



Thames Water Reporting Criteria AR20



Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
WA1	Improve handling of written complaints by increasing 1st time resolution – water	% written complaints resolved 1st time	<p>This measure is the percentage of household and non-household customer complaints relating to water services which are resolved first time. The measure is expressed as a percentage of the total written water services complaints and is based on complaints received in the financial year (1 April 2019 - 31 March 2020). It is calculated as follows:</p> <p>(Water Services complaints resolved at the first stage / Total water services complaints) x 100</p> <ul style="list-style-type: none"> • A written customer complaint is defined as any customer mail and email received by Thames Water's customer representatives, including any third-party service providers, where the customer is dissatisfied with the service provided. • A failure of first-time resolution is noted when a customer complaint has been escalated to the '2nd stage'. If a customer complaint is not escalated to the 2nd stage, the initial complaint is considered to be resolved in the first instance. • A 2nd stage complaint is defined as a second complaint from a customer relating to the same issue. 	<p>Customer complaints relating to the provision of 'water services' are in scope of the measure.</p> <p>Customer complaints relating to 'wastewater services', 'charging and billing' 'metering' and 'other' are excluded. Any customer complaints received for services offered by another water company are excluded from this measure.</p> <p>Written complaints are via letter, email, web form and fax channels of contact.</p> <p>Social media and web chat complaints are not included in the performance measure.</p> <p>Some exclusions to 2nd stage apply, see the CCW guidance document published by Ofwat: https://www.ofwat.gov.uk/wp-content/uploads/2015/11/gud_pro201503sjm.pdf</p>

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
WA2	Number of written complaints per 10,000 properties connected for water services	nr / 10,000 properties	<p>This measure is the number of written complaints received from household and non-household customers relating to water services provided by Thames Water. The measure is expressed as a number per 10,000 properties connected to a water supply by Thames Water and is based on complaints received in the financial year (1 April 2019 - 31 March 2020). It is calculated as follows:</p> <p>(Number of complaints categorised as relating to water services received during the financial year / number of properties that receive water only, and water and sewerage services, as at 31 March 2020) x 10,000</p> <ul style="list-style-type: none"> A written customer complaint is defined as any customer mail and email received by Thames Water's customer representatives, including any third-party service providers, where the customer is dissatisfied with the service provided. 	<p>Customer complaints relating to the provision of 'water services' are in scope of the measure.</p> <p>Customer complaints relating to 'wastewater services', 'charging and billing' 'metering', and 'other' are excluded. Any customer complaints received for services offered by another water company are excluded from this measure.</p> <p>Written complaints are via letter, email, web form and fax channels of contact.</p> <p>Social media and web chat complaints are not included in the performance measure.</p> <p>The customers for which Thames Water provide wastewater services only to are excluded from the population.</p> <p>Some exclusions to complaints apply, see the CCW guidance document published by Ofwat: https://www.ofwat.gov.uk/wp-content/uploads/2015/11/qud_pro201503sim.pdf</p>
WA3	Customer satisfaction surveys (internal CSAT monitor) – water	TW internal Customer satisfaction score (mean score out of 5)	<p>This measure is the customer satisfaction score for customer contacts relating to water operational activity. The measure is expressed as the average customer satisfaction score (between 1 to 5) and is based on the financial year (1 April 2019 - 31 March 2020).</p> <p>A score of 1 is defined as very unsatisfied and a score of 5 is defined as very satisfied.</p> <p>The surveys are performed by a third party 'Rant and Rave' and the survey results are collected via SMS.</p>	<p>Customer contacts relating to the provision of 'water services' are in the scope of the measure.</p> <p>Customer contacts relating to 'wastewater services', 'charging and billing', 'metering' and 'other' are excluded.</p>

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WA4	Reduced water consumption from issuing water efficiency devices to customers	Ml/d reduced water consumption (cumulative)	<p>This measure is the reduced water consumption (demand) measured in Ml/d, achieved from issuing water efficiency devices to customers. The measure is expressed as the cumulative reduction in demand (in Ml/d) in the period 1 April 2015 to 31 March 2020. The reduced water consumption from water efficiency visits is calculated as:</p> $(A \times B) + (C \times D) + (E \times F)$ <p>Where: A = The number of households with an already existing meter receiving a water efficiency visit B= The measured savings rate of households with an already existing meter (litres per household) C = The number of non-metered households receiving water efficiency visits D = The measured non-metered saving rate (litres per household) E = The number of newly metered households receiving a water efficiency visit (as part of the Progressive Metering Programme (PMP)) F = The measured newly metered household saving rate (litres per household)</p> <ul style="list-style-type: none"> During a water efficiency visit, customers are offered the installation of water efficiency devices, associated plumbing fixes to reduce "wastage" (water lost due customer side leaks such as dripping taps, leaking toilets) and water efficiency advice on how to better use water in the home. Wastage repairs provide additional litres per household figure to be multiplied by the number of wastage fixes completed. The measured savings rate is defined per each water efficiency device / initiative in accordance with revised Ofwat Water efficiency guideline (2012) an UKWIR report "Estimating water savings calculator for baseline water efficiency - final". Thames Water can claim 100% savings if they install the water efficiency device, but only 70% of the savings (set per item by Ofwat) if the device is 'issued', i.e. handover to the customer but not installed. 	<p>This applies to water efficiency devices issued to Thames Water's household customers only.</p> <p>Non-household customers are excluded from the measure.</p> <p>The change in consumption excludes:</p> <ul style="list-style-type: none"> Demand relating to a customer side leak (CSL) fixes, in connection pipes. Reduction in demand as a result of a customer becoming more aware of water usage following the installation of a water meter, where the customer has not been given water efficiency advice or received installed water efficient devices through a specific Thames Water initiative.

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WA5	Provide a free repair service for customers with a customer side leak outside of the property	Number against target above annual baseline no.	<p>This measure is the number of properties where Thames Water provides a free repair service to customers with a customer side leak outside their property. The measure is expressed as the number of properties and measured over the financial year (1 April 2019 - 31 March 2020).</p> <p>The following customer side leaks repair types are in the scope of the performance measure:</p> <ul style="list-style-type: none"> a) Repairs identified as part of the Active Leakage Control (ALC) programme; b) Repairs identified as part of the mains replacement programme; c) Repairs generated from the meters installed as part of the Progressive Metering Programme; and d) Repairs generated as a result of a customer receiving a water efficiency visit and where the household already has an existing meter. <p>A key assumption used in the calculation is the average number of properties on a shared supply in London. This is defined as 2.5 properties.</p>	<p>Free repairs are only provided to household customers, non-households are not eligible for free leak repairs.</p> <p>Free repairs are performed on the water supply pipes, including shared external supplies, up to a length of 25m and 50mm in diameter. Leaks occurring on the water supply pipe past the point it enters the building are not eligible for a free repair.</p> <p>Only targeted properties above the company's annual baseline number of 10,000 are counted in the performance measure.</p>
WB1	Asset health water infrastructure	category	<p>This measure relates to the water asset health status and is based on a 'basket' of key indicators that represent the health of the water infrastructure assets (below ground). The performance measure is expressed as 'stable', 'marginal', or 'deteriorating'. The Asset Health measure is a composite indicator made up of the following sub-measures for water infrastructure (WB1.1 - WB1.6):</p> <ul style="list-style-type: none"> • WB1.1 Total bursts (based on the financial year 1 April 2019 - 31 March 2020); • WB1.2 Unplanned interruptions to supply > 12 hours (based on the financial year 1 April 2019 - 31 March 2020); • WB1.3 Iron mean zonal non-compliance (based on the calendar year 1 January 2019 - 31 December 2019); • WB1.4 Inadequate pressure DG2 (based on the financial year 1 April 2019 - 31 March 2020); • WB1.5 Planned network rehabilitation (based on the financial year 1 April 2019 - 31 March 2020); and 	<p>This composite measure includes the sub-measures WB1.1 - WB1.6 only. Boundaries for each sub -measure are set out in WB1.1 - WB1.6 below.</p>

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- WB1.6 Customer complaints of discolouration and white water (based on the calendar year 1 January 2019 - 31 December 2019).

Each sub-measure has its own defined reporting criteria which is set out in WB1.1 - WB 1.6 below. For each sub-measure, there is a defined:

- **Reference level:** This is the target level for the sub-measure as defined in the PR14 Final Determination.
- **Control limit:** This provides a deadband for performance for the sub-measure. Its primary purpose is to allow for a degree of natural variation in performance around the reference level, to allow for identification of material changes in performance.
- **Failure threshold:** A significant failure of one sub-measure which results in a movement from stable to marginal status.

These limits are set out in Thames Water AMP6 Final Determination:

[AMP6 Outcomes Reporting Policy Annex 2](#)

Thames Water Reporting Criteria

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
WB1.1	Total Bursts (Repairs only)	nr	<p>This measure relates to the number of repairs to mains bursts in the financial year (1 April 2019 - 31 March 2020).</p> <ul style="list-style-type: none"> Water mains are defined as the large company pipes that distribute potable water around the whole of Thames Water’s network. A burst is defined as all physical repair work to mains from which water is lost. This is attributable to pipes, joints or joint material failures or movement, or caused or deemed to be caused by conditions or original pipe laying or subsequent changes in ground conditions (such as changes to a road formation, loading, etc. where the costs of repair cannot be recovered from a third party). 	<p>The default position is that there are no exclusions. The cause of the mains burst is not relevant to the calculation of the reported figure, with the following exceptions and points of clarification:</p> <ul style="list-style-type: none"> Any work that is not undertaken on the main e.g. solely on a ferrule, hydrant or valve and clamps associated with these ancillaries, which does not involve a repair on the main are excluded. Clamps used to repair the main shall be included. All third-party damage is excluded where costs are potentially (rather than actually) recovered from a third party.
WB1.2	Unplanned interruptions to customer >12 hours DG3	nr	<p>This measure relates to the average minutes per property lost through water supply interruptions of greater than 12 hours in the financial year (1 April 2019 - 31 March 2020). The metric can be calculated as follows:</p> <p>(Total number of properties with interrupted supply > 12 hours)</p> <p>An interruption is defined as when a is without a continuous supply of water and the supply has been interrupted for greater than 12 hours.</p> <ul style="list-style-type: none"> A property is defined as one which is connected to Thames Water’s water distribution system. The duration of an interruption is defined as the amount of time which passes between the start time and stop time of an event. The start time is defined as when water is lost from the first cold water tap at a property. In the event of applicable telemetry data or logging being unavailable, the time is determined from the earliest of: 	<p>The performance measure only accounts for interruptions greater than 12 hours in duration. Any interruptions less than or equal to 12 hours are excluded from the measure.</p> <p>Interruptions as a result of planned but not warned activity (e.g. planned maintenance) and unplanned interruptions (e.g. an asset failure) are included in the performance results.</p> <p>Planned and warned interruptions and overruns of planned and warned interruptions are not included</p> <p>Incidents caused by third parties are not included</p>

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			<ul style="list-style-type: none"> ○ As advised by “no water” contact from customer (where not due to a customer side issue); ○ Indications from flow or pressure monitoring to infer a change in supply; or ○ Verified modelled data (calibrated, maintained, reflective of the network at the time of the incident and validated with contemporaneous flow and/or pressure data). ● The stop time is defined as when the company is satisfied that water has been fully restored to an acceptable pressure to the affected property(ies) and water is restored to the first cold water tap at a property. In the event of pressure logging being unavailable, the time is determined from the latest of: <ul style="list-style-type: none"> ○ As advised by notification from customer; ○ Indications from flow or pressure monitoring to indicate return to normal supply conditions; or ○ Verified modelled data (calibrated, maintained, reflective of the network at the time of the incident and validated with contemporaneous flow and/or pressure data). 	
WB1.3	Iron mean zonal non-compliance	%	<p>This measure is the water quality measure for iron mean zonal non-compliance. The measure is expressed as the percentage non-compliance and is based on the calendar year (1 January 2019 - 31 December 2019). The measure is determined by the Drinking Water Inspectorate and Water Supply Regulations 2016, as set out in the following guidance:</p> <p>http://www.legislation.gov.uk/uksi/2016/614/contents</p> <p>http://dwi.defra.gov.uk/about/annual-report/calculating-indices.pdf</p> <p>The measure is calculated as follows:</p> <p>Non-Compliance percentage for all sites / Total no. of sites</p> <p>The non-compliance percentage for each site is calculated as follows:</p>	<p>The water quality sampling programme covers the geographical region that Thames Water supplies with drinking water, as stipulated by the Drinking Water Inspectorate guidance. The sample programme is agreed with the Drinking Water Inspectorate at the beginning of the calendar year. The non-compliance percentage is based on the results of the planned water quality samples only.</p> <p>Iron is the parameter in the scope of this measure. The remaining DWI parameters, as set out in the Water Supply Regulations 2016, are not in scope.</p>

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
<p>(No. of failures per site in the year / No. of samples per site in the year) x 100</p>				
<ul style="list-style-type: none"> • A site is defined as an individual supply point (i.e. a customer tap) around the whole of Thames Water's potable distribution network. • A sample is defined as a water quality sample in line with the Water Supply Regulations 2016, as set out in the guidance in the link above, which tests the concentration of the parameter in scope. This is performed under a UKAS accredited process. • A failure is defined as a level of concentration of the parameter in a sample that falls outside of the acceptable level as defined in the Water Supply Regulations 2016. 				
WB1.4	Inadequate pressure DG2	nr	This measure is the number of properties at the end of the reporting year (31 March 2020) experiencing low water pressure.	Boundaries are set out in Ofwat's guidance in the following link:
<ul style="list-style-type: none"> • A property is defined as one which is connected to Thames Water's water distribution system. • Low water pressure is defined as pressure that is below the reference level, in line with Ofwat requirements which can be found in the following link: 				
<p>https://www.ofwat.gov.uk/publications/water-pressure/</p>				
<p>https://www.ofwat.gov.uk/wp-content/uploads/2017/12/Properties-at-risk-of-receiving-low-pressure.pdf</p>				
<p>https://www.ofwat.gov.uk/wp-content/uploads/2017/12/Properties-at-risk-of-receiving-low-pressure.pdf</p>				

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<p>WB1.5</p>	<p>Planned network rehabilitation</p>	<p>kilometres</p>	<p>This measure relates to the delivery of a project relating to the network rehabilitation of water mains. This includes, but may not be exclusively, activity relating to capital projects, new developments, mains repair etc. The performance measure is expressed as kilometres of mains rehabilitated over the five-year period to 31 March 2020.</p> <ul style="list-style-type: none"> ● Water mains are defined as the large company pipes that distribute potable water around the whole of Thames Water’s network. <p>The length of planned network rehabilitated comes from the following data sets which are included in the reported length:</p> <ol style="list-style-type: none"> a) Decommissioning of existing mains; b) Summation of all mains length where a cut out has occurred; and c) Any other lengths of abandoned mains. 	<p>The scheme is considered complete when all project milestones have been completed, exit criteria has been met and the benefits have been realised.</p>
<p>WB1.6</p>	<p>Customer complaints discolouration white water</p>	<p>nr / 1,000 population</p>	<p>This measure relates to the number of discoloration complaints and the number of white-water complaints received from customers. The measure is expressed as a number per 1,000 population and is based on the calendar year (1 January 2019 - 31 December 2019). It is calculated as follows:</p> <p>(Number of Discolouration complaints + Number of white-air complaints) x 1000 / Total population</p> <ul style="list-style-type: none"> ● A customer complaint is defined as any customer mail, email or telephone call received by Thames Water’s customer representatives, including any third-party service providers, where the customer expresses dissatisfaction with the service provided. ● The population is defined as the population for which Thames Water provides water services to as at 31 December 2019. 	<p>Customer complaints relating to ‘discolouration’ and ‘white water’ are in scope of the measure.</p> <p>Customer complaints relating to any other type of water quality issue are excluded. Any customer complaints received for services offered by another water company are excluded from this measure.</p>

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WB2	Asset health water non-infrastructure	category	<p>This measure relates to the water asset health status and is based on a basket of key indicators that represent the health of the water non-infrastructure assets (above ground). The performance measure is expressed as 'stable', 'marginal', or 'deteriorating' and is assessed based on the calendar year (1 January 2019 - 31 December 2019). The Asset Health measure is a composite indicator made up of the following sub-measures for water non-infrastructure (WB2.1 - WB2.7):</p> <ul style="list-style-type: none"> ● WB2.1 Disinfection index (DWI); ● WB2.2 Reservoir integrity index; ● WB2.3 DWQ compliance measure – turbidity; ● WB2.4 Process control index; ● WB2.5 DWQ compliance measure enforcement actions; ● WB2.6 Water quality complaints for chlorine; and ● WB2.7 Water quality complaints for monitored complaints for hardness. 	<p>This composite measure includes the sub-measures WB2.1 - WB2.6 only. Boundaries for each sub -measure are set out in WB2.1 - WB2.7 below.</p>
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Each sub-measure has its own defined reporting criteria which is set out in WB2.1 - WB 2.7 below. For each sub-measure, there is a defined:

- **Reference level:** This is the target level for the sub-measure as defined in the PR14 Final Determination.
- **Control limit:** This provides a deadband for performance for the sub-measure. Its primary purpose is to allow for a degree of natural variation in performance around the reference level, to allow for identification of material changes in performance.
- **Failure threshold:** A significant failure of one sub-measure which results in a movement from stable to marginal status.

These limits are set out in Thames Water AMP6 Final Determination:

[AMP6 Outcomes Reporting Policy Annex 2](#)

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WB2.1	Disinfection index (DWI)	%	<p>This measure is the water quality measure for Coliforms, E. Coli and Turbidity compliance. The measure is expressed as the percentage compliance and is based on the calendar year (1 January 2019 - 31 December 2019). The measure is determined by the Drinking Water Inspectorate and Water Supply Regulations 2016, as set out in the following guidance:</p> <p>http://www.legislation.gov.uk/ukxi/2016/614/contents</p> <p>http://dwi.defra.gov.uk/about/annual-report/calculating-indices.pdf</p> <p>The measure is calculated as follows:</p> <p>Compliance percentage for all sites / Total no. of sites</p> <p>The compliance percentage for each site is calculated as follows:</p> <p>((No. of samples per site in the year - No. of failures per site in the year) / No. of samples per site in the year) x 100</p> <ul style="list-style-type: none"> • A site is defined as an individual supply point (i.e. a customer tap) around the whole of Thames Water's potable distribution network. • A sample is defined as a water quality sample in line with the Water Supply Regulations 2016, as set out in the guidance in the link above, which tests the concentration of each parameter in scope. This is performed under a UKAS accredited process. • A failure is defined as a level of concentration of each parameter in a sample that falls out with the acceptable level as defined in the Water Supply Regulations 2016. 	<p>The water quality sampling programme covers the geographical region that Thames Water supplies with drinking water, as stipulated by the Drinking Water Inspectorate guidance. The sample programme is agreed with the Drinking Water Inspectorate at the beginning of the calendar year. The compliance percentage is based on the results of the planned water quality samples only.</p> <p>Coliforms, E. Coli and Turbidity are the parameters in the scope of this measure. The remaining DWI parameters, as set out in the Water Supply Regulations 2016, are not in scope.</p>

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WB2.2	Reservoir integrity index	%	<p>This measure is the water quality measure for reservoir integrity index, which is expressed as a percentage of the proportion of the total number of service reservoirs 'in supply' which have a coliform failure rate of greater than 5%. The measure is based on the calendar year (1 January 2019 - 31 December 2019). The measure is determined by the Drinking Water Inspectorate and Water Supply Regulations 2016, as set out in the following guidance:</p> <p>http://www.legislation.gov.uk/uksi/2016/614/contents</p> <p>http://dwi.defra.gov.uk/about/annual-report/calculating-indices.pdf</p> <p>The measure is determined as follows:</p> <p>No. of sites with greater than 5% of samples failing / No. of total sites</p> <p>The failure rate for each site is calculated as follows:</p> <p>(No. of failures per site in the year / No. of samples per site in the year) x 100</p> <ul style="list-style-type: none"> • A site is defined as a water service reservoir. • A sample is defined as a water quality sample in line with the Water Supply Regulations 2016, as set out in the guidance in the link above, which tests the concentration of the parameter in scope. This is performed under a UKAS accredited process. • A failure is defined as a level of concentration of the parameter in a sample that falls out with the acceptable level as defined in the Water Supply Regulations 2016. 	<p>The water quality sampling programme covers the geographical region that Thames Water supplies with drinking water, as stipulated by the Drinking Water Inspectorate guidance. The sampling programme is agreed with the Drinking Water Inspectorate at the beginning of the calendar year.</p> <p>The failure rate is based on the results of the planned water quality samples only.</p> <p>Water Service Reservoir Coliform compliance is the parameter in the scope of this measure. The remaining DWI parameters, as set out in the Water Supply Regulations 2016, are not in scope.</p>

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WB2.3	DWQ compliance measure – turbidity	nr	<p>This measure is the water quality measure for Turbidity compliance. The measure is expressed as the number of failed water treatment works (out of a population of 97) and is based on the calendar year (1 January 2019 - 31 December 2019). The measure is determined by the Drinking Water Inspectorate and Water Supply Regulations 2016, as set out in the following guidance:</p> <p>http://www.legislation.gov.uk/uksi/2016/614/contents</p> <p>http://dwi.defra.gov.uk/about/annual-report/calculating-indices.pdf</p> <ul style="list-style-type: none"> • A failure is when the Nephelometric Turbidity Units (NTU) 95th percentile of a sample exceeds 0.5 sample at a water treatment works. • A sample is defined as a water quality sample in line with the Water Supply Regulations 2016, as set out in the guidance in the link above, which tests the concentration of turbidity. This is performed under a UKAS accredited process. 	<p>The water quality sampling programme covers the geographical region that Thames Water supplies with water, as stipulated by the Drinking Water Inspectorate guidance. The sampling programme is agreed with the Drinking Water Inspectorate at the beginning of the calendar year. The compliance is based on the results of the planned water quality samples only.</p> <p>Turbidity compliance is the parameter in the scope of this PC. The remaining DWI parameters, as set out in the Water Supply Regulations 2016, are not in scope.</p>
WB2.4	Process control index	%	<p>This measure is the water quality measure for colour, nitrite, aluminium, fluoride, THM and bromate compliance. The measure is expressed as the percentage compliance and is based on the calendar year (1 January 2019 - 31 December 2019). The measure is determined by the Drinking Water Inspectorate and Water Supply Regulations 2016, as set out in the following guidance:</p> <p>http://www.legislation.gov.uk/uksi/2016/614/contents</p> <p>http://dwi.defra.gov.uk/about/annual-report/calculating-indices.pdf</p> <p>The measure is calculated as follows:</p> <p>Compliance percentage for all sites / Total no. of sites</p>	<p>The water quality sampling programme covers the geographical region that Thames Water supplies with drinking water, as stipulated by the Drinking Water Inspectorate guidance. The sample programme is agreed with the Drinking Water Inspectorate at the beginning of the calendar year. The compliance percentage is based on the results of the planned water quality samples only.</p> <p>Colour, nitrate, nitrite, aluminium, fluoride, THM and bromate are the parameters in the scope of this measure. The remaining DWI parameters, as set out in the Water Supply Regulations 2016, are not in scope.</p>

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The compliance percentage for each site is calculated as follows:

$$\frac{((\text{No. of samples per site in the year} - \text{No. of failures per site in the year})}{\text{No. of samples per site in the year}} \times 100$$

- A site is defined as an individual supply point (i.e. a customer tap) around the whole of Thames Water's potable distribution network.
- A sample is defined as a water quality sample in line with the Water Supply Regulations 2016, as set out in the guidance in the link above, which tests the concentration of the parameters in scope. This is performed under a UKAS accredited process.
- A failure is defined as a level of concentration of the parameters in a sample that falls out with the acceptable level as defined in the Water Supply Regulations 2016.

WB2.5	DWQ compliance measure enforcement actions	nr	<p>This measure relates to the number of enforcement orders issued to Thames Water by the Drinking Water Inspectorate (DWI). The measure is expressed as a number and is based on the calendar year (1 January 2019 - 31 December 2019).</p> <p>The Inspectorate will proceed with an Enforcement Order if it is determined that a particular issue necessitates regulatory enforcement to ensure a timely and appropriate mitigation. This would occur if it is determined that the Company has failed to implement appropriate action within a suitable time frame e.g. in response to a breach of a regulatory standard or regulatory requirement. The Inspectorate will also proceed with an enforcement order if any of the improvement programmes of work are not delivered within the agreed timeframe i.e. for Undertakings and Notices.</p>	<p>Refer to reporting criteria.</p> <p>Note that this refers to the year in which the enforcement took place but this may not be the same year as the infringement happened.</p>
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WB2.6	Water quality complaints for chlorine	nr	<p>This measure relates to the number of water quality complaints received from customers relating to chlorine. The measure is expressed as a number per 1,000 population and is based on the calendar year (1 January 2019 - 31 December 2019). It is calculated as follows:</p> <p>(Number of chlorine complaints / Total population) x 1000</p> <ul style="list-style-type: none"> • A customer complaint is defined as any customer mail, email or telephone call received by Thames Water’s customer representatives, including any third-party service providers, where the customer is dissatisfied with the service provided. • The population is defined as the population for which Thames Water provides water services to at 31 December 2019. 	<p>Customer complaints relating to ‘chlorine’ are in scope of the measure.</p> <p>Customer complaints relating to any other type of water quality issue are excluded. Any customer complaints received for services offered by another water company are excluded from this measure.</p> <p>Where a customer from the same address complains more than once about the same problem within a 6-hour period this is counted as one complaint. However, where house numbers are not present, or it is not possible to confirm the same customer contact, it is assumed that the contacts have come from different properties and are counted as separate contacts.</p>
WB2.7	Water quality complaints for monitored complaints for hardness	nr	<p>This measure relates to the number of water quality complaints received from customers relating to white chalk. The measure is expressed as a number per 1,000 population and is based on the calendar year (1 January 2019 - 31 December 2019). It is calculated as follows:</p> <p>(Number of white chalk complaints / Total population) x 1000</p> <p>A customer complaint is defined as any customer mail, email or telephone call received by Thames Water’s customer representatives, including any third-party service providers, where the customer is dissatisfied with the service provided.</p> <ul style="list-style-type: none"> • The population is defined as the population for which Thames Water provides water services to at 31 December 2019. 	<p>Customer complaints relating to ‘white chalk’ are in scope of the measure.</p> <p>Customer complaints relating to any other type of water quality issue are excluded. Any customer complaints received for services offered by another water company are excluded from this measure.</p> <p>Where a customer from the same address complains more than once about the same problem within a 6-hour period this is counted as one complaint. However, where house numbers are not present, or it is not possible to confirm the same customer contact it is assumed that the contacts have come from different properties and are counted as separate contacts. Customers seeking guidance or support with dishwasher settings regarding the hardness of water are excluded from the measure as they are not</p>

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WB3	Compliance with drinking water quality standards (MZC) – Ofwat/ DWI KPI	%	<p>This measure is the water quality measure for mean zonal percentage compliance. The measure is expressed as the percentage compliance and is based on the calendar year (1 January 2019 - 31 December 2019). The measure is determined by the Drinking Water Inspectorate and Water Supply Regulations 2016, as set out in the following guidance:</p> <p>http://www.legislation.gov.uk/ukxi/2016/614/contents</p> <p>http://dwi.defra.gov.uk/about/annual-report/calculating-indices.pdf</p> <p>The measure is calculated as follows:</p> <p>Compliance percentage for all sites / Total no. of sites</p> <p>The compliance percentage for each site is calculated as follows:</p> <p>((No. of samples per site in the year - No. of failures per site in the year) / No. of samples per site in the year) x 100</p> <ul style="list-style-type: none"> • A site is defined as an individual supply point (i.e. a customer tap) around the whole of Thames Water's potable distribution network. • A sample is defined as a water quality sample in line with the Water Supply Regulations 2016, as set out in the guidance in the link above, which tests the concentration of each parameter in scope. This is performed under a UKAS accredited process. • A failure is defined as a level of concentration of a parameter in a sample that falls out with the acceptable level as defined in the Water Supply Regulations 2016. 	<p>considered a direct measure of customer dissatisfaction with hardness.</p> <p>The water quality sampling programme covers the geographical region that Thames Water supplies with water, as stipulated by the Drinking Water Inspectorate guidance. The sampling programme is agreed with the Drinking Water Inspectorate at the beginning of the calendar year. The compliance percentage is based on the results of the planned water quality samples only.</p> <p>All 39 parameters, as set out in the Water Supply Regulations 2016, are in scope.</p>

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
WB4	Properties experiencing chronic low pressure (DG2)	nr of properties	<p>This measure is the number of properties at the end of the reporting year (31 March 2020) experiencing low water pressure.</p> <ul style="list-style-type: none"> • A property is defined as one which is connected to Thames Water's water distribution system. • Low water pressure is defined as pressure that is below the reference level, in line with Ofwat requirements which can be found in the following link: <p>https://www.ofwat.gov.uk/publications/water-pressure/</p> <p>https://www.ofwat.gov.uk/wp-content/uploads/2017/12/Properties-at-risk-of-receiving-low-pressure.pdf</p>	<ul style="list-style-type: none"> • Boundaries are set out in Ofwat's guidance in the following link: • https://www.ofwat.gov.uk/wp-content/uploads/2017/12/Properties-at-risk-of-receiving-low-pressure.pdf
WB5	Average hours lost supply per property served, due to interruptions > 4 hours	Hours lost supply per property served	<p>This measure relates to the average minutes per property lost through water supply interruptions of greater than 4 hours in the financial year (1 April 2019 - 31 March 2020). The metric can be calculated as follows:</p> <p>(Total number of properties with interrupted supply > or = to 4 hours x the full duration of the interruption in minutes) / Total number of properties supplied with water at 31 March 2020.</p> <ul style="list-style-type: none"> • An interruption is defined as when a customer is without a continuous supply of water and the supply has been interrupted for greater than 4 hours. • A property is defined as one which is connected to Thames Water's water distribution system. • The duration of an interruption is defined as the amount of time which passes between the start time and stop time of an event. • The start time is defined as when water is lost from the first cold water tap at a property. In the event of applicable telemetry data or logging being unavailable, the time is determined from the earliest of: <ul style="list-style-type: none"> ○ As advised by "no water" contact from customer (where not due to a customer side issue); 	<p>The performance measure only accounts for interruptions greater than 4 hours in duration. Any interruptions less than 4 hours are excluded from the measure.</p> <p>Interruptions as a result of planned (e.g. planned maintenance) and unplanned interruptions (e.g. an asset failure) are included in the performance results.</p>

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
			<ul style="list-style-type: none"> ○ Indications from flow or pressure monitoring to infer a change in supply; or ○ Verified modelled data (calibrated, maintained, reflective of the network at the time of the incident and validated with contemporaneous flow and/or pressure data). ● The stop time is defined as when the company is satisfied that water has been fully restored to an acceptable pressure to the affected property(ies) and water is restored to the first cold water tap at a property. In the event of pressure logging being unavailable, the time is determined from the latest of: <ul style="list-style-type: none"> ○ As advised by notification from customer; ○ Indications from flow or pressure monitoring to indicate return to normal supply conditions; or <p>Verified modelled data (calibrated, maintained, reflective of the network at the time of the incident and validated with contemporaneous flow and/or pressure data).</p>	
WB6	Security of Supply Index – Ofwat KPI	score	<p>The Security of Supply index (SoSi) is a score reflecting a company's ability to meet its planned levels of service for average demand in a dry year at the end of the financial year (31 March 2020). The SoSi score can range from negative scores to 100. A score of less than 100 demonstrates that Thames Water would have to impose demand restrictions on its customers more frequently than set out in its levels of service.</p> <p>The level of service is set with the following frequencies of occurrence and types of water use restrictions:</p> <ul style="list-style-type: none"> ● Level 1 (1 year in 5 on average) – Intensive media campaign; ● Level 2 (1 year in 10 on average) – Sprinkle / unattended hosepipe ban, enhanced media campaign; ● Level 3 (1 year in 20 on average) – Temporary Use Ban (formerly hosepipe ban), Drought Direction 2011 (formerly non-essential use bans) requiring granting of an Ordinary Drought Order; and 	SoSI describes a company's ability to meet its planned levels of service for average demand in a dry year (DYAA).

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
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- Level 4 (Never) – If extreme measures (such as standpipes and rota cuts) were necessary their implementation would require the granting of an Emergency Drought Order.

SoSi is scored for the whole company based on a weighted sum of the six individual Water Resource Zones (WRZs). A water resources zone is defined as the largest area of a water company’s supply system where all customers have the same supply risk.

The methodology to derive the index score is set out below:

- 1. Calculate the Water available for use (WAFU).**
 - WAFU is defined as WRZ deployable output less reductions including climate change, sustainability reductions, network constraints and reductions made for outage allowance.
 - Deployable output is defined as a measure of Thames Water’s capability to put water into the supply network in drought conditions. This capability is limited by a number of factors such as abstraction licences, treatment network constraints and water resource shortages. Estimation of deployable input is performed through Water Resources Management models used to understand how the current water supply system would work effectively in past droughts.
 - Sustainability reductions are reductions in abstraction licence volume agreed with the Environment Agency (EA) for environmentally sustainable purposes.
 - Outage is defined as a temporary loss of Deployable Output that is retrievable. The outage allowance number for a given sub-zone is the worst of the monthly ‘95th percentile’ actual outages numbers for that sub-zone.

- 2. Calculate the Dry Year Available Headroom per WRZ**
 - Dry Year Available Headroom is defined as WAFU adjusted for Bulk Imports/Exports to and from other companies less adjusted dry year Distribution Input.
 - Bulk water exports and imports include treated and untreated exports and imports but excludes non-potable supplies.
 - Dry Year Distribution input (DI) is defined as the average DI recorded during the year adjusted by a dry year uplift. Weather

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
			<p>dependent models of usage and leakage are used to generate a range of demand scenarios at the WRZ level, using a number of years of weather and demand data.</p> <ul style="list-style-type: none"> The dry-year demand is defined as the demand observed under the joint conditions of a 1 in 5 summer and a 1 in 5 winter. <p>3. Calculate the Target Headroom</p> <ul style="list-style-type: none"> Target headroom is defined as 'the minimum buffer that water companies are required to maintain between supply and demand in order to account for current and future uncertainties in supply and demand'. The target headroom model is used to calculate the threshold minimum acceptable headroom, catering for uncertainties in the overall supply demand balance and agreed levels of service, which would trigger the need for water management options to increase water available for use or decrease demand. Thames Water uses a statistical technique called Monte Carlo analysis to examine uncertainties used in the Target Headroom calculation and the possible range of values that specific elements of supply and demand forecast could take. <p>4. Calculate the surplus / deficit expressed as a percentage per WRZ</p> <ul style="list-style-type: none"> Surplus / deficit is defined as a difference between the Dry Year Available Headroom and Target Available Headroom. The surplus or deficit expressed as a percentage per WRZ is calculated by dividing the surplus or deficit value in megalitres per day (Ml/d) by the sum of Adjusted Dry Year Distribution Input and Target Headroom. <p>5. Calculate the percentage of population with headroom deficit by dividing the population per zone with the deficit by the total company population.</p> <ul style="list-style-type: none"> Zonal population is the total average resident population in a water resource zone. 	

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
<p>6. Calculate the zonal index per WRZ</p> <ul style="list-style-type: none"> Zonal index is defined as a percentage deficit (step 4) squared multiplied by the percentage of population affected (step 5) and multiplied by 100. <p>7. Calculate the final companywide SoSi as 1 minus the sum of zonal scores and then multiplied by 100.</p>				
WB7	Compliance with SEMD advice notes (with or without derogation)	%	This measure relates to the compliance with SEMD (Security and Emergency Measures Directive) Advice Notes, to deliver a secure supply of water and resilience in supply. These relate to the advice notes issued by Defra and written by the Centre for Protection of National Infrastructure (CPNI). There are 537 schemes in total which form this performance measure with a target completion date of 31 March 2020.	The schemes are considered complete when all project milestones have been completed, exit criteria has been met and the benefits have been realised.
WB8	MI/d of sites made resilient to future extreme rainfall events	MI/d	This measure relates to the investment made by Thames Water to protect the capacity and supply of water treatment works from extreme weather events (defined as a 1:100 rainfall event). The measure is expressed in megalitres per day (MI/d) and is a cumulative measure for the period 1 April 2015 to 31 March 2020.	There are 27 schemes which form part of this measure. The schemes are considered complete when all project milestones have been completed, exit criteria has been met and the benefits have been realised.
<p>Completion is measured by the successful delivery of the solutions to protect supply from the identified sites. MI/d is measured from the design capacity of the sites.</p>				

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WC1	Greenhouse gas emissions from water operations	ktCO2e	<p>The measure is the greenhouse gas emissions (in kilo tonnes of carbon dioxide equivalent (CO2e)) from water operations in the financial year 1 April 2019 - 31 March 2020).</p> <p>In line with Ofwat guidance, greenhouse gas protocols classify emissions as being:</p> <ul style="list-style-type: none"> ● Scope 1 – All emissions from processes which are the organisation’s direct responsibility (e.g. emissions from transport owned or leased and fossil fuel use); ● Scope 2 – The emissions associated with the organisation’s grid electricity use (e.g. grid electricity used for pumping and treatment of water and grid electricity used in owned buildings); and ● Scope 3 – All other emissions, which may be indirectly associated with the organisation, but which come from sources that the company does not own or control (e.g. emissions from contractors and outsourced sourced services, business associated transport, public transport or in private vehicles). <p>Greenhouse gas emissions are calculated using the Carbon Accounting Workbook (CAW), the Water Industry wide tool. The workbook uses the greenhouse emissions conversion factors per activity as ratified by the Department of Energy and Climate change (DECC). Any updates to the figures are issued by the DECC, and UK Water Industry Research (UKWIR) then manage the updates to the CAW, which are then issued to the water companies. The CAW is rebaselined annually to reflect changes to the DECC published grid emission factors. This annual development cycle includes; an industry-wide steering group (October), draft (January) and final (March) publications, in order to ensure that it continues to reflect latest accounting practice.</p>	<p>All emissions relating to wastewater operations are not included within this measure. They are included in SC1.</p> <p>Other excluded activities consist of the application of sludge to land or landfill not owned by Thames Water, the purchase of chemicals, the disposal of waste from administrative activities, and the reduction of emissions arising from sequestration in woodlands.</p>
WC2	Leakage	Megalitres per day	<p>This measure is the total level of leakage, including customer supply-pipe leakage, expressed in megalitres per day (Ml/day) in the financial year (1 April 2019 - 31 March 2020). The leakage calculation is performed separately for Thames Water’s six water resource zones and for the company as a whole.</p>	<p>Leakage includes any uncontrolled losses between Thames Water’s treatment works and the customer’s stop tap. This includes trunk mains, service reservoirs, flow monitoring zones and customer supply pipes.</p>

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
			<p>Annual average leakage is defined as the sum of distribution system leakage, including customer supply pipe leakage, plus service reservoir losses and trunk mains leakage.</p> <p>Distribution system leakage is calculated by establishing the baseline leakage through minimum nightlines. Minimum nightlines are measured at the Flow monitoring zone level as a minimum flow during the night when consumption is expected to be at its lowest and therefore any residual flow after legitimate night use is assumed to be leakage.</p> <ul style="list-style-type: none"> ● Legitimate night use is an estimate of genuine use of water during the night time. Components of night use include the night use of measured and unmeasured households, commercial measured, unmeasured and assessed non-household night use and operational night use such as that of sewage treatment works. It also includes allowances for wastage occurring at void properties and night use of occupied void properties. ● Due to pressure variations during the day and the sensitivity of leakage to pressure, night time leakage (nightlines - legitimate night use) needs adjustment to arrive at a daily average leakage flow. This adjustment deals with the effect of pressure variations and is known as the T-Factor. The T-Factor is calculated as average daily pressure divided by night pressure and multiplied by 24 hours. The T-factor is calculated on flow monitoring zone levels using the average pressure from all pressure loggers located within the zone. Night pressure is calculated as average for the period of 3am to 4am; day pressure - average for the whole 24-hour period. ● A water resources zone is defined as the largest area of a water company’s supply system where all customers have the same supply risk. ● Trunk mains are defined as the length of mains between from the start of the distribution system and the flow monitoring zones. Transfer mains leakage is estimated based on the length of main, multiplied by the assessed leakage rate per kilometre of main. ● Reservoir leakage is calculated based on reservoir drop tests. For reservoirs where drop tests are not available the capacity and reservoir type are used to estimate leakage. Reservoir type is made up of three categories, brick, concrete and other. Leakage for each 	<p>It does not include internal plumbing losses.</p>

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
			<p>reservoir is calculated by the capacity-leakage relationship for each reservoir type and then summed to give total reservoir leakage.</p> <ul style="list-style-type: none"> Leakage is reported as a post-Maximum Likelihood Estimation (MLE) weighted average MI/day over the year. The MLE technique is used to distribute the volume of any unaccounted-for water in the water balance calculation. Unaccounted for water occurs when the distribution input and the sum of the components of the water balance do not reconcile. To reconcile the water balance, the MLE method is used to distribute the unaccounted-for water according to the uncertainty in the components of the water balance. An adjustment is applied to the annual leakage figure to remove the impact of "reporting change" improvements introduced since PR14 reporting methodology was developed. Reporting change is defined as a change in approach to how a water balance component is calculated such that it results in a step change in the reported value since the base year of the current Water Resources Management Plan (WRMP) used to set the leakage targets. Reporting change is different from the data update, which is an update in the data to reflect changes that have occurred over time but remains consistent with the approach taken to calculate the WRMP base year water balance. 	
WC3	Abstraction Incentive Mechanism (AIM)	MI	<p>This measure relates to the Abstraction Incentive Mechanism (AIM) which is used to measure the reduction of abstraction in environmentally damaging abstraction sites. The measure is expressed in megalitres and based on the financial year (1 April 2019 - 31 March 2020).</p> <p>Detailed guidance and the methodology used to prepare the AIM measures can be found in the following link:</p> <p>https://www.ofwat.gov.uk/wp-content/uploads/2016/02/gud_pro20160226aim.pdf</p>	<p>The following abstraction sites are in scope of this measure:</p> <ul style="list-style-type: none"> River Lee new gauge pumping stations (London WRZ); Pangbourne (Kennet Valley WRZ); Axford pumping stations (SWOZ WRZ); Pan Mill pumping station (SWA WRZ); and North Orpington PS (London WRZ). <p>All other abstraction incentive schemes are not in scope.</p>

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
WC4	We will educate our existing and future customers	No. of children directly engaged	<p>This measure relates to 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. The measure is based on the financial year (1 April 2019 - 31 March 2020). The following assumptions apply to this measure:</p> <ul style="list-style-type: none"> ● A future customer is defined as a child that is under the age of 18; ● Future customers are educated about water and waste issues at the same time, so the number of future customers educated is counted once against each measure (WC4 and SC6); ● Direct engagement refers to a face-to-face engagement between a Thames Water employee or selected education delivery partner and a child from the Thames Water region; and ● An engagement is defined as a contact greater than 10 minutes (i.e. collection of a water efficiency pack at an open day will not be counted). 	<p>A customer above the age of 18 is excluded from the measure.</p> <p>Engagement of less than 10 minutes with a future customer is excluded from the measure.</p>
WC5	Deliver 100% of agreed measures to meet new environmental regulations	%	<p>This measure relates to the percentage of agreed measures completed to meet new environmental regulations including water schemes listed on NEP5, as agreed with the Environment Agency. There are 27 measures in scope (as agreed with the Environment Agency) and the measure is cumulative and based on the percentage completion in the period from 1 April 2015 to 31 March 2020. Agreed measures are defined as:</p> <ul style="list-style-type: none"> ● Low flow Investigations; ● Installation of Eel Screen; ● NEP Catchment management; ● Monitoring outfalls; and ● Drought Permit Baseline Monitoring. 	<p>The measures are considered complete when all project milestones have been completed, exit criteria has been met and the benefits have been realised.</p> <p>Any AMP7 measures completed in AMP6 are excluded from performance.</p> <p>Any measures where it was agreed with the Environment Agency to revise the completion date to AMP7 are excluded from the performance.</p>

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
WD1	Energy imported less energy exported	GWh (gigawatt hours)	<p>This measure is the net reduction in energy from the grid (i.e. energy consumption imported from the electricity grid less the total electricity exported to the grid) from water operation. It is expressed in gigawatt hours (GWh) and is based on the financial year (1 April 2019 - 31 March 2020).</p> <p>The 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.</p> <p>Billing consumption and export consumption data is received from energy suppliers for electricity imported and exported by Thames Water to the national grid and is validated through half hourly metering data.</p>	<p>The performance relates to energy imported and exported from the provisions of water services only. All other sources of energy supply and energy use are excluded.</p> <p>Energy consumption from capital schemes and private wire supplies are excluded from the performance measure.</p>
SA1	Improve handling of written complaints by increasing first time resolution – wastewater	% written complaints resolved 1st time	<p>This measure is the percentage of household and non-household customer complaints relating to wastewater services which are resolved first time. The measure is expressed as a percentage of the total written wastewater services complaints and is based on complaints received in the financial year (1 April 2019 - 31 March 2020). It is calculated as follows:</p> <p>(Wastewater Services complaints resolved at the first stage / Total Wastewater Services complaints) x 100</p> <ul style="list-style-type: none"> • A written customer complaint is defined as any customer mail and email received by Thames Water's customer representatives, including any third-party service providers, where the customer is dissatisfied with the service provided. • A failure of first-time resolution is noted when a customer complaint has been escalated to the '2nd stage'. If a customer complaint is not escalated to the 2nd stage, the initial complaint is considered to be resolved in the first instance. • A 2nd stage complaint is defined as a second complaint from a customer relating to the same issue. 	<p>Customer complaints relating to the provision of 'wastewater services' are in scope of the measure.</p> <p>Customer complaints relating to 'water services', 'charging and billing', 'metering' and 'other' are excluded. Any customer complaints received for services offered by another water company are excluded from this measure.</p> <p>Written complaints are via letter, email, web form and fax channels of contact.</p> <p>Social media and web chat complaints are not included in the performance measure.</p> <p>Some exclusions to 2nd stage apply, see the CCW guidance document published by Ofwat: https://www.ofwat.gov.uk/wp-content/uploads/2015/11/gud_pro201503sim.pdf</p>

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
SA2	Number of written complaints per 10,000 properties connected for wastewater services	No. written complaints /10,000 properties	<p>This measure is the number of written complaints received from household and non-household customers relating to wastewater services provided by Thames Water. The measure is expressed as a number per 10,000 properties connected to a water and wastewater supply by Thames Water and is based on complaints received in the financial year (1 April 2019 - 31 March 2020). It is calculated as follows:</p> <p>(Number of complaints categorised as relating to wastewater services received during the financial year / number of properties that receive wastewater only, and water and sewerage services, as at 31 March 2020) x 10,000</p> <ul style="list-style-type: none"> A written customer complaint is defined as any customer mail and email received by Thames Water's customer representatives, including any third-party service providers, where the customer is dissatisfied with the service provided. 	<p>Customer complaints relating to the provision of 'wastewater services' are in scope of the measure.</p> <p>Customer complaints relating to 'water services', 'charging and billing', 'metering' and 'other' are excluded. Any customer complaints received for services offered by another water company are excluded from this measure.</p> <p>Written complaints are via letter, email, web form and fax channels of contact.</p> <p>Social media and web chat complaints are not included in the performance measure.</p> <p>Some exclusions to complaints apply, see the CCW guidance document published by Ofwat: https://www.ofwat.gov.uk/wp-content/uploads/2015/11/qud_pro201503si_m.pdf</p>
SA3	Customer satisfaction surveys (internal CSAT monitor) – wastewater	TW internal Customer satisfaction score (mean score out of 5)	<p>This measure is the customer satisfaction score for customer contacts relating to wastewater operational activity. The measure is expressed as the average customer satisfaction score (between 1 to 5) and is based on the financial year (1 April 2019 - 31 March 2020).</p> <p>A score of 1 is defined as very unsatisfied and a score of 5 is defined as very satisfied.</p> <p>The surveys are performed by a third party 'Rant and Rave' and the survey results are collected via SMS.</p>	<p>Customer contacts relating to the provision of 'wastewater services' are in the scope of the measure.</p> <p>Customer contacts relating to 'water services', 'charging and billing', 'metering' and 'other' are excluded.</p>

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
SB1	Asset health wastewater non-infrastructure	category	<p>This measure relates to the wastewater asset health status and is based on a basket of key indicators that represent the health of the non-infrastructure assets (above ground). The performance measure is expressed as 'stable', 'marginal', or 'deteriorating' and is assessed based on the calendar year (1 January 2019 - 31 December 2019). The Asset health measure is a composite indicator made up of the following sub-measures for wastewater non-infrastructure (SB1.1 - SB1.3):</p> <ul style="list-style-type: none"> ● SB1.1 Unconsented pollution incidents (category 1,2,3) from sewage treatment works (STWs), storm tanks, pumping stations and other sewage related premises; ● SB1.2 Sewage treatment discharges failing numeric consents %; ● SB1.3 Total population equivalent served by sewage treatment works failing look-up table consents; <p>Each sub-measure has its own defined reporting criteria which is set out in SB1.1 - SB1.3 below. For each sub-measure, there is a defined:</p> <ul style="list-style-type: none"> ● Reference level: This is the target level for the sub-measure as defined in the PR14 Final Determination. ● Control limit: This provides a deadband for performance for the sub-measure. Its primary purpose is to allow for a degree of natural variation in performance around the reference level, to allow for identification of material changes in performance. ● Failure threshold: A significant failure of one sub-measure which results in a movement from stable to marginal status. <p>These limits are set out in Thames Water AMP6 Final Determination:</p> <p>AMP6 Outcomes Reporting Policy Annex 2</p>	This composite measure includes the sub-measures SB1.1 - SB1.3 only. Boundaries for each sub-measure are set out in SB1.1 - SB1.3 below.

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
SB1.1	Unconsented pollution incidents (category 1,2,3) from sewage treatment works (STWs), storm tanks, pumping stations and other sewage related premises	nr	<p>This measure is the number of unconsented category 1, 2 and 3 pollution incidents from sewage treatment works, storm tanks, pumping stations and other sewage related premises. The measure is expressed as the number of pollution incidents and based on the calendar year (1 January 2019 - 31 December 2019).</p> <p>Category 1, 2 and 3 pollution incidents are defined as:</p> <ul style="list-style-type: none"> • Category 1 – Major, serious, persistent and/or extensive impact or effect on the environment, people and/or property • Category 2 – Significant impact or effect on the environment, people and/or property • Category 3 – Minor or minimal impact or effect on the environment, people and/or property. <p>The determination of the category of an incident is made by the Environment Agency. Further information can be found in the following Environment Agency guidance:</p> <p>https://www.ofwat.gov.uk/wp-content/uploads/2017/12/20171129-Incidents-and-their-classification-the-Common-Incident-Classification-Scheme-CICS-23.09.16.pdf</p>	Category 4 incidents are excluded from the measure. The definitions of these are also set out in the Environment Agency guidance link.

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
SB1.2	Sewage treatment works discharges failing numeric consents %	%	<p>This measure is the sewage treatment works compliance with discharge consents set by the Environment Agency. It is expressed as percentage compliance and is based on the calendar year (1 January 2019 - 31 December 2019). It is a measure of the capability of the company's sewage treatment works to treat and dispose of wastewater in line with the company's discharge permit conditions. It is calculated as follows:</p> <p>(number of non-compliant discharges / number of compliant discharges) x 100</p> <ul style="list-style-type: none"> • A non-compliant discharge is defined as a level of concentration of a parameter in a wastewater quality sample taken at a sewage treatment works that falls out of the acceptable level as defined in the individual sewage treatment work permit. • A sample is defined as a wastewater quality sample in line with the Environment Agency guidance, as set out in the links below. The samples are tested for the concentration of a range of parameters as set out the individual permits for each sewage treatment works. The samples are taken at the designated sampling point at each sewage treatment works and are carried out under a UKAS accredited process. <p>The measure is governed by guidance and regulations issued by the Environment Agency which can be found in the following links:</p> <p>https://www.gov.uk/government/publications/water-companies-operator-self-monitoring-osm-environmental-permits/water-companies-operator-self-monitoring-osm-environmental-permits; and</p> <p>https://www.gov.uk/government/publications/waste-water-treatment-works-treatment-monitoring-and-compliance-limits/waste-water-treatment-works-treatment-monitoring-and-compliance-limits</p>	<p>The wastewater sampling programme covers the geographical region that Thames Water supplies with wastewater, as stipulated by the Environment Agency guidance. The sampling programme is agreed with the Environment Agency at the beginning of the calendar year. The compliance percentage is based on the results of the wastewater quality samples only.</p> <p>Further information over boundaries is set out in the Environment Agency guidance links provided.</p>

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
SB1.3	Total population equivalent served by sewage treatment works failing look-up table consents	%	<p>This measure is the population equivalent served by sewage treatment works which fail look-up table discharge consents set by the Environment Agency. It is expressed as percentage compliance and is based on the calendar year (1 January 2019 - 31 December 2019). It is a measure of the capability of the company's sewage treatment works to treat and dispose of wastewater in line with the company's discharge permit conditions. It is calculated as follows:</p> <p>(Population equivalent of non-compliant discharges / Total population equivalent of population served) x 100</p> <ul style="list-style-type: none"> • A non-compliant discharge is defined as a level of concentration of a parameter in a wastewater quality sample taken at a sewage treatment works that falls out of the acceptable level as defined in the individual sewage treatment work permit. • A sample is defined as a wastewater quality sample in line with the Environment Agency guidance, as set out in the links below. The samples are tested for the concentration of a range of parameters as set out the individual permits for each wastewater treatment works. The samples are taken at the designated sampling point at each sewage treatment works and are carried out under a UKAS accredited process. • The population is defined as the population for which Thames Water provides wastewater services to (i.e. the collection and treatment of wastewater from properties) at 31 December 2019. <p>The measure is governed by guidance and regulations issued by the Environment Agency which can be found in the following links:</p> <p>https://www.gov.uk/government/publications/water-companies-operator-self-monitoring-osm-environmental-permits/water-companies-operator-self-monitoring-osm-environmental-permits; and</p> <p>https://www.gov.uk/government/publications/waste-water-treatment-works-treatment-monitoring-and-compliance-limits/waste-water-treatment-works-treatment-monitoring-and-compliance-limits</p>	<p>The wastewater sampling programme covers the geographical region that Thames Water supplies with wastewater, as stipulated by the Environment Agency guidance. The sampling programme is agreed with the Environment Agency at the beginning of the calendar year. The compliance percentage is based on the results of the wastewater quality samples only.</p> <p>Further information over boundaries is set out in the Environment Agency guidance links provided.</p>

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
SB2	Asset health wastewater infrastructure	Category	<p>This measure relates to the wastewater asset health status and is based on a basket of key indicators that represent the health of the infrastructure assets (below ground). The performance measure is expressed as 'stable', 'marginal', or 'deteriorating'. The Asset health measure is a composite indicator made up of the following sub-measures for wastewater infrastructure (SB2.1 - SB2.4):</p> <ul style="list-style-type: none"> ● SB2.1 Number of Sewer collapses (based on the financial year 1 April 2019 - 31 March 2020); ● SB2.2 Number of Sewer blockages (based on the financial year 1 April 2019 - 31 March 2020); ● SB2.3 Unconsented pollution incidents (based on the calendar year 1 January 2019 - 31 December 2019); and ● SB2.4 Properties internally flooded due to sewer flooding other causes (based on the financial year 1 April 2019 - 31 March 2020). <p>Each sub-measure has its own defined reporting criteria which is set out in SB2.1 - SB2.4 below. For each sub-measure, there is a defined:</p> <ul style="list-style-type: none"> ● Reference level: This is the target level for the sub-measure as defined in the PR14 Final Determination. ● Control limit: This provides a deadband for performance for the sub-measure. Its primary purpose is to allow for a degree of natural variation in performance around the reference level, to allow for identification of material changes in performance. ● Failure threshold: A significant failure of one sub-measure which results in a movement from stable to marginal status. <p>These limits are set out in Thames Water AMP6 Final Determination:</p> <p>AMP6 Outcomes Reporting Policy Annex 2</p>	<p>This composite measure includes the sub-measures SB2.1 - SB2.4 only. Boundaries for each sub -measure are set out in SB2.1 – SB2.4 below.</p>

Thames Water Reporting Criteria

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
SB2.1	Number of Sewer Collapses	nr	<p>This measure is the number of sewer collapses in the financial year (1 April 2019 - 31 March 2020). It is expressed as the number of sewer collapses.</p> <p>A reportable sewer collapse is considered to be where a failure has resulted in a total loss of service or failure to support the ground above the sewer, and any rising main pipe failure that allows sewage to escape.</p> <p>A sewer collapse is identified from a customer's contact, through a third-party contractor or by Thames Water itself.</p>	<p>The measure includes rising mains, pipe bridges, and failures on the infrastructure network, including inputs into the inlet of treatment works and terminal pumping station rising mains.</p> <p>The measure includes all public sewer and lateral collapses recorded by the company inclusive of those incidents that have been reported as flooding or pollution failures, if the primary cause of the flooding or pollution was a sewer collapse.</p>
SB2.2	Number of Sewer Blockages	nr	<p>This measure is the number of sewer blockages in the financial year (1 April 2019 - 31 March 2020).</p> <p>A sewer blockage is an obstruction in a sewer which causes a reportable problem, such as flooding or discharge to a watercourse, unusable sanitation, surcharged sewers or odour.</p>	<p>The measure consists of sewer blockages only. Sewer collapses are not in the scope of this measure. Sewer collapses are defined in SB2.1 above.</p> <p>The measure consists of sewer blockages on the current network i.e. the sewerage network including private sewers and lateral drains transferred as a result of schemes made by the Secretary of State / Welsh Ministers under the Water Industry (Schemes for Adoption of Private Sewers) Regulations 2011.)</p> <p>This measure excludes any blockage caused by hydraulic overload. If the blockage is the result of a fracture or deformation of the pipe, it should be included in 'sewer collapses' in SB2.1 above.</p>

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
SB2.3	Unconsented Pollution Incidents (category 1,2 and 3) from foul sewers, combined sewer overflows and rising mains	nr	<p>This measure is the total annual number of unconsented pollution incidents (category 1, 2 and 3) from foul sewers, combined sewer overflows and rising mains. The measure is expressed as the number of pollution incidents and based on the calendar year (1 January 2019 - 31 December 2019).</p> <p>Category 1, 2 and 3 pollution incidents are defined as:</p> <ul style="list-style-type: none"> • Category 1 – Major, serious, persistent and/or extensive impact or effect on the environment, people and/or property • Category 2 – Significant impact or effect on the environment, people and/or property • Category 3 – Minor or minimal impact or effect on the environment, people and/or property. <p>The determination of the category of an incident is made by the Environment Agency. Further information can be found in the following Environment Agency guidance:</p> <p>https://www.ofwat.gov.uk/wp-content/uploads/2017/12/20171129-Incidents-and-their-classification-the-Common-Incident-Classification-Scheme-CICS-23.09.16.pdf</p>	<p>Category 4 incidents are excluded from the measure. The definitions of these are also set out in the Environment Agency guidance link.</p>
SB2.4	Properties Internally Flooded due to sewer flooding other causes	nr	<p>This measure is the number of internally flooded properties due to other causes, flooded per year on Thames Water’s sewerage network. The measure is expressed as the number of properties and is based on the financial year (1 April 2019 - 31 March 2020).</p> <p>Internal flooding is defined as flooding which enters a building or passes below a suspended floor. In this context, buildings are defined as those normally used for residential, public, community, commercial, business or industrial purposes. The list below gives examples of what parts of buildings shall be included in the internal flooding category.</p> <ul style="list-style-type: none"> • The main parts of the building; • Conservatories; • Basements and cellars (even if unoccupied); • Areas below suspended floors; 	<p>The measure includes other causes of internally flooded properties. Other causes of flooding can be caused by:</p> <ul style="list-style-type: none"> • Sewer blockages: An obstruction in a sewer which causes a reportable problem (not caused by hydraulic overload), such as flooding or discharge to a watercourse, unusable sanitation, surcharged sewers or odour • Sewer collapses: Where failure has occurred to the pipe that results in any contact with the company or any unplanned escape of

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
			<ul style="list-style-type: none"> ● Lift shafts; ● Stairwell/lobby area of flats (to be counted as 1 flooded property); ● Any shared car parking areas beneath the main building where access to the parking area is from within the building (to be counted as 1 flooded property); ● Studios and workshops, which are an integral part of the main building. ● Porches; and ● Garages which are an integral part of the house with an adjoining door to the occupied building. 	<p>wastewater and results in the need to replace or repair the pipe to reinstate normal service.</p> <ul style="list-style-type: none"> ● Equipment failures: Failure or incorrect operation of company apparatus (e.g. pumping stations, penstocks, maintenance equipment, combined sewer overflows, or real time control systems)
<p>SB3</p>	<p>Properties protected from flooding due to rainfall (including Counters Creek project)</p>	<p>No. properties protected from flooding due to rainfall</p>	<p>This measure is the number of properties which receive further protection from flooding due to rainfall. The measure is expressed as the number of properties. It is based on the period 1 April 2015 to 31 March 2020.</p> <p>The measure is set based on the annualised benefits which is determined based on the change in probability and severity of flooding for a particular property. It is calculated as follows:</p> <p>(sum of the annualised benefit) / average benefit per property</p> <p>Schemes that result in properties receiving enhanced flood protection contribute to the companies Annualised Benefit calculation. In order for this to occur the properties associated with the scheme will be detailed on a form that is generated and updated by the framework contractor delivering the scheme.</p>	<p>A key assumption in the measure is the average benefit per property which is considered to be £9,428.</p>
<p>SB4</p>	<p>Number of internal flooding incidents, excluding those due to overloaded sewers (SFOC)</p>	<p>No. of internal sewer flooding (other causes) incidents</p>	<p>This measure is the number of internal flooding incidents from all causes with exception to those relating to overloaded sewers. The measure is expressed as the number of incidents and is based on the financial year (1 April 2019 - 31 March 2020).</p> <p>Internal flooding is defined as flooding which enters a building or passes below a suspended floor. In this context, buildings are defined as those normally used for residential, public, community, commercial, business or industrial purposes. The list below gives examples of what parts of buildings shall be included in the internal flooding category.</p>	<p>The measure includes all causes of internal flooding incidents with exception to those as a result of an overloaded sewer (SFOC)</p>

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
			<ul style="list-style-type: none"> ● The main parts of the building; ● Conservatories; ● Basements and cellars (even if unoccupied); ● Areas below suspended floors; ● Lift shafts; ● Stairwell/lobby area of flats (to be counted as 1 flooded property); ● Any shared car parking areas beneath the main building where access to the parking area is from within the building (to be counted as 1 flooded property); ● Studios and workshops, which are an integral part of the main building. ● Porches; and ● Garages which are an integral part of the house with an adjoining door to the occupied building. 	
SB5	Contributing area disconnected from combined sewers by retrofitting sustainable drainage	No. of hectares (cumulative)	<p>This measure is the number of hectares of contributing area (i.e. local impermeable area that would normally contribute to surface water run-off into a combined sewer) disconnected from the combined sewers by fitting Sustainable Urban Drainage System (SUDS) measures. It is expressed as the number of hectares. The measure is cumulative and based on the period 1 April 2015 to 31 March 2020.</p> <p>SUDS are defined as any means of reducing the peak flow in our combined sewer network by removing and/or attenuating surface water flows.</p>	The measure is considered complete when all project milestones have been completed, exit criteria has been met and the benefits have been realised.
SB6	Compliance with SEMD advice notes (with or without derogation)	%	This measure relates to the Compliance with SEMD (Security and Emergency Measures Directive) Advice Notes, to deliver a secure and resilience wastewater service. These relate to the advice notes issued by Defra and written by the Centre for Protection of National Infrastructure (CPNI). There are 54 schemes in total which form this performance measure with a target completion date of 31 March 2020.	The schemes are considered complete when all project milestones have been completed, exit criteria has been met and the benefits have been realised.

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
SB7	Population equivalent of sites made resilient to future extreme rainfall events	Population equivalent (cumulative)	<p>This measure is 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). The measure is expressed as the number of population served and has a target date of 31 March 2020. The measure records the successful delivery of the solutions to protect supply from the 24 identified sites.</p> <ul style="list-style-type: none"> The population is defined as the population for which Thames Water provides wastewater services to (i.e. the collection and treatment of wastewater from properties) at the identified sites in the scheme. 	The range of capital and non-capital solutions are considered complete when all project milestones have been completed, exit criteria has been met and the benefits have been realised.
SB8	Lee Tunnel including Shaft G	text	This measure relates to the delivery of a capital project relating to the Thames Water Lee Tunnel by 31 March 2016.	The scheme is considered complete when all project milestones have been completed, exit criteria has been met and the benefits have been realised.
SB9	Deephams Wastewater Treatment Works	text	This measure relates to the delivery of a capital project relating to the upgrade of the Thames Water Deephams Wastewater Treatment Works by 31 March 2017.	The scheme is considered complete when all project milestones have been completed, exit criteria has been met and the benefits have been realised.

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
SC1	Greenhouse gas emissions from wastewater operations	ktCO2e	<p>This measure is the greenhouse gas emissions (in kilo tonnes of carbon dioxide equivalent (CO2e)) from wastewater operations in the financial year 1 April 2019 - 31 March 2020).</p> <p>In line with Ofwat guidance, greenhouse gas protocols classify emissions as being:</p> <ul style="list-style-type: none"> ● Scope 1 – All emissions from processes which are the organisation’s direct responsibility (e.g. emissions from transport owned or leased, fossil fuel use (natural gas, kerosene) and methane and nitrox oxide from sewage treatment); ● Scope 2 – The emissions associated with the organisation’s grid electricity use (e.g. grid electricity used for pumping and treatment sewage and grid electricity used in owned buildings); and ● Scope 3 – All other emissions, which may be indirectly associated with the organisation, but which come from sources that the company does not own or control (e.g. emissions from contractors and outsourced sourced services, business associated transport, public transport or in private vehicles). <p>Greenhouse gas emissions are calculated using the Carbon Accounting Workbook (CAW), the Water Industry wide tool. The workbook uses the greenhouse emission factors per activity as ratified by the Department of Energy and Climate change (DECC). Any updates to the figures are issued by the DECC, and UK Water Industry Research (UKWIR) then manage the updates to the CAW, which are then issued to the water companies. The CAW is rebaselined annually to reflect changes to the DECC published grid emissions factors. This annual development cycle includes; an industry-wide steering group (October), draft (January) and final (March) publications, in order to ensure that it continues to reflect latest accounting practice.</p>	<p>All emissions relating to water operations are not included within this measure. These are included in WC1.</p> <p>Other excluded activities consist of the application of sludge to land or landfill not owned by Thames Water, the purchase of chemicals, the disposal of waste from administrative activities, and the reduction of emissions arising from sequestration in woodlands.</p>

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
SC2	Total category 1–3 pollution incidents from sewage related premises	No. of pollution incidents (category 1, 2 and 3)	<p>This measure is the number of consented and unconsented Category 1, 2 and 3 pollution incidents. The measure is expressed as the number of pollution incidents and based on the calendar year (1 January 2019 - 31 December 2019).</p> <p>The pollution sources for this commitment include sewage treatment works, storm tanks, combined sewer overflows, foul sewers, pumping stations, rising mains and other.</p> <p>Category 1, 2 and 3 pollution incidents are defined as:</p> <ul style="list-style-type: none"> • Category 1 – Major, serious, persistent and/or extensive impact or effect on the environment, people and/or property • Category 2 – Significant impact or effect on the environment, people and/or property • Category 3 – Minor or minimal impact or effect on the environment, people and/or property. <p>The determination of the category of an incident is made by the Environment Agency. Further information can be found in the following Environment Agency guidance:</p> <p>https://www.ofwat.gov.uk/wp-content/uploads/2017/12/20171129-Incidents-and-their-classification-the-Common-Incident-Classification-Scheme-CICS-23.09.16.pdf</p>	Category 4 incidents are excluded from the measure. The definitions of these are also set out in the Environment Agency guidance link.
SC3	Sewage treatment works discharge compliance	% compliance	<p>This measure is the percentage of sewage treatment works with discharges compliant with numeric environmental permits in each year.</p> <p>It is expressed as the percentage compliance and is based on the calendar year (1 January 2019 - 31 December 2019). It is a measure of the capability of the company's wastewater treatment works to treat and dispose of wastewater in line with the company's discharge permit conditions. It is calculated as follows:</p> <p>(B - A) / B * 100</p>	<p>The wastewater sampling programme covers the geographical region that Thames Water supplies with wastewater, as stipulated by the Environment Agency guidance. The sampling programme is agreed with the Environment Agency at the beginning of the calendar year. The compliance percentage is based on the results of the wastewater quality samples only.</p> <p>Further information over boundaries is set out in the Environment Agency guidance</p>

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
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Where:
 A = No. of discharges with numeric limits confirmed as failing relevant conditions in calendar year; and
 B = No. of discharges with numeric limits with relevant conditions during calendar year.

- A non-compliant discharge is defined as a level of concentration of a parameter in a wastewater quality sample taken at a sewage treatment works that falls out of the acceptable level as defined in the individual sewage treatment work permit.
- A sample is defined as a wastewater quality sample in line with the Environment Agency guidance, as set out in the links below. The samples are tested for the concentration of a range of parameters as set out the individual permits for each sewage treatment works. The samples are taken at the designated sampling point at each sewage treatment works and are carried out under a UKAS accredited process.

The measure is governed by guidance and regulations issued by the Environment Agency which can be found in the following links:

- <https://www.gov.uk/government/publications/water-companies-operator-self-monitoring-osm-environmental-permits/water-companies-operator-self-monitoring-osm-environmental-permits>; and
- <https://www.gov.uk/government/publications/waste-water-treatment-works-treatment-monitoring-and-compliance-limits/waste-water-treatment-works-treatment-monitoring-and-compliance-limits>

links provided.

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
<p>SC4</p>	<p>Water bodies improved or protected from deterioration as a result of Thames Water's activities</p>	<p>No. of water bodies improved or protected by catchment management</p>	<p>This measure relates to 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. The measure is expressed as the number of water bodies improved by 31 March 2020. It is a cumulative measure and based on the period 1 April 2015 to 31 March 2020.</p> <p>In rural areas, runoff from agricultural land can be a significant source of phosphorus and the measure includes working with farmers to reduce the levels of nutrients running off their land. The pilot measure is being adopted in the Evenlode catchment over three rural water bodies, helping farmers undertake measures such as fertilizer spreading improvements, constructing buffer strips and new hedges and other farm management activities that could reduce the amount of phosphorus entering rivers from the land. Learning from the three water bodies will be applied to a further ten waterbodies in the area to achieve the commitment of thirteen waterbodies protected or improved as a result of the Company's activities.</p>	<p>The improvements for each waterbody are based on measures designed to target phosphorus concentrations, however ancillary benefits relating to environmental quality will be captured and used as additional evidence of improving the water bodies. However, it will not be sufficient for any waterbody to meet the performance commitment target through ancillary benefits alone. The water bodies are considered improved by measuring the levels of phosphorous saved from entering the river, and not directly from measuring phosphorous levels in the river itself.</p>
<p>SC5</p>	<p>Satisfactory sludge disposal compliance</p>	<p>% satisfactory sludge disposal compliance</p>	<p>This measure is the percentage compliance of the company's wastewater sludge with all relevant legislation and best practice guidance, including 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. The measure is expressed as a percentage of compliance and is based on the calendar year (1 January 2019 - 31 December 2019). It is calculated as follows:</p> <p>$((C - D) / C) \times 100$</p> <p>Where:</p> <p>C = Total sewage sludge disposed of measured in thousand tonnes of dry solids. D = Total sewage sludge disposed of which cannot be confirmed as complying with the Safe Sludge Matrix and/or relevant regulations described above and is therefore not considered satisfactory.</p>	<p>All sludge produced and treated in Thames Water's sludge treatment works are in the scope of the measure.</p>

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
SC6	We will educate our existing and future customers	No. of children directly engaged	<p>This measure relates to the number of children directly engaged each year through Thames Water's education programme on wastewater supply, including working in schools, educational visits and site open days. The measure is based on the financial year (1 April 2019 - 31 March 2020). The following assumptions apply to this measure:</p> <ul style="list-style-type: none"> • A future customer is defined as a child that is under the age of 18; • Future customers are educated about water and waste issues at the same time, so the number of future customers educated is counted once against each measure (WC4 and SC6); • Direct engagement refers to a face-to-face engagement between a Thames Water employee or selected education delivery partner and a child from the Thames Water region; and • An engagement is defined as a contact greater than 10 minutes (i.e. collection of a water efficiency pack at an open day will not be counted). 	<p>A customer above the age of 18 is excluded from the measure.</p> <p>Engagement of less than 10 minutes with a future customer is excluded from the measure.</p>
SC7	Modelled reduction in properties affected by odour	No. of properties (modelled cumulative reduction)	<p>This measure is the reduction in the number of properties affected by odour assessed through odour monitoring. It is expressed as the number of properties and the measure is cumulative and based on the period 1 April 2015 to 31 March 2020.</p> <p>Odour monitoring consists of odour modelling which 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.</p>	<p>Properties are only included in the performance when the impact of odour initiatives have been verified and signed off by an independent third-party odour expert contracted by Thames Water.</p>

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
SC8	Deliver 100% of agreed measures to meet new environmental regulations	%	<p>This measure relates to the percentage of agreed measures completed to meet new environmental regulations including wastewater schemes listed on NEP5, as agreed with the Environment Agency. There are 653 measures in scope (as agreed with the Environment Agency) and the measure is cumulative and based on the percentage completion in the period from 1 April 2015 to 31 March 2020. Agreed measures are defined as:</p> <ul style="list-style-type: none"> ● Wastewater schemes listed on NEP5; ● Successful application for first time sewerage; ● Specified WFD schemes to improve either biological oxygen demand (BOD) or ammonia discharges; ● Specified WFD schemes to prevent water bodies deteriorating; ● 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. 	<p>The measures are considered complete when all project milestones have been completed, exit criteria has been met and the benefits have been realised.</p> <p>Any AMP7 measures completed in AMP6 are excluded from performance.</p> <p>Any measures where it was agreed with the Environment Agency to revise the completion date to AMP7 are excluded from the performance.</p> <p>The Thames Tideway Tunnel is not included in this measure.</p>
SC9	Reduce the amount of phosphorus entering rivers to help improve aquatic plant and wildlife	Kilograms of phosphorus removed per day	<p>This measure relates to the amount of phosphorus removed from rivers. The measure is expressed as kilograms of phosphorus per day removed from the aquatic environment and relates to environmental investment required to meet the Water Framework Directive requirements in the updated River Basin Management Plans, published in February 2016. It is a cumulative measure and based on the period 1 April 2015 to 31 March 2020. It is calculated as follows:</p> <p>Modelled (Simcat) mean daily flow x (current permitted final effluent Phosphorous load as annual average – proposed permitted final effluent Phosphorous load as annual average)</p>	<p>Load reductions are set on a theoretical basis using permitting data to overcome seasonal, weather and measurement impacts. 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.</p> <p>The scheme is considered complete when all project milestones have been completed, exit criteria has been met and the benefits have been realised.</p>

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
SD1	Energy imported less energy exported	GWh (gigawatt hours)	<p>This measure is the net reduction in energy from the grid (i.e. energy consumption imported from the electricity grid less the total electricity exported to the grid) from wastewater operation. It is expressed in gigawatt hours (GWh) and is based on the financial year (1 April 2019 - 31 March 2020).</p> <p>The 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.</p>	<p>The performance relates to energy imported and exported from the provisions of wastewater services only. All other sources of energy supply and energy use are excluded.</p> <p>Energy consumption from capital schemes and private wire supplies are excluded from the performance measure.</p>
T1			<p>This measure is the improvement in outcomes for customers relating to the Thames Tideway Tunnel (TTT) project. It is a composite indicator made up of the following sub-measures (T1A - T1C):</p> <ul style="list-style-type: none"> • T1A. Successful procurement of the Infrastructure Provider. • T1B. Acquisition of land rights for the project (subject to planning permission). • T1C. Completion of construction activities and timely availability of sites to the IP. 	Refer to the reporting criteria.
T1A	Successful procurement of the Infrastructure Provider (IP)	text	The T1A sub-measure relates to the award of the license to the infrastructure provider, Bazalgette Tunnel Limited. The measure is considered complete when the license has been awarded.	
T1B	Thames Water will fulfil its land related commitments in line with the TTT programme requirements	nr	The T1 B sub-measure relates to Thames Water fulfilling its land related commitments in line with the TTT programme requirements. Thames Water is responsible for the acquisition of land, site assembly and access to sites on the Tideway Project.	The measure applies to land within the Limits of Land to be Acquired or Used (LLAU) which is identified within the Development Consent Order (DCO) for the construction sites as well as land outside of the DCO for monitoring and surveying.
T1C	Completion of category 2 and 3 construction works and timely availability of sites to the IP	nr	The T1C sub-measure relates to the completion of Enabling Works and System Works to make sites available to the Infrastructure Provider (IP), Bazalgette Tunnel Limited, in accordance with the TTT programme timetable. The measure is expressed as the cumulative number of sites and is based on the period 1 April 2015 to 31 March 2020.	Sites are considered complete when Thames Water has a site handover process with the IP and the both parties agree that all criteria have been met.

Thames Water Reporting Criteria

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
T2	Thames Water will engage effectively with the IP, and other stakeholders, both in terms of integration and assurance	text	This measure relates to the effectiveness of engagement activities with key stakeholders in the Thames Tideway Tunnel project at 31 March 2020. Thames Water have established an approach to measuring the effectiveness of stakeholder engagement in the form of an interview questionnaire completed by an external consultant. Key stakeholders that are interviewed include Bazalgette Tunnel Limited (IP), Ofwat, Defra and the Consumer Council for Water (CCWater).	Different types of interactions with key stakeholders and implemented methods of interaction are assessed (Responsiveness and Participation, Meetings, Reporting, Collaboration and Delivery of outputs) and scored on a 1 - 5 point scale. An average score of > 3.5 is considered effective engagement and the target being met.
T3	Thames Water will engage with its customers to build understanding of the TTT project. Thames Water will liaise with the IP on its surveys of local communities impacted by construction**	text	<p>This measure relates to the effectiveness of engagement activities with customers to build an awareness of the Thames Tideway Tunnel project at 31 March 2020. The measure consists of four interview test questions which are carried out by an external consultant.</p> <p>The target is considered met when there is an improving average percentage score trend from the prior year results.</p>	<p>There are four test questions in the scope of the measure:</p> <ol style="list-style-type: none"> 1. Percentage of household customers with an awareness of the TTT project; 2. Percentage of household customers who understand the TTT project; 3. Percentage of non-household customers with an awareness of the TTT; and 4. Percentage of non-household customers who understand the TTT project.

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
RA1	Minimise the number of written complaints received from household customers (relating to charging and billing)	No. written complaints /10,000 properties	<p>This measure is the number of written complaints received from household customers relating to charging and billing provided by Thames Water. The measure is expressed as a number per 10,000 household connected properties and is based on complaints received in the financial year (1 April 2019 - 31 March 2020). It is calculated as follows:</p> <p>(Number of household complaints categorised as relating to charging and billing services received during the financial year / number of household properties that are billed by Thames Water as at 31 March 2020) x 10,000</p> <ul style="list-style-type: none"> A written customer complaint is defined as any customer mail and email received by Thames Water’s customer representatives, including any third-party service providers, where the customer is dissatisfied with the service provided. 	<p>Customer complaints relating to the provision of ‘charging and billing’ services are in scope of the measure.</p> <p>Customer complaints relating to ‘wastewater services’, ‘water services’, ‘metering’ and ‘other’ are excluded. Any customer complaints received for services offered by another water company are excluded from this measure.</p> <p>Written complaints are via letter, email, web form and fax channels of contact.</p> <p>Social media and web chat complaints are not included in the performance measure.</p> <p>Some exclusions to complaints apply, see the CCW guidance document published by Ofwat: https://www.ofwat.gov.uk/wp-content/uploads/2015/11/qud_pro201503si_m.pdf</p>
RA2	Improve handling of household written complaints by increasing first time resolution – charging and billing	% written complaints resolved 1st time	<p>This measure is the percentage of household written complaints relating to the charging and billing services which are resolved at the first stage, without the need for escalation to a second stage complaint. The measure is expressed as a percentage of total household written charging and billing service complaints and is based on the financial year (1 April 2019 - 31 March 2020). It is calculated as follows:</p> <p>(Charging and billing household complaints resolved at the first stage / Total household charging and billing complaints) x 100</p> <ul style="list-style-type: none"> A written customer complaint is defined as any customer mail and email received by Thames Water’s customer representatives, including any third-party service providers, where the customer is dissatisfied with the service provided. A failure of first-time resolution is noted when a customer complaint has been escalated to the ‘2nd stage’. If a customer complaint is not escalated to the 2nd stage, the initial complaint is considered to be resolved in the first instance. 	<p>Customer complaints relating to the provision of ‘charging and billing’ are in scope of the measure.</p> <p>Customer complaints relating to ‘wastewater services’, ‘water services’, ‘metering’ and ‘other’ are excluded. Any customer complaints received for services offered by another water company are excluded from this measure.</p> <p>Written complaints are via letter, email, web form and fax channels of contact.</p> <p>Social media and web chat complaints are not included in the performance measure.</p>

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
			<ul style="list-style-type: none"> A 2nd stage complaint is defined as a second complaint from a customer relating to the same issue. 	<p>Some exclusions to 2nd stage apply, see the CCW guidance document published by Ofwat: https://www.ofwat.gov.uk/wp-content/uploads/2015/11/gud_pro201503sim.pdf</p>
RA3	Improve customer satisfaction of retail customers – charging and billing service	TW internal Customer satisfaction score (mean score out of 5)	<p>This measure is the customer satisfaction score for customer contacts received in the billing contact centre relating to charging and billing services. The measure is expressed as the average customer satisfaction score (between 1 to 5) and is based on the financial year (1 April 2019 - 31 March 2020).</p> <p>This measure is the customer satisfaction score for customer contacts relating to charging and billing services. The measure is expressed as the average customer satisfaction score (between 1 to 5) and is based on the financial year (1 April 2019 - 31 March 2020).</p> <p>A score of 1 is defined as very unsatisfied and a score of 5 is defined as very satisfied.</p> <p>The surveys are performed by a third party 'Rant and Rave' and the survey results are collected via SMS.</p>	<p>Customer contacts relating to the provision of 'charging and billing' are in the scope of the measure.</p> <p>Customer contacts relating to 'wastewater services', 'water services', 'metering' and 'other' are excluded.</p>
RA4	Improve customer satisfaction of retail customers – operations contact centre	TW internal Customer satisfaction score (mean score out of 5)	<p>This measure is the customer satisfaction score for customer contacts received in the operational contact centre relating to operational contact services. The measure is expressed as the average customer satisfaction score (between 1 to 5) and is based on the financial year (1 April 2019 - 31 March 2020).</p> <p>A score of 1 is defined as very unsatisfied and a score of 5 is defined as very satisfied.</p> <p>The surveys are performed by a third party 'Rant and Rave' and the survey results are collected via SMS.</p>	<p>Customer contacts relating to the provision of 'operational contact' are in the scope of the measure.</p> <p>Customer contacts relating to 'billing and charging services', 'metering' and 'other' are excluded.</p>

Thames Water Reporting Criteria

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
RA5	Increase the number of bills based on actual meter reads (in cycle)	% bills based on actual meter reads	This measure 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, a meter read is conducted in the same financial year as the bill is issued). The measure is expressed as a percentage of total bills based on meter reads and is based on the financial year (1 April 2019 - 31 March 2020).	The measure consists of household properties only. Non-household properties are excluded. If a property is empty at the date of a meter read, it is excluded from the measure.
RA6	SIM Proxy	%	<p>This measure is the Ofwat industry standard measure for customer satisfaction in AMP6. It is expressed as a percentage and is based on the financial year (1 April 2019 - 31 March 2020)</p> <p>Standard AMP6 definition:</p> <p>https://www.ofwat.gov.uk/wp-content/uploads/2015/11/gud_pro201503sim.pdf</p> <p>Revised Ofwat definition for the 2020 reporting year:</p> <p>https://www.ofwat.gov.uk/wp-content/uploads/2020/04/Reporting-guidelines-for-SIM-proxy-and-C-MeX-and-D-MeX-in-2019-20.pdf</p>	Refer to the Ofwat guidance links.
RB1	Implement new online account management for customers supported by web-chat	text	This measure relates to the delivery of the new online self-serve platform with a target date of 31 March 2020. Delivery is measured by the 'go live' date which is defined as being the date used to bill customers, update accounts, capture contacts, record payments, and for online account management that Thames Water's customers can sign up to use.	The project is considered complete when all project milestones have been completed, exit criteria has been met and the benefits have been realised.
RC1	Increase the number of customers on payment plans (excluding Thames Tideway Tunnel)	% of customers on DD payment plans	This measure is the percentage of household customers (water only, wastewater only, and water and wastewater) paying their bill using a direct debit payment plan. The measure is expressed as a percentage of total household customers and is based on the financial year (1 April 2019 - 31 March 2020).	All household customers billed by Thames Water in the financial year are in the scope of the measure.

Ref	Performance Commitment	Unit of Measure	Thames Water Reporting Criteria	Boundaries
RC2	Increase cash collection rates (excluding Thames Tideway Tunnel)	% of cash collected from billing in the year	<p>This measure relates to the percentage of cash collected from billing in the financial year (1 April 2019 - 31 March 2020). The measure consists of household and non-household customers. It is calculating as follows:</p> $(Cash / Opening debt plus net billing) \times 100$ <p>Where:</p> <p>Cash = Cash, refunds, apply credit, cancel credit, movement in excess credits and balancing items. Net billing = Billing, cancellations, apply debit, cancel debit and credit write offs</p>	<p>The target for RC2 was originally based on cash collected from both household and non-household. Following the sale of the Thames Water non-household business in April 2017, the actual performance data is only household. TW had proposed to formally approach Ofwat to restate this commitment but following further internal discussions it was decided not to pursue this.</p>

