



Ref 5.3

# PR19 Performance Commitment Definitions

September 2018

Outcomes						
Clean, safe water for all	Safeguard our environment for future generations	Personal service that's right for you	Put things right if they go wrong	Fair bills for everyone	Create a better future for all our communities	Colleague promises
Tap water quality compliance risk index (Wt1) WN+	Water and wastewater treatment works compliance (En1) WWN+	Household customer satisfaction (C-MeX) (Sv1) RH	Sewer flooding on customer property (internal) (Rt1) WWN+	Change in average household bill (BI1) WR, WN+, WWN+, BR, RH, RNH	Risk of severe restrictions in a drought (Ft1) WR, WN+	Reportable injuries (Co1) Company
Water supply interruptions (Wt2) WN+	Wastewater treatment works 'look-up table' compliance (En2) WWN+	Developer services customer satisfaction (D-MeX) (Sv2) WN+, WWN+	Sewer flooding on customer property (external) (Rt2) WWN+	Vulnerable customers on social tariffs (BI2) RH	Risk of sewer flooding in a severe storm (Ft2) WWN+	Employee training and expertise (Co2) Company
Acceptability of drinking water (Wt3) WN+	Pollution incidents from Wastewater (En3) WWN+	Customer trust (Sv3) WN+, WWN+, RH	Sewer collapses (Rt3) WWN+	Company level of bad debt (BI3) RH	Energy self-sufficiency (Ft3) WR, WN+, WWN+, BR	Employee engagement (Co3) Company
Water mains bursts (Wt4) WN+	Leakage (En4) WN+	Business customer satisfaction (Sv4) RNH	Total complaints (Rt4) WN+, WWN+, RH	Unbilled properties (BI4) RH, RNH	Surface water removed from sewers (Ft4) WWN+	
Water process unplanned outages (Wt5) WN+	Per capita consumption (En5) WN+	Vulnerable customers on priority services register (Sv5) RH	Worst served customers for water service (Rt5) WN+	Financial resilience (BI5) Company	Asset resilience (Impounding reservoirs) (Ft5) WR	
Tap water quality event risk index (Wt6) WN+	Km of river improved (En6) WWN+	Customers on Welsh language register (Sv6) RH	Worst served customers for wastewater service (Rt6) WWN+		Asset resilience (water network+ above ground assets) (Ft6) WN+	
Water catchments improved (Wt7) WR	Bioresources energy generation (En7) BR				Asset resilience (water network+ below ground assets) (Ft7) WN+	
Lead supply pipes replaced (Wt8) WN+	Bioresources disposal compliance (En8) BR				Asset resilience (wastewater network+ above ground assets) (Ft8) WWN+	
					Asset resilience (wastewater network+ below ground assets) (Ft9) WWN+	
					Community education (Ft10) WR, WN+, WWN+, BR	
					Visitors to recreational facilities (Ft11) WR, WN+, WWN+, BR	

## Outcome: Safe, clean water for all

### Wt3: Acceptability of drinking water

#### Short definition

The number of contacts received from customers in the calendar year regarding the appearance, taste or odour of drinking water, per 1,000 population served.

#### Measurement

Reported to two decimal places, annually for the calendar year.

#### Mitigation / exceptions

We are excluding any customer contacts if they relate to a water quality incident as the Drinking Water Inspectorate (DWI) information Letter 1/2006 states “excluded from this category are customer contacts received in the course of managing a notified water quality incident”. To be explicit, we only discount those contacts associated with water quality events notified to DWI (under the Information Direction 2012).

In addition, on investigation, if some contacts are found to relate to a private supply of water and not the company’s public water supply, as per the DWI definition, we exclude these contacts. This means that this measure is different from the figure reported to the DWI.

Our performance measure also excludes contacts associated with illness.

#### Any other information relating to the performance commitment

The Drinking Water Inspectorate monitors the company’s performance closely and reports publicly on its performance along with other companies, on an annual basis.

#### Full definition of the performance commitment

When customers are dissatisfied with the quality of their drinking water they may contact their water company. Records of the numbers of contacts received are sent to the Drinking Water Inspectorate each year in accordance with the information Letter 1/2006 [6thJan 2006] and published in the Chief Inspector’s report.

We will be measuring the number of contacts received from customers in the calendar year regarding the appearance, taste or odour of their drinking water. The reported number will be the number of contacts per 1,000 population served. The population figure used is the resident population. This is consistent with the approach adopted for the submission of the annual report to the DWI. The resident population figure as at 31 December is used to calculate the overall contact rate for the year.

A customer contact about drinking water quality is any communication about drinking water quality initiated by a customer living or working in the area supplied by Welsh Water contacted by phone, letter, fax, email, in person, website request form, livechat and message left on a helpline. If a customer who contacts us via social media is happy to give us their details we log a contact and they will be counted in the numbers. We monitor and report those customer

contacts that arise from problems associated with our assets, i.e. not including contacts linked to customers' own plumbing.

There are five categories of customer contact that are recorded. The two which are included within this measure are defined as follows:

- A customer contact about the appearance of drinking water: a contact where the customer perceives something about the appearance of the water that is different from the "norm".
- A customer contact about the taste and odour of drinking water: a contact where the customer perceives that the water has an unusual taste or smell.

The three categories not included within this measure are defined as follows;

- A customer enquiry about drinking water quality: a contact made solely with the intent of eliciting information from the company about drinking water quality, in the absence of any expression of concern, dissatisfaction or service shortfall.
  - A customer contact about a water quality concern: a contact where the customer expresses a concern about drinking water other than its appearance, taste or smell and they are not attributing symptoms of a current illness to the water.
  - A customer contact about illness: a contact where the customer attributes specific symptoms of illness to the water, including reports of illness amongst family members of the household, within their workplace or at another location such as a school.
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## Outcome: Safe, clean water for all

### Wt6: Tap water quality event risk index

#### Short definition

The quality of tap water supplied as defined by the Drinking Water Inspectorate's Event Risk Index (ERI).

#### Measurement

Reported as a number to one decimal place, annually for the calendar year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

The ERI measure is designed to demonstrate the impact of water quality events. This measure is in the early stages of development by the DWI. We will monitor progress and adopt any changes that are implemented.

#### Full definition of the performance commitment

ERI includes elements relating to:

- The seriousness of each drinking water quality event (the Event Category score);
- A measure of the company performance in managing the event (the Inspector Assessment score); and
- The impact of each event – based on a simple measure of the population affected and time in hours.

The formula for the calculation of the index is as follows;

$$\text{Event Risk Index} = \frac{\Sigma(\text{Seriousness} \cdot \text{Assessment} \cdot \text{Impact}(\text{population, time}))}{\text{Population served by the company}}$$

This seriousness score (derived from the existing DWI Event classification) assesses the relative seriousness of a particular event.

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## Outcome: Safe, clean water for all

### Wt7: Water catchments improved

#### Short definition

The number of our Water Treatment Works with catchments designated as Safeguard Zones under the Water Framework Directive.

#### Measurement

Reported as a whole number, annually for the financial year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

N/A

#### Full definition of the performance commitment

Drinking water Safeguard Zones are designated areas where raw water quality has been deemed to be “at risk” of deterioration. Land management and/ or the use of certain substances must be carefully managed within Safeguard Zones to recover from/ prevent further deterioration and the need for additional water treatment. Water Treatment Works may have more than one catchment and more than one Safeguard Zone.

The Measure of Success (MOS) will measure the outcomes of land management schemes implemented to recover deterioration in raw water quality parameters. The MOS will be measured via our raw water quality monitoring programme. Success will be the removal of the Safeguard Zone status and this will be assessed as part of the 2025 National Environment Programme (NEP).

Definition of Safeguard Zones from the Environment Agency:

“Water is a vital natural resource. In order to provide water for people to drink we must take (or abstract) raw water from reservoirs, rivers and the ground (known as groundwater), these are referred to as Drinking Water Protected Areas (DrWPAs) within the Water Framework Directive. Where necessary this raw water is treated to purify it for us to drink.

In order to protect our water we want to ensure that we are not polluting it with additional substances leading to the need for more treatment. To do this we identify Safeguard Zones for any raw water sources that are ‘at risk’ of deterioration which would result in the need for additional treatment. These zones are areas where the land use is causing pollution of the raw water. Action is targeted in these zones to address pollution so that extra treatment of raw water can be avoided.”

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## Outcome: Safe, clean water for all

### Wt8: Lead supply pipes replaced

#### Short definition

Number of customers' lead supply and communication pipes replaced (cumulative over an AMP).

#### Measurement

Reported as whole number, annually for the financial year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

We are working in conjunction with Welsh Government, specifically with their housing initiative schemes. Welsh Government offer grants to local authorities in which housing stock is upgraded with new energy saving windows, cavity wall insulation and heating system replacement. By working with this scheme, properties that have lead supply pipes can be upgraded with minimal customer disruption and provide a better water supply at the same time as major renovation works.

We will be aiming to replace lead pipework for customers who experience lead in their water supply above 5 µg/l, which is half of the upper limit for lead.

#### Full definition of the performance commitment

This measure will reflect our progress in replacing supply pipes (the section of the water supply pipe which are the property and responsible of customers between the boundary of the property and the internal stop cock) that are partially or substantially composed of lead.

We will also include communication pipes in this commitment. If we replace both the communication pipe and the supply pipe at an individual property in the same year then this will be counted as one pipe replacement.

This measure is the cumulative number of lead supply pipes replaced by Welsh Water or our contractors working on our behalf within the AMP.

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## Outcome: Safeguard our environment for future generations

### En2: Wastewater treatment works 'look-up table' compliance

#### Short definition

Percentage of sewage treatment works with numeric limits, which were compliant with: sanitary look-up table limits, Urban Wastewater Treatment Directive (UWWTD) look-up table limits, and all phosphorus and nitrogen annual average limits.

#### Measurement

Reported as a percentage to two decimal places, annually for the calendar year.

#### Mitigation / exceptions

This measure does not include wastewater treatment at water treatment sites.

#### Any other information relating to the performance commitment

Figures as reported to Natural Resource Wales (NRW) and Environment Agency (EA), and reflected in MD109.

#### Full definition of the performance commitment

This measure will report the percentage of sewage treatment works with numeric limits, which were compliant with: sanitary look-up table limits, all urban wastewater treatment directive (UWWTD) look-up table limits, all phosphorus and nitrogen annual average limits.

This comprises the following:

- Sanitary Look Up Table limits on permits for Biological Oxygen Demand (BOD), Total suspended solids (TSS) and ammonia
  - Annual average Phosphorus limits
  - UWWTD Look up table limits for BOD and Chemical Oxygen Demand (COD)
  - UWWTD annual average Phosphorus limits
  - UWWTD annual average Nitrogen limits
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## Outcome: Safeguarding our environment for future generations

### En6: km of river improved

#### Short definition

The length (in km) of river with improved water quality, as a result of Welsh Water action (cumulative within an AMP).

#### Measurement

Reported as a number (to the nearest km), annually for the financial year.

#### Mitigation / exceptions

If there are two or more interventions that take place, affecting the same river, then the length of the river is only included once so there is no double counting within the figures.

#### Any other information relating to the performance commitment

N/A

#### Full definition of the performance commitment

Natural Resource Wales (NRW) and Environment Agency (EA) issue reports for Reasons for Not Achieving Good status (RNAG). The report shows which Water Framework Directive (WFD) designated rivers have not achieved a 'good' status and identifies the sectors impacting the status of these rivers. The information is abstracted from the report for rivers affected by the water industry and this information is used alongside our asset data to focus on which areas require improvement.

When the National Environment Programme (NEP) is developed with NRW and the Water Industry National Environment Programme (WINEP) is developed with EA the km of river improved through our actions is determined by NRW/EA. We use the km length of the river within which the actions are undertaken to identify the km river length improved. The actual and forecasted length of river improved are recorded in the EA's WINEP3 spreadsheet and NRW's NEP4.1 spreadsheet and delivery is signed off with the regulators on an annual basis. The measure includes improvements resulting from WINEP/NEP Water Quality and Water Resources schemes.

"Improved" has the same meaning as in the EA's and NRW's technical PR19 environmental guidance document. It includes any action that improves any parameter within the river length but does not necessarily change the overall class of the river length.

This performance commitment shows the cumulative length associated with schemes delivered in the year and previous years in the AMP.

Where NEP/WINEP schemes are undertaken with the aim of improving the status of the WFD designated rivers, our actions will ensure that the rivers will not be prevented from achieving

WFD 'good' status due to the impact from our assets. However, where we are not the only contributor to river water status actions may be required by other sectors to achieve WFD 'good' status.

NRW combine works within the same water body to produce one water body length, this length is taken from the highest upstream treatment works. Information from the WINEP is manually sorted to combine works and also produce one length for a water body. This ensures that there is no double counting, where improvements are made at several assets in the same river.

The driver codes associated with WINEP / NEP eligible for consideration in assessing performance are:

**WINEP** – WFD\_IMPg, WFD\_ND, HD\_IMP, U\_IMP1

**Water Quality NEP** – W\_CSM\_IMP, W\_WFD\_PD\_IMP, W\_WFD\_PG\_IMP, W\_WFD\_FP\_IMP, W\_I\_IMP4

**Water Resources NEP** – WFD\_IMP\_WRHMWB

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## Outcome: Safeguarding our environment for future generations

### En7: Bioresources product quality

#### Short definition

The percentage of our total Waste Water sludge processed through our Advanced Anaerobic Digestion facilities, producing an Enhanced Treated biosolids product and meeting the Biosolids Accreditation Scheme (BAS) accredited standard.

#### Measurement

Reported as a percentage to one decimal place, annually for the financial year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

We currently operate four enhanced digestion facilities at Cardiff, Afan, Cog Moors and Five Fords. If any more are constructed we will add them to this measure.

#### Full definition of the performance commitment

Total dry solids (TDS) of sludge treated through enhanced digestion treatment and meeting the BAS standard, as a percentage of the TDS treated. This measure includes all of our own sludge produced and any we treat for a third party. Any sludge that meets BAS but is conventionally treated does not count in this percentage.

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## Outcome: Safeguarding our environment for future generations

### En8: Bioresources disposal compliance

#### Short definition

The percentage of wastewater sludge disposed of satisfactorily.

#### Measurement

Reported as a percentage to one decimal place, annually for the financial year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

If sludge quality is not satisfactory and fails the tests set out in the Hazard Analysis and Critical Control Points (HACCP) plans, the sludge is quarantined until it can be disposed of satisfactorily. The percentage of tonnes per dry solid determines whether the sludge is classified as 'cake' or 'liquid sludge'. The treatment process removes the ammonia from the sludge and a compliant sludge will have a high percentage of tonnes per dry solid and be classified as 'cake'.

#### Full definition of the performance commitment

The performance commitment is calculated as the percentage of the total sewage sludge disposed of which is confirmed as complying with the Sludge Use in Agriculture Regulations (SUIA), Safe Sludge Matrix and Environmental Permit Regulations (EPR). This measure will include all the sludge/organic waste we treat and recycle and also including any sludge/organic waste we import.

Percentage satisfactory sludge disposal =  $(1-A/B)*100$

A=Total unsatisfactory sludge disposed

B=Total sludge produced

This definition is consistent with the June return reporting requirements 2011, Table 15, Line 13.

## Outcome: Personal service that's right for you

### Sv3: Customer trust

#### Short definition

The customer trust score is calculated from the CCWater's survey question: "How much do you trust your water and sewerage company?"

#### Measurement

Reported as a number out of 10, to one decimal place, annually for the financial year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

The CCWater "Water Matters" report is published in July annually. This means that the results will not be available for the Annual Performance Report and we will be reporting the previous year's results. CCWater undertake surveys on water company's customers and water companies have no involvement in this process.

#### Full definition of the performance commitment

Each year CCWater undertake a survey asking customers for feedback on their water and sewerage company. This report is the Water Matters report and is usually published in June or July each year. The number of customers surveyed varies between 200 and 500 for each WASC. One of the questions asks customers "How much do you trust your water and sewerage company?"

The survey scores this response on a scale of 1 – 10 with 1 being 'do not trust them at all' and 10 being 'trust them completely'. CCWater publish the average score for each water company.

We assume that CCWater will continue to undertake this survey. If for any reason the survey is no longer undertaken, we will re-evaluate the methodology for this measure.

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## Outcome: Personal service that's right for you

### Sv4: Business customer satisfaction

#### Short definition

The average customer score out of 5 from four quarterly business customer satisfaction surveys.

#### Measurement

Reported as a score out of 5 to one decimal place, annually for the financial year.

#### Mitigation / exceptions

All our non-households will be included and a random sample of these will be selected by an appointed independent market research company. The only customers excluded will be those that have stated they do not wish to take part in this satisfaction survey.

#### Any other information relating to the performance commitment

N/A

#### Full definition of the performance commitment

We will undertake a survey of 250 business customers per quarter (1,000 in total per year). We will survey a sample from all customers, not just those who have contacted us.

The satisfaction score is calculated in the same way as the Ofwat household satisfaction surveys. A score of 5 is given for a very satisfied score down to a score of 1 for a very dissatisfied score. The average of these scores is the satisfaction score, this is calculated based on the results from the 4 surveys in the year. Any customer who scores us don't know or refused are not included in the calculation of the score. This score is then divided by 5 to convert to a satisfaction score multiplied by 100 and reported to the nearest whole percentage.

Any customer who scores 'don't know' or refuses to respond are not included in the calculation of the score.

## Outcome: Personal service that's right for you

### Sv5: Vulnerable customers on priority services register

#### Short definition

The number of customers who are registered on our Priority Services Register.

#### Measurement

Reported as whole number, annually at the end of the financial year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

We also work with other organisations to share data so that customers are registered for the appropriate service.

#### Full definition of the performance commitment

This measure reports the number of unique customers that have informed us that they require priority services or assistance. Customers can sign up to the priority services register due to age, health or medical conditions which mean they require additional services. Some of the services which we provide are bottled water, bills and supplementary material in; large print, coloured background, braille, and audio. We are also able to offer a read service to read customers' bills to them over the phone or talk to a nominee. We also provide a text relay service for our customers that are deaf or hard of hearing or have a speech impairment. Our customers are able to allocate a nominee whom we can contact regarding their bills and the nominee will be our first point of contact for that customer.

Customers are able to sign up to the register by contacting Welsh Water either via phone, letter or email. All call advisors are trained to recognise and offer our priority assistance register to customers during any phone call. We also partner with Western Power & Wales and West Utilities to share details of customers that they sign up for to their priority services schemes, as well as promote web links to the priority register on each other's websites and run targeted community engagement campaigns in identified vulnerable areas. The list of customers will be reviewed every two years in line with new General Data Protection Regulation.

## Outcome: Personal service that's right for you

### Sv6: Customers on Welsh language preference register

#### Short definition

Number of customers registered for our Welsh language preference services (e.g. proactive and reactive communication including text alert/correspondence, etc.).

#### Measurement

Reported as a whole number, annually for the financial year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

The provisions of the Welsh Language Act 1993 establish the principle that in conducting public business in Wales, bodies such as Welsh Water ensure that the Welsh language and the English language should be treated on the basis that they are equal. The Welsh Language (Wales) Measure 2011, passed by the National Assembly of Wales gives the Welsh Language official status in Wales and, inter alia, creates a procedure for introducing duties in the form of language standards.

Welsh Water acknowledges and supports these requirements and is fully committed to ensuring that in its dealings with customers the Welsh language and English language have equal status.

To facilitate the Welsh Language Act 1993, we offer multiple communication channels through which customers can contact us and when we contact them. This includes a dedicated Welsh language telephone line, a written correspondence service, a bilingual website and also bilingual social media channels. Any public events we attend, such as the Royal Welsh Show, also offer the opportunity for customers to communicate with us in either English or Welsh.

#### Full definition of the performance commitment

For this measure we will report the number of customers registered for our Welsh Language preference service. We will obtain the figures by using the Welsh flag tag on our internal billing system to identify the number of customers who have signed up to our Welsh Register.

Our internal billing system (Rapid) holds a flag against a customer when they request to be part of our Welsh language preference service. Our customers can request this service by phone, post, email and through our online account management facilities. From the system, we run reports quarterly to determine the number of customers that have signed up to our Welsh language preference service. The number of customers signed up to this service will be reported at the end of the financial year.

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## Outcome: Put things right if they go wrong

### Rt2: Sewer flooding on customer property (external)

#### Short definition

The number of external flooding incidents per year within property curtilage.

#### Measurement

Reported as a whole number, annually for the financial year.

#### Mitigation / exceptions

External flooding outside the curtilage of properties is excluded from this Measure. Examples include flooding to highways (including footpaths); 'public' open space; agricultural land; car parks including overflow carparks.

#### Any other information relating to the performance commitment

N/A

#### Full definition of the performance commitment

The number of external flooding incidents per year within property curtilage.

We will report consistently with the latest definition published by Ofwat in March 2018.

<https://www.ofwat.gov.uk/wp-content/uploads/2018/03/Reporting-guidance-sewer-flooding.pdf>

A flooding event is the escape of water from a sewerage system, irrespective of size as evidenced by standing water, running water or visible deposits of silt or sewage solids.

Incidents caused by sewers and laterals transferred under the Transfer of Private Sewers Regulations 2011 and pumping stations transferred in 2016 shall be included.

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 does not comply with the definition for internal flooding. Where the same property is flooded multiple times it will count repeatedly. Flooding due to overloaded sewers and other causes are included. There are no exclusions on the basis of severe weather.

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## Outcome: Put things right if they go wrong

### Rt4: Total complaints

#### Short definition

The total number of written and telephone complaints received from our household customers per 10,000 customers.

#### Measurement

Reported as a whole number, annually for the financial year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

N/A

#### Full definition of the performance commitment

The measure is the total number of our written and telephone complaints from our household customers per 10,000 customers. Our written complaints are recorded on our internal SAP system and our telephone complaints are recorded in different systems, dependent on what the complaint is regarding, e.g. billing complaints are recorded in our internal billing system, Rapid, and our operational complaints are recorded on SAP. We will follow the guidance document from Ofwat/CC Water on the process of identifying and recording complaints.

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## Outcome: Put things right if they go wrong

### Rt5: Worst served customers for water service

#### Short definition

The number of customers that have had repeat incidents of low water pressure or interruptions to water supply.

#### Measurement

Reported as a whole number, annually for the financial year.

#### Mitigation / exceptions

A property would only exist on the register for one of these issues and not both. Therefore if a property experienced low pressure and enough interruptions to supply they would only exist on the worst served register once.

Disconnected and/or void properties will not be included in this measure.

#### Any other information relating to the performance commitment

N/A

#### Full definition of the performance commitment

The measure 'Worst Served Customer for Water Service' identifies those properties who consistently receive a poor level of service. The measure consists of 3 elements:

[1] Properties who have had their water supply repeatedly interrupted over a 2 year period:

Those properties who have had their water supply interrupted at least once in year one and experienced >2 interruptions in year two.

[2] Properties who have had their water supply repeatedly interrupted over a 3 year period:

Those properties who have had their water supply interrupted at least once in year one, experienced up to 2 interruptions in year two and experienced 2 or more interruptions in year three. This ensures that properties which do not meet the trigger criteria of [1] remain a focus if further poor service is repeated.

[3] Properties who receive low pressure below the agreed level of service for 3 years or more:

Those properties captured on the Low Pressure longstanding register.

The number of Worst Served customers will be the combined total of [1], [2] and [3] at any given time.

The process for identifying properties that have suffered an interruption to supply is consistent with the Ofwat document; <https://www.ofwat.gov.uk/wp-content/uploads/2018/03/Reporting-guidance-supply-interruptions.pdf>

Properties can be removed from the Worst Served register in the following ways:

- (1) The successful implementation of planned investment with confirmed performance improvements demonstrating resolution of the issue.
  - (2) A property will remain on the Worst Served register for 3 years after the date of the last interruption. If no further interruption has been experienced within this time, it will be assumed that the underlying cause has been resolved.
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## Outcome: Put things right if they go wrong

### Rt6: Worst served customers for wastewater service

#### Short definition

The number of properties at risk of repeat internal or serious external flooding.

#### Measurement

Reported as a whole number, annually for the financial year.

#### Mitigation / exceptions

The definitions of internal and external flooding shall be consistent with those set out in Ofwat reporting guidance.

#### Any other information relating to the performance commitment

N/A

#### Full definition of the performance commitment

Identification of properties that have suffered sewer flooding begins with the definition in the Ofwat document; <https://www.ofwat.gov.uk/wp-content/uploads/2018/03/Reporting-guidance-sewer-flooding.pdf>

However only a subset are deemed to be worst served.

This will measure the number of customers that experience repeat sewer flooding incidents i.e. 'worst-served' customers. The measure is comprised of four categories, outlined below. Two of the categories relate to sewer flooding due to hydraulic overload (HO) and two relate to flooding due to other causes (OC).

- Properties recorded as being at active risk of flooding internally due to hydraulic overload in the 2:10 risk category.
- Properties recorded as being at active risk of Serious External Flooding due to hydraulic overload in the 2:10 risk category.
- Properties which have flooded internally more than once in the ten years prior to 31<sup>st</sup> March in the report year due to 'other causes'.
- Properties which have suffered, on average, more than one Serious External Flooding due to 'other causes' in the three years prior to 31<sup>st</sup> March in the report year.

The properties will be recorded as a live 'rolling' Register, such that the properties flooded internally more than once in the last ten years will be identifiable from records of flooding dating back ten years from the current date. The same method will be applied to multiple Serious External Flooding in the previous three years.

Serious External Flooding (SEF) generally relates to flooding within the curtilage of a property, and is defined as follows:

- Access to premises cannot be achieved without stepping through sewage flooding.
- Garden is extensively flooded leading to its effective destruction and rendering it unavailable for the enjoyment of family or pets.
- Outbuildings or garages (other than integral as classified above) are flooded inside.

All sewer flooding is attributed to a cause, with four possible options:

- Hydraulic overload (i.e. incapacity of the sewage system)
- Blockages
- Collapses
- Equipment Failure

Blockages, collapses and equipment failure are collectively termed 'other causes' (OC), and are deemed to be temporary issues. Hydraulic overload (HO) is deemed to be a permanent issue of incapacity, to be resolved by increasing capacity and/or reducing flows.

Hydraulic models are built and verified in accordance with the Dŵr Cymru Modelling Specification v2.0 (December 2014). This is based on best practise referencing industry standard guidance. It should be noted the specification is currently under revision. Our requirements for verification are that continuous simulation is required as the basis for verification, with three marker events used for statistical assessment. This moves the assessment of verification more towards overall confidence in the prediction of the model over a full period of flow survey as opposed to three discrete events and the potential to force fit to achieve better statistical assessment. Our approach is risk based, therefore the complexity of modelling and subsequent level of verification will be determined by the level of risk.

The specification does not currently define what length of storm and returns periods to use for design. However, it is generally accepted that return period events of 1, 5, 10, 20 30 and 50 years are used with durations ranging from 15 minutes to 1440 minutes.

Management of the register will be according to the Wastewater "Worst Served" customer policy and a downgrading of risk can only be completed once an audit statement is prepared and signed off. This process is already in place for Hydraulic Overload flooding and will be replicated for "other cause" flooding.

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## Outcome: Fair bills for everyone

### BI1: Change in average household bill

#### Short definition

The percentage increase in the average household bill.

#### Measurement

Reported as a percentage to one decimal place, annually for the financial year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

N/A

#### Full definition of the performance commitment

This measure is the percentage increase since 2019/20 in the average household bill before inflation is taken into account. The measure will be reported relative to inflation so will take one of three values (<CPIH, = CPIH, >CPIH). The average household bill numbers will be the figures calculated at the time the scheme of changes are published, that is, in the February preceding the relevant charging year.

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## Outcome: Fair bills for everyone

### BI2: Vulnerable customers on social tariffs

#### Short definition

The unique number of customers who are benefiting from our financial assistance schemes.

#### Measurement

Reported as a whole number, annually for the financial year.

#### Mitigation / exceptions

Customers are only counted once and not double counted if they are benefiting from more than one social tariff.

#### Any other information relating to the performance commitment

N/A

#### Full definition of the performance commitment

The reported figure is the number of unique customers on social assistance tariffs at the 31<sup>st</sup> March each year. This number excludes Water Collect, Customer Assistance Fund and Water Direct customers.

We have a number of financial assistance schemes which aim to provide help to our customers that require it by reducing the value of bills, making bills more affordable. Our financial assistance schemes are:

- Help U: Our social tariff, which caps charges to low income households
- Water Sure Wales: This is a tariff to support large families who receive qualifying benefits as well as people with a medical condition that requires the use of a significant amount of water. It is aimed at metered customers only and is set around DEFRA regulations for vulnerable customer groups.

Any new financial assistance schemes that are introduced within the period will be brought into this measure.

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## Outcome: Fair bills for everyone

### BI3: Company level of bad debt

#### Short definition

The annual doubtful debt charge as a proportion of total revenue.

#### Measurement

Reported to one decimal place, annually for the financial year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

N/A

#### Full definition of the performance commitment

The company level of bad debt is a measure of the total unpaid water bills that are deemed uncollectable as a proportion of the total revenue billed in that period.

At the end of each year we identify the total value of unpaid bills that we have been unable to collect and this goes into our accounts as a cost to the retail price control as the doubtful debt charge.

Total Revenue is the total value of bills sent out in the year.

The measure includes all customers, both household and non-household.

The measure is shown as a percentage.

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## Outcome: Fair bills for everyone

### BI4: Unbilled properties

#### Short definition

The percentage of connected properties that are void. Voids are vacant properties which are not billed for water and/or waste water services.

#### Measurement

Reported as a percentage to one decimal place, annually for the financial year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

N/A

#### Full definition of the performance commitment

We will measure the total number of properties, within the supply area, which are connected for either a water service only, a wastewater service only or both services but do not receive a charge, as there are no occupants. Factors influencing the level of voids are the quality of housing stock and levels of transiency within the population. The reported figure is the number of unique void properties as published in the APR. The measure can be calculated from the published numbers contained within the APR. Table 4U line A9 divided by table 4U line A10 NO Customers.

This measure includes properties where other companies bill on our behalf.

The definition used for voids in BI4 will match the one contained within the RAG's at the time of publication for the creation of the Annual Performance Reports.

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## Outcome: Fair bills for everyone

### BI5: Financial resilience

#### Short definition

Our overall financial resilience as reflected in the credit ratings for senior class bonds, given by the three main credit rating agencies: Moody's, Standard & Poor's (S&P) and Fitch.

#### Measurement

Reported for the financial year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

This definition assumes that all three credit rating agencies continue to issue annual ratings updates as they do today. Should there be significant changes we would need to revise this definition.

#### Full definition of the performance commitment

The score may be "High", "Medium" or "Low".

A score of "High" represents a 'strong investment grade' (see below) credit rating from at least two of the three credit rating agencies.

A score of "Medium" represents a 'strong investment grade' (see below) credit rating from only one of the three credit rating agencies.

A credit rating that does not meet the standard for "High" or "Medium" as defined above is "Low".

A 'strong investment grade' credit rating is defined as follows:

Moody's: A3 or better

S&P: A- or better

Fitch: A- or better

## Outcome: Create a better future for all our communities

### **Ft2: Risk of sewer flooding in a severe storm**

#### Short definition

Percentage of population at risk of sewer flooding in a 1-in-50 year storm

#### Measurement

Reported as a whole percentage, annually for the financial year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

N/A

#### Full definition of the performance commitment

The measure is calculated using our Sustainable Drainage Plans (SDPs) hydraulic models. Within these models the impact of a 1 in 50 year storm event is simulated where population are in areas of high and medium vulnerability according to PR19 methodology. Properties are identified where there is a 0.5cm or more flood depth modelled at the point where the flooding intersects with the address point (single grid reference that represents the property and not the property itself or its curtilage) of the property. This number is multiplied by 2.5 to calculate the population affected.

The measure will be based on a sample of drainage areas until we are able to get all hydraulic models completed to the required level.

---

## Outcome: Create a better future for all our communities

### Ft3: Energy self-sufficiency

#### Short definition

Electricity generated and gas injected to grid as a percentage of all electricity and gas consumed (gas expressed as an electricity equivalent).

#### Measurement

Reported as a whole percentage, annually for the financial year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

Includes private wire-supplied renewable generation from third party sites, which are not owned or operated by Welsh Water.

Private wire supply is where electricity is supplied to our sites without using the 'Grid' infrastructure (i.e. without involving the National Grid or local distribution network operator). For example this could be from a solar array or wind turbine on land adjacent to our site.

#### Full definition of the performance commitment

The total electricity generated (either on-site or off-site) and gas injected to grid as a percentage of all electricity and gas consumed by Welsh Water. This includes private wire supplied renewable generation and grid supplies from renewable energy generation from sites where Dŵr Cymru Group has an ownership stake and buys or retains the power for its own use (the percentage of generation apportioned equivalent to the percentage ownership stake). All gas is expressed as an electricity equivalent (at a gas to electricity conversion rate in line with standard water industry reporting (currently gas GWh \* 60% = electricity GWh)).

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## Outcome: Create a better future for all our communities

### Ft4: Surface water removed from sewers

#### Short definition

The volume of surface water removed from our sewers (measured as roof equivalents).

#### Measurement

Reported as a whole number, annually for the financial year. This measure is cumulative from the first year of reporting in AMP6.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

N/A

#### Full definition of the performance commitment

This measure reflects the completion of schemes to reduce the amount of surface water draining to the company's foul/combined sewer systems. The measure is the volume of surface water removed from the company's foul/combined systems, expressed as the number of rooftop equivalents, where one unit is the volume of water that would drain from a typical rooftop in a year with average rainfall.

To calculate this a reference 'typical Welsh roof' was estimated to be 67.16 m<sup>2</sup> in area receiving an annual average rainfall of 1,454 mm per year. The average roof area was based on the average domestic roof area within Welsh Water's operating area of 1.2 million households (excluding garages) in 2013. The rainfall is based on Met Office data showing the long-term rainfall trend from 1981 to 2010 in Wales.

Therefore in a year with average rainfall, 97.65m<sup>3</sup> of surface water will drain from a typical Welsh roof and all of this is assumed to drain to the foul/combined sewer network if there is a connection present. All completed RainScape schemes that disconnect surface water from the foul/combined sewer network are then reviewed against this baseline and converted to rooftop equivalents. The 'roof equivalent' figure is calculated using one of the following methods:

The removal of surface water through disconnection of impermeable areas is substantiated by impermeable area surveys, confirming connectivity to the sewer network and the contributing area in m<sup>2</sup>. The calculation used to derive a rooftop-equivalent for disconnection of impermeable areas is as follows:

$$\text{Rooftop equivalents} = \frac{\text{Local rainfall SAAR}^1 (m) \times \text{Impermeable Area disconnected}(m^2)}{\text{Average Welsh rainfall (m)} \times \text{Average roof area (m}^2\text{)}}$$

The removal of point-source ingress (such as a land drain) is substantiated by confirming connectivity and measuring/estimating flow in litres/second, typically via flow monitoring. The calculation to derive the rooftop equivalent of a scheme to remove a surface water connection is as follows:

$$\text{Rooftop equivalents} = \frac{\text{Annual average surface water removed (m}^3\text{)}}{\text{Average roof area (m}^2\text{)} \times \text{Average Welsh rainfall (m)}}$$

In general, removal of infiltration is not included within the measure unless it is the removal of a clear surface water connection to a combined/foul sewer. These are typically in the form of highway or land drainage directly connected to the foul/combined sewer system. Removal of infiltration entering the sewer via a defect would not be considered as claimable under this measure.

Rooftop equivalents removal are counted once surface water disconnection on site is confirmed and demonstrated. A RainScape audit document sign-off is used to confirm the legitimacy of the output claim.

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<sup>1</sup> SAAR = seasonally adjusted annual rainfall rate.

## Outcome: Create a better future for all our communities

### Ft5: Asset resilience (Impounding reservoirs)

#### Short definition

A resilience score for our critical impounding reservoirs based on the company resilience scorecard.

#### Measurement

Reported as a percentage to one decimal place, annually for the financial year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

We have developed the resilience scorecard over the last five years as a way of measuring and improving the resilience of our assets, in terms of how well protected they are against extreme weather events and other short-term challenges, and their ability to recover from service failures arising from those events.

The scorecard uses a scoring of 100% if the asset meets a particular criteria, and 0% if it fails the criteria.

#### Full definition of the performance commitment

The resilience scorecard identifies our most critical impounding reservoirs and assesses the level of resilience across these assets. We have identified a set of risks that could mean a reservoir is less resilient than our defined standard. An asset is marked as 100% resilient if it meets all of the criteria that are relevant to it. Any reduction from 100% resilience identifies a risk of major customer impact in extreme circumstances. The resilience score for the set of critical reservoirs is the average score across all the assets considered.

We have defined critical impounding reservoirs according to the table below. These are the assets where a failure could mean a loss of raw water availability, which cannot be replaced, leading to interruptions to customers' water supply or major flooding downstream with potential for significant property damage.

Asset Type	Criticality Definition
Impounding reservoirs	Potential inundation (Cat 3, 4 & 5 – CNI status >2000 properties affected from potential inundation)) or population served > 70000

We review the critical asset list on an annual basis and assets will be added/removed if they fit the criteria above.

Each critical asset is assessed for its resilience against a scorecard. There is a specific scoring methodology for impounding reservoirs which differs from the other critical assets.

Impounding reservoirs are scored using the three criteria below;

Category	Criteria Summary
SEMD	100% - Site must be compliant with all advice notes and Water UK Standard for Security Arrangement for Operational Assets (SSAOA). 0% is applied if the site fails to meet any of these criteria.
Failure	100% - Portfolio Risk Assessment (PRA) score is below the medium risk boundary and below an Annual Probability of Failure (APF) value of 1.0E-07 90% - PRA score is above the medium risk boundary & between an APF value of 1.0E-07 and 1.0E-04 50% - PRA score is above the medium risk boundary with an APF value above 1.0E-04
Access	100% - Access by normal vehicle in all conditions A reduction in % score is applied on a sliding scale, dependant on vehicle required and or conditions when access can be achieved.

All the scores are entered into a scorecard, the score for each asset is calculated as the average of the score against individual criteria.

## Outcome: Create a better future for all our communities

### Ft6: Asset resilience (water network+ above ground assets)

#### Short definition

A resilience score for critical water network+ above ground assets based on the company resilience scorecard. Critical assets are those for which failure would have a major impact on service to customers or on the environment.

#### Measurement

Reported as a percentage to one decimal place, annually for the financial year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

We have developed the resilience scorecard over the last five years as a way of measuring and improving the resilience of our assets, in terms of how well protected they are against extreme weather events and other short-term challenges, and their ability to recover from service failures arising from those events.

The scorecard uses a scoring of 100% if the asset meets a particular criteria, and 0% if it fails the criteria.

#### Full definition of the performance commitment

The resilience scorecard identifies our most critical water network plus assets and assesses the level of resilience across these assets. We have identified a set of risks that could mean an asset is less resilient than our defined standard. An asset is marked as 100% resilient if it meets all of the criteria that are relevant to it. Any reduction from 100% resilience identifies a risk of major customer impact in extreme circumstances. The resilience score for the set of critical water network plus assets is the average score across all the assets considered.

We have defined critical assets according to the table below. These are the assets where a failure could mean a loss of water availability, which cannot be replaced, leading to interruptions to customers' water supply.

Asset Type	Criticality Definition
Water treatment works	Population served (direct feed)> 70000 Including vital points

Water pumping stations	Direct population served > 70000
Service reservoirs	Population served (direct feed) > 70000

We review the critical asset list on an annual basis and assets will be added/removed if they fit the criteria.

Each critical asset is assessed for its resilience against a scorecard. Water treatment works, water pumping station and service reservoirs are scored against the eight criteria below:

Category	Criteria Summary
SEMD	100% - Site must be compliant with all advice notes and Water UK Standard for Security Arrangement for Operational Assets (SSAOA). 0% is applied if the site fails to meet any of these criteria.
Flood	100% - Located within Natural Resources Wales (NRW) or Environment Agency (EA) identified flood zones or the site is within a flood zone but is protected to above a 1 in 200 year flood event. 0% if the site is located within NRW or EA identified flood zones and is not protected to 1 in 200 year flood event.
Coastal erosion	100% - Not within an identified coastal erosion zone or is within an erosion zone but is adequately protected. A score of 0% is applied if the site is within a coastal erosion zone and is not adequately protected from coastal erosion.
Power	100% - Two independent power supplies or has one power supply and backup generator to maintain supply to complete site. A reduction in % score is applied on a sliding scale, dependant on the amount of works that can be maintained with loss of main power supply.
Control	100% - Site can maintain operation with loss of remote control system. A reduction in % score is applied on a sliding scale, dependant on the amount of works that can still operate with loss of remote control system.
Treatment	100% - Site can lose any individual part of the treatment process and still maintain compliance with its outputs. A reduction in % score is applied on a sliding scale, dependant on the amount of works that can still operate.
Failure	100% Score - Site output can be completely replaced by an alternative site. A reduction in % score is applied on a sliding scale, dependant on the amount of works output that can be met by an alternative source.
Access	100% Score - Access by normal vehicle in all conditions A reduction in % score is applied on a sliding scale, dependant on vehicle required and or conditions when access cannot be achieved.

## PR19 Performance Commitment Definitions



All the scores are entered into a scorecard, the score for each asset is calculated as the average of the score against individual criteria. The total score for the above ground assets is calculated as the average score across the assets in that scorecard.

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## Outcome: Create a better future for all our communities

### Ft7: Asset resilience (water network+ below ground assets)

#### Short definition

A resilience score for critical water network+ below ground assets based on the company resilience scorecard. Critical assets are those for which failure would have a major impact on service to customers or on the environment.

#### Measurement

Reported as a percentage to one decimal place, annually for the financial year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

We have developed the resilience scorecard over the last five years as a way of measuring and improving the resilience of our assets, in terms of how well protected they are against extreme weather events and other short-term challenges, and their ability to recover from service failures arising from those events.

The scorecard uses a scoring of 100% if the asset meets a particular criteria, and 0% if it fails the criteria.

#### Full definition of the performance commitment

The resilience scorecard identifies our most critical water network plus assets and assesses the level of resilience across these assets. We have identified a set of risks that could mean an asset is less resilient than our defined standard. An asset is marked as 100% resilient if it meets all of the criteria that are relevant to it. Any reduction from 100% resilience identifies a risk of major customer impact in extreme circumstances. The resilience score for the set of critical water network plus assets is the average score across all the assets considered.

We have defined critical assets according to the table below. These are the assets where a failure could mean a loss of water availability, which cannot be replaced, leading to interruptions to customers' water supply or failure could lead to major travel disruption.

Asset Type	Criticality Definition
Treated water mains and raw water mains	Population served >70000 not able to be served by alternative source or

	<p>Crossing vital infrastructure rail – main line e.g. Paddington - Swansea and Holyhead rail classification</p> <p>or</p> <p>Crossing vital infrastructure major road M4, A55, A470, A483, A465, A40, A49</p> <p>or (Unable to isolate and rezone) 650mm plus &gt; 15 bar</p>
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We review the critical asset list on an annual basis and assets will be added/removed if they fit the criteria.

Each critical asset is assessed for its resilience against a scorecard. There is a specific scoring methodology for water network+ below ground assets, which differs from the other critical assets.

Water network+ below ground assets are scored using the criteria below;

Category	Criteria Summary
Control	<p>100% - Location known and access is good and cover is able to be lifted. Has been operated within last 5 years</p> <p>50% - Location is assumed to be correct or unable to lift or gain access or has not been operated within 10 years or has known operating problems</p> <p>0% - No knowledge of location, unable to locate and/or never operated.</p>
Isolation	<p>100% - Double isolation can be achieved with 3 or less valves</p> <p>50% - No double isolation and or 3-5 valves to isolate</p> <p>0% - Number of valves required to isolate is greater than 5.</p>
Temporary works	<p>100% - Plan in place with equipment and spares available to deploy in 12 hours</p> <p>50% - Plan in place with equipment and spares available to deploy in 24 hours.</p> <p>0% - No plan, no material or equipment in place.</p>
Duplication / Reconfiguration	<p>100% - Duplication or reconfiguration of the network within 3 hours for all customers</p> <p>75% - Duplication or reconfiguration of the network within 6 hours for all customers</p> <p>50% - Duplication or reconfiguration within 12 hours for all customers or only able to supply 50% of customers</p> <p>25% - Duplication or reconfiguration within 24 hours for all customers or only able to supply 25% of customers</p> <p>0% - No duplication or reconfiguration is available</p>
Storage	<p>100% - 24 hour storage can be achieved within the network</p> <p>50% - Up to 12 hours of network storage available</p> <p>0% - No storage is available within the network.</p>
Access	100% Score - Access by normal vehicle in all conditions

	A reduction in % score is applied on a sliding scale, dependant on vehicle required and or conditions when access can be achieved.
Erosion river / Coastal	100% Score - Not within an identified coastal or fluvial erosion zone or is within an erosion zone but is adequately protected. 50% Score - Network at risk from erosion is not adequately protected but erosion monitoring is being undertaken. 0% Score - Network is at risk from erosion and is not adequately protected.
Asset condition	100% Score- Full monitoring of flow, pressure and turbidity and no indication of risk or condition information suggest no risk 50% Score - Insufficient monitoring or indication of failure from monitors in place or condition survey has raised concerns about failure risk 0% - Condition is unknown

All the scores are entered into a scorecard, the score for each asset is calculated as the average of the score against individual criteria. The total score for the below ground assets is calculated as the average score across the assets in that scorecard.

## Outcome: Create a better future for all our communities

### Ft8: Asset resilience (wastewater network+ above ground assets)

#### Short definition

A resilience score for critical wastewater network+ above ground assets based on the company resilience scorecard. Critical assets are those for which failure would have a major impact on service to customers or on the environment.

#### Measurement

Reported as a percentage to one decimal place, annually for the financial year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

We have developed the resilience scorecard over the last five years as a way of measuring and improving the resilience of our assets, in terms of how well protected they are against extreme weather events and other short-term challenges, and their ability to recover from service failures arising from those events.

The scorecard uses a scoring of 100% if the asset meets a particular criteria, and 0% if it fails the criteria.

#### Full definition of the performance commitment

The resilience scorecard identifies our most critical wastewater network plus assets and assesses the level of resilience across these assets. We have identified a set of risks that could mean an asset is less resilient than our defined standard. An asset is marked as 100% resilient if it meets all of the criteria that are relevant to it. Any reduction from 100% resilience identifies a risk of major customer impact in extreme circumstances. The resilience score for the set of critical wastewater network plus assets is the average score across all the assets considered.

We have defined critical assets according to the table below. These are the assets where a failure could mean a major environmental impact or major sewage flooding to properties.

Asset Type	Criticality Definition
Wastewater treatment works	PE > 10000 plus potential environmental impact on Water Framework Directive (WFD), bathing water and shellfish and SSSI water bodies.  Potential Environment Agency (EA) CAT 1 and 2 pollutions or Natural Resources Wales (NRW) CAT Major and Significant.

Sewage pumping stations	PE > 5000 plus potential environmental impact on WFD, bathing water and shellfish and SSSI water bodies Potential EA CAT 1 and 2 pollutions or NRW Cat Major and Significant.  or  Impact 30 or more properties through flooding.
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We review the critical asset list on an annual basis and assets will be added/removed if they fit the criteria.

Each critical asset is assessed for its resilience against a scorecard. Wastewater treatment works and sewage pumping stations are scored against the eight criteria below:

Category	Criteria Summary
SEMD	100% - Site must be compliant with all advice notes and Water UK Standard for Security Arrangement for Operational Assets (SSAOA). 0% is applied if the site fails to meet any of these criteria.
Flood	100% - Located within Natural Resources Wales (NRW) or Environment Agency (EA) identified flood zones or the site is within a flood zone but is protected to above a 1 in 200 year flood event. 0% if the site is located within NRW or EA identified flood zones and is not protected to 1 in 200 year flood event.
Coastal erosion	100% - Not within an identified coastal erosion zone or is within an erosion zone but is adequately protected. 0% is applied if the site is within a coastal erosion zone and is not adequately protected from coastal erosion.
Power	100% - Two independent power supplies or has one power supply and backup generator to maintain supply to complete site. A reduction in % score is applied on a sliding scale, dependant on the amount of works that can be maintained with loss of main power supply.
Control	100% - Site can maintain operation with loss of remote control system. A reduction in % score is applied on a sliding scale, dependant on the amount of works that can still operate with loss of remote control system.
Treatment	100% - Site can lose any individual part of the treatment process and still maintain compliance with its outputs. A reduction in % score is applied on a sliding scale, dependant on the amount of works that can still operate.
Failure	100% - Site output can be completely replaced by an alternative site. A reduction in % score is applied on a sliding scale, dependant on the amount of works output that can be met by an alternative source.
Access	100% - Access by normal vehicle in all conditions A reduction in % score is applied on a sliding scale, dependant on vehicle required and or conditions when access cannot be achieved.

All the scores are entered into a scorecard, the score for each asset is calculated as the average of the score against individual criteria. The total score for the above ground assets is calculated as the average score across the assets in that scorecard.

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## Outcome: Create a better future for all our communities

### Ft9: Asset resilience (wastewater network+ below ground assets)

#### Short definition

A resilience score for critical wastewater network+ below ground assets based on the company resilience scorecard. Critical assets are those for which failure would have a major impact on service to customers or on the environment.

#### Measurement

Reported as a percentage to one decimal place, annually for the financial year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

We have developed the resilience scorecard over the last five years as a way of measuring and improving the resilience of our assets, in terms of how well protected they are against extreme weather events and other short-term challenges, and their ability to recover from service failures arising from those events.

The scorecard uses a scoring of 100% if the asset meets a particular criteria, and 0% if it fails the criteria.

#### Full definition of the performance commitment

The resilience scorecard identifies our most critical wastewater network plus assets and assesses the level of resilience across these assets. We have identified a set of risks that could mean an asset is less resilient than our defined standard. An asset is marked as 100% resilient if it meets all of the criteria that are relevant to it. Any reduction from 100% resilience identifies a risk of major customer impact in extreme circumstances. The resilience score for the set of critical wastewater network plus assets is the average score across all the assets considered.

We have defined critical assets according to the table below. These are the assets where a failure could mean a major environmental impact, major sewage flooding to properties or major travel disruption.

Asset Type	Criticality Definition
Trunk sewers and rising mains	<p>Sewer mains &gt;300mm diameter plus major environmental or flooding impact</p> <p>or</p> <p>Crossing vital infrastructure rail – main line e.g. Paddington - Swansea and Holyhead rail classification with potential for major damage</p> <p>or</p> <p>Crossing vital infrastructure major road M4, A55, A470, A483, A465, A40, A49 with potential for major damage</p> <p>or rising mains &gt;450mm diameter</p>

We review the critical asset list on an annual basis and assets will be added/removed if they fit the criteria.

Each critical asset is assessed for its resilience against a scorecard. There is a specific scoring methodology for wastewater network+ below ground assets, which differs from the other critical assets.

Trunk sewers and rising mains are scored against these six criteria below:

Category	Criteria Summary
Control	<p>100% - Location known, access good and assets maintained</p> <p>50% - Location known, access good, assets not maintained</p> <p>0% - No knowledge of control assets</p>
Temporary Works	<p>100% - Plan in place with equipment and spares available to deploy in 2 hours</p> <p>50% - Plan in place with equipment and spares available to deploy in 12 hours.</p> <p>0% - No plan in place within 48hours.</p>
Flow Management	<p>100% - 12 hrs and above within system and /or relief point within system with minimal environmental impact</p> <p>75% - 9 hrs within system</p> <p>50% - 6 hrs within system or 12 hours storage outside system</p> <p>25% - 3 hrs within system or 6 hours storage outside system</p> <p>0% - No storage is available within the network.</p>
Access	<p>100% - Access by normal vehicle in all conditions</p> <p>50% - Access by employees / maintenance &amp; repair but using specialist vehicles in all weathers</p> <p>0% - Access can be achieved after 48 hours</p>
Erosion River / Coastal	<p>100% Score - Not within an identified coastal or fluvial erosion zone or is within an erosion zone but is adequately protected.</p> <p>50% Score - Network at risk from erosion is not adequately protected but erosion monitoring is being undertaken.</p>

	0% Score - Network is at risk from erosion and in not adequately protected.
Asset condition	100% Score - Class 1/2 and surveyed within 10 years or class 3 surveyed within 5 years 80% Score - Class 1/2 and has not surveyed within 10 years 75% Score- Class 3 and not surveyed within 5 years 0% score - Class 4 or 5 or condition not know

All the scores are entered into a scorecard, the score for each asset is calculated as the average of the score against individual criteria. The total score for the below ground assets is calculated as the average score across the assets in that scorecard.

## Outcome: Create a better future for all our communities

### Ft10: Community education

#### Short definition

The total number of children and adults who have participated in our educational activities.

#### Measurement

Report as a whole number, annually for the financial year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

Engaging with schools, colleges, local authorities and communities to provide an education programme. The key elements of our education programme helps us:

- Engage with future and current customer to increase awareness of the value of water and the role Welsh Water plays in the communities we serve
- Supports the delivery key business objectives through behavioural change such as water efficiency and sewer abuse
- Enhances our reputation and builds trust in the communities we serve

#### Full definition of the performance commitment

The total number of children and adults who have participated in educational activities. This includes

- Visits from schoolchildren to one of our education centres,
- Children participating in outreach sessions when one of our team visits schools, and
- Adults or children who come to one of our 'asset open days'.

It does not include visitors to our recreation centres (see measure Ft9 below) even though there are educational facilities, information boards etc at those sites.

## Outcome: Create a better future for all our communities

### Ft11: Visitors to recreational facilities

#### Short definition

The number of visitors to our recreational sites across Wales.

#### Measurement

Reported as a whole number, annually for the financial year.

#### Mitigation / exceptions

The reported number includes repeat visitors.

#### Any other information relating to the performance commitment

Our current recreational sites are Llyn Brenig, Elan Valley, Llandegfedd and Llys y Fran. We are planning a new visitor centre at the site of Lisvane and Llanishen reservoirs in North Cardiff. If we develop any further recreational sites within the AMP we will include them within this measure.

#### Full definition of the performance commitment

The number of visitors is calculated as follows:

Number of cars accessing our recreational sites multiplied by 2.4 (assumed average number of car occupants)  
+  
Number of coaches multiplied by 52  
+  
Number of mini buses multiplied by 12  
+  
Number of pedestrians (Lisvane/Llanishen only)  
+  
Number of cyclists  
= Total number of visitors

The overall number of visitors is collected through a combination of data capture methods; our vehicle numbers are obtained by an automated counter on the car parks and the number of coaches, mini buses and cyclists are monitored by booking and arrivals.

At our Llanishen and Lisvane sites we are expecting a large number of pedestrians so we will install counters on pedestrian access gates.

## Outcome: Colleague promises

### Co1: Reportable Injuries

#### Short definition

The number of RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations) injuries recorded per year.

#### Measurement

Reported as a whole number, annually for the financial year.

#### Mitigation / exceptions

This measure does not include RIDDOR Diseases, RIDDOR Dangerous Occurrences or RIDDOR Injuries to members of the public.

#### Any other information relating to the performance commitment

This measure covers both Welsh Water employees and any contractors working on our behalf, including all subcontractors.

#### Full definition of the performance commitment

The indicator by which we measure performance is the number of injury reports to the Health and Safety Executive under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) per annum.

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## Outcome: Colleague promises

### Co2: Employee training and expertise

#### Short definition

The percentage of our employees who are evaluated as having the necessary skills, experience and knowledge to carry out their specific role safely.

#### Measurement

Reported as a percentage to one decimal place, annually for the financial year.

#### Mitigation / exceptions

Employees who are on long term sick leave, seasonal workers and employees on maternity leave will not be included in the measure. Long term sick leave is defined as when an employee is off work for longer than 4 weeks.

Also excluded from this measure are employees working in support services (e.g. Retail, Finance, BIS, etc.).

#### Any other information relating to the performance commitment

N/A

#### Full definition of the performance commitment

All operational roles within the business have a dedicated training plan which incorporates a combination of e-learning modules and training courses. Employees' training performance is continually monitored and an overall percentage of employees that have completed their training is reported annually for the financial year. The overall percentage is the percentage of Welsh Water employees who are evaluated as having the necessary skills, experience and knowledge to carry out their specific role safely.

This measure includes Welsh Water employees employed on permanent and fixed term contracts of employment including those on internal secondments.

The method of calculation is as follows:

The overall Competence figure (c) is the average of (a) mandatory health and safety training compliance of colleagues in the Water, Waste and Capital teams, plus (b) the compliance for defined colleague competence programmes, which are:

- Water Production Technician
- Waste Competent Operator
- Water Distribution Inspector

The calculation is: average of (a) plus average of (b) = (c)

## Outcome: Colleague promises

### Co3: Employee engagement

#### Short definition

The employee engagement score derived from an annual survey of colleague sentiment.

#### Measurement

Reported as a percentage, annually, captured in November each year.

#### Mitigation / exceptions

N/A

#### Any other information relating to the performance commitment

ORC International (an research company) calculate the Engagement Index based on the responses to a selected set of questions within an annual survey that they run on our behalf, reflecting the key themes of Say, Stay and Strive. ORC run the same survey in many companies and can therefore compare our results against a private sector benchmark.

#### Full definition of the performance commitment

An independent company, ORC International, is used to conduct our engagement survey.

Our engagement is measured by ORC International's say, stay and strive model. They use the responses to the following 4 questions to provide this;

- I am proud to work for Welsh Water
- I would recommend Welsh Water as a great place to work
- I feel a strong sense of belonging to Welsh Water
- Working at Welsh Water makes me want to do the best work I can

Once the surveys are completed, they provide the percentage positive score for each of those questions and calculate an average to create the engagement score for Welsh Water.

We have set a response rate for this measure of 75%.

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