



SSC04a

PR24 Data tables commentary - Outcomes

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# OUT1

The majority of these lines are calculated from OUT4, please refer to that table commentary for detail on the resultant values and trends. For lines which are input directly into this table, please see below.

Line Reference	Commentary
OUT1.1 and OUT 1.3 - OUT 1.32	All linked to OUT4- please see assumption outlined under OUT4 commentary.
OUT1.2	CRI historic performance included from 2017/18 to 2021/22. Linked to CW6 for 22/23 to 29/30. 2030-31 onwards targeting full compliance.
OUT1.33 – 1.34	Welsh only- left blank
OUT1.35 – 1.46	Where possible we have taken data from the file ‘Historical performance trends for PR24 v2.0’, issued April 2023. We note for leakage that the regional data does not sum to the combined total in two of the years (only a 0.1 Ml/d discrepancy, so not material). For PCC the Ofwat file has some gaps. We have populated with alternative historic information within the business but note that combined PCC was reported for some years and so we have been unable to locate a robust regional split. We would advise caution on using historic reported values for leakage and PCC, the methodologies have changed significantly over this period due to the industry convergence work and specific company improvements, such that the historic data is not sufficiently consistent over the data period. It is also difficult to locate source data files for some historic years and therefore we cannot appropriately verify some of the data we find in our systems for historic years.

## OUT2 and OUT3

These tables require a split of performance into base expenditure and enhancement expenditure. As we expressed in our responses to Ofwat’s previous ‘what base buys’ data requests, it is clear to us that performance improvement across time is, in almost all cases, delivered by a mix of both traditional enhancement activity and ongoing business as usual base activity. Unfortunately however, we do not in most cases have direct data to be able to set out how much enhancement or base activity directly contributes to performance commitments historically. In our responses to Ofwat’s previous data requests on this topic, we provided narrative rationale for where we think there are contributions to performance from base and/or enhancement. We have used these same principles, looking forward at our PR24 plans, to populate this table, along with any direct PC impacts we can quantify from our proposed enhancement schemes.

OUT2 and OUT3 are closely linked, so this commentary covers the equivalent lines on both tables.

Line Reference	Commentary
<p>OUT2.1 and OUT3.1</p>	<p>The past 10 years’ performance in supply interruptions has been characterised primarily by:</p> <ul style="list-style-type: none"> <li>• A falling bursts frequency, driven primarily by IRE;</li> <li>• Process improvements such as calm network;</li> <li>• Improvements in planned work delivery to minimise customer interruption, which is now close to zero;</li> <li>• A focus on minimising interruption during unplanned events, by ensuring good zoning decisions and aiming to restore customer supplies as quickly as possible during an incident;</li> <li>• Improving zonal resilience in a targeted manner;</li> <li>• Improving instrumentation and using it to make better decisions;</li> </ul> <p>Many of the above themes are traditionally base, although we would classify resilience and instrumentation improvements as enhancement in principle (although not always by Ofwat’s definition), as they generally represent step changes and new assets. There are also side benefits to supply interruptions from our broader enhancement programmes, such as new mains laid for growth, and periodic enhancement improvements we make to treatment works, booster sites and service reservoir capacity. Whilst we do not have an existing mechanism to quantify this, from a logic perspective the contribution over time is clearly not zero.</p> <p>Going forward, as we have achieved close to zero supply interruptions performance from planned works, we will need to reduce interruptions from unplanned work further to drive further improvement. Delivering this will require continued improvements to operational working practices, and also continued reduction of burst frequency from IRE expenditure, however to continue to drive improvement we will also need to improve operational resilience and redundancy, and improve our use of technology, both areas of enhancement.</p> <p>Our business plan has set out proposals related to resilience in this area, but the process for identifying these has focussed on assessing risk. This is therefore about improving resilience (enhancement) but the impact on supply interruptions is to reduce the scale or impact of events if they occur, it will not necessarily result in a direct improvement in performance because the events we are building resilience against have not actually occurred. Therefore we cannot say there is a direct impact on supply interruptions from this investment. We assume therefore that we continue to deliver all supply interruptions improvements from base expenditure, but this is supported by the enhancement expenditure from resilience that we propose.</p>
<p>OUT2.2 and OUT3.2</p>	<p>Water quality compliance as an activity area is well established with extensive history. Improvement in compliance (most recently expressed via the CRI metric, but before that by the MZC metric, and in all cases also through continual DWI monitoring of our performance and risks against statutory regulations, driving investment schemes), or reduction in risk, comes almost wholly from new or improved assets to mitigate the risk on those assets. Therefore our view is that it is almost all enhancement driven underpinned by business as usual management activity.</p> <p>We acknowledge that there may be an impact on performance from internal process improvements too, over time, as we modernise our systems, improve our assessment of risk and modernise our monitoring. This is all implicitly done, and so we do not have an existing means of quantifying its benefit.</p> <p>On balance we would expect that asset enhancement has played a significant role in meeting new standards of water quality over time, and process improvement has gone alongside that to support the activity and to modernise our processes. We therefore would classify activity related to improving CRI as enhancement.</p>

	<p>But, the target is already zero. So from the point of view of the tables, there is no improvement to record as the target/expectation remains at zero. We have some enhancement expenditure related to water quality, but not explicitly related to CRI. Investment such as this mitigates risk, helps to control volatility, and continues to ensure we meet water quality regulatory standards and expectations.</p>
OUT2.3 and OUT3.3	<p>Activity over the past ten years has focussed on our discolouration management strategy, which includes advanced cluster analysis, calm network activity, targeted flushing, PODDS modelling, zonal risk assessments and optimisation of source works for metals. There will also be a continued general benefit from IRE activity in improving network condition and from general maintenance of water treatment works and ongoing compliance with treatment standards.</p> <p>Customers will also benefit from our enhancement programmes for water treatment that have taken place at many sites over the past 10 years and also will benefit from our upgrades to our two major surface water works that we are currently delivering in AMP7, which are enhancement. From our PR19 performance commitment, these two schemes were expected to deliver a performance improvement which we applied in years 4 and 5 following scheme delivery. However in practice we have delivered significant operational improvements as well from the base activity which is likely to mitigate some of the direct benefits of the treatment works schemes. We have completed the line on the basis that the base schemes have delivered substantial improvements on their own over the first three years and the treatment works schemes deliver the remaining overall forecast in years 4 and 5.</p> <p>In AMP8 we plan to continue with and build on the activity listed above in the first paragraph, which is base related activity. However there is one specific enhancement scheme in our AMP8 programme which aims to improve manganese performance in one water quality zone by approximately 0.02 contacts per annum. Therefore this line is completed on the basis that this specific scheme is delivering some enhancement benefit to water quality contacts, but the majority of the performance ambition is derived from base activity. We have assumed this level is similar in future years.</p>
OUT2.4 and OUT3.4	NA-Waste companies only
OUT2.5 and OUT3.5	NA-Waste companies only
OUT2.6 and OUT3.6	<p>This is a new measure not reported historically, and we cannot populate any historic data for this line.</p> <p>Going forward, all of our biodiversity activity we are proposing in our plan that is being assessed under the new biodiversity framework is enhancement activity related to WINEP and our environmental improvements. Therefore the performance being delivered from base expenditure is zero biodiversity units, all of the biodiversity units are included in enhancement.</p>
OUT2.7 and OUT3.7	<p>GHG emission reductions are a mix of both base and enhancement activity.</p> <p>Within base, we have activity which has consequential effects on GHG emissions. For example, our pump efficiency programme seeks to address routine deterioration of pumping plant which impacts its energy efficiency, which also has benefits to carbon reduction. We will also consider energy efficiency factors for any capital maintenance scheme, to try and improve energy and carbon efficiency. We've also undertaken reviews of our network to try and minimise energy use. And we are adopting new technology, for example electric vehicles, as operational requirements allow. Market based carbon emissions can also be impacted through our energy procurement choices.</p> <p>Carbon emissions can also be impacted through our enhancement programmes. For example by reducing leakage we reduce the volume of water we need to pump and treat. We also consider energy efficiency and carbon emissions as part of our large capital upgrades, for example our recent Green Recovery bid for carbon reduction at our Hampton Loade treatment works which we are delivering in conjunction with our treatment works enhancement programme.</p> <p>As we explained previously, we do not have a reliable method of separating base and enhancement performance historically or in AMP7. Going forward to AMP8 we have forecast a mix of base and enhancement delivered activity. Within base we have:</p> <ul style="list-style-type: none"> <li>• Electric vehicles</li> <li>• Pump efficiency programme</li> <li>• Leakage reduction impact on distribution input (base component)</li> </ul> <p>Within enhancement we have:</p> <ul style="list-style-type: none"> <li>• Small scale renewables</li> <li>• Leakage reduction impact on distribution input (enhancement component)</li> <li>• Consumption reduction (household and business water efficiency and metering) impact on distribution input</li> </ul> <p>Note that we have concerns about the carbon emissions PC definition. As a WOC, we have very limited choices on what we can do for carbon reduction, as evidenced by the Jacobs report titled 'Net Zero technology review',</p>

	<p>published August 2022. The PC definition excludes corporate PPA's which are one of our best options for carbon emissions reduction as a WOC. We plan to look at PPAs in AMP8, but cannot include their benefits in the PC because they are excluded from the definition. Long term, we will need PPAs if we are to reduce our location based emissions to zero. If the PC excludes the PPA we will also have to report it on a different basis to the calculation of emissions for APR table 11A.</p> <p>Going forward, if the pace of carbon reduction emissions is to be increased, then this will likely require specific investments to reduce carbon, rather than carbon reduction being a consequential benefit of other schemes. This would be a step change in activity and therefore we consider it would be require dedicated expenditure allowances.</p>
<b>OUT2.8 and OUT3.8</b>	NA-Waste companies only
<b>OUT2.9 and OUT3.9</b>  <b>Also regional lines:</b> <b>OUT2.21 and OUT3.21</b> <b>OUT2.22 and OUT3.22</b>	<p>At PR14 we had a static leakage target and no enhancement funding. At PR19, we had a target to reduce leakage but Ofwat set a policy that this was to be funded through base expenditure and so made no enhancement allowance. Therefore by strict adherence to the PR19 Ofwat policy, our leakage performance over the past 10 years is entirely base. However, we did not agree with the categorisation of leakage expenditure in PR19. We have continued to invest in leakage reduction and we are making strides towards our circa 15% leakage reduction targets in both regions, which was a significant step change.</p> <p>As with supply interruptions, there will also be a degree of beneficial impact for leakage from new mains laid for growth, as these will have the effect, over a long period of time, of increasing the average condition of the network and reducing burst frequency, impacting leakage.</p> <p>We have assumed that a significant proportion of leakage now remains base expenditure. We propose to deliver our WRMP level of leakage improvement from base, which is approximately 8% in SST and 18% in CAM. Our business plan however proposes to go beyond this, to 15% in SST and 20% in CAM. We have classified the WRMP improvements as base and the amount over this level as enhancement.</p>
<b>OUT2.10 and OUT3.10</b>  <b>Also regional lines:</b> <b>OUT2.23 and OUT3.23</b> <b>OUT2.24 and OUT3.24</b>	<p>Over the past ten years we have undertaken a wide range of activity on water efficiency. From a direct perspective, we have supplied water efficiency devices to customers, offered educational resources, participated in local and national water efficiency campaigns, and continued with our long standing meter optants programme. From an indirect perspective we have improved our own data systems, introducing new models for capturing consumption data from both measured and unmeasured customers, and continued to make PCC a prominent part of water resources planning and optioneering.</p> <p>Whilst there is a base expenditure element to the management of these activities, it is difficult to quantify this. In general the expenditure to deliver demand reduction is enhancement and the bulk of this expenditure is for metering. We have therefore assumed that going forward the delivery of PCC improvements is entirely enhancement, as aside from management time and immaterial comms activity, all the investment is enhancement.</p>
<b>OUT2.11 and OUT3.11</b>  <b>Also regional lines:</b> <b>OUT2.25 and OUT3.25</b> <b>OUT2.26 and OUT3.26</b>	<p>These are new PCs reflecting new obligations to undertake water efficiency activity in then non-household customer space. Previously this activity was separated from the incumbent water companies and expected to be improved via competition in the business retail market. In practice it is clear that a collaborative approach between retailers and wholesalers is required. We have included this in our WRMPs and there is enhancement expenditure in our plans for delivery of this new obligation, therefore all of the performance improvement is categorised as enhancement expenditure.</p> <p>Note that Ofwat may observe that in CAM the business demand is expected to increase despite the business efficiency activity, because of growth. This is as per our WRMP, but means that the method of expressing this PC, which expects to see a reduction over time in absolute consumption from businesses, does not quite fit with the expectation for growth. We have expressed in our appendix about ODI risk that we do not consider business demand to be a suitable PC to apply incentives, because of the uncertainty about what business consumption will do and its reliance on external economic factors.</p>
<b>OUT2.12 and OUT3.12</b>	NA-Waste companies only
<b>OUT2.13 and OUT3.13</b>	<p>We do not have a PC for pollution incidents in AMP7, although we are still subject to the legislative compliance requirements underpinning the measures.</p> <p>Our activity in this area over the past 10 years has focussed largely on discharges from water treatment works, as the use of chemicals at these sites is the material risk. It is also possible to cause pollution from large burst mains, but these are far less likely to be materially damaging to the environment. Our activity has therefore focussed on risk reduction at the aforementioned sites, for example by improving containment of chemicals, enhancing monitoring of discharges (M-certs) and managing our policies and procedures. We have not had a significant problem with pollution incidents or discharge consent breaches and we have continued to work on reducing risk as part of routine capital maintenance. The small amount of routine activity in this area has not warranted much exposure at previous price reviews.</p>

	<p>Going forward, we would see ongoing management of pollutions as base activity however if a material step change was introduced in compliance levels or monitoring requirements, for example requiring a step change in installation of monitoring equipment, then we would consider this to require enhancement expenditure.</p> <p>The target for this measure is expected to be zero.</p>
<b>OUT2.14 and OUT3.14</b>	<p>We do not have a PC for discharge consent compliance in AMP7, although we are still subject to the legislative compliance requirements underpinning the measures.</p> <p>Our activity in this area over the past 10 years has focussed largely on discharges from water treatment works, as the use of chemicals at these sites is the material risk. It is also possible to cause pollution from large burst mains, but these are far less likely to be materially damaging to the environment. Our activity has therefore focussed on risk reduction at the aforementioned sites, for example by improving containment of chemicals, enhancing monitoring of discharges (M-certs) and managing our policies and procedures. We have not had a significant problem with pollution incidents or discharge consent breaches and we have continued to work on reducing risk as part of routine capital maintenance. The small amount of routine activity in this area has not warranted much exposure at previous price reviews.</p> <p>Going forward, we would see ongoing management of discharge consents as base activity however if a material step change was introduced in compliance levels or monitoring requirements, for example requiring a step change in installation of monitoring equipment, then we would consider this to require enhancement expenditure.</p> <p>The target for this measure is expected to be zero.</p>
<b>OUT2.15 and OUT3.15</b>	NA-Waste companies only
<b>OUT2.16 and OUT3.16</b>	NA-Waste companies only
<b>OUT2.17 and OUT3.17</b>	NA-Waste companies only
<b>OUT2.18 and OUT3.18</b>	<p>We would hope that Ofwat recognises that the weather is a material external influencing factor to mains repairs performance, particularly when looking over a short time frame. This is clear when examining industry performance, as all companies tend to move up and down to similar degrees year on year. In 2022/23 almost all companies failed their PC because of this weather volatility.</p> <p>Notwithstanding this, the most direct impact over time is from base activity – primarily mains renewals which seeks to maintain asset health over a long period of time through targeted mains replacement. New systems, improved data, maturing processes, and modern materials means that mains renewal can be targeted better over time leading to reducing bursts over time all else being equal. There is also process improvement driven by network activities such as calm network and pressure management, which are also base activities.</p> <p>However there is also an enhancement element. New mains get laid for growth purposes, which will help modernise the network over time and contribute to reducing overall burst rate. In 2021/22 almost 50km of new mains were laid, around 0.6% of total network length. We also identify bursts through our increased leak detection activity for targeting leakage reduction. Whilst an increase in leakage find and fix activity may result in an increase in reported burst frequency, its impact on the underlying asset base is still positive as the fix activity has the effect of improving average asset condition over time. It is however difficult to quantify this impact.</p> <p>We have therefore assumed that mains repairs, underpinned and linked predominantly to mains renewals, is base activity for the purposes of this table.</p>
<b>OUT2.19 and OUT3.19</b>	<p>This is a relatively new performance commitment at PR19 although preceded by serviceability assessment which was working along similar lines for a similar outcome, albeit via different metrics. It is the non-infrastructure equivalent of mains repairs.</p> <p>As with mains bursts, maintaining asset health is primarily a base driver but has impacts from enhancement activity. In the case of non-infrastructure assets, which unplanned outage targets, there will be side effect benefits from the construction of new assets for other drivers, such as growth or improving water quality. In cost terms, our enhancement programmes for new non-infrastructure assets are substantial, for example our treatment works upgrades at Hampton Loade and Seedy Mill at circa £80 million. It is however difficult to quantify this impact on the performance measure.</p> <p>We have therefore assumed that unplanned outage, underpinned and linked predominantly to capital maintenance activity, is base activity for the purposes of this table.</p>
<b>OUT2.20 and OUT3.20</b>	NA-Waste companies only

<p>OUT2.27 and OUT3.27 OUT2.28 and OUT3.28 OUT2.29 and OUT3.29 OUT2.30 and OUT3.30 OUT2.31 and OUT3.31 OUT2.32 and OUT3.32</p>	<p>NA- bespoke PCs for other companies that do not apply to us.</p>
<p>OUT2.33 and OUT3.33  And regional lines: OUT2.37 and OUT3.37 OUT2.41 and OUT3.41</p>	<p>Historically, all leakage delivered through base expenditure as per Ofwat's PR19 policy.</p>
<p>OUT2.34 and OUT3.34  And regional lines: OUT2.38 and OUT3.38 OUT2.42 and OUT3.42</p>	<p>Please see the commentary for combined leakage above in lines OUT2.9.</p>
<p>OUT2.35 and OUT3.35  And regional lines: OUT2.39 and OUT3.39 OUT2.43 and OUT3.43</p>	<p>Please see the commentary for combined PCC above in lines OUT2.10. We consider PCC activity has always been predominantly enhancement activity.</p>
<p>OUT2.36 and OUT3.36  And regional lines: OUT2.40 and OUT3.40 OUT2.44 and OUT3.44</p>	<p>Please see the commentary for combined PCC above in lines OUT2.10.</p>



# OUT4

Note: NR- Not Reported

Line Reference	Commentary															
<p>OUT4.1- OUT4.6 Water supply interruptions</p>	<p><b>Historic Actuals</b> 2011/12-2021/22 as per Ofwat’s Historical performance trends for PR24’. 2022/23 as per APR23. We previously did not report the total number of properties whose supply was interrupted so these are not included in the historic data before 2019/20. <b>AMP7/AMP8</b> Properties as per SUP1B. We have looked at our and the sector’s historical performance to determine where we are in relation to the sector and against the upper quartile and frontier performance levels. We have set an ambitious forward challenge on ourselves for supply interruptions, which is in alignment with the customer research testing and our ambition was supported by customers. Our forecast assumes that both the length of an average interruption is reducing over time, and the number of properties effected is also reducing. We have assumed each of these factors is carrying equal weight. <b>AMP9</b> Average new connections for AMP8 (6281 each year) rolled forward to 2034-35. Minutes interrupted reflect diminishing returns as we move closer to zero interruptions, and customer long term priorities. See LTDS for detail.</p>															
<p>OUT4.1—OUT4.11 Customer contacts about water quality</p>	<p><b>Historic Actuals</b> This table has been completed in alignment the latest PR24 definition for water quality contacts which includes the changes for social media contacts and multiple contacts recorded per call. We have included social media contacts for around 5 years but we have not recorded multiple contacts per call, as advised in the data restatement queries from Ofwat in 2023. We have therefore left the historic values blank until 2019/20. For 2020/21 onwards we have uplifted our reported values by 10% to account for multiple contacts per call, this value was based on a 2022/23 data review where we reviewed each contact’s customer notes to determine if multiple categories were provided by the customer. <b>AMP7/8</b> This PC uses calendar year population figures produced in advance of the reporting year and reported to DWI for the annual sampling programme update. For years 2023/24 onwards in this table we take the average between end of year positions forecast in SUP1A to reflect the timing of the population estimate. Forecast contacts is based on historic levels of improvement, and the benefits of our investment plan for amp7/8. The forecast average split between Taste/Odour and appearance contacts is based on the average over the past 3 years reporting- as shown below:</p> <table border="1" data-bbox="376 1624 1503 1762"> <thead> <tr> <th></th> <th>2020-21</th> <th>2021-22</th> <th>2022-23</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>Taste/Odour</td> <td>20.8%</td> <td>23.8%</td> <td>22.4%</td> <td>22.3%</td> </tr> <tr> <td>Appearance</td> <td>79.2%</td> <td>76.2%</td> <td>77.6%</td> <td>77.7%</td> </tr> </tbody> </table> <p><b>AMP9</b> Average population growth from AMP8 (13,764 per year) rolled forward to 2034-35. Contacts forecast reflecting diminishing returns as we move closer to zero, and customer long term priorities. See LTDS for detail.</p>		2020-21	2021-22	2022-23	Average	Taste/Odour	20.8%	23.8%	22.4%	22.3%	Appearance	79.2%	76.2%	77.6%	77.7%
	2020-21	2021-22	2022-23	Average												
Taste/Odour	20.8%	23.8%	22.4%	22.3%												
Appearance	79.2%	76.2%	77.6%	77.7%												

<p>OUT4.12- 4.23 Biodiversity (water)</p>	<p><b>Historic Actuals/AMP7</b> New PC for PR24- no historic data available. We have reported this table from 2025/26 onwards for all lines.</p> <p><b>AMP8</b> To derive an indicative target of Biodiversity units with limited existing information on site specifics to calculate units, we have screened our largest 12 sites by area, which make up over 90% of total land ownership. For these locations we have estimated the type of land coverage and condition for calculating baseline biodiversity units using the Natural England tool. We have also included chalk stream with planned improvements in our WINEP programme in the baseline biodiversity units calculation. We have at this stage estimated an overall 20% improvement in biodiversity units, excluding the baseline units for chalk streams and our Blithfield site. This is because we are unable to estimate improvement in units for chalks streams at this time, and as Blithfield, a SSSI, is already managed under NE prescriptions and so further improvements are unlikely. Between now and Final Determination we intend to refine the baseline calculation and verify that the proposed improvement of 20% in units is achievable within our proposed programme of biodiversity work and the habitat measures available. Additionally the ODI rates for this performance commitment are not yet available. The area surveyed figure provided is the area of all sites included in the baseline calculation, and survey frequency is estimated as 50% of sites every 2 years – this figure will be updated to reflect the actual area of sites to be surveyed once we have refined the input data and programme of improvement measures on a site specific basis.</p> <p><b>AMP9</b> We are also looking to develop a 25-year environment plan over the next couple of years that will align with the Government 25-year environment plan and will provide a clear line of sight for the environmental protection and improvements we wish to deliver over the next 25 years. Whilst our future environmental plans must align with statutory guidance and legislation, and there will inevitably be future changes to this which will impact on the activities we undertake, this will help create a clear strategic direction and inform our future plans.</p>
<p>OUT4.24 – OUT4.31 Operational greenhouse emissions (water)</p>	<p><b>Historic Actuals</b> Historic data is reported from 2018/19 onwards. The tonnes carbon is as per the GHG historic data request, 2023. The DI values are as per restated water balance figures. Historic data and current data as per APR23 does not fully included all of scope 3's required factors, we are working to include these in our data going forward. These may require historic data or future forecasts to be restated, depending on the impact of these additional factors.</p> <p><b>AMP8</b> DI forecast as per water balance assumptions (CW5) which includes the impact of leakage and demand reductions. Within our absolute tonnes of carbon forecasts we have included:</p> <ul style="list-style-type: none"> <li>• DI reduction from leakage and demand, aligned to our targets proposed for other PCs.</li> <li>• Small scale renewables enhancement delivered in years 3 and 4 of the period, delivering benefits in years 4 and 5.</li> <li>• Other reductions from chemical reduction, electric vehicles and the continuation of our pump efficiency programme.</li> </ul> <p>Note that we have concerns about the carbon emissions PC definition. As a WOC, we have very limited scope on what we can do for carbon reduction, as evidenced by the Jacobs report titled 'Net Zero technology review', published August 2022. The PC definition excludes corporate PPA's which are one of our best options for carbon emissions reduction as a WOC. We plan to initiate PPAs in AMP8, but cannot include their benefits in the PC because they are excluded from the definition. Long term, we will need PPAs if we are to reduce our location based emissions to zero. If the PC excludes the PPA we will also have to report it on a different basis to the calculation of emissions for APR table 11A. We think it could be confusing for external stakeholders to see multiple versions of a carbon emissions value for each company on an annual basis. Referring to the data tables, we think the percentage reduction calculation might be the incorrect way around in line OUT4.31 and 4.29 as it is the opposite way around to how the leakage, PCC and business demand percentage reductions are shown (positive is decrease, negative is increase).</p> <p><b>AMP9</b> We have assumed continuation of the strategy delivering the same degree of benefits going forward into AMP9, with a continuation of DI reduction reflecting the long term continued reductions in leakage and demand.</p> <p><b>GROSS emissions SVT</b> We think there could be a consistency issue with how we account for our Hampton Loade site's carbon emissions. In other areas of the plan, including costs, we now report net costs for Hampton Loade (both opex and capex), as per Ofwat's instruction. However we do not know whether we should roll this approach into other table lines. It effects carbon, as well as some of the lines around proportion of water delivered via the various types of asset and size bands for treatment. The specific issue for carbon is that the total emissions (which includes the Severn Trent share of Hampton Loade's output) is divided by the SSC DI value to normalise, which excludes Severn Trent's</p>

	<p>component. This means that the normalised value is too large as it is gross for emissions but net for volume. We have raised this issue with Ofwat previously. The CAW workbook default approach is to include both imports and exports in the calculation, which if all companies do this is surely double counting the emissions of imports/exports across the sector.</p>
<p><b>OUT4.32 -OUT4.35</b> Leakage- Company level</p>	<p>Leakage at company level is the sum of the 2 regional leakage figures, detailed below.</p>
<p><b>OUT4.36 – OUT4.39</b> Leakage- Region 1</p>	<p><b>South Staffs</b> Historic data as per APR23. AMP7: Forecast meeting PR19 targets AMP8: Forecast data as per water balance in CW5. AMP9: Reductions in line with meeting our WRMP reductions and Environment Act targets, linear profile. 50% leakage reduction by 2050 from 2017/18 baseline. We are stretching our AMP8 position in line with our customer engagement, and so our PR24 plans go beyond the level of the reduction in the WRMP.</p>
<p><b>OUT4.40 – OUT4.43</b> Leakage-Region 2</p>	<p><b>Cambridge</b> Historic data as per APR23. AMP7: Forecast meeting PR19 targets AMP8: Forecast data as per water balance in CW5. AMP9: Reductions in line with meeting our WRMP reductions and Environment Act targets, linear profile. 50% leakage reduction by 2040 from 2017/18 baseline. We are stretching our AMP8 position in line with our customer engagement, and so our PR24 plans go beyond the level of the reduction in the WRMP.</p>
<p><b>OUT4.44 -OUT4.52</b> Per capita consumption - Company level</p>	<p>PCC at company level is the sum of the 2 regional figures, detailed below.</p>
<p><b>OUT4.53 – OUT4.61</b> Per capita consumption - Region 1</p>	<p><b>South Staffs</b> Historic data as per APR23. AMP7 &amp; AMP8: Due to the impact of Covid (see appendix SSC18) we are not forecasting to hit our existing PR19 targets for PCC. We have rebased our forecasts and 2025/26 starting point for the next period to be more realistic based on the current levels of PCC and the expected impacts of increased metering and other water efficiency activity. The levels of consumption for households are included in our water balance projection in table CW5 and, in conjunction with leakage and the other elements of the water balance, align to our expected DI totals. However our level of reduction is in line with WRMP position and we are still on track to meet the Environment Act interim and 2050 targets. AMP9: Reductions in line with meeting our WRMP reductions and Environment Act targets, linear profile. DYAA PCC of 110lpd by 2050 from 2019/20 baseline.</p>
<p><b>OUT4.62 – OUT4.70</b> Per capita consumption -Region 2</p>	<p><b>Cambridge</b> Historic data as per APR23. AMP7 &amp; AMP8: Due to the impact of Covid (see appendix SSC18) we are not forecasting to hit our existing PR19 targets for PCC. We have rebased our forecasts and 2025/26 starting point for the next period to be more realistic based on the current levels of PCC and the expected impacts of increased metering and other water efficiency activity. The levels of consumption for households are included in our water balance projection in table CW5 and, in conjunction with leakage and the other elements of the water balance, align to our expected DI totals. However our level of reduction is in line with WRMP position and we are still on track to meet the Environment Act interim and 2050 targets. AMP9: Reductions in line with meeting our WRMP reductions and Environment Act targets, linear profile. DYAA PCC of 110lpd by 2050 from 2019/20 baseline.</p>
<p><b>OUT4.71-OUT4.78</b> Business demand- company level</p>	<p>Business demand at company level is the sum of the 2 regional figures, detailed below.</p>
<p><b>OUT4.75-OUT4.78</b> Business demand- region 1</p>	<p>Historic data as per APR23.</p>

	<p>AMP7&amp;8: The figures in this table are taken directly from CW5 water balance and the reduction profile is aligned to the WRMP but rebased to reflect current starting position and to ensure the overall water balance DI figure is appropriate.</p> <p>AMP9: In alignment with the 9% reduction by 2038.</p>
<p><b>OUT4.79-OUT4.82</b> <b>Business demand-region 2</b></p>	<p>Historic data as per APR23.</p> <p>AMP7&amp;8: The figures in this table are taken directly from CW5 water balance and the reduction profile is aligned to the WRMP but rebased to reflect current starting position and to ensure the overall water balance DI figure is appropriate. In contrast to SST region, the CAM WRMP has business demand growth considerably positive and so the 9% reduction profile has been included but from a growing demand, resulting in an increase in demand post efficiency activity. This is reflected in the % target calculation as a negative.</p> <p>AMP9: In alignment with the 9% reduction by 2038.</p>
<p><b>OUT4.83-OUT4.85</b> <b>Serious pollution incidents</b></p>	<p>We have never had a serious pollution incident historically in either category, and are forecasting the same going forward.</p>
<p><b>OUT4.86-OUT4.89</b> <b>Discharge pollution incidents</b></p>	<p>We have completed this data with actual data from 2019/20. Going forward we aspire to zero failures.</p>
<p><b>OUT4.90-OUT4.96</b> <b>Mains Repairs</b></p>	<p>We reported splits of reactive and proactive bursts from 2020/21 onwards.</p> <p>The mains length is aligned to CW6 and the 2030 forecast is at the same average growth rate.</p> <p>We have forecast our burst mains performance at the same level of improvement as in our PR19 target, so a continuation of the PR19 reducing glidepath into AM8. We assumed the same percentage change also into AMP9 at 7% per AMP.</p> <p>The average split between reactive and proactive bursts has been the starting point for future forecasts, but we have assumed that due to the impacts of leakage detection and improved smart monitoring the proportion of proactive repairs increases compared to the reactive repairs.</p>
<p><b>OUT4.97-4.99</b> <b>Unplanned outage</b></p>	<p>We have completed these lines with data from 2020/21 onwards when the existing performance commitment came into operation.</p> <p>These tables are completed using the rebased performance commitment which adjusts the historic values due to the removal of exclusions from the definition.</p> <p>PWPC is forecast to be the same as the end of AMP8, for AMP9, as we are not aware at this stage of any further changes.</p>
<p><b>OUT4.100-OUT4.120</b> <b>Water and waste combined</b></p>	<p>Calculations based on above lines.</p>

## OUT6

OUT6 has been completed using the outputs of the ODI performance models for 2023/24 and 2024/25, see separately supplied models.

Note that these values are in 2017/18 prices, as per the output of the above spreadsheets.

## OUT7

OUT7 has been completed with Ofwat's supplied marginal benefit rates as per the centralised research results. We have assumed the benefit sharing factor is 70% as per the specified outputs from that study.

We have populated enhanced outperformance thresholds for supply interruptions and leakage, set at the current normalised industry frontier level.

- For supply interruptions this is 02:21 mm:ss.
- For leakage this is based on industry frontier for leakage per property per day, converted back to an SSC leakage level in Ml/d and then to a percentage to be compatible with the units in the Ofwat definition. This is 59% in SST and 69% in CAM.

We have not included enhanced outperformance levels for PCC, as the impact of Covid means the sector data is widely variable and we do not know where the frontier level is best represented.

## OUT8

OUT8 has been completed using the outputs of the ODI performance models for 2023/24 and 2024/25, see separately supplied models.

## OUT9

Our general approach for OUT9 is to directly review 90% of our land (by area) for this table, and apportioned the remaining land across the sealed surface, open habitat and tree/canopy categories as our smaller sites are mostly operational sites.

All land appears only in one categorisation, and if covered by two categories it appears in the first relevant line category. As the table is to zero decimal places, we have provided extra decimal place in the information below.

Line Reference	Commentary
OUT9.1	Our total company owned land is 8.3km <sup>2</sup> .
OUT9.2	Our Blithfield reservoir site makes up 63% of our company owned land at 5.3km <sup>2</sup> . Of this site, 4.6km <sup>2</sup> is SSSI, as shown at the below link. <a href="https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1003858&amp;SiteName=&amp;countyCode=39&amp;responsiblePerson=&amp;SeaArea=&amp;IFCAArea=">https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1003858&amp;SiteName=&amp;countyCode=39&amp;responsiblePerson=&amp;SeaArea=&amp;IFCAArea=</a> We have 2 additional smaller sites with SSSI status: Fowlmere, and Hayley Green. Total value 4.7km <sup>2</sup>
OUT9.3	None.
OUT9.4	None.
OUT9.5	Although we have plans for behind the meter solar PVs and PPA agreements, there are small scale in AMP8 . Total value > 1km <sup>2</sup> .
OUT9.6	Limited long term tenancies. Total value 0.2km <sup>2</sup> .
OUT9.7	Approximately 10 sites with short term tenancies. Total value 1.0km <sup>2</sup>
OUT9.8	None.
OUT9.9	None.
OUT9.10	Our Chelmarsh reservoir is our 2 <sup>nd</sup> largest site, at around 1.15km <sup>2</sup> . The reservoir itself is standing water. Total value 0.5km <sup>2</sup>
OUT9.11	None that has not been included in above lines.
OUT9.12	Estimated sealed surfaces at our sites Total value 0.4km <sup>2</sup>
OUT9.13	Estimated trees and woodland cover. Total value 0.4km <sup>2</sup>
OUT9.14	None
OUT9.15	Estimated open habitats. Total value 1.1km <sup>2</sup>
OUT9.16	Land managed through NERC Habitat/Species own land (annual)
OUT9.17	Land managed through: River Restoration (cumulative) INNS management own land (cumulative) PEBBLE grants (cumulative) Tree and hedge planting (cumulative) Catchment Measures (annual)
OUT9.18	None.



## OUT10

This table is for underlying data for the bespoke commitments for other companies, so we do not need to complete.