

June 2019

Trust in water

# **Notice of Ofwat's proposal to impose a penalty on Southern Water Services Limited**

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## Executive summary

This is a notice of Ofwat's intention to issue Southern Water with a financial penalty amounting to £37.7 million reduced exceptionally to **£3 million** for significant breaches of its licence conditions and its statutory duties. This is on the basis that Southern Water has undertaken to pay customers about £123 million over the next five years, some of which is a payment of price review underperformance penalties the company avoided paying in the period 2010 to 2017 and some of which is a payment to customers for the failures set out in this notice, paid in lieu of a penalty.

This notice sets out the details of Southern Water's failings and how these have occurred. The failings relate to the management, operation and performance of its wastewater treatment works. These are vital assets that are used to clean and treat sewage (or wastewater) and which have a direct impact on the environment, particularly bodies of water, such as rivers or streams, into which treated wastewater is released.

We have concluded that Southern Water has deliberately misreported data to us about the performance of its wastewater treatment works. We have also concluded that it has failed: to have adequate systems of planning, governance and internal controls in place to be able to manage its wastewater treatment works; to accurately report information about the performance of these works; and to properly carry out its general statutory duties as a sewerage undertaker, to make provision for effectually dealing with and treating wastewater.

This notice follows a lengthy investigation which included a detailed request for information from Ofwat to Southern Water in June 2017, in which we highlighted our concerns about potential areas of non-compliance and possible contraventions of the company's licence conditions and statutory obligations.

In November 2017, whilst Southern Water was collating material for Ofwat, it discovered serious irregularities in the way the sampling of final effluent at its wastewater treatment works was being and had been carried out. It commenced an internal investigation of its own which found widespread and deliberate measures that were taken by employees, including at senior management levels, to prevent samples of wastewater from being taken at treatment works to check compliance with environmental permit conditions. This meant that the true performance of its treatment works was hidden and incorrect data was reported to Ofwat and to the Environment Agency.

Southern Water's failure to operate its wastewater treatments works properly has meant that there have been unpermitted and premature spills of wastewater from those treatment works - where wastewater has not gone through all of the processes it is supposed to before being released into the environment.

Our investigation shows that a material number of Southern Water's wastewater treatment works have faced a wide range of problems, including some over a long period of time. This includes critical assets - including those used to monitor performance at treatment works and those which form a key part of the treatment process (such as screening equipment) - failing to perform effectively, either through lack of timely investment by the company or inadequate maintenance of those assets. These problems have contributed to the widespread use and adoption of improper practices within Southern Water, including at senior management levels, to present a false picture of compliance.

This has been compounded by failings of corporate culture and governance within the company. Southern Water's Board did not take the steps that we would expect a diligent and reasonable company to take; firstly to put in place and check that there were adequate systems and processes to ensure that wastewater treatment works were being operated in a compliant manner, and secondly steps to ensure it had sight of and could identify problems at an early stage in order to take action to prevent these.

As a result of Ofwat's investigation, Southern Water now recognises that it has failed and intends to make reparations by way of significant customer bill rebates and making very significant changes in the way that it operates, including measures to ensure failures of this type do not occur again.

As a consequence of its misreporting Southern Water has had to restate performance information for the period 2010 to 2017 to Ofwat which means the company will need to pay back money to customers – in total amounting to **£91.2 million**. This amount reflects the automatic penalties it would have incurred for underperformance under Ofwat's price review regime had it reported data correctly in the first place and the delay in imposing those penalties because it misreported.

Ofwat considers that the contraventions that have taken place are sufficiently serious to warrant a significant penalty, the highest that Ofwat has ever considered imposing on a company. Ofwat considers that a penalty equivalent to 6.7% of the turnover of Southern Water's wholesale wastewater business would be an appropriate penalty in this case. However, we have recognised the steps taken by Southern Water to put things right, including its proposal to make significant payments to customers by way of bill rebates, and accordingly we are minded to accept undertakings from the company and impose a penalty of £37.7 million reduced exceptionally to **£3 million**. Had Southern Water not taken steps to put things right, including engaging Ofwat on its reparations package, we would have been minded to impose a penalty greater than 6.7%.

There are various elements to the company's undertakings. The first deals with the price review underperformance penalties that Southern Water avoided paying as a consequence of its misreporting and which it must now incur based on restated performance data. This money will be returned to customers via bill rebates over the next five years. The second element is a payment to customers, in lieu of a penalty, for the company's failure to meet its legal obligations and for hiding the truth about the performance of its treatment works. This payment goes beyond

recompense for underperformance. This amount will also be paid to customers via bill rebates over the next five year period.

Southern Water has already put in place and completed a number of measures to ensure that in future it complies with each of the obligations that are the subject of this notice, and does not repeat the failures that have come to light. The third element to the company's undertakings is a package of further such measures that Southern Water has put forward and is putting in place. This includes investment in treatment works, and new operational and governance arrangements. The company will report to us regularly to demonstrate that the corrective actions it is taking are working and the company's reports to us will be independently assured.

Southern Water is also subject to criminal investigations by the Environment Agency in relation to non-compliance with environmental permits and in relation to Southern Water's own findings that there were deliberate measures taken within the company to prevent samples of wastewater from being taken at treatment works.

For the avoidance of doubt, Ofwat's findings in this notice are purely about regulatory obligations in respect of which Ofwat has jurisdiction. We are not seeking to make findings about environmental permit failures or whether the acts of Southern Water or its employees, were criminal in nature. These matters are currently being dealt with by the Environment Agency, as the environmental regulator.

As required by legislation, Ofwat is publishing this notice to allow representations to be made on our proposed action. We will make our final decision on this having considered any representations we receive.

## 1. Introduction

- 1.1 The Water Services Regulation Authority (“**Ofwat**”) is notifying Southern Water Services Limited (“**Southern Water**”) <sup>1</sup> by this document that it proposes to impose a penalty on it under section 22A paragraphs (1) and (2) of the Water Industry Act 1991 (“**WIA91**”).
- 1.2 The proposed penalty is for Southern Water contravening the following provisions of its instrument of appointment (“**Licence**”), in relation to the management of its wastewater treatment works (“**WwTW**”) and the reporting of performance information to us in respect of those WwTW, relating to the 2010-15 and 2015-20 price control periods:
- Paragraph 9.2 of Condition B and/or paragraph 1 of Condition M of its Licence, by deliberately misreporting information about its WwTW performance for the period 2010-15, provided to us in February 2016;<sup>2</sup>
  - Paragraph 1 of Condition M and/or the Regulatory Accounting Guidelines (“**RAGs**”) (version 3.08)<sup>3</sup> issued under Condition F of its Licence, by deliberately misreporting information to us about its WwTW performance in its Annual Performance Report for the years 2015-16, 2016-17 and 2017-18; and
  - Paragraphs 6A.1 of Condition F of its Licence in relation to the adequacy of its resources and systems of planning and internal control to enable it to properly carry out its regulated activities, particularly in relation to its obligations under section 94(1)(b) of the WIA91.
- 1.3 The proposed penalty is also for infringing section 94(1)(b) of the WIA91 in relation to Southern Water's duty to make provision for dealing effectually, by means of sewage disposal works or otherwise, with the contents of the sewers in its sewerage system.

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<sup>1</sup> Southern Water was appointed as a water and sewerage undertaker in 1989 under an instrument of appointment issued by the Secretary of State for the Environment.

<sup>2</sup> Southern Water's conditions of appointment have been amended a number of times. References to the conditions are to the conditions in place at the relevant time.

<sup>3</sup> This was the version of the RAGs in place from October 2015 until 17 August 2016 when it was replaced by RAG 3.09. RAG 3.09 was in place until November 2017, when it was replaced by RAG 3.10. However, the relevant paragraphs in the RAGs, that deal with the requirement to submit an Annual Performance Report, have remained the same in each of these three versions of the RAGs. For convenience, throughout this Notice, we refer to RAG 3.08.

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- 1.4 Ofwat considers that a penalty of 6.7% of Southern Water's wholesale wastewater business turnover, for 2017-18, is appropriate in all the circumstances. This amounts to approximately £37.7 million. However taking into account the package of measures that Southern Water intends to implement, we propose to reduce this penalty to £3 million. The package of measures includes undertakings that will be provided to us by Southern Water, including payments to customers by way of bill rebates in lieu of a penalty. Ofwat is satisfied that the total value of the payments put forward by Southern Water is about £34.7 million.
- 1.5 In addition to the above, Southern Water will also incur penalties via our price review process that it should have incurred, had it not deliberately misreported data. These penalties are distinct from the penalty we can impose under section 22A of the WIA91 as they result from incentives in our price review regime and will be reflected in the final determination we make as part of our current price review process (PR19).
- 1.6 As required by section 22A(4) of the WIA91, we provide more details of the proposed penalty referenced above, together with details of the contraventions to which it relates, in sections 2 to 5 of this notice. This notice is structured as follows:
- **Section 2** sets out relevant background about Southern Water's WwTW and how we and the Environment Agency regulate Southern Water's activities in relation to its WwTW;
  - **Section 3** explains the nature of our investigation and summarises the evidence we have collected;
  - **Section 4** sets out our findings and the acts and omissions which we consider constitute a breach of the provisions listed in paragraphs 1.2 and 1.3 above; and
  - **Section 5** details the facts which we consider justify the imposition of a penalty, and the amount of that penalty.
- 1.7 Under section 22A(4)(d) of the WIA91, this notice must allow at least 21 days for representations on or objections to our proposal to be made. We explain how to make representations about or objections to this notice in **Section 6**.

## 2. Relevant background

- 2.1 This chapter provides relevant background, setting out details of: Southern Water's WwTW; the environmental permits required for operating those WwTW; Ofwat's price review process as it impacts the operation of WwTW; Ofwat's reporting requirements in relation to those WwTW; and Southern Water's reporting of WwTW performance to us.

### Southern Water's WwTW

- 2.2 Within its area of appointment, Southern Water treats and recycles 743 million litres of wastewater or sewage daily at 365 WwTW after it gravitates and is pumped through a network of 3,321 pumping stations and over 39,700 kilometres of sewers.
- 2.3 Southern Water's WwTW vary in size, with its largest WwTW serving a population equivalent ("PE")<sup>4</sup> of over 360,000 and its smallest serving just a handful of properties.
- 2.4 The purpose of a WwTW is to clean the incoming wastewater to such a degree that it can be safely discharged to the environment (typically a nearby watercourse such as a river or stream) without causing pollution. As the nature of the receiving environment will vary from place to place the level of treatment provided at each WwTW will be site-specific. For example, with certain exceptions, discharges from coastal WwTW will typically receive more basic levels of treatment because of the greater dilution available in marine waters.
- 2.5 It is not normally practicable nor economic to design a WwTW to treat the peak amount of wastewater arriving at the site and because of this storm tanks are provided. During rainfall events, wastewater entering the WwTW which exceeds a predetermined level will be diverted to such storm tanks. Here the sewage will be stored and, provided its volume does not exceed the capacity of the storm tanks, will be returned to the main treatment area once the storm abates and the amount of wastewater arriving at the WwTW subsides.

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<sup>4</sup> The unit of measure used to describe the size of a wastewater discharge. Population equivalent does not necessarily reflect the actual population of a community or 'agglomeration'. It is usually calculated by measuring the strength and flow rate (load) of wastewater at a treatment works and relating them to the average load from one person.



## Environmental Permits

- 2.6 All of Southern Water's WwTW operate under an Environmental Permit ("**permit**") issued by the Environment Agency. Permits specify the conditions the site must meet, and the Environment Agency is responsible for checking and enforcing compliance with these permits.
- 2.7 Smaller WwTW (typically those with a PE lower than 250) generally have descriptive permits which broadly set out in qualitative terms how the works should be maintained and operated. Larger WwTW will, in addition, have numeric conditions (for example, specifying the amount of wastewater the WwTW must treat before it can be legitimately diverted to the storm tank or discharged untreated to the environment) and the quality standards which treated wastewater must meet before it is discharged to the environment. Approximately 300 of Southern Water's 365 WwTW have permits with these numeric conditions.
- 2.8 There are currently two sampling programmes that sewerage companies must implement for their WwTW with permits containing numeric conditions. One is under the Urban Waste Water Treatment Directive ("**UWWTD**")<sup>5</sup> and the other is the Operator Self-Monitoring ("**OSM**")<sup>6</sup> programme. Under the OSM, the responsibility for sampling moved from the Environment Agency to sewerage companies at the beginning of 2009.
- 2.9 Once a sewerage company has taken a sample from a WwTW, it must test the sample and the results must be reported to the Environment Agency ('as soon as is reasonably practicable', and at least quarterly). The Environment Agency must be notified ('as soon as is reasonably practicable') if there is any non-compliance<sup>7</sup>.
- 2.10 There can be conditions under which there is insufficient wastewater at the sampling location to enable an effective sample to be taken. This is termed a "**no flow event**". For example, WwTW with low PEs may experience no flow conditions outside of peak times (for example, morning and evening), or during maintenance work that impacts the amount of wastewater available to sample.

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<sup>5</sup> Samples under the UWWTD are collected by an 'autosampler', which takes a composite sample over a period of 24 hours. Every 15 minutes the autosampler collects 'aliquots' of wastewater. The maximum number of aliquots is 96; at least 72 aliquots must be collected for the sample to be valid. (Where portable autosamplers are used, aliquots are taken every 30 minutes, the maximum number is 48, and at least 36 must be taken for a valid sample.)

<sup>6</sup> OSM is an approach for self-monitoring discharges to the water environment. Under OSM all effluent must be measured, recorded and maintained within each company's permit conditions.

<sup>7</sup> <https://www.gov.uk/government/publications/water-companies-operator-self-monitoring-osm-environmental-permits/water-companies-operator-self-monitoring-osm-environmental-permits>

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- 2.11 There can be genuine operating conditions that can give rise to no flow events. For the UWWTD sample programme if there is a no flow event, the sampling date is rescheduled, so that an actual sample can be taken. In contrast, under the OSM sampling programme, in line with Environment Agency guidance, where there is a no flow event it is assumed that, had it been possible to take a sample, it would have been recorded as being compliant and does not need to be rescheduled.
- 2.12 The Environment Agency has powers to take enforcement or other regulatory action with respect to permit compliance. A WwTW can be categorised as having 'failed' if a set number of samples show that its final effluent does not meet the quality standards required in its permit.

## Ofwat's price review process

- 2.13 Ofwat is the economic regulator of the water and sewerage sector and one of the ways that it regulates water and sewerage companies is by carrying out a price review every five years (the intervening period being commonly referred to as an Asset Management Plan, "**AMP**", period). Since the privatisation of the sector in 1989, there have been six AMP periods and we are in the process of carrying out the next price review (known as "**PR19**") which will set the price, service and incentive package that customers will receive for the 2020-25 period ("**AMP7**").
- 2.14 At each price review we ask water and sewerage companies in England and Wales to develop business plans. This includes setting out the service levels that they will deliver for their customers during the next AMP period. Whilst the methodology for our price review has evolved each time, there have been incentive mechanisms in each one, whereby companies have been able to secure financial benefits as a result of out-performing against agreed service and performance levels, and have incurred financial payments for under-performing.
- 2.15 The penalties incurred for not meeting performance levels set at a price review, are distinct from enforcement penalties that Ofwat may impose under section 22A of the WIA91. The former are part of mechanisms used at price reviews to incentivise good behaviour and the achievement of agreed performance standards; the latter are penalties for breaching statutory or Licence requirements. A breach of a performance measure/commitment set in the context of a price review will not necessarily mean that the company has breached an enforceable statutory or Licence requirement.

2.16 For both the 2010–15 (“**AMP5**”) and 2015–20 (“**AMP6**”) price review periods all companies, including Southern Water, had performance measures and financial incentives related to the performance of their WwTW. The way in which companies have had to report their performance, including the standards they have had to meet and the consequences faced by them for performance below these standards, have differed for each AMP. This reflects the changes in our approach to carrying out price reviews every five years. The requirement to report to us for price review purposes is set out in paragraph 9.2 of Condition B and in Condition M of Southern Water’s Licence.

## **WwTW performance measures set at PR09**

2.17 For the 2010–15 price control period (AMP5) we set out our expectations for the management of companies’ assets to a defined standard so that they could provide reliable services to customers over the long term and protect the environment. We then explained how we would measure those assets’ fitness for purpose or “**serviceability**”. The serviceability of a company’s assets was assessed as falling into one of four performance categories, where ‘improving’ was the best assessment, followed by ‘stable’, then ‘marginal’, with ‘deteriorating’ the worst. Serviceability was measured through a number of indicators grouped into four sub-services:

- water non-infrastructure (for example, water treatment works);
- water infrastructure (for example, underground water mains);
- sewerage non-infrastructure (for example, sewerage treatment works); and
- sewerage infrastructure (for example, underground networks sewers).

2.18 In our final determinations<sup>8</sup> for the 2010–15 period, made in 2009, we set out our expectation that each company monitor, manage and maintain its assets so that each of a number of serviceability indicators remained ‘stable’.

2.19 The PR09 final determinations included the above requirement and explained that companies would otherwise be at risk of incurring a “**shortfall penalty**”<sup>9</sup>.

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<sup>8</sup> That is our final decision on the price, service and incentive package that customers of each company should receive over the next five years.

<sup>9</sup> This applies where a company fails to deliver on time any outputs which are required and were included in our final determination assumptions. To shortfall means that we will claw back the additional revenue recovered by the company during the relevant period and make an adjustment for the next price control period to ensure that customers’ bills going forward reflect the actual outputs that companies have delivered.

- 2.20 Whether or not we applied a shortfall penalty to a company for delivering less than stable serviceability in the 2010–15 period was determined by reference to the framework set out in the document **Setting price limits – logging down and shortfalling (27 November 2007)** and the detailed shortfalling methodology was published in '**Setting price controls for 2015-20 Final price control determination notice: policy chapter A4 – reconciling 2010-15 performance**'.
- 2.21 During and following the conclusion of AMP5, sewerage companies, including Southern Water, monitored and reported against the following performance indicators with respect to the serviceability of their wastewater service assets (sewerage non-infrastructure assets) for that period:
- Percentage of WwTW with numerical discharge permits found to be non-compliant with relevant permit conditions in the calendar year ("**Percentage of non-compliant numeric WwTW**");
  - Percentage of total PE served by wastewater treatment works found to be non-compliant with the Water Resources Act 1991 ("**the WRA**") or UWWTD LUT permit conditions ("**Percentage of total PE non-compliant WwTW**").

## **WwTW performance measures set at PR14**

- 2.22 For the 2015–20 price review period (AMP6) we asked water and sewerage companies to develop business plans to meet their statutory and Licence obligations in an efficient and economic manner, including agreeing a series of service levels ("**performance commitments**") that would deliver against outcomes that their customers expected of them. Companies developed these by engaging with and listening to their customers and wider stakeholders.
- 2.23 Under the Outcome Delivery Incentive ("**ODI**") mechanism we introduced in our 2014 price review, we agreed reputational and/or financial incentives linked to the delivery of each of a company's performance commitments. If a company exceeds the delivery of its agreed performance commitment, it may be rewarded; if it misses it, it may be penalised under the price review mechanism. For ODI financial incentives there are maximum rewards and penalties that a company can incur (referred to as "**caps**" and "**collars**").

- 2.24 Some companies also proposed “**deadbands**” for some of their ODIs, representing a boundary around the performance commitment within which the company would neither incur a penalty nor gain a reward under the ODI mechanism. The majority of the financial ODI rewards or penalties that companies incur during the 2015–20 period will be reconciled at the end of the AMP (when we make the final determinations for PR19), resulting in either a future reduction or increase in the revenues the company can collect from customers, including via an adjustment to the company’s Regulatory Capital Value (**RCV**)<sup>10</sup>.
- 2.25 The relevant WwTW-related performance commitments and ODIs agreed with Southern Water for the 2015–20 period are set out in Table 1 below, including details of the maximum penalty that could be incurred for each as a result of the agreed deadband and collar levels.

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<sup>10</sup> The RCV has been developed for regulatory purposes and is primarily used in setting price limits. One of the elements we consider when assessing the revenue that a company needs is a return on the capital invested in the business. The value of the capital base of each company for the purposes of setting price limits is the RCV.

**Table 1 – Southern Water's AMP6 relevant WwTW Performance Commitments**

Performance commitment	2015-16	2016-17	2017-18	2018-19	2019-20
<p><b>Wastewater asset health</b> - based on three underlying sub-measures (sewer collapses, WwTW population equivalent compliance ('<b>PE compliance</b>') and external flooding – other causes). "Stable" performance requires performance for all three measures to be better than defined "upper performance level".</p> <p>PE compliance measures the percentage of the total PE in Southern Water's region served by any WwTW which are in breach of the look-up table (or LUT) conditions of their discharge permit in a calendar year.</p> <p>Penalty rate for WwTW PE compliance = £16.80m per 0.1%. Max = £16.80m per year.</p>					
Performance commitment	Stable	Stable	Stable	Stable	Stable
Penalty deadband – WwTW PE compliance upper performance level	99.9%	99.9%	99.9%	99.9%	99.9%
Penalty collar – WwTW PE compliance lower performance level	99.8%	99.8%	99.8%	99.8%	99.8%
<p><b>WwTW numeric compliance</b> – percentage of wastewater treatment works that are compliant with the numeric conditions of their permits throughout the calendar year</p> <p>Penalty rate = £1.866m/0.1%/year. Max = £16.80m per year.</p>					
Performance commitment	100%	100%	100%	100%	100%
Penalty deadband	97.7%	97.7%	97.7%	97.7%	97.7%
Penalty collar	96.8%	96.8%	96.8%	96.8%	96.8%
<p><b>Category 3 pollution incidents</b><sup>11</sup> (including transferred assets &amp; excluding private pumping stations)</p> <p>Penalty rate = £23,113 per incident. Max = £2.43m per year</p>					
Performance commitment	285	221	158	158	158
Penalty deadband	348	348	175	175	175
Penalty collar	453	453	280	280	280

<sup>11</sup> Category 3 pollution incidents are incidents having a minor or minimal impact on the environment, people or property with only a limited or localised effect on water quality.

Performance commitment	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Serious pollution incidents (category 1 and 2 pollution incidents)</b> <sup>12</sup> The ODI associated with this performance commitment is reputational only (i.e. non-financial). Reputational incentive only					
Performance commitment	8	6	4	2	0

2.26 The setting of the ODIs for the WwTW numeric compliance performance commitment was reflective of an Environment Agency letter to companies in 2013 that set out the Environment Agency's expectations for operational performance. That letter set out the Environment Agency's expectation that business plans should aim to achieve 100% compliance with all permits. We understand the Environment Agency's position to be that any less ambitious aim would be in conflict with a company's legal obligation to comply with its permits all of the time<sup>13</sup>. This was also our approach in our final determination decisions. Ofwat made it clear to companies that they had to target 100% as a performance commitment. However, as companies are unlikely to achieve 100% all of the time, we accepted a deadband in respect of this ODI.

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<sup>12</sup> Category 1 incidents are those having a serious, extensive or persistent impact on the environment, people or property and may, for example, result in a large number of fish deaths. Category 2 are those having a lesser, yet significant impact as compared with category 1 incidents.

<sup>13</sup>[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/541622/Water\\_company\\_performance\\_report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/541622/Water_company_performance_report.pdf)

## Southern Water's reported WwTW performance for 2010–15

- 2.27 Financial incentives within the price review process have in the past typically been calculated and implemented at the end of each AMP, so that companies' revenues and/or RCVs can be appropriately adjusted for the coming AMP.
- 2.28 The last year of each AMP is referred to as the "**blind year**". As our final determinations in our price review process are issued prior to the start of the AMP to which they apply (for example, our final PR14 determinations were issued in December 2014 but took effect from 1 April 2015), they are made before the actual data for the last year of the previous AMP period is available. Consequently, companies provide us with forecast data for that final year which we use to make our final determination. We then undertake a "**blind year reconciliation process**" where companies submit their actual audited data for the blind year, enabling us to reconcile the final actual data against the company forecasts used for our final determinations. Companies are required to provide us with this blind year data under paragraph 9.2 of Condition B and under Condition M of their Licence.
- 2.29 To reconcile its 2014–15 performance, Southern Water first submitted its blind year data to us in February 2016 and then sent further submissions and responses to us about this at different times in 2016 and again in 2017. In these submissions it:
- provided data on its performance against the indicators described in paragraph 2.21 for 2014–15; and
  - confirmed its historical performance against those same indicators for the whole of the 2014–15 period.
- 2.30 The performance Southern Water reported in its blind year submissions for the 2014–15 period is set out in Table 2 below.



**Table 2 – Southern Water’s reported performance against 2010–15 relevant WwTW serviceability indicators**

<b>Sewerage Non-Infrastructure</b>	<b>2011-12<sup>14</sup></b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>
Percentage of non-compliant numeric WwTW	3.97%	3.25%	4.03%	1.02%
Percentage of total PE non-compliant WwTW	1.61%	0.98%	0.77%	0.00%
Serviceability assessment - Sewerage Non-Infrastructure	Stable	Marginal	Stable	Stable

- 2.31 Following the blind year reconciliation process we applied an overall serviceability shortfall penalty to Southern Water of £54.2m (£60.9m in 2017–18 prices). This included £51.6m (£58.0m in 2017–18 prices) due to the Percentage of total PE non-compliant WwTW indicator in 2011–12, 2012-13 and 2013-14.
- 2.32 Based on the performance information submitted to us by Southern Water, no shortfall was applied in respect of the Percentage of non-compliant numeric WwTW indicator.
- 2.33 Our 2010–2015 reconciliation was published on 18 December 2017<sup>15</sup> and alongside this we sent a letter to Southern Water in which we stated that:

“Companies have now provided complete information and final audited spend and performance data for the whole 2010–2015 period....For the avoidance of doubt, should further information come to light regarding the accuracy of the relevant data, it is possible that our view of the reconciliation could change.

This has particular relevance for Southern Water and if investigations reveal that previous information is clearly inaccurate, we expect to take the corrected information into account when making adjustments at the 2019 Price Review.”

<sup>14</sup> For AMP5 (2010 to 2014), Ofwat chose to exclude the reporting year 2010/11 (2010 calendar year) from any performance assessment and penalty application for all water companies.

<sup>15</sup> <https://www.ofwat.gov.uk/wp-content/uploads/2017/12/Updated-2010-2015-reconciliation.pdf>

## **Southern Water's reported performance against relevant WwTW performance measures for the 2015–20 period**

- 2.34 Water companies must follow our Regulatory Accounting Guidelines (“RAGs”). The RAGs are structured into five parts. RAG 3.08<sup>16</sup> was published in October 2015, and since then each water and sewerage company has published an Annual Performance Report (“APR”) as part of its regulatory reporting requirements. A company's APR includes information about:
- how it has done in meeting its performance commitments;
  - whether it has earned any ODI rewards or incurred any ODI penalties (for exceeding or missing the service levels it has committed to and customers expect); and
  - if a company is failing to deliver on a performance commitment, how it will put things right.
- 2.35 Table 3 sets out what Southern Water has reported in its APRs for the relevant WwTW performance commitments during AMP6. As can be seen, Southern Water has reported that it has met most of these performance commitments. For WwTW numeric compliance the company has reported not meeting its performance commitment, but its performance fell within the penalty deadband and therefore was not at the level at which an ODI penalty would be incurred.

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<sup>16</sup> See paragraphs 2.2.1; 2.2.3 and 4.1 of RAG 3.08.

**Table 3 – Southern Water reported performance against AMP6 performance commitments**

Performance commitment	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Wastewater asset health</b> - Penalty rate for WwTW PE compliance = £16.80m per 0.1%.					
Performance commitment	Stable	Stable	Stable	Stable	Stable
WwTW PE compliance	99.9%	99.9%	99.9%	99.9%	99.9%
Reported performance	Stable	Stable	Stable	-	-
WwTW PE compliance	100%	100%	99.9%		
<b>Resulting penalty</b>	<b>£0</b>	<b>£0</b>	<b>£0</b>	-	-
<b>WwTW numeric compliance</b> - Penalty rate = £1.866m/0.1%/year. Max = £16.80m per year.					
Performance commitment	100%	100%	100%	100%	100%
Reported performance	99.3% (2 WwTW out of 293 fail)	99.3% (2 WwTW out of 293 fail)	99.3% (2 WwTW out of 309 fail)	-	-
<b>Resulting penalty</b>	<b>£0</b>	<b>£0</b>	<b>£0</b>	-	-
<b>Category 3 pollution incidents</b> - Penalty rate = £23,113 per incident. Max = £2.43m per year					
Performance commitment	285	221	158	158	158
Reported performance	160	143	131	-	-
<b>Resulting penalty</b>	<b>£0</b>	<b>£0</b>	<b>£0</b>	-	-
<b>Serious pollution incidents (category 1 and 2 pollution incidents)</b> - Reputational incentive only					
Performance commitment	8	6	4	2	0
Reported performance	7	3	4	-	-

## Performance commentary and statements in Southern Water's 2016, 2017 and 2018 APRs

- 2.36 Alongside the figures set out in Table 3 Southern Water provided commentary and narrative in its APRs, as required by paragraph 4.1 of RAG 3.08.
- 2.37 In its 2015–16 APR<sup>17</sup> published on 15 July 2016, Southern Water stated that it had achieved 99.3% compliance with current environmental standards at its WwTW and that this performance represented the best in the company's history and placed the company alongside industry leaders (page 14).
- 2.38 In respect of the numbers of pollution incidents reported the company highlighted that it had 167 pollution incidents in 2015 (160 category 3 incidents and 7 category 1 and 2 incidents) – a reduction of 43% compared with 2014 and its best performance in 15 years. The company added that it had seen a major improvement in its pollution performance over the previous five years (page 14).
- 2.39 In its 2016–17 APR<sup>18</sup> Southern Water included the following footnote against two of its relevant WwTW performance measures (page 33):

“The number of Category 3 pollution incidents and wastewater treatment works compliance remains subject to further assurance.”

- 2.40 The company also stated the following as part of its 2016–17 APR (page 4):

“We provide a significant amount of data to the EA about the performance of our assets and any wastewater or sewage discharges we make into what is known as the ‘water environment’, such as rivers, streams and coastal waters. We have identified the need to review and improve our end-to-end reporting processes with a view to implementing process and control improvements. Detailed process reviews have continued and a programme of improvements is being developed. We will establish a programme of rolling audits of our EA reporting and data integrity, starting with the 2017–18 internal audit programme of assurance. In addition, we will complete assurance of the 2015–16 and 2016–17 data. Independent external assurers will be assigned to the review, which will commence in August 2017.

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<sup>17</sup> <https://www.southernwater.co.uk/Media/Default/PDFs/annual-report-15-16.pdf>

<sup>18</sup> [https://www.southernwater.co.uk/Media/Default/PDFs/SW\\_AnnualPerformanceReport\\_2016\\_17.pdf](https://www.southernwater.co.uk/Media/Default/PDFs/SW_AnnualPerformanceReport_2016_17.pdf)

We are also working with Ofwat in relation to the management and operation of our wastewater treatment works and the reporting of relevant information in connection with them.”

- 2.41 In the Chairman's introduction of the 2017–2018 APR,<sup>19</sup> published in July 2018, the Chairman noted that “the Board and I are clear that Southern Water is facing a number of historical issues with aspects of internal culture and behaviours that have not always led to the right outcome for customers, regulators, the environment and other stakeholders” (page 20).
- 2.42 In relation to its WwTW performance measures the company's 2017–18 APR outlined assurance issues it was facing, particularly in terms of data quality. Referring to previously reported performance for WwTW (both population equivalent and numbers of failed works), Southern Water said it was reviewing its 2015 data and that it appeared that ODI penalties may have been applicable in respect of its 2015–16 performance. It went on to say that additional assurance was now also being rolled out for data for the years 2010–2014. Southern Water added that it was likely that it would be required to make future revenue adjustments and/or pay penalties and fines in relation to any restated figures (page 5).
- 2.43 In the same report, Southern Water also highlighted that it had undertaken further external assurance of category 3 pollution data collected during 2016–17 and 2017–18 and had identified a number of issues with the processes and systems used to generate its spills data which it says are the subject of an ongoing improvement plan (footnote, page 37).

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<sup>19</sup> [https://annualreport.southernwater.co.uk/media/1784/annualperformancereport\\_2017\\_18.pdf](https://annualreport.southernwater.co.uk/media/1784/annualperformancereport_2017_18.pdf)

## 3. Our investigation

### Background

- 3.1 In December 2016 the Environment Agency informed us that it was investigating Southern Water in relation to problems with WwTW compliance data that the company had provided to it. Southern Water told us about the Environment Agency's investigation in early 2017. As this had potential implications for our regulation of Southern Water, we decided to open our own investigation.
- 3.2 On 21 June 2017 we issued a notice to Southern Water under section 203 of the WIA91<sup>20</sup> to gather more information about its WwTW compliance and reporting. This put the company on notice that it appeared to us that Southern Water may have contravened or be contravening:
- conditions F and/or M of its Licence by misreporting information in connection with its WwTW related performance; and/or
  - conditions 6A.1(c) and/or 6A.2A of Condition F of its Licence by not having adequate systems of planning and internal control and/or sufficient financial resources and facilities to carry out its regulated activities; and/or
  - the requirements of its general duty under section 94 of the WIA91 to provide a sewerage system (in particular section 94(1)(b) WIA91) and including but not limited to breaches of Regulations 4(4) and 5 of the Urban Waste Water Treatment (England and Wales) Regulations 1994 ("the Regulations")<sup>21</sup>.

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<sup>20</sup> A section 203 notice requires information from a company if we are of the opinion that the company may be contravening, or may have contravened, any of its Licence conditions or relevant statutory obligations. Serving the notice does not mean we have already concluded that there has been a contravention. A company receiving a section 203 must provide reliable, accurate and complete information in response to our notice, otherwise it may be guilty of an offence. However, no one is required under section 203 to produce any documents which they could not be compelled to give in evidence or produce in civil proceedings in the High Court.

<sup>21</sup> The Regulations supplement Southern Water's section 94 obligation by requiring it to ensure that urban waste water entering collecting systems is subject to treatment before discharge.

- 3.3 As part of our section 203 notice, we requested, amongst other things, to see copies of papers and minutes from Southern Water's Board and Executive team meetings (from mid-2014 to mid-2017) in connection with the overall management, operation and performance of its WwTW (specifically those about the company's relevant WwTW performance measures) as well as those related to its APR and blind year submissions to us.
- 3.4 Since sending our section 203 notice to Southern Water and receiving documents from the company in response to this, we have made a number of further requests for information, to clarify and seek further detail on the documents it has provided to us. We have also met with the company on a number of occasions to discuss these documents.

## **Independent engineering advice**

- 3.5 Our section 203 notice included a request for documentation from Southern Water in relation to the management, operation and performance of all of its WwTW. Southern Water told us that this element of our notice could give rise to a voluminous response and suggested that, in the first instance, it provide us with files for a sample of sites. We agreed with this approach and after receiving and reviewing files for an initial sample of two of its WwTW, we requested details for a further 11 sites that we had identified ourselves in December 2017 (using earlier information received from the company in response to our section 203 notice). We did so to understand the nature of issues at a broader sample of WwTW, to understand common issues and to see whether issues were being or had been raised at an operational, Executive and Board level. To assist us with our review of the sample of WwTW files provided, we commissioned external engineering consultants to provide an independent review of ten of these site files. The files covered the period 2010 to 2017. Specifically we asked the consultants to provide us with:
- an overview of the performance of each WwTW, including any issues that had occurred at each site and the potential causes and outcomes of those issues;
  - a comparison of the performance of each WwTW against permit conditions and expectations and requirements as set out in relevant Environment Agency guidance and operational instructions;
  - a comparison of the performance of each WwTW as evidenced by the data and information reviewed against available data on permit breaches and pollution incidents;
  - a professional opinion as to whether the issues identified at each WwTW suggested or clearly showed that the company had the appropriate systems and processes in place to meet its Licence and statutory obligations; and

- a short summary highlighting any common themes or issues identified across the ten WwTW that had been reviewed.

3.6 The review took place between February and March 2018 and identified a number of potential shortcomings in the operational and maintenance processes, documentation, decision-making and quality control systems and processes across the ten WwTW that had been reviewed. The review also identified where Southern Water did not appear to be employing best practice compared to other sewerage companies in England and Wales.

3.7 The main issues observed and highlighted by the review of these ten sites included:

- **Equipment standard compliance.** The review identified non-compliance with permit requirements at a number of sites as a result of assets such as screens<sup>22</sup> and storm tanks not having the necessary capacity. It was noted that rag and debris had caused a number of equipment failures on sites, some of which had led to compliance issues.
- **Repeated exceedances / breaches / near misses of Environment Agency permit conditions.** It was noted that in many of the individual site reviews, asset failures and assets that were not capable of delivering the required levels of service had resulted in compliance issues occurring more than once. This pointed to the root cause of failure not being adequately identified and addressed where the expectation would be that failures that have already resulted in compliance issues and that have not been resolved would be considered as a high priority.
- **Capital investment issues.** Although the need to balance competing investment needs within the company was recognised, the review noted that due to the compliance issues experienced at the sites reviewed, capital solutions would have been expected to have been forthcoming sooner than appears to have been the case. The necessary capital investment identified to address issues did not appear to be progressed in a timely manner even after multiple permit breaches, suggesting failures in the investment decision processes within Southern Water.

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<sup>22</sup> Screens are used as part of the first stage of the wastewater treatment process and are used to remove objects that may block or damage equipment. The effective operation of screening equipment relies on regular targeted maintenance and refurbishment. Blocked screens risk spills to the environment and potentially give rise to problems throughout the WwTW.



- **Flow compliance.** The majority of sites were identified as potentially having flow compliance issues, i.e. issues relating to the amount of wastewater flow that is required to be treated at a WwTW in accordance with the permit for that site. There appeared to be two main causes behind flow compliance issues: undersized treatment processes (i.e. with insufficient capacity); and asset failures leading to premature diversion of wastewater to storm tanks below the flow treatment limit required by the WwTW permit.
- **Lack of regular / planned maintenance activities leading to the above.** The review highlighted concerns that maintenance resources had potentially been stretched leading to reactive activities given preference over preventative maintenance. Only one of the site files reviewed included reference to completion rates of Maintenance Scheduled Tasks which include inspections and preventative activities such as servicing. For this WwTW approximately 50% of Maintenance Scheduled Tasks were completed on time, which the consultants considered to be lower than would be expected by best practice.
- **A lack of effective mitigation measures to protect effluent quality, i.e. the quality standard that treated wastewater must reach before it can be put back into the environment.** The number of near misses, exceedances, permit breaches and repeats of asset failures evidenced suggested that mitigation measures and risk management systems and processes within Southern Water had not been effective.

3.8 Given the limited number of sites reviewed by the consultants and variations in the type of material that was supplied about each WwTW reviewed, the consultants identified a number of areas that would merit further investigation in order to understand and confirm the findings above - in particular, to better understand how some of the issues raised had occurred, how they had been addressed, and whether such actions had been effective. We did not further investigate these suggested areas as, following the conclusion of the independent review, we received various reports and documents from Southern Water, as detailed in the subsections below, which provided more insight into the management, operation and performance of the company's WwTW. Although the further documentation provided by Southern Water did not precisely cover all of the areas suggested for follow up by the consultants, there was enough general overlap for us to decide not to request further information from Southern Water on the issues identified by the consultants. We have compared this additional documentation with the independent engineering advice that we have received and both sources of information have informed the conclusions set out in Section 4 of this notice.

## Sampling compliance issues

- 3.9 We requested and received a significant amount of material from Southern Water in response to our section 203 notice. This included copies of Board, Executive and operational level papers in connection with the performance and operation of its WwTW. The company also instigated a project to retrieve relevant archived emails to respond to our information request.
- 3.10 During our review of information provided in response to our section 203 notice, in March 2018, Southern Water told us that it had, since November 2017, been carrying out an internal investigation into the way in which samples at its WwTW were taken and reported to the Environment Agency. It said that irregularities in WwTW sampling processes had been identified following its review of retrieved emails and documents that formed part of the company's response to our section 203 notice. Southern Water confirmed that it had commissioned external lawyers to conduct this investigation and produce a confidential report on its findings (the "**Sampling Compliance Report**"). An interim confidential version of this report was sent to us on 26 March 2018.
- 3.11 In a separate document (dated August 2018) that outlined the methodology that had been followed to produce the Sampling Compliance Report, Southern Water explained that the investigation into sampling compliance issues had consisted of fact finding meetings with "a broad selection of mid and senior level employees with responsibility for compliance and/or sampling". These were undertaken "to understand the sampling regime and to give an opportunity for individuals to raise any practices of concern so that these issues could be fully investigated."
- 3.12 As part of the investigation Southern Water highlighted that search terms<sup>23</sup> were applied to circa 3 million emails and attachments resulting in over one hundred thousand documents being identified for review.

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<sup>23</sup> Examples include the terms "divert AND storm", "fine AND risk", "no flow", "next sample"

- 3.13 The Sampling Compliance Report provides evidence (mostly in the form of email extracts between employees of Southern Water between 2010 and 2017), of staff anticipating the timing of planned OSM samples across numerous WwTW, in order to ensure that no effluent was available for sampling purposes. This deliberate practice (which took place through a number of different methods) of creating an artificial “no flow” event (described as an “**Artificial No Flow or ANF**”) meant that (as noted at paragraph 2.11 above) a sample under the OSM regime could not be taken thus ensuring that the sample (and as a consequence the relevant WwTW) would be deemed as being compliant with permit conditions. As a result of this manipulation, a false picture of Southern Water’s WwTW performance (and how this was being achieved) was provided internally within the company, to the Environment Agency and to Ofwat. Specifically it impacted performance information relating to the numbers of samples that were non-compliant or had failed. This information in turn fed through to the numbers of WwTW that were deemed to be failing to meet permit conditions relating to final effluent quality standards.
- 3.14 The Sampling Compliance Report, in addition to evidencing the company’s conduct, highlighted that various employees at different levels and within different parts of the organisation (but primarily those employees within the Wastewater Operations part of the company), including senior level employees, were either directly involved in instigating or were aware of these issues.
- 3.15 On 20 July 2018, Southern Water provided us with an updated version of the Sampling Compliance Report, which included further evidence of sampling compliance issues, identified following a review of additional emails. The updated report also highlighted the wide ranging techniques that were used and openly discussed within Southern Water’s Wastewater Operations division to create ANFs to avoid the possibility of permit sample failures.
- 3.16 The evidence presented shows that employees were easily able to predict the dates when samples would be taken (when this information should have been kept confidential), including via the circulation of lists that set out when the next sample was due or likely to be due, and as a result of there being insufficient separation between employees with knowledge of the sampling schedule and operational staff that should not have had access to such information.
- 3.17 Staff then used the knowledge about sample dates to put in place ANFs. This included, for example, through the improper use of tankering (i.e. by tankering wastewater from one WwTW to another to cause an ANF). Another method included ‘recirculating’ effluent within a WwTW again to ensure there was no final effluent available for sampling. The report also highlighted occasions where employees felt pressured by senior managers to create ANFs.

## Restatement of past performance data based on issues highlighted in the Sampling Compliance Report

- 3.18 In order to establish the impact of the issues highlighted in the Sampling Compliance Report on its past reported WwTW performance data, on 27 June 2018, Southern Water provided details to us about a review of no flow events undertaken by the company for the years 2016 and 2017. The company acknowledged to us that, for 2016 and 2017 there was a need to correct its WwTW related performance data.
- 3.19 After extensive engagement and discussions with the company, including further information requests about the work it was doing to assess the impact of ANFs on the WwTW performance data previously reported to us, we met with Southern Water on 13 November 2018. At this meeting the company provided and talked us through a short note setting out details of its findings. This was followed up with a more detailed report sent to us on 22 November 2018 titled "Restatement of Wastewater Treatment Works performance for the period 2010 to 2017".
- 3.20 This report included restated performance data for the following WwTW performance measures reported us for AMP5 and AMP6:
- Percentage of non-compliant/compliant<sup>24</sup> numeric WwTW; and
  - Percentage of total PE non-compliant/compliant WwTW.
- 3.21 Southern Water outlined that its findings had been informed by an analysis of telemetry data, tankering information and sampling data for the period around each no flow event, to identify characteristics or trends that raised suspicions as to whether an ANF had been implemented. This work was assured by external consultants who:
- reviewed the methodology adopted by Southern Water;
  - reviewed Southern Water's work on identifying the impact of these issues on the number of failed sites reported; and
  - reviewed Southern Water's work on identifying any potential price review penalties that may have been avoided as a result of these issues during AMP5 and AMP6.

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<sup>24</sup> During AMP5 the relevant performance measures were worded so as to request details of the percentage of non-compliant works but in AMP6 were worded so as to request details of the percentage of compliant works

- 3.22 Southern Water undertook further diligence on its findings between December 2018 and March 2019 and provided us with updated details in March 2019.
- 3.23 As part of this work Southern Water categorised each no flow event that occurred between 2010 and 2017 into one of the following categories<sup>25</sup> based on the probability of the event being an ANF:
- High probability – multiple documentary/data sources strongly pointing toward an ANF or one compelling item of documentary/data source that explicitly stated that an ANF was successfully implemented and there was insufficient evidence to provide a robust explanation as to why the no flow was, or could be deemed to be, genuine;
  - Medium probability (i.e. probable) – multiple documentary/data sources pointing toward an ANF or one compelling item of documentary/data source that strongly implied that an ANF was successfully implemented and there was insufficient evidence to provide a robust explanation as to why the no flow was, or could be deemed, to be genuine;
  - Low (i.e. less than probable) – no or limited documentary/data sources pointing toward an ANF or there was sufficient evidence to provide a robust explanation as to why the no flow was genuine.
- 3.24 Southern Water has confirmed that out of 584 events, 99 no flow events were classed as falling into the 'high probability' category described above and 71 were classed as falling into the 'medium probability' category.
- 3.25 Using Southern Water's categorisations as set out above, the potential extent of misreporting by the company is illustrated in Table 4 below. This shows what the company had reported to us previously and what it might have reported had it taken into account the high and medium probability ANFs. The table also shows the penalty payments Southern Water would have incurred (and has therefore avoided to date) had: i) the high ANFs, and ii) both the high and medium ANFs, been taken into account in the calculation of the number of failing WwTW, based on the penalty rates set out in Table 3 above.
- 3.26 In summary, as a consequence of now restating past WwTW performance data, we have calculated that Southern Water has avoided price review penalties in past years amounting to a total of £75 million (in 2017-18 prices). This has arisen as a direct consequence of the practices in place within the company to implement ANFs at its

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<sup>25</sup> These categories had been used in the 1 June 2018 letter sent to the EA but were only formally defined by Southern Water in its November 2018 Restatement report

WwTW over 2010 to 2017. The total amount of avoided price review penalties reflects the restated figures that Southern Water has now provided about the numbers of WwTW that were potentially non-compliant with permit conditions relating to final effluent quality.

**Table 4 – Southern Water restated WwTW compliance data estimates**

Performance measure	AMP5 (2010–15)				AMP6 (2015–20)		
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
<b>Wastewater asset health – PE compliance</b>							
AMP5 Serviceability reference level / AMP6 Performance commitment	99.9%	99.9%	99.9%	99.9%	> 99.9%	> 99.9%	> 99.9%
Actual reported	98.66%	99.54%	99.36%	100%	100%	100%	100%
<b>Resulting penalty (£m)</b>	<b>19.421</b>	<b>19.343</b>	<b>19.266</b>	-	-	-	-
Restated performance with high probability ANFs added	98.66%	99.54%	98.63%	99.91%	97.41%	100%	99.97%
<b>Resulting penalty (£m)</b>	<b>19.421</b>	<b>19.343</b>	<b>19.266</b>	<b>0</b>	<b>16.80</b>	<b>0</b>	<b>0</b>
Restated performance with high and medium probability ANFs added	98.66%	99.54%	98.46%	99.89%	97.41%	100%	99.96%
<b>Resulting penalty (£m)</b>	<b>19.421</b>	<b>19.343</b>	<b>19.266</b>	<b>0</b>	<b>16.80</b>	<b>0</b>	<b>0</b>
<b>WwTW numeric compliance</b>							
AMP5 Serviceability reference level /	98.6%	98.6%	98.6%	98.6%	100%	100%	100%

Performance measure	AMP5 (2010–15)				AMP6 (2015–20)		
	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
AMP6 Performance commitment							
Actual reported	96.39% (10 out of 277 fail)	97.47% (7 out of 277 fail)	98.32% (5 out of 298 fail)	98.98% (3 out of 295 fail)	99.32% (2 out of 293 fail)	99.32% (2 out of 293 fail)	99.35% (2 out of 309 fail)
<b>Resulting penalty (£m)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Restated performance with high probability ANFs added	96.39% (10 out of 277 fail)	97.47% (7 out of 277 fail)	96.31% (11 out of 298 fail)	98.31% (5 out of 295 fail)	97.95% (6 out of 293 fail)	99.32% (2 out of 293 fail)	99.03% (3 out of 309 fail)
<b>Resulting penalty (£m)</b>	<b>25.89</b>	<b>6.51</b>	<b>25.69</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Restated performance with high and medium probability ANFs added	96.39% (10 out of 277 fail)	97.47% (7 out of 277 fail)	95.97% (12 out of 298 fail)	97.97% (6 out of 295 fail)	97.95% (6 out of 293 fail)	98.98% (3 out of 293 fail)	98.71% (4 out of 309 fail)
<b>Resulting penalty (£m)</b>	<b>25.89</b>	<b>6.51</b>	<b>25.69</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## Wider permit compliance investigation

- 3.27 Alongside the information provided to us and outlined above, Southern Water informed us that it had also been looking at permit compliance issues more generally across its WwTW as a separate exercise from the work that was done to produce the Sampling Compliance Report. It also confirmed that, in July 2016, it had commenced an investigation looking at permit compliance at a limited number of its WwTW. This internal investigation was started as a result of an investigation being conducted by the Environment Agency into potential breaches of permits at certain WwTW. Southern Water explained that given the issues that it was finding at the limited number of sites that it was looking at initially, in March 2017, it extended this investigation to review permit compliance more generally across its WwTW.
- 3.28 Southern Water told us that its wider investigation looking at permit compliance was started in March 2017 in order to:

- produce a summary of all permit conditions for each site (focusing on 96 “high risk” WwTW initially and subsequently broadened to encompass all of its WwTW with numeric permits);
- provide evidence-based assurance that each WwTW meets all of its permit conditions and that the flow/spill data from each WwTW accurately shows its status/performance;
- identify permit compliance issues and risks;
- develop an action plan to address the issues and risks (both immediate actions and longer-term investment needs); and
- assess the need for a wider roll-out across other sites.

3.29 Southern Water confirmed that this investigation was primarily focused on identifying and resolving issues at WwTW and did not include identifying causal factors nor identifying the duration of any impacts resulting from the issues identified.

3.30 During the course of the investigation, any issues discovered which compromised (or were seen as potentially compromising) Environment Agency permit conditions were recorded. As of 18 January 2019, Southern Water told us that it had identified 991 issues across 245 of its WwTW, 650 of which had already been resolved. These issues have been grouped into 36 themes (with the following comprising the bulk of these):

- **Monitoring** [182 issues] – issues with monitoring equipment and systems used to monitor performance at WwTW including in relation to spills to the environment calling into question the accuracy and reliability of the company's systems and processes for recording and reporting WwTW performance data;
- **Signage** [147 issues] - a lack of, and issues with, the accuracy of signage at WwTW to ensure compliance with permit conditions, for example, illegible signs for sampling points;
- **Flow control** [87 issues] – issues with controlling the flow of effluent at WwTW, impacting the ability of sites to comply with permit conditions specifying the amount of wastewater required to be treated at a site before it can be put through to storm tanks or discharged to the environment;
- **Sampling points** [61 issues] – issues with sample points at WwTW, for example, lack of access for samplers and incorrect locations specified;



- **Permits** [58 issues] – issues with copies of permits, for example, missing pages or information and incorrect details contained within permits, including details of other WwTW;
- **Screens** [56 issues] – issues with the deterioration and standard of screening devices and their maintenance at WwTW. Screens are used as part of the first stage of the wastewater treatment process and regular targeted maintenance and refurbishment of screening equipment is essential for the effective operation of a WwTW;
- **Storm tank volumes** [51 issues] – insufficient capacity within storm tanks, creating a risk around premature spills to the environment; and
- **Storm tanks** [48 issues] – issues with the maintenance and cleaning of storm tanks, resulting in large amounts of debris and sludge remaining within tanks in contravention of permit conditions that require the emptying of storm tanks as soon as reasonably practicable.

3.31 Southern Water noted that, in August 2018, circa £14 million of expenditure had been identified as needed to resolve those issues that required a capital expenditure solution. This figure was estimated and based on the extrapolation of a number of known issues at a limited number of sites. Investment was prioritised based upon highest risk to service, environmental impact (for example, potential significant pollution incidents to bathing or inland waters) and identified potential compliance issues. Southern Water said that the remaining issues, that is those not requiring capital schemes, could be resolved through improvements in operational practices. As of April 2019 Southern Water had confirmed that the capital costs associated with resolving issues identified from its wider permit compliance investigation amounted to about £26 million.

## **Review of FFT performance and unpermitted spills from WwTW**

3.32 Through our review of information sent in response to our section 203 notice we became aware that, in 2013, Southern Water instigated annual reviews of Flow to Full Treatment (“**FFT**”) performance and spill to environment compliance at its WwTW.

3.33 FFT is the amount of wastewater that must be subjected to full treatment at a WwTW before any excess flow is permitted to be diverted to a storm tank or occasionally direct to the environment. Storm tanks provide relief to the WwTW at the time of storm events. Once the tanks are full the excess flows are spilled, essentially untreated, to the nearest watercourse. After the storm event has subsided, the contents of the storm tanks are returned to the WwTW to be given full treatment.

- 3.34 Southern Water's FFT annual review in 2014 resulted in 23 WwTW sites deemed to be "at risk", with action plans drawn up for each of these. Southern Water noted that these earlier FFT reviews were focussed on spills to the environment and not to storm tanks.
- 3.35 As part of its wider permit compliance investigation, in 2017, Southern Water carried out a review of FFT performance at each of its WwTW with a numeric permit with respect to data collected in 2016. Its investigations revealed that:
- 170 WwTW showed at least one spill to storm tanks occurring at FFT below the permitted level, that is these sites were diverting untreated wastewater into storm tanks before they were allowed to in accordance with their permits; and
  - 178 WwTW showed at least one spill to the environment occurring at FFT below the permitted level, that is these sites were releasing untreated wastewater into the environment (for example rivers) before they were allowed to in accordance with their permits. The figure of 178 was subsequently reduced to 165, which represented 198 'spill points'.<sup>26</sup>
- 3.36 Southern Water provided us with information in January 2019, identifying the number of potential permitted and unpermitted spills at each of the 198 spill points for the years 2016, 2017 and 2018. The company caveated this information by describing it as "the result of an assessment intended to act purely as a diagnostic test", noting that it was based on raw unvalidated data from a single monitor at each site to provide some indication of an unverified spill to the environment.
- 3.37 In order to obtain a greater understanding of the reliability of this diagnostic assessment of raw data (covering the years 2016–2018) we requested the company to set out further detailed analysis of a sample of ten WwTW.
- 3.38 The ten WwTW were selected by Ofwat on the basis that the sample size represented around 6% of the total of 165 sites and that between them the WwTW in the sample accounted for nearly 6% of the total of 162,289 potential (permitted and unpermitted) spill events identified by the company. As well as being representative of the full set of 165 in terms of potential spill events, the sample provided good coverage of Southern Water's asset base in terms of 1) geographical spread, 2) the type of receiving waters to which the WwTW discharges (inland, estuarial, and coastal. This was considered relevant because it may give an indication of the sensitivity to polluting spills), and 3) size of WwTW.

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<sup>26</sup> Spill points are point at which effluent spills occur. For example, at a WwTW where spills may be made either directly to the environment or via storm tanks, there can be different spill points.

- 3.39 On 26 March 2019 Southern Water provided us with the results of its analysis at the sample of ten sites and supplemented this on 23 April 2019 and 14 May 2019 with further detail. It explained that it had reassessed the number of spills at the ten WwTW and the cumulative duration of those spills and compared the results with similar information held in the company's verified spill reporting system and with the information submitted in an annual report to the Environment Agency.
- 3.40 From the analysis presented to us by Southern Water, it is clear that numerous spills to the environment occurred over the three year period and a large majority of the spills were unpermitted - that is happened when the FFT achieved was less than that specified in the WwTW permit (71% in 2016; 80% in 2017; and 75% in 2018). It was not clear whether or not the spills were trivial in nature. The cumulative duration<sup>27</sup> of:
- the 599 verified spills in 2016 was approximately 2,850 hours, implying an average spill duration of 4.75 hours;
  - the 580 verified spills in 2017 was approximately 2,600 hours, implying an average spill duration of 4.5 hours; and
  - the 999 verified spills in 2018 was approximately 3,600 hours, implying an average spill duration of 3.6 hours.
- 3.41 Alongside the above, in January 2019, Southern Water provided us with a copy of a document it had had prepared in April 2018 for the Environment Agency. This document provided an overview of a range of issues concerning FFT compliance and the results of an analysis of historic spill data relating to several WwTW. This analysis used improved techniques to review spills, in particular using information from a number of different monitoring points. When the results of this analysis were compared to data the company had actually reported about spills from its WwTW, it revealed that there had been both potential under and over reporting at sites.
- 3.42 In addition to the above, Southern Water has confirmed that an external assurance exercise of the company's spills data in 2016 and 2017 (which was referenced in the company's APR for 2017–18, as discussed in paragraph 2.42 above) across all its WwTW resulted in the company's spills data being assigned a confidence grade<sup>28</sup> of B4 which indicates that the data may only be accurate to within 25% of the true values. The external consultant commissioned by Southern Water also assigned a B4 confidence grade to the

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<sup>27</sup> The duration of a spill alone would not be determinative of whether or not it has had an environmental impact, for example, the spill flow may be of low or very low volume (possibly a trickle), and/or be at varying degrees of dilution (possibly highly diluted).

<sup>28</sup> Ofwat has historically required companies to assess the quality of the data they report to us by using a system of confidence grades that represent the quality, reliability and accuracy of the data to which they are assigned.

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numbers of category 3 pollution incidents arising from spills from WwTW reported in 2016 and 2017 again indicating that these may be as much as 25% adrift from the true number. The table below shows the different components used to produce confidence grades.

**Table 5: Reliability and accuracy bands for confidence grades**

<b>Data reliability bands (how data was gathered)</b>	
A	Sound textual records, procedures, investigations or analysis properly documented and recognised as the best method of assessment.
B	As A, but with minor shortcomings. Examples include old assessment, some missing documentation, some reliance on unconfirmed reports, or some use of extrapolation.
C	Extrapolation from limited samples for which grade A or B data is available.
D	Unconfirmed verbal reports, cursory inspections or analysis.
<b>Accuracy bands (error range)</b>	
1	±1%
2	±5%
3	±10%
4	±25%
5	±50%
6	±100%
X	For very small numbers where accuracy cannot be calculated or the error could be more than ±100%

3.43 With regard to environmental impacts, this falls within the jurisdiction of the Environment Agency, which is conducting criminal investigations about these matters. Ofwat is not sighted on the evidence in this area held by the Environment Agency. Separately, Southern Water has noted that it is difficult to estimate the impact of historic spill events and determine which would have constituted pollution incidents and what category of pollution incident they would have fallen into. Typically, if a potential pollution incident occurs, the company or the Environment Agency will visit the location of the incident at that time or soon after to look at the impact on the environment, in order to assess the severity of the pollution incident (for example, number of dead fish, impact on shellfish beds). Southern Water considers that it becomes increasingly difficult to assess the environmental impact and to categorise pollution incidents as time passes.

## Steps Southern Water is taking to address concerns identified and to secure future compliance

- 3.44 After it had sent us the interim version of the Sampling Compliance Report but before it had provided other further material to us in connection with its own internal investigation findings, on 27 March 2018, Southern Water sent us a draft confidential '**Action Plan**' listing various measures the company had already taken, was taking or planned to take with the aim of addressing the areas of concern that we had outlined in our section 203 notice.
- 3.45 Between April 2018 and January 2019 we engaged with and challenged the robustness of Southern Water's draft Action Plan, particularly following information that the company shared with us in relation to the Sampling Compliance Report, the restatement of past WwTW related performance data and its wider WwTW investigations. Specifically we asked the company to clearly explain how and why it had arrived at the various actions listed within its plan, so that we could seek to establish that Southern Water fully understood, and had put in place suitable steps to address the underlying causes for the issues it had identified.
- 3.46 On 1 March 2019 Southern Water provided us with the latest version of its Action Plan. As part of this it stated that it had identified a number of potential underlying causes which could explain the failings it had identified, some of which were based on anecdotal evidence and others derived as a result of interviews with staff or email and other documentary evidence. Further detail on the proposed actions set out by Southern Water is provided in Section 4 (Analysis of the evidence and findings) below.

## 4. Analysis of the evidence and findings

- 4.1 In this section, as required by section 22A(4) of the WIA91, we set out the Licence conditions and the statutory provision that we consider Southern Water has breached and, in relation to each breach, we set out the acts or omissions which, in our opinion, constitute the contravention or failure in question.
- 4.2 The documents we have analysed and used to inform our conclusions on whether a breach has occurred, are those referenced in Section 3 above. This includes:
- documents sent directly to us in response to our section 203 notice as described in paragraphs 3.2 to 3.4 above, for example copies of Board and Executive Team papers and minutes of meetings;
  - the independent engineering consultancy advice we received as described in paragraphs 3.5 to 3.8;
  - the Sampling Compliance Report and the underlying emails, as described in paragraphs 3.9 to 3.17;
  - Southern Water's restatement of WwTW performance data for the period 2010 to 2017 as described in paragraphs 3.18 to 3.26;
  - all documents provided to us by Southern Water in relation to its wider permit compliance investigation as described in paragraphs 3.27 to 3.31;
  - all documents provided to us by Southern Water in relation to its investigation into FFT compliance and unpermitted spills as described in paragraphs 3.32 to 3.43; and
  - Southern Water's Action Plan, which includes its view on the potential causes of issues as described in paragraphs 3.44 to 3.46.

## Misreporting in breach of Conditions B, F and M<sup>29</sup>

4.3 We consider that Southern Water has breached:

- Paragraph 9.2 of Condition B and/or paragraph 1 of Condition M of its Licence, by misreporting information about its WwTW performance for the period 2010–15 in its blind year submissions provided to us in February 2016, supplemented by further submissions in 2016 and 2017;
- Paragraph 1 of Condition M and the RAGs<sup>30</sup> issued under Condition F of its Licence, by misreporting information to us about its WwTW performance in its APR for the years 2015–16, 2016–17 and 2017–18.

4.4 Paragraph 9.2 of Condition B (Charges), provides that Southern Water “shall furnish to the Water Services Regulation Authority such Information as the Water Services Regulation Authority may reasonably require to enable it to carry out a Periodic Review pursuant to sub-paragraph 9.3 or subparagraph 9.4.”

4.5 By means of an **Information Notice (IN 15/17)** we notified companies of the information they were required to submit to us for the blind year submissions. This made clear that each company’s board was “accountable for the quality and transparency of the information they provide on their performance.”

4.6 Paragraph 1 of Condition M (Provision of information to Ofwat) of Southern Water’s Licence requires that Southern Water “furnish the Water Services Regulation Authority with such Information as the Water Services Regulation Authority may reasonably require for the purpose of carrying out any of its functions.”

4.7 Condition F (Accounts and accounting information) of Southern Water’s Licence requires it to submit regular accounting and other information to us, to enable us to compare the financial position and performance of Southern Water’s business with the financial position and performance of other companies.<sup>31</sup>

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<sup>29</sup> Southern Water’s conditions of appointment have been amended a number of times. References to the conditions are to the Licence conditions in place at the relevant time.

<sup>30</sup> Over the last few years, there have been annual amendments to the RAGs. This was the version of the RAGs in place from October 2015 until 17 August 2016 when it was replaced by RAG 3.09. RAG 3.09 was in place until November 2017, when it was replaced by RAG 3.10. However, the relevant paragraphs in the RAGs, that deal with the requirement to submit an APR, have remained the same in each of these three versions of the RAGs. For convenience, throughout this Notice, we refer to RAG 3.08.

<sup>31</sup> Paragraph 1.1(5) of Condition F provides that one of the purposes of Condition F is to ensure that Ofwat is “furnished with regular accounting and other information to enable it to compare the financial position and performance (including, without limitation, costs) of the Appointed Business and of so much of the respective



- 4.8 To that end, paragraphs 5.3, 7.3, 6A.1(1A), and 8.1 of Condition F allows us to issue guidance (the Regulatory Accounting Guidance or RAGs) and once issued, companies must comply with this guidance. Under paragraph 10 of Condition F, companies may appeal the content of the RAGs to the CMA within one month of being notified that a new version of the RAGs has been issued.
- 4.9 The requirement to submit an APR to Ofwat is a requirement of the RAGs (see in particular, paragraphs 2.2.1; 2.2.4 and 4.1 of RAG 3.08) and directors must include a statement on the quality of the information being submitted (see paragraphs 3.3.3 and 3.3.4 of RAG 3.08).
- 4.10 No water or sewerage company can be in doubt about the importance of providing Ofwat with high quality information. For the avoidance of doubt, Ofwat considers high quality data to be that which is reliable, accurate and complete within the bounds specified, thus enabling Ofwat to carry out its functions.
- 4.11 Through the restatement of its WwTW performance data for the period 2010 to 2017, Southern Water has confirmed that relevant data (concerning the number of 'failed' or non-compliant WwTW) reported to us for AMP5 (2010-15) and in its APR submissions for the years 2015-16, 2016-17 and 2017-18 was incorrect. We have concluded that this misreporting was as a result of a concerted practice within the company to conceal potentially non-compliant WwTW performance by implementing ANFs, as identified in the Sampling Compliance Report.
- 4.12 The acts or omissions that we consider gave rise to this concerted practice are the following:
- the adoption of practices which made it possible to predict the sampling schedule, including the circulation of lists that set out when the next sample was due or likely to be due; and not maintaining a clear separation between employees with knowledge of the sampling schedule and operational staff responsible for compliance;



- the deliberate implementation of artificial no-flows during predicted sample periods in order to prevent a failed sample. This was achieved through a number of methods such as the tankering away of wastewater; 'recirculating' effluent within a WwTW; the premature diversion of wastewater flows to storm tanks; and turning off pumping stations to reduce wastewater flow into a WwTW; and
- misrepresenting to the Environment Agency the reasons for such no-flow events.

4.13 Southern Water does not dispute that the practice of deliberately manipulating samples to implement ANFs occurred and that this had the effect of incorrect data being reported to Ofwat which led to Southern Water avoiding penalties under the price review regime that it would otherwise have incurred.

4.14 Had the data which has now been restated been reported to us at the relevant times, it would have resulted in a less favourable assessment of the serviceability of Southern Water's sewerage non-infrastructure assets in the 2010-15 period than was made at the time of our 2014 price review. The main consequence of this different assessment is that the serviceability shortfall that we applied at PR14 would have been greater – see Table 4 above.

4.15 Southern Water would also have incurred an ODI penalty in 2015–16 had it reported the data that it has now restated.

4.16 The misreporting resulted in Southern Water avoiding ODI penalties or a higher serviceability shortfall penalty in past years amounting to a total of £75m (in 2017–18 prices).

## **Finding in respect of misreporting**

4.17 We find that Southern Water has contravened Condition B (paragraph 9.2) and Condition M (paragraph 1) by deliberately misreporting information about its WwTW performance for the 2010–15 period in its blind year submissions to us in February 2016, supplemented by further submissions in 2016 and 2017.

4.18 We also find that Southern Water has contravened Conditions M and F by deliberately misreporting information to us about its WwTW performance in its APR for the years 2015–16, 2016–17 and 2017–18.

4.19 Specifically, the company has provided incorrect data for the following WwTW performance measures/commitments:

- Percentage of non-compliant/compliant numeric WwTW; and
- Percentage of total PE non-compliant/compliant WwTW.

### **Failure to make provision for effectually dealing with the contents of sewers in breach of section 94(1)(b) of the WIA91**

4.20 Section 94(1) of the WIA91 imposes a general duty on sewerage companies (referred to in the WIA91 as undertakers) to:

- a) provide, improve and extend such a system of public sewers (whether inside its area or elsewhere) and so to cleanse and maintain those sewers as to ensure that that area is and continues to be effectually drained; and
- b) make provision for the emptying of those sewers and such further provision (whether inside its area or elsewhere) as is necessary from time to time for effectually dealing, by means of sewage disposal works or otherwise, with the contents of those sewers.

4.21 Managing WwTW correctly is critical to a sewerage company's ability to fulfil part b) of this duty, ensuring that the sewage conveyed to a WwTW is treated effectively before being discharged back into the environment. Delivering this service is important to public health and protecting the natural environment. Any failure by a sewerage company to meet its statutory obligations undermines the confidence of customers and other stakeholders in that company and it can have negative short and long term effects on the natural environment.

4.22 In considering whether a company may have breached its obligations under section 94(1) of the WIA91, we will look at whether:

- there has been a systemic failure by the company to comply with its obligations ; and
- the actions of the company were the actions to be expected of a reasonable company.

- 4.23 In determining if Southern Water has made provision for “effectually dealing, by means of sewage disposal works or otherwise, with the contents of [its] sewers” our starting point is that it should have the systems in place to ensure that:
- wastewater which has been subjected to full treatment and which is to be returned to the environment meets the quality conditions outlined in the WwTW permit; and
  - other wastewater flows to the environment, either direct or via storm tanks, and which have not been fully treated only occur in the circumstances allowed by conditions in the permit.
- 4.24 All breaches of permit conditions are subject to the Environment Agency's enforcement policy. Our focus is different. We are unlikely to consider individual or occasional permit breaches as being indicative of a breach of a sewerage company's general duty under section 94 of the WIA91.
- 4.25 However, where breaches or risks of breaches are numerous, widespread or persist over an extended period, we are likely to view this as being indicative of a systemic failure to make appropriate provision for effectually dealing with the contents of sewers, constituting a breach of section 94 of the WIA91.
- 4.26 In determining if a company has acted reasonably, we will look, among other things, at whether the company has made provision for ensuring that its assets are being maintained appropriately for the benefit of current and future generations. A reasonable company would monitor the condition and performance of its asset base, identify critical assets and intervene through either operational or capital investment measures so that, as a minimum, compliance with permits and the relevant rules and regulations can be assured.
- 4.27 A reasonable company would also take a system-wide approach to understanding, planning and managing risks and issues for the delivery of its wastewater service by having the right information, systems, processes, governance and capabilities in place.
- 4.28 Taking account of all of the evidence, we have concluded that Southern Water has failed to make provision for effectually dealing, by means of sewage disposal works or otherwise, with the contents of its sewers. This conclusion is based on the acts and omissions set out in the following paragraphs.

## **Systemic failures to comply with permit conditions**

- 4.29 As noted in paragraphs 4.3 to 4.19 above, Southern Water has misreported data about the performance of its WwTW in past years. This misreporting has disguised the actual performance of its WwTW. In particular we have concluded, on the basis of the Sampling Compliance Report and the restatement of WwTW past performance data, for the period 2010 to 2017, that the number of 'failed' WwTW (that is, those sites not meeting their permit requirements, specifically in relation to final effluent quality), was higher than reported.
- 4.30 In addition we have concluded that we also cannot rely on the company's historic reporting of pollution events to us. Whilst we cannot quantify with any certainty the full extent of the issue, we are satisfied that the cumulative duration of unreported historic spills likely ran into thousands of hours. While we acknowledge that not all of these spills would necessarily have resulted in a category 3 (or higher) pollution incident, the likelihood that a large proportion of them would have occurred below the permitted FFT level coupled with lengthy average durations (as calculated using information from the company's FFT compliance and unpermitted spills investigation) indicates that some would have caused pollution events. Permit compliance is a matter for the Environment Agency. The Environment Agency is currently undertaking investigations in relation to potential permit breaches by Southern Water.
- 4.31 We consider that the high number of potential unpermitted spills occurring at over half (165)<sup>32</sup> of Southern Water's numerically consented WwTW between at least 2016 and 2018, in contravention of permit conditions, is inconsistent with making provision for effectually dealing with the wastewater arriving at WwTW. Further there is evidence (see paragraph 3.32) that FFT compliance and unpermitted spills have been an issue at a number of Southern Water's WwTW going back to at least 2013.

## **Systemic failure to manage and operate WwTW assets properly**

- 4.32 We have concluded that for a material number of its WwTWs Southern Water has failed to ensure that they have been managed and operated in a way that ensures that they meet their permit requirements, including in relation to final effluent quality standards and FFT compliance.

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<sup>32</sup> See paragraphs 3.35

- 4.33 As discussed in paragraphs 3.5 to 3.8 we received independent engineering advice about the performance of a sample of ten of Southern Water's WwTW. In addition we received details of the company's own findings following its wider permit and FFT compliance investigations during the course of our investigation. The latter investigations highlighted 991 issues as at January 2019 (matters identified by Southern Water, which compromised or were seen as potentially compromising permit conditions) across its WwTW that require operational fixes or capital expenditure to resolve, though as at that date, 650 issues had already been resolved.
- 4.34 Taken together the evidence indicates to us that the company did not, until very recently, have a clear enough idea about the general state of its WwTW assets, nor did it have a clear enough idea about how its WwTW were working and the extent of work needed at each site to ensure the effective and compliant operation of its WwTW. Southern Water has also now acknowledged that there are issues with the equipment in place to monitor WwTW performance.
- 4.35 Southern Water has been unable to explain why the 991 issues it has now identified were not picked up earlier or for how long they have existed or the full extent of the impact of these issues. The fact that such a backlog of maintenance work has built up, and is currently estimated by Southern Water to cost around £26 million to remedy, strongly suggests that past levels of investment have not been sufficient to keep pace with the inevitable deterioration of assets over time and to ensure compliance with permits and related statutory obligations.
- 4.36 The independent engineering advice that we obtained, found (in respect of the ten sites reviewed), evidence of a potential lack of investment in wastewater treatment assets. Across the sample of WwTW, the review found that while investment needs were identified they were often not progressed for long periods of time.
- 4.37 The review also identified that the approach taken by Southern Water to the management of its assets tended to be reactive rather than proactive and whilst there was evidence of an operational and maintenance focus on failing assets, capital investment was sometimes slow to materialise, even after multiple permit breaches.
- 4.38 These observations are consistent with evidence provided to us by Southern Water of delayed investment at other WwTW. For example, the Sampling Compliance Report revealed that at Romsey WwTW, half the flow was bypassing the final effluent chamber in contravention of the site's permit. An internal email dated 10 January 2018 included the comment that "nearly a year on, the scheme [needed to address the issue] is showing no signs of starting".

- 4.39 Our own review of documentation supplied by Southern Water relating to other WwTW reveals similar shortcomings. Permit compliance at Eastchurch WwTW has been good as regards final effluent quality, with no breaches of the numeric permit limits in a record going back at least ten years. However, due to hydraulic constraints (undersized pipework) and insufficient process capacity, the site was, for many years, unable to meet its permit condition in regard to FFT levels. For this reason, a baffle board<sup>33</sup> had been used for many years to divert flows to the storm tanks well before the FFT reached the consented 219 litres per second (l/s) value. This resulted in more frequent discharges of wastewater to the environment than should have been the case.
- 4.40 Also in relation to the Eastchurch site, another report, dated February 2011, said that: "There are a series of deficiencies with this site, which appears to have had no investment for many years". This is despite a "Solutions Report" written in 2007 which detailed the same issues. Furthermore a Pollution Investigation Report Summary of an incident on 11 April 2013 still referred to the works only being able to "cope with around 100 l/s" and to the "inlet area" being in "poor condition" allowing rags to go into the treatment works and cause blockages. A Compliance Assessment Report, dated September 2014 noted the baffle board still in place restricting the flow to full treatment to "possibly 50 l/s". A slide pack dated 28 September 2015 noted "Capital scheme [to address flow non-compliance] underway for completion in March 2017". Despite this history, Southern Water's wider permit compliance investigation identified Eastchurch as still being beset by multiple issues that posed a risk to compliance.
- 4.41 As part of its Action Plan, Southern Water has now included a number of actions to ensure the issues outlined above do not occur in future. These include:
- audits and corrective action plans carried out at WwTW;
  - £26 million of investment identified to address permit non-compliance risks;
  - a range of asset improvement activities, subject to our final determination in PR19;
  - roll out of Operational Excellence Hubs across all WwTW;
  - cross-functional team reviews of on-site operational and asset risks;

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<sup>33</sup> An Environment Agency 'Compliance Assessment Report' for Eastchurch WwTW dated 12 September 2014 notes, "At the time of the visit a baffle board was noticed in the channel downstream of the storm weir and upstream of the flow monitoring structure, the board is reducing the flow to treatment from the permitted pass forward rate of 219 l/s down to possibly 50 l/s. It was suggested the board had been in place for many years (maybe 25-30 years)... This board will be the cause of flows prematurely going to storm and subsequently spilling to the environment which is deemed a sensitive watercourse due to the Shellfish Waters Directive."

- regular face-to-face meetings of various teams on site to discuss risks; and
- new maintenance review processes in place to ensure appropriate interventions are delivered on site.

## **Finding in respect of breach of obligations under section 94 of the WIA91**

4.42 In light of all the evidence, for the reasons identified above, we have concluded that, from at least July 2014<sup>34</sup>, Southern Water has failed, and continues to fail, to comply with its obligations under section 94(1)(b) of the WIA91, by failing to make provision to effectually deal, by means of sewage disposal works or otherwise, with the contents of its public sewer system. The commitments under the undertakings that Southern Water has provided to Ofwat address and aim to resolve the failings identified in this Notice.

4.43 In particular, we find that Southern Water has failed, and continues to fail, to make adequate provision by:

- under-investing in its WwTW network, resulting in, amongst other things equipment failures and a lack of capacity in its assets;
- failing to maintain assets to ensure their effective operation, including screens and monitoring equipment;
- failing to ensure its sampling regime and overall WwTW monitoring regime were and are operating appropriately; and
- failing to identify issues at WwTW and address the causes of failures in a timely manner.

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<sup>34</sup> Ofwat may only impose a penalty for breaches that occurred after 14 July 2014.

## **Failure to put in place adequate systems and controls in breach of paragraph 6A.1 of Condition F**

4.44 Condition 6A.1 of Condition F of Southern Water's Licence requires it to "at all times act in the manner best calculated to ensure that it has adequate:

- a) financial resources and facilities;
- b) management resources; and
- c) systems of planning and internal control

to enable it to secure the carrying out of the Regulated Activities..."

4.45 As indicated above, we consider that Southern Water has failed to properly carry out its regulated activities, in particular the operation of its WwTW. We consider that this failure and its misreporting of data, occurred in part because of failures in and the inadequacy of its systems of planning and internal controls and management resources. This is evident from the following:

- inadequate processes, controls and management resources in place to fulfil WwTW permit and sampling requirements;
- failings in corporate culture and governance; and
- inadequate processes of assurance and controls to ensure and challenge the integrity of WwTW performance reporting, including at Board and Executive level.



## Inadequate processes, controls and management resources

4.46 To help ensure the integrity of the WwTW sampling programme, Environment Agency guidance, since 2010, has required that the sampling schedule (that is the dates when samples are scheduled to be taken) for OSM and UWWTD not be disclosed to operational staff<sup>35</sup>. This supports the EA's MCERTS Performance Standard, which states:

“It would not be acceptable for an organisation to manipulate the operation of their treatment plant or effluent inputs to a treatment plant to take account of sampling dates. The sampling programme should be representative of the normal operation of that treatment plant”<sup>36</sup>.

4.47 Evidence contained within the Sampling Compliance Report provided to us (see paragraphs 3.9 to 3.17 above) indicates that Southern Water's Sampling Procedures Manual for OSM and its provisions in relation to no flows were largely aligned with the Environment Agency's guidance. Both guidance documents, for example, request digital photo evidence of no flow events, with the date and time recorded.

4.48 Despite the above, however, the Sampling Compliance Report and material sent to us in relation to the restatement of past WwTW performance data, show that from at least 2010 to the end of 2017 there were 170 'high or medium probability' ANFs (see paragraph 3.23) implemented in direct contravention of the MCERTS standard set out above. Our review of this evidence shows that:

- **Southern Water's scheduling of OSM and UWWTD sampling visits were coordinated** so sample dates could be easily predicted, with the UWWTD samples used to give 24 hours' notice for OSM samples.
- **Staff involved in the scheduling of the sample visits were not sufficiently separate from operational teams; did not hold information regarding sampling dates confidentially; and openly discussed the predicted dates of OSM and UWWTD samples with wider staff, including operational teams.** For example, an email of 23 June 2015, between relevant staff within Southern Water, showed the extent to which sampling dates were openly discussed:

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<sup>35</sup> <https://www.gov.uk/government/publications/water-companies-operator-self-monitoring-osm-environmental-permits/water-companies-operator-self-monitoring-osm-environmental-permits#monitoring-schedule-visibility>

<sup>36</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/769332/MCERTS\\_Performance\\_Standard\\_for\\_organisations\\_undertaking\\_sampling\\_and\\_chemical\\_testing\\_of\\_water.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/769332/MCERTS_Performance_Standard_for_organisations_undertaking_sampling_and_chemical_testing_of_water.pdf)

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“Next sample due mid july // We have had 6 samples to date // Osm always taken after urban”.

This kind of information sharing, and predictability, continued into 2017, when sample dates were still accessible. An audit undertaken by Southern Water during 2017 identified that it was possible for operational staff to access hard copies of elements of the sampling programme and the Sampling Compliance Report says that, as recently as December 2017, a Principal Process Scientist was able to obtain specific sample dates in advance, which were “circulated to Operational staff with instructions to “keep confidential” or “delete”.

- **Staff confidence in expected sample dates was such that they were able to plan ANF events to achieve a “pass” under the OSM sampling rules.** For example, a report on 18 February 2013 provided in relation to the Warnham WwTW stated:

“Tankers are on-site and ensuring no-flow is leaving site. This will continue for the rest of the day and recommence tomorrow morning or until a sample is taken...Tankering has been reinstated, there is a high expectation the sample is this week and most likely tomorrow.”

Southern Water has confirmed as part of the material it has submitted to us restating past WwTW performance data, that a no-flow event was recorded for the Warnham WwTW on 26 February 2013. It has now categorised this event as ‘High’, meaning that it has found compelling evidence to suggest that an ANF was successfully implemented and there was insufficient evidence to provide a robust explanation as to why the no flow was, or could be deemed to be, genuine. Had the ANF not taken place there is a strong likelihood that the sample taken would have failed to meet the site’s permit conditions and thus the site would have been classed as a failed site (given previous, sample failures).

- 4.49 The effective operation of the sampling regime was and is critically important to Southern Water securing the compliance of its WwTW and for regulatory reporting purposes. We therefore would have expected there to have been more robust systems of planning and internal control and management resources in place to ensure proper oversight and management of the sampling regime, including greater randomisation of sampling events, confidential management of sampling schedules (so that they were not available to operational staff) and stricter controls in place to prevent the implementation of ANFs.

4.50 As part of its Action Plan Southern Water has now included a number of actions to ensure the issues outlined above do not occur in future. These include:

- structural changes to the wastewater OSM sampling programme, including increasing the randomness of the programme to ensure reduced predictability of when samples are being taken;
- refreshing communication to managers regarding representative sampling and the confidentiality of the wastewater monitoring programme;
- regular checking to reduce geographic predictability of the programme;
- rescheduling samples where a no-flow had occurred (from January 2018 onwards) at WwTW and providing the results to the Environment Agency; and
- reviewing remaining risks and controls to improve confidence of representative sampling and performance monitoring.

4.51 In addition, via our review of material provided in response to our section 203 notice we found an internal audit and risk document, presented to Southern Water's Executive Management Team in September 2015. This included the following statement:

“lack of training provided to operators and technicians at waste water treatment works.”

4.52 The document noted that training had not been provided since 2011. We asked the company to provide further detail and background about this point including when this was first identified as an issue and why no training had been provided since 2011. Southern Water responded that a more structured training programme was created in wastewater and courses began in May 2016. It remains unclear however the type of training that was being referred to here, why it took five years to implement this training and why there were no questions raised earlier about this within the company. We find this very concerning particularly in such a complex, technical and important environment as WwTW. In such an environment we would have expected Southern Water's management to have provided appropriate and regular staff training for staff employed at WwTW to ensure that they were equipped to carry out their jobs effectively and in a proper manner.

4.53 During Southern Water's own internal review of wider permit compliance issues at its WwTW, it categorised a number of issues under the heading 'permit issues' (see paragraph 3.30 above). This included an instance where a permit for one WwTW had pages from another WwTW. This kind of failure is unacceptable as it is likely to result in permit requirements being incorrectly applied.

4.54 As part of its Action Plan Southern Water has now included a number of actions to ensure the issues outlined above do not occur in future. This includes:

- compliance competence training, providing wastewater operators with training to meet permit management conditions;
- simplifying permits to make them accessible and understandable to staff in order to ensure compliance risks can be identified and escalated;
- public health and environmental compliance training programmes;
- putting environmental advisors in place to increase awareness of environmental compliance; and
- training provided to staff on the importance of high quality, high confidence information upon which the business is managed and performance reported to regulators, stakeholders and customers.

## **Failings in corporate culture and governance**

4.55 Southern Water has acknowledged in its Action Plan, that operational teams unduly prioritised meeting ODI targets over other non-financial outcomes. It says that whilst there is limited direct evidence of front line staff incentives or rewards linked to the implementation of ANFs, there was a potential that incentive schemes for senior management led to inappropriate behaviours to avoid ODI penalties.

4.56 Senior management within the Wastewater Operations division colluded to conceal the actual performance of WwTW. A culture of data manipulation was the norm and was accepted by staff across the division.

4.57 Southern Water has acknowledged in its Action Plan that there were deficiencies in its organisational culture which prevented employees from being comfortable with speaking out about inappropriate or non-compliant behaviours. This included having in place ineffective whistleblowing processes which resulted in no staff coming forward to report their concerns despite certain staff being obviously uncomfortable about the implementation of ANFs and feeling pressured to act in an improper manner (as evidenced by emails we have seen that are referenced in the Sampling Compliance Report).

- 4.58 The whistleblower policy Southern Water had in place at the time included on its first page and highlighted in bold the following text: “Should any investigation conclude that the disclosure was designed to discredit another individual or group, prove to be malicious or misleading then that worker concerned would become the subject of the Disciplinary Procedure or even action from the aggrieved individual.” The company has confirmed that this policy has since been replaced with a new policy which makes clear that its whistleblower policy is completely anonymous and that Southern Water is committed to protecting the career of anyone who reports wrongdoing, and would not tolerate any form of retaliation or threat should the person choose not to remain anonymous.
- 4.59 We consider that a company’s board should have oversight over the values and culture of the company to satisfy itself that behaviours throughout the business are aligned with the company’s purpose. The evidence we have seen, in particular our review of relevant Board and Executive team papers and the Sampling Compliance Report, leads us to conclude that this oversight was absent for the duration of the failures that are described in this notice.
- 4.60 This has also been implicitly acknowledged by Southern Water through the range of improvement initiatives it is now taking forward in this area. It has stated that the success of these initiatives is underpinned by a “tone from the top” that promotes the principles of ethical business practice, including a ‘challenge’ culture from the top to the bottom of the organisation that does not tolerate non-compliance. We also note that there have been significant changes to the current Southern Water Board and senior management team in recent years, with the current CEO joining in January 2017. Given previous references by Southern Water to cultural changes within the company, Ofwat expects that the cultural changes now being taken forward will be shown to be real and that a constructive, responsible approach to governance will prevail in the future.
- 4.61 As part of its Action Plan Southern Water has now included a number of actions to ensure the issues outlined above do not occur in future. A number of actions were commenced in 2017 and have already been implemented. The further actions include:
- a new “Speak up” campaign re-launched and refreshed to replace the previous whistleblower policy, which includes the introduction of a new process linked to an anonymous, third-party online portal and reporting phone line;
  - a company-wide communications campaign to promote the new whistleblower policy, including face-to-face manager briefings for all teams, video (focusing on endorsement of the policy by directors), and visuals displayed at offices and operational sites;
  - ethical business practice training and cultural change within its two year cultural transformation programme;

- the roll out of a new Code of Ethics; and
- a commitment to best practice on executive pay, including a review of current incentive schemes.

## **Inadequate processes of assurance and controls to ensure and challenge the integrity of WwTW performance reporting at Board and Executive level**

4.62 As part of our section 203 notice to the company, we asked for copies of papers and minutes from Southern Water's Board and Executive team meetings (from mid-2014 to mid-2017) in connection with the overall management, operation and performance of its WwTW (specifically those about the company's relevant WwTW performance measures), as well as those related to its APR and blind year submissions to us. This was in order to see what information was being shown to and discussed by members of the Board and Executive team in connection with the company's WwTW performance.

4.63 Generally the Board and Executive level papers we have seen were of the same format each month. Prior to each Board meeting, in addition to the agenda and minutes of the previous Board meeting, the following were circulated for presentation/discussion:

- a CEO report where the CEO gave his view on various issues and opportunities being faced by the company, and provided any updates on key risks or milestones; and
- a performance dashboard, which highlighted the company's performance against different performance measures set under our price review, including those for its WwTW, through the course of the year.

4.64 We also received copies of (six monthly) Environmental Performance Reports and year-end Operational Performance Updates, both of which included details of the information the Board was receiving about the performance of the company's WwTW (both collectively and individually). Finally, we saw copies of papers about relevant risks faced by the company (either as a whole or at particular WwTW) and its plans to mitigate these, for example, in November 2014, a presentation on 'Managing the risk of serious pollution incidents' was delivered to the Board.

4.65 In addition to Board papers, we reviewed copies of papers circulated to the company's Executive Management Team (EMT) about the overall management, operation and performance of its WwTW (specifically those relevant to the company's WwTW-related performance commitments as well as those related to its APR and blind year submissions to us). This included copies of draft Board papers, including draft CEO reports, which were

circulated to the EMT before being presented to the Board, and draft performance dashboards.

4.66 Also taken to the EMT and given to us were 'Deep Dive' reports. These were papers looking in depth at areas of risk that had been identified, for example, operational failures and pollution incidents. We were also provided with papers which were taken to the EMT to seek approval for capital expenditure at certain WwTW where this was deemed necessary, for example, to meet permit requirements.

4.67 In addition, in terms of Executive level papers, we saw papers circulated to a group known as the Environmental Executive Management Team (EEMT). This was a sub-group of the EMT, which included Southern Water's CEO as a member, met on a monthly basis and had a specific remit to look at environmental-related matters concerning the company. Relevant standing items sent to the EEMT and to us in response to our section 203 notice included:

- a Pollution Incidents Performance report, the purpose of which was to give detailed breakdowns of pollution incidents including figures for those self-reported by the company, types of pollution, and total incident numbers; and
- a WwTW Compliance Status report which presented a summary of the compliance position at relevant WwTW each month.

4.68 Below the level of Board, EMT and EEMT, we received copies of papers drafted by and shared at an operational manager level and below. Southern Water confirmed that at the Operations Directorate level the only meeting that was documented related to governance issues, the contents of which included information contained in the Board and EMT dashboards provided to us. It said that three other meetings were identified as possibly relevant for performance reporting, for which it sent us copies of the meeting materials:

- meetings to review pollution incidents;
- meetings on the management of Sludge Treatment Centres; and
- meetings on the management of WwTW.

4.69 Despite the existence of these various fora and the documentation described above, the failures in the operation and performance of Southern Water's WwTW that we have now seen, and which are described in the earlier sections of this document, were not, for a number of years, fully identified for the attention of the Board.



- 4.70 Instead our review of the relevant extracts of reports provided to Southern Water's Board and to its EMT regarding its WwTW performance, discussed a picture of improving performance at the company's WwTW, over the period 2014 to 2017.
- 4.71 At Southern Water's September 2014 Board meeting there was an operational performance update which mentioned performance improvement enablers that were said to have contributed to the company's wastewater compliance performance. These included:
- better performance management - reinforcing culture of consequences, both positive and negative;
  - targeted investment programme driving performance improvement;
  - collaborative working across the business- procurement, infrastructure, communications, finance, people delivering better results by working together; and
  - change in pace of activity continually driving efficiencies.
- 4.72 We requested further details about the above in an information request to Southern Water in December 2017. In its response the company said that it could not find any specific initiatives or projects linked to the improvement enablers described above and that the relevant member of staff responsible for the Board paper had since left the organisation.
- 4.73 In an environmental report taken to the Board in November 2014 it was said that the company's strong performance against its target for numbers of failed WwTW was achieved through:
- an acute operational focus on compliance; and
  - effective asset interventions where necessary.
- 4.74 At the Board meeting in January 2015 the Director of Infrastructure and the Director of Operations presented a calendar year performance update for 2014. They said that WwTW performance saw an improvement in compliance and was the company's best performance for a number of years.
- 4.75 In June 2015 an environment report discussed at the Board mentioned four reasons for the improvements seen on pollution performance for 2014 and the first part of 2015:
- an acute operational focus on pollution incident reduction;
  - effective asset interventions where necessary;



- the benefits of recent investment; and
- less extreme weather.

4.76 In the minutes of the Southern Water Board Meeting held on 26 April 2016 the following was noted:

“On wastewater treatment works (WWTW) compliance,....confirmed that, with two failures, the Company had achieved its best performance in 15 years”. “[The former CEO] confirmed that this is a result of both operational practice and targeted investment”.

4.77 At the July 2016 Board meeting an environmental report mentioned a ‘step-change in performance’ for WWTW and a cultural shift, which included improved awareness, investigation, reporting and ownership. We asked Southern Water to provide more background and detail about this. In its response the company said that it could not find any documents on these specific projects or programmes to tackle culture change. It said that the cultural change could have been part of business as usual so was not formally documented.

4.78 The extracts from meetings cited above indicate that members of the Board were potentially unaware of the company’s true WWTW performance and the practices that were occurring ‘on the ground’ as highlighted in the Sampling Compliance Report.

4.79 We consider that Southern Water failed to ensure that it had adequate internal systems of control to ensure the reliability, accuracy and/or completeness of reported WWTW performance data. Our view is that a diligent company should ensure that there are robust systems of control for reporting data. It is the responsibility of the Board to secure the reliability of the information reported to it and create a culture in which that is the expectation. This was not the case at Southern Water.

4.80 We also expect boards to be more diligent in ensuring that their companies meet core obligations such as compliance with their general duty set out in section 94 WIA91 (General duty to provide sewerage system). To meet the requirements of Condition F, a board must ask for the necessary evidence to enable it to ensure the company has appropriate systems and resources in place to carry out its regulated activities. This is reflected in our board leadership, transparency, and governance principles that were introduced in 2014, which include the principle that:

“An effective Board is fully focused on the regulated company’s obligations. We expect the Board to be in a position to make well-informed and high-quality decisions based on a clear line of sight into the business, and to make decisions that are in the best interests of the regulated company.”

- 4.81 In its Action Plan, Southern Water addresses issues about the way WwTW performance data was recorded and reported historically throughout the organisation and ultimately reported to ourselves, the Environment Agency and its customers. This includes failures to integrate end-to-end reporting processes with control checks and assurances, and investment decisions in relation to IT (resulting in a fragmentation of IT architecture) as contributors to the lack of robust delivery of performance information and the Board not having an appropriate line of sight into WwTW performance.
- 4.82 In addition, our review of documents provided in response to our section 203 notice indicates that the company had a lack of independent assurance of performance data internally, and poorly targeted external assurance. The company has noted that responsibilities in relation to WwTW performance (for example, site performance, site audits, flow, spill and compliance monitoring and verification) were all concentrated in its Wastewater Operational Directorate leading to an environment whereby operational WwTW performance was not sufficiently subject to independent challenge or assurance, at least up to 2017.
- 4.83 As part of its action plan Southern Water has included a number of actions to ensure the issues outlined above do not occur in future. These include:
- appointing a Director of Risk and Compliance to lead a new Compliance Directorate to act as an internal second line team providing check and challenge to front line teams and providing internal assurance of front line performance;
  - making operational front line teams responsible for reporting their performance but subject to controls that highlight the accuracy of reported performance;
  - introduction of a new Compliance and Risk committee of the Executive Leadership Team and regular compliance updates to the Southern Water Board;
  - end-to-end reviews and improvement of all regulatory reporting processes;
  - increasing internal and external assurance deployed on wastewater reporting metrics to the Environment Agency and Ofwat and merging Environment Agency and Ofwat reporting to ensure consistency of reporting; and
  - identifying and remediating single points of failure, including by minimising manual interventions in processes and using IT and data analytics interventions.

## **Finding in respect of in breach of paragraph 6A.1 of Condition F**

4.84 We find that, from at least 14 July 2014, Southern Water failed to act in the manner best calculated to ensure it had adequate management resources and systems of planning and internal control in place to carry out its regulated activities, and in particular to manage and effectively operate its WwTW. The reasons for this failure were within its control. The commitments under the undertakings that Southern Water has provided to Ofwat address and aim to resolve the failings identified in this Notice.

4.85 We find that the acts and omissions giving rise to this failure were:

- deficiencies in the company's WwTW operational practices and the support and guidance given to operational staff; and
- failures in corporate culture and governance in that Southern Water's Board and Executive Team did not create a robust compliance culture, where staff felt supported to 'do the right thing' and where Southern Water's Board and Executive Team did not impose a sufficient degree of control or scrutiny over the operation of its WwTW and did not effectively challenge the integrity of performance reporting.

## 5. Proposal to impose a financial penalty and the proposed broad level of that penalty

### Relevant provisions of the WIA91

- 5.1 Under sections 22A(1)(a) and 22A(2)(a) of the WIA91, Ofwat may impose on a water or sewerage company a penalty of such amount (not exceeding 10% of the regulated company's turnover in a relevant year) as is reasonable in all the circumstances of the case, where it is satisfied that the company has contravened or is contravening any Condition of its Licence, or has contravened or is contravening any statutory requirement.
- 5.2 Under section 22A(11) of the WIA91, no penalty imposed by Ofwat under section 22A may exceed 10% of the turnover of the company, determined in accordance with the Water Industry (Determination of Turnover for Penalties) Order 2005. Article 3 of that Order provides that for the purposes of section 22A(11) of the WIA91, the turnover of a company is the applicable turnover for the preceding business year (that is, the last business year preceding the date on which Ofwat gives notice under section 22A(4) of the WIA91). Article 2(2) defines "applicable turnover" as "... the amounts, determined in conformity with normal accounting practice in the United Kingdom, which are derived by a company from the provision of goods and services in the course of the company's regulated activities in respect of which the penalty is imposed ..." and article 2(1) defines "regulated activities" as:
- "(a) in the case of a company holding an appointment as a water undertaker, its functions as a water undertaker;*
- (b) in the case of a company holding an appointment as a sewerage undertaker, its functions as a sewerage undertaker;"*
- 5.3 Southern Water's last business year<sup>37</sup> ran from 1 April 2017 to 31 March 2018. Southern Water's applicable turnover derived from its activities as a sewerage company (its wholesale wastewater business) in the 2017-18 business year was £558.67 million. Accordingly, the maximum penalty for Southern Water's contravention in this case is 10% of this number, i.e. £55.87 million. Section 22A of the WIA91 does not set any minimum penalty.

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<sup>37</sup> At the time of drafting this notice Southern Water's turnover figures for the business year for 2018/19 were not available

- 5.4 Under section 22C(1) of the WIA91 Ofwat may only impose a penalty for breaches which occurred within five years of the penalty being imposed, unless, before the end of that period, a notice under section 203 WIA91 is issued or a provisional or final enforcement order is issued. The five year period was introduced into the WIA91 by the Water Act 2014. Prior to this it was a one year period. In this case this means that we can only apply a penalty in respect of a breach that occurred after 14 July 2014 and which was the subject of the notice under section 203(2) WIA91 issued on 21 June 2017.
- 5.5 Ofwat is satisfied that the breaches for which a penalty is being applied fall within the permitted time period for imposing a penalty under section 22C(1) WIA91.
- 5.6 Under section 22A(4) WIA91, we must specify the “other facts” which we consider justify imposing a penalty for a relevant contravention, and of the amount proposed.
- 5.7 Pursuant to section 22B(2) WIA91, Ofwat must have regard to its most recently published [statement of policy](#) with respect to penalties (“**Statement of Policy**”) when deciding whether to impose a penalty, and its amount.
- 5.8 Section 22A(9) WIA91 provides that penalties imposed under section 22A WIA91 are paid into the Consolidated Fund.

## **Competition Act 1998**

- 5.9 Section 22A(13) of the WIA91 provides that “before making an enforcement order or confirming a provisional enforcement order, the Authority (Ofwat) shall consider whether it would be more appropriate to proceed under the Competition Act 1998”. The findings in this notice do not relate to breaches of EU or UK competition law and Ofwat is satisfied that, for the purposes of Section 22A(13) of the WIA91, the Competition Act 1998 is not the appropriate way of proceeding.

## Reasons for proposal to impose a penalty and the proposed broad level of that penalty

5.10 We are satisfied that Southern Water has contravened section 94(1)(b) of the WIA91 and Conditions B (paragraph 9.2), F (paragraph 6A.1) and M (paragraph 1) of its Licence in relation to how it managed and operated its WwTW and reported information to us relating to the 2010-15 and the 2015-20 price control periods. In determining whether to impose penalties for these contraventions, we have had regard to [Ofwat's Statement of Policy](#) and in particular the following factors, as further detailed below:

- the seriousness and duration of the contraventions or failure;
- if the contravention or failure has damaged the interests of customers, the degree of harm caused and also any increased costs incurred by customers;
- if the application of a penalty would be likely to create an incentive to comply and deter future contraventions or failures;
- any gains made by the company (financial or otherwise);
- any damage to other market participants;
- any damage caused to the environment;
- whether the contraventions or failure was or is of a trivial nature;
- whether the contravention or possibility of a contravention would have been apparent to a diligent company; and
- precedents set under equivalent provisions for other utilities.

5.11 We have also had regard to our current policy on enforcement which provides, amongst other things, that we may “agree to a reduced penalty if the company puts measures in place to provide customers with appropriate redress<sup>38</sup>.”

5.12 As noted in sections 3 and 4 of this notice, Southern Water has avoided incurring penalties under our price review process as a result of misreporting past WwTW performance data, meaning that customer bills are higher than they would otherwise have been. Although this issue is related to, and has informed our decision about, whether to impose a penalty and the broad level of that penalty under section 22A of the WIA91, the reconciliation of avoided price review penalties remains distinct from section 22A of the WIA91 and will be taken account of in PR19.

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<sup>38</sup> Para 18 of document entitled '[Ofwat's approach to enforcement](#)'.

- 5.13 **The seriousness and duration of the contraventions:** Southern Water must provide sewerage services across its area of appointment in line with its statutory and Licence obligations. As a general duty, section 94 is one of the core obligations of a sewerage company. Condition F paragraph 6.A1 is a fundamental requirement of an efficient and effectively operated company. We therefore consider a failure of these provisions to be potentially very serious. The evidence we have seen shows that Southern Water has not managed and operated a material number of its WwTW in the manner expected from a reasonable company over a prolonged period of time (from at least July 2014), thus failing to deliver the degree of environmental protection required. Potential consequences of this include increased pollution of watercourses, risks to the natural environment and ecology, poorer aesthetics and amenity value, and public nuisance. The seriousness of the contraventions is exacerbated by evidence pointing to, at a high management level within the company, the intent to deceive regulators about the performance of WwTW.
- 5.14 The misreporting of performance data to us also adds to the seriousness of the contraventions. Accurate regulatory reporting is crucial to enable our comparative regulation, including ensuring that the financial incentives in place within our price control process work as intended. Regulatory reporting also enables us and wider stakeholders to monitor how each water and sewerage company is performing and whether there are causes for concern that require action to be taken either by us or the company itself.
- 5.15 Misreporting of regulatory information is always a serious issue and one which damages, to a greater or lesser extent, Ofwat's ability to regulate and protect customers' interests. Misreporting as a result of deliberate action is significantly more serious than misreporting which arises wholly due to failures in processes and systems.
- 5.16 Where deliberate misreporting masks inadequacies in performance or a company conceals its failure to comply with required standards, Ofwat is prevented from identifying failures in the service that customers receive; from taking action in respect of the failures that have occurred; and from remedying the problem going forward. Companies may avoid the need for expenditure to remedy the situation and benefit in price limits to the detriment of their customers. In this instance, Southern Water's deliberate misreporting of the performance of its WwTW, meant that the company did not incur penalties under the price review process when it should have, and which in turn would have reduced customer bills.
- 5.17 **If the contravention or failure has damaged the interests of customers, the degree of harm caused, and also any increased costs incurred by customers:** Southern Water has avoided price review penalties in past years amounting to a total of £75m (in 2017–18 prices) as a result of having misreported its regulatory performance data to Ofwat. This has meant that customer bills were higher than they would otherwise have been. Although this is now being addressed, the actions by Southern Water to intentionally deceive regulators is extremely serious.



- 5.18 Misreporting undermines the confidence of customers and other stakeholders in the ability of companies to fulfil their functions and obligations. Where a company deliberately takes action to conceal or misrepresent its true performance, the impact of such misreporting increases significantly, and it seriously damages the regulatory regime. Misreporting leads to reduced confidence in the regulatory regime, in Ofwat's ability to intervene to protect customers' interests and in the value of published information for those who use it.
- 5.19 **If the application of a penalty would be likely to create an incentive to comply and deter future contraventions or failures:** We consider that a financial penalty issued under section 22A of the WIA91 will act as an incentive to deter future contraventions or failures. High quality regulatory information is fundamental to Ofwat's role in protecting customers. Strong incentives to discourage deliberate misreporting and the manipulation of data and encourage robust procedures are therefore essential.
- 5.20 Ofwat notes that Southern Water has incurred costs in the course of investigating, quantifying and remedying the deficiencies in its systems and the non-compliant practices which led to the misreporting and wider contraventions. Ofwat does not however, consider that these costs are sufficient deterrent against similar future contraventions since the possibility of future costs to remedy non-compliance did not deter Southern Water in this instance. Also the costs which Southern Water has incurred and is incurring in order to remedy its contraventions are costs which it should in any case have incurred in order to ensure that its performance was to the standard which Ofwat expects.
- 5.21 **Any gains made by the company (financial or otherwise) from the contraventions:** Southern Water has avoided price review penalties in past years amounting to a total of £75m (in 2017-18 prices) as a result of having misreported its regulatory performance data to Ofwat. Southern Water has also failed to undertake necessary expenditure at a number of its WwTW to the detriment of its customers. In this instance, Southern Water's deliberate misreporting of performance meant that the company's true WwTW compliance position was disguised. This is likely to have impacted the actions the company would have taken to resolve issues and ensure compliance at its WwTW earlier had data been correctly reported and not manipulated in the manner it was.
- 5.22 **Any damage to other market participants:** Deliberate misreporting also damages the reputation of those companies who have not misreported. Deliberate misreporting by one company damages the regulatory regime and the reputation of all company. Customers' confidence in the industry as a whole is invariably damaged by misreporting of data, and particularly by cases where companies have knowingly presented falsified information to conceal their true performance.
- 5.23 **Any damage caused to the environment:** See paragraph 5.13 above. The breaches have potentially resulted in negative impacts on the environment, including unpermitted spills.



- 5.24 **Whether the contraventions or failure was or is of a trivial nature:** We have outlined above the serious nature of these contraventions and their duration.
- 5.25 **Whether the contravention or possibility of a contravention would have been apparent to a diligent company:** As we find in Section 4, Southern Water's poor performance results from the shortcomings in the internal planning, controls and management of its WwTW, which we consider would have been apparent to a diligent company. As required by Condition F 6A.1, we would have expected a diligent company to have in place adequate systems of planning and internal controls in order to prevent, identify and address systemic issues of the type outlined in this case.
- 5.26 Ofwat considers that Southern Water neglected its obligations in this case, including in respect of the provision of reliable and accurate data as it did not have adequate systems of internal control in place. The Board of Southern Water placed reliance on a variety of teams and systems to control the quality of the WwTW performance data reported. These systems and processes were ineffective and there was a lack of sufficient challenge applied to WwTW performance data at Board level.
- 5.27 Southern Water remains ultimately responsible for the integrity of the information it furnishes, the systems from which it derives that information and its processes for doing so and for securing that it has met its obligations. Accordingly, Ofwat considers that Southern Water did not act in a diligent manner to ensure that rigorous checks on data and the processes used to generate the data were carried out. As such, Southern Water did not ensure that it had in place an environment or culture in which deliberate misreporting was made difficult and/or could be readily discovered or was considered by staff to be inappropriate in principle.
- 5.28 **Precedents set under equivalent provisions for other utilities:** We are not aware of any relevant precedent decisions by other regulators in respect of provisions equivalent to sections 94 of the WIA91 and Condition F.
- 5.29 In 2018 Ofwat took enforcement action against Thames Water for a breach of Condition F and a breach of its statutory duty under section 37 of the WIA91 (its general duty as a water company). Ofwat has also previously taken enforcement action against companies for deliberate misreporting. We have considered these previous decisions in setting the broad level of the penalty below.

## **Broad level of the penalty**

- 5.30 Section 22A(11)(a) limits a financial penalty imposed by Ofwat to a maximum of 10% of the appropriate turnover of the regulated company. For these purposes, Ofwat considers the appropriate turnover to be that related to the provision of wholesale wastewater services.

- 5.31 Ofwat may impose separate penalties for different contraventions. In this case, we have found that Southern Water has contravened a number of the Conditions of its Licence and has contravened its general duty under section 94 of the WIA91. Although these contraventions are to some extent interrelated, they point to different problems where the absence of any one contravention, would have reduced the impact as a whole. Thus, although we are minded to issue a single penalty for these various breaches, rather than three separate penalties, we have taken the cumulative effect of these three breaches into account in setting the broad penalty level.
- 5.32 In arriving at the broad level of the penalty, Ofwat has given due weight to the fact that the contraventions arose both from deliberate manipulation of data and from the underlying failures and inadequacies of Southern Water's internal systems and controls. These were not the actions of a reasonable company.
- 5.33 The contraventions in this case have damaged the interests of Southern Water's customers, and customers of the water and sewerage companies in England and Wales in general. Southern Water's contraventions have also damaged confidence in the regulatory regime as a whole.
- 5.34 Although there have been instances of deliberate misreporting in the past and failures of internal systems of controls, the additional element of a contravention of a core and general duty (in this case section 94(1)(b)) means that it is the most serious contravention that has occurred. It is also the third enforcement investigation we have carried out to date involving Southern Water, one of which also concerned the deliberate manipulation of data. We consider that these factors justify the imposition of a penalty that is based on the highest percentage of applicable turnover ever imposed by Ofwat.
- 5.35 Having regard to the above, the evidence gathered and to the factors set out in our Statement of Policy, Ofwat judges that the broad level of the penalty should be calculated by reference to a starting point of 6% of the relevant turnover, based on 2017-18 wholesale wastewater revenue.
- 5.36 This is a higher percentage than that imposed on Southern Water (3.5%) in 2008 and Severn Trent Water also in 2008 (2.9%) for misreporting. This is because of the serious and prolonged failure to adequately deliver a core operational function for a sewerage company. It also reflects Ofwat's ability to consider breaches that have occurred since July 2014; that is over a longer period than Ofwat was able to consider in 2008 (when it could only impose a penalty for breaches that took place in the immediately preceding year). Our proposed penalty in this case is also higher than the penalty considered appropriate in our enforcement action against Thames Water in respect of leakage failures in 2018 (3%) and that would have been imposed in the absence of the package of measures put forward by the company in that case. Although that case also involved a breach of Condition F and a breach of a statutory general duty (section 37 WIA91) this case is considered more serious

given the additional element of deliberate misreporting and because of evidence pointing to a concerted practice at senior management levels of the organisation to mislead regulators.

5.37 As set out in our Statement of Policy, once the broad level of the penalty has been considered, other factors such as aggravating and mitigating factors may be taken into consideration. These may include, but would not necessarily be limited to:

- repeated contraventions or failures;
- the continuation of a contravention or failure;
- any involvement of senior management;
- the level of cooperation with any investigation carried out
- any attempts to conceal the contravention or failure;
- the proactive reporting of the contravention or failure to the enforcement authority;
- taking appropriate action to acknowledge and rectify the contravention or failure; and
- activities to provide restitution and compensation.

## **Aggravating factors**

### **Repeated contraventions or failures**

5.38 We have previously taken enforcement action against Southern Water on two occasions. In February 2008 we fined Southern Water £20.3 million (£19.8m for deliberate misreporting of customer service performance data and £0.47m for providing sub-standard services to customers) and in October 2011, we accepted section 19 undertakings from Southern Water for leakage failures (breaches of leakage targets). We note that in 2008 cultural issues around compliance, including the manipulation and concealment of the true position of performance data, were also identified and we would therefore have expected Southern Water to have been particularly alert to the risk of misreporting and the need for a robust and actively monitored compliance culture in the organisation.

### **The continuation of a contravention or failure**

5.39 Ofwat has found the breaches in this case to have existed for a prolonged period of time - that is from at least July 2014. We also consider that some of the breaches are continuing and will only be fully resolved through the implementation of the undertakings provided by Southern Water.

## **Any involvement of senior management**

5.40 Southern Water's senior management and Board failed to ensure it had a clear line of sight to enable it to sufficiently monitor and control performance against its legal obligations for WwTW performance, and to provide a robust challenge and assurance to the reported levels of performance. There is also evidence that some senior employees were aware of potentially illegal practices and facilitated those practices.

## **Any attempts to conceal the contravention or failure**

5.41 The Sampling Compliance Report provides evidence which points to a concerted practice within Southern Water (including by senior level employees) to deliberately conceal poor performance at the company's WwTW. This had a direct impact on WwTW performance data reported to Ofwat, indicating deliberate attempts to conceal potential company failures under Condition F6A.1 of its Licence and section 94 of the WIA91.

## **Mitigating factors**

### **The level of co-operation with any investigation carried out**

- 5.42 Since opening our investigation Southern Water has provided us with a large amount of material and has shared with us the details of its own reviews and investigations, including those it has externally-commissioned. In particular, in relation to the Sampling Compliance Report, Southern Water reported its findings to us promptly and shared with us the full confidential report.
- 5.43 In the early part of our investigation we considered that the timeliness and quality of information provided to us by Southern Water did not meet our expectations. We highlighted our concerns to Southern Water formally, in writing on 30 October 2018, and noted that we expected companies to take an enforcement investigation very seriously and to respond to formal requests for information in a timely way.
- 5.44 Since then we consider that Southern Water has been significantly more cooperative, in particular in discussions around a reparations package for customers. We welcome Southern Water's engagement with us on an appropriate settlement package for customers, including the provision of undertakings. It also has taken and will be taking steps to get itself back into compliance.

## **The proactive reporting of the contravention or failure to the enforcement authority**

5.45 Although Southern Water did notify Ofwat that it was being investigated by the Environment Agency in relation to its WwTW performance, this was later than we would have expected.

## **Activities to provide restitution and compensation**

5.46 In section 4 of this notice we set out the various actions Southern Water has already put in place to bring itself into compliance with its statutory and Licence obligations. In addition, Southern Water has provided us with draft undertakings that we are minded to accept under section 19 of the WIA91. A section 19 undertaking is enforceable by Ofwat if the company that made the undertaking does not comply with the undertaking. We accept that completion of the various actions set out in Southern Water's Action Plan together with implementation of the formal undertakings, will address Southern Water's failures as set out in this notice.

5.47 The draft undertakings include the following financial and non-financial measures:

- the implementation of £111.7 million of customer bill rebates which will be distributed in equal tranches over 2020–25. This amount will be made up of avoided Price Review penalties of £80 million and additional rebates of £31.7 million;
- the implementation, in the financial year 2020–21, of a further customer bill rebate of £11.2 million to reflect the late nature of the avoided Price Review penalties payment (caused by the misreporting of data);
- setting out these rebates clearly on customer bills, in wording approved by Ofwat;
- the completion of a technical review of environmental permit compliance across all numerically permitted WwTW. This involves carrying out audits, inspections and corrective actions on all relevant WwTW;
- continuing to provide a specific budget to identify and correct any permit risk compliance issues identified in the technical review;
- continuing the implementation of a new compliance framework, including implementing end to end process reviews of key reporting processes;

- continuing to embed and implement improvements to its Environmental Monitoring Programme, including: strengthening the confidentiality of the sampling programme; removing potential conflicts of interest with a segregation of responsibilities for sampling; reducing the predictability and representativeness of the sampling programme; making changes in policy and procedures to better control reasons for not sampling; and carrying out a programme of site visits to check the status of sampling arrangements;
- conducting compliance training for all employees, including on public health, environmental compliance, information management and reporting processes;
- continuing to implement the cultural change elements of Southern Water's wider transformation programme across the company, including refreshing Southern Water's vision, purpose and values framework;
- continuing to embed ethical business practices, including via a Code of Ethics and an ethical decision making framework;
- annually reviewing the refreshed whistleblower policies that have been put in place;
- annually reviewing the incentive schemes for executives and senior management aimed at addressing behaviours linked to the contraventions that are the subject of this notice;
- putting in place measures to ensure that when Southern Water's board of directors certify that the company has sufficient financial and management resources in place to properly manage and operate its WwTW, it does so on the basis of evidence following diligent enquiry;
- putting in place additional internal and external assurance teams to review the processes, procedures and controls that operate over the principal risks of Southern Water so far as they relate to the management and operation of its WwTW and the reporting of relevant information in connection with this. The external assurance report will be shared with Ofwat and must confirm, amongst other things, whether the company has appropriate and effective compliance and assurance policies in place; whether these policies are being implemented and adhered to; and whether the company should adopt improvements to these policies;
- reporting regularly to Ofwat on its compliance with these undertakings for a period of five years, unless Ofwat agrees to reduce this period.

## **Taking appropriate action to acknowledge and rectify the contravention or failure**

- 5.48 Ofwat welcomes the steps that the Southern Water is taking to ensure compliance moving forward and to put things right for its customers. Southern Water has provided us with an Action Plan (see paragraphs 3.44 to 3.46). The measures within this, which includes those discussed in section 4 of this notice, show the steps it has been and will be taking to rectify the contraventions and failures outlined in this notice. It has also proposed undertakings under section 19 of the WIA91 (discussed above) and has proposed customer bill rebates totalling £122.9 million, £91.2 million of which arise from previously avoided price review penalties and the delay in imposing those penalties, and £31.7 million of which are additional rebates in lieu of a larger penalty under this notice.
- 5.49 The payment of the price review penalties that have been avoided would normally be made through a reduction to the company's RCV which would benefit customers over an extended time (that is over 50+ year period). Instead, Southern Water has proposed providing this via customer bill rebates spread over a shorter period of five years (AMP7). We recognise that there is a value to current customers of providing this more timely compensation. Although it is difficult to quantify this benefit, we have ascribed a monetary value of £3 million to it. Accordingly, we value the additional element of Southern Water's package (beyond price review penalties) to be £34.7 million (£31.7m plus £3m) (6.2% of its wholesale wastewater turnover).

## **The proposed penalty**

- 5.50 In considering the amount of any potential penalty, we have taken into account the seriousness, duration and impact of the contraventions and have weighed up the aggravating and mitigating factors set out above. On balance, we consider that the mitigating factors cannot be given equal weight to the aggravating factors. Of particular concern to us is evidence of some senior level employees having knowledge of and involvement in potentially illegal practices. We have also given weight to the fact that this is the third enforcement action against the company and that previous enforcement action also revealed evidence of the deliberate manipulation of data.
- 5.51 The main mitigating factors we have taken into account are:
- the steps Southern Water has taken and will be taking to get itself back into compliance;
  - the undertakings Southern Water has provided; and
  - the fact that Southern Water has sought and engaged in settlement in a constructive fashion.

- 5.52 Having taken all the above into account, we consider that accepting Southern Water's package of measures is appropriate and will provide greater benefit to customers than imposing a much larger fine instead. However, given the seriousness of our findings, we also consider that we should impose significantly more than a nominal financial penalty. Therefore in this case Ofwat considers it appropriate to impose a penalty of £37.7 million reduced exceptionally to £3 million in addition to accepting the package put forward by Southern Water. We consider this to be equivalent in value to a penalty of approximately 6.7% of its applicable turnover (taking into account the penalty and the value of the compensatory package).
- 5.53 We would have been minded to impose a penalty significantly greater than 6.7% had Southern Water not taken the necessary steps to bring itself back into compliance and had it not engaged with us on settlement.



## 6. How to make representations or objections

6.1 Pursuant to section 22A(4) WIA91, Ofwat, in publishing a notice of a proposal to impose a penalty under section 22A(1) WIA91, is required to specify a period, of no less than 21 days from the date of publication of the notice, within which representations or objections with respect to the proposed penalty may be made. Accordingly, any such representations or objections should be made so as to be received by Ofwat by **5pm on 19 July 2019**.

6.2 Representations should be sent to the following address:

[mailto: enforcement@ofwat.gov.uk](mailto:enforcement@ofwat.gov.uk)

OR by post to: Enforcement, Ofwat, Centre City Tower, 7 Hill Street, Birmingham, B5 4UA

6.3 We will publish copies of representations and objections we receive in response to this notice on our website, unless the person making them indicates that they would like their response to remain unpublished.

6.4 Information provided in response to this notice, including personal information, may be published or disclosed in accordance with access to information legislation – primarily the Freedom of Information Act 2000 (FoIA), the Data Protection Act 2018, and the Environmental Information Regulations 2004.

6.5 If persons making representations or objections to this notice would like the information they provide to be treated as confidential, please be aware that, under the FoIA, there is a statutory 'Code of Practice' which deals, among other things, with obligations of confidence. In view of this, it would be helpful if in making representations or obligations it is explained why you regard the information provided as confidential. If we receive a request for disclosure of the information we will take full account of this explanation, but we cannot give an assurance that we can maintain confidentiality in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on Ofwat.

Ofwat (The Water Services Regulation Authority) is a non-ministerial government department. We regulate the water sector in England and Wales. Our vision is to be a trusted and respected regulator, working at the leading edge, challenging ourselves and others to build trust and confidence in water.

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