

Reporting Criteria

2019–20



Southern Water Reporting Criteria

Ref	Performance Commitment	Unit of Measure	Reporting Criteria	Boundaries
W1	Water Asset Health	Category (Stable / Unstable)	 This measure is the water asset health status based on a basket of key indicators that represent the health of water assets. The performance measure is expressed as 'stable' or 'unstable'. The measure is a composite indicator made up of the following sub-measures for water (W1.1 - W1.5): W1.1 Mains bursts (based on the financial year 1 April 2019 - 31 March 2020); W1.2 Water quality compliance (TIM) (based on the calendar year 1 January 2019 - 31 December 2019); W1.3 WSW coliform compliance (based on the calendar year 1 January 2019 - 2010); 	This composite measure includes the sub- measures W1.1 - W1.5 only. Boundaries for each sub-measure are set out in W1.1 - W1.5 below.
			 2019 - 31 December 2019); W1.4 WSR coliform compliance (based on the calendar year 1 January 2019 - 31 December 2019); and W1.5 Turbidity compliance (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 W1.1 - W1.5 below. For each sub-measure, there is a defined upper and lower performance level. 'Stable' performance is achieved when all sub-measures achieve performance greater than the upper performance threshold. If any of the sub-measures achieve performance level that the upper threshold, the composite 	
W1.1	Mains bursts	nr	measure is considered 'unstable'. This measure relates to the number of repairs to mains bursts in the financial year (1 April 2019 - 31 March 2020). Water mains are defined as the large company pipes that distribute potable water around the whole of Southern Water's network.	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:
			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).	 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.

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				 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. 	
W1.2	Water quality compliance (TIM)	%	This measure is the water quality measure for Turbidity, Iron and Manganese (TIM) compliance. The measure is expressed as the percentage compliance and is based on the calendar year (1 January 2019 - 31 December 2020). The measure is determined by the Drinking Water Inspectorate and Water Supply Regulations 2016, as set out in the following guidance: http://www.legislation.gov.uk/uksi/2016/614/contents http://www.legislation.gov.uk/uksi/2016/614/contents http://www.legislation.gov.uk/uksi/2016/614/contents http://www.legislation.gov.uk/uksi/2016/614/contents http://www.legislation.gov.uk/uksi/2016/614/contents http://www.legislation.gov.uk/about/annual-report/calculating-indices.pdf The measure is calculated as follows:	The water quality sampling programme covers the geographical region that Southern 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.	
			Compliance percentage for all sites / Total no. of sites The compliance percentage for each site is calculated as follows:	Turbidity, Iron and Manganese are the parameters in the scope of this PC. The remaining 36 parameters, as set out in the	
			((No. of samples per site in the year - No of samples per site in the year) x 100	((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	Water Supply Regulations 2016, are not in scope.
			 A site is defined as an individual supply point (i.e. a customer tap) around the whole of Southern 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. 		

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W1.3	WSW coliform compliance	%	This measure is the water quality measure for Water Service Works (WSW) Coliform compliance. The measure is expressed as the percentage compliance and is based on the calendar year (1 January 2019 - 31 December 2020). The measure is determined by the Drinking Water Inspectorate and Water Supply Regulations 2016, as set out in the following guidance: http://www.legislation.gov.uk/uksi/2016/614/contents http://dwi.defra.gov.uk/about/annual-report/calculating-indices.pdf The measure is calculated as follows:	The water quality sampling programme covers the geographical region that Southern 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. The compliance percentage is based on the results of the planned water quality samples only.
			(Total no. of samples that failed coliform test) / (Total no. of coliform samples taken in the year for all WSW sites)	Water Service Works (WSW) Coliform compliance is the parameter in the scope of this PC. The remaining 38 parameters, as
			• A site is defined as a water treatment works.	set out in the Water Supply Regulations 2016, are not in scope.
			 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 coliforms. This is performed under a UKAS accredited process. 	
			 A failure is defined as a level of concentration of coliform in a sample that falls out with the acceptable level as defined in the Water Supply Regulations 2016. 	
W1.4	WSR coliform compliance	%	This measure is the water quality measure for Water Service Reservoir (WSR) Coliform compliance. The measure is expressed as the percentage compliance and is based on the calendar year (1 January 2019 - 31 December 2020). The measure is determined by the Drinking Water Inspectorate and Water Supply Regulations 2016, as set out in the following guidance: <u>http://www.legislation.gov.uk/uksi/2016/614/contents</u> <u>http://dwi.defra.gov.uk/about/annual-report/calculating-indices.pdf</u> The measure is calculated as follows:	The water quality sampling programme covers the geographical region that Southern 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. The compliance percentage is based on the results of the planned water quality samples only.
			(No. of WSR sites where the coliform compliance rate is less than 95% per	Water Service Reservoir (WSR) Coliform

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			site) / (Total no. of WSR sites)	compliance is the parameter in the scope of this PC. The remaining 38 parameters, as
			Percentage compliance is calculated as follows:	set out in the Water Supply Regulations 2016, are not in scope.
			(1 – (No. of WSRs sites with more than 5% samples failed for coliform tests) / (Total no. of WSR sites))	
			• 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 coliform. This is performed under a UKAS accredited process. 	
			 A failure is defined as a level of concentration of coliform in a sample that falls out with the acceptable level as defined in the Water Supply Regulations 2016. 	
W1.5	Turbidity compliance	nr	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 84) and is based on the calendar year (1 January 2019 - 31 December 2020). The measure is determined by the Drinking Water Inspectorate and Water Supply Regulations 2016, as set out in the following guidance: http://www.legislation.gov.uk/uksi/2016/614/contents http://dwi.defra.gov.uk/about/annual-report/calculating-indices.pdf A failure is when the Nephelometric Turbidity Units (NTU) 95th percentile of	The water quality sampling programme covers the geographical region that Southern 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.
			 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 	Turbidity compliance is the parameter in the scope of this PC. The remaining 38 parameters, as set out in the Water Supply Regulations 2016, are not in scope.
			the concentration of turbidity. This is performed under a UKAS accredited process.	

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W3	Leakage (five- year average)	megalitres/ day	This measure is the total level of leakage, including customer supply-pipe leakage, expressed in megalitres per day (MI/day) in the financial year (1 April 2019 - 31 March 2020). Leakage is a measure of the total volume of water that is lost across Southern Water's network when delivering it from water treatment works to customers. The total leakage is made up of the annual average Minimum Night Flow Leakage, Trunk Mains Leakage and Reservoir Losses. The unit of measurement is post-Maximum Likelihood Estimation weighted average MI/day over the year. Minimum Night Flow Leakage is a measure of District Meter Area ('DMA') flow during the night when consumption is expected to be at its lowest, and therefore any residual flow after Legitimate Night Use ('LNU') is likely to be leakage. Minimum Night Flow Leakage is calculated as follows:	Leakage includes any uncontrolled losse between Southern Water's treatment wo and the customer's stop tap. This include trunk mains, reservoirs, district meter are and customer supply pipes. It does not include internal plumbing loss
			DMA night flow - LNU x Hour to Day Factor	
			 LNU is an average allowance per property based on survey data collected and reported by a third party. The allowance is calculated for each of Southern Water's Water Resource Zones and property types (measured, unmeasured, household and non-household). The LNU rate is multiplied by the number of properties of the corresponding type within each Water Resource Zone to derive a litres per hour value to deduct from night flow. 	
			 DMA night flow is measured by DMA "in" and "out" flow meters. Where flow meters are faulty or misreporting, a graduated or pseudo figure is used based on actual historic flow or company average flows. 	
			 The Hour to Day Factor is applied to account for reduced flow as a result of Southern Water reducing the water pressure within DMAs during night time. The pressure is reduced to protect the distribution area from bursts as a result of lower demand during the night. 	
			 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. 	
			 Customer supply pipe leakage is defined as leakage from customers' pipes between the highway boundary and the customer's stop tap. 	

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			Trunk Mains Leakage is assessed based on a 50% survey of the company's trunk network per year. Identified leaks are measured using a flow rate methodology depending on the severity of the leak.	
			 A trunk main is a pipe which carries water between Southern Water's treatment works and its distribution areas. 	
			Service reservoirs are only assumed to be leaking where they have not undergone maintenance in more than 5 years, after which a standard model of leakage is used based on recommendations from UK Water Industry Research. The following formula assumes reservoirs to be at 60% capacity:	
			Reservoir loss = capacity (MI) x 60% x 0.33%.	
			A further volume of Reservoir Losses is added to account for reservoir overflow. This is measured by reservoir overflow meters and is taken as a total across the year.	
W4	Interruptions to supply	mins/prop /year	This measure relates to the average minutes per property lost through water supply interruptions of greater than three hours in the financial year (1 April 2019 - 31 March 2020). The metric can be calculated as follows:	The performance measure only accounts for interruptions greater than three hours in duration. Any interruptions less than three hours are excluded from the measure.
			(Total number of properties with interrupted supply > or = to 180 minutes x the full duration of the interruption in minutes) / Total number of properties supplied with water at 31 March 2020.	Interruptions as a result of planned (e.g. planned maintenance) and unplanned interruptions (e.g. an asset failure) are
			 An interruption is defined as when a customer experiences a loss of water and the supply has been interrupted for greater than three hours. 	included in the performance results.
			 A property is defined as one which is connected to Southern 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 	

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			a property, taken as being operationally equivalent to ≤5m pressure at the main (adjusted for any difference in ground or property level). In the event of applicable telemetry data or logging being unavailable, the time is determined from the earliest of:	
			 As advised by "no water" contact from customer (where not due to a customer side issue); Indications from flow or processor monitoring to infer a change in supply; 	
			 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 water is restored to the first cold water tap at a property – taken as being operational equivalent to >5m head of pressure at the main. In the event of pressure logging being unavailable, the time is determined from the latest of: 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 	
W5	Drinking water	%	and/or pressure data). This measure is the water quality measure for mean zonal percentage compliance.	The water quality sampling programme
	quality – Mean Zonal Compliance (MZC)		The measure is expressed as the percentage compliance and is based on the calendar year (1 January 2019 - 31 December 2020). The measure is determined by the Drinking Water Inspectorate and Water Supply Regulations 2016, as set out in the following guidance:	covers the geographical region that Southern 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
			http://www.legislation.gov.uk/uksi/2016/614/contents http://dwi.defra.gov.uk/about/annual-report/calculating-indices.pdf	of the calendar year. The compliance percentage is based on the results of the planned water quality samples only.
			The measure is calculated as follows:	All 20 percenters, as not out in the Mater
			Compliance percentage for all sites / Total no. of sites	All 39 parameters, as set out in the Water Supply Regulations 2016, are in scope.

Ref	Performance Commitment	Unit of Measure	Reporting Criteria	Boundaries
			The compliance percentage for each site is calculated as follows:	
			((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	
			 A site is defined as an individual supply point (i.e. a customer tap) around the whole of Southern 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. 	
W5a	W5a: Drinking water quality – discolouration contacts	number/ 1,000 population	This measure is the number of customer contacts regarding yellow, black, brown or orange discoloration of drinking water. The measure is expressed as the number of contacts per 1,000 population and is based on the calendar year (1 January 2019 - 31 December 2019). It is calculated as follows:	The performance result includes discoloration contacts relating to yellow, black, brown and orange as specified by the customer. Contacts relating to discolouration of any other colour are
			(Number of Discolouration Contacts / Total population) x 1,000	excluded from the measure.
			 A customer contact is any customer call, mail and email received by Southern Water's customer representatives, including any third-party service providers. Each unique 'enquiry number' recorded in the customer services management system is considered to be a separate 'contact'. 	Social media and web forms contacts are not included in the performance measure.
			 The total population is defined as the population served by each water treatment works at 31 March 2019. 	

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W6	W6: Low water pressure	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:
			 A property is defined as one which is connected to Southern Water's water distribution system. 	https://www.ofwat.gov.uk/wp- content/uploads/2017/12/Properties-at-risk- of-receiving-low-pressure.pdf
			 Low water pressure is defined as pressure that is below the DG2 reference level, in line with Ofwat requirements which can be found in the following link: 	<u>orrecenting-tow-pressure.pur</u>
			https://www.ofwat.gov.uk/publications/water-pressure/ https://www.ofwat.gov.uk/wp-content/uploads/2017/12/Properties-at-risk-of- receiving-low-pressure.pdf	
W7	W7: Distribution input	megalitres/ day	This measure is the average daily amount (MI/day) of potable water entering the distribution system in the financial year (1 April 2019 - 31 March 2020). The measure is calculated by performing the sum of daily total Distribution Input meter readings from Water Treatment Works exit points to determine a yearly total, which is divided by the number of days in the year to determine average daily Distribution Input in MI/day. The unit of measurement is post-Maximum Likelihood Estimation	Distribution input includes potable water entering any part of Southern Water's distribution network and supplied to customers within Southern Water's area of supply.
			weighted average MI/day over the year.	It does not include non-potable water.
			 Potable water is defined as water that is safe to drink. 	

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W8	W8: Per capita consumption (five-year average)	litres per head/day	 This measure is the average amount of water used by each household consumer each day, measured as litres per head per day (l/h/d) in the financial year (1 April 2019 - 31 March 2020). Household consumption is calculated across both metered and unmetered properties in ML/day. This is converted to I/day and divided by metered and unmetered household populations to determine per capita consumption. The unit of measurement is post-Maximum Likelihood Estimation weighted average litres per person per day. Metered household consumption is calculated using average daily consumer meter readings, adjusted for Meter Under-Registration and underground supply pipe leakage. Meter Under-Registration is provided by a third party based on an annual survey of actual household meters. Meter Under-Registration is an adjustment made to metered household consumption to account for the error rate in consumption meters during periods of higher flows. The adjustment is provided by a third party based on surveys conducted throughout the year on Southern Water's consumption meters. Underground supply pipe leakage is any loss of water from the underground supply pipe between the customer's consumption meter and their stop tap. Unmetered household consumption is derived using a Small Area Meter approach across a sample of 25 District Meter Areas ('DMA'). The following formula is used per area: "DMA flow" – "leakage" – "metered household consumption" – "metered non-household consumption" – "unmetered non-household consumption" – "unmetered non-household consumption" – "metered non-household consumption" – "metered non-household consumption" – "unmetered non-household consumption" – "metered non-household consumption" – "unmetered non-household consumption" – "unmetered non-household consumption" – "unmetered non-household consumption" – "metered non-household consumption" – "unmetered non-household consumption" – "unmetered non-household consumption" – "unmetered non-household consumptio	Per Capita Consumption includes estimate consumption of households that are suppli and billed for measured and unmeasured water. It does not include customer supply pipe leakage. Customer supply pipe leakage is defined as leakage from customers' pipes between the highway boundary and the customer's stop tap. It does not include consumption by non- household customers.
			= "unmetered household consumption"	
WW1	Wastewater	Category	This measure is the wastewater asset health status based on a basket of key	This composite measure includes the sub-
	asset health	(Stable/Un	indicators that represent the health of wastewater assets. The performance	measures WW1.1 - WW1.3 only.
		stable)	measure is expressed as 'stable' or 'unstable'. The asset health measure is a	Boundaries for each sub -measure are set
		Studie)	modelie is expressed as stable of anstable. The asset health measure is a	Boundaries for each sub -measure are set

Ref	Performance Commitment	Unit of Measure	Reporting Criteria	Boundaries
			 WW1.3): WW1.1 Sewer collapses (based on the financial year 1 April 2019 - 31 March 2020); WW1.2 Wastewater treatment works population equivalent compliance (based on the calendar year 1 January 2019 - 31 December 2019); and WW1.3 External flooding – other causes (based on the financial year 1 April 2019 - 31 March 2020). Each sub-measure has its own defined reporting criteria which is set out in WW1.1 - WW1.3 below. For each sub-measure, there is a defined upper and lower performance level. 'Stable' performance is achieved when all sub-measures achieve performance greater than the upper performance threshold. If any of the sub- measures' achieve performance less than upper threshold, the composite measure is considered 'unstable'. 	

Ref	Performance Commitment	Unit of Measure	Reporting Criteria	Boundaries
WW1.1	Sewer collapses	nr	 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. A reportable sewer collapse is considered to be where a failure has occurred to the pipe that results in any contact with the company (i.e. an impact on service has caused someone to contact the company) or any unplanned escape of wastewater and results in the need to replace or repair the pipe to reinstate normal service. A sewer collapse is identified when from a customer's contact, through a third-party contractor or by Southern Water itself. 	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. 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.
				 The following exclusions apply to the sewer collapse measure definition: Proactively identified collapses – Should the need to replace or repair a pipe be found as a result of proactive activity (survey or proactive sewer maintenance work) on the network then it is excluded. Third party damage – Third party structural damage (including water maintenance)

- utility damage) of the sewer is not an indicator of asset health and hence are excluded.
- Manhole damage and internal •
- Mannole damage and internal backdrops
 Displaced joints, cracked pipes, open joints, intruding connections, hard blockages patch repairs and sewer lining do not reflect sufficiently significant structural failure.
 Root ingress is excluded unless it has resulted in a need for pipe replacement
- replacement.

Ref	Performance Commitment	Unit of Measure	Reporting Criteria	Boundaries	
WW1.2	Wastewater treatment works population equivalent compliance	nent works lation ralent iliance	atment works Reso bulation (UW uivalent base npliance of the of wa	This measure is the wastewater treatment works compliance with the Water Resources Act (WRA) and the Urban Waste Water Treatment Regulations (UWWTW). It is expressed as a population equivalent 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:	The wastewater sampling programme covers the geographical region that Southern 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
			1 - (population equivalent of failed works / Population equivalent of all works) x 100	quality samples only.	
			 The population is defined as the population for which Southern Water provides wastewater services to (i.e. the collection and treatment of wastewater from properties) at 31 December 2019. 	For the purposes of Ofwat reporting, the measure excludes compliance with water treatment works regulations as reported to the Environmental Agency.	
			 A failed wastewater treatment works is defined as a level of concentration of a parameter in a sample that falls out with the acceptable level as defined in the individual wastewater treatment work permit. 	Further information over boundaries is set out in the Environment Agency guidance links provided.	
			 A sample is defined as a wastewater quality sample in line with the Environment Agency guidance, as set out in the guidance links below. The samples are tested for the concentration of a range of parameters as set out in the individual permits for each wastewater treatment works. The samples are taken at the designated sampling point at each wastewater treatment works and are carried 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		

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WW1.3	External flooding – other causes	nr	This measure is the number of external flooding incidents from other causes on Southern Water's sewerage network. The measure is expressed as the number of incidents and is based on the financial year (1 April 2019 - 31 March 2020).	The measure includes the causes describe for external flooding only, all other causes are not in scope.
			External flooding is defined as flooding within the curtilage of a building normally used for residential, public, community and business purposes. It includes buildings in those curtilages which do not comply with the definition for internal flooding. For example:	Internal flooding incidents are excluded fro the measure. Internal flooding incidents are defined in WW2 below.
			 Buildings where the prime purpose is for storage or installation of domestic appliances and is not accessed from the house by means of an adjoining door to the habitable building; Detached garages (whether situated inside the boundary of the property and separated from the main building or outside the boundary but with common access as in a garage block); Linked detached garages (i.e. garages which are attached to a property but separated from it by an external passageway); Sheds and outbuildings (e.g. stables, kennels, coal houses, outside toilets); and Summer houses. 	
		Other causes of flooding can be cau	Other causes of flooding can be caused by:	
			 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 wastewater and results in the need to replace or repair the pipe to reinstate normal service. Equipment failures: Failure or incorrect operation of company apparatus (e.g. pumping stations, penstocks, maintenance equipment, combined sewer overflows, or real time control systems) 	

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WW1a	Category 3 pollution incidents	nr	This measure is the number of Category 3 pollution incidents. The measure is expressed as the number of pollution incidents and is based on the calendar year (1 January 2019 - 31 December 2019).	Category 1, 2 and 4 incidents are excluded from the measure. The definitions of these are also set out in the Environment Agency guidance link.
			A Category 3 pollution incident is defined as having minor or minimal impact or effect on the environment, people and/or property. 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:	
			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	
WW2	Internal flooding incidents	nr	This measure is the number of internal flooding incidents (from all causes, including private sewers) on Southern Water's sewerage network. The measure is expressed as the number of incidents and is based on the financial year (1 April 2019 - 31	The measure includes all causes of internal flooding incidents.
			March 2020).	External flooding incidents are excluded from the measure. External flooding incidents are
			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.	defined in W1.3 below.
			 The main parts of the building; Conservatories: 	
			 Basements and cellars (even if unoccupied); 	
			 Areas below suspended floors; 	
			 Lift shafts; Stainwell/(abby area of flate (to be equated as 1 flanded areas to)); 	
			 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. 	

Ref	Performance Commitment	Unit of Measure	Reporting Criteria	Boundaries
WW3	External flooding incidents	nr	 This measure is the number of external flooding incidents (all causes) per year on Southern Water's sewerage network. The measure is expressed as the number of incidents and is based on the financial year (1 April 2019 - 31 March 2020). External flooding is defined as flooding within the curtilage of a building normally used for residential, public, community and business purposes. It includes buildings in those curtilages which do not comply with the definition for internal flooding. For example: Buildings where the prime purpose is for storage or installation of domestic appliances and is not accessed from the house by means of an adjoining door to the habitable building; Detached garages (whether situated inside the boundary of the property and separated from the main building or outside the boundary but with common access as in a garage block); Linked detached garages (i.e. garages which are attached to a property but separated from it by an external passageway); Sheds and outbuildings (e.g. stables, kennels, coal houses, outside toilets); and Summer houses. 	The measure includes all causes of external flooding incidents, including those from 'other causes' in WW1.3. Internal flooding incidents are excluded from the measure. Internal flooding incidents are defined in WW2 above.
WW4	Sewer blockages	Number per km sewer	This measure is the number of sewer blockages per kilometre of sewer length in the financial year (1 April 2019 - 31 March 2020). 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.	The measure consists of sewer blockages only. Sewer collapses are not in the scope of this measure. Sewer collapses are defined in WW1.1 above. 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.) This measure excludes any blockage caused by hydraulic overload. If the blockage is the

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				result of a fracture or deformation of the pipe, it should be included in 'sewer collapses' in WW1.1 above.
				The sewer length consists of sewers which are part of Southern Water's sewer network only and serve the population within Southern Water's geographical region.
WW5	Odour complaints (Portswood and Tonbridge treatment works)	nr	This measure is the number of customer complaints relating to odour from the Portswood and Tonbridge wastewater treatment works. The measure is expressed as the number of complaints and is based on the financial year (1 April 2019 - 31 March 2020). A customer contact is any customer call, mail and email received by Southern Water's customer representatives, including any third-party service providers. Each unique 'enquiry number' recorded in the customer services management system is considered to be a separate 'contact'.	 Odour complaints from the following are excluded from the scope of this measure: All other treatment works; Sewers in Portswood and Tonbridge; Pumping stations in Portswood and Tonbridge; and Any other Southern Water assets.
			For this specific measure, a complaint is defined as a customer contact regarding 'smell' and/or 'odour'. Each unique 'enquiry number' is considered to be a separate complaint. Complaints recorded by the third-party service provider 'Springboard' are included within this measure.	included in the performance measure.
WW6	Wastewater treatment works numeric compliance	%	This measure is the wastewater treatment works compliance with the Water Resources Act (WRA) and the Urban Waste Water Treatment Regulations (UWWTW). 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: 1 - (number of failed works / Total works) x 100	The wastewater sampling programme covers the geographical region that Southern 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.
			 A failed wastewater treatment works is defined as a level of concentration of a parameter in a sample that falls out with the acceptable level as defined in the individual wastewater treatment work permit. 	For the purposes of Ofwat reporting, the measure excludes compliance with water treatment works regulations as reported to the Environmental Agency.

Ref	Performance Commitment	Unit of Measure	Reporting Criteria	Boundaries
			 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 wastewater treatment works and are carried under a UKAS accredited process. 	Further information over boundaries is set out in the Environment Agency guidance links provided.
			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	
WW7	Proportion of energy from renewable sources	%	This measure is the proportion of total operational energy consumption that is from renewable sources (operational energy consumption is the amount of renewable energy imported from the UK national electricity grid, less the energy that is exported to the grid) from operations in the financial year (1 April 2019 - 31 March 2020). It is expressed as a percentage of total energy consumption.	Energy used for all operations by the Company is included in the measure.
			Billing consumption and export consumption data is received from metering data and energy suppliers for electricity imported and exported by Southern Water from and to the national grid.	
WW8	Bathing waters with 'excellent' water quality (part 1)	nr	This measure is the number of bathing waters categorised as 'excellent' water quality. The measure is expressed as the number of bathing waters and is based on the calendar year (1 January 2019 - 31 December 2019).	Southern Water has 83 bathing waters in its geographical region. All of these bathing waters are in the scope of this measure.
			 Bathing waters are defined as areas that are: Officially identified (designated) by the Secretary of State because a large number of people bathe there; Water quality tested every year by the Environment Agency (EA); and Covered by the Bathing Water Regulations. 	

Ref	Performance Commitment	Unit of Measure	Reporting Criteria	Boundaries
			 The measure of 'excellent' water quality is defined as no more than 100 Intestinal Enterococci cfu/100ml and 250 Escherichia coli cfu/100ml based on the 95th percentile of a log normal distribution of samples taken over a single bathing water season (i.e. the calendar year). Further guidance can be found in the following links: 	
			https://environment.data.gov.uk/bwq/profiles/help-understanding-data.html http://www.legislation.gov.uk/uksi/2013/1675/made	
			The quality sampling of bathing waters is undertaken by the Environment Agency.	
WW9	Bathing waters nr with 'excellent'	vith 'excellent' improved to 'excellent' water quality. The measure is expressed as the number vater quality bathing waters and has a target date of 31 December 2019.	improved to 'excellent' water quality. The measure is expressed as the number of	There are seven bathing waters in the sco of this measure, as agreed with Ofwat:
	(part 2 –		1. Middleton-on-sea	
	additional		 Bathing waters are defined as areas that are: 	2. Selsey
	number of		 Officially identified (designated) by the Secretary of State because a 	3. Worthing
	bathing waters)		large number of people bathe there;	4. Shanklin
			 Water quality tested every year by the Environment Agency (EA); and Covered by the Bathing Water Regulations. 	5. Deal Castle 6. Minster Leas 7. Leysdown
			 The measure of 'excellent' water quality is defined as no more than 100 	
			Intestinal Enterococci cfu/100ml and 250 Escherichia coli cfu/100ml based on the 95th percentile of a log normal distribution of samples taken over a	The remaining 76 bathing waters in South Water's geographical region are not in
			single bathing water season (i.e. the calendar year). Further guidance can be found in the following links:	scope.
			https://environment.data.gov.uk/bwq/profiles/help-understanding-data.html	
			http://www.legislation.gov.uk/uksi/2013/1675/made	
			The quality sampling of bathing waters is undertaken by the Environment Agency.	
WW10	Bathing waters	£m	This measure relates to the funds invested by Southern Water for the planned	There are seven bathing waters in the sco
	with 'excellent'		programme of works to improve bathing waters. The measure is expressed in GBP	of this measure:
	water quality		millions with a target date of 31 March 2020.	
	(part 3)			1. Middleton-on-sea
			 Bathing waters are defined as areas that are: 	2. Selsey

Ref	Performance Commitment	Unit of Measure	Reporting Criteria	Boundaries
			 Officially identified (designated) by the Secretary of State because a large number of people bathe there; Water quality tested every year by the Environment Agency (EA); and Covered by the Bathing Water Regulations. The cost includes 'delivery cost' of the seven bathing waters and the 'investigation cost' for twenty one candidates bathing waters which were agreed as part of bathing water enhancement programme. The 'delivery cost' component is based on the 'estimated cost' obtained from third party technical reports, whereas the 'investigation cost' component is based on 'actual costs' incurred.	 3. Worthing 4. Shanklin 5. Deal Castle 6. Minster Leas 7. Leysdown Funds invested for the improvements to th remaining 76 bathing waters in Southern Water's geographical region are not in scope.
WW11	Serious pollution incidents (Category 1 and 2)	nr	This measure is the number of Category 1 and 2 pollution incidents, including transferred assets and excluding private pumping stations. The measure is expressed as the number of pollution incidents and based on the calendar year (1 January 2019 - 31 December 2019). Category 1 and 2 pollution incidents are defined as:	Category 3 and 4 incidents are excluded from the measure. The definitions of these are also set out in the Environment Agence guidance link.
			 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 	
			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:	
			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	
WW13	Thanet Sewers	Delivered / Not Delivered	This measure relates to the delivery of a capital project relating to the upgrade of the Thanet sewer by 31 March 2020.	The measure specifically relates to the Thanet sewer scheme only.
			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	Reporting Criteria	Boundaries
WW14	Woolston STW	Delivered / Not Delivered	This measure relates to the delivery of a capital project relating to the redevelopment of the Woolston Wastewater Treatment Works by 31 March 2020. The scheme is considered complete when all project milestones have been completed, exit criteria has been met and the benefits have been realised, as set out in the defined project scope at initiation.	The measure specifically relates to the redevelopment of the Woolston wastewater treatment works only. Delivery is measured in accordance with requirements set out in the National Environment Programme as agreed with the Environment Agency.
WW15	Millbrook Sludge	tonnes	This measure relates to the delivery of a capital project relating to the Millbrook Sludge scheme. The scheme requires Southern Water to provide a total of 6,000 tonnes of dry solids sludge capacity at the Millbrook Sludge Treatment Works by 31 March 2020. The scheme is considered complete when all project milestones have been completed, exit criteria has been met and the benefits have been realised, as set out in the defined project scope at initiation.	The measure specifically relates to the redevelopment of the Millbrook sludge scheme only.
R1	First-time resolution of customer contacts	%	This measure is the percentage of customer contacts resolved first time. The measure is expressed as a percentage of total customer contacts and is based on the financial year (1 April 2019 - 31 March 2020). A customer contact is any customer call, mail and email received by Southern Water's customer representatives, including any third-party service providers. Each unique 'enquiry number' recorded in the customer services management system is considered to be a separate 'contact'.	Customer contacts relating to all issues are in scope of the measure. These include both, contacts related to 'billing' and 'technical' (operational) issues. Any customer contacts received for services offered by another water company are excluded from this measure.
			A failure of first-time resolution is noted when a customer contact is received within 30 days of a previous customer contact for the same customer. If a customer does not make contact within 30 days of the first contact, the initial contact is considered to be resolved in the first instance.	Social media and web forms contacts are not included in the performance measure.

Ref	Performance Commitment	Unit of Measure	Reporting Criteria	Boundaries
3C	Abstraction Incentive Mechanism	megalitres	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).	Only the Otterbourne and Twyford abstraction incentive schemes are in the scope for this measure. All other abstraction incentive schemes are not in scope.
			Detailed guidance and the methodology used to prepare the AIM measures can be found in the following link:	
			https://www.ofwat.gov.uk/wp-content/uploads/2016/02/gud_pro20160226aim.pdf	
N/A	Greenhouse gas emissions – KgCO2e	KgCO2e	This measure is the greenhouse gas emissions (in kilo tonnes of carbon dioxide equivalent (CO2e)) from Southern Water operations in the financial year 1 April 2019 - 31 March 2020).	Excluded activities include the application of sludge to land or landfill not owned by Southern Water, the purchase of chemicals, the disposal of waste from administrative
			Emissions are categorised into the following types:	activities, and the reduction of emissions arising from sequestration in woodlands.
			 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 of water and 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).	
			Greenhouse gas emissions are calculated using the Carbon Accounting Workbook (CAW), the Water Industry wide tool. The workbook uses the greenhouse gas emission conversion factors as ratified by the Department of Energy and Climate	
			change (DECC). Updates to the figures are issued by the DECC, and UK Water Industry Research (UKWIR) 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	

Ref	Performance Commitment	Unit of Measure	Reporting Criteria	Boundaries
			(March) publications, in order to ensure that it continues to reflect latest accounting practice.	
N/A	with treated is calculated in line with the measure above 'Greenhouse gas emissions – KgCO2e and relates to emissions from water operations only. The total emissions from water	This measure is the scope 1, 2 and 3 greenhouse gas emissions (in kilo tonnes of carbon dioxide equivalent (CO2e)) from water operations per person. The measure is calculated in line with the measure above 'Greenhouse gas emissions – KgCO2e' and relates to emissions from water operations only. The total emissions from water operations is divided by the population that Southern Water supply water services to	Only emissions relating to the supply of water are included in the measure. Any emissions relating to the provision of wastewater services are excluded.	
		at 31 March 2020. It is expressed in KgCO2e per person and based on the financy year (1 April 2019 - 31 March 2020).	Excluded activities include the application of sludge to land or landfill not owned by Southern Water, the purchase of chemicals, the disposal of waste from administrative activities, and the reduction of emissions arising from sequestration in woodlands.	
N/A	KgCO2e per person supplied with wastewater services	lied carbon dioxide equivalent (CO2e)) from wastewater operations per person. The measure is calculated in line with the measure above 'Greenhouse gas emissions KgCO2e' and relates to emissions from wastewater operations only. The total emissions from wastewater operations is divided by the population that Southern Water provides wastewater services to at 31 March 2020. It is expressed in	Only emissions relating to the provision of wastewater services are included in the measure. Any emissions relating to the supply of water are excluded.	
				Excluded activities include the application of sludge to land or landfill not owned by Southern Water, the purchase of chemicals, the disposal of waste from administrative activities, and the reduction of emissions arising from sequestration in woodlands.
N/A	Odour complaints (total)	nr	This measure is the number of customer complaints (written and call) relating to odour from Southern Water's wastewater treatment works and pumping stations. The measure is expressed as the number of complaints and is based on the financial year (1 April 2019 - 31 March 2020).	Odour complaints from any assets other than wastewater treatment works and pumping stations are excluded from the scope of this measure. Any odour complaints for sewers are also excluded from this measure.
			A complaint is defined as a customer contact regarding 'smell' and/or 'odour'. Each unique 'enquiry number' is considered to be a separate complaint. Complaints recorded by a third-party service provider 'Springboard' are included within this measure.	