

August 2014

Setting price controls for 2015-20
Draft price control determination notice:
company-specific appendix – Thames Water



OFWAT

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Correction

The return on regulated equity range for outcome delivery incentives and figure A7.1 on page 64, and figure AA4.2 on page 104 setting out the financial outcome delivery incentives were updated on 26 September 2014.

Overview

This appendix sets out the details of the draft determination of price controls that are specific to Thames Water. Our draft determination is based on Thames Water's business plan as submitted by 27 June and its responses to our subsequent queries.

Thames Water's revised business plan has a number of strengths. The company has addressed a number of our concerns from the risk-based review. In particular the company remains below our cost assessment threshold on wholesale water and very close to our cost threshold on wastewater. However, we have had to intervene in a number of areas. These include adjusting for its performance in 2010-15 and removing the company's proposed new costs above the materiality threshold for the non-household control. In addition, we have made other interventions around outcomes and the associated delivery incentives which are common to all companies. The company also needs to provide further assurance ahead of final determinations in some areas of its plan.

We support Thames Water's proposal for a separate price control for the activities it will undertake in respect of the Thames Tideway Tunnel ('TTT'). While we note improvements in its proposals for our regulation in this area, we are making significant interventions in order to protect the interests of customers. We expect the company to make further representations on the efficient cost of its TTT activities and the associated outcome delivery incentives, which we will consider for our final determination.

It should be noted that in order for the price controls to protect the interests of consumers, we consider that – in accordance with their licence obligations – companies must act in an economic and efficient manner in all circumstances. For the avoidance of doubt, this obligation overrides any individual incentive element.

This draft determination sets out the draft allowed revenues and K factors for Thames Water, along with what they mean for average customer bills. We have summarised this information in the 'draft determination – at a glance section'. The draft determination also sets out:

- the outcomes we expect the company to deliver under each price control;
- the costs we are assuming the company will incur and, where appropriate, the assumptions we have made to arrive at the allowed revenue for each price control;
- the adjustments we are making to the wholesale water and wastewater price controls to reflect the company's performance in 2010-15; and
- our assumptions on risk and reward, including the uncertainty mechanisms that form part of each price control.

As part of this price review, we stated in ‘[Setting price controls for 2015-20 – final methodology and expectations for companies’ business plans](#)’ (our ‘final methodology statement’) that we would be setting separate price controls for wholesale and retail elements of the appointee business. We explained that these separate controls would be binding, confirmed through the modifications made to the price setting elements of companies’ licence conditions.

This means that the companies cannot recover more revenue than allowed under each specific price control. The revenue allowance for each price control is determined by the costs specific to that particular price control. This means that companies cannot cross-subsidise between controls in terms of costs or revenues, which gives important benefits for providing more effective incentives. It also supports the development of the relevant markets and in particular those provided for by the Water Act 2014.

In response to our challenge at the risk-based review, Thames Water has proposed to introduce a separate price control for its activities in respect of the Thames Tideway Tunnel. We support the introduction of a separate price control for Thames Water’s activities on the TTT Control. This will require amendments to Thames Water’s licence aligned with the final determination. We set out our proposals in section A4.

We have made this draft determination in accordance with our final methodology statement and our statutory duties. We have also had regard to relevant guidance from the UK Government, and where appropriate Welsh Government, and the principles of best regulatory practice to be transparent, accountable, proportionate, consistent and targeted.

This draft determination is structured on an element-by-element basis and is separated into:

- wholesale water;
- wholesale wastewater;
- Thames Tideway Tunnel;
- household retail; and
- non-household retail.

In each area, we have set out the relevant information after our interventions – that is, our draft determination. In those areas in which we have intervened, we discuss the difference between our view and the company view further in the specific annexes where appropriate.

At the appointee level, this draft determination sets out our view of the company’s financeability over the period 2015-20.

Annexes 1 to 4 form part of the draft price control determination.

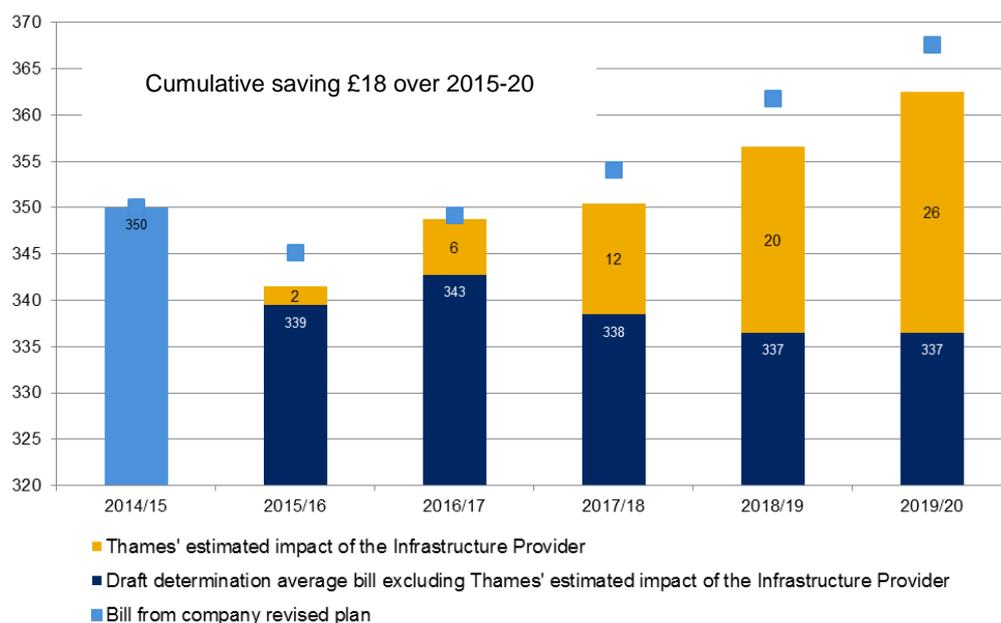
A1. Draft determination – at a glance

In this section we set out what the draft determination means:

- for customers, with respect to the average bills they will pay and the outcomes that the company will deliver in return; and
- for the company, with respect to the allowed costs/expenditure, return on regulatory equity (RoRE) range; financial ratios (under the notional structure) and the interventions we made to the company's revised plan.

It should be noted that on 6 August we informed Thames Water that very material differences remain between its re-submitted plan and our assessment of efficient TTT Control. We did this to give Thames Water (and other affected companies) as much time as possible to reflect on its plan for the coming five-year period and reconsider its proposals in response to our draft determinations. This may include submitting further compelling evidence that its TTT Control cost proposals are efficient. Accordingly the information presented should be considered in the context of the material gap in relation to TTT Control costs.

Combined average household bill (£)¹



Note. The "Bill from company revised plan" is based on the data submitted by the company in its business plan but projected using our financial model, thereby ensuring consistency with the draft determination projection. As a consequence the company's proposed bills illustrated above may not necessarily be the same as those described in the revised business plan.

Outcomes

Wholesale water	Wholesale wastewater
Demonstrate to our customers and stakeholders that they can trust us, that we are easy to do business with and that we care	Demonstrate to our customers and stakeholders that they can trust us, that we are easy to do business with and that we care
We will provide a safe and reliable Water service that complies with all necessary standards, is available when our customers require it	We will provide a safe and reliable Wastewater service that complies with all necessary standards and is available when our customers require it

¹ In addition the bills for Thames Water customers that receive both water and wastewater services will include the costs associated with both the Thames Tideway Tunnel activities undertaken by Thames Water and the Infrastructure Provider (IP). The appointment of an IP is subject to a market procurement exercise and so the exact bill impact is uncertain at this stage. Thames included an estimate of the impact on customers' bills of the IP costs in 2015-20 its June submission. The yellow bars in the chart above represent the estimated bill using Thames Water's assumptions in respect of the pass through to the IP. We are not determining the IP's allowed revenue as part of this price review, instead the calculation of revenue (particularly during construction) will be included in the project licence for the IP. The appointment of an IP is subject to a market procurement exercise, because of this the exact impact to customers' bills is uncertain at this stage

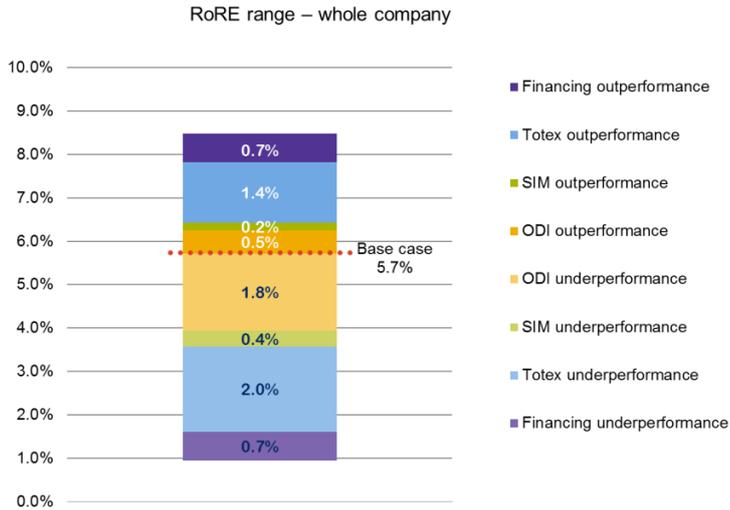
Wholesale water	Wholesale wastewater
We will limit our impact on the environment and achieve a socially responsible, sustainable business for future generations, including reducing levels of leakage	We will limit our impact on the environment and achieve a socially responsible, sustainable business for future generations, including reducing levels of leakage
We will provide the level of customer service our customers require, in the most economic and efficient manner, to ensure that bills are no more than necessary	We will provide the level of customer service our customers require, in the most economic and efficient manner, to ensure that bills are no more than necessary
Retail	TTT Control
Improving customer service by doing the basics excellently and by getting things 'right first time'	Thames Water proposed no performance commitments for the TTT Control in the June plan
Offer a choice of easy to use contact options	
Improving cash collection from those that can pay and helping those that are struggling to pay	

Allowed costs/expenditure¹

Wholesale	Water	Wastewater	TTT
Totex – 2015-20 total (£m)	3,326.1	3,679.0	324.3
Allowed weighted average cost of capital (%)	3.70%	3.70%	3.70%
Allowed wholesale revenue in 2015-20 (£m)	3,966.7	4,404.3	215.9
Retail	Household	Non-household	
Cost allowance – 2015-20 total (£m)	726.6		
Margin (%)	1.00%	2.50%	
Retail allowed revenue (£m)	817.8	151.0	
Average bill per household customer – retail component only (£)	33		

¹ Wholesale figures in 2012-13 prices and retail figures in nominal prices – this is consistent throughout the draft determination unless otherwise stated.

RoRE ranges – appointee



Ofwat's calculations of notional financeability ratios

Financial ratios for notional company	Ofwat calculation (average 2015-20)
Cash interest cover	2.82
Adjusted cash interest cover ratio (ACICR) – base case (average over five years)	1.40
Funds from operations/debt	8.64%
Retained cash flow/debt	6.10%
Gearing	64.17%
Dividend cover (profit after tax/dividends paid)	0.94
Regulatory equity/regulated earnings for the regulated company	16.66
RCV/EBITDA	11.57

Summary of interventions

<p>Outcomes</p> <ul style="list-style-type: none"> • Cap – We have imposed an overall cap and collar on outcome delivery incentives of +/- 2% of RoRE • Horizontal check – We have made four performance level targets more stretching. • Bottom up analysis -The reward for one incentive has been removed; we have adjusted the deadbands, caps and collars across a number of incentives; we have extended the commitments to 2019-20 across a number of performance commitments. • We have included three additional proposals for performance commitments relating to the Thames Tideway Tunnel separate control. 	<p>Wholesale costs</p> <ul style="list-style-type: none"> • The company is below our water cost threshold. Consistent with the approach for all companies that are significantly below our threshold, we have adapted our draft determination threshold by capping our view of the cost threshold at 5% above the company plan view of totex for water. • The company proposed wholesale water totex of £3,249 million in its plan. Our initial threshold (ie, after adjustments) is £3,773 million. Given that the difference exceeds 5%, we have capped the difference, resulting in a draft determination threshold of £3,411 million. • The company proposed wholesale wastewater totex of £3,744 million in its plan which is £22 million above our draft determination threshold of £3,721 million. • We rejected some of the company's wholesale cost adjustments, or only partially allowed them. • For Thames Tideway Tunnel expenditure, the company's proposed costs of £655 million are above our assessment for the draft determination of £324 million.
<p>Retail</p> <ul style="list-style-type: none"> • We have rejected the company's proposed adjustment for increased household retail costs resulting from the Thames Tideway Tunnel (household). • We have adjusted the price base year for retail costs (household and non-household). • We removed the company's proposed new costs above the level of the materiality threshold (non-household). 	<p>Reconciling 2010-15 performance</p> <ul style="list-style-type: none"> • We have adjusted both the water and wastewater controls to a combined total of £27 million revenue and £42 million RCV in customers' favour. We have applied a shortfall adjustment in respect of supply interruptions and increased the company's proposed shortfall for wastewater infrastructure. • We have made further interventions in respect of the costs claimed by the company in 2010-15 for Thames Tideway Tunnel.
<p>Risk and reward</p> <ul style="list-style-type: none"> • We have not intervened in this area. 	<p>Financeability and affordability</p> <ul style="list-style-type: none"> • We have made technical adjustments to the PAYG and RCV run off rates for the wastewater control.
<p>Thames Tideway Tunnel</p> <ul style="list-style-type: none"> • We agree with Thames Water's proposal to adopt a separate price control for its expenditure on the Thames Tideway Tunnel ("TTT Control") . However, we consider there is no need for an automatic expiry date in the licence as proposed by Thames Water and indeed that this could operate against customers' interests in the long term. 	

A2. Wholesale water

A2.1 Company outcomes, performance commitments and delivery incentives

A2.1.1 Outcomes, performance commitments and incentives

In the [outcomes technical appendix](#), we discuss our approach to outcomes for the wholesale and retail controls.

We summarise the outcomes, performance commitments and outcome delivery incentives for the wholesale water control for Thames Water in table A2.1 below.

We are intervening to impose an overall cap and collar on outcome delivery incentives for the 2015-20 period, thereby limiting total rewards and penalties. We are intervening to impose an overall cap and collar on outcome delivery incentives for the 2015-20 period, thereby limiting total rewards and penalties. The maximum rewards for outperformance will be limited to +2% of RoRE and maximum penalties for underperformance are limited to -2% of RoRE. This will help ensure that the overall package of delivery incentives is calibrated to provide meaningful financial incentives and protect customers.

In addition for some performance commitments and incentives types, we have intervened to change the underlying performance level or incentives. These interventions are listed in table A2.1 below. Full detail of the wholesale water outcomes, performance commitments and incentives is provided in annex 4.

Table A2.1 Wholesale water outcomes, performance commitments and incentives

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
We will provide a safe and reliable Water service that complies with all necessary	Asset Health (Water Non-Infrastructure)	Financial – penalty only	Bottom-up analysis – Adjusted the deadband and penalty collar
	Asset Health (Water Infrastructure)	Financial – penalty only	Bottom up analysis – Adjusted the deadband and penalty collar and incentive rate

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
standards, is available when our customers require it	Compliance with drinking water quality standards – Ofwat/DWI KPI	Financial – penalty only	Horizontal check – Adjusted the performance commitment level and changed penalty deadbands and collar.
	Average hours lost supply per property served, due to interruptions >4hr	Financial – reward and penalty	Horizontal check Adjusted performance commitment level, changed penalty and reward deadbands and penalty and rewards cap and collar.
	Properties experiencing chronic low pressure (DG2)	Non-financial incentive	No Intervention
	Security of Supply Index – Ofwat KPI	Financial – penalty only	No Intervention
	SEMD Compliance advice notes, with or without derogation	Financial – penalty only	No Intervention
	MI/d of sites made resilient to future extreme rainfall events	Financial – reward and penalty	No Intervention
Demonstrate to our customers and stakeholders that they can trust us, that we are easy to do business with and that we care	Improve handling of written complaints by increasing 1st time resolution	Non-financial incentive	No Intervention
	Number of Written complaints per 10,000 connected properties	Non-financial incentive	No Intervention
	Customer satisfaction surveys (Internal CSAT monitor)	Non-financial incentive	No Intervention

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
	Reduced water consumption from issuing water efficiency devices to customers	Financial – penalty only	No Intervention
	Provide a free repair service for customers with a customer side leak outside of the property	Non-financial incentive	No Intervention
We will limit our impact on the environment and achieve a socially responsible, sustainable business for future generations, including reducing levels of leakage	Leakage	Financial – reward and penalty	Bottom-up analysis - Adjusted the penalty collar in year 1 and extended the incentive to cover 2019-20.
	Greenhouse gas emissions from water operations	Non-financial incentive	No Intervention
	We will educate our existing and future customers	Non-financial incentive	No Intervention
	Deliver 100% of agreed measures to meet new environmental regulations	Financial – penalty only	No Intervention
We will provide the level of customer service our customers require, in the most economic and efficient manner, to	Energy imported – Energy exported	Non-financial incentive	No Intervention

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
ensure that bills are no more than necessary			
	Asset Health Water Infrastructure Asset Health Water Non Infrastructure Drinking Water Quality Standards Supply Interruptions above 4 hours (average minutes per property) Security of Supply Index – Ofwat KPI Leakage	Various	Bottom-up analysis – Extended the performance commitment and incentive to cover 2019-20

A2.1.2 Outcome delivery and reporting

In the [assurance technical appendix](#), we set out our proposed framework for the form and level of reporting, monitoring and assurance we will seek from companies during the five year regulatory period 2015-20 in relation to the delivery of their commitments for the price review. This sets out three levels of assurance and the opportunities available for a company to improve its category status through the finalisation of the price controls and during the regulatory period itself.

We are satisfied with the company's proposals for self reporting. But consistent with the commentary in our assurance technical annex, we will need to consider the categorisation of the company for assurance purposes at the final determination.

Thames Water's proposed approach to the measurement, reporting and governance of outcomes and our assessment of this approach is summarised in annex 4.

A2.2 Calculating the wholesale water price control

A2.2.1 Calculating allowed wholesale water expenditure

Our approach to calculating allowed wholesale expenditure is set out in the [wholesale water and wastewater technical appendix](#).

In its December plan, the company included wholesale water totex of £3,160 million. This increased in its June plan to £3,249 million as a result of higher business rates and re-allocations. This would be 14% below the (pre cap) basic cost threshold, post additions, of £3,773 million. However, in line with the policy we have applied a 5% cap on this which results in a revised draft determination threshold of £3,411 million.

It is also important to bear in mind that the actual gap is smaller than what would be implied when looking at the totex gap. This is because the use of menus and our approach to setting baselines reduces the difference. In the case of Thames Water our approach would reduce the difference from 5% to 2.5%.

We also note that the company made representations to our cost models following the publication of these in April. The representations made and our response is summarised in wholesale water and wastewater technical appendix.

The proposed wholesale water allowed expenditure for Thames Water is detailed in table A2.2 below. We provide a further breakdown of some of the calculations in annex 1. Further information about our assessment of each claim is set out in the populated version of the draft determination initial cost threshold models.

Table A2.2 Wholesale water allowed expenditure (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total 2015-20
Draft determination cost threshold						3,411.1
Costs excluded from menu						55.0
Menu cost baseline ¹	635.3	676.4	696.2	685.3	663.0	3,356.1
Company's view of menu costs ²						3,197.5
Implied menu choice						95.3

	2015-16	2016-17	2017-18	2018-19	2019-20	Total 2015-20
Allowed expenditure from menu	627.8	668.4	687.9	677.2	655.2	3,316.5
Costs excluded from menu	11.4	10.9	10.9	10.9	10.9	55.0
Total allowed expenditure ³	639.1	679.3	698.8	688.1	666.1	3,371.4
Less pension deficit repair allowance	9.1	9.1	9.1	9.1	9.1	45.3
Totex for input to PAYG	630.1	670.3	689.8	679.0	657.0	3,326.1

Notes:

1. Menu baseline is equal to the draft determination threshold less pension deficit recovery costs, third party costs and market opening costs related to 2014-15 (see annex 1).
2. Based on company plan totex minus costs for items excluded from the menu.
3. Includes pension deficit repair allowance.

A2.2.2 Calculation of revenues: pay as you go (PAYG) and regulatory capital value (RCV)-run off

Table A2.3 shows the company's proposed PAYG ratios and associated totex recovery for wholesale water, which we have used as the basis for this draft determination.

Table A2.3 Thames Water wholesale water PAYG ratios

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Totex (£m)	630.1	670.3	689.8	679.0	657.0	3,326.1
PAYG %	54.6%	55.0%	58.4%	59.9%	61.7%	57.9%
Resulting PAYG (£m)	344.2	368.5	402.9	406.8	405.1	1,927.6

Table A2.4 shows the RCV run-off amounts included within the wholesale water charge. This reflects a run-off rate of 4.96% in 2015-16 for the RCV as at 31 March 2015, this rates falls over the period to 2.82% in 2019-20 as proposed by Thames Water. An asset life of 20 years is used for the totex additions to the RCV over 2015-20.

Table A2.4 Thames Water wholesale water RCV run-off (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Run-off of 2015 RCV	234.6	192.9	140.7	121.5	114.1	803.8
RCV run-off of totex additions	7.1	21.6	36.2	50.1	63.1	178.1
Total RCV run-off	241.7	214.5	176.9	171.6	177.1	981.9

A2.2.3 Return on the RCV

Our risk and reward guidance set out a single industry cost of capital for both wholesale water and wastewater services of 3.7%. The company has accepted this guidance, however it says this is predicated on us accepting its business plan in the round.

In common with all other water and sewerage companies, we have used a cost of capital of 3.7% in this draft determination. This results in a return on capital of £910 million over 2015-20.

Table A2.5 shows our calculation of the opening RCV at 1 April 2015 taking account of the adjustments for 2010-15 performance discussed in section A2.2.4 below. The average RCV, set out in table A2.6 for each year, takes into account the proportion of totex additions to the RCV determined by the PAYG ratio and RCV run-off.

Table A2.5 Thames Water wholesale water opening RCV (£ million)

	2015-16
Closing RCV 31 March 2015	4,812.4
Land sales	-17.7
Adjustment for actual expenditure 2009-10	28.4
Adjustment for actual expenditure 2010-15 ¹	-69.9
Net adjustment from logging up, logging down and shortfalls	-23.8
Other adjustments	0.0
Opening RCV 1 April 2015	4,729.4

Note:

1. The adjustment for actual expenditure in 2010-15 is explained further in annex 3 as part of the CIS adjustment.

Table A2.6 Thames Water wholesale water return on RCV (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20
Opening RCV	4729.4	4773.6	4860.8	4970.8	5071.3
RCV additions (from totex)	285.8	301.8	286.9	272.2	251.9
Less RCV run-off	241.7	214.5	176.9	171.6	177.1
Closing RCV	4773.6	4860.8	4970.8	5071.3	5146.0
Average RCV (year average)	4751.5	4817.2	4915.8	5021.0	5108.7
Return on capital	175.7	178.1	181.8	185.7	188.9

A2.2.4 Reconciling 2010-15 performance

Our approach to reconciling 2010-15 performance is set out in the [wholesale water and wastewater technical appendix](#).

Thames proposed adjustments to the opening RCV and allowed revenue for the wholesale water services to reconcile performance in 2010-15. We have intervened and as a result the revenue adjustments for wholesale water have changed from £-0.8 million to £-26.9 million.

We summarise these interventions and quantify the resulting adjustments within this draft determination in Table A2.7 below. The impact on the opening RCV of 2010-15 adjustments is shown in table A2.5.

As noted in the table above, we have applied -£23.8 million in (net) adjustments arising from logging up, logging down and shortfalls. The company did not raise any shortfalling claims; we have intervened to apply a shortfall of £18.0 million (post efficiency), relating to unplanned interruptions to supply exceeding 12 hours. Further information on our interventions and rationale is set out in annex 3.

Table A2.7 Thames Water wholesale water revenue adjustments to reflect 2010-15 performance (£ million)

Area	Intervention	Why we did it	Total 2010-15
Service incentive mechanism (SIM)	SIM performance penalty has increased	To reflect updated industry performance in line with the methodology.	-40.9
Revenue correction mechanism (RCM)	We have intervened in the following areas. <ul style="list-style-type: none"> • Back billing • FD09 assumptions • Number of households billed • Outturn financial year average RPI 	We have concerns as to whether the back billing amounts put forward by the company are compliant with RAG4.04 and IN 11/04 and so have disallowed these claims. We also have concerns on FD09 assumptions and data inconsistencies.	30.1
Opex incentive allowance (OIA)	There are no interventions in this area.	n/a	0.0
Capital expenditure incentive scheme (CIS)	There are no interventions in this area other than we have included our view of the applicable change protocol amounts.	n/a	-16.1
Other adjustments	There are no interventions in this area.	n/a	0.0
Total	n/a	n/a	-26.9

A2.2.5 Calculation of allowed revenue

We set out the calculation of the allowed revenue for Thames Water's wholesale water control in table A2.8.

Overall, we consider that the company's wholesale water revenue allowance should be £790.7million in 2015-16, increasing by 1.3% to £800.6 million in 2019-20.

Table A2.8 Thames Water wholesale water allowed revenue (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Totex	630.1	670.3	689.8	679.0	657.0	3,326.1
PAYG ratio	54.64%	54.98%	58.41%	59.92%	61.66%	-
Totex additions to the RCV	285.8	301.8	286.9	272.2	251.9	1,398.5
RCV (year average)	4,751.5	4,817.2	4,915.8	5,021.0	5,108.7	-
Wholesale allowed revenue build up:						
PAYG ¹	353.3	377.6	412.0	415.9	414.2	1,972.9
Return on capital	175.7	178.1	181.8	185.7	188.9	910.1
RCV run-off	241.7	214.5	176.9	171.6	177.1	981.9
Tax ²	0.0	0.0	0.0	0.0	0.0	0.0
Income from other sources	-5.9	-5.9	-5.9	-5.9	-5.9	-29.4
Reconciling 2010-15 performance	-5.4	-5.4	-5.4	-5.4	-5.4	-26.9
Ex ante additional menu income	3.7	3.9	4.0	4.0	3.8	19.5
Wholesale allowed revenue adjustments						
Equity Issuance	0.0	0.0	0.0	0.0	0.0	0.0

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Cost						
Revenue solving adjustment	0.0	0.0	0.0	0.0	0.0	0.0
Profiling adjustments	0.0	0.0	0.0	0.0	0.0	0.0
Manual adjustments	0.0	0.0	0.0	0.0	0.0	0.0
Capital contributions from connection charges and revenue from infrastructure charges	27.6	27.7	27.7	27.8	27.8	138.6
Final allowed revenues	790.7	790.5	791.2	793.6	800.6	3,966.7

Notes:

1. PAYG includes the PAYG calculated from totex and the pension deficit repair allowance.
2. Including tax on adjustments for reconciling 2010-15 performance and ex-ante additional menu income.

A2.3 Uncertainty mechanisms

We outline our approach to uncertainty mechanisms in the [risk and reward technical appendix](#). In table A2.9 below, we set out Thames Water’s proposed wholesale water uncertainty mechanisms and our assessment of these proposals.

Table A2.9 Thames Water proposals for wholesale water uncertainty mechanisms

Thames Water proposals	Our assessment
<p>Thames Water proposed an uncertainty mechanism for water business rates with a sharing rate of 75% customer and 25% company.</p>	<p>We consider that the materiality, comparability and control over risk criteria for water business rates are met. We have included a 75%:25% uncertainty mechanism for all companies consistent with our prior guidance and earlier draft determinations. The specific text of this Notified Item and the rationale for its inclusion in the draft determination is set out in the risk and reward technical appendix.</p>

A3. Wholesale wastewater

In this chapter, we outline our draft determination for Thames Water’s wholesale wastewater control, excluding the Thames Tideway Tunnel. We outline our draft determination for the Thames Tideway Tunnel in the following chapter.

A3.1 Outcomes, performance commitments and incentives

In the [outcomes technical appendix](#), we discuss our approach to outcomes for the wholesale and retail controls.

We summarise the outcomes, performance commitments and outcome delivery incentives for the wholesale wastewater control for Thames Water in table A3.1 below.

We are intervening to impose an overall cap and collar on outcome delivery incentives for the 2015-20 period, thereby limiting total rewards and penalties. The maximum rewards for outperformance will be limited to +2% of RoRE and maximum penalties for underperformance are limited to -2% of RoRE. This will help ensure that the overall package of delivery incentives is calibrated to provide meaningful financial incentives and protect customers.

Similar to the water wholesale control, for some performance commitments and incentives types we have intervened to change the underlying performance level or incentives. These interventions are listed in table A3.1 below. Full detail of the wholesale water outcomes, performance commitments and incentives is provided in annex 4.

Table A3.1 Wholesale wastewater outcomes, performance commitments and incentives

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
Demonstrate to our customers and stakeholders	Improve handling of written complaints by increasing 1st time resolution	Non-financial incentive	No Intervention

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
that they can trust us, that we are easy to do business with and that we care	Number of Written complaints per 10,000 connected properties	Non-financial incentive	No Intervention
	Customer satisfaction surveys (Internal CSAT monitor)	Non-financial incentive	No Intervention
We will provide a safe and reliable Wastewater service that complies with all necessary standards and is available when our customers require it	Asset Health Wastewater Non Infrastructure	Financial – penalty only	Bottom-up analysis – Adjusted the penalty deadband and collar
	Asset Health Wastewater Infrastructure	Financial – penalty only	Bottom up analysis – Adjusted the penalty deadband, penalty collar and incentive rate
	Properties protected from flooding due to rainfall	Financial – reward and penalty	Horizontal check – Adjusted the performance commitment level, and include specific penalty for delayed delivery of Counters Creek sewer flooding scheme
	Number of internal flooding incidents, excluding those due to overloaded sewers (SFOC)	Financial – reward and penalty	Horizontal check - Adjusted the performance commitment level and changed penalty deadbands and collar. The rewards have been removed and s105A transferred assets have been included.

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
	Contributing area disconnected from combined sewers by retrofitting sustainable drainage	Financial – reward and penalty	No Intervention
	Compliance with SEMD (Security and Emergency Measures Directive) advice notes, with or without derogation	Financial – penalty only	No Intervention
	Population Equivalent of sites made resilient to future extreme rainfall events	Financial – penalty only	No Intervention
We will limit our impact on the environment and achieve a socially responsible, sustainable business for future generations, including reducing levels of leakage	Greenhouse gas emissions from wastewater operations	Non-financial incentive	No Intervention
	Total Category 1-3 pollution incidents from sewage related premises	Financial – reward and penalty	Horizontal check - Adjusted the penalty rate and introduced a gateway clause that disallows rewards if a category 1 or 2 incident occurs. S105A transferred assets have been included
	Sewage treatment works discharge compliance	Financial – penalty only	No Intervention
	Water bodies improved or protected from deterioration as a result of TW activities	Non-financial incentive	No Intervention
	Satisfactory sludge disposal compliance	Non-financial incentive	No Intervention

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
	We will educate our existing and future customers	Non-financial incentive	No Intervention
	Modelled reduction in properties affected by odour	Financial – reward and penalty	Bottom-up analysis Reward cap lowered in years 4 and 5
	Deliver 100% of agreed measures to meet new environmental regulations	Financial – penalty only	No Intervention
	Reduce Phosphorus in rivers to help improve aquatic plant wildlife quality	Financial – reward and penalty	Bottom-up analysis Introduced a timeline for delivery and clarified the incentive rates.
We will provide the level of customer service our customers require, in the most economic and efficient manner, to ensure that bills are no more than necessary	Energy imported – Energy exported	Non-financial incentive	No Intervention

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
Various	Asset Health Wastewater (Non-infrastructure) Asset Health Wastewater (Infrastructure) Number of internal flooding incidents, excluding those due to overloaded sewers (SFOC) Total category 1-3 pollution incidents from sewage related Sewage treatment works discharge consent Modelled reduction in properties affected by odour	Various	Bottom-up analysis - Extended the performance commitment and incentive to cover 2019-20

A3.1.1 Outcome delivery and reporting

In the [assurance technical appendix](#), we set out our proposed framework for the form and level of reporting, monitoring and assurance we will seek from companies during the five year regulatory period 2015-2020 in relation to the delivery of their commitments for the price review. This sets out three levels of assurance and the opportunities available for a company to improve its category status through the finalisation of the price controls and during the regulatory period itself.

We are satisfied with the company's proposals for self reporting. But consistent with the commentary in our assurance technical annex, we will need to consider the categorisation of the company for assurance purposes at the final determination.

Thames Water's proposed approach to the measurement, reporting and governance of outcomes and our assessment of this approach is summarised in annex 4.

A3.2 Calculating the wholesale wastewater price control-excluding TTT

In its December business plan, Thames Water included the costs associated with the delivery of its elements of the Thames Tideway Tunnel (TTT) within its wholesale wastewater control. As part of our feedback on the risk-based review, we raised particular concerns around this, in particular, the company provided insufficient evidence to justify that the uncertainty mechanisms it proposed to apply to these activities would represent best value to customers.

We subsequently explored with Thames Water the possibility of a separate price control for its activities on the TTT (the TTT Control). Thames Water has since proposed that the delivery of its components of the TTT could be delivered via a separate price control in its June plan.

We support the introduction of a separate, binding price control for the Thames Water activities within a separate TTT Control. The wholesale wastewater costs for Thames Water therefore exclude any costs for the TTT Control, which are considered in section A4. Thames Water has provided business plan table information for Thames Water appointee with and without the TTT Control, in some instances it has provided data on just the TTT Control in the business plan tables. But as it has not provided separate financial tables for the TTT Control, this has implications for financial modelling as discussed in section A3.2.2.

A3.2.1 Calculating allowed wholesale wastewater expenditure

Our approach to calculating allowed wholesale expenditure is set out in the [wholesale water and wastewater technical appendix](#).

In the December plan, Thames Water proposed wholesale wastewater totex of £3,799 million (excluding the impact of the Thames Tideway Tunnel). This reduced in its June plan to £3,744 million, largely due to reduction in costs claimed for NEP5. We calculated the draft determination threshold at £3,721 million, giving rise to a difference of £22 million or 0.6%. We did consider making adjustments for wholesale wastewater in its revised plan. Our draft determination threshold is £3,721 million after consideration of adjustments proposed by the company, this included the full amount included by Thames – £130 million – in respect of the NEP5 programme.

We also note that the company made representations to our cost models following the publication of these in April. The representations made and our response is summarised in [wholesale water and wastewater technical appendix](#).

With an implied menu choice of 99.9, the company is very close to our totex threshold.

The proposed wholesale wastewater allowed expenditure for Thames Water is detailed in table A3.2 below. A further breakdown of some of the calculations is provided in annex 1. Further information about our assessment of each claim is set out in the populated version of draft determination initial cost threshold models.

Table A3.2 Wholesale wastewater allowed expenditure (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Draft determination cost threshold (excluding TTT)						3,721.3
Costs excluded from menu						62.1
Menu cost baseline ¹	823.3	770.1	776.3	689.9	599.7	3,659.2
Company's view of menu costs ²						3,656.5
Implied menu choice						99.9
Allowed expenditure from menu	823.1	770.0	776.1	689.8	599.5	3,658.5
Costs excluded from menu	12.8	12.3	12.3	12.3	12.3	62.1
Total allowed expenditure³	835.9	782.3	788.4	702.1	611.9	3,720.6
Less pension deficit repair allowance	8.3	8.3	8.3	8.3	8.3	41.7
Totex for input to PAYG	827.6	774.0	780.1	693.8	603.5	3,679.0

Notes:

1. Menu baseline is equal to the draft determination threshold less pension deficit recovery costs, third party costs and market opening costs related to 2014-15 (see annex 1).
2. Based on company plan totex minus costs for items excluded from the menu.
3. Includes pension deficit repair allowance.

A3.2.2 Calculation of revenues: PAYG and RCV-run off

Table A3.3 shows the PAYG ratios and associated totex recovery for wholesale wastewater, which we have used as the basis for this draft determination.

As a consequence of its financial modelling approach, the company has to apply blended PAYG and RCV run-off rates for the TTT Control and wholesale wastewater control. We have applied zero PAYG and RCV run-off to the TTT Control (see section A4). However, as a consequence of our cost assessment for the TTT Control (where we reduced the cost allowance, also see section A4), we have made technical adjustments to the PAYG and RCV run off rates proposed by the company, which are applied to the wastewater control to maintain zero PAYG and RCV run off for the TTT Control. This ensures that wastewater and TTT revenues are correct.

Table A3.3 Thames Water wholesale wastewater PAYG ratios

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Totex (£m)	827.6	774.0	780.1	693.8	603.5	3,679.0
PAYG %	43.7%	47.7%	48.0%	53.3%	59.5%	50.4%
Resulting PAYG (£m)	362.0	368.8	374.5	369.8	359.1	1,834.2

Table A3.4 shows the RCV run-off amounts included within the wholesale wastewater charge. This reflects a run-off rate of 5.29% for the RCV as it stands on 31 March 2015 and 23 years for the totex additions to the RCV over 2015-20.

Table A3.4 Thames Water wholesale wastewater RCV run-off (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Run-off of 2015 RCV	291.1	263.2	240.7	232.4	239.8	1267.2
RCV run-off of totex additions	10.2	29.2	46.9	62.8	75.2	224.1
Total RCV run-off	301.3	292.4	287.6	295.1	314.9	1491.3

A3.2.3 Return on the RCV

As discussed in section A2.2.3, the company has accepted our risk and reward guidance (subject to us accepting its plan as a whole as discussed in section A2.2.3). In common with all other water and sewerage companies, we have used a

cost of capital of 3.7% in this draft determination. This results in a return on capital of £1071.2 million over 2015-20.

Table A3.5 shows our calculation of the opening RCV at 1 April 2015 taking account of the adjustments for 2010-15 performance discussed in section A3.2.4 below. The average RCV, set out in table A3.6 below for each year, takes into account the proportion of totex additions to the RCV determined by the PAYG ratio and RCV run-off.

Table A3.5 Thames Water wholesale wastewater opening RCV (£ million)

	Thames (excluding TTT)	TTT
	2015-16	2015-16
Closing RCV 31 March 2015	6147.0	316.0
Land sales	-23.7	0.0
Adjustment for actual expenditure 2009-10	-88.6	0.5
Adjustment for actual expenditure 2010-15 ¹	-235.1	0.0
Net adjustment from logging up, logging down and shortfalls	-191.5	481.1
Other adjustments ²	-101.3	0.0
Opening RCV 1 April 2015 –including TTT	5506.9	797.5

Note:

1. The adjustment for actual expenditure 2010-15 is explained further in annex 3 as part of the CIS adjustment.
2. Logging up adjustments include logging up amounts relating to Thames Tideway Tunnel expenditure for 2010-15 (£482 million) and a logging down amount proposed by the company (£101 million) in respect of 2005-10 s203 expenditure.

Table A3.6 Thames Water wholesale wastewater return on RCV (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20
Opening RCV	5,506.9	5,671.2	5,784.0	5,902.0	5,930.9
RCV additions (from totex)	465.6	405.1	405.6	324.0	244.4
Less RCV run-off	301.3	292.4	287.6	295.1	314.9
Closing RCV	5,671.2	5,784.0	5,902.0	5,930.9	5,860.4

	2015-16	2016-17	2017-18	2018-19	2019-20
Average RCV (year average)	5,589.0	5,727.6	5,843.0	5,916.5	5,895.7
Return on capital	206.7	211.8	216.0	218.8	218.0

A3.2.4 Reconciling 2010-15 performance

Our approach to reconciling 2010-15 performance is set out in the [wholesale water and wastewater technical appendix](#).

Thames proposed adjustments to the opening RCV and allowed revenue for the wholesale water services to reconcile performance in 2010-15. We have intervened and as a result the revenue adjustment for wholesale water has changed from -£51.2 million to -£52.6 million.

We summarise these interventions and quantify the resulting adjustments within this draft determination in table A3.7 below. The impact on the opening RCV of 2010-15 adjustments is shown in table A3.5 above. As noted in the table above, we have applied -£191.5 million in (net) adjustments arising from logging up, logging down and shortfalls. Thames Water proposed shortfalling adjustments totalling £16.1 million in respect of its performance on pollution incidents and flooding other causes. We have intervened and increased the shortfall to £38.1 million (post efficiency) overall. Further information on our interventions and rationale is set out in annex 3.

Table A3.7 Thames Water wholesale wastewater revenue adjustments to reflect 2010-15 performance (£ million)

Area	Intervention	Why we did it	Total 2010-15
Service incentive mechanism (SIM)	SIM performance penalty has increased	To reflect updated industry performance statistics and application of methodology	-43.3

Area	Intervention	Why we did it	Total 2010-15
Revenue correction mechanism (RCM)	We have intervened in the following areas: <ul style="list-style-type: none"> • Back billing • FD09 assumptions • Number of households billed • Outturn financial year average RPI 	We have concerns as to whether the back billing amounts put forward by the company are compliant with RAG4.04 and IN 11/04 and so have disallowed these claims. We also have concerns on FD09 assumptions and data inconsistencies.	66.7
Opex incentive allowance (OIA)	There are no interventions in this area.	n/a	0.0
Capital expenditure incentive scheme (CIS)	There are no interventions in this area other than we have included our view of the applicable change protocol amounts.	n/a	-76.0
Other adjustments			0.0
Total	n/a	n/a	-52.6

A3.2.5 Calculation of allowed revenue

The calculation of the allowed revenue for Thames Water's wholesale wastewater control is shown in table A3.8.

Overall, we consider that Thames Water's wholesale wastewater revenue allowance should be £871.4 million in 2015-16, increasing by 2.5% to £893.6 million in 2019-20.

Table A3.8 Thames Water wholesale wastewater allowed revenue (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
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	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Totex	827.6	774.0	780.1	693.8	603.5	3,679.0
PAYG ratio	43.7%	47.7%	48.0%	53.3%	59.5%	-
Totex additions	465.6	405.1	405.6	324.0	244.4	1,844.8
RCV (year average)	5,589.0	5,727.6	5,843.0	5,916.5	5,895.7	-
Wholesale allowed revenue build up:						
PAYG ¹	370.3	377.1	382.8	378.1	367.5	1,875.8
Return on capital	206.7	211.8	216.0	218.8	218.0	1,071.2
RCV run-off	301.3	292.4	287.6	295.1	314.9	1,491.3
Tax ²	0.0	0.0	0.0	0.0	0.0	0.0
Income from other sources	-11.4	-11.4	-11.4	-11.4	-11.4	-56.8
Reconciling 2010-15 performance	-10.5	-10.5	-10.5	-10.5	-10.5	-52.6
Ex ante additional menu income	0.1	0.1	0.1	0.1	0.1	0.3
Capital contributions from connection charges and revenue from infrastructure charges	15.0	15.0	15.0	15.0	15.1	75.1
Final allowed revenues	871.4	874.5	879.6	885.2	893.6	4,404.3

Notes:

1. PAYG includes the PAYG calculated from totex and the pension deficit repair allowance.
2. Including tax on adjustments for reconciling 2010-15 performance and ex ante additional menu income

A3.3 Uncertainty mechanisms

We outline our approach to uncertainty mechanisms in the [risk and reward technical appendix](#). In table A3.9 below, we set out Thames Water's proposed wholesale wastewater uncertainty mechanisms and our assessment of these proposals.

Table A3.9 Thames Water proposals for wholesale wastewater uncertainty mechanisms

Thames Water proposals	Our assessment
Thames Water did not propose any uncertainty mechanisms beyond those that will already form part of the regulatory framework for 2015-20.	

A4. Thames Tideway Tunnel

A4.1 Separate price control

The Thames Tideway Tunnel (TTT) is the main tunnel component of a solution to reduce overflows of untreated sewage into the River Thames in order to achieve compliance with the Urban Wastewater Treatment Directive. The Government has specified the project to be delivered by a third party Infrastructure Provider (IP) given the size and complexity of the project.

We are not determining the IP's revenues at this price review. Instead the IP's revenues (particularly during the construction phase) will be determined through its licence in light of the outcomes of a competitive procurement process for an IP. We intend to consult on a licence for the IP (and necessary associated modifications to Thames Water's licence) this Autumn

Thames still has an important role on the project during construction and into operations including: carrying out the procurement of an IP; obtaining the necessary planning consents to deliver the project; carrying out design for the project; acquiring the land necessary for construction activities to commence; delivering some of the site enabling works; and works to prepare for the interface between the TTT and the rest of the sewerage system.

Up until 31 March 2015 Thames Water will have spent nearly £800m on developing the project. Its June business plan forecast costs of £655 million for Thames Water's activities on the project between 2015 and 2020; an increase from the £508 million included in the December plan.

As set out in section A3.2, Thames Water proposed that the delivery of its components of the TTT could be delivered via a separate price control in its June plan (the 'TTT Control').

We support the introduction of a separate price control for the Thames Water's activities on the TTT as there are a number of benefits to this approach, including increased transparency; and separation of activities with different risk profiles and the provisions of bespoke (and focused) uncertainty mechanisms. Overall, we consider that separately regulating this part of the value chain better protects customers' interests.

This approach will require an amendment to Condition B of Thames Water's licence to align with the final determination. Thames Water did not provide its proposed

licence modifications with its June plan, but has subsequently provided a suite of licence conditions to accommodate the separate price control at a working level. We understand that Thames Water's licence proposals have not been formally endorsed by its Board; the modifications remain part of ongoing discussions with the company and will be subject to a separate licence consultation.

However, a key aspect of Thames Water's proposed modification is that this price control (and Thames Water's TTT RCV) will automatically fold back into Thames Water's wastewater control in 2020. We consider there is no need for an automatic expiry date in the licence as proposed by Thames Water and indeed that this could operate against customers' interests in the long term. Should Thames Water continue to pursue a licence modification on these terms, we expect it to set out clearly in its representations how it is in the customer interest for the TTT price control to automatically fold back into the wastewater price control in 2020.

A4.2 Company outcomes, performance commitments and delivery incentives

A4.2.1 Outcomes, performance commitments and incentives

In the [outcomes technical appendix](#), we discuss our approach to outcomes.

Thames did not propose any outcome delivery incentives or performance commitments for its activities on the TTT in its June business plan submission.

In response to our request, Thames Water has subsequently developed an initial set of performance commitments for the TTT although these were neither tested with customers nor approved by Thames Water's Board. Given Thames Water's key role in the timely delivery of the project, we consider that customers would not be adequately protected without performance commitments and incentives in this area.

The performance commitments Thames Water has proposed are a helpful starting point. Using the company's proposals, we have outlined what we consider to be the three key performance commitments and associated incentives for the project in annex 4. We have reflected these commitments in the RoRE ranges for the TTT control and the appointee.

Thames will need to develop the performance commitments further including how it will measure and report against its performance and engage with its customers to understand their views. Thames Water will also need to update the performance

commitments should it commit to take on additional activities to limit the extent of delays to the project if there is a delay to the appointment of an IP.

As explained in the [outcomes technical appendix](#), we are proposing the introduction of an aggregate cap on rewards and collar on penalties from the outcome delivery incentives. Details of how the cap/collar will operate are set out in section A5 of the Outcomes Technical Appendix.

There are a small number of specific exclusions from the cap/collar. The following Performance Commitment for Thames Water has been excluded from the cap/collar: Thames Tideway Tunnel: We will limit the extent of delays on the overall programme timeline

We summarise the outcomes, performance commitments and outcome delivery incentives for the TTT Control for Thames Water in table 4.1 below. Full detail of the proposed TTT Control outcomes, performance commitments and incentives is provided in annex 4.

Table A4.1 TTT Control outcomes, performance commitments and incentives

Outcome	Performance commitment	Incentive type	Intervention
Thames Water is committed to improving outcomes for customers and for the environment, notably by intercepting significant sewage discharges into the tidal river Thames, working together with the IP to ensure the timely and cost-efficient delivery of the TTT project	Thames did not propose any performance commitments in its June business plan	n/a	<p>Include three performance commitments for Thames Water's activities on the TTT:</p> <ul style="list-style-type: none"> • Limit the extent of delays to the overall programme timeline (financial – penalty only). • Engage effectively with the IP, and other stakeholders, both in terms of integration and assurance (reputational). • Engage with customers to build understanding of the TTT project (reputational).

A4.2.2 Outcome delivery and reporting

In the [assurance technical appendix](#), we set out our proposed framework for the form and level of reporting, monitoring and assurance we will seek from companies during the five-year regulatory period 2015-20 in relation to the delivery of their commitments for the price review. This sets out three levels of assurance and the opportunities available for a company to improve its category status through the finalisation of the price controls and during the regulatory period itself.

We are satisfied with the company's proposals for self reporting that it has applied for the performance commitments across the wholesale and retail control (as summarised in annex 4). We expect Thames Water to set out how it will apply its reporting proposals for the performance commitments it develops in respect of the TTT Control.

A4.3 Calculating the TTT price control

A4.3.1 Calculating allowed TTT expenditure

Our approach to calculating allowed TTT Control expenditure follows the approach adopted for the wholesale water and wastewater controls as set out in the [wholesale water and wastewater technical appendix](#). The proposed TTT Control allowed expenditure for Thames Water is detailed in table 4.2 below.

Its June business plan submission, Thames Water set out its TTT Control costs as a single cost exclusion claim to the wholesale wastewater control. It further split these into three sub-menu exclusion claims relating to Thames Water's view of whether the costs were for: typical activities, atypical activities or land acquisition. Typical costs are for activities which Thames Water considers are broadly consistent with its usual regulated activities. Atypical costs are either for activities which Thames Water considers are not in line with its usual regulated activities or are subject to a high-level of uncertainty.

Thames Water proposed different cost sharing rates for these different types of cost: typical (50:50); atypical (90:10); and land (100:0). It proposed these cost sharing arrangements would lie outside the operation of the wholesale wastewater menu. annex 5 sets out Thames Water's proposals and our approach for the draft determination.

In addition, within the business plan, Thames Water further broke its costs down into individual cost areas and the principal activities within those cost areas.

In respect of the costs and activities included in the atypical category (in the company's business plan), we assessed that nearly all of the costs should be categorised as relating to typical business as usual activities. Where some of these costs related to activities that are uncertain, we have proposed that uncertainty mechanisms could apply. We discuss these issues further in table A4.8.

While we have not included the financial consequences of the implied menu choice for the draft determination we proposed to adopt a cost menu, using the menu for wholesale wastewater for all costs excluding land, for the final determination. This is in order to provide Thames Water with the same incentives and opportunities under which the rest of the industry are being exposed. A menu will maintain an incentive on Thames Water to provide accurate information on Thames Water until it makes its menu choice² and (together with the proposed uncertainty mechanisms) will further help mitigate the risk to the company around our cost challenge. It will provide the company with discretion to choose its cost performance sharing rate based on its own view of appropriate P50 cost (in line with our approach on the wholesale controls). As land costs (and land income) will remain subject to the 100:0 sharing rate (as set out in annex 5) these costs will be excluded in the menu³.

This approach is contingent on Thames Water providing a reasonable response to our challenges on efficient P50 costs, treatment of uncertainty, and providing, through its representations, a firm proposal on consequences from the decision on planning permission (which is expected to be made in September)⁴. We set out our assessment of the costs proposed by Thames Water in 'Protecting customers where there are very material differences between companies' re-submitted plans and

² Within the range 80 to 130 as set out in the [wholesale water and wastewater technical appendix](#).

³ At the 2009 price review, we agreed a 100:0 sharing mechanism for costs to acquire land rights for the project and also any associated income. Normally, under licence Condition K, income from land disposal is shared 50:50 between customers and the company. Given the extensive land rights needed for the project but the clear intention to dispose of these once they were no longer required, we were concerned that customers would not fully benefit from the income arising from the disposal of land, though they had financed the acquisition through increased bills. We considered it was appropriate that customers fully benefit from the net proceeds from rental income and the disposal of project land. We therefore agreed a 100:0 sharing of costs for land acquisition and income from the project land.

⁴ The Secretary of State for Department of Communities and Local Government, and the Secretary of State for Defra will make the decision on whether to grant planning permission for the project.

Ofwat's wholesale cost assessment', we provide further detail on our cost assessment in annex 1.

Finally, as explained above on 6 August we informed Thames Water that very material differences remain between its re-submitted plan and our assessment of efficient TTT Control. We did this to give Thames (and other affected companies) as much time as possible to reflect on its plan for the coming five-year period and reconsider its proposals in response to our draft determinations.

Table A4.2 TTT allowed expenditure (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Ofwat's assessment of costs eligible for menu cost baseline ¹	84.4	59.2	56.1	51.5	26.5	277.7
Allowed expenditure from menu	Not modelled for the purposes of the draft determination. Our intention is to adopt the wholesale wastewater menu for the final determination.					
Costs excluded from menu (that is, land costs under 100:0 sharing) ²	22.7	14.0	2.8	6.0	1.0	46.6
Total allowed expenditure^{3,4}	107.1	73.2	59.0	57.6	27.5	324.3

Notes:

1. We profiled our view of expenditure based on the company's profile, after taking into account that £110m of delay to the appointment of the IP was included in 2015-16
2. Land costs will be set outside of the menu
3. See annex 1 and the populated version of draft determination initial cost threshold models for further details of our cost assessment
4. Numbers may not add due to rounding

A4.3.2 Calculation of PAYG rates and RCV run-off

Thames did not request any PAYG or RCV run-off for the TTT Control in its June business plan. This is because the project will not be operational in 2015-20 and will not deliver long-term benefits to customers until after 2020. Because the TTT will be completed post-2020, there is no RCV run-off for the TTT Control in the 2015-20 period. This is consistent with usual accounting practice for depreciation and the absence of customer benefit from the RCV until after the project is operational.

Thames did however propose an asset life of around 133 years in the business plan for totex additions. We did not use this asset life in the draft determination to be consistent with the view that there will be no RCV run-off in 2015-20. As explained above, this is in line with usual accounting practice.

A.4.3.3 Return on the RCV

Table A4.3 shows our calculation of the opening RCV at 1 April 2015 taking account of the adjustments for 2010-15 performance discussed in section A4.3.4 below.

Table A4.3 Thames Water TTT opening RCV (£ million)

	2015-16
Allocation of RCV from the wholesale wastewater control as at 31 March 2015 ¹ .	316.0
Land sales ²	0
Adjustment for actual expenditure 2009-10	0.5
Adjustment for actual expenditure 2010-2015	0
Net adjustment from logging up, logging down and shortfalls ³ .	481.1
Other adjustments	0
Opening RCV 1 April 2015	797.5

Note:

RCV included at PR09 for logging up in 2008-09 and 2009-10, and £261.5m included for 2010-15. This has been reallocated from the wholesale wastewater control.

1. Income from land is netted off capex in the logging up adjustment, in the line "net adjustment from logging up, logging down and shortfall"
2. Net of income from land

Table A4.4 Thames Water TTT return on RCV (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20
Opening RCV	797.5	904.7	977.9	1,036.8	1,094.4
RCV additions (from totex)	107.1	73.2	59.0	57.6	27.5
Less RCV run-off	0.0	0.0	0.0	0.0	0.0
Closing RCV	904.7	977.9	1,036.8	1,094.4	1,121.9
Average RCV (year average)	851.1	941.3	1,007.3	1,065.6	1,108.1

	2015-16	2016-17	2017-18	2018-19	2019-20
Return on capital	31.5	34.8	37.2	39.4	41.0

Table A4.5 TTT adjustments for financing costs in 2010-15 (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Financing costs revenue adjustment	6.4	6.4	6.4	6.4	6.4	32.0

A4.3.4 Reconciling 2010-15 performance

At PR09 we allowed £261.5m for development and land activity over the period 2010-15 through the price limit. We also logged up (to the RCV) £54.5m for additional expenditure Thames Water had incurred between 2008-2010. At the time we recognised that there was still considerable uncertainty around the project timetable. As a result Thames Water may incur additional expenditure. Therefore we committed to log up efficient additional expenditure. We provided a notified item for land costs so that Thames Water could ask for price controls to be reopened before PR14 should land costs increase materially. We also excluded these costs from CIS.

In its June business plan, Thames Water proposed to log up costs of £597.0m that were in addition to the expenditure allowed at PR09. Of this £300.2m was for acquiring land rights for the project and £296.8m was for development and delivery of the project. Thames Water provided sufficient evidence to justify £481.5m of its requested costs; but did not do so for the remaining £115.5m.

We summarise our views and the associated interventions in table A4.6 below. The interventions are explained in more detail in annex 3. The impact on the opening RCV of 2010-15 adjustments is shown in table A4.3

Table A4.6 Thames Tideway Tunnel change protocol adjustments (£million)

Area	Intervention	Why we did it	Total 2010-15
Land – logging up	We have intervened in the following areas: <ul style="list-style-type: none"> Accrued deferred lease payments Possible double counting in 2014-15 forecast costs 	We do not consider that customers should pay for lease payments before Thames Water has incurred them. Customers should not pay twice for the acquisition of a land right.	£-46.5m
Other costs (non-land) – logging up	We intervened in Thames Water's forecast for 2014-15	Thames did not provide sufficient evidence to demonstrate that its forecast costs were likely to occur in 2014-15 and that they were efficient	£-68.9m
Total			£-115.5m

Notes:

- Numbers may not add due to rounding

A4.3.5 Calculation of allowed revenue

The calculation of the allowed revenue for Thames Water's TTT Control is shown in table A4.7.

Table A4.7 Thames Water TTT allowed revenue (£ million)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Totex	107.1	73.2	59.0	57.6	27.5	324.3
PAYG ratio	0.0%	0.0%	0.0%	0.0%	0.0%	-
Totex additions	107.1	73.2	59.0	57.6	27.5	324.3
RCV (year average)	851.1	941.3	1,007.3	1,065.6	1,108.1	-

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Wholesale allowed revenue build up:						
PAYG	0.0	0.0	0.0	0.0	0.0	0.0
Return on capital	31.5	34.8	37.2	39.4	41.0	183.9
RCV run-off	0.0	0.0	0.0	0.0	0.0	0.0
Tax	0.0	0.0	0.0	0.0	0.0	0.0
Financing costs for 2010-15	6.4	6.4	6.4	6.4	6.4	32.0
Final allowed revenues	37.9	41.2	43.6	45.8	47.4	215.9

Notes:

1. The company used the capital contributions from the connection charges line in the financial model to input income from land rental in the company's plan. As we have included this as an RCV adjustment, we have corrected the capital contributions line to zero.

A4.4 Uncertainty mechanisms

As set out in our [risk and reward technical appendix](#), we understand that companies face uncertainty about future costs and revenues and that appropriate risk sharing mechanisms provide companies with incentives to reduce costs and provide better services.

Table A4.8 Thames Water proposals for the TTT Control – uncertainty mechanisms

Thames Water proposals	Our assessment
Alternative cost sharing rates for costs assessed as 'typical' and 'atypical' costs.	<p>We have reviewed the costs and activities included in the atypical category in the company's business plan. We assessed that nearly all of the costs should be categorised as relating to typical, business as usual activities.</p> <p>Where costs are identified as atypical, this is due to the uncertainties associated with (i) the outcome of the planning consent process and (ii) the timing of the award of the licence to the Infrastructure Provider</p>

Thames Water proposals	Our assessment
	<p>(IP).</p> <p>We explain our proposals in respect of the uncertainty mechanism in section A4.4.1 and provide further detail of our assessment of Thames Water’s proposed mechanisms in annex 5.</p>
<p>Uncertainty mechanisms to deal with tax implications associated with both the separate TTT Control within the next period and the inter-relationship between Thames Water and the IP.</p>	<p>Our financial modelling shows there is no tax payable by Thames Water in the period 2015-20 due to the availability of capital allowances and tax losses. Moreover, there is significant headroom available at the level of the Appointee before tax would be payable. Given this, we consider that uncertainty mechanisms are unnecessary over 2015-20 on grounds of materiality.</p> <p>We understand that given the unique delivery model for the project, the relevant tax treatment of the project (including both the IP delivered elements and the Thames Water delivered elements) is still to be agreed with HMRC. This suggests this risk is still partly within the company’s control.</p>

A4.4.1 Proposed uncertainty mechanism for the draft determination

For the TTT Control, we have considered risk and uncertainty consistent with the framework for PR14 overall. We have applied the wholesale cost of capital to the TTT Control, and in doing so we have taken into account our view that Thames Water retains appropriate ownership of the design (and associated liability) of the works it has carried out for the overall TTT project. We have also taken account of the fact that there are areas of the TTT Control which face lower risk than the “business as usual” wholesale wastewater control (such as the treatment of land costs); and the available mechanisms to mitigate unique material risks where they are largely out of Thames Water's control.

As set out in ‘Setting price controls for 2015-20 – risk and reward guidance’ there are a range of standard industry uncertainty mechanisms that apply to the wholesale controls. We consider that mechanisms relating to RPI indexation, five-yearly price reviews, totex sharing rates, the flexibility provided by ODIs and the interim

determination of K (IDoK) and substantial effects provisions all have merits in respect of the TTT Control.

In respect of the IDoK mechanism itself, it is possible to incorporate this within the licence triggers that may be enduring such as a Relevant Changes of Circumstance (RCC) already within company licences, or to adopt Notified Items through the price control itself which are in place for the duration of the price control.

We discuss our rationale in response to the specific proposals by Thames Water in table AA5.1 in annex 5. Our proposals for addressing uncertainty in the TTT Control are summarised below:

- We propose to adopt a bespoke IDoK mechanism for the TTT Control for specified circumstances that are beyond management control. In addition, we propose a mechanism that would allow certain, specified costs to be logged up at the next price review if Thames Water does not reopen price controls before the next price review.
- The uncertainty mechanism would only apply to net additional costs that arise from the reallocation of scope of work from the IP to Thames Water in order to secure efficient project delivery in the event of delay to the appointment of the IP (where this is beyond Thames Water's control).
- We are considering whether to allow a company specific Relevant Change of Circumstance (RCC) in Thames Water's licence for changes to the scope of the project (as set out in the Specification Notice or Preparatory Works Notice⁵) where it changes Thames Water's obligations on the project.
- We propose to include a bespoke materiality threshold in the licence of 10% of RCV for an interim determination mechanism for the TTT Control. This means in aggregate Thames Water's additional costs would need to be at least equal to 10% of the RCV in the TTT Control before it could ask for prices to be reopened.
- We propose to adopt a triviality threshold of 2% to each notified item that would apply to the 2015-20 totex baseline for Thames Water's activities on the TTT.

⁵ The Secretary of State issued a project specification notice on 5 June 2014. This requires Thames to start a competitive procurement process for an IP to finance and build the tunnel. The specification notice defines the work to be delivered by an IP, while the preparatory works notice sets out the work that Thames shall carry out on the project and also identifies other activities which Thames may need to deliver.

- We propose to revisit the potential requirement for an uncertainty mechanism, ahead of final determinations, once the outcome of the planning consent process is known.
- Our proposals are made on the basis that the amendments to Thames Water's licence are enduring. We consider this will provide investors with confidence that the licence mechanism would not need to be subject to further review at the 2019 price review while work in the TTT project continues into the 2020-25 period.

A5. Household retail

A5.1 Company outcomes, performance commitments and delivery incentives

In the [outcomes technical appendix](#), we discuss our approach to outcomes for the wholesale and retail controls.

We summarise the outcomes, performance commitments and outcome delivery incentives for the household retail control for Thames Water in table A5.1 below.

For some performance commitments and incentives types, we have intervened to change the underlying performance level or incentives. These interventions are listed in table A5.1 below. Full detail of the wholesale water outcomes, performance commitments and incentives is provided in annex 4.

Table A5.1 Household retail outcomes, performance commitments and incentives

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
Offer a choice of easy to use contact options	Implement new online account management for customers supported by web-chat	Financial – penalty only	Bottom-up analysis: Introduce-value based penalty for years 4 and 5 to fully compensate customers in the event of delay
Improving cash collection from those that can pay and helping those that are struggling to pay	Increase the number of customers on a payment plan (excluding Thames Tideway Tunnel)	Non-financial incentive	Bottom-up analysis: Remove the Thames Tideway Tunnel exclusion
	Increase cash collection rates (excluding Thames Tideway Tunnel)	Non-financial incentive	Bottom-up analysis: Remove the Thames Tideway Tunnel exclusion

Company proposal			Intervention
Outcome	Performance commitment	Incentive type	
	Minimise the number of written complaints received from customers	Non-financial incentive	No Intervention
	Improve handling of written complaints by increasing first time resolution	Non-financial incentive	No Intervention
	Improve customer satisfaction of Retail customers (charging and billing services only)	Non-financial incentive	No Intervention
	Improve customer satisfaction of Retail customers (operations contact centre)	Non-financial incentive	No Intervention
	Increase the number of bills based on actual meter reads (in cycle)	Non-financial incentive	No Intervention
	Service Incentive Mechanism (SIM)	Reward and penalty	Horizontal check: PC added (industry wide incentive)

A5.1.1 Outcome delivery and reporting

In the [assurance technical appendix](#), we set out our proposed framework for the form and level of reporting, monitoring and assurance we will seek from companies during the five-year regulatory period 2015-20 in relation to the delivery of their commitments for the price review. This sets out three levels of assurance and the opportunities available for a company to improve its category status through the finalisation of the price controls and during the regulatory period itself

We are satisfied with the company's proposals for self reporting. But consistent with the commentary in our assurance technical annex, we will need to consider the categorisation of the company for assurance purposes at the final determination.

Thames Water’s proposed approach to the measurement, reporting and governance of outcomes and our assessment of this approach is summarised in annex 4.

A5.2 Costs

Our approach to the household retail control is set out in the [household retail technical appendix](#).

A5.2.1 Allocation of costs

In table A5.2 below, we summarise our assessment of Thames Water’s cost allocation methodology.

Table A5.2 Our assessment of Thames Water’s cost allocation methodology

Area assessed	Assessment
No potential material misallocations	Fail
Adequate assurance provided	Pass
Reconciliation to regulatory accounts and December business plan provided	Pass
Correct price base used	Fail

The company has submitted information to suggest that it has allocated its costs in line with our guidance. We will use the company’s costs, but note the following issues and actions associated with the company’s approach to the allocation of costs:

- the company has not allocated the following costs between retail and wholesale in accordance with our guidance – IT costs (telephony) and facilities, building and grounds maintenance.
- the company has not allocated debt management between household and non-household in accordance with our guidance.
- the company has not allocated doubtful debts between household and non-household in accordance with our guidance. It has allocated this cost based on the write-offs over a five-year period. We understand that this is due to limitations in the company’s systems which mean that it cannot allocate the movement in its doubtful debt provision specifically between household and non-household.
- the company has not complied with the principal use guidance with respect to the allocation of capital costs and depreciation; and

- the company has not used the prescribed customer number ratio of 1.3 for dual service customers when allocating its costs between household and non-household using customer numbers.

While reviewing the company's cost allocations, we also noted that the company had submitted tables R3 and R4 in 2013-14 outturn prices. This is not in line with our guidance which required these tables to be prepared in 2012-13 base year prices. We have amended our models to deflate the company's household and non-household costs to 2012-13 base year prices.

We have noted some concerns with the allocation of costs in the company's plan, in particular that the June plan was not in line with revised guidance. In order to address the issues that we have identified, we expect the company to submit the following information to us in its representations:

- a cross-check of its allocation of doubtful debts based on write offs against an allocation based on the movement in outstanding debt and present us with the results of this cross-check (that is, how different would the allocation between household and non-household be based on the movement in outstanding debt from 31 March 2013 to 31 March 2014);
- a revised table R3 and R4 with capital costs and depreciation allocated in accordance with our guidance;
- a calculation of what the allocation of costs would be between household and non-household using the correct customer number ratio for dual service customers of 1.3 and allocating debt management between household and non-household in accordance with our guidance (on a sample basis if required); and
- where this calculation gives a difference to the current business plan allocation in excess of our materiality threshold for allocations between household and non-household (greater than 2% of R4 line 1) reallocate these costs in tables R3 and R4.

A5.2.2 Adjustments

In table A5.3 below, we outline Thames Water's proposed average cost to serve (ACTS) adjustments and our assessment of these proposals. The adjustments proposed by Thames Water and Ofwat are quantified in table A5.3. Our approach to assessing adjustment claims is set out in the [household retail technical appendix](#).

Table A5.3 Thames Water proposals for ACTS adjustments

		Adjustment assessment criteria			
Adjustment	Value (£m over 2015-20)	Materiality	Beyond efficient management control	Impact company in materially different way	Value of adjustment appropriate
Thames Tideway Tunnel	13.5	Fail	n/a	n/a	n/a

Thames Water sought an ACTS adjustment for increased retail costs due to the Thames Tideway Tunnel (TTT). Thames Water proposes that this adjustment is necessary to cover additional costs (principally comprising bad debt and commissions) that arise from Thames Water acting as the principal to the billing arrangements with the Infrastructure Provider⁶. The value of the company's proposed adjustment in its original business plan was £24.9m, but Thames Water reduced this to £13.5m in its revised business plan.

We reject Thames Water's proposal for an ACTS adjustment for increased retail costs due to the Thames Tideway Tunnel (TTT). Thames Water's revised adjustment value is no longer material and, hence in line with our methodology, cannot be allowed as an adjustment to the ACTS.

Regardless of the materiality of the proposed adjustment, Thames Water did not provide sufficiently convincing and consistent evidence regarding the scale of the impact of TTT-related bill increases on its retail costs vis-à-vis other drivers of these retail costs.

Thames Water's evidence on its management practices relating to the costs for which an adjustment was sought (bad debt, customer contacts and commissions) was mixed and, in some instances, incomplete.

⁶ The Infrastructure Provider is the entity that will undertake the tunnelling activities in respect of the delivery of the Thames Tideway Tunnel.

Table A5.4 Household retail adjustments (£ million, nominal prices)

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Adjustments proposed in Thames Water's business plan						
Thames Tideway Tunnel	1.035	1.796	2.802	3.758	4.094	13.485
Pension deficit repair costs	1.555	1.555	1.555	1.555	1.555	7.776
Adjustments included in business plan	2.590	3.351	4.357	5.313	5.649	21.261
Adjustments included in draft determination						
Thames Tideway Tunnel	0.000	0.000	0.000	0.000	0.000	0.000
Pension deficit repair costs	1.627	1.627	1.627	1.627	1.627	8.137
Adjustments included in draft determination	1.627	1.627	1.627	1.627	1.627	8.137

Note:

There will be no indexation for retail price controls.

A5.2.3 New costs

In table A5.4 below, we outline Thames Water's proposed 'new costs' and our assessment of these proposals. The new costs included in this draft determination are quantified in table A5.5.

Table A5.5 Thames Water proposals for household retail new costs

Value (£m over 2015-20)	New costs assessment criteria				
	Materiality	Need	Options and CBA	Robustness of costs	Customer protection
86.9	Fail	Fail	Fail	Fail	Pass

Thames Water sought an allowance for new costs associated with a new billing system. The value of the company's proposed adjustment was £73.4m. An investment of £25.7m in a new billing system was also included in Thames Water's business plan for the previous price control period, 2010-15.

In addition, the £13.5m for additional retail costs due to TTT are included in the new cost assessment. These have not been allowed as an adjustment as they are immaterial.

Thames Water also included a net incremental reduction in expenditure of £-10.2m in its business plan due to the following outcomes:

- Outcome A: Improve customer service by 'doing the basics' to an excellent standard and by getting things 'right first time';
- Outcome B: Offer a choice of easy to use contact options; and
- Outcome C: Improve cash collection from those customers that can pay and helping those customers who are struggling to pay.

The change in expenditure associated with these outcomes has not been factored into the calculation of new costs or the setting of household retail expenditure as this was identified late in our process. These changes to expenditure and the evidence supporting them will be considered when setting final determinations.

Thames Water's proposed new costs are not material regardless of whether the additional retail costs due to TTT are included or excluded. This is because the increases in costs are offset by Thames Water's forecast efficiency savings.

However, funding for a billing system was included in both the company's 2010 – 2015 business plan and the 2015 – 2020 business plan. As the funding included in the previous price control was not spent replacing the billing system, we are concerned that allowing for this investment in the 2015 – 2020 period would result in customers paying twice. We raised this concern at the risk-based review conducted in early 2014, and have consequently reassessed the evidence supporting this specific cost:

- The need for the investment is supported by an assessment of the risks of continuing to use old systems and the benefits of improving customer service.
- Thames Water has provided evidence setting out its view that the proposed investments are cost-beneficial, although there are some issues with this evidence. The costs and benefits of several options are not quantified and so the proposed solution is not demonstrated to be the most cost beneficial.
- There is no evidence that the costs have been market tested or otherwise shown to be robust.
- The SIM will provide some protection to customers. In addition, customers are protected from failure to make this investment through an ODI, which we have intervened on to strengthen the penalties, as the original proposal gives significant leeway for late delivery. There is no customer recompense for the fact

that the funding that Thames Water has already received for this investment has been invested elsewhere.

As these proposed new costs do not result in material increases in Thames Water's costs due to other efficiency savings (ie the costs remain below the materiality threshold), we have allowed these new costs in our draft determination. However, our final decision regarding these new costs will be made in Thames Water's final determination and we would expect to see further evidence supporting these investments, as well as proposals for how to protect customers in the event that the investment does not deliver as envisaged. We will also consider whether short-falling is required for the investments in the previous price control period.

Table A5.6 New household retail costs (£/customer)

	Value
Modification made to 2013-14 CTS for ACTS calculation	0.0

Note:

There will be no indexation for retail price controls from this 2012-13 price base.

A5.3 Calculating the allowed revenues

Using the average industry allowances per customer and the projected customer numbers in the company's revised business plan; we have calculated the total allowed household retail revenues including the efficiency challenge and the household retail net margin.

For the purposes of calculating the retail net margin we have included revenue arising from the TTT control and the pass through of revenue to the IP. In calculating the effect of the margin we have reallocated the revenue that Thames Water implies will be passed to the IP in 2015-16 to 2016-17. This is consistent with the approach Thames Water has proposed for the IP given the appointment of the IP is expected to be after bills have been issued for 2015-16. As the actual revenue that will be passed through to the IP is not known at this stage we will consider a true-up for the impact on the pass through of revenue to the IP on the calculation of the net margin when we next set price controls, if material.

A5.3.1 Net margins

The table below shows the household retail net margin over 2015-20.

Table A5.7 Household retail net margins (%)

	2015-16	2016-17	2017-18	2018-19	2019-20
Household retail net margin	1.00%	1.00%	1.00%	1.00%	1.00%

Table A5.8 below sets out the components of the allowed household retail revenue.

Table A5.8 Components of the allowed household retail revenue (nominal prices)

	2013-14	2015-16	2016-17	2017-18	2018-19	2019-20
Company cost to serve (£/customer)						
Unmetered single service customers	20.29					
Unmetered water and wastewater customers	26.38					
Metered water only customers	35.89					
Metered wastewater only customers	23.82					
Metered water and wastewater customers	42.16					
Industry average cost to serve (£/customer)						
Unmetered single service customers						21.02
Unmetered water and wastewater customers						27.11
Metered water only customers						24.37
Metered wastewater only customers						33.66
Metered water and wastewater customers						27.33
Allowed cost to serve¹ (£/customer)						
Unmetered single service customers		19.49	19.94	19.80	19.86	19.05

	2013-14	2015-16	2016-17	2017-18	2018-19	2019-20
Unmetered water and wastewater customers		25.33	25.92	25.74	25.82	24.76
Metered water only customers		32.70	30.77	28.24	25.92	25.10
Metered wastewater only customers		22.96	23.36	23.17	23.18	22.36
Metered water and wastewater customers		38.73	36.94	34.38	32.08	31.02
Total allowed (£ million)						
Cost to serve (excluding net margin)		144.5	147.4	146.1	145.6	142.9
Forecast household wholesale charge (including forecast RPI ²) ³		1,816.1	1,948.3	2,053.1	2,191.6	2,332.4
Household retail revenue (including an allowance for the net margin) ⁴		161	165	164	165	163

Notes:

There will be no indexation for retail price controls.

1. Allowed cost to serve includes pension deficit repair costs.
2. The household wholesale charge includes forecast RPI so that the total household retail revenue can be displayed on the same price base as other retail costs.
3. The allocation of allowed wholesale revenue to different wholesale charges will be at the company's discretion, subject to charging rules and licence conditions. Wholesale charges includes IP revenue for the purposes of calculating retail margin.
4. This number is indicative as allowed revenue will depend upon actual customer numbers.

A5.4 Uncertainty mechanisms

We outline our approach to uncertainty mechanisms in the [risk and reward technical appendix](#). In table A5.9 below, we set out Thames Water's proposed household retail uncertainty mechanisms and our assessment of these proposals.

Table A5.9 Thames Water proposals for household retail uncertainty mechanisms

Thames Water proposals	Our assessment
------------------------	----------------

Thames Water did not propose any uncertainty mechanisms beyond those that will already form part of the regulatory framework for 2015-20.

A6. Non-household retail

In the [non-household retail technical appendix](#), we outline our overall approach to the non-household retail price control. Further information regarding our observations on companies' proposals for their non-household retail price controls is set out in [IN 14/14 – 2014 price review – non-household customer engagement ahead of draft determination representations](#).

In this chapter, we provide details of Thames Water's non-household retail draft determination.

A6.1 Indicative non-household retail total revenue

Table A6.1 below shows the indicative total of non-household allowed revenue. The table is indicative, as it does not assume any gains or losses from competition or impacts from the company charging customers at levels different to the relevant default tariffs for the projected customers in each customer type.

Table A6.1 Indicative non-household retail total revenue price control including net margins (£ million, nominal prices)

	2015-16	2016-17	2017-18	2018-19	2019-20
Indicative non-household retail total revenue price control including net margins	29	30	30	31	31

Note:

There will be no indexation for retail price controls from this price base. The non-household wholesale charge includes forecast RPI so that the total non-household retail revenue can be displayed on the same price base as other retail costs. Figures exclude retail services to developers and revenues associated with miscellaneous charges. Retail revenue has been calculated using wholesale revenue that includes IP revenue for the purposes of calculating retail margin.

A6.2 Net margins

The company proposed net margins that summated in aggregate to 2.5%. This is in line with our risk and reward guidance. We have therefore accepted the company's proposals.

A6.3 Cost proposals

Below we set out our interventions on the company's costs, including for:

- Consistency with existing policy, including for example ensuring that companies' cost information is presented in a consistent price base and pension deficit costs are presented as per our stated policy; and
- Cost escalation, including for example material new investments or increases in costs or requests for input cost allowances.

The table requirements stipulated the use of 2012-13 prices. The company did not deflate its costs; therefore we have deflated its submission from 2013-14 prices to 2012-13 prices.

In ['IN 13/17: Treatment of companies' pension deficit repair costs at the 2014 price review'](#) we explained how we would treat the costs associated with water companies reducing the deficits in their defined benefit pension schemes at the 2014 price review. Where companies' proposals have differed from our calculations we have over-written their proposals in line with our overall approach.

This resulted in the company's proposals being adjusted from £1.000 million over the control period, to £1.304 million.

Overall the company's proposed costs increase by more than our non-household retail materiality threshold of 5.3% between 2015 and 2020. We therefore assessed the evidence presented in the company's plan.

The company proposed £4 million for 'additional activity preparing for market opening', and £4.6 million for 'central market costs'. Both these items are costs associated with preparing for market opening, and as such, should be supported by evidence on their size and need. Sufficient evidence in this area has not been provided.

In addition, the company has submitted a capex plan totalling £26.2 million covering base IT capex of around £5.7 million, and investment to replace the company's old legacy customer billing system of around £20.5 million.

The company refers to the same supporting appendix as for the IT investment in the household retail control, even though the company is proposing to develop two distinct systems, one for household and one for non-household. The referenced appendix makes little reference to the investment in the non-household control,

focusing on the larger household customer billing system. There is therefore insufficient evidence on the need, costs or benefits for a new customer relationship management and billing system (CRM) for non-household customers. Furthermore, there is no clear explanation of how the value of this investment was derived. We have therefore reduced the company's new costs down to our materiality threshold.

In total (including the pension deficit repair cost and price base adjustments), this resulted in the company's proposed costs being adjusted from £116.136 million over the control period to £96.170 million.

A7. Appointee

In this section we discuss at an appointee level:

- bills and k factors;
- return on regulated equity
- financeability; and
- affordability

A7.1 Bills and K factors

Table A7.1 below sets out the allowed revenues we have assumed in our draft determination for Thames Water to deliver its:

- statutory duties;
- outcomes; and
- associated performance commitments.

It also sets out the average customer bills on the basis of the draft determination.

Table A7.1 Thames Water’s draft determination – K factors, allowed revenues and customer bills (in 2012-13 average prices)^A

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
Wholesale water – allowed revenues (£m) ¹	790.7	790.5	791.2	793.6	800.6	3,966.7
Wholesale water – K (%) ²	0.00%	-0.02%	0.18%	0.12%	0.69%	
Wholesale wastewater (excl. TTT) – allowed revenues (£m)	871.4	874.5	879.6	885.2	893.6	4,404.3
Wholesale wastewater (excl. TTT) ² – K (%)	0.00%	0.35%	0.70%	0.44%	0.76%	
TTT only – allowed revenues (£m)	37.9	41.2	43.6	45.8	47.4	215.9

	2015-16	2016-17	2017-18	2018-19	2019-20	Total
TTT ^{2, 5} only – K (%)	0.00%	8.81%	6.03%	4.74%	3.24%	
Retail household allowed revenue (£m)	160.7	164.6	164.3	164.9	163.4	817.8
Retail non-household expected revenue (£m)	29.1	29.7	30.1	30.7	31.3	151.0
Average household bill – water (£)	197	196	194	193	193	
Average household bill – wastewater (excl. TTT) (£)	154	158	155	154	154	
Average household bill – TTT only (£) ⁵	6	6	7	7	7	
Average household bill – wastewater incl. TTT (£)	160	165	162	161	161	
Average household bill – combined (£) ^{3, 4}	339	343	338	337	337	
Average household bill – IP (£) ⁶	2	6	12	20	26	
Average household bill – incl. IP (£)	341	349	350	357	363	
Average household bill – TTT and IP only (£)	8	12	19	27	33	

Notes:

A Wholesale and TTT figures in 2012-13 prices and retail figures in nominal prices.

1. The allowed revenue for our draft determination is based on an implied menu choice. The company will have the opportunity to make its own menu choice, which will impact on its allowed revenues and customers' bills.
2. As discussed in the [wholesale water and wastewater technical appendix](#), K is set to zero for 2015-16 for wholesale water and wastewater because there are no directly equivalent wholesale revenues for 2014-15 (because of the new price review structure). As such, there is no reference point against which to express a change in K.
3. The average combined household bill is not equal to the sum of the average household water bill and the average household wastewater bill due to the use of the economies of scope factor in the household retail price control.
4. It should be noted the average household bill illustrated above reflects a notional allocation (by Ofwat but based on the company's split of household and non-household customers) of the overall wholesale revenue

requirement across Thames Water's household and non-household customer base. In practice, this will depend upon the structure of wholesale charges implemented by Thames Water.

5. We have not attempted to profile the TTT bill impact.
6. The average household bill that relates to the IP is uncertain at this stage. The IP revenues are not determined by Ofwat in the IP's construction phase. Instead this will be determined by a competitive procurement exercise and the terms of the IP's licence. The bill profile presented here is the one estimated by Thames Water in its June plan.

We note that customer bills in the regulatory period from 2020 will be affected by Thames Water's performance in the forthcoming regulatory period in relation to costs and the regulatory incentives in place for performance delivery and revenue projection performance.

The bills for Thames Water's customers receiving its wastewater services will also include the Thames Tideway Tunnel activities undertaken by Thames Water (TTT Control) and the Infrastructure Provider (IP). The exact bill impact arising from the IP is uncertain at this stage. Thames Water included an estimate of the impact on customers' bills in its June submission which is represented in the table above.

A7.2 Return on regulated equity range

We set out our approach to calculating the expected range in RoRE in the [risk and reward technical appendix](#). The composition of the RoRE range for Thames Water at an appointee level is shown in table A7.2 and Figure A7.1 below.

Table A7.2 Thames Water's RoRE ranges

	Lower bound (%) (appointee)	Upper bound (%) (appointee)
Overall	-4.8%	+2.8%
ODIs	-1.8%	+0.5%
Totex	-2.0%	+1.4%
Financing	-0.7%	+0.7%
SIM	-0.4%	+0.2%
Commentary:		
The whole company RoRE range is from 0.9% to 8.5%, with a base case of 5.7%. This translates to a downside impact of -4.8% and an upside variance of +2.8% as shown in the table.		
Thames Water has modelled totex performance variance by applying a Monte Carlo methodology to detailed data about its underlying cost drivers and to macro-economic		

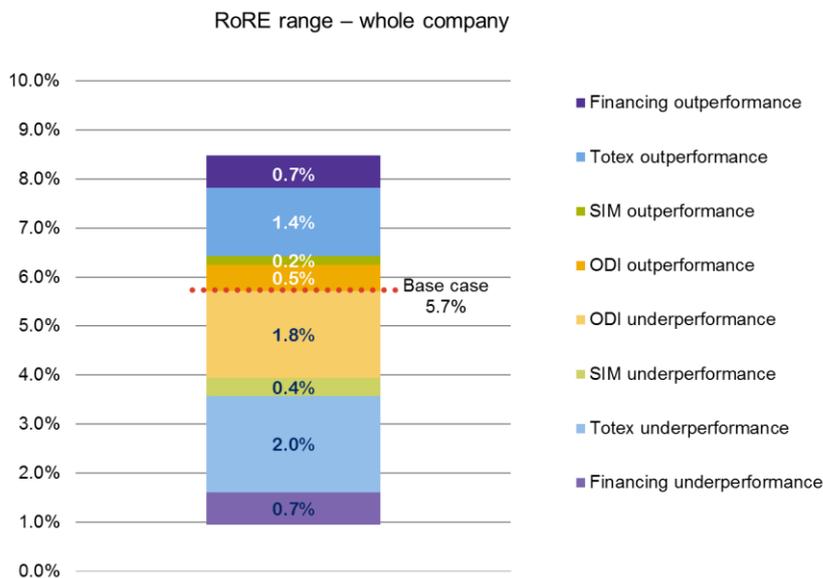
variables. We consider its approach to be robust and the resultant RoRE impacts, ranging from -2.0% to +1.4%, are broadly in line with other companies. We have not made any adjustments for our interventions on totex or inclusion of menu for TTT Control costs.

The ODI range proposed by Thames Water was from -1.1% to +0.6%. We have adjusted this to -1.8% to +0.5% to take account of the interventions in respect of the TTT control.

Thames Water’s estimate for financing risk, which is $\pm 0.7\%$ of RoRE, assumed autocorrelation, as well as the variation in interest rates. Thames Water modelled the spread between corporate bond rates and UK government rates in a similar way. We consider that this approach overestimates financing risk in a number of ways. For example it treats forecast and non-forecast changes in interest rates as the same and it treats UK government rates and corporate interest rate spreads as independent. However, as financing risk is a relatively small component of the RoRE range, we have not intervened to adjust the rate for the purpose of draft determination and will consider any further evidence on appropriate range in final determination.

Thames Water has estimated its SIM range based on maximum reward and penalties (+6% to -12% of household revenue) reflecting its view that it would be feasible for it to achieve a SIM outturn at either end of the range. While Thames Water has had the lowest SIM score of any water company for the last two years, we consider that this range is appropriate given the company’s ambition in this area.

Figure A7.1 Thames Water RoRE range – appointee



Source:

Ofwat calculations based on information from Thames Water

A7.3 Financeability

We have compared the financial ratios provided by Thames Water and our calculation of its financial ratios implied by the company's business plan proposals submitted on 27 June, when both are prepared on a notional basis. We illustrate these in table A7.3 below. The final column of table A7.3 sets out the financeability ratios based on our draft determination revenues and costs.

Table A7.3 Company and Ofwat notional financial ratio calculations based on the company business plan and notional financial ratios based on our draft determination

Financial ratios for notional company	Financial ratio calculations based on the company business plan (average 2015-20)		Financial ratio calculations based on our draft determination (average 2015-20)
	Company calculation	Ofwat calculation	
Cash interest cover	2.59	2.68	2.82
Adjusted cash interest cover ratio (ACICR) – base case (average over five years)	1.25	1.31	1.40
Funds from operations/debt	7.38%	7.99%	8.64%
Retained cash flow/debt	4.99%	5.51%	6.10%
Gearing	64.62%	64.80%	64.17%
Dividend cover (profit after tax/dividends paid)	0.63	0.74	0.94
Regulatory equity/regulated earnings for the regulated company	18.12	16.59	16.66
RCV/EBITDA	12.45	12.02	11.57
Commentary:			
<p>Financial ratios: Thames Water has provided Board assurance that it is financeable on an actual and notional basis. On a notional basis its target credit rating is BBB+. Thames Water consider its notional financeability ratios are consistent with a BBB rating. These ratios are set out above. In order to meet its target rating, it has proposed to adjust notional dividends and increase the level of index linked debt to improve its financial ratios. Thames</p>			

Water believes that on the basis of these adjustments, it is financeable on the notional capital structure, but that this would not provide a return which is commensurate with the risk which equity assumes. Thames Water has provided third party assurance on its notional financeability. Our notional ratios are above the company's calculations, taking account of our interventions in its plan and also appear broadly consistent with the company's target ratios as set out in its plan. As set out below, Thames Water has elected not to use PAYG ratios to manage any financeability issues following adoption of the wholesale cost of capital and retail margins consistent with risk and reward guidance. This has resulted in ratios that are below many other companies on a notional basis. Consistent with PR14 methodology, we expect companies to take responsibility for their financeability and to appropriately balance customer and company interests in their use of PAYG/RCV run off rates. Thames Water has proposed to pass through the full benefits of weighted average cost of capital (WACC) reduction in 2015-20 period and this results in lower ratios, nonetheless these are still consistent with an investment grade credit rating. On this basis we consider that there is sufficient evidence that the company is financeable for the draft determination.

PAYG changes: Thames Water has slightly adjusted its PAYG rates from its December plan – from 57% to 58% for water and from 45% to 42% for wastewater. The June plan is broadly neutral on PR09 equivalent basis. The PAYG rate is 100% of opex plus IRE and 101% of opex plus IRE expensed, with Thames Water expensing 96% of its IRE.

Pass through of WACC reduction: Thames Water has not materially adjusted its PAYG or RCV run offs in response to the reduction in the WACC between December and June. Therefore all the benefit of the WACC reduction has been passed back to customers in 2015-20.

Conclusion on intervention: As our financial ratios are higher than Thames Water's, consistent with an investment grade credit rating and the company's ratios reflect its decision on how to use PAYG and RCV run off rates we consider that the draft determinations are financeable and we do not propose to intervene in the company's plan on the grounds of financeability. As the company has passed through all of the WACC change to customers in 2015-20 then we do not propose to intervene on PAYG. The company will need to consider the implications of our wholesale cost interventions in the draft determination for its choice of PAYG and RCV run off rates in its response to the draft determination, including appropriate engagement with its CCG. Any engagement with customers on financeability should be undertaken on the basis of notional financeability.

Table A7.4 sets out the PAYG and RCV run-off rates which shows whether revenue has been brought forward compared to the December plan and the impact that this has on RCV growth and longer term affordability and financeability. This also reflects our adjustments to PAYG and RCV run-off rates to ensure that wastewater and TTT Control revenues are correct, following our assessment of costs in relation to the TTT Control as set out in section A3.3.2.

Table A7.4 Impact on the longer term

	PAYG rate	RCV run-off	RCV growth % 1 April 2015 to 31 March 2020
Company December plan	51.1%	3.96%	10.0%
Company June plan	50.7%	3.96%	12.4%
Draft determination	52.3%	4.05%	9.9%

A7.4 Affordability

Table A7.5 sets out the change in household bill profile between the company's December and June business plans and the draft determinations.

Table A7.5 Household bill profile

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Company December plan including IP and TTT	349	355	360	367	374	386
Company June plan including IP and TTT	354	350	354	359	369	377
Company December plan excluding IP	349	353	354	355	354	360
Company June plan excluding IP	354	348	348	347	349	351
Ofwat calculation for June plan (excluding IP)	350	343	343	342	342	342
Ofwat calculation for draft determinations (inc TTT and exc IP)	350	339	343	338	337	337

	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Company assessment of IP bill impact	0	2	6	12	20	26
DD average household bill including IP	350	341	349	350	357	363
DD average household bill excluding TTT and IP	350	334	336	332	330	329
DD average household bill TTT	-	6	6	7	7	7

Companies have not necessarily used the same method of calculating household bills as Ofwat – for example, we have included economies of scope for household retail when calculating combined water and sewerage bills. So the Ofwat calculations are not directly comparable to the company plans. We have not intervened to reprofile bills as the draft determination’s bill profile is similar to the company’s business plan, albeit starting from a lower level.

Table A7.6 sets out the reasons why this draft determination is assessed as affordable. It describes key changes in relation to Thames Water’s December business plan that we assessed as unaffordable. We note in particular that the company has a range of measures in place to support customers with affordability problems which we assess as sufficient. We have introduced a performance commitment that requires Thames Water to engage with its customers to build understanding of the Thames Tideway Tunnel project.

Table A7.6 Business plan affordability assessment

	Commentary
<p>Acceptability</p>	<p>In the risk-based review assessment of affordability, we identified Thames Water as required to submit further evidence to demonstrate the affordability of its plan. Thames Water had used an econometric model to predict that 78% of its customers would find its December submission acceptable. However, the company did not provide the underlying data for its model; we were unable to replicate the results and the results were not consistent with evidence gathered directly from customers in the same or similar surveys.</p> <p>The company has responded to our challenge by conducting further research in June 2014. This ‘Final acceptability testing’ discarded the econometric modelling approach in the company’s December submission. Instead it was able to test the bill profile consistent with its June submission directly with a representative sample of customers.</p> <p>Overall, 59% of respondents stated that the company’s plan with the TTT was acceptable and without the TTT acceptability rose to 85%. The company tested its plan with customers from each of its wastewater only areas (where other WoCs provide the water service). Acceptability in these areas was slightly lower at 55%.</p> <p>17% of household respondents identified concerns with affordability as the reason for finding the plan unacceptable. This equates to roughly 1 in 6 and is broadly consistent with the 1 in 8 who identified that they always or sometimes struggle to pay their bills. 46% of these respondents stated the plan was acceptable compared to 57% who stated they do not have any problems paying their bills.</p>
<p>Identification of affordability issues and appropriate support measures</p>	<p>During our risk-based review we found the range of measures in place to support customers with affordability problems as sufficient. Nevertheless the company has added to the package of support albeit driven by external factors outside of the price review. The company will now donate a £10m tax refund from HMRC to its Customer Assistance Fund (that helps customers in arrears to become regular payers). This increases donations in 2015-20 from around £12m to around £22m. Combined with the proposals in its December plan that included a new social tariff and customer visits we have concluded that its package of measures is appropriate to assist customers with affordability</p>

	Commentary
	problems.
<p>Longer-term affordability – cost recovery tools</p>	<p>During the risk-based review, we concluded that the company had not directly engaged with its customers on future affordability. We also concluded that there appeared to be significant increases in PAYG for water and wastewater between 2015-20 and 2020-25 and that the impact of these movements on customers’ bills had not been explained or that customers supported them.</p> <p>The company has addressed our challenges in two ways. Its new acceptability research included an additional question on the acceptability of the likely bill profile between 2020-25 and dedicated research exploring customers’ support for moving revenue between the two price control periods.</p> <p>The company’s final acceptability testing found that a forecast bill level of £70 to £80 above the current bill level in 2020-25 was found to be acceptable to 42% of respondents and unacceptable to 48%.</p> <p>The company research into bill profiles linked to revenue allocation found a clear preference from participants for steadily increasing bill profiles during 2015-25 over profiles that delayed price increases until the later years.</p> <p>The company states it has not used PAYG for affordability or financeability reasons and it has only used RCV run off rates to smooth customer bills.</p> <p>Overall, the company has successfully explored customer preferences for price movements and revenue collection over time. The company has also clearly identified customer levels of acceptability for possible price changes between 2020 and 2025. Although it has identified that there is a lack of customer support for longer term price increases associated with the TTT, the company does set out plans to continually engage with its customers on this issue. This includes communicating across a range of media, an ongoing research programme to monitor changing views, promotion of support measures such as its social tariff and ongoing engagement with hard-to-reach groups. The CCG also supports the need for the company to have a dedicated strategy for communicating with all its wastewater customers throughout 2015-20 its justification for the Tunnel and its cost. The CCG would also expect Thames Water to work in close co-operation with the water only companies that bill on its behalf.</p>

	Commentary
	<p>Consistent with these views we have introduced a performance commitment that will require Thames Water to engage with its customers to build understanding of the project.</p>
<p>Longer-term affordability – ODIs</p>	<p>The company carried out customer research to establish the level of support for different ODI options. The research found that predictability of bills was important to almost all customers to allow them to budget and manage their bills. However, there was also support for bills to be linked to service and performance although having a limit to the scope of possible impact on bills was an important caveat. Most customers were shown to support a bill range linked to performance of +/- 1% to 1.5% which has the potential to add between £8 and £12 to customer bills. The company's CCG supported the Company's approach to its new customer research and thought the company's plan appropriately represented consumers' views.</p>

Annex 1 Wholesale costs

Establishing draft determination thresholds

Our approach to establishing draft determination thresholds is outlined in the [wholesale water and wastewater technical appendix](#).

In the tables below, we provide some information on the company-specific numbers that support these calculations.

We also provide detail on our cost assessment for the TTT control.

Further information about our assessment of each claim is set out in the [populated version of draft determination initial cost threshold models](#).

Table AA1.1 Movement from basic cost threshold to draft determination menu threshold for wholesale water totex (£ million)

Basic cost threshold	Policy additions ¹	Unmodelled costs adjustment	Deep dive	Draft determination threshold	Deep dives fully or partially not added ²
3483.4	315.7	-26.1	-361.9 ³	3411.1	None

Note:

1. See table AA1.2 below.
2. Deep dives are net of implicit allowances. A value of zero means deep dives are wholly covered by IAs.
3. This figure has been derived in accordance with our approach to applying the cap to the benefit a company derives from projecting costs below our cost baseline. See the [wholesale water and wastewater technical appendix](#).

Table AA1.2 Policy additions to the wholesale water basic cost threshold (£ million)

Business rates	Pension deficit payments	Third party costs	Open market costs ¹	Net v gross adjustments	Total
258.0	45.3	9.2	3.2	0.0	315.7

Note:

1. Of this amount, £0.471m relates to 2014-15 open market costs.

Table AA1.3 Comparison of company wholesale water totex with the draft determination threshold and 2010-15 totex (£ million)

Plan	DD threshold	Gap ¹	Plan v 2010-15
3,248.7	3,411.1	-162.4	291.7

Note:

1. This gap will not equal the deep dives fully or partially not added in table AA1.1 if the company's claims for special treatment in the costs thresholds are not equal to the gap.

Table AA1.4 Wholesale water deepdive claims

Company proposal		Assessment				DD allowance	
Claim	Amount sought	Implicit allowance	Need	CBA	Robust costs	Assessment	Amount allowed
The company has made no wholesale water deep-dive claims							

Table AA1.5 Movement from basic cost threshold to draft determination threshold for wholesale wastewater totex (£ million)

Basic cost threshold	Policy additions	Unmodelled costs adjustment	Private sewage pumping stations	NEP5	Deep dive	Draft determination threshold	Deep dives fully or partially not added ²
3,059.1	238.9	-63.3	94.3	130.2	262.3	3,721.3	121

Note:

1. See table AA1.6 below.
2. Deep dives are net of implicit allowances. A value of zero means deep dives are wholly covered by IAs.

Table AA1.6 Policy additions to the wholesale wastewater basic cost threshold (£ million)

Business rates	Pension deficit payments	Third party costs	Open market costs ¹	Net v gross adjustments	Total
174.0	41.7	20.0	3.2	0.0	238.9

Note:

1. Of this amount, £0.480m relates to 2014-15 open market costs.

Table AA1.7 Comparison of company wholesale wastewater totex with the draft determination threshold and 2010-15 totex (£ million)

Plan	DD threshold	Gap	Plan v 2010-15
3,743.6	3,721.3	22.3	-1,797.9

Note:

1. This gap will not equal the deep dives fully or partially not added in table AA1.5 if the company's claims for special treatment in the costs thresholds are not equal to the gap.

Table AA1.8 Summary of wholesale wastewater deep dive assessments (excluding TTT)

Company proposal		Assessment				DD allowance	
Claim	Amount sought	Implicit allowance	Need	CBA	Robust costs	Assessment	Amount allowed
Environmental compliance (NEP5 only)	130.2	0	Pass	Pass	Pass	Accept	130.2
Deephams STW	206.6	7.0	Pass	Pass	Partial pass	Accept	199.6
Lee Tunnel including Shaft G	61.7	0	Pass	Pass	Pass	Accept	61.7
Hydraulic sewer flooding protection: Counters Creek	256.8	170.2	Pass	Pass	Fail	Reject	0

Company proposal		Assessment				DD allowance	
Claim	Amount sought	Implicit allowance	Need	CBA	Robust costs	Assessment	Amount allowed
Hydraulic sewer flooding protection: named schemes; flips; infiltration reduction, mitigation, opex	101.2	67.1	Fail	Fail	Fail	Reject	0

Note:

- In its June submission the company also included representations on the totex models. Our analysis and conclusions on this claim have been set out in annex 1 to the [wholesale water and wastewater technical appendix](#).

Its June business plan submission set out Thames TTT costs as a cost exclusion claim to the wholesale wastewater control. It further split these into three sub-menu exclusion claims relating to Thames Water's view of whether the costs were for: typical activities; atypical activities (depending on whether these were assessed to carry a level of risk that was broadly consistent with the rest of its regulated activities); or land acquisition activities. In addition, within Thames Water's business plan these costs were broken down into individual cost areas and principal activities within those cost areas. able AA1.9 Summary of TTT Control deepdive assessment

Company proposal		Assessment				DD allowance	
Claim	Amount sought	Need	CBA	Robust costs	Customer protection	Assessment	Amount allowed
Resilience	£109.6m	Pass	Fail	Fail	Fail	Fail	£0m
Risk	£135.9m	Pass	n/a	Partial Pass	n/a	Partially accept	£30.3m

Company proposal		Assessment				DD allowance	
Claim	Amount sought	Need	CBA	Robust costs	Customer protection	Assessment	Amount allowed
Inflation	£13.8m	Pass	n/a	Fail	Fail	Fail	£0m
Construction	£209.8m	Pass	Pass	Partial Pass	Partial Pass	Partially accept	£182.1m
Land	£83.7m	Partial Pass	n/a	Partial Pass	Fail	Partially accept	£51.0m
Indirect costs	£63.9m	Partial Pass	Partial Pass	Partial Pass	Fail	Partially accept	£21.3m
Development costs ²	£18.0m	Pass	n/a	Pass	Fail	Partially accept	£18.0m
Corporate overheads ²	£21.1m	Pass	n/a	Pass	Fail	Partially accept	£21.1m

Notes:

1. Thames submitted one cost exclusion claim (divided into three menu exclusion claims). We have broken down the claim into the separate cost areas and assessed them on each of the gateways. Table AA1.10 sets these challenges out in more detail.
2. Development costs and corporate overheads have only been partially accepted due to their failure under the customer protection gateway. Because we passed the costs under need and robust costs tests we included the costs in full. However, this allowance is subject to Thames Water's representations on performance commitments, incentives and other issues for example, planning and indirect costs.
3. See section A4 for more information on TTT price control.

Annex 2 Household retail revenue modification

We outline our approach to revenue modification in the household retail price control in the [household retail technical appendix](#).

Table AA2.1 sets out the amount per customer, by customer type, that allowed revenues will be modified by if outturn customer numbers differ from forecast customer numbers. Table AA2.2 sets out the baseline number of customers.

Table AA2.1 Household retail allowed revenue modification factors by class of customer (£/customer)

Revenue modification per:	2015-16	2016-17	2017-18	2018-19	2019-20
Unmetered water only customer	21.66	22.27	22.26	22.49	21.77
Unmetered wastewater only customer	21.66	22.27	22.26	22.49	21.77
Unmetered water and wastewater customer	28.16	28.95	28.93	29.24	28.30
Metered water only customer	36.35	34.37	31.74	29.35	28.69
Metered wastewater only customer	25.52	26.09	26.04	26.24	25.56
Metered water and wastewater customer	43.05	41.26	38.65	36.33	35.46

Note:

There will be no indexation for retail price controls

Table AA2.2 Assumed number of customers for household retail total revenues (000s)

Number of customers	2015-16	2016-17	2017-18	2018-19	2019-20
Unmetered water only	32.1	32.1	32.1	32.1	32.1
Unmetered wastewater only	1109.3	992.5	872.7	751.5	637.1
Unmetered water and wastewater	2154.7	2070.2	1956.9	1826.8	1693.8
Metered water only	15.5	15.5	15.5	15.5	15.5

Number of customers	2015-16	2016-17	2017-18	2018-19	2019-20
Metered wastewater only	805.0	938.4	1074.6	1212.2	1342.7
Metered water and wastewater	1257.9	1377.1	1527.2	1694.2	1863.7

Annex 3 Reconciling 2010-15 performance

We set out our methodology for calculating the adjustments to 2015-20 wholesale price controls resulting from the company's actual performance during the 2010-15 period in the [wholesale water and wastewater technical appendix](#).

In this annex, we set out the draft determination adjustments to 2015-20 price controls for Thames Water resulting from the company's actual performance during the 2010-15 period.

As part of the draft determination of the 2010-15 adjustments we have undertaken detailed calculations within our models for the RCM, OIA, CIS and serviceability shortfalls. While we have included an explanation of our interventions within this annex, each model covers the detail of the specific calculation. Similarly, our detailed calculations behind the midnight adjustments such as land sales (but excluding those relating to the change protocol) are contained within the RCV midnight adjustment model. A copy of any of these models is available on request.

Table AA3.1 below compares the company's view of the required revenue adjustments included in its revised business plan for each of the incentive tools for water and wastewater services, with our own view. Our view reflects our understanding of the company's performance using these incentives, based on information provided in its revised business plan and subsequent query responses. The table also shows other adjustments, such as those relating to tax resulting from the company's actual performance during the 2010-15 period.

Table AA3.1 Revenue adjustments 2015-20 (£ million)

	Water service		Wastewater service		Thames Tideway	
	Company view	Ofwat view	Company view	Ofwat view		
Service incentive mechanism (SIM)	-35.757	-40.905	-37.837	-43.285	0.000	0.000
Revenue correction mechanism (RCM)	50.459	30.095	84.087	66.687	0.000	0.000
Opex incentive allowance – post-tax (OIA)	0.000	0.000	0.000	0.000	0.000	0.000
Capital expenditure incentive scheme (CIS)	-15.536	-16.132	-97.454	-76.014	0.000	0.000
Tax refinancing benefit clawback	0.000	0.000	0.000	0.000	0.000	0.000
Other tax adjustments	0.000	0.000	0.000	0.000	0.000	0.000
Equity injection clawback	0.000	0.000	0.000	0.000	0.000	0.000
Other adjustments	0.000	0.000	0.000	0.000	37.781	31.972
Total wholesale legacy adjustments	-0.833	-26.943	-51.204	-52.612	37.781	31.972

Notes:

Totals may not add due to rounding.

For the CIS mechanism, there is a corresponding adjustment to the RCV made at 1 April 2015 (part of the 'midnight' adjustments'). The impact on the RCV for both water and wastewater can be seen in table AA3.15. This adjustment is net of any logging up, logging down or shortfalls. A full reconciliation showing all of the midnight adjustments to the RCV, including the impact of logging up, logging down and shortfalls, can be seen in table A2.5 and table A3.5.

Service incentive mechanism (SIM)

We provide our view of each company’s SIM reward/penalty in the [wholesale water and wastewater technical appendix](#).

Table AA3.2 provides the annualised rewards from the company’s SIM performance. The difference of views reflects the penalty calculation using updated industry performance statistics.

Table AA3.2 SIM annualised rewards (£ million)

		2015-16	2016-17	2017-18	2018-19	2019-20	Total
Water	Company view	-7.151	-7.151	-7.151	-7.151	-7.151	-35.757
	Ofwat view	-8.181	-8.181	-8.181	-8.181	-8.181	-40.905
Wastewater	Company view	-7.567	-7.567	-7.567	-7.567	-7.567	-37.837
	Ofwat view	-8.657	-8.657	-8.657	-8.657	-8.657	-43.285

Revenue correction mechanism (RCM)

This draft determination includes our view of the company’s RCM annualised adjustment amounts as detailed in table AA3.3 below.

Table AA3.4 summarises our interventions in relation to Thames Water’s proposed 2010-15 RCM adjustments.

Table AA3.3 RCM annualised adjustments for 2015-20 (£ million)

		2015-16	2016-17	2017-18	2018-19	2019-20	Total
Water	Company view	10.092	10.092	10.092	10.092	10.092	50.459
	Ofwat view	6.019	6.019	6.019	6.019	6.019	30.095
Wastewater	Company view	16.817	16.817	16.817	16.817	16.817	84.087
	Ofwat view	13.337	13.337	13.337	13.337	13.337	66.687

Table AA3.4 Interventions on proposed 2010-15 RCM adjustments

Area of intervention	What we did	Why we did it
Back billing amounts	Our assumptions for the draft determination did not include the back-billed amounts claimed by the company.	<p>We have concerns as to whether the back billing amounts being claimed by the company are compliant with RAG4.04 and IN11/04.</p> <p>The company has not demonstrated that:</p> <ul style="list-style-type: none"> • it has received all outstanding back-billed amounts due from the customer; • it has claimed for back-billed amounts where the inaccuracy of the charging is the customer's fault; and • it has taken a reasonable, fair and appropriate approach for the back-billed amounts claimed. <p>The company's proposed alternative approach to recognising the back-billed amounts based on its cash</p>

Area of intervention	What we did	Why we did it
		collection rates has not been fully evidenced and so we have not included it in our determination assumptions.
FD09 assumptions	Adjusted for our assumptions applied at FD09.	There are differences between the company's and our view of the FD09 determination applied in the company's populated RCM model.
Number of households billed	Our assumptions for the draft determination use the data the company submitted in its business plan table R3 to calculate our view of the RCM adjustment compared with the values in the company RCM model.	There were inconsistencies with the number households billed between business plan table R3 and the company's populated RCM model.
Outturn financial year average RPI	Our assumptions for the outturn financial year average RPI, in the draft determination, use the data that the company submitted in its business plan table A9 to calculate our view of the RCM adjustment compared with the values in the company RCM model.	There are inconsistencies with the outturn financial year average RPI between table A9 and the company's populated RCM model.

Operating expenditure incentive allowance (OIA)

Table AA3.5 below summarises the company's view and our view of the incentive allowances for 2015-20. Table AA3.4 summarises our interventions in relation to Thames Water's proposed 2010-15 OIA adjustments.

Table AA3.5 Operating expenditure incentive allowances for 2015-20 (£ million)

		2015-16	2016-17	2017-18	2018-19	2019-20	Total
Water service							
Incentive allowance (post-tax)	Company view	0.000	0.000	0.000	0.000	0.000	0.000
	Ofwat view	0.000	0.000	0.000	0.000	0.000	0.000
Wastewater service							
Incentive allowance (post-tax)	Company view	0.000	0.000	0.000	0.000	0.000	0.000
	Ofwat view	0.000	0.000	0.000	0.000	0.000	0.000

Table AA3.6 Interventions on proposed 2010-15 OIA adjustments

Area of intervention	What we did	Why we did it
There are no interventions in this area.	n/a	n/a

Change protocol (logging up, logging down and shortfalls)

Table AA3.7 and table AA3.8 below summarise Thames Water's view and our baseline view of total adjustments to:

- capex included in the CIS reconciliation;

- adjustments for Thames Tideway Tunnel; and
- the FD09 opex assumptions used in the calculation of the opex incentive revenue allowances.

Table AA3.9 summarises our interventions in relation to Thames Water’s proposed change protocol adjustments.

Table AA3.7 Summary of post-efficiency capex for logging up, logging down and shortfalls (£ million)

2009-10 to 2014-15 – post-efficiency capex	Water service		Wastewater service		Total service	
	Company view	Ofwat view	Company view	Ofwat view	Company view	Ofwat view
Logging up (two-sided)	0.000	0.000	73.806	76.149	73.806	76.149
Logging down (two-sided)	0.000	0.000	-222.165	-229.951	-222.165	-229.951
Shortfalls (one-sided)	0.000	-5.788	0.000	0.000	0.000	-5.788
Thames Tideway Tunnel ³			596.983	481.529	596.983	481.529

Notes:

1. Includes two-sided adjustments from the PR09 agreed overlap programme as set out in table AA3.13.
2. We exclude shortfalls for serviceability from the CIS reconciliation, but instead make direct adjustments to the RCV in 2015-16. We do this to allow the actual capex the company incurred in seeking to maintain serviceability, to be reflected in the rewards or penalties earned through the scheme. This is also to ensure customers are not required to pay for the regulatory output the company has failed to deliver.
3. Thames Tideway Tunnel was not included in CIS at PR09. This logging up forms part of the opening RCV for the TTT Control

Table AA3.8 Summary of post-efficiency opex for logging up, logging down and shortfalls included in the opex incentive allowance calculation (£ million)

2009-10 to 2014-15 – post-efficiency opex	Water service		Wastewater service		Total service	
	Company view	Ofwat view	Company view	Ofwat view	Company view	Ofwat view
Logging up	0.000	0.000	39.176	27.318	39.176	27.318
Logging down	0.000	0.000	-1.471	-1.462	-1.471	-1.462
Shortfalls	0.000	-0.518	0.000	0.000	0.000	-0.518
Shortfalls for serviceability	0.000	0.000	-3.691	-3.691	-3.691	-3.691

Table AA3.9 Interventions on proposed 2010-15 change protocol adjustments (includes Thames Tideway Tunnel)

Area of intervention	What we did	Why we did it
Security and Emergencies Measures Direction (SEMD) delays – Shortfall	<ul style="list-style-type: none"> The company did not propose a legacy adjustment in relation to the delivery risk associated with the SEMD programme on the grounds of triviality. Several elements of the programme are currently at risk of slippage into the next price control period, 2015-20. We have assessed the information provided by the company and determined that a shortfall should be applied to reflect the late delivery. We are shortfalling £6.050m capex and £0.544m 	The company has not included the relevant SEMD schemes in the overlap programme. As the outputs are still to be delivered, albeit late, it is therefore appropriate to assess the variance to FD09 assumptions as a shortfall. Triviality does not apply in the case of the shortfalling mechanism. In determining the shortfall amount we have utilised values from FD09. These have been indexed (using COPI for capex and RPI for opex) to 2012-13 prices.

Area of intervention	What we did	Why we did it
	<p>opex.</p> <ul style="list-style-type: none"> In post efficiency terms these values are £5.788m (capex) and £0.518m (opex). 	
Private Sewers – Logging up	<ul style="list-style-type: none"> We have applied a challenge to the capex proposed. We have reduced the pre-efficiency capex from the £25.74m proposed by the company to £23.991m. We have also applied a challenge to the opex proposed as we considered the claimed costs were not entirely attributable to the transfer, did not entirely represent additional costs or were not adequately substantiated. As a result we have reduced the pre-efficiency opex from the £39.65m proposed by the company to £27.632m. In post-efficiency terms the value of the logging up claim is now £22.531m (capex) and £27.250m (opex). 	<p>Our view of costs is based on our determination of the company's 2013 IDoK application, revised in the light of new information.</p> <p>Consequently our assessment has changed due to the extra information provided.</p> <p>In particular, our view has changed in two key areas: i) revised data from all companies has altered the industry average unit costs (capex per collapse and opex per blockage) consequently the gap between the company's unit costs and the industry average, and ii) the disapplication of catch-up and ongoing efficiency adjustments that were made in error at the risk-based review to costs that already incorporated an efficiency challenge.</p>
Shaft G – Logging up	There are no interventions for this scheme. We are accepting the company's proposed logging up claim	There are no interventions for this scheme. We are accepting the company's proposed logging up claim
Counters Creek – Logging up	There are no interventions for this scheme. We are accepting the company's proposed logging up claim	There are no interventions for this scheme. We are accepting the company's proposed logging up claim
DG5 Sewer Flooding Programme	<ul style="list-style-type: none"> We have applied a challenge to the pre- 	The company based its approach using figures

Area of intervention	What we did	Why we did it
– Logging down	<p>efficiency capex proposed by the company (£145.746m). We have increased the capex to £153.94m. In post efficiency terms the total capex to be logged down is £144.399m.</p> <ul style="list-style-type: none"> We have applied a small challenge to the opex proposed by the company (£1.490m). We have increased the opex to £1.497m (£1.478m post application of FD09 efficiency). 	<p>published in the 2013 IDoK. However, these were post efficiency values. Our assessment has been calculated using pre-efficiency values as the reporting requirements specify.</p>
Hendon Way External Flooding Scheme – Logging down	<ul style="list-style-type: none"> We have accepted the company's claim in relation to pre-efficiency capex (£7.434m). We have included a small opex adjustment (£0.026m). In post-efficiency terms the values in the logging down claim are £6.998m (capex) and £0.025m (opex). 	<p>The company provided underlying calculations that we can trace back to pre-efficiency figures at FD09. We therefore agree with the company submission for capex. At FD09 we pro-rated changes in operating expenditure by changes in capital expenditure. We have therefore reflected this in the logging down claim.</p>
Sewer Flooding Mitigation Programme – Logging down	<ul style="list-style-type: none"> We have applied a challenge to the pre-efficiency capex proposed by the company (£3.386m). We have increased the capex to £3.502m. The company did not propose any opex. We have assessed the claim and have included a small element of opex in the logging down (£0.009m). In post-efficiency terms the values in the logging 	<p>The company provided an underlying profile of capital expenditure that we can trace back to pre-efficiency figures at FD09. We have applied the lack of delivery separately between internal and external mitigation because these were specified separately in FD09. At FD09 we pro-rated changes in operating expenditure by changes in capital expenditure. We have reflected this in the logging down claim.</p>

Area of intervention	What we did	Why we did it
	down claim are £3.302m (capex) and £0.009m (opex).	
Deephams upgrade scheme – Logging down	There are no interventions for this scheme. We are accepting the company’s proposed logging down claim.	There are no interventions for this scheme. We are accepting the company’s proposed logging down claim
Lee Tunnel – Logging down	There are no interventions for this scheme. We are accepting the company’s proposed logging down claim.	There are no interventions for this scheme. We are accepting the company’s proposed logging down claim
Thames Tideway Tunnel: Land – logging up	<p>Total intervention £46.5m comprised of:</p> <ul style="list-style-type: none"> • Reversal of Thames Water's accrued deferred lease payments in 2013-14 (£5.2m). • Adjustment to the company’s claim for land costs in 2014-15 by £42.6m in customers’ favour. • £2.7m due to difference in income assumptions. <p>About £4m higher due to difference in allocation between land and other costs. Overall cost neutral to Thames.</p>	<p>We do not consider customers should pay for deferred payments before Thames Water incurs them.</p> <p>Thames’ June business plan stated that its view of land costs had increased from its 2014-15 forecast (presented to us in February 2014). One reason was an acquisition slipping from 2013-14 to 2014-15. However, the cost of this site was included in Thames Water's February forecast for land acquisition and therefore no uplift is required. We consider this request is double counting</p> <p>Thames’ plan did not clearly set out its income assumptions. We have therefore used the view of income included in Thames Water interim determination application in 2013.</p>

Area of intervention	What we did	Why we did it
Thames Tideway Tunnel: Other costs ('non-land') – logging up	<p>Total intervention £68.9m comprised of:</p> <ul style="list-style-type: none"> • £65m reduction to Thames Water's 2014-15 costs. • About £4m reduction due to difference in allocation between land and other costs. 	<p>Thames has not provided sufficient evidence to justify proposed costs for 2014-15 and why these are economic and efficient. Thames Water's submission forecast costs of £187m, which contradicts evidence provided to us elsewhere. Our assessment is based on Thames Water's July 2014 programme board report which forecast 2014-15 'non-land' expenditure to be lower than Thames Water's business plan proposal. We have applied a ten per cent efficiency challenge due to insufficient evidence that costs are efficient.</p>

Service standard outputs

The final determination supplementary reports in 2009 contained defined project(s) where the primary output was the service standard specified⁷. These outputs were set out to recognise that companies may decide to prioritise investment differently in order

⁷ In the final determination supplementary reports we said: "Both the project activity (as proposed in your final business plan) and the service standard are the defined output. You must demonstrate delivery of the stated service standard output through the June return. The service standard output is the primary output. We recognise that companies may decide to prioritise activity differently in order to achieve the service output in a more efficient manner. All material changes to the project activity must be reported and explained through your June return."

to achieve the service output in a more innovative and efficient manner, while still holding the company to account for the benefits to customers and the environment.

Where companies have not reported progress on these service standards, we would have expected them to demonstrate achievement of the service standards to both customers and Ofwat as part of the price review process.

We have considered applying shortfalls equal to the cost of the FD09 project(s) with defined service standards. However, in many cases there is some evidence that the projects and activities have been delivered, but there is a lack of compelling evidence that the service standards specified have been achieved.

For the purposes of these draft determinations, we will not applying shortfalls on this issue conditional upon this information being provided as part of companies' draft determination representations. We would expect companies to respond to this issue in their representations. If they do not provide adequate evidence to demonstrate achievement of the service standards set out, then they should assume that we will apply a shortfall equal to the costs assumed for the project(s) at FD09 within our final determinations in December 2014.

Serviceability performance

Table AA3.10 below summarises our serviceability assessments for Thames Water and table AA3.11 quantifies the value and impact of any serviceability shortfall on the RCV. Table AA3.12 summarises our interventions in relation to Thames Water's proposed adjustments for serviceability.

Table AA3.10 Serviceability assessments for 2010-15¹

		2010-11	2011-12	2012-13	2013-14	2014-15 ²
Water (infrastructure)	Company view	Stable	Stable	Stable	Stable	Stable
	Ofwat view	Stable	Stable	Stable	Marginal	Marginal
Water (non-infrastructure)	Company view	Stable	Stable	Stable	Stable	Stable
	Ofwat view	Stable	Stable	Stable	Stable	Stable
Wastewater (infrastructure)	Company view	Stable	Stable	Marginal	Marginal	Stable
	Ofwat view	Stable	Marginal	Deteriorating	Deteriorating	Deteriorating
Wastewater (non-infrastructure)	Company view	Stable	Stable	Stable	Stable	Stable
	Ofwat view	Stable	Stable	Stable	Stable	Stable

Notes:

1. Assessments are based on actual and forecast performance submitted in the company's revised business plans.
2. Assessments for 2014-15 are based on forecast data and are subject to review once actual performance data becomes available.

Table AA3.11 Impact of serviceability shortfalls on the RCV (£ million)

2009-10 to 2014-15		Water	Wastewater	Total
Amount subtracted from RCV	Company view	0.0	-16.1	-16.1
	Ofwat view	-18.0	-38.1	-56.1

Table AA3.12 Interventions on proposed 2010-15 serviceability adjustments

Area of intervention	What we did	Why we did it
<p>Unplanned interruptions to supply exceeding 12 hours</p>	<p>For the purposes of the draft determination, we have assumed a shortfall adjustment of £19.5m (£18.0m post efficiency) for marginal performance in this indicator. In accordance with our shortfall calculation methodology the shortfall (which has been applied for 2013-14) has not been capped, the scaling factor⁸ for this year is below 2 standard deviations. The overall scale of the shortfall does not exceed 50% of the sub-service capital expenditure and therefore no further cap has been applied.</p> <p>We would expect the company to demonstrate its latest performance as part of its representations and in advance of the final determination.</p>	<p>The company has had two breaches of the upper control limit in 2010-11 and 2013-14. The company states that there were two events in 2013-14 that resulted in a large number of unplanned interruptions. The company states that these events were caused by power failures that occurred due to severe weather in the winter of 2013-14. Based upon the commentary provided by the company, we consider that the company has not provided sufficient evidence to demonstrate that the interruptions to supply that occurred were outside of its control and could not have been mitigated by company action. The company has not evidenced that all possible mitigation measures were in place to minimise the impact of the supply interruptions (such as alternative supplies and alternative power generators). Therefore for the purposes of the draft determination we have assumed a shortfall adjustment for this</p>

⁸ Shortfall calculation methodology is detailed within the [wholesale water and wastewater technical appendix 3](#).

Area of intervention	What we did	Why we did it
		indicator.
Pollution incidents (Cat 1, 2 and 3)	<p>For the purposes of the draft determination, we have calculated a scale of shortfall that is greater than that offered by the company. The company's proposed shortfall was £10.8m, we have calculated a shortfall of £26.6m (£24.4m post efficiency) for deteriorating performance in this indicator. In accordance with our shortfall calculation methodology we have applied a cap at 2 standard deviations to the shortfall in each year between 2012-13 and 2013-14, to limit the impact of specific measures and scaling factors⁹. The overall scale of the shortfall does not exceed 50% of the sub-service capital expenditure and therefore no further cap has been applied.</p> <p>We would expect the company to demonstrate its latest performance as part of its representations and in advance of the final determination.</p>	<p>The company has had two breaches of the upper control limit, in 2012-13 and 2013-14, they are also predicting to be above the upper control limit in 2014-15. The company has recognised the performance as marginal and offered a shortfall of £10.8m. However, we do not consider the company's own valuation of the shortfall to be sufficient for the level of failure. Therefore for the purposes of the draft determination the assumed shortfall is based on our calculation.</p>

⁹ The shortfall calculation methodology is detailed within the [wholesale water and wastewater appendix](#).

Area of intervention	What we did	Why we did it
<p>Flooding other causes</p>	<p>For the purposes of the draft determination, we have calculated a scale of shortfall that is greater than that offered by the company. The company's proposed shortfall was £4.3m, we have calculated a shortfall of £11.0m (£10.1m post efficiency) for deteriorating performance in this indicator. In accordance with our shortfall calculation methodology the shortfall (which has been applied for 2011-12, 2012-13 and 2013-14) has not been capped, the scaling factors¹⁰ in these years are below 2 standard deviations. The overall scale of the shortfall does not exceed 50% of the sub-service capital expenditure and therefore no further cap has been applied.</p> <p>We would expect the company to demonstrate its latest performance as part of its representations and in advance of the final determination.</p>	<p>The company has had three breaches of the upper control limit in 2011-12, 2012-13 and 2013-14. The company states that performance is recovering and is forecasting performance to be below the upper control limit in 2014-15. The company has recognised the performance as marginal and has offered a shortfall of £4.3m. However, we do not consider the company's own valuation of the shortfall to be sufficient for the level of failure. Therefore for the purposes of the draft determination the assumed shortfall is based on our calculation.</p>

¹⁰ Shortfall calculation methodology is detailed within the [wholesale water and wastewater appendix](#).

Area of intervention	What we did	Why we did it
Sewer blockages	For the purposes of the draft determination we have assumed no intervention. We are accepting the company's proposed shortfall of £3.1m capex and £3.7m opex.	The company has offered a shortfall for failure to achieve the enhanced service level output for blockages. We agree that the enhanced service level has not been achieved and have accepted the company proposed value.

The 2009 agreed overlap programme

Table AA3.13 below confirms the 2009 agreed overlap programme assumptions included in this draft determination. Table AA3.14 summarises our interventions in relation to Thames Water's proposed adjustments for the PR09 agreed overlap programme.

Table AA3.13 PR09 agreed overlap programme adjustments and assumptions (£ million)

		2010-15		2015-20	
		Two-sided adjustment for inclusion in the CIS		Expenditure forecasts to complete the projects	
		Capex	Opex	Capex	Opex
Water service	Company view	0.000	0.000	0.000	0.000
	Ofwat view	0.000	0.000	0.000	0.000
Wastewater service	Company view	0.000	0.000	207.746	1.447
	Ofwat view	3.987	0.000	207.746	1.447

Table AA3.14 Interventions on proposed 2010-15 PR09 agreed overlap programme adjustments

Area of intervention	What we did	Why we did it
Deephams STW upgrade	We accepted the company's proposed logging down capex of £41.340m (pre efficiency) as agreed in the IDoK due to delays in scheme delivery and we accepted the company's latest forecast totex to complete the scheme.	The logging down value was confirmed in our IDoK for the company in 2013. Because the cost of the whole project is forecast to be lower than the original FD09 assumptions post efficiency, we have accepted the company's latest totex forecast of £206.597m in 2015-20 to complete the scheme without further challenge on the efficiencies.
Swindon network	We have made a small logging up adjustment in 2010-15 to reflect the increased capex by the company during the period compared to original FD09 assumptions post efficiency. We have accepted the company's latest forecast totex to complete the scheme.	The company is forecasting the whole cost of the project to be lower than the original FD09 assumptions post efficiency. Therefore we have: made a two-sided adjustment in 2010-15 to ensure the company is not penalised in the CIS reconciliation for the increased expenditure in the period; and accepted the company's lower totex forecast of £2.596m in 2015-20 to complete the scheme without further challenge on the efficiencies.

Capital expenditure incentive scheme (CIS)

Table AA3.15 provides details of the CIS ratios and performance incentive. It also gives the:

- monetary amounts of the CIS performance reward or penalty;

- true-up adjustment to 2015-20 allowed revenues; and
- midnight adjustment to the closing 2014-15 RCV.

Table AA3.16 then sets out the profiled values of the revenue adjustments in each year 2015-20.

Table AA3.15 Legacy true-up adjustments

		Water service	Wastewater service	Total service
Restated FD09 CIS bid ratio	Company view	125.264	108.820	
	Ofwat view	125.700	124.806	
Outturn CIS ratio	Company view	107.171	99.907	
	Ofwat view	107.545	99.601	
Incentive reward/penalty (%)	Company view	-2.841	-0.089	
	Ofwat view	-2.885	0.484	
Reward/penalty (£m)	Company view	-41.446	-2.699	-44.145
	Ofwat view	-41.934	14.652	-27.282
Adjustments to 2015-20 revenue (£m)	Company view	-14.466	-90.743	-105.209
	Ofwat view	-15.021	-70.779	-85.801
CIS adjustment to RCV (£m)	Company view	-75.655	-388.859	-464.514
	Ofwat view	-75.655	-388.859	-464.514

	Water service	Wastewater service	Total service
Commentary:			
The company has correctly applied the published Ofwat methodology.			
In carrying out our assessment, we have included our view of the applicable change protocol amounts.			

Notes:

The restated FD09 CIS bid ratio takes account of the adjustments for the change protocol (Table AA3.7) and the 2009 agreed overlap programme (table AA3.13).

The reward/(penalty) is adjusted for the additional income included in the 2010-15 determination and the financing cost on the difference between actual spend and capital expenditure assumed in the 2010-15 determination to derive the value of the adjustment to 2015-20 revenue.

The adjustment to 2015-20 revenue values shown in this table assume a single year adjustment in the first year, and do not include the NPV profiling used for the draft determination.

Table AA3.16 Profiled revenue adjustments from the CIS reconciliation (£ million)

		2015-16	2016-17	2017-18	2018-19	2019-20	Total
Water	Company view	-3.107	-3.107	-3.107	-3.107	-3.107	-15.536
	Ofwat view	-3.226	-3.226	-3.226	-3.226	-3.226	-16.132
Wastewater	Company view	-19.491	-19.491	-19.491	-19.491	-19.491	-97.454
	Ofwat view	-15.203	-15.203	-15.203	-15.203	-15.203	-76.014

Other adjustments

Table AA3.17 below confirms the assumptions included in this draft determination with respect to the following adjustments:

- tax refinancing benefit clawback;
- other tax adjustments;
- equity injection clawback; and
- other adjustments.

Table AA3.17 Other adjustments 2015-20 (£ million)

	Water service		Wastewater service		Thames Tideway		Commentary
	Company view	Ofwat view	Company view	Ofwat view	Company View	Ofwat View	
Tax refinancing benefit clawback	0.000	0.000	0.000	0.000			No adjustment was proposed by the company.
Other tax adjustments	0.000	0.000	0.000	0.000			No adjustment was proposed by the company.
Equity injection clawback	0.000	0.000	0.000	0.000			No adjustment was proposed by the company.
Other adjustments	0.000	0.000	0.000	0.000	37.781	31.972	Adjustment to the RCV consist of a deduction of £101.300 million in respect of s203 spend in 2005-10 as proposed in the business plan and an increase of £481.529m leading to a total of £380.2m RCV adjustment for logged up amounts

	Water service		Wastewater service		Thames Tideway		Commentary
	Company view	Ofwat view	Company view	Ofwat view	Company View	Ofwat View	
							for the Thames Tideway Tunnel which were not included in the CIS calculations. These adjustments are made to the TTT Control.

Annex 4 Outcomes, performance commitments and outcome delivery incentives

This chapter sets out in detail the performance commitments and outcome delivery incentives (ODIs) for the company's wholesale water, wholesale wastewater, TTT and household retail outcomes, presented in that order.

The two figures below first provide an overview of these performance commitments and ODIs. Figure AA4.1 shows the balance between reward and penalty, penalty only and reputational incentives in the package of incentives for the company and Figure AA4.2 shows the potential financial impact of each of the financial incentives.

Figure AA4.1 The composition of the package of ODIs

	Reward and penalty	Penalty only	Non-financial
Wholesale water	3	7	9
Wholesale wastewater	5	7	8
Thames Tideway Tunnel	0	1	2
Household retail	1	1	7
Total	9	16	26

Figure AA4.2 Overview of financial ODIs

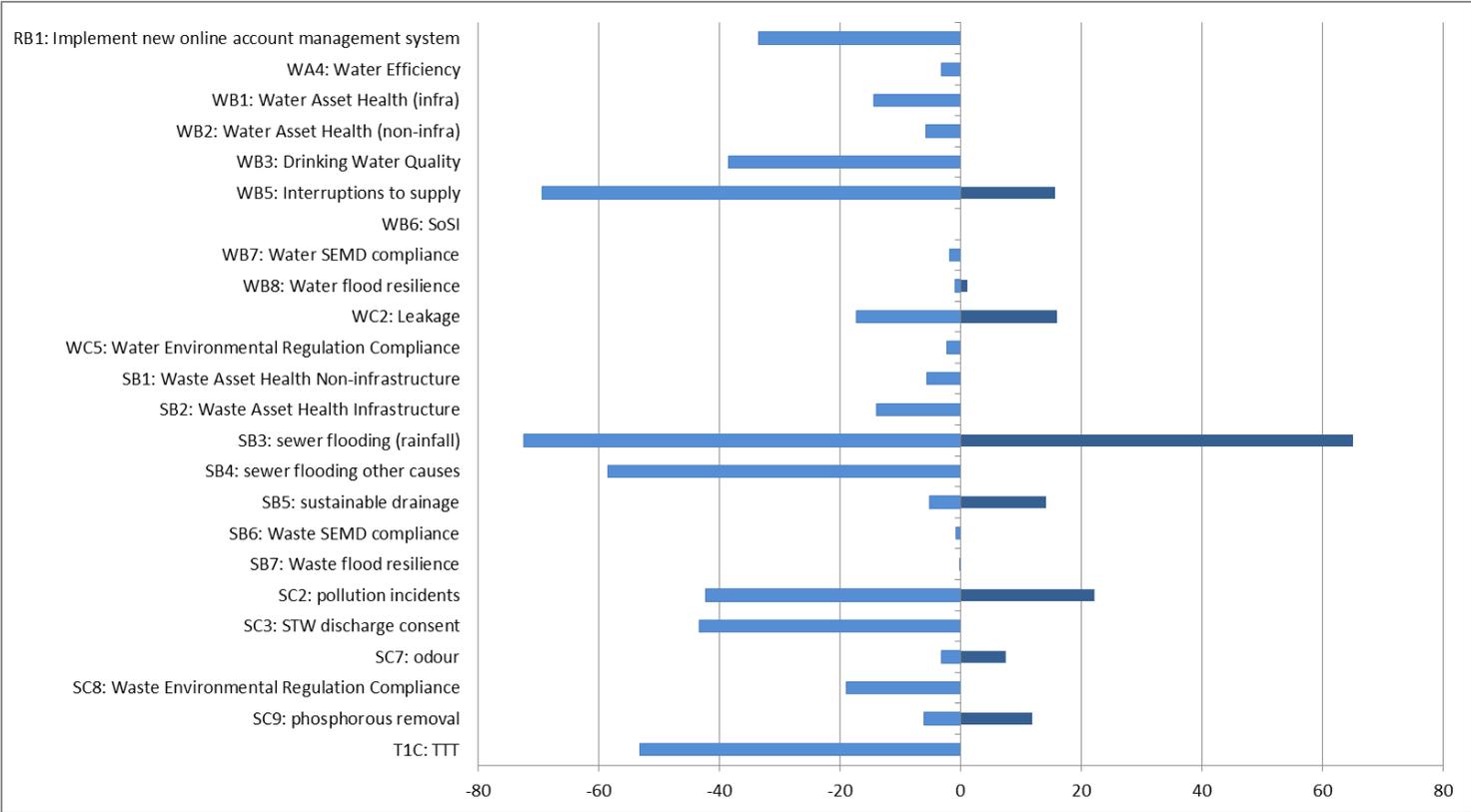


Figure AA4.2 graph shows the potential financial consequences of the individual financial ODIs. The figures represent the penalties and rewards associated with the p10 and p90 scenarios over the 5 years (2015-16 to 2019-20). This means there is a 10% chance of performance being higher or lower than these assumed levels. In most cases the potential maximum will be bigger but is very unlikely to occur. The p10 and p90 scenarios therefore represent a more realistic estimate of potential financial impacts.

As explained in the [outcomes technical appendix](#), we are proposing the introduction of an aggregate cap on rewards and collar on penalties from the outcome delivery incentives. Details of how the cap/collar will operate are set out in section A5 of the Outcomes Technical Appendix.

There are a small number of specific exclusions from the cap/collar. For Thames Water, the exclusion is as follows: Thames Tideway Tunnel: We will limit the extent of delays on the overall programme timeline

Tables AA4.3, AA4.4, AA4.5 and AA4.6 set out a more detailed explanation of our interventions in the company’s wholesale water, wholesale wastewater, household retail and Thames Tideway Tunnel outcomes.

Table AA4.3 Summary of interventions on wholesale water outcomes, performance commitments and incentives

PC/ODI affected	What we did	Why we did it
B1 – Asset Health Water Infrastructure	<ul style="list-style-type: none"> Removed the penalty collar Removed the penalty deadband Adjusted the penalty incentive rate Rolled forward the incentive structure to include 2019-20 	<p>The interventions ensure that the company is incentivised to maintain performance, and appropriate penalties are in place for under or poor performance.</p> <p>Thames Water proposed a collar of four changes in status across the price control period, 2015-20. We do not consider that this provides customers with adequate protection from serious deterioration in the health of the non-infrastructure assets and have removed the collar entirely.</p>

PC/ODI affected	What we did	Why we did it
		<p>Thames Water proposed to include a penalty deadband which required non-stable performance to be reported for two consecutive years before a penalty is applied. We do not believe this appropriately compensates customers for non-stable performance in a single year and have removed the deadband completely.</p> <p>The penalty incentive rate has been increased by 25% to provide an additional incentive and stronger protection to customers, in recognition that the company has been subject to shortfalls for the 2010-2015 period for serviceability (water infrastructure) as a result of poor performance.</p> <p>Thames Water did not propose any financial penalties for 2019-20 for this performance commitment, stating that this would be undertaken as part of the next price review process. We consider that it is more appropriate to outline the incentive structures for 2019-20 prior to the reporting period and, as such, have rolled forward the incentive structure from 2018-19 to 2019-20.</p>
B2 – Asset Health Water Non Infrastructure	<p>Removed the penalty collar</p> <p>Removed the penalty deadband</p> <p>Rolled forward the incentive structure to include 2019-20</p>	<p>The interventions ensure that the company is incentivised to maintain performance, and appropriate penalties are in place for under or poor performance.</p> <p>Thames Water proposed a collar of four changes in status across the price control period. We do not consider that this provides customers with adequate protection from serious deterioration in the health of the non-infrastructure assets and have removed the collar entirely.</p> <p>Thames Water proposed to include a penalty deadband which</p>

PC/ODI affected	What we did	Why we did it
		<p>required non-stable performance to be reported for two consecutive years before a penalty is applied. We do not believe this appropriately compensates customers for non-stable performance in a single year and have removed the deadband completely.</p> <p>Thames Water did not propose any financial penalties for 2019-20 for this performance commitment, stating that this would be undertaken as part of the next price review process. We consider that it is more appropriate to outline the incentive structures for 2019-20 prior to the reporting period and, as such, have rolled forward the incentive structure from 2018-19 to 2019-20.</p>
<p>B3 – Drinking Water Quality Standards</p>	<p>Adjusted the PC level for 2017 - 18 to 2019-20</p> <p>Changed penalty deadbands and collar.</p> <p>Rolled forward the incentive structure to include 2019-20</p>	<p>We have intervened following a review of drinking water quality across all companies to ensure that the company is incentivised to achieve upper quartile performance.</p> <p>The interventions for the PC and ODI ensure that the company is incentivised to deliver upper quartile performance by 2017-18.</p> <p>We have changed the deadbands to ensure that the company has a 2 year glide path to deliver upper quartile performance,</p> <p>Thames Water did not propose any financial penalties for 2019-20 for this performance commitment, stating that this would be undertaken as part of the next price review process. We consider that it is more appropriate to outline the incentive structures for 2019-20 prior to the reporting period and, as such, have rolled forward the incentive structure from 2018-19 to 2019-20.</p> <p>The Company has defined Outcome Delivery Incentives for drinking water quality compliance with a penalty at less than 100%. This</p>

PC/ODI affected	What we did	Why we did it
		<p>penalty represents an incentive to the company to not reduce its compliance with water quality measures. This threshold represents the point at which financial incentives will be applied to the company through the price setting process. All companies are subject to drinking water quality obligations regulated by the DWI, which are the overriding statutory obligations that a water company must comply with as part of their Section 37 obligations. The company's Board has confirmed as part of its business plan submission that it will comply with all relevant statutory obligations</p>
<p>B5 – Supply Interruptions above 4 hours (average minutes per property)</p>	<p>Adjusted the PC level to upper quartile for 2017-18 to 2019-20, and adjusted in intervening years to reflect glide path</p> <p>Changed the penalty and reward deadbands and penalty and rewards cap and collar.</p> <p>Rolled forward the incentive structure to include 2019-20</p>	<p>The interventions for the PC and ODI ensure that the company is incentivised to deliver upper quartile performance by 2017-18.</p> <p>We have intervened following a review of interruptions across all companies to ensure that the company is incentivised to achieve upper quartile performance.</p> <p>This has led to changes. We have changed to the deadbands to ensure that the company has a 2 year glide path to deliver upper quartile performance, while rewards can only be earned for genuine outperformance.</p> <p>Thames Water did not propose any financial penalties for 2019-20 for this performance commitment, stating that this would be undertaken as part of the next price review process. We consider that it is more appropriate to outline the incentive structures for 2019-20 prior to the reporting period and, as such, have rolled forward the incentive structure from 2018-19 to 2019-20.</p>
<p>B6 – Security of Supply Index –</p>	<p>Rolled forward the incentive</p>	<p>Thames Water did not propose any financial penalties for 2019-20 for</p>

PC/ODI affected	What we did	Why we did it
Ofwat KPI	structure to include 2019-20	this performance commitment, stating that this would be undertaken as part of the next price review process. We consider that it is more appropriate to outline the incentive structures for 2019-20 prior to the reporting period and, as such, have rolled forward the incentive structure from 2018-19 to 2019-20.
C2 – Leakage	Adjusted Penalty Collar in Year 1. Rolled forward the incentive structure to include 2019-20	The penalty collar has been adjusted to ensure that an appropriate penalty range is in place for non-delivery in 2015-16. Thames Water did not propose any financial penalties for 2019-20 for this performance commitment, stating that this would be undertaken as part of the next price review process. We consider that it is more appropriate to outline the incentive structures for 2019-20 prior to the reporting period and, as such, have rolled forward the incentive structure from 2018-19 to 2019-20.

Table AA4.4 Summary of interventions on wholesale wastewater outcomes, performance commitments and incentives

PC/ODI affected	What we did	Why we did it
B1 – Asset Health Wastewater (Non-infrastructure)	Removed the penalty collar Removed the penalty deadband Rolled forward the incentive structure to include 2019-20	The interventions ensure that the company is incentivised to maintain performance, and appropriate penalties are in place for under or poor performance. Thames Water proposed a collar of four changes in status over 2015-20. We do not consider that this provides customers with adequate protection from serious deterioration in the health of the non-infrastructure assets and have removed the collar entirely.

PC/ODI affected	What we did	Why we did it
		<p>Thames Water proposed to include a penalty deadband which required non-stable performance to be reported for two consecutive years before a penalty is applied. We do not believe this appropriately compensates customers for non-stable performance in a single year and have removed the deadband completely.</p> <p>Thames Water did not propose any financial penalties for 2019-20 for this performance commitment, stating that this would be undertaken as part of the next price review process. We consider that it is more appropriate to outline the incentive structures for 2019-20 prior to the reporting period and, as such, have rolled forward the incentive structure from 2018-19 to 2019-20.</p>
<p>B2 – Asset Health Wastewater (Infrastructure)</p>	<p>Removed the penalty collar Removed the penalty deadband Adjusted the penalty incentive rate Include the transferred network Rolled forward the incentive structure to include 2019-20</p>	<p>The interventions ensure that the company is incentivised to maintain performance, and appropriate penalties are in place for under or poor performance.</p> <p>Thames Water proposed a collar of four changes in status over 2015-20. We do not consider that this provides customers with adequate protection from serious deterioration in the health of the non-infrastructure assets and have removed the collar entirely.</p> <p>Thames Water proposed to include a penalty deadband which required non-stable performance to be reported for two consecutive years before a penalty is applied. We do not believe this appropriately compensates customers for non-stable performance in a single year and have removed the deadband completely.</p> <p>The penalty incentive rate has been increased by 25% to provide an additional incentive and stronger protection to customers, in</p>

PC/ODI affected	What we did	Why we did it
		<p>recognition that the company has been subject to shortfalls for the 2010-2015 period for serviceability (wastewater infrastructure) as a result of poor performance.</p> <p>In line with our approach, incidents occurring on the network transferred under s105A of the Water Industry Act have been included in this performance commitment.</p> <p>Thames Water did not propose any financial penalties for 2019-20 for this performance commitment, stating that this would be undertaken as part of the next price review process. We consider that it is more appropriate to outline the incentive structures for 2019-20 prior to the reporting period and, as such, have rolled forward the incentive structure from 2018-19 to 2019-20.</p>
<p>B3 – Properties protected from flooding due to rainfall</p>	<p>Include the transferred network</p> <p>Increase the expected value to be delivered by the performance commitment</p> <p>Introduce a Counters Creek specific penalty</p>	<p>In line with our approach, incidents occurring on the network transferred under s105A of the Water Industry Act have been included in this performance commitment.</p> <p>As part of the horizontal review of internal sewer flooding, it was identified that Thames Water had a degree of catch up required to reach upper quartile performance. Therefore, the value of benefit that this performance commitment will deliver has been increased in line with the degree of catch up required by Thames Water to reach upper quartile performance.</p> <p>In addition, the penalty structure proposed by Thames Water did not include any penalty for the late delivery of the Counters Creek scheme. Therefore, we have introduced an additional penalty, equivalent to the annual benefit value of the Counters Creek scheme</p>

PC/ODI affected	What we did	Why we did it
		to apply in the event that the scheme is late, and in each subsequent year that it is not delivered.
B4 – Number of internal flooding incidents, excluding those due to overloaded sewers (SFOC)	<p>Include the transferred network</p> <p>Remove the reward</p> <p>Reduce the committed performance level and alter the penalty deadbands and collar</p> <p>Roll forward the incentive structure to include 2019-20</p>	<p>In line with our approach, incidents occurring on the network transferred under s105A of the Water Industry Act have been included in this performance commitment.</p> <p>The company attempted to demonstrate it was stretching its performance based on improvements from 2012-13 over 2010-15. Our analysis showed that Thames Water was one of three companies actually showing a net deterioration in performance 2010-15 and are being shortfalled for this. We have, therefore, removed the reward element of this incentive completely.</p> <p>We have intervened following a review of internal flooding incidents across all companies to ensure that the company is incentivised to achieve upper quartile performance. Therefore, the committed performance levels has been reduced to upper quartile in 2017-18 to 2019-20 and reduced in 2015-16 and 2016-17 to reflect the 2 year glide path. The penalty deadbands and penalty collars have also been adjusted.</p> <p>Thames Water did not propose any financial penalties for 2019-20 for this performance commitment, stating that this would be undertaken as part of the next price review process. We consider that it is more appropriate to outline the incentive structures for 2019-20 prior to the reporting period and, as such, have rolled forward the incentive structure from 2018-19 to 2019-20.</p>

PC/ODI affected	What we did	Why we did it
<p>C2 – Total category 1-3 pollution incidents from sewage related premises</p>	<p>Include the transferred network Increase the penalty rate Include a clause which prevents rewards being earned for category 1 and 2 incidents Roll forward the incentive structure to include 2019-20</p>	<p>In line with our approach, incidents occurring on the network transferred under s105A of the Water Industry Act have been included in this performance commitment.</p> <p>The penalty rate proposed by the company was less than the average incremental cost (AIC) per incident. We do not consider that this fully incentivises the company to reduce pollution incidents. Therefore we have increased the penalty rate to equal the AIC.</p> <p>We have intervened following a review of sewerage service pollution incidents across all companies to ensure that the company is incentivised to achieve upper quartile performance. Thames Water is already proposing upper quartile performance so no changes were required. We have included a 'gateway clause' which precludes the company from earning a reward in any single year that a category 1 or 2 incident occurs. This clause has been included as it was proposed by the company during the clarification process following the 27 June submission.</p> <p>Thames Water did not propose any financial penalties for 2019-20 for this performance commitment, stating that this would be undertaken as part of the next price review process. We consider that it is more appropriate to outline the incentive structures for 2019-20 prior to the reporting period and, as such, have rolled forward the incentive structure from 2018-19 to 2019-20.</p>
<p>C3 – Sewage treatment works discharge consent</p>	<p>Roll forward the incentive structure to include 2019-20</p>	<p>Thames Water did not propose any financial penalties for 2019-20 for this performance commitment, stating that this would be undertaken as part of the next price review process. We consider that it is more</p>

PC/ODI affected	What we did	Why we did it
		appropriate to outline the incentive structures for 2019-20 prior to the reporting period and, as such, have rolled forward the incentive structure from 2018-19 to 2019-20.
C7 – Modelled reduction in properties affected by odour	Reduce the reward cap in 2018-19 and 2019-20	Due to the performance commitment being based on modelled results, and the significant imbalance between rewards and penalties, we have reduced the reward cap in 2018-19 and 2019-20. This is in line with removing an equivalent number of properties that are within 500m of a wastewater site where odour problems may arise, but are not currently an issue. This is equivalent to reducing the cap by 8,000 properties in each of the two years.
C9 – Reduce the amount of phosphorus entering rivers to help improve aquatic plant and wildlife	Made clearer how incentive rates will be established and introduced required timeline to do so	Company proposal provided no details or timeline for resolution

Table AA4.5 Summary of interventions on household retail outcomes, performance commitments and incentives

PC/ODI affected	What we did	Why we did it
B1 – Implement new online account management system	Introduce value-based penalties for year 4 and year 5	The new account management system is expected to bring annual benefits to customers of £6.5m. However, the penalty structure proposed by Thames Water would not have compensated customers in the event that delivery of the system was delayed. Therefore, in addition to the penalty proposed by Thames Water, we have introduced a value-based penalty for years 4 and 5 to fully compensate customers in the event of late delivery.
RA6 – Service Incentive Mechanism (SIM)	Introduce the Ofwat SIM incentive	SIM will continue to operate in the 2015–20 as a comparative industry metric, therefore we have included it as part of the package of incentives. The reward and penalty will be determined by Ofwat.
RC1 – Increase the number of customers on a payment plan (excluding Thames Tideway Tunnel)	Remove Thames Tideway Tunnel exclusion	Number of customers on payment plan should not be impacted by the Thames Tideway Tunnel, so the Thames Tideway Tunnel exclusion has been removed
RC2 – Increase cash collection rates (excluding Thames Tideway Tunnel)	Remove Thames Tideway Tunnel exclusion	Thames is the principal to the billing arrangement with the Infrastructure Provider. This is different to other water company arrangements where a water company may collect for another company as a billing agent under contractual arrangements outside of the regulatory business. As Thames Water is acting as a principal (ie it has the direct interface with customers and carries bad debt) the exclusion on cash collection rates is not appropriate.

Table AA4.6 Summary of interventions on Thames Tideway outcomes, performance commitments and incentives

PC/ODI affected	What we did	Why we did it
T1 – We will limit the extent of delays on the overall programme timeline	Introduced the PC	Thames Water has a number of key activities which must be delivered to limit the extent of any delays to the programme. This performance commitment will give visibility to these activities as well as financially penalise the company for delays in construction activities needed to allow the Infrastructure Provider access to the sites.
T2 – We will engage effectively with the IP, and other stakeholders, both in terms of integration and assurance	Introduced the PC	The successful delivery of the project will require Thames Water to work well with the IP and other stakeholders, therefore effective engagement is important. For this reason we are including performance commitments ensure that Thames Water is actively seeking the views of those stakeholders to identify ways in which it can operate and engage more effectively to deliver the Tideway Tunnel.
T3 – We will engage with our customers to build understanding of the Thames Tideway Tunnel project	Introduced the PC	It is important that Thames Water focuses on the customer understanding of the Tideway Tunnel as well as the construction activities to deliver it. This is both in terms of the overall customer base who are funding the project, and the more local issues caused by construction activities.

Outcome delivery and reporting

In the [outcomes technical appendix](#), we outline a framework against which we have assessed Thames Water’s proposals in relation to outcome delivery and reporting.

The table below summarises Thames Water’s proposed approach to the measurement, reporting and governance of outcomes and our assessment of this approach.

Table A2.8 Thames Water’s proposals for outcome delivery and reporting

Thames Water proposals	Our assessment
<p>In the June submission, Thames Water provided information on the processes for Governance and Accountability, Audit and Assurance, and Transparency and Publication for reporting performance over the 2015 – 20 period.</p> <p>For the performance commitments, the company will set out methodology statements which outline the processes and procedures for collecting data and calculating the metrics to ensure consistency in the approach to reporting performance. The data is reviewed monthly, quarterly and annually by the Board and Executive team.</p> <p>For 2015 – 20, the company is proposing to build on the existing audit and assurance process in place for the 2010 – 15 period. In addition to the use of internal and external audit teams to assure the systems and processes from which performance data is collected and reported, the company is proposing to:</p> <ul style="list-style-type: none"> • Appoint an independent assessor for the full price control period • Set-up a customer group (following on from the CCG) to review and challenge the performance reporting and assurance process. 	<p>In our methodology statement we set out our expectation that companies should demonstrate that their proposed PCs can be measured and recorded consistently and that they will have the appropriate governance and quality assurance processes in place to achieve this. We also expect companies to be transparent with customers about their performance against their outcomes and commitments.</p> <p>Thames Water has provided sufficient evidence demonstrating the approach it will undertake to ensure the PCs will be measured and reported consistently, and the proposed governance and assurance processes. Therefore, we have accepted the company’s proposals</p> <p>In time, we may develop further information requirements with regard to outcomes, as we review and change current requirements relating to performance indicators and each company’s annual risk and compliance statement.</p>

Thames Water proposals	Our assessment
<ul style="list-style-type: none"> obtain independent third party assurance on the methodology and technical issues, for performance commitments where a degree of judgement and discretion is involved in the calculation – for example through a peer review with relevant experts. <p>The company is proposing to report performance through the existing regulatory publication process, comprising of:</p> <ul style="list-style-type: none"> Annual Performance Report (incorporating the KPI dashboard) Annual Report and Financial Statements (which also includes the risk and compliance statement) Regulatory accounts <p>The company proposes to commit to undertaking further customer engagement and research to understand the level of detail and frequency that customers would prefer to receive about the performance against outcomes.</p>	

In the remainder of this section, we provide the following information on each performance commitment we are proposing as part of this draft determination.

- The name and detailed definition of the performance commitment.
- The type of incentive.
- The performance commitment level.
- For financial incentives:
 - the limits on rewards and penalties (caps and collars) and neutral zones (deadbands) as applicable¹¹; and

¹¹ In general, the cap or collar is the level of service at which the maximum penalty or reward occurs and a deadband is the level of service at which the incentive first applies. However, where a greater than or less than symbol precedes the figure this denotes that the maximum or initial incentive only occurs if service is greater than or less than this level.

- the incentive rates.
- Additional details on the measure.
- Where Ofwat has not accepted the company's proposals, the nature of the intervention made is also explained.

[Appendix 1 of our final methodology statement](#) contains a number of worked examples that illustrate how the different incentive types will operate.

We have intervened in relation to a number of performance commitments proposed by the company. Where our intervention is to remove the performance commitment in question, details and reasoning are provided in table AA4.1 at the end of this annex. Where we have amended the company's proposed incentive but retained the performance commitment, we have intentionally set out our interventions below using a ~~strike through~~. What this means is that we have rejected the proposal that has been struck through and instead we have either used a different value or not included a value at all (for example, in the case of some rewards).

Following submission of its business plan on 27 June 2014, Thames Water was given the opportunity to amend and clarify its proposed outcome delivery incentives following a number of queries raised by us. While Thames Water was supportive of a number of potential changes, it set out that its formal position remained as set out in its June Submission. Where we have included these changes within our draft determination they have, therefore, been shown as interventions.

Thames Water proposed a number of reward and penalty structures which were only active until 2018-19, stating that 2019-20 would be based on forecast performance and, as such, should form the first year of the incentive package designed as part of the price review process in 2019. We do not consider that this provides customers with appropriate protection for 2019-20 and we have, therefore, intervened by rolling forward the incentive structure from 2018-19 to include 2019-20.

Thames Water will be able to finalise its proposed menu choice and affected ODI calibrations following our consideration of responses to these proposals.

Table AA4.7 Performance commitments that we have added to this draft determination

Performance commitment	Reason for its addition
Household Retail	
Service Incentive Mechanism (SIM)	SIM will continue to operate in the 2015 – 20 period as a comparative industry metric, therefore we have included it as part of the package of incentives. The reward and penalty will be determined by Ofwat.
T1 – We will limit the extent of delays on the overall programme timeline	Thames did not propose any outcome delivery incentives or performance commitments for its activities on the TTT in its June business plan submission. In response to our request, Thames Water has subsequently developed an initial set of performance commitments for the TTT although these were neither tested with customers nor approved by Thames Water's Board. Given Thames Water's key role in the timely delivery of the project, we consider that customers would not be adequately protected without performance commitments and incentives in this area.
T2 – We will engage effectively with the IP, and other stakeholders, both in terms of integration and assurance	
T3 – We will engage with our customers to build understanding of the Thames Tideway Tunnel project	The performance commitments Thames Water has proposed are a helpful starting point. Using the company's proposal, we have outlined what we consider to be the three key performance commitments and associated incentives for the project. Thames Water will need to develop the performance commitments further including how it will measure and report against its performance and engage with its customers to understand their views. Thames Water will also need to update the performance commitments should it commit to take on additional activities to limit the extent of delays to the project if there is a delay to the appointment of an IP.

Wholesale water outcome A: Demonstrate to our customers and stakeholders that they can trust us, that we are easy to do business with and that we care

Performance commitment WA1: Improve handling of written complaints by increasing 1st time resolution

Detailed definition of performance measure: The percentage of written complaints relating to the wholesale water business (excluding metering) which are resolved at the first stage, without the need for escalation.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	90%	95%	95%	95%	95%	95%

Additional details

Necessary detail on measurement units	The measurement unit is the proportion of written complaints relating to water services (excluding metering) that are resolved first time, without the need for escalation.
Frequency of PC measurement and any use of averaging	Performance commitment reported at the end of each financial year and reviewed through independent assurance process.

Performance commitment WA2: Number of Written complaints per 10,000 connected properties

Detailed definition of performance measure: The number of written complaints about water operational activity per 10,000 connected properties that receive water services from Thames Water.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Number of written complaints per 10,000 connected properties	11.66	10.64	9.61	8.58	7.55	6.53

Additional details

Necessary detail on measurement units	<p>Measurement units are the number of written complaints about water operational activity per 10,000 connected properties that receive water services from Thames Water.</p> <p>The activities carried out between the wholesale water and retail price controls will be managed through a service level agreement (SLA), which will cover, among other things, information integrity and accuracy across the separate business functions.</p> <p>This is rounded to two decimal places</p>
Frequency of PC measurement and any use of averaging	<p>Performance commitment reported at the end of each financial year and reviewed through independent assurance process.</p>

Performance commitment WA3: Customer satisfaction surveys (Internal CSAT monitor)

Detailed definition of performance measure: The average customer satisfaction score for customer contacts relating to the wholesale water operational activity, using Thames Water’s internal CSAT monitor.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Score 1:5	4.10	4.35	4.45	4.50	4.55	4.60

Additional details

Necessary detail on measurement units	Measurement unit is the average customer satisfaction score for customer contacts relating to water operational activity
Frequency of PC measurement and any use of averaging	Performance commitment reported at the end of each financial year and reviewed through independent assurance process.

Performance commitment WA4: Reduced water consumption from issuing water efficiency devices to customers

Detailed definition of performance measure: Reduced water consumption (demand) measured in MI/D, achieved from issuing water efficiency devices to customers. The calculation of the demand reduction from these devices follows Ofwat guidelines (Ofwat – June Return Reporting Requirements, 2011) and is reported as part of the annual return.

Incentive type: Financial – penalty only

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Reduced demand MI/d	4.24					15.45
Penalty collar	Reduced demand MI/d						11.70
Penalty deadband	Reduced demand MI/d						15.45

Incentive rates

Incentive type	Performance levels (Reduced demand MI/d)		Incentive rate (£m/ Reduced demand MI/d)
	Lower	Upper	
Penalty	11.70	15.45	0.870

Additional details

Necessary detail on measurement units	Measurement unit is the cumulative reduction in demand (in MI/d) by the end of 2015-20 from issuing water efficiency devices to customers. The calculation of the demand reduction from these devices follows Ofwat guidelines (Ofwat – June Return Reporting Requirements, 2011) and is reported as part of the Annual Return.
Frequency of PC measurement and any use of averaging	The penalty applies to performance at the end of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5 of 2015-20. Performance against the commitment will be measured annually.
Timing and frequency of	Penalties will be calculated at PR19, to be applied in

rewards/penalties	2020-25
Form of reward/penalty	Adjustment to revenue

Performance commitment WA5: Provide a free repair service for customers with a customer side leak outside of the property

Detailed definition of performance measure: The number of properties where Thames Water provides a free repair service to customers with a customer side leak outside their property. These are additional targeted properties, above the company's annual baseline number (10,000), aligned with the roll out of its progressive metering programme.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Number against target above baseline no.	10,000 baseline	1170	1450	1410	900	890

Additional details

Necessary detail on measurement units	Measurement unit is the number of properties where Thames Water provides a free repair service to customers with a customer side leak outside their property
Frequency of PC measurement and any use of averaging	Performance commitment reported at end of each financial year and reviewed through independent assurance process.

Wholesale water outcome B: We will provide a safe and reliable Water service that complies with all necessary standards and is available when our customers require it

Performance commitment WB1: Asset Health Water Infrastructure

Detailed definition of performance measure: The Asset Health status in each year of 2015-20, based on independently assessed performance against a basket of key indicators that represent the health of the infrastructure assets.

The Asset Health measure for water infrastructure is made on the basis of indicators of bursts, unplanned interruptions to supply, iron mean zonal non-compliance, inadequate pressure, planned network rehabilitation and customer complaints of discolouration and white water.

Incentive type: Financial – penalty only

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Composite index	Stable	Stable	Stable	Stable	Stable	Stable
Penalty collar	Composite index		Marginal or Deteriorating	Marginal or Deteriorating	Marginal or Deteriorating	Marginal or Deteriorating	Deteriorating
Penalty deadband	Composite index		Marginal	Marginal	Marginal	Marginal	

Incentive rates

Incentive type	Performance levels (status)		Incentive rate (£m/status decrement/year)
	Lower	Upper	
Penalty 1	Deteriorating Marginal	Stable	5.75 4.6

Incentive type	Performance levels (status)		Incentive rate (£m/status decrement/year)
	Lower	Upper	
Penalty 2	Deteriorating	Marginal	4.6

Additional details

Necessary detail on measurement units	<p>Measurement unit is the Asset Health status in each year of 2015-20, based on independently assessed performance against a basket of key indicators that represent the health of the infrastructure or non-infrastructure assets, and therefore the service being provided to current and future customers.</p> <p>The Asset Health measure for water infrastructure is made on the basis of indicators of bursts, unplanned interruptions to supply, iron mean zonal non-compliance, inadequate pressure, planned network rehabilitation and customer complaints of discolouration and white water.</p>
Frequency of PC measurement and any use of averaging	The penalty applies to performance in each of the first four years of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	<p>The penalty incentive rate applies to a single change in status, where stable to marginal and marginal to deteriorating each represent a single change in status.</p> <p>The penalty collar is set at the level of four changes in status for each of infrastructure and non-infrastructure. For example, the penalty collar would apply in four persistent years of marginal status, two years of deteriorating status, or one year of deteriorating status and two years of marginal status.</p> <p>Marginal status represents the effective penalty deadband, as no penalty is earned until performance is assessed as marginal. Penalties start to occur in the event of a single year of two or more consecutive years of marginal or deteriorating status (except where marginal or deteriorating status occurs in the fourth year of 2015-20, the last year where the ODI applies), with penalties applying in each</p>

year where the status is below stable.

The table below illustrates how the penalty would apply in two different scenarios:

-	2015-16	2016-17	2017-18	2018-19	2019-20	Penalty
Scenario 1 – Performance	Marginal	Deteriorating	Marginal	Stable	-	
Scenario 1 – Penalty	£4.6m	£9.2m	£4.6m	0	-	£18.4m
Scenario 2 – Performance	Stable	Marginal	Stable	Marginal	-	
Scenario 2 – Penalty	0	0	0	£4.6m	-	£4.6m

Performance commitment WB2: Asset Health Water Non Infrastructure

Detailed definition of performance measure: The Asset Health status in each year of 2015-20, based on performance against a basket of key indicators that represent the health of the non-infrastructure assets.

The Asset Health measure for water non-infrastructure is made on the basis of indicators of Disinfection Index, Reservoir Integrity Index, Drinking Water Quality Compliance Measures – Turbidity, Drinking Water Quality Compliance Measures – Enforcement actions, Process Control Index, and Water Quality Customer Complaints for chlorine and hardness.

Incentive type: Financial – penalty only

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Composite index	Stable	Stable	Stable	Stable	Stable	Stable

Penalty collar	Composite index	Marginal or Deteriorating	Marginal or Deteriorating	Marginal or Deteriorating	Marginal or Deteriorating	Deteriorating
Penalty deadband	Composite index	Marginal	Marginal	Marginal	Marginal	

Incentive rates

Incentive type	Performance levels (status)		Incentive rate (£m/status decrement/year)
	Lower	Upper	
Penalty 1	Deteriorating Marginal	Stable	4.6
Penalty 2	Deteriorating	Marginal	4.6

Additional details

Necessary detail on measurement units	<p>Measurement unit is the Asset Health status in each year of 2015-20, based on independently assessed performance against a basket of key indicators that represent the health of the infrastructure or non-infrastructure assets, and therefore the service being provided to current and future customers.</p> <p>The Asset Health measure for water non-infrastructure is made on the basis of indicators of disinfection, reservoir integrity, drinking water quality compliance – turbidity and enforcement actions, process control and water quality customer complaints for chlorine, monitored complaints for hardness.</p>
Frequency of PC measurement and any use of averaging	The penalty applies to performance in each of the first four years of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue
Any other information or	The penalty incentive rate applies to a single change in status, where stable to marginal and marginal to deteriorating each represent a

<p>clarifications relevant to correct application of incentive</p>	<p>single change in status.</p> <p>The penalty collar is set at the level of four changes in status for each of infrastructure and non-infrastructure. For example, the penalty collar would apply in four persistent years of marginal status, two years of deteriorating status, or one year of deteriorating status and two years of marginal status.</p> <p>Marginal status represents the effective penalty deadband, as no penalty is earned until performance is assessed as marginal. Penalties start to occur in the event of a single year of two or more consecutive years of marginal or deteriorating status (except where marginal or deteriorating status occurs in the fourth year of 2015-20, the last year where the ODI applies), with penalties applying in each year where the status is below stable.</p> <p>The table below illustrates how the penalty would apply in two different scenarios:</p>						
		2015-16	2016-17	2017-18	2018-19	2019-20	Penalty
	Scenario 1 – Performance	Marginal	Deteriorating	Marginal	Stable	-	
	Scenario 1 – Penalty	£4.6m	£9.2m	£4.6m	0	-	£18.4m
	Scenario 2 – Performance	Stable	Marginal	Stable	Marginal	-	
	Scenario 2 – Penalty	0	0	0	£4.6m	-	£4.6m

Performance commitment WB3: Compliance with drinking water quality standards – Ofwat/DWI KPI

Detailed definition of performance measure: Compliance with drinking water quality standards – Ofwat/DWI KPI, is the mean zonal compliance in the year for water quality parameters. It is an existing KPI which is reported annually to Ofwat and the DWI.

Incentive type: Financial – penalty only

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	% compliance	99.94%	99.94%	99.94%	100% 99.94%	100% 99.94%	100% 99.95%
Penalty collar	% compliance		99.91%	99.91%	99.94% 99.91%	99.94% 99.91%	99.94%
Penalty deadband	% compliance		99.93%	99.93%	99.96% 99.93%	99.96% 99.93%	99.96%

Incentive rates

Incentive type	Performance levels (%)		Incentive rate (£m/0.01 pp /year)
	Lower	Upper	
Penalty	99.91%	99.96% 99.93%	3.855

Additional details

Necessary detail on measurement units	The measurement unit is the mean zonal compliance in the year, as currently reported to the DWI. Performance is rounded to the nearest two decimal places for the purpose of applying the ODI
Frequency of PC measurement and any use of averaging	The penalty applies to annual performance in each of the first four years of 2015-20. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue

Performance commitment WB4: Properties experiencing chronic low pressure (DG2)

Detailed definition of performance measure: This measure is the previous Ofwat DG2 measure, which shows the number of properties at the end of the reporting year experiencing chronic low pressure.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No. of properties	34	34	34	34	34	34

Additional details

Necessary detail on measurement units	Measurement unit is previous DG2 measure showing the number of properties at the end of the reporting year experiencing chronic low pressure
Frequency of PC measurement and any use of averaging	Performance commitment reported at end of each financial year and reviewed through independent assurance process.

Performance commitment WB5: Average hours lost supply per property served, due to interruptions >4hr

Detailed definition of performance measure: This is the annual, average number of hours lost supply per property served, due to interruptions >4hr, from both planned and unplanned events. A cap (20,000) applies to the number of property hours counted for any single incident.

Incentive type: Financial – reward and penalty

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Hours lost supply per property served	0.13	0.12 0.13	0.12 0.13	0.11 0.13	0.11 0.13	0.11 0.13
Penalty collar	Hours lost supply per property served		0.15	0.15	0.14 0.15	0.14 0.15	0.14 0.15
Penalty deadband	Hours lost supply per property served		0.13	0.13	0.13 0.13 0.11	0.13 0.13 0.11	0.13 0.13 0.11
Reward deadband	Hours lost supply per property served		0.13 0.13 0.11	0.13 0.13 0.11	0.13 0.13 0.11	0.13 0.13 0.11	0.13 0.13 0.11
Reward cap	Hours lost supply per property served		0.10 0.10 0.06	0.10 0.10 0.06	0.10 0.10 0.06	0.10 0.10 0.06	0.10 0.10 0.06

Incentive rates

Incentive type	Performance levels (hours lost per property served)		Incentive rate (£m/0.01 hours lost per property served/year)
	Lower	Upper	
Penalty	0.15	0.11 0.13	5.335
Reward	0.11 0.13	0.06 0.10	3.125

Additional details

Necessary detail on	Measurement unit is the average number of hours lost
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measurement units	supply per property served, due to interruptions >4hr, from both planned and unplanned events. A cap (20,000) applies to the number of property hours for any single incident. Performance will be rounded to two decimal places
Frequency of PC measurement and any use of averaging	The penalty applies to annual performance in the first four years of 2015-20. This will be calculated at PR19 based on actuals for years 1-4. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue

Performance commitment WB6: Security of Supply Index – Ofwat KPI

Detailed definition of performance measure: This is the existing annual Security of Supply (SOSI) index. This measure is reported and audited as part of the Annual Return process.

Incentive type: Financial – penalty only

Performance commitments

	Unit	Starting level	Committed performance levels				
			2014-15	2015-16	2016-17	2017-18	2018-19
PC	Index	100	100	100	100	100	100
Penalty collar	Index		97	97	97	97	

Incentive rates

Incentive type	Performance levels (index)		Incentive rate (£m/index point/year)
	Lower	Upper	
Penalty	97	100	2.230

Additional details

Necessary detail on measurement units	Measurement unit is the existing annual security of supply (SOSI) index. This measure is reported and audited as part of the annual return process. The calculation matches the method for current annual reporting.
Frequency of PC measurement and any use of averaging	The penalty applies to annual performance in the first four years of 2015-20. This will be calculated at PR19 based on actuals for years 1-4. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue

Performance commitment WB7: Compliance with SEMD advice notes (with or without derogation)

Detailed definition of performance measure: Compliance with SEMD (Security and Emergency Measures Directive) Advice Notes, with or without derogation. These are the advice notes issues by Defra and written by CPNI (the Centre for Protection of National Infrastructure).

Incentive type: Financial – penalty only

Performance commitments

	Unit	Starting level	Committed performance levels					
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	
PC	% compliance	100%						100%
Penalty collar	% compliance							0%

Incentive rates

Incentive type	Performance levels (%)		Incentive rate
	Lower	Upper	
Penalty	0%	100%	40% of annualised costs saved through scope reduction

Additional details

Necessary detail on measurement units	This measures compliance with the SEMD Advice Notes to deliver a secure supply of water and resilience in supply.
Frequency of PC measurement and any use of averaging	The penalty applies to performance at the end of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5 of 2015-20. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	This incentive will return 40% of any 2015-20 revenue as a result of reductions in scope used to estimate the SEMD cost for Thames Water's 27 June 2014 submission. This will be in addition to the 50% of costs returned after the totex menu reward. For the avoidance of doubt, this does not apply to cost increases or to cost reductions as a result of efficiencies. Incentives will be applied in 2020-25 on an NPV-neutral basis.

Performance commitment WB8: MI/d of sites made resilient to future extreme rainfall events

Detailed definition of performance measure: The capacity (in MI/d) of water treatment works where Thames Water has invested to protect supply from extreme weather events (defined as a 1:100 rainfall event), by the end of 2015-20.

This will be measured by the successful delivery of the proposed solutions to protect supply from the identified sites. MI/d will be measured from the design capacity of the sites.

Incentive type: Financial – reward and penalty

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	MI/d cumulative	n/a					1015
Penalty collar	MI/d cumulative						812
Reward cap	MI/d cumulative						1218

Incentive rates

Incentive type	Performance levels (MI/d cumulative)		Incentive rate (£m/MI/d cumulative)
	Lower	Upper	
Penalty	812	1015	0.005
Reward	1015	1218	0.005

Additional details

Necessary detail on measurement units	Measurement unit is the capacity (in Ml/d) of water treatment works where Thames Water has invested to protect supply from extreme weather events, by the end of 2015-20
Frequency of PC measurement and any use of averaging	The penalty applies to performance at the end of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5 of 2015-20. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue

Wholesale water outcome C: We will limit our impact on the environment and achieve a socially responsible, sustainable business for future generations, including reducing levels of leakage

Performance commitment WC1: Greenhouse gas emissions from water operations

Detailed definition of performance measure: The greenhouse gas emissions (in kilo tonnes of CO₂ equivalent) from water operations.

This performance measure takes into account all forecast movements in the use of energy and emissions, including impacts from Thames Water’s wider investment programme and efficiency activities. Its specific programme is optimised at a company-wide level and then allocated to water or wastewater service based on each site-specific solution in the preferred programme. This performance commitment is allocated 100% to Wholesale Water, being delivered solely by solutions on water sites.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Kt CO ₂ e	247.8	227.0	185.0	166.1	146.6	136.2

Additional details

Necessary detail on measurement units	Measurement unit is the greenhouse gas emissions (in kilo tonnes of CO ₂ equivalent) from water operations
Frequency of PC measurement and any use of averaging	Performance commitment reported at end of each financial year and reviewed through independent assurance process.

Performance commitment WC2: Leakage

Detailed definition of performance measure: The annual average level of leakage, including customer supply pipe leakage, in MI/day. This is reported on an annual basis in the company's annual returns.

Incentive type: Financial – reward and penalty

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	MI/d	665	649	630	620	612	606
Penalty collar	MI/d		657 649	649	649	649	649
Reward deadband	MI/d		637	619	609	600	594
Reward cap	MI/d		626	607	596	588	582

Incentive rates

Incentive type	Performance levels (MI/d)		Incentive rate (£m/MI/d/year)
	Lower	Upper	
Penalty	657 649	606 612	0.445
Reward	637	582 588	0.265

Additional details

Necessary detail on measurement units	Measurement unit is the annual average level of leakage, in MI/day.
Frequency of PC measurement and any use of averaging	The penalty applies to annual performance in the first four years of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecast for year 5. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25

Form of reward/penalty	Adjustment to revenue
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Performance commitment WC3: Abstraction Incentive Mechanism (AIM)

Detailed definition of performance measure: This is a new measure being developed by Ofwat for an industry-wide incentive, to apply during 2015-20. Thames Water will align the measure with the detailed definition to be formed by Ofwat, which the company understands will be score-based using abstracted volume at identified sites.

Incentive type: Reputational

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Score		TBC	TBC	TBC	TBC	TBC

Additional details

Necessary detail on measurement units	n/a – measurement units will be defined as the incentive is developed.
Frequency of PC measurement and any use of averaging	n/a – frequency of measurement will be defined as the incentive is developed.

Performance commitment WC4: We will educate our existing and future customers

Detailed definition of performance measure: This measures the number of children directly engaged each year through Thames Water’s education programme on water supply, including working in schools, educational visits and site open days.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No. of children directly engaged	14,000	15,000	16,000	17,000	18,000	20,000

Additional details

Necessary detail on measurement units	The measurement unit is the number of children Thames Water has directly engaged each year in its water education programme.
Frequency of PC measurement and any use of averaging	Performance commitment reported at end of each financial year and reviewed through independent assurance process.

Performance commitment WC5: Deliver 100% of agreed measures to meet new environmental regulations

Detailed definition of performance measure: The proportion of agreed measures completed to meet new environmental regulations. Agreed measures are defined as:

- water schemes listed on NEP4; and
- low flow and drought management plan schemes.

The list of schemes currently agreed is listed in the Performance Commitment Response WC5 (27 June 2014)

Incentive type: Financial – penalty only

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	% agreed schemes completed	n/a					100%
Penalty collar	% agreed schemes completed						0%

Incentive rates

Incentive type	Performance levels (%)		Incentive
	Lower	Upper	
Penalty	0%	100%	40% of 2015-20 costs reduced through scope reductions

Additional details

Necessary detail on measurement units	This measures compliance with the Environment Agency agreed schemes for the agreed measures to meet new environmental regulations
Frequency of PC measurement and any use of averaging	The penalty applies to performance at the end of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5 of 2015-20. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to RCV
Any other information or clarifications relevant to correct application of incentive	This incentive will return 40% of any 2015-20 cost as a result of reductions in scope used to estimate the 27 June 2014 submission. This will be in addition to the 50% of costs returned after the totex menu reward. For the avoidance of doubt, this

does not apply to cost increases or to cost reductions as a result of efficiencies.

Incentives will be applied in 2020-25 on an NPV-neutral basis.

Wholesale water outcome D: We will provide the level of customer service our customers require, in the most economic and efficient manner, to ensure that bills are no more than necessary

Performance commitment WD1: Energy imported less energy exported

Detailed definition of performance measure: The net reduction in energy from the grid (energy imported less energy exported) measured in gigawatt hours (GWh), achieved by improving the energy efficiency of assets and increasing self-generation percentage across water operations.

This performance measure takes into account all forecast movements in the use of energy, including impacts from Thames Water's wider investment programme and efficiency activities. The specific programme is optimised at a company-wide level and then allocated to water or wastewater service based on each site-specific solution in the preferred programme. This performance commitment is allocated 100% to wholesale water, being delivered solely by solutions on water sites.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	GWh	505	494	483	472	472	476

Additional details

Necessary detail on measurement units	Measurement unit is the net energy imported by wholesale water operations in GWh.
Frequency of PC measurement and any use of averaging	Performance commitment reported at end of each financial year and reviewed through independent assurance process.

Wholesale wastewater outcome A: Demonstrate to our customers and stakeholders that they can trust us, that we are easy to do business with and that we care

Performance commitment SA1: Improve handling of written complaints by increasing first time resolution

Detailed definition of performance measure: The percentage of written complaints relating to the wholesale wastewater business which are resolved at the first stage, without the need for escalation.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	90%	95%	95%	95%	95%	95%

Additional details

Necessary detail on measurement units	Measurement units are the percentage of wastewater operational written complaints resolved first time.
Frequency of PC measurement and any use of averaging	Performance commitment reported at end of each financial year and reviewed through independent assurance process.

Performance commitment SA2: Number of Written complaints per 10,000 connected properties

Detailed definition of performance measure: The number of written complaints about wastewater operational activity per 10,000 connected properties that receive wastewater services from Thames Water.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Number of written complaints per 10,000 connected properties	8.05	7.60	7.15	6.70	6.25	5.80

Additional details

Necessary detail on measurement units	Measurement unit is the number of written complaints about wastewater operational activity per 10,000 connected properties that receive wastewater services from Thames Water. This is rounded to two decimal places.
Frequency of PC measurement and any use of averaging	Performance commitment reported at the end of each financial year and reviewed through independent assurance process.

Performance commitment SA3: Customer satisfaction surveys (Internal CSAT monitor)

Detailed definition of performance measure: The average customer satisfaction score for customer contacts relating to wastewater operational activity, using Thames Water’s internal CSAT Monitor.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Score 1:5	4.30	4.55	4.60	4.65	4.65	4.70

Additional details

Necessary detail on measurement units	Measurement unit is the average customer satisfaction score for customer contacts relating to wastewater operational activity
Frequency of PC measurement and any use of averaging	Performance commitment reported at the end of each financial year and reviewed through independent assurance process.

Wholesale wastewater outcome B: We will provide a safe and reliable Wastewater service that complies with all necessary standards and is available when our customers require it

Performance commitment SB1: Asset Health Wastewater Non Infrastructure

Detailed definition of performance measure: The Asset Health status in each year of 2015-20 based on independently assessed performance against a basket of key indicators that represent the health of the non-infrastructure assets.

The Asset Health measure for wastewater non-infrastructure is made on the basis of indicators of unconsented pollution incidents, the percentage of sewage treatment works discharges failing numeric consents, and the total population equivalent served by sewage treatment works failing look-up table consents.

Incentive type: Financial – penalty only

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Composite index	Stable	Stable	Stable	Stable	Stable	Stable
Penalty collar	Composite index		Marginal or Deteriorating	Marginal or Deteriorating	Marginal or Deteriorating	Marginal or Deteriorating	Deteriorating
Penalty deadband	Composite index		Marginal	Marginal	Marginal	Marginal	

Incentive rates

Incentive type	Performance levels (status)		Incentive rate (£m/status decrement)
	Lower	Upper	

Penalty 1	Deteriorating Marginal	Stable	4.505
Penalty 2	Deteriorating	Marginal	4.505

Additional details

Necessary detail on measurement units	<p>The measurement unit is the Asset Health status in each year of 2015-20, based on independently assessed performance against a basket of key indicators that represent the health of the infrastructure or non-infrastructure assets, and therefore the service being provided to current and future customers.</p> <p>The Asset Health measure for wastewater non-infrastructure is made on the basis of indicators of unconsented pollution incidents, the percentage of sewage treatment works discharges failing numeric consents, and the total population equivalent served by sewage treatment works failing look-up table consents.</p>
Frequency of PC measurement and any use of averaging	The penalty applies to performance in each of the first four years of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecast performance for year 5. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	<p>The penalty incentive rate applies to a single change in status, where stable to marginal and marginal to deteriorating each represent a single change in status.</p> <p>The penalty collar is set at the level of four changes in status for each of infrastructure and non-infrastructure. For example, the penalty collar would apply in four persistent years of marginal status, two years of deteriorating status, or one year of deteriorating status and two years of marginal status.</p> <p>Marginal status represents the effective penalty deadband, as no penalty is earned until performance is assessed as marginal. Penalties start to occur in the event of two or more consecutive years a single year of marginal or deteriorating status (except where marginal or deteriorating status occurs in the fourth year of 2015-20,</p>

the last year where the ODI applies), with penalties applying in each year where the status is below stable.

The table below illustrates how the penalty would apply in two different scenarios:

	2015-16	2016-17	2017-18	2018-19	2019-20	Penalty
Scenario 1— Performance	Marginal	Deteriorating	Marginal	Stable	-	
Scenario 1— Penalty	£4.5m	£9.0m	£4.5m	0	-	£18.0m
Scenario 2— Performance	Stable	Marginal	Stable	Marginal	-	
Scenario 2— Penalty	0	0	0	£4.5m	-	£4.5m

Performance commitment SB2: Asset Health Wastewater Infrastructure

Detailed definition of performance measure: The Asset Health status in each year of 2015-20, based on independently assessed performance against a basket of key indicators that represent the health of the infrastructure assets. The Asset Health measure for wastewater infrastructure is made on the basis of indicators of number of sewer collapses, number of blockages, unconsented category 1 to 3 pollution incidents and properties internally flooded due to other causes. This includes assets transferred under section 105A of the Water Industry Act.

Incentive type: Financial – penalty only

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Composite index	Stable	Stable	Stable	Stable	Stable	Stable
Penalty	Composite		Marginal ef	Marginal ef	Marginal ef	Marginal ef	Deterioratin

collar	index	Deteriorating	Deteriorating	Deteriorating	Deteriorating	g
Penalty deadband	Composite index	Marginal	Marginal	Marginal	Marginal	

Incentive rates

Incentive type	Performance levels (status)		Incentive rate (£m/status decrement/year)
	Lower	Upper	
Penalty 1	Deteriorating Marginal	Stable	4.505 5.6
Penalty 2	Deteriorating	Marginal	4.505

Additional details

Necessary detail on measurement units	The measurement unit is the Asset Health status in each year of 2015-20, based on performance against a basket of key indicators that represent the health of the infrastructure or non-infrastructure assets, and therefore the service being provided to current and future customers.
Frequency of PC measurement and any use of averaging	The penalty applies to performance in each of the first four years of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecast performance for year 5. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue

<p>Any other information or clarifications relevant to correct application of incentive</p>	<p>The penalty incentive rate applies to a single change in status, where stable to marginal and marginal to deteriorating each represent a single change in status.</p> <p>The penalty collar is set at the level of four changes in status for each of infrastructure and non-infrastructure. For example, the penalty collar would apply in four persistent years of marginal status, two years of deteriorating status, or one year of deteriorating status and two years of marginal status.</p> <p>Marginal status represents the effective penalty deadband, as no penalty is earned until performance is assessed as marginal. Penalties start to occur in the event of two or more consecutive years a single year of marginal or deteriorating status (except where marginal or deteriorating status occurs in the fourth year of 2015-20, the last year where the ODI applies), with penalties applying in each year where the status is below stable.</p> <p>The table below illustrates how the penalty would apply in two different scenarios:</p>																																			
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;"></th> <th style="width: 10%;">2015-16</th> <th style="width: 10%;">2016-17</th> <th style="width: 10%;">2017-18</th> <th style="width: 10%;">2018-19</th> <th style="width: 10%;">2019-20</th> <th style="width: 10%;">Penalty</th> </tr> </thead> <tbody> <tr> <td>Scenario 1— Performance</td> <td>Marginal</td> <td>Deteriorating</td> <td>Marginal</td> <td>Stable</td> <td>-</td> <td></td> </tr> <tr> <td>Scenario 1— Penalty</td> <td>£4.5m</td> <td>£9.0m</td> <td>£4.5m</td> <td>0</td> <td>-</td> <td>£18.0m</td> </tr> <tr> <td>Scenario 2— Performance</td> <td>Stable</td> <td>Marginal</td> <td>Stable</td> <td>Marginal</td> <td>-</td> <td></td> </tr> <tr> <td>Scenario 2— Penalty</td> <td>0</td> <td>0</td> <td>0</td> <td>£4.5m</td> <td>-</td> <td>£4.5m</td> </tr> </tbody> </table>		2015-16	2016-17	2017-18	2018-19	2019-20	Penalty	Scenario 1— Performance	Marginal	Deteriorating	Marginal	Stable	-		Scenario 1— Penalty	£4.5m	£9.0m	£4.5m	0	-	£18.0m	Scenario 2— Performance	Stable	Marginal	Stable	Marginal	-		Scenario 2— Penalty	0	0	0	£4.5m	-	£4.5m
	2015-16	2016-17	2017-18	2018-19	2019-20	Penalty																														
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Scenario 2— Performance	Stable	Marginal	Stable	Marginal	-																															
Scenario 2— Penalty	0	0	0	£4.5m	-	£4.5m																														

Performance commitment SB3: Properties protected from flooding due to rainfall

Detailed definition of performance measure: The number of properties which receive further protection from flooding due to rainfall by the end of 2015-20, at the estimated frequency and severity of flooding as detailed in Thames Water’s business plan.

The ODI is set based on annualised benefits which are determined using a matrix (Table 5 in PCR SB3, 27 June 2014) which sets out different values depending on

the change in probability and severity of flooding for a particular property. The proposed annual benefit is £30.434m ~~£20.053m~~; rewards are earned for delivering greater annual benefit and penalties for lesser annual benefit.

Further details on the operation of the PC and ODI (including worked examples) are provided in PCR SB3 (27 June 2014).

Incentive type: Financial – reward and penalty

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Properties protected	n/a					2127
Penalty collar	Equivalent property numbers						1459
Reward cap	Equivalent property numbers						2753

Incentive rates

Incentive type	Performance levels (equivalent properties protected)		Incentive rate
	Lower	Upper	
Penalty	1459	2127	Determined by reference to actual costs and benefits matrix
Reward	2127	2753	Determined by reference to actual costs and benefits matrix

Additional details

<p>Necessary detail on measurement units</p>	<p>The measurement unit for the PC is the number of properties further protected from flooding due to rainfall by the end of 2015-20. The ODI is based on the actual benefits delivered, which are presented for illustration as equivalent property numbers (further details provided below).</p>
<p>Frequency of PC measurement and any use of averaging</p>	<p>The penalty and reward apply to performance at the end of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5 of 2015-20. Performance against the commitment will be measured annually.</p>
<p>Timing and frequency of rewards/penalties</p>	<p>Rewards and penalties will be calculated at PR19, to be applied in 2020-25</p>
<p>Form of reward/penalty</p>	<p>Adjustment to RCV</p>
<p>Any other information or clarifications relevant to correct application of incentive</p>	<p>The ODI calculation will be based on the actual costs and benefits associated with the specific solutions delivered (for rewards) or not delivered (for penalties) against the commitment, which will depend on the type of solution, the severity of the flooding and the probability of flooding occurring.</p> <p>The process for determining incentive rates per property is defined up front, using the formula:</p> <p>Penalty or Reward incentive rate =</p> $\frac{\text{annualised incremental WTP} - \text{annualised incremental cost}}{\text{company's totex incentive rate} * \text{incremental cost}}$ <p>The exact incentive rate and size of the ODI true-up will be determined by Thames Water, ex post at PR19, with necessary independent assurance provided by the Independent Experts Group. The annual willingness to pay for the ODI calculation will be determined by the annualised benefits matrix in table 5 in PCR SB3 (27 June 2014), which sets out the different values depending on the change in probability and severity of flooding for a particular property. These values are applied to both outperformance and underperformance.</p> <p>The incremental costs for the ODI calculation will be based on the difference between allowed and actual costs as a result of changes in scope (for the avoidance of doubt, cost changes as a result of other factors, for example, inflation risk, would be treated outside the ODI in the totex menu).</p> <p>The penalty collar is financial (set at £54m), calculated as the penalty that would be incurred at the p10 estimate of</p>

performance (1,459 equivalent properties). This corresponds to a performance scenario in which Thames Water only delivers the Counters Creek solution in its 2015-20 business plan. The reward cap is financial (set at £64m), calculated as the reward that would be earned at the P90 estimate of performance (2,753 equivalent properties). This is evaluated by applying the ex-ante penalty formula to the additional benefits and costs of P90 outputs compared to those in Thames Water's 2015-20 business plan. For the purposes of setting the penalty collar and reward cap, it is assumed that the incremental benefits and costs are equal to those of the solutions in Thames Water's 2015-20 business plan.

As the reward cap and penalty collar are set in financial terms (not based directly on the number of properties), and the ODIs are based on the incremental benefits and costs of the specific outputs actually delivered, the equivalent number of properties for the penalty collar and reward cap, as shown in the performance commitment tables above, are indicative only.

Further detail on the method for determining the rewards and penalties linked with outperformance and underperformance, including worked examples, is set out in PCR SB3 (27 June 2014).

Within the framework, there will be a different treatment of outputs related to the Counters Creek solution, as a result of the risks to the delivery of these outputs that are outside of Thames Water's control. Calculation of the penalty for Counters Creek outputs will be subject to whether the outputs are cancelled or delayed, and whether this is due to reasons within or outside company control, to drive the right behaviour for customers. Further details are provided in PCR SB3 (27 June 2014).

An additional penalty has been included relating to the Counters Creek scheme. In the event that the entire scheme isn't delivered by the end of the period a penalty equivalent to the value of the scheme (£13.756m) will be applied in 2019-20, and each subsequent year that the scheme is not delivered.

This will be subject to specific, risk-based independent assurance, as set out in Thames Water's business plan.

Performance commitment SB4: Number of internal flooding incidents, excluding those due to overloaded sewers (SFOC)

Detailed definition of performance measure: The number of incidents of internal other causes flooding per year on Thames Water’s legacy sewerage network (that is, prior to the transfer of private sewers in October 2011) including those from sewers that transferred to the company in October 2011 and pumping stations that will transfer in 2016. Other causes flooding can be caused by blockages, collapses and equipment failures (which also include ‘blowbacks’ during jetting).

Incentive type: Financial – reward and penalty only

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Incidents	1209 953	1120 953	1039 953	943 953	943 953	943 953
Penalty collar	Incidents		1339 1154	1339 1154	1073 1154	1073 1154	1073
Penalty deadband	Incidents		1209 1024	1209 1024	943 1024	943 1024	943
Reward deadband	Incidents		943 882	943 882	943 882	943 882	943
Reward cap	Incidents		895 834	895 834	895 834	895 834	895

Incentive rates

Incentive type	Performance levels (no. of incidents)		Incentive rate (£m/ incidents/year)
	Lower	Upper	
Penalty	943 1154	1339 1024	0.090
Reward	1083 882	1083 834	0.055

Additional details

Necessary detail on measurement units	The measurement unit is the number of incidents of internal other causes flooding per year on Thames Water's legacy sewerage network including those from sewers that transferred to the company in October 2011 and pumping stations that will transfer in 2016. (that is, prior to the transfer of private sewers in October 2014). Other causes flooding can be caused by blockages, collapses and equipment failures (which also include 'blowbacks' during jetting). Certain mitigation events are defined under the company's assurance procedures.
Frequency of PC measurement and any use of averaging	The penalty applies to annual performance in the first four years of 2015-20. This will be calculated at PR19 based on actuals for years 1-4. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue

Performance commitment SB5: Contributing area disconnected from combined sewers by retrofitting sustainable drainage

Detailed definition of performance measure: The number of hectares of contributing area (that is, local impermeable area that would normally contribute to surface water run-off into a combined sewer) disconnected from the combined sewers by fitting sustainable drainage measures.

Incentive type: Financial – reward and penalty

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Hectares cumulative	n/a					20

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Penalty collar	Hectares cumulative						10
Reward cap	Hectares cumulative						50

Incentive rates

The costs of retrofitting sustainable urban drainage have been subject to a challenge through cost assessment. Given the incentive rates are cost-based we have also considered whether it is appropriate to reduce the incentive rate in line with the cost assessment challenge. However, given the significant benefit value determined per hectare we have concluded that no intervention is appropriate.

Incentive type	Performance levels (Hectares)		Incentive rate (£m/hectares cumulative)
	Lower	Upper	
Penalty	10	20	0.515
Reward	20	50	0.470

Additional details

Necessary detail on measurement units	The measurement unit is the number of hectares of contributing area (that is, local impermeable area that would normally allow surface water to run-off into a combined sewer) disconnected from the combined sewers by fitting sustainable drainage measures such as water butts, permeable paving, rain gardens and green roofs
Frequency of PC measurement and any use of averaging	The penalty and reward apply to performance at the end of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5 of 2015-20. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Rewards and penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue

Any other information or clarifications relevant to correct application of incentive	This commitment is not applicable for separate surface/foul sewer networks and while surface water may still ultimately drain to the combined sewer, the peak flow must be substantially reduced to green field run-off rates
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Performance commitment SB6: Compliance with SEMD (Security and Emergency Measures Directive) advice notes, with or without derogation

Detailed definition of performance measure: Compliance with SEMD (Security and Emergency Measures Directive) Advice Notes, with or without derogation. These are the advice notes issues by Defra and written by CPNI (the Centre for Protection of National Infrastructure).

Incentive type: Financial – penalty only

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	% compliance	100%					100%
Penalty collar	% compliance						0%

Incentive rates

Incentive type	Performance levels (%)		Incentive rate
	Lower	Upper	
Penalty	0%	100%	40% of annualised costs saved through scope reduction

Additional details

Necessary detail on measurement units	This measures compliance with the SEMD Advice Notes to deliver a secure and resilient wastewater service.
Frequency of PC measurement and any use of averaging	The penalty applies to performance at the end of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5 of 2015-20. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	This incentive will return 40% of any 2015-20 revenue as a result of reductions in scope used to estimate the SEMD cost for Thames Water's 27 June 2014 submission. This will be in addition to the 50% of costs returned after the totex menu reward. For the avoidance of doubt, this does not apply to cost increases or to cost reductions as a result of efficiencies. Incentives will be applied in 2020-25 on an NPV-neutral basis.

Performance commitment SB7: Population Equivalent of sites made resilient to future extreme rainfall events

Detailed definition of performance measure: The capacity (in population equivalent, PE) of wastewater treatment works where Thames Water has invested to protect supply from extreme weather events (defined as a 1:100 rainfall event), by the end of 2015-20.

This will be measured by the successful delivery of the proposed solutions to protect supply from the identified sites. PE will be measured from the design capacity of the sites.

Incentive type: Financial – penalty only

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	PE cumulative						1,700,000
Penalty collar	PE cumulative						1,360,000

Incentive rates

Incentive type	Performance levels (PE cumulative)		Incentive rate (£/PE cumulative)
	Lower	Upper	
Penalty	1,360,000	1,700,000	0.71

Additional details

Necessary detail on measurement units	The measurement unit is the cumulative capacity (in population equivalent) of wastewater treatment works made resilient to flooding by the end of 2015-20.
Frequency of PC measurement and any use of averaging	The penalty applies to performance at the end of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5 of 2015-20. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue

Wholesale wastewater outcome C: We will limit our impact on the environment and achieve a socially responsible, sustainable business for future generations, including reducing levels of leakage

Performance commitment SC1: Greenhouse gas emissions from wastewater operations

Detailed definition of performance measure: This is the greenhouse gas emissions (in kilo tonnes of CO₂ equivalent) from wastewater operations. This performance measure takes into account all forecast movements in the use of energy and emissions, including impacts from Thames Water’s wider investment programme and efficiency activities. The company’s specific programme is optimised at a company-wide level and then allocated to water or wastewater service based on each site-specific solution in the preferred programme. This performance commitment is allocated 100% to wholesale wastewater, being delivered solely by solutions on wastewater sites.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Kt CO ₂ e	394.6	368.1	322.5	290.5	269.6	260.6

Additional details

Necessary detail on measurement units	The measurement unit is the greenhouse gas emissions (in kilo tonnes of CO ₂ equivalent) from wastewater operations
Frequency of PC measurement and any use of averaging	Performance commitment reported at the end of each financial year and reviewed through independent assurance process.

Performance commitment SC2: total Category 1-3 pollution incidents from sewage related premises

Detailed definition of performance measure: The total annual number of pollution incidents (category 1, 2 and 3) from sewage related premises, on Thames Water's legacy assets (that is, prior to the transfer of private sewers in October 2011), including both consented and unconsented incidents, and those from sewers that transferred to the company in October 2011 and pumping stations that will transfer in 2016. The source of information for this performance commitment is the Environment Agency's National Incident Recording System (NIRS) database. The pollution sources for this commitment include sewage treatment works, storm tanks, combined sewer overflows, foul sewers, pumping stations, rising mains and other.

This measure does not include category 4 incidents, consistent with historical regulatory reporting to Ofwat.

Incentive type: Financial – reward and penalty

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Category 1 and 2 Incidents/Category 3 incidents	0/340 316	0/340 316	0/340 316	0/340 316	0/340 316	0/340 316
Penalty collar	Category 1 and 2 Incidents/Category 3 incidents		-/465 441	-/465 441	-/465 441	-/465 441	-/465
Penalty deadband	Category 1 and 2 Incidents/Category 3 incidents		0/400 376	0/400 376	0/400 376	0/400 376	0/400
Reward deadband	Category 1 and 2		0/263 239	0/263 239	0/263 239	0/263 239	0/263

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
	Incidents/Category 3 incidents						
Reward cap	Category 1 and 2 Incidents/Category 3 incidents		0/229 205	0/229 205	0/229 205	0/229 205	0/229

Incentive rates

Incentive type	Performance levels (incidents)		Incentive rate (£m/incident/year)
	Lower	Upper	
Penalty	465 444	400 376	0.130 0.065
Reward	263 239	229 205	0.130

Additional details

Necessary detail on measurement units	The measurement unit is the total number of pollution incidents (category 1, 2 and 3) from sewage related premises, including both consented and unconsented incidents and those from sewers that transferred to the company in October 2011 and pumping stations that will transfer in 2016. The source of information for this performance commitment is the Environment Agency's National Incident Recording System (NIRS) database. The pollution sources for this commitment include Sewage Treatment Works, Storm Tanks, Combined Sewer Overflows, Foul Sewers, Pumping Stations, Rising Mains and Other. Certain mitigation events are defined under the company's assurance procedures.
Frequency of PC measurement and any use of averaging	The penalty applies to annual performance in all years of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecast for year 5. Performance against the commitment will be measured annually.

Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	<p>Rewards in each year over which the ODI applies will be subject to the attainment of zero serious pollution incidents that year. If a category 1 or 2 pollution incident occurs in a given year of 2015-20, a reward may not be earned for performance in the same year. This 'gateway' to rewards is applicable on a year by year basis and the occurrence of a category 1 or 2 pollution incident in a given year of 2015-20 will not limit the ability to earn rewards in future years.</p> <p>Penalties will be applied for all category 1 and 2 incidents, as well as category 3 incidents that fall above the deadband.</p>

Performance commitment SC3: Sewage treatment works discharge compliance

Detailed definition of performance measure: The percentage of sewage treatment works with discharges compliant with numeric environmental permits in each year. This is an existing measure which is assessed annually by the EA through MD109 reporting.

Incentive type: Financial – penalty only

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	% compliance	98.88%	98.88%	98.88%	98.88%	98.88%	98.88%
Penalty collar	% compliance		96.61%	96.61%	96.61%	96.61%	96.61%

Incentive rates

Incentive type	Performance levels (%)		Incentive rate (£m/pp. compliance/year)
	Lower	Upper	
Penalty	96.61%	98.88%	3.820

Additional details

Necessary detail on measurement units	<p>This is the continuance of an existing measure showing the percentage of sewage treatment works with discharges compliant with numeric environmental permits in each year and is assessed annually by the EA through MD109 reporting.</p> <p>The measurement units are rounded to the nearest two decimal places and the incentive rate should be applied in proportion.</p>
Frequency of PC measurement and any use of averaging	<p>The penalty applies to annual performance in all years of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecast for year 5. Performance against the commitment will be measured annually.</p>
Timing and frequency of rewards/penalties	<p>Penalties will be calculated at PR19, to be applied in 2020-25</p>
Form of reward/penalty	<p>Adjustment to revenue</p>

Performance commitment SC4: Water bodies improved or protected from deterioration as a result of TW activities

Detailed definition of performance measure: The number of water bodies improved or protected by catchment management solutions, to control phosphorus and other pollutants, as part of an innovative pilot programme. This measure does not directly relate to a statutory requirement and is not a formal requirement of Defra, Natural England, the DWI or the Environment Agency.

Incentive type: Reputational

Performance commitments

	Starting level	Committed performance levels

	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No. of water bodies improved	n/a					13

Additional details

Necessary detail on measurement units	This performance commitment is for the number of water bodies improved by catchment management solutions to control phosphorus. This measure does not directly have a statutory requirement and is not a formal requirement of Defra, Natural England, the DWI or the Environment Agency.
Frequency of PC measurement and any use of averaging	Performance commitment reported at end of each financial year and reviewed through independent assurance process.

Performance commitment SC5: Satisfactory sludge disposal compliance

Detailed definition of performance measure: The percentage compliance of the company's wastewater sludge with all relevant legislation and best practice guidance, such as The Sludge (Use in Agriculture) Regulations 1989; The ADAS Safe Sludge Matrix (2001); The Nitrates Regulations (2008; 2013); Waste Management Licensing (amendment and related provisions) Regulations 2005.

Incentive type: Reputational

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	% compliance	100%	100%	100%	100%	100%	100%

Additional details

Necessary detail on measurement units	This is an existing measure showing the proportion of the company's sludge disposal to agricultural land (in tonnes of dry solids) that is compliant with all relevant legislation and best practice guidance, such as The Sludge (Use in Agriculture) Regulations 1989; The ADAS Safe Sludge Matrix (2001); The Nitrates Regulations (2008; 2013); Waste Management Licensing (amendment and related provisions) Regulations 2005.
Frequency of PC measurement and any use of averaging	Performance commitment reported at end of each financial year and reviewed through independent assurance process.

Performance commitment SC6: We will educate our existing and future customers

Detailed definition of performance measure: This measures the number of children directly engaged each year through Thames Water's education programme for wastewater, including working in schools, educational visits and site open days.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	No. children directly engaged	14,000	15,000	16,000	17,000	18,000	20,000

Additional details

Necessary detail on measurement units	The measurement unit is the number of children Thames Water has directly engaged each year in its wastewater education programme.
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Frequency of PC measurement and any use of averaging	Performance commitment reported at end of each financial year and reviewed through independent assurance process.
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Performance commitment SC7: Modelled reduction in properties affected by odour

Detailed definition of performance measure: This is a new measure showing the reduction in the number of properties affected by odour on a cumulative basis, assessed through odour monitoring.

Odour modelling is carried out as part of the detailed design phase of a scheme which confirms the point sources of odour and the reduction in emission rate expected. The properties impacted are assessed by pre- and post-project odour dispersion modelling.

Incentive type: Financial – reward and penalty

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Modelled reduction in properties (cumulative)	14,311	0	793	1,771	6,593	6,593
Penalty collar	Modelled reduction in properties (cumulative)		0	0	0	0	3,874
Reward cap	Modelled reduction in properties (cumulative)		0	5,807	11,800	13,636 21,636	18,650 26,650

Incentive rates

Incentive type	Performance levels (modelled reduction in properties)		Incentive rate (£/modelled reduction in properties/year)
	Lower	Upper	
Penalty	3,874	6,593	270
Reward	6,593	18,650 26,650	220

Additional details

Necessary detail on measurement units	This is a new measure showing the reduction in the number of properties affected by odour. This is measured using a confirmation of point and area sources via odour dispersion modelling. The ODI is applied annually to the cumulative performance in each year. So, for example, a one year delay in reducing the incidence of odour by one modelled property would incur the annual penalty rate.
Frequency of PC measurement and any use of averaging	The penalty applies in each year to annual performance in all five years of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecast performance in year 5. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	The penalty collar and reward caps represent an indicative level of performance associated with the total financial value of the penalty and reward over 2015-20. The penalty collar and reward cap are binding as a total financial magnitude of £3m and £11m £6.66m, respectively, over 2015-20 rather than as annual levels of performance. In practice the collar and cap may be reached through a number of profiles of performance over the AMP.

Performance commitment SC8: Deliver 100% of agreed measures to meet new environmental regulations

Detailed definition of performance measure: Proportion of agreed measures completed to meet new environmental regulations. Agreed measures are defined as:

- wastewater schemes listed on NEP4, except the Tideway Tunnel;
- one successful application for first time sewerage;
- 11 specified WFD schemes to improve either biological oxygen demand (BOD) or ammonia discharges;
- 13 specified WFD schemes to prevent water bodies deteriorating;
- 11 specified actions to enable Artificial and Heavily Modified Water bodies under Thames Water ownership to achieve Good Ecological Potential; and
- investigations into 192 intermittent discharges suspected of contributing to WFD failures.

The Thames Tideway Tunnel is not included in this measure.

Incentive type: Financial – penalty only

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	% agreed schemes completed	n/a					100%
Penalty collar	% agreed schemes completed						Do not deliver NEP5

Incentive rates

Incentive type	Performance levels (%)		Incentive rate
	Lower	Upper	
Penalty	Do not deliver NEP5	100%	40% of cost saved through scope reduction

Additional details

Necessary detail on measurement units	This measures compliance with the Environment Agency agreed schemes for the agreed measures to meet new environmental regulations
Frequency of PC measurement and any use of averaging	The penalty applies to performance at the end of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5 of 2015-20. Performance against the commitment will be measured annually.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to RCV
Any other information or clarifications relevant to correct application of incentive	<p>This incentive will return 40% of the NEP5 2015-20 cost as a result of reductions in scope used to estimate the 27 June 2014 submission. This will be in addition to the 50% of costs returned after the totex menu reward. For the avoidance of doubt, this does not apply to cost increases or to cost reductions as a result of efficiencies.</p> <p>If the final requirements are lower than Thames Water has anticipated, the company will return 90% of the allowed costs back to customers. If the final requirements are higher, the company will seek to first reprioritise the schemes it will deliver in 2015-20 and seek to complete the programme in the early part of 2020-25, in advance of the regulatory deadline of December 2021. If the overall level of investment is broadly equivalent but slightly different from the specific schemes Thames Water has identified, the company proposes that schemes could be swapped, as long as certain criteria are met.</p> <ul style="list-style-type: none"> • Investment has a regulatory requirement. • The Environment Agency agrees to the change. • The forecast cost to deliver the measure is broadly equivalent. • Where benefits are applicable, the new scheme offers greater or equivalent benefits. <p>Any residual regulatory requirements can be delivered in 2020-25 or a transition period at the end of 2015-20.</p> <p>Incentives will be applied in 2020-25 on an NPV-neutral basis.</p>

Performance commitment SC9: Reduce the amount of phosphorus entering rivers to help improve aquatic plant and wildlife

Detailed definition of performance measure: The amount of phosphorus removed from rivers through the final NEP5 schemes by the end of 2015-20, measured as kilograms per day. The delivery of NEP5 schemes will be reported and signed-off independently by the Environment Agency through its annual MD109 report.

Load reductions are to be set on a theoretical basis using permitting data to overcome seasonal, weather and measurement impacts and thereby keeping it transparent and simple to regulate. Where no permitted phosphorus limit exists, the assumed final effluent concentration will be considered to be 6 mg/l. This is the average final effluent discharge concentration of phosphorus across all measured sites where no phosphorus limit currently exists in the permit. Thames Water proposes that the Environment Agency verifies the assumed load reductions.

Incentive type: Financial – reward and penalty

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Kg removed/day	n/a					151.8
Penalty collar	Kg removed/day						0
Reward cap	Kg removed/day						199

Incentive rates

Incentive type	Performance levels (kg removed/day)		Incentive rate
	Lower	Upper	

Penalty	0.0	151.8	Determined by reference to actual costs and benefits using reliable projections as soon as available (and to be included in annual report on outcomes performance no later than 2016-17)
Reward	151.8	199	Determined by reference to actual costs and benefits using reliable projections as soon as available (and to be included in annual report on outcomes performance no later than 2016-17)

Additional details

Necessary detail on measurement units	The measurement unit is kg/day of phosphorus removed from rivers through the final NEP5 schemes, when confirmed, by the end of 2015-20. Delivery of NEP5 schemes will continue to be reported and signed-off independently by the Environment Agency through its annual MD109 report. Thames Water proposes that the Environment Agency would also verify the assumed load reductions.
Frequency of PC measurement and any use of averaging	The penalty and reward apply to performance at the end of 2015-20. This will be calculated at PR19 based on actuals for years 1-4 and forecasts for year 5 of 2015-20. Performance against the commitment will be measured annually after the final requirements are confirmed in January 2016.

Timing and frequency of rewards/penalties	Rewards and penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to RCV
Any other information or clarifications relevant to correct application of incentive	<p>The ODIs are based on the actual costs and benefits associated with the specific solutions delivered against the commitment, which will depend on the type of solution and the benefits delivered through P reduction.</p> <p>The annual benefits will be determined by the same method for calculating the benefits of the 2015-20 programme.</p> <p>Further details and worked examples are provided in PCR SC9 (27 June 2014).</p>

Wholesale wastewater outcome D: We will provide the level of customer service our customers require, in the most economic and efficient manner, to ensure that bills are no more than necessary

Performance commitment SD1: Energy imported less energy exported

Detailed definition of performance measure: This is the net reduction in energy from the grid (energy imported less energy exported) measured in gigawatt hours (GWh), achieved by improving the energy efficiency of assets and increasing the self-generation percentage across wastewater operations.

This performance measure takes into account all forecast movements in the use of energy, including impacts from Thames Water's wider investment programme and efficiency activities. The specific programme is optimised at a company-wide level and then allocated to water or wastewater service based on each site-specific solution in the preferred programme. This performance commitment is allocated 100% to wholesale wastewater, being delivered solely by solutions on wastewater sites.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	GWh	457	428	392	329	303	295

Additional details

Necessary detail on measurement units	The measurement unit is the net energy imported by wholesale wastewater operations in GWh.
Frequency of PC measurement and any use of averaging	Performance commitment reported at end of each financial year and reviewed through independent assurance process.

Household retail outcome A: Improving customer service by doing the basics excellently and by getting things 'right first time'

Performance commitment RA1: Minimise the number of written complaints received from customers

Detailed definition of performance measure:

The number of written complaints relating to charging and billing, per 10,000 connected properties.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Number of written complaints per 10,000 connected properties	16	16	17	18	17	15

Additional details

Necessary detail on measurement units	<p>The measurement unit is the number of written complaints relating to charging and billing, per 10,000 connected properties.</p> <p>Thames Water has allocated written complaints based on the CCWater allocations in its 2012-13 complaints report. The allocation between household and non-household is based on Thames Water's finance cost allocation (94% household and 6% non-household).</p> <p>This is rounded to the nearest integer.</p>
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Frequency of PC measurement and any use of averaging	Performance commitment reported at end of each financial year and reviewed through independent assurance process.
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Performance commitment RA2: Improve handling of written complaints by increasing first time resolution

Detailed definition of performance measure:

The proportion of written complaints relating to charging and billing that are resolved at the first stage, without the need for escalation

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	90%	95%	95%	95%	95%	95%

Additional details

Necessary detail on measurement units	<p>This measures the proportion of written complaints relating to charging and billing that are resolved at the first stage, without the need for escalation.</p> <p>Thames Water has allocated written complaints based on the CCWater allocations in its 2012-13 complaints report. The allocation between household and non-household is based on Thames Water's finance cost allocation (94% household and 6% non-household).</p> <p>This is rounded to the nearest percentage.</p>
Frequency of PC measurement and any use of averaging	Performance commitment reported at end of each financial year and reviewed through independent assurance process.

Performance commitment RA3: Improve customer satisfaction of retail customers – charging and billing service

Detailed definition of performance measure:

The average customer satisfaction score (from a scale of 1 to 5) for the charging and billing services by the household retail business, using Thames Water’s internal CSAT monitor.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Mean score out of 5	4.40	4.45	4.55	4.45	4.60	4.65

Additional details

Necessary detail on measurement units	<p>The measurement unit is the customer satisfaction score (out of 1 to 5) for the charging and billing services.</p> <p>This is based on the average customer score from Thames Water’s internal CSAT monitor, which is based on ‘resolved contacts’ aligned with SIM in 2010-15. The coding of customer feedback to charging and billing services is done in the internal CSAT tool and is quality checked each month.</p> <p>This is rounded to two decimal places.</p>
Frequency of PC measurement and any use of averaging	<p>Performance commitment reported at end of each financial year and reviewed through independent assurance process.</p>

Performance commitment RA4: Improve customer satisfaction for retail customers – operations contact centre

Detailed definition of performance measure:

The average customer satisfaction score (from a scale of 1 to 5) for the operational contact services by the household retail business, using Thames Water's internal CSAT monitor.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Mean score out of 5	4.40	4.45	4.52	4.57	4.60	4.65

Additional details

Necessary detail on measurement units	<p>The measurement unit is the customer satisfaction score (out of 1 to 5) for the operational contact centre.</p> <p>This is based on the average customer score from Thames Water's internal CSAT monitor, which is based on 'resolved contacts', aligned with SIM in 2010-15. The coding of customer feedback to operational contact centre is done in the internal CSAT tool and is quality checked each month.</p> <p>This is rounded to two decimal places.</p>
Frequency of PC measurement and any use of averaging	<p>Performance commitment reported at end of each financial year and reviewed through independent assurance process.</p>

Performance commitment RA5: Increase the number of bills based on actual meter reads (in cycle)

Detailed definition of performance measure:

The proportion of household customers' bills (for water only, wastewater only, and water and wastewater customers) that are based on actual meter reads in cycle (that is, meter read is conducted in the same financial year as the bill is issued).

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	85%	96%	96%	96%	96%	96%

Additional details

Necessary detail on measurement units	This measurement unit is the proportion of household customers' bills (for water only, wastewater only, and water and wastewater customers) that are based on actual meter reads in cycle (that is, meter read is conducted in the same financial year as the bill is issued).
Frequency of PC measurement and any use of averaging	Performance commitment reported at end of each financial year and reviewed through independent assurance process.

Performance commitment RA6: Service Incentive Mechanism (SIM)

Detailed definition of performance measure:

SIM score as defined in Ofwat's SIM guidance and updated in IN13/03.

Incentive type: Reward and Penalty

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Score		tbc	tbc	tbc	tbc	tbc

Additional details

Necessary detail on measurement units	Ofwat determined reward and penalty incentive
Frequency of PC measurement and any use of averaging	Annual
Timing and frequency of rewards/penalties	Penalties and rewards will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to Revenue
Any other information or clarifications relevant to correct application of incentive	Ofwat determined reward and penalty incentive

Household retail outcome B: Offer a choice of easy to use contact options

Performance commitment RB1: Implement new online account management for customers supported by web-chat

Detailed definition of performance measure:

The delivery of the new online self-serve channel. Delivery is measured by the 'go live' date being achieved by the end of the relevant financial year (that is, 31 March). 'Go Live' is defined as it being used to bill customers, update accounts, capture contacts, record payments, and for online account management that Thames Water's customers can sign up for to use the new service. It will also provide the functionality to deliver alternative tariffs.

Incentive type: Financial – penalty only

Performance commitments

	Unit	Starting level	Committed performance levels				
		2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Status	Limited online	Limited online	Limited online	New online self-serve channel	Online self-serve channel	Online self-serve channel
Penalty collar	Status						CRMB billing system not commissioned nor on track for 2020-25 delivery
Penalty deadband	Status					CRMB billing system does not 'go live'	CRMB billing system does not 'go live'

Incentive rates

Incentive type	Performance levels (status)		Incentive rate (£/status)
	Lower	Upper	
Penalty		CRMB billing system does not 'go live'	£6.5m in years 4 and 5
Penalty	CRMB billing system not commissioned or on track for 2020-25 delivery	CRMB billing system does not 'go live'	Additional £20.5m applicable in year 5 (total 2015-20 allowed cost in ACTS adjustment plus premium)

Additional details

Necessary detail on measurement units	The measurement unit is the delivery of the new online self-serve channel. Delivery is measured by the 'go live' date being achieved by the end of the relevant financial year (that is, 31 March).
Frequency of PC measurement and any use of averaging	Performance commitment reported at end of each financial year and reviewed through independent assurance process.
Timing and frequency of rewards/penalties	Penalties will be calculated at PR19, to be applied in 2020-25
Form of reward/penalty	Adjustment to revenue
Any other information or clarifications relevant to correct application of incentive	<p>This commitment is fully enabled by the system and has a commitment to 'go live' as being by the end of 2017-18. 'Go Live' would be defined as it being used to bill customers, update accounts, capture contacts, record payments, and for online account management that Thames Water's customers can sign up for to use the new service. It will also provide the functionality to deliver alternative tariffs.</p> <p>Failure of the system to 'go live' will incur a penalty of £6.5m in each of years 4 and 5, based on the annualised benefit value to customers.</p> <p>In addition, an ODI penalty of up to a maximum of the allowed 2015-20 cost (depreciation charge net of opex</p>

savings, which is equal to £18.6m) plus a 10% premium to ensure that Thames Water has an incentive to deliver the system, resulting in a maximum penalty of £20.5m.

~~The ODI penalty relates to whether the system ‘goes live’ in 2015-20 and, if not, whether this is due to causes within reasonable management control. The plan will be to roll-out the system to all customers, with ‘go live’ being the start of this roll-out to customers. ‘Reasonable management control’ will depend on the specific circumstances, but the test is whether the issue could have been foreseen and/or efficiently mitigated by a prudent company.~~

The ODI therefore works as follows under four possible outcomes:

1. The system ‘goes live’ in 2015-20 (that is, by 31 March 2020), roll out to all customers has started in 2015-20, and a plan is available to complete the roll out in 2020-25

No ODI penalty for year 5. £6.5m penalty applies in year 4 if ‘go live date is after 31st March 2019.

2. The system ‘goes live’ in 2015-20 but to a lower specification than planned (for example, limited functionality, or the plan is to roll out the system to only a subset of customers)

ODI penalty to return appropriate portion of allowed 2015-20 cost (plus 10% premium). Penalty is calculated by Thames Water and verified by an independent third party, in line with approach to independent assurance for all ODIs. In addition, £6.5m penalty in year 4 if ‘go live’ date is after 31 March 2019.

3. The system does not ‘go live’ in 2015-20, due to unforeseen reasons outside reasonable management control (for example, legislative or market changes, significant contractual dispute), but Thames Water can demonstrate mitigating actions and is on track for full system roll out in 2020-25

£6.5m penalty to compensate customers for lost benefit for both years 4 and year 5. Need to ensure 2020-25 funding to deliver the system does not double-count 2015-20 funding. This is subject to third party

verifications and assurance, in line with approach to independent assurance for all ODIs

4. The system does not 'go live' in 2015-20, where: (i) this is due to reasons within reasonable management control; or (ii) Thames Water is not on track for full system roll out in 2020-25 **ODI penalty of £20.5m (that is, equal to allowed 2015-20 depreciation net of opex savings plus 10% premium). This is subject to third party verifications and assurance, in line with approach to independent assurance for all ODIs. In addition, £6.5m penalty for both years 4 and year 5 to compensate customers for the lost benefit of the system.**

Performance and the financial ODI will be assured independently; Thames Water will report performance in a transparent manner to its customers, stakeholders and Customer Group. Thames Water will publish progress against this performance commitment on an annual basis, providing transparency to customers and ensuring incentives for the company remain current.

Household retail outcome C: Improving cash collection from those that can pay and helping those that are struggling to pay

Performance commitment RC1: Increase the number of customers on payment plans

Detailed definition of performance measure:

The percentage of customers (water only, wastewater only, and water and wastewater) paying their bill using a direct debit payment plan. ~~The performance commitment excludes the effect of the Thames Tideway Tunnel.~~

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	52%	53%	54%	54%	57%	60%

Additional details

Necessary detail on measurement units	This measures the percentage of customers (water only, wastewater only, and water and wastewater) paying their bill using a direct debit payment plan.
Frequency of PC measurement and any use of averaging	Performance commitment reported at end of each financial year and reviewed through independent assurance process.

Performance commitment RC2: Increase cash collection rates

Detailed definition of performance measure: The percentage of cash collected from the billing in that year. This includes all household customers. ~~The performance commitment excludes the effect of the Thames Tideway Tunnel.~~

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	%	88.6%	89.0%	89.5%	90.0%	90.0%	91.0%

Additional details

Necessary detail on measurement units	The measurement unit is the percentage of cash collected from the billing in that year. This includes all household customers.
Frequency of PC measurement and any use of averaging	Performance commitment reported at end of each financial year and reviewed through independent assurance process.

Thames Tideway Tunnel outcome: Thames Water is committed to improving outcomes for customers and for the environment, notably by intercepting significant sewage discharges into the tidal River Thames, working together with the IP to ensure the timely and cost-efficient delivery of the TTT project

Performance commitment T1: We will limit the extent of delays on the overall programme timeline

Detailed definition of performance measure: TWUL will work positively to limit the extent of delays on the project. This performance commitment has three strands.

- A. Successful procurement of the Infrastructure Provider.
- B. Acquisition of land rights for the project (subject to planning permission).
- C. Completion of construction activities and timely availability of sites to the IP.

Performance commitments: T1A – Successful procurement of the Infrastructure Provider

Incentive type: Reputational

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Status		IP award (according to the project timetable)				

Thames to confirm the expected IP award date for the final determination.

Thames Water proposed an allowance for additional work to be carried out prior to the procurement of the IP; we have not included this within our draft determination. If Thames Water justifies the inclusion of this allowance for our final determination then we would be minded to introduce a penalty only incentive to ensure customers are compensated in the event the IP is procured at an earlier date.

Performance commitments: T1B – Acquisition of land rights for the project (subject to planning permission).

Incentive type: Reputational

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC			Acquire land access rights in line with programme in the development consent order (DCO) and programme timetable to be agreed with Ofwat				

Additional details

Necessary detail on measurement units	Thames will monitor and report against the extent of delays to acquisition of land rights. Thames Water will publish information from its planning permission and/or its programme timetable setting out by when rights must be acquired. We understand that this timetable may be impacted by the outcome of the DCO and this will be confirmed post the DCO.
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Performance commitments: T1C – Completion of category 2 and 3 construction works and timely availability of sites to the IP.

Incentive type: Financial – penalty only

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Number of sites	0	0	0	5	12	7
Penalty deadband	Number of sites		0	0	5	12	7
Penalty collar	Number of sites		0	0	0	0	0

The final delivery profile will be agreed post the award of the Main Works contracts after the process to optimise the programme.

Incentive rates

Incentive type	Performance levels (status)		Incentive rate (status)
	Lower	Upper	
Penalty	0	12	£2.217m per site

Additional details

Necessary detail on measurement units	<p>Thames Water will monitor the extent of programme delays.</p> <p>To monitor the delivery of T1C, Thames Water will publish details from Appendix 5 annex 4 – Detailed information on construction activities (submitted on 27 June 2014), setting out the Category 2 and 3 activities by year and providing further site-specific details for example, when the site needs to be vacated for the IP to begin work. Costs and details of Cat 1 works have been redacted from the published document for reasons of commercial confidentiality. This delivery profile is currently subject to change as it undergoes a process of optimisation. The final delivery profile will be confirmed no later than the award of the Infrastructure Provider contract.</p>
Frequency of PC measurement and any use of averaging	Performance commitment reported at the end of each financial year and reviewed through independent assurance process
Timing and frequency of rewards/penalties	Penalties will be calculated annually and applied to the total five-year position in 2015-20. Rewards and penalties to be calculated at PR19, to be applied at 2020-25
Form of reward/penalty	RCV adjustment

Any other information or clarifications relevant to correct application of incentive	<p>The penalty rate is based on our view of the annualised average incremental cost per site of the category 2 and 3 works. A 25% increase has been applied.</p> <p>Each site can only be penalised for delayed delivery once within the AMP period.</p>
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Performance commitment T2: We will engage effectively with the IP, and other stakeholder, both in terms of integration and assurance

Detailed definition of performance measure: Thames Water and the IP will need to work effectively together to achieve a successful outcome for the project. Thames Water will need to work closely with the IP, and other stakeholders, to seek to deliver its activities on a timely and efficient basis.

Incentive type: Reputational

Performance commitments

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC	Status	n/a	Engage effectively with IP and other stakeholders				

Additional details

Necessary detail on measurement units	<p>Thames Water will monitor delivery of this commitment using the following measures:</p> <p>In assessing and reporting performance against this commitment, Thames Water will seek views from the</p>
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	IP and other relevant parties including any Independent Expert appointed by the IP, Ofwat and Defra. Thames will develop a standard approach to obtain this information, and commence monitoring from the date of the IP award.
Frequency of PC measurement and any use of averaging	Performance commitment reported at the end of each financial year.
Any other information or clarifications relevant to correct application of incentive	A summary of the results will be published annually.

Performance commitment T3: We will engage with our customers to build understanding of the Thames Tideway Tunnel project

Detailed definition of performance measure: TWUL will undertake a programme of ongoing engagement with our customers and collaborate with water-only companies to understand and measure customers' views.

Incentive type: Reputational

Performance commitments – To be determined

		Starting level	Committed performance levels				
	Unit	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
PC			Improving trend	Improving trend	Improving trend	Improving trend	Improving trend

Additional details

Necessary detail on measurement units	Thames Water will design and commission suitable customer research to understand and measure customer views, including on key indicators such as awareness of the TTT, understanding of why it is needed, support for the project, acceptability of bill impacts and their perceived affordability.
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	<p>Thames Water will collaborate with the water-only companies and licensed retail suppliers operating in its region to develop a joined up communications strategy.</p> <p>Thames Water will consider both the overall customer base as well as more local issues, particularly around communities impacted by construction works.</p> <p>The performance commitment should be determined during 2015-20 based on the outcomes of this work on the ongoing research and communications strategy.</p>
Frequency of PC measurement and any use of averaging	A summary of the results will be published at least annually.

Annex 5 Thames Tideway Tunnel Control – uncertainty

We set out our proposals for uncertainty mechanisms for the TTT Control in section A4.4. We set out further detail on Thames Water’s proposals and our assessment of the uncertainty mechanism in the table below.

Table AA5.1 Thames Water proposals for TTT Control uncertainty mechanisms

Thames Water proposals	Our assessment
<p>Thames Water proposed:</p> <ul style="list-style-type: none"> • 50:50 (customers : Thames) cost sharing for costs that carry a similar level of risk to the rest of Thames Water's activities (typical costs); • 90:10 cost sharing for costs that carry a difference level of risk to the rest of Thames Water's activities; and, • 100:0 cost sharing for land. <p>Thames Water proposed all 'atypical' activities to be funded at its assessment of P50 costs, with a 90:10 cost sharing rate and a cap and collar for atypical costs at P10 and P90 such that there was 100% pass through of costs to customers above P90 and 100% return of costs to customers below P10.</p>	<p>Our review of the costs and activities included in the atypical category in the company's business plan, showed that nearly all of the costs could be better categorised as relating to typical, business as usual activities.</p> <p>In some cases the atypical nature of the costs is due to the uncertainties associated with (i) the outcome of the planning consent process and (ii) the timing of the award of the licence to the Infrastructure Provider (IP).</p> <p>Our assessment has focused on: the materiality of the costs, the extent to which management can control the outcome, the extent to which the risk is unique to the Thames Tideway project, and whether the it is reasonable for customers to bear the risk.</p> <p>Materiality – both uncertainties above introduce material specific risks to the delivery of the overall programme. At the extreme, the outcome of the planning process could be a requirement for Thames Water to resubmit its planning application which could be material to the company in terms of costs and delay to the project.</p> <p>Management control – the outcome of the planning process is now out of the management control of Thames Water. The timing of the award of the licence to the IP introduces risks including those that are beyond management control. However, there is scope for Thames Water to influence the impact of planning decisions on the company</p>

Thames Water proposals	Our assessment
<p>In addition, Thames Water proposed variations to the base costs by agreement with Ofwat due to (i) scope swaps in the programme of work allocated to Thames Water and the IP both pre- and post-licence award to the IP and (ii) the impact of planning.</p>	<p>once risks materialise. This is also true for the delay to the appointment of an IP.</p>
	<p>Unique risk – these risks are unique to Thames Water. There is currently uncertainty around the outcome of the planning process which is expected to be known in September 2014. The outcome may provide increased certainty in respect of the timing and activities to be carried out by Thames. However there are a range of scenarios where the impact on Thames Water may be no more certain than it is today. There is also uncertainty around the timing of the award of the licence to the IP, although this is at least partly within Thames Water’s control.</p> <p>Reasonable for customers to bear – facilitated by a separate price control, our approach is to consider risk in the round for the TTT price control, and for this risk to be appropriately remunerated by the cost of capital. On this basis we are concerned that Thames Water’s proposed 90:10 cost sharing rate (with 100% pass through above P90 and base cost variations by agreement with Ofwat) may not provide adequate incentives on Thames Water to deliver its obligations efficiently for customers.</p> <p>Reasonable for customers to bear – facilitated by a separate price control, our approach is to consider risk in the round for the TTT price control, and for this risk to be appropriately remunerated by the cost of capital. On this basis we are concerned that Thames Water’s proposed 90:10 cost sharing rate (with 100% pass through above P90 and base cost variations by agreement with Ofwat) may not place adequate incentives on</p>

Comment [NW1]: Consider using 'to'

Thames Water proposals	Our assessment
	<p>Thames Water to deliver its obligations efficiently for customers.</p> <p>We discuss our proposals in respect of an uncertainty mechanism for the TTT control below. However, due to the uncertainty around the outcome of the planning process, we have deferred a decision on how to handle the consequences until after the outcome is known. We will revisit both the appropriate allowed costs and the potential requirement for associated uncertainty mechanisms for the final determination.</p> <p>For land costs and income from land, we agreed a 100:0 sharing mechanism at the 2009 price review and we propose to continue with this approach to ensure customers benefit fully from any income in relation to the project land throughout the construction period and that customers receive the full benefit of proceeds from the disposal of this land as the project nears completion.</p>
<p>Changes in scope (between Thames Water and the IP)</p> <p>Thames proposed that all changes in scope between Thames Water and the IP should be subject to an uncertainty mechanism.</p>	<p>As discussed above, there is a risk that this timetable may be delayed by circumstances that could be outside of Thames Water's control.</p> <p>This could result in reallocation of activities to Thames Water that would otherwise have been undertaken by the IP (for example, to keep the overall programme on track) and that are in the interests of customers and the environment.</p> <p>We propose an uncertainty mechanism where there is delay to the appointment of the IP from the expected date (Thames will need to confirm this date for final determinations). This could be dealt with by a PR19 true up mechanism and a bespoke, two-way notified item for this price control period.</p> <p>The uncertainty mechanism would address only the efficient, net change in costs to Thames Water that arise from the reallocation of scope from the IP to Thames (and Thames Water to the IP) to secure efficient project delivery in the light of any delay to the appointment of the IP. We would expect Thames Water to demonstrate how such 'scope swaps' are in customers' interests. Moreover, we expect Thames Water to demonstrate</p>

Thames Water proposals	Our assessment
	<p>that it will cost customers no more (to the extent they would otherwise be undertaken by the IP).</p> <p>In addition to the above uncertainty mechanism, we are also considering whether to allow a bespoke, company specific relevant change in circumstance (RCC) in Thames Water's licence. This would address changes in scope in the documentation that define Thames Water's obligations on the project (that is, as set out in the Specification Notice or Preparatory Works Notice). This does not include despecification as it is being considered separately to the price review . We are considering an RCC rather than a notified item as an RCC could be enduring throughout construction (for example, until 2023), whereas a notified item would only be legally binding during the price control period (five years).</p>
	<p>We do not consider it is necessary to make provision for scope swaps that do not require changes to the Specification Notice or Preparatory Works Notice as such scope swaps could be addressed contractually.</p>
<p>Uncertainty mechanism – materiality</p> <p>Thames proposed a materiality threshold of 10% of peak year TTT revenue in its plan and in later discussions proposed a materiality threshold of 2% of totex over 2015-20.</p>	<p>For draft determination we have decided to set a materiality threshold in the licence of 10% of RCV for the TTT Control, and a triviality threshold of 2% of our totex baseline over 2015-20 for Thames Water's activities on the TTT. This would be applied before re-opening the price control via a Notified Item for interim review in the next price control period for material delay to the appointment of the IP and scope swaps (and, if required, planning uncertainty).</p> <p>In arriving at our decision for the materiality threshold, we considered a range of metrics to which we could link materiality. As we expect the licence modifications in respect of the TTT control to be enduring, our preference is to link the materiality threshold to the TTT control to the RCV as it provides a meaningful comparison in 2015-20, but also for future price determinations where totex associated with the TTT control is expected to be low. The 10% materiality threshold gives a RoRE impact of greater than c.+/-2% and is</p>

Comment [NW2]: ...a range of metrics to determine if an item is material

Thames Water proposals	Our assessment
	<p>equivalent to over 10% of totex included in this draft determination.</p> <p>For triviality, we propose to adopt Thames Water's proposal for the materiality threshold of 2% of totex. The triviality threshold will not be embedded in the licence and would be used for notified items and at the next price review to allow Thames Water to log up efficient costs in relation material IP delay and scope swaps (and, if required, planning uncertainty). We will determine the triviality threshold for future price control periods at the relevant price review that is, we will determine the triviality threshold for period 2020-25 at the 2019 price review.</p> <p>We expect Thames Water to set out its view on triviality and materiality in its representations to us. We also expect Thames Water to set out its views on whether the mechanism would better protect consumers if it could also be triggered should there be a reduction to the scope of activities that are undertaken by Thames Water.</p>

Ofwat (The Water Services Regulation Authority) is a non-ministerial government department. We are responsible for making sure that the water sector in England and Wales provides customers with a good quality and efficient service at a fair price.



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