
PR24

NORTHUMBRIAN
WATER *living water*

ESSEX & SUFFOLK
WATER *living water*

SUPPLEMENTARY TABLE COMMENTARY

NES_COM10



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1. SUP1A AND 1B

• ***An explanation of any changes in reporting methods / assumptions that have led to a material change in reported figures.***

There are no changes to methods in reporting.

• ***An explanation of any material year-on-year variations. Companies should also include more detailed evidence in relation to line items that are used as cost drivers in PR24 cost assessment including:***

• ***Customer numbers – average during the year (SUP1A.1 to SUP1A.9);***

• ***Property numbers – average during the year (SUP1A.10 to SUP1A.16);***

PR24 forecasts are derived from the WRMP24 demand forecast under a PR24 Business Plan Scenario. For water customers the WRMP base year forecast is 2021/22, and for wastewater customers base year forecast is 2022/23, any step changes seen in the first year of the forecasts will be due to the 2022/23 APR being different to those forecasted for 2022/23.

Our property and population growth forecasts are different between the WRMP24 and the PR24 Business Plan. This is to follow the separate guideline requirements for the WRMP and the Business Plan with regards to population and property forecasting.

Please refer to our WRMP:

- NW Demand Forecast WRMP24 Revised draft Technical Report
- ESW Demand Forecast Revised WRMP24 Technical Report for more detailed information on how we have forecast our properties
- Methodology, PR24 Forecasting, Demand, PCC, Population & Property report

for more detailed information on how we have forecast the separate property and populations.

SUP1A

Lines 10-44

APR data included for 2022/23.

Increases in customers to measured households and non-households (and subsequent decrease to unmeasured household and non-household properties and population) is due to the increase in measured customers over

the forecast under our metering programme of compulsory metering in ESW and enhanced optant metering in NW.

Residential water only customers: decrease in 2023/24 due to forecasting from a 2021/22 base year, then properties increase across the planning period. From 2024/25 residential water customer has an average increase of ~4,120 properties each year.

Residential wastewater only customers: increase in 2023/24 and has an average increase of ~1,123 properties each year.

Residential water and wastewater only customers: decrease in 2023/24 due forecasting from a 2021/22 base year, then increase across the planning period. From 2024/25 residential water and wastewater customer has an average increase of ~4,091 properties each year.

Total residential customers: increase in 2023/24 and continues to increase on average by ~9,334 properties per year, resulting in a 3% growth overall by 2029/30.

Business water only customers: increase in 2023/24 and continue to increase on average ~384 properties per year.

Business wastewater only customers: decrease slightly in 2023/24 by 54 properties however we then see growth return in 2026/27 which results in an average of ~57 properties per year.

Due to the different start date for the wastewater forecast (22/23) from the WRMP demand forecast (21/22) this produces a difference in total wastewater customers for the forecasted years. This caused an issue for this table in particular for business measured wastewater customers as it produced a negative number as one forecast was less than the other. To rectify this we reassigned some void business wastewater only customers to business measured wastewater only customer to ensure a negative value wasn't submitted in this table.

Business water and wastewater only customers: increase in 2023/24 and continue to increase on average ~667 properties per year.

Where companies identify a property as uneconomic to bill, further detail of their assessment approach for identifying properties as uneconomic to bill.

SUP1B – We do not report any properties in the category uneconomic to bill therefore zeros have been entered into our tables.

Where properties are recorded as unbilled 'other', further explanation of the reasons for these properties remaining unbilled.

Our unbilled households (total 42) are made up of historic agreements with employees for free supplies and company official households. This is forecast to remain flatlined, with the same numbers as APR 22/23 used.

Our unbilled non-households (total 407) are our operational and office sites which are not in CMOS. This is because it would not make sense for us to bill ourselves for these sites. This is forecast to remain flatlined, with the same numbers as APR 22/23 used.

An explanation of their approach to calculating the non-resident population (wastewater) reported in line SUP1A.18.

Domestic/foreign over-night visitor sub-populations (reported as non-resident population) are considered to sit outside the Census definition of 'usual resident' population, whilst potentially contributing to the water/wastewater-using population within each Water Company's geographical area of operation. Whilst the majority of water use associated with visitor populations is likely to be captured through water meters at the homes of friends and relatives, at tourist sites, in hotels and in other types of commercial accommodation, it is important to quantify the potential scale of visitor population impacts upon WRZ demand.

These are included in Edge Analytics' hidden and transient population estimates and calculated from the 'Great British tourism survey' and 'International passenger survey'. (For more information on Edge Analytics' hidden & transient methodology please refer to their methodology document which can be provided upon request.) The data is split between VFR (visiting friends and relatives), Business visits and holiday visits. To consider the potential level of counter flow of visitors, three scaling factors have again been applied to the visitor-night estimates, scaling the net effect to 10% (Low), 50% (Medium) and 100% (High).

NWG has selected a medium scaling factor for foreign visits due to the increase in these this year as a result of Covid-19 restrictions easing¹. A high scaling factor has been applied to domestic overnight visits with demand for UK staycations remaining strong in 2022².

These populations are flat lined across the forecast.

• An explanation of their approach to calculating any non-resident population (water) reported in lines SUP1A.19 to SUP1A.21.

Non-resident population is not applicable for water – we do not apply any non-resident population to our PCC calculation.

• Property numbers – at end of year (SUP1B.1 to SUP1B.11). This should include a comparison of forecasts with historical growth rates. In addition, companies should include an explanation of any scenarios / assumptions used to forecast property growth.

PR19 growth, in line with the WRPG (Environment Agency, 2017a) requirement, we used a local authority Plan housing growth evidence from all local authorities and has selected the Plan-based scenario. This forecast scenario was used in both the WRMP19 and PR19 property and population growth forecasts.

For the PR24 Business Plan an ONS trend population and property growth scenario has been selected in line with PR24 guidance. We have selected a ONS 2018 scenario with medium growth. This is an ONS 2018-based Principal sub-national projection (SNPP) using updated mid-year estimates from 2021 Census data, with a five-year history (2013–2018) to derive local fertility and mortality assumptions and a medium long-term UK net international migration assumption of +150k p.a. for the UK in total.

For the WRMP24 guidance requires plans to be underpinned by evidence on Local Plan housing growth for those Local Planning Authorities (LPA). The Housing Plan scenario is a housing-led scenario, with growth underpinned by each local authority's Local Plan housing growth trajectory. Following the final year of local authority data, projected housing growth in non-London areas returns to the ONS-14 & ONS-16 long-term annual growth average by 2050. For London Boroughs, housing growth returns to the GLA Central scenario long-term annual average by 2050.

¹ [Share of Britons taking holidays by destination 2022 | Statista](#)

² [Demand for UK staycations remains strong in 2022 \(holidaycottages.co.uk\)](#)

The below table shows the PR19 forecasted growth for residential new homes compared to the reported data in the APRs. We are seeing a slow recovery in new homes since 2020, for 2022/23 the build rate here does not show a full recovery however a number of new builds are now included in their respective NAV forecasts and will not show in our new connections.

New Homes	2018/19	2019/20	2020/21	2021/22	2022/23
PR19 Forecast	17,256	17,919	18,469	18,257	17,712
Actual APR	15,014	15,367	12,016	13,816	13,083

Lines 49-61

APR data included for 2022/23.

Resident population: which includes household and non-household population, decreases in 2023/24 due to forecasting from a 2021/22 base year, the reported population in 2022/23 was higher than forecasted. The reason for this is APR 2022/23 uses a housing plan population scenario which resulted in a higher population to that used when forecasting from 2021/22 base year using an ONS trend population. Population increases on average by 8,305 per year for water population and 4,307 on average for wastewater, a 1% increase from 2022/23.

Non-resident population (wastewater), see above comment. Non-resident population (water) is not applicable we do not apply any non-resident population to our PCC calculation.

Household population: decreases in 2023/24 due to forecasting from a 2021/22 base year, the reported population in 2022/23 was higher than forecasted. The reason for this is APR 2022/23 uses a housing plan population scenario which resulted in a higher population to that used when forecasting from 2021/22 base year using an ONS trend population. Household population increases on average by 7,712 per year for water, a 1% increase from 2022/23.

SUP1B

The 2022/23 properties are those reported at year end. We have forecasted metering from 2022/23, that all new meters will be AMI capable. AMI active meters increase over time when we have forecast these meters will have the appropriate communications networks in place.

Lines 11-21

APR data included for 2022/23.

Please refer to:

- Methodology, PR24 Forecasting, Demand, PCC, Population & Property report
- NW Demand Forecast WRMP24 Revised draft Technical Report
- ESW Demand Forecast Revised WRMP24 Technical Report

for more detailed information on how we have forecast the separate property and populations.

Total new residential properties connected in year: New domestic meters installed will all be AMI capable, if they are installed in a live network the meters will be AMI active. From 2022/23 we have forecasted 61,803 additional smart meter installations.

Total new residential properties connected in year: New commercial meters installed will all be AMI capable, if they are installed in a live network the meters will be AMI active. From 2022/23 we have forecasted 3,640 additional smart meter installations.

Residential properties billed at year end: Residential properties billed at year end include unmeasured properties which have a meter installed, this could be via our WAM or compulsory metering programme. These properties will have meters fitted but are still billed via the unmeasured process. Over time some of these properties will become billed by the meter. These metering figures will also include the meter replacement strategies whereby we are replacing basic meters with smart capable and smart active meters.

See our metering strategy for further information.

Residential properties unbilled at year end: Our unbilled households are made up of historic agreements with employees for free supplies and company official households. This is forecast to remain flatlined, with the same numbers as APR 22/23 used.

Residential void properties at year end: Void properties have been calculated in the company demand forecast using a percentage of properties are estimated each year to be empty/void. The forecast will use an average of historic reported data which for this table results in unmeasured properties void percentage of between 3.8%-4% and measured percentage of 3.2%.

Total connected residential properties at year end: decrease in 2023/24 due to forecasting from a 2021/22 base year, the reported properties in 2022/23 was higher than forecasted. The reason for this is APR 2022/23 uses actual property growth which resulted in a higher number of properties to that used when forecasting from 2021/22 base year using an ONS trend growth. Household growth increases on average by 6,576 per year for water through to 2030.

Business properties billed at year end: On average we estimate growth of 344 per year for business properties, however there is a step change between 2022/23-2023/24 due to the high number of void properties reported in the 2023 APR which has not be included in the forecasted figures due to the demand forecast used having been rebased to 2021/22 APR data.

Business properties unbilled at year end: Our unbilled non-households are our operational and office sites which are not in CMOS. This is because it would not make sense for us to bill ourselves for these sites. This is forecast to remain flatlined, with the same numbers as APR 22/23 used.

Business void properties at year end: Void properties have been calculated in the company demand forecast, a percentage of properties are estimated each year to be empty/void. The forecast will use an average of historic reported data which for this table results in unmeasured properties void percentage of between 20%-35% and measured percentage of 13%-14%. We assume with the introduction of smart metering the number of unmeasured void properties will reduce over time.

Total connected business properties at year end: Total connected business properties are the sum of properties billed and void properties at year end, both of which have been forecasted using the same methodology.

Total connected properties at year end: These are the sum of residential and business properties which results in a 2% increase from 2022-2030

• ***An indication of the quality of data provided.***

Confidence Grades applied in APR are as follows:

Confidence Grade Population: A2

Confidence Grade Properties: A1

2. SUP11

In calculating the weight for each cost category, we have excluded business rates and service charges. The rationale behind this is that these are not input costs and therefore cannot be reduced or improved with frontier shift. Business rates take up 6% of total cost and service charges also take up 6% of total cost. The total cost includes water + wastewater + retail base and enhancement.

For base, we have used 2021-22 base opex data from our Finance Team to calculate the weightings of each cost category (2022-23 was unavailable in sufficient time for the business plan governance). For capex, we have used Mott MacDonald's water sector basket of goods.

Mott MacDonald's water sector basket of goods include all the typical costs in capital expenditure for the water sector. According to Mott, the basket balance has not changed for several years so it is applicable for the current period. The basket includes items for labour and plant, equipment, material.

For enhancement costs, we were not able to split the data into each cost category at this stage in planning. We have used Mott MacDonald's basket for capex. For opex, we have assumed the ratios will be the same as base.

The AMP8 total enhancement numbers used for RPE weightings have changed. We have done a sensitivity check with the final numbers and the change in the weightings are immaterial. We have, therefore, kept the previous weightings as these have been used in multiple areas.

For bioresources, the shares of each cost category in AMP8 will be different from the current ones. We are spending below upper quartile level and we plan to spend at UQ in AMP8. Most of this increase in costs will be in capital maintenance. We have used Mott MacDonald's capex shares for this increase. This means that there will be little change to energy, chemicals, and other costs while there will be a relatively big increase in labour and material, plant and equipment costs compared to 2021-22.

The detail of how RPEs are calculated is in appendix A3 – Costs (NES04) section 3.5 and Economic Insight's RPE calculation file. We are proposing RPE for labour only.

For Input Price Inflation (IPI) of labour, we have used the OBR's long term forecast of average earning growth. Our CPIH forecast comes from the May 2023 Monetary Policy Report. To get RPE for year t, we have used Ofwat's formula :

$$RPE_t = (1+IPI_t)/(1+CPIH_t)-1$$

Our RPEs for wholesale and retail are the same.

We can provide the working file for the weightings and the working file for RPEs from Economic Insight on request.

3. SUP14

We explain our approach to customer engagement in appendix A7 – Customer and stakeholder engagement (NES08). We provide our qualitative and quantitative affordability and acceptability research with our business plan submission (NES49 and NES50), which explain full details of the research as required in *PR24 and Beyond: customer engagement policy – a position paper* (Feb 2022). We also [published all of our research](#) for PR24.

We note that we have complied with further information issued by e-mail by Simon Compton at Ofwat in relation to SUP14.

We note that our appendix A7 – Customer and stakeholder engagement (NES08) contains an explanation of the (very few) areas where we have not been able to follow the guidance, and why.

4. SUP15

We provide a full explanation of our approach to affordability in our appendix [A1 – Affordability](#) (NES02). This explains our assessment of the affordability challenges and how we expect these to change; our current approach; and our evolved approach for 2025-30.