Developer Services
PR24 data tables commentary

October 2023

Developer Services PR24 Data Table Commentary

Developer Services Summary

We have developed this narrative and commentary for the Developer Services data tables in our PR24 business plan submission to outline our assumptions supporting the data and to expand on our principles and decisions we have made as we work towards AMP8.

We have aligned to the guidance put forward in the final methodology as well as the PR24 table guidance, and we have also considered the recent Ofwat consultations, including; D-Mex, Environmental Incentives and Charges within our PR24 business plan for development services. In particular, we have reflected changes to price controls, removal of income offset, included a proposed scheme for environmental incentives and also carried out further analysis on our costs to ensure we can unbundle sufficiently to enhance our transparency in AMP8 charges.

We are driven to enable sustainable growth, including enabling competition within the market, as part of our company purpose to bring environmental and social prosperity to the region we serve. Having reviewed our market share and current levels of penetration for particular Developer Services within our business plan, we are confident that our plan allows for further competition and have reflected significant levels of both Self-lay Provider (SLP's) and New Appointee and Variations (NAV's) growth within our business plan. Notably we have assumed NAV delivery to 20% for all new connections for our AMP8 plan. This reflects the existing strength we see in this market and our confidence in its sustainability.

The removal of the Developer Services Reconciliation Mechanism (DSRA) and the challenges this brings with ensuring sufficient revenue for those services that will remain within the price control, requires our plan to carefully balance predicted growth with managing risk to our network. We have proposed a two sided price control deliverable (PCD) to help mitigate this impact on expenditure for growth at water recycling centres.

Throughout AMP7, and despite the impact of 'Covid', we have seen significant levels of growth within the Anglian Water region, with approximately 25,000 new properties connected every year. We continue to see growth in properties being connected through SLPs and NAVs in our region. Our developer services customers continue to face challenges in the construction industry, not only with the increase in material costs and labour, but also the economic shocks of rising interest rates and inflation impacting demand and supply. This has resulted in uncertainty and the predictability of growth within our region. As a result, we have chosen to use an Office for National Statistics (ONS) forecast of growth for our AMP8 business plan.

Our plan has been driven from the outputs of the Drainage and Wastewater Management Plan (DWMP), which in turn has fed into our delivery of the Long Term Delivery Strategy (LTDS). We have used the long-term lens of the LTDS to consider ways to expand on our DWMP, setting ambitious targets to further improve our performance in these areas.

DS1e - Developer services revenue (English companies)

The data provided in table DS1e of the PR24 data tables represents the Developer Services revenue collected in Year 3 (2022-23) of AMP7 as reported in table 2E from our 2022-23 APR submission and a forecast of the expected revenue we will collect in the remaining 2 years of AMP7 and the full 5 years of AMP8. The base year used for our data is 2022-23 and all AMP8 data is inclusive of frontier shift and real price effect adjustments according to the expenditure tables.

The data provided in this table has been shown in the column labelled 'Fully recognised in income statement' for all of AMP7 and AMP8 data.

The final two years of AMP7 revenue has been projected using our AMP7 forecast for plot connections which can be seen in table DS4. This forecast is based on our current rate of connections that we are experiencing in the Anglian Water region. All AMP8 revenue has been forecast based on an ONS level of growth, which is shown in table DS4. Due to the different approach used in forecast data between AMP7 and AMP8, there is a difference in the allowed collected revenue due to the difference in plot connections.

The commentary below explains the assumptions made to complete the table as well as indicating where any changes of reporting principles between AMP7 and AMP8 or price controls is shown.

We are confident that the data reported in this table reflects the allowed revenue that corresponds with the Developer Services activities carried out in the Anglian Water region and is reflective of the charges set in our Developer Services Charges Arrangements.

All revenue forecasted for AMP8 is based on AMP7 market share and competition levels observed in the Anglian Water region up to and including Year 3 (2022/23). We indicated an increase of NAV market share as we transition into AMP8, consistent with our observed levels of NAV activity this AMP. We have therefore assumed NAV penetration to 20% for AMP8 due to the consistent increase and ambitious plans our NAV's have shared with us to increase their market share as we move into AMP8. We will continue to monitor this closely, and our collaboration with our NAV customers and respond to any changes to this forecast and accommodate any further increase to this market share.

We have outlined our assumptions and further explanation on expenditure in tables DS2e for water, DS3 for wastewater, as well as tables CW11 and CWW11 for diversions, which correlates to the revenue, as outlined within DS1.

Developer services revenue - water network+ Lines 1e.1 - 1e.15

The data in this section relates to all water revenue associated with Developer Services activities and is linked to the expenditure costs shown in tables DS2e and CW11.

DS1e.1-3 - Water Diversions

The data in this section relates to the revenue we expect to receive for water diversions including; Section 185 of the Water Industry Act 1991 (S185), New Roads and Street Works Act 1991 (NRSWA) and other non-S185 diversions.

For non-S185 and NRSWA services, the revenue is subject to a cost sharing mechanism and therefore the allowed revenue compared to the costs we expend in our expenditure tables shown in CW11. In AMP7 our average cost recovery sharing was shown to be 82% chargeable. We have therefore used this 82% principle across AMP8 revenue. Other non-S185 revenue remains 100% recoverable.

Some variances between revenue and expenditure may be presented due to the difference in reporting years when costs were consumed and revenue was collected for these services.

Our forecast for diversion revenue is driven by our expected diversion activity. For AMP8 we have used two different models to understand this; linear projection, based on prior AMP diversion activity, and AMP7 base level activity model. Our linear projection gave a slightly higher rate for diversion activity than our AMP7 base models and therefore we decided to use the linear model for NSWRA diversions that we felt were harder to predict, but also could be of significant value should we be requested to undertake this service. For S185 and other non-S185 diversions, we have chosen to use our AMP7 base model as we feel we have better insight into these diversion types and are more confident that the forecast is in line with AMP7 levels.

DS1e.4 - Water Infrastructure Charges

The data in this section relates to water infrastructure charges revenue in relation to the water network reinforcement expenditure shown in table DS2e.

Our AMP7 revenue is linked to the reported data in table 2E of our 2022-23 APR submission. The remaining years of AMP7 is based on the revenue we expect to collect based on our likely infrastructure charges against our AMP7 plot connection forecast shown in table DS4. This revenue is reflective of our network reinforcement costs for water across AMP7.

Our AMP8 revenue is directly linked to our expected network reinforcement costs in AMP8. Our AMP8 methodology for expenditure is explained in section DS2e and is based on an ONS level of growth. This revenue includes for the expenditure associated with any network reinforcement scheme planned to be constructed in AMP8 as well as a modelling and pressure logger programme which will enable us to assess risk and determine the most efficient time to invest on the network to manage growth. Our modelling has been assessed taking into account the likely risk profile produced as part of the pressure logger programme for growth.

We have profiled our revenue evenly across AMP8 , in line with our plot connection forecast, as per table DS4. This also ensures consistency and manages expectations for charges for our Developer Services customers.

DS1e.5 – Water Other Price Control Revenue

Our data is blank for AMP7 as we do not currently report any data within this line on the APR.

For AMP8, we have separated our reporting for asset payments to clearly demonstrate our expected residual asset payment profile into AMP8 for legacy schemes that started prior to 2020. We do not expect there will be any further asset payments needed past Year 2 of AMP8.

DS1e.7 – Water Income Offset

Income offset payments are expected to continue through AMP7 and into AMP8 for schemes that have started, and may have ongoing onsite properties to be developed and connected as we move forward into AMP8. We observed a fairly long 'tail' of connections under previous charging regimes as we moved to the new charging rules in 2018 and again when the income offset was applied to infrastructure charges.

In line with Ofwat recommendation, we are not entering into any new agreements where an income offset is offered and will be owed in AMP8.

We expect that there will only be a small volume of schemes that are eligible for income offset payments in AMP8 that have outstanding properties to be connected and have provided a value for this based on our 2022-23 income offset payment in our Developer Services Charges Arrangements.

DS1e.8-9 – Water Environmental Incentive Scheme

The data in this section relates to AMP8 only as Anglian Water do not have an existing AMP7 environmental incentives scheme that we intend on collecting any revenue for.

The data provided relates to incentives and surcharges that we have modelled, in-line with the Ofwat environmental incentive consultation and our subsequent response to this consultation. We have created a series of models that are flexible and adaptable to any future guidance or charges principles relating to environmental incentives issued prior to the start of AMP8.

Our models include for a tiered approach that includes an option for water neutrality. In this instance, as we stated in our environmental incentive consultation response, we believe that both water and wastewater benefits can be sought using innovation to achieve certain levels of the tiered approach. For this reason, and that it is not possible to predict, or split the benefits for water or wastewater, we have chosen only to populate the data in this water section of the DS1e table.

We have split our incentive and surcharges evenly over AMP8 in line with property connection forecast in table DS4.

Our surcharge data allows for a small administration and audit charge that Anglian Water feel will be needed to facilitate the scheme across AMP8 and should be recoverable from our developer customers.

DS1e.11 – Water Connection Charges

The data in this section relates to all AW delivered water connections (both onsite and offsite), non-standard connections (including those requiring larger than standard pipe sizes, or longer length of connection pipework), internal meter fits and administration and associated charges for SLP delivered connections.

Our revenue is based on expenditure as per our current AMP7 connection forecast shown in table DS4. Variances in our revenue may exist compared to our expenditure shown in table DS2e due to some schemes being linked to schemes paid under previous charging regimes.

For AMP8, our revenue is based on expenditure linked to an ONS level of growth as shown in table DS2e. The revenue for these connections is linked to both those that do and do not require a new water main.

Note that for AMP7, this data includes some services that we have changed our reporting principles for AMP8 and will show some of the existing connection revenue in line DS1e.13 in AMP8.

DS1e.12 - Water Requisitioned Mains

The data in this section relates to all AW delivered water mains including fire mains and fire hydrants as required.

For AMP7 our revenue is based on expenditure as per our current AMP7 connection (and associated meterage of new water mains laid) as per table DS4. Variances in our revenue may exist compared to our expenditure shown in tale DS2e due to some schemes being linked to schemes paid under previous charging regimes.

For AMP8, our revenue is based on expenditure linked to an ONS level of growth as shown in table DS2e.

DS1e.13 - Water Other Non-price Control Revenue

Our data for AMP7 is blank, the exception being a reversal of invoice reported in year 3 (2022/23) as per table 2E of our 2022-23 APR submission. We do not expect to normally report data in this line in AMP7.

For AMP8, we have split our revenue reporting to reflect the guidance for expenditure as per table DS2e. The data in this section relates to administration/fees associated with SLP delivered water mains, replacement connections (enlargement only), any offsite site specific requisitioned mains and NAV bulk connections (both for those that do and do not require a new water mains).

Developer services revenue - wastewater network+ Lines 1e.16 - 1e.29

The data in this section relates to all wastewater revenue associated with Developer services activities and is linked to the expenditure costs shown in tables DS3 and CWW11.

DS1e.16, 17 & 26 - Wastewater diversions

The data in this section relates to the revenue we expect to receive for wastewater diversions including; S185, NRSWA and other non-S185 diversions.

For S185 and NRSWA services, the revenue is subject to a cost sharing mechanism and therefore the allowed revenue compared to the costs we expend in our expenditure tables shown in CWW11. In AMP7 our average cost sharing was shown to be 82% chargeable. We have therefore used this 82% principle across AMP8 revenue. Other non-S185 revenue remains 100% recoverable.

Some variances between revenue and expenditure may be presented due to the difference in reporting years when costs were consumed and revenue was collected for these services.

Our forecast for diversion revenue is driven by our expected diversion activity. For AMP8 we have used two different models to understand this; a linear projection, based on prior AMP diversion activity, and AMP7 base level activity model. Our linear projection gave a slightly higher rate for diversion activity than our AMP7 base models and therefore we decided to use the linear model for NSWRA diversions that we felt were harder to predict, but also could be of significant value should we be requested to undertake this service. For S185 and other non-S185 diversions, we have chosen to use our AMP7 base model as we feel we have better insight into these diversion types and are more confident that the forecast is in line with AMP7 levels.

DS1e.18 - Wastewater Infrastructure Charges

The data in this section relates to wastewater infrastructure charges revenue in relation to the wastewater network reinforcement expenditure shown in table DS3.

Our AMP7 revenue is linked to the reported data in table 2E of our 2022-23 APR submission. The remaining years of the current AMP is based on the revenue we expect to collect based on our likely infrastructure charges against our AMP7 plot connection forecast shown in table DS4. This revenue is reflective of our network reinforcement costs for wastewater across AMP7.

Our revenue is directly linked to our expected network reinforcement costs in AMP8. Our methodology for expenditure is explained in section DS3 and is based on an ONS level of growth. This revenue includes for the expenditure associated with any network reinforcement scheme planned to be constructed in AMP8 as well as a modelling and a flow monitor programme which will enable us to assess risk and determine the most efficient time to invest on the network. Our investment profile is based on a current view of risk however during AMP8 these locations will be reviewed using additional information gathered through the flow monitoring programme and to reflect developments in the market.

We have profiled our revenue evenly across AMP8 due to the unpredictable growth forecast and have therefore spread our revenue associated to properties connected evenly, as per table DS4.

DS1e.19 - Wastewater Other price control revenue

We do not expect any data to be populated in these lines. There is an exception for Year 3 (2022-23) where this has a value as we have populated to reflect the reporting principles as per table 2E of our 2022-23 APR submission. The reporting

principles for the data contained in this line has changed for the remainder of AMP7 into AMP8 and will be reported against DS1e.25 as this relates to requisitioned mains.

DS1e.21 – Wastewater Income Offset

This is not applicable as Anglian Water do not offer Income Offset for wastewater services, this is therefore blank for all years.

DS1e.22-23 – Wastewater environmental Incentives

Although Anglian Water offer an environmental incentive for wastewater, we did not have any uptake of this in Year 3 (2022-23) and therefore have not reported any incentives for this line. For consistency, we have profiled the remaining years of AMP7 in line with the reported data for Year 3 of AMP7.

For AMP8 we do not intend to offer a separate wastewater environmental incentive as per our commentary in section DS1e.8-9 where we expect wastewater benefits as a result of significant water re-use or water neutrality.

DS1e.25 – Wastewater receipts for on-site work

The data in this section relates to revenue associated in accordance with the following services; wastewater new connections (including S104 adoptions and vacuum sewer connections) and requisitioned sewers.

For AMP7 our revenue is based on expenditure as per our current AMP7 connection forecast, as per table DS4. Note that for AMP7, some of the requisitioned sewer revenue receipts has been reported in other price control lines such as DS1e.19.

For AMP8, our revenue is based on expenditure linked to an ONS level of growth as shown in table DS3.

DS1e.27 – Wastewater Other Non-price Control Revenue

For AMP7 this data is blank with the exception of Year 3 (2022-23) which has been included as per table 2E of our 2022-23 APR submission. We do not expect revenue for the remainder of AMP7 and therefore is left blank.

For AMP8 we have included revenue associated with services relating to our ancillary growth functions, including those within pre-development and the facilitation of our Adaptive Growth Model tool which will provide fast responses to simple growth enquiries.

DS2e Developer services expenditure - water (English companies)

The data provided in table DS2e of the PR24 data tables represents the Developer Services water expenditure reported in Year 3 (2022-23) of AMP7, reflected in table 4N from our 2022-23 APR submission , a forecast of the expected expenditure we will incur in the remaining 2 years of AMP7 and the full 5 years of AMP8. The base year used for our data is 2022-23 and all AMP8 data is inclusive of frontier shift and real price effect adjustments.

The tables contain Developer Services activity for services inside the Water Network+ price control, including infrastructure network reinforcement, and also the site-specific services that will be removed from the price control in AMP8.

The data in this table has been split between Capex and Opex. Using AMP7 trend, and prior year APR reporting, we have allowed for approx. 2% Opex for water service expenditure which we expect to be collected as revenue. We have maintained an Opex allowance within our business plan to reflect services where an asset was not created, for example; aborted schemes.

The final two years of AMP7 expenditure has been projected using our AMP7 forecast for plot connections which can be seen in table DS4. The forecast is based on our current rate of connections that we are achieving in the Anglian Water region. All AMP8 expenditure has been forecast based on an ONS level of growth, which is shown in table DS4. Due to the different approach used in forecast data between AMP7 and AMP8, there is a difference in the expenditure totals due to the difference in forecast plot connections.

The commentary below contains explanations to any assumptions made to complete the table as well as indicating where any changes of reporting principles between AMP7 and AMP8 or price controls is shown.

We are confident that the data reported in this table is accurate and reflects the actual expenditure that Developer Services activities carried out in the Anglian Water region and is reflective of our charges set our in our Developer Services Charges Arrangements.

All expenditure for AMP8 is based on AMP7 market share and competition levels observed in the Anglian Water region up to and including Year 3 (2022-23).

Water developer services expenditure (excluding diversions)- price control Lines 2e.1 - 2e.2

DS2e.1 - Water Infrastructure Network Reinforcement

The data in this section relates to our water expenditure related to the provision or upgrading of network assets to provide for new customers with no net deterioration of existing levels of service. This expenditure data is directly related to our charges published in our Developer Services Charges Arrangements infrastructure charges.

For AMP7 our expenditure is based on our current AMP7 profile based on trend levels of growth, as per table DS4. Throughout AMP7 we have balanced investment carefully against levels of risk in the network and worked closely with developer timescales to ensure we are investing at the most economically viable stage. We expect to see consistent activity for network reinforcement expenditure as we work towards the end of the AMP.

In AMP8 we aim to plan our investment carefully in line with our growth forecast, as well as gaining efficiency through a more optimised investment structure across the AMP, modelled through our Copperleaf C55 financial optimisation tool.   Our AMP8 methodology for network reinforcement expenditure is explained below. Our expected reinforcement expenditure for AMP8 is based on ONS levels of growth within the Anglian Water region. We have used a hydraulic modelling approach, utilising Anglian Water AMP7 growth modelling practices   , to determine a level of network reinforcement associated with the proposed level of ONS growth. Our expenditure plan has been developed from a bottom up, scheme by scheme, approach to meet the ONS growth requirements. Our expenditure is based on the current view of risk, with solutions driven by the DWMP optioneering, we will monitor throughout AMP8 to ensure investment is prioritised effectively.

Within our AMP8 modelling, we have also allowed for a pressure logger programme for growth. This will allow us to accurately monitor network asset health in specific locations in our network where we believe growth will impact within the AMP. We can use this data to design and construct our network upgrades as efficiently as possible, in line with developer timescales and expectations, as well as gaining further insight on the effects of growth on our network to help maximising asset longevity and investment opportunities.

Our modelling was carried out using a dataset based on local authority growth forecasts sourced from Glenigan Limited, who we have used for a number of years to provide insight and market analysis information. We used this data and overlaid an ONS growth projection to determine a final dataset that we used to create investments for our PR24 business plan.

Our PR24 investments are managed within our investment optimisation and delivery planning tool, C55, which uses AMP8 cost models (determined using 2022-23 base data) to provide estimated costs for these schemes. The C55 tool applies the relevant adjustments to our modelled investments, including Frontier Shift and Real Price Effect. We have used C55 to optimise our investments and provide the greatest efficiency profile for our expenditure and as such has applied a cost curve to the data. This can be seen in the AMP8 data profile as a bell curve across the 5 years.

Water developer services expenditure (excluding diversions) - non-price control
Site specific costs for developments that do not require new water mains Lines 2e.3 - 2e.7

The data in these sections relates to water site-specific developer services activities that are currently regulated within the Water Network+ price control for AMP7, but are due to be removed from the price control in AMP8.

Due to the change in regulation principles between AMP7 and AMP8, there are notable differences between the data reported for these services between the AMPs. Notably, the split between services 'with' or 'without' an associated water mains, and the allocation in 'other'.

Using the principles from the final methodology and PR24 guidance, along with further Ofwat consultations received, we have populated our PR24 data tables differently from AMP8. The assumptions and explanation for our AMP8 approach is provided below.

For each of the sections below, we have used Year 3 (2022-23) base cost data and market share analysis to forecast costs and proportional split of work types in AMP8. We have multiplied these costs against our expected ONS forecast, as per table DS4, to build up our expenditure allowance for AMP8 water developer service activity. Using our C55 investment optimisation and delivery planning tool, we have applied the relevant adjustments. We have profiled our expenditure evenly across the 5 years of AMP8 to reflect the relatively stable pattern of developer services activity observed in the Anglian Water region.

In line with the proposals Ofwat have set out in their recent charges consultation, we aim to use the below splits of developer services work types to help further unbundle costs and therefore enhance our transparency and cost-reflectivity in future year Developer Services Charges Arrangements.

DS2e.3 - Water New Connections (Not Requiring New Mains)

The data in this section relates to expenditure for water new connections that do not require a new water mains, including; AW delivered offsite water connections, non-standard connections (including those requiring larger than standard pipe sizes, or longer length of connection pipework), internal meter fits and administration and associated charges for SLP delivered offsite connections.

DS2e.4 - Other Water Site-specific Developer Services Activities (Not Requiring New Mains)

The data in this section relates to the expenditure for other Water site-specific developer services activities that do not require a new water mains, including; Replacement connections (enlargement only) and NAV bulk connections that do not require a new water mains. Note that other types of replacement connections, such as lead replacement, has been allowed for elsewhere in the PR24 business plan, under maintenance.

DS2e.5 - Water New Connections (Requiring New Water Mains)

The data in this section relates to the expenditure for water new connections that do require a new water mains, including; AW delivered onsite water connections, non-standard connections (including those requiring larger than standard pipe sizes, or longer length of connection pipework) and administration and associated charges for SLP delivered onsite connections.

DS2e.6 - Water Requisitioned Mains

The data in this section relates to expenditure for water requisitioned mains, including; fire mains and fire hydrants delivered by Anglian Water.

DS2e.7 - Other Water Site-specific Developer Services Activities (Requiring New Water Mains)

The data in this section relates to the expenditure for other Water site-specific developer services activities that do require a new water mains, including; administration/fees associated with SLP delivered water mains, any offsite site specific requisitioned mains and NAV bulk connections that do require a new water mains.

DS3 Developer services expenditure – wastewater (English and Welsh companies)

The data provided in table DS3 of the PR24 data tables represents the Developer Services Wastewater expenditure reported in Year 3 (2022-23) of AMP7, reflected in table 4O from our 2022-23 APR submission, a forecast of the expected expenditure we will incur in the remaining 2 years of AMP7 and the full 5 years of AMP8. The base year used for our data is 2022-23 and all AMP8 data is inclusive of frontier shift and real price effect adjustments.

The tables contain Developer Services activity for services inside the Wastewater Network+ price control, including infrastructure network reinforcement which have been driven by the outputs of the DWMP, as well as the site-specific services that will be removed from the price control in AMP8.

The data in this table has been split between Capex and Opex. Using AMP7 trend, and prior year APR reporting, we have allowed for approximately 2% Opex for water service expenditure which we expect to be collected as revenue. We have maintained an Opex allowance within our business plan to reflect services where an asset was not created, for example; aborted schemes.

The final two years of AMP7 expenditure has been projected using our AMP7 forecast for plot connections which can be seen in table DS4. The forecast is based on our current rate of connections that we are achieving in the Anglian Water region. All AMP8 expenditure has been forecast based on an ONS level of growth, which is shown in table DS4. Due to the different approach used in forecast data for plot connections between AMP7 and AMP8, there is a difference in the expenditure totals due to the difference in forecast plot connections.

The commentary below contains explanations to any assumptions made to complete the table as well as indicating where any changes of reporting principles between AMP7 and AMP8 or price controls is shown.

We are confident that the data reported in this table reflects the actual expenditure that Developer Services activities carried out in the Anglian Water region and is reflective of our charges set out in our Developer Services Charges Arrangements.

All expenditure for AMP8 is based on AMP7 market share and competition levels observed in the Anglian Water region up to and including Year 3 (2022-23).

Wastewater developer services expenditure (excluding diversions) -price control. Lines 3.1 – 3.2 and 3.14 – 3.15

DS3.1-2 – Wastewater Infrastructure Network Reinforcement (Capex & Opex)

The data in these sections relates to our wastewater expenditure related to the provision or upgrading of network assets to provide for new customers with no net deterioration of existing levels of service. This expenditure data is directly related to our charges published in our Developer Services Charges Arrangements infrastructure charges.

For AMP7 our expenditure is based on our current AMP7 profile based on trend levels of growth, as per table DS4. Throughout AMP7 we have balanced investment carefully against levels of risk in the network and worked closely with developer timescales to ensure we are investing at the most economically viable stage. We expect to see consistent activity for network reinforcement expenditure as we work towards the end of the AMP. This upwards trend in AMP7 is due investment in line with developer need and using the analysis from a flow monitoring programme to understand the network.

In AMP8 we aim to plan our investment carefully in line with our growth forecast, as well as gaining efficiency through a more optimised investment structure across the AMP, modelled through our Copperleaf C55 financial optimisation tool. Our AMP8 methodology for network reinforcement expenditure is explained below. Our expected reinforcement expenditure for AMP8 is based on ONS levels of growth within the Anglian Water region. We have used a wastewater modelling approach, utilising Anglian Water AMP7 growth modelling practices , to determine a level of network reinforcement associated with the proposed level of ONS growth. Our expenditure plan has been developed from a bottom up, scheme by scheme, approach to meet the ONS growth requirements. Our expenditure is based on the current view of risk, with solutions driven by the DWMP optioneering, we will monitor throughout AMP8 to ensure investment is prioritised effectively.

Within our AMP8 modelling, we have also allowed for a flow monitor programme for growth. This will allow us to accurately monitor network asset health in specific locations in our network where we believe growth will impact within the AMP. We can use this data to design and construct our network upgrades as efficiently as possible, in line with developer timescales and expectations, as well as gaining further insight on the effects of growth on our network to help maximising asset longevity and investment opportunities.

Our modelling was carried out using a dataset based on local authority growth forecasts sourced from Glenigan Limited, who we have used for a number of years to provide market analysis information. We used this data and overlaid an ONS growth projection to determine a final dataset that we used to create investments for our PR24 business plan. Our Wastewater network reinforcement modelling has been carried out using a methodology consistent with the approach we took in our recent DWMP submission however we refined the risk to growth only to ensure the investment required would not incorporate broader risks. To ensure we provide best value solutions we will consider all risks during solution implementation.

Our PR24 investments are managed within our investment optimisation and delivery planning tool, C55, which uses AMP8 cost models (determined using 2022-23 base data) to provide estimated costs for these schemes. The C55 tool applies the relevant adjustments to our modelled investments, including Frontier Shift and Real Price Effect. We have used C55 to optimise our investments and provide the greatest efficiency profile for our expenditure and as such has applied a cost curve to the data. This can be seen in the AMP8 data profile as a bell curve across the 5 years.

DS3.14-15 - Wastewater Asset Payments (Capex & Opex)

There is no data to be displayed for these lines as we have not captured any wastewater asset payments specifically for AMP7 or AMP8.

Wastewater developer services expenditure (excluding diversions) - non-price control Site-specific developer services - Capex. Lines 3.3-3.9

The data in these sections relates to Wastewater site-specific developer services activities that are currently regulated within the Wastewater Network+ price control for AMP7, but are due to be removed from the price control in AMP8.

Due to the change in regulation principles between AMP7 and AMP8, there are notable differences between the data reported for these services between the AMPs. Notably, the portion of expenditure reported between Requisitioned Sewers and Infrastructure Network Reinforcement.

Using the principles from the final methodology and PR24 guidance, along with further Ofwat consultations received, we have populated our PR24 data tables differently from AMP8. The assumptions and explanation for our AMP8 approach is provided below.

For each of the sections below, we have used Year 3 (2022-23) base cost data and market share analysis to forecast costs and proportional split of work types in AMP8. We have multiplied these costs against our expected ONS forecast, as per table DS4, to build up our expenditure allowance for AMP8 wastewater developer service activity. Using our C55 investment optimisation and delivery planning tool, we have applied the relevant adjustments. We have profiled our expenditure evenly across the 5 years of AMP8 to reflect the relatively stable pattern of developer services activity observed in the Anglian Water region.

In line with the proposals Ofwat have set out in their recent charges consultation, we aim to use the below splits of developer services work types to help further unbundle costs and therefore enhance our transparency and cost-reflectivity in future year Developer Services Charges Arrangements.

DS3.3 & 7 - Wastewater New Connections (Capex & Opex)

The data in these sections relates to wastewater new connections including costs associated with the connection of S102 and S104 sewer adoptions, S106 sewer connections, administration and supervision costs associated with build over/build near and the delivery of vacuum sewer new connections.

DS3.4 & 8 - Wastewater Requisitioned Sewers (Capex & Opex)

The data in these sections relates to wastewater requisitions including costs associated with the delivery of S98 schemes.

DS3.5 & 9 - Other Wastewater Site-specific Developer Services Activities (Capex & Opex)

The data in these sections relates to other wastewater site-specific developer services activities including those related to our ancillary growth functions. For example, those included within pre-development and the facilitation of our Adaptive Growth Model tool which will provide fast responses to simple growth enquiries.

DS4 Developer services - New connections, properties and mains

The data populated as part of table DS4 relates to our actual and forecast growth data. Year 3 (2022-23) of AMP7 is in line with data reported as part of table 4Q of our 2022-23 APR submission. The final two years of AMP7 are based on our AMP7 forecast. Our AMP8 data has been forecast based on an ONS level of growth for total new properties in our region.

We experienced continued growth in our region throughout 2022-23 where the number of new properties connecting to our water network rose by 4% to over 26,000 properties. This included new properties being connected by SLPs and NAVs. SLP and NAV connections were up 24% on Year 2 (2021-22) of AMP7 and accounted for over 50% of the total properties connected.

The number of NAV sites continues to grow in our region for both water and wastewater services, with a further 51 sites granted within Year 3 (2022-23). We saw significant increases in the number of properties being connected by NAVs within the year and continue to monitor NAV activity closely, whilst uplifting our projections for AMP8, within our business plan, to 20% of total property connection volumes.

As part of our engagement with NAV customers, we liaise at pre-development stage through to delivery and post-connection. We are committed to delivering excellent service for our NAV customers first time, every time, to enable NAVs to successfully do business with us to support deliver for the end customer. We collaborate with our NAV customers and work with them to align our growth and forecasting projections through monthly connection reporting, build programmes and early visibility of future sites. This has supported proactive planning on our networks, smarter investment opportunities and joined up solutions that have reduced costs, while providing enhanced sustainable solutions for both water companies. We are now also sharing learning on how we further understand future water resources on NAV sites, data consumption and metering, as well as data sharing provisions for customer billing.

Our developer services customers continue to face challenges in the construction industry, not only with the increase in material costs and labour, but also the economic shocks of rising interest rates and inflation

Connections volume data Lines 4.1 - 4.4

DS4.1 - New Connections (Residential - excluding NAVs)

The data in this section relates to water and wastewater residential property connections that will be served by Anglian Water. The data includes connections delivered by SLPs, but excludes those delivered by NAVs.

DS4.2 - New Connections (Business - excluding NAVs)

The data in this section relates to water and wastewater business property connections that will be served by Anglian Water. The data includes connections delivered by SLPs, but excludes those delivered by NAVs.

DS4.4 - New Connections (SLPs)

The data in this section relates to water and wastewater connections delivered by SLPs. This data forms part of the total reported in line DS4.1.

Properties volume data Lines 4.5 - 4.12

DS4.5 - New Properties (Residential - excluding NAVs)

The data in this section relates to water and wastewater residential property connections that will be served by Anglian Water. The data includes connections delivered by SLPs, but excludes those delivered by NAVs. The data in this section also includes for any internal meters for properties connected as part of a single water connection.

DS4.6 - New Properties (Business - excluding NAVs)

The data in this section relates to water and wastewater business property connections that will be served by Anglian Water. The data includes connections delivered by SLPs, but excludes those delivered by NAVs. The data in this section also includes for any internal meters for properties connected as part of a single water connection.

DS4.8 - New Properties (Residential - Served by NAVs)

The data in this section relates to water and wastewater residential property connections, delivered by NAVs. This data is based on the reported outputs received from the NAVs operating in our region on appointed sites.

DS4.9 - New Properties (Business - Served by NAVs)

The data in this section relates to water and wastewater business property connections, delivered by NAVs. This data is based on the reported outputs received from the NAVs operating in our region on appointed sites.

DS4.12 - New Properties (SLPs)

The data in this section relates to water and wastewater connections delivered by SLPs. This data forms part of the total reported in line DS4.1.

New water mains data Lines 4.13 - 4.14

DS4.13 - Length of New Mains (km) - Requisitions

The data in this section relates to the new mains associated with water requisitions delivered by Anglian Water.

DS4.14 - Length of New Mains (km) - SLPs

The data in this section relates to the new mains associated delivered by SLPs.

DS5 Network reinforcement costs

The data in this table relates to network reinforcement costs for both water and wastewater activities. The data reported for AMP7 Year 3 (2022-23) aligns with table 2J from our reported data from our 2022-23 APR submission. The remaining two years of AMP7 relate to our forecast expenditure as per our growth forecast shown in table DS4. Our AMP8 data all relates to our expenditure as indicated in tables DS2e.1 and DS3.1 which reflects an ONS forecast as shown in table DS4. The base year used for our data is 2022-23 and all AMP8 data is inclusive of frontier shift and real price effect adjustment.

Wholesale water network+ (treated water distribution) Lines 5.1 - 5.4

DS5.1 - Water Distribution and Trunk Mains

The Network Reinforcement investments that we have created as part of our Networks + investment plan have been developed by undertaking a modelled hydraulic assessment and a scheme by scheme build-up of need to ensure that our network is suitable for the expected growth within our region. This gives us a high degree of technical and financial confidence that our investments are fit for purpose and will deliver the expected technical outputs. We have investigated and taken into account how the installation of new water and trunk mains will be integrated into the wider network ensuring that existing customers are not affected or impacted by growth related activities.

DS5.2 - Water Pumping Stations and Storage Facilities

The Network Reinforcement investments that we have created as part of our Networks + investment plan have been developed by undertaking a modelled hydraulic assessment and a scheme by scheme build-up of need to ensure that our network is suitable for the expected growth within our region. This gives us a high degree of technical and financial confidence that our investments are fit for purpose and will deliver the expected technical outputs. As the majority of growth will impact existing assets within the pumping and storage class, we have undertaken detailed analysis to ensure that we have the right capacity within these assets to provide a resilient supply and looked to increase pumping and storage capacity where appropriate.

DS5.3 - Other Water Network Reinforcement Activities

We have no reported value in this row.

Wholesale wastewater network+ (sewage collection) Lines 5.5 - 5.9

DS5.5 - Foul and Combined Systems

Wholesale wastewater network+ (sewage collection) is based on a current view of the highest risks in our network due to growth. Solutions have been modelled and costed in our costing system. Scheme costs are profiled using cost curves. Line DS5.5 shows the costs attributable to foul and combined systems.

DS5.6 - Surface Water Only Systems

Line DS5.6 shows the costs attributable to surface water only systems. This is zero due to all investment being within the foul and combined systems. We have considered that any surface water investment, linked to growth, is part of wider green solutions attributable to the combined foul and surface water sewer network. We do not propose any standalone surface water schemes purely driven by growth. We work with developers at pre-development stage and with the Lead Local Flood Authority (LLFA) with regards to surface water sewers and/or SUDS schemes in relation to new development and growth to ensure they do not increase flood risk to the existing network. We follow the Design and Construction Guidance (DCG) to promote sustainable solutions for any new development through the surface water hierarchy, thereby minimising new surface water flows to existing sewers (foul and combined). By following the processes in the Sewerage Sector Guidance (SSG), we are able to have early influence on the design of new surface water drainage for Growth, through engaging early with Developers and LLFA using our free service of the Pre-Design Strategic Assessment. Hence we do not propose to have any standalone surface water schemes purely driven by new growth.

DS5.7 - Pumping Stations and Storage Facilities

Line DS5.7 shows the costs attributable to pumping station and storage facilities. This is zero due to all investment being within the foul and combined systems.

DS5.8 - Other Wastewater Network Reinforcement Activities

Line DS5.8 shows the costs attributable to Other. This is zero due to all investment being within the foul and combined systems.

DS6 Network reinforcement drivers - potable mains, sewers, pumping stations and pumping capacity

The data in this table relates to the drivers identified in correspondence with the expenditure data displayed in tables DS2e.1, DS3.1 and DS5 for network reinforcement costs for both water and wastewater activities. The data reported for AMP7 Year 3 (2022-23) has been manually collated from our central systems as we do not currently hold this data specifically for current reporting. The remaining two years of AMP7 relate to our forecast expenditure as per our growth forecast shown in table DS4. Our AMP8 data is based on an ONS forecast, as documented in table DS4.

We note that we have only populated data drivers for investment for 'Network Reinforcement' and 'Requisitioned Mains or Sewers', where applicable. We have not populated any data in the sections for 'Resilience', 'Maintenance' or 'Water Quality' as we do not consider these areas are included for growth drivers for network reinforcement costs. In addition, we have allocated our costs only in the 'Full Allocation' section of these tables.

Potable mains Lines 6.1 - 6.4

DS6.1 - Length of new potable mains laid - proportional allocation

Data has been reported in DS6.2 for full allocation.

DS6.2 - Length of new potable mains laid - full allocation

The data in this section relates to the increase in our water network for mains laid due to growth. Year 3 (2022-23) is based on our records for commissioned mains within that financial year. The final two years of AMP7 are based on a projection in line with our AMP7 trend and forecast for network reinforcement growth.

For AMP8, we have projected our total length of network reinforcement required for new growth based on our modelling, as discussed in DS2e.1.

DS6.3 - Length of new potable mains upsized - proportional allocation

No reported or forecast data for upsizing of mains. All data has been reported as new main in section DS6.2.

DS6.4 - Length of new potable mains upsized - full allocation

No reported or forecast data for upsizing of mains. All data has been reported as new mains in section DS6.2.

Sewers Lines 6.5 - 6.8

DS6.5 - Length of new sewers laid - proportional allocation

Data has been reported in DS6.6 for full allocation.

DS6.6 - Length of new sewers laid - full allocation

The data in this section relates to the increase in our wastewater network for sewers laid due to growth. Year 3 (2022-23) is based on our records for commissioned sewers within that financial year. The final two years of AMP7 are based on a projection in line with our AMP7 trend and forecast for network reinforcement growth.

For AMP8, this outlines the additional length of new sewers anticipated based on the current view of risk and investment need within AMP8.

DS6.7 - Length of new sewers upsized - proportional allocation

No reported or forecast data for upsizing of sewers. All data has been reported as new sewers in section DS6.6.

DS6.8 - Length of new sewers upsized - full allocation

No reported or forecast data for upsizing of sewers. All data has been reported as new sewers in section DS6.6.

Pumping stations and capacity (water) Lines 6.9 – 6.14

DS6.9 - New potable water pumping stations built - proportional allocation

Data has been reported in DS6.10 for full allocation.

DS6.10 - New potable water pumping stations built - full allocation

The data in this section relates to the water pumping stations we have constructed due to growth. Year 3 (2022-23) is based on our records for commissioned pumping stations within that financial year. The final two years of AMP7 are based on a projection in line with our AMP7 trend and forecast for network reinforcement growth.

For AMP8, we have projected our new pumping stations forecast to be constructed based on our anticipated new growth, as per our modelling, as discussed in DS2e.1.

DS6.11 - Existing potable water pumping stations upsized - proportional allocation

No reported or forecast data for upsizing existing pumping stations. All data has been reported as new pumping stations in section DS6.10.

DS6.12 - Existing potable water pumping stations upsized - full allocation

No reported or forecast data for upsizing existing pumping stations. All data has been reported as new pumping stations in section DS6.10.

DS6.13 - Additional potable water pumping station capacity installed - proportional allocation

Data has been reported in DS6.14 for full allocation.

DS6.14 - Additional potable water pumping station capacity installed - full allocation

The data here reflects the capacity as per the number of pumping stations reported in line DS6.10.

Pumping stations and capacity (wastewater) Lines 6.15 – 6.20

DS6.15 - New pumping stations built on sewerage network - proportional allocation

Data has been reported in DS6.16 for full allocation.

DS6.16 - New pumping stations built on sewerage network - full allocation

The data in this section relates to the wastewater pumping stations we have constructed due to growth. Year 3 (2022-23) is based on our records for commissioned pumping stations within that financial year. The final two years of AMP7 are based on a projection in line with our AMP7 trend and forecast for network reinforcement growth.

We have not forecast any pumping stations in our AMP8 data as per our outputs from the modelling that was undertaken to assess the network reinforcement needed as part of the projected growth. We have prioritised green solutions where possible which has limited the amount of flow through our network and the associated need for pumping.

DS6.17 - Existing pumping stations upsized on sewerage network - proportional allocation

No reported or forecast data for upsizing existing pumping stations. All data has been reported as new pumping stations in section DS6.16.

DS6.18 - Existing pumping stations upsized on sewerage network - full allocation

No reported or forecast data for upsizing existing pumping stations. All data has been reported as new pumping stations in section DS6.16.

DS6.19 - New pumping station capacity installed on sewerage network - proportional allocation

Data has been reported in DS6.20 for full allocation.

DS6.20 - New pumping station capacity installed on sewerage network - full allocation

The data here reflects the capacity as per the number of pumping stations reported in line DS6.16.