SCOTTISH WATER

Water Industry Commission for Scotland (WICS) ANNUAL RETURN 2024/25

Section E – Operating Costs and Efficiency

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Section E– Operating Costs and Efficiency

1 Table E3 – PPP project analysis

1.1 Overview

Table E3 and E3a provide details of the Public-Private Partnership (PPP) major wastewater assets that are managed under seven separate PPP concession contracts.

Upon its creation in April 2002 Scottish Water inherited nine concession contracts which had been entered into with nine private sector consortia (PFI Companies) by its three predecessor authorities (i.e., East of Scotland Water, North of Scotland Water Authority and West of Scotland Water Authority). During the year ending 31 March 2023 two PPP concessions, Highland and Aberdeen, expired and passed to Scottish Water control. Scottish Water acts as the client body to the seven remaining private sector consortia that provide wastewater and sludge treatment and disposal services to Scottish Water.

Under the terms of the PPP concession contracts the private sector has either upgraded or built new wastewater and sludge treatment assets, and, in certain circumstances, network assets (e.g. sewers and pumping stations) in order to meet Scottish Water's legal obligations in respect of the treatment and disposal of these products. These consortia are also responsible for the operation and maintenance of these assets over the lifetime of each contract.

The assets that form part of each contract are detailed in Table 1 below.

Table 1: PPP schemes.

PPP Scheme	Wastewater Treatment Works
Moray Coast	Lossiemouth, Buckie, Banff/Macduff
Tay	Hatton
Levenmouth	Levenmouth
AVSE	Seafield, Newbridge, East Calder, Blackburn, Whitburn
Daldowie(1)	Daldowie Sludge Treatment Centre
Dalmuir	Dalmuir
MSI (Ayrshire)	Meadowhead, Stevenston, Inverclyde

Explanatory notes:
(1) Daldowie is a sludge treatment centre only.

1.2 Performance Trends

E3.1 Annual average resident connected population

Population values in this commentary section are given in '000s to match the table values. The resident population connected to Public/Private Partnership (PPP) assets, as calculated by the Data Transformation Dept, has increased from 1,891.616 in AR24 to 1,897.591 in AR25.

These changes are shown by wastewater treatment works (WwTW) in Table *2* below. Reductions are reported for Tay (Hatton), Moray Coast (Buckie), AVSE (Blackburn and Whitburn) and MSI (Meadowhead, Stevenston and Inverclyde) totalling 1897.591. The overall change in population results in an increase of 5.975 population connected. The small variances within individual schemes are driven by changes in census data and are consistent with those seen in previous years.

Table 2: Resident connected population change AR24 to AR25

E3_Column	E3_Pfi_Area_Name	E3_Stw_Name	AR24 E3.1	AR25 E3.1	Difference
30	Tay	Hatton	192.931	192.658	-0.273
80	Moray Coast	Lossiemouth	37.124	37.153	0.029
90	Moray Coast	Buckie	13.395	13.306	-0.089
100	Moray Coast	Banff/Macduff	10.517	10.534	0.017
110	AVSE	Seafield	622.31	626.608	4.298
120	AVSE	Newbridge	25.04	25.193	0.153
130	AVSE	East Calder	76.484	77.283	0.799
140	AVSE	Blackburn	18.755	18.642	-0.113
150	AVSE	Whitburn	13.017	12.944	-0.073
160	Levenmouth	Levenmouth	114.708	114.507	-0.201
170	Dalmuir	Dalmuir	437.97	440.506	2.536
180	Daldowie	Daldowie	0	0	0.000
190	MSI	Meadowhead	188.905	188.526	-0.379
200	MSI	Stevenston	67.839	67.574	-0.265
210	MSI	Inverclyde	72.621	72.157	-0.464
			1891.616	**1897.591**	**5.975**

Properties connected to the wastewater network are identified in the Geospatial Information system (GIS) and associated to their catchments. Population figures are then calculated from latest available National Records of Scotland (NRS) 2018 projections to 2043 using the same methodology as for tables A2 and A3. This method, as calculated by the Data Transformation Dept, is unchanged from AR24.

E3.2 Annual average non-resident connected population

The annual average non-resident connected population, as calculated by the Data Transformation Dept, has been taken from the assessment and distribution of holiday populations described in the commentary for tables A2 and A3.

The total reported population is 18.237, which is an increase of 1.945 from AR24.

The movement in the non-resident population is due to an increase in occupancy rates across all accommodation types, especially Guest House & B&B which has a 17% increase.

The largest percentage increase for a single catchment is Banff / Macduff with a 48% rise in the non-resident population. This is mainly driven by an increase in the number of tourist accommodations from 26 in AR24 to 45 in AR25. Other catchments show an increase in the number of accommodations also, but to a lesser extent

Table 3: Average Non-resident connected population change AR24 to AR25

E3_Column	E3_Pfi_Area_Name	E3_Stw_Name	AR24 E3.2	AR25 E3.2	Difference
30	Tay	Hatton	1.964	2.166	0.202
80	Moray Coast	Lossiemouth	0.882	0.905	0.023
90	Moray Coast	Buckie	0.548	0.586	0.038
100	Moray Coast	Banff/Macduff	0.275	0.408	0.133
110	AVSE	Seafield	4.953	5.586	0.633
120	AVSE	Newbridge	0.183	0.241	0.058
130	AVSE	East Calder	0.253	0.246	-0.007
140	AVSE	Blackburn	0.11	0.121	0.011
150	AVSE	Whitburn	0.038	0.043	0.005
160	Levenmouth	Levenmouth	1.281	1.366	0.085
170	Dalmuir	Dalmuir	3.689	4.101	0.412
180	Daldowie	Daldowie	0	0	0.000
190	MSI	Meadowhead	1.415	1.649	0.234
200	MSI	Stevenston	0.344	0.427	0.083
210	MSI	Inverclyde	0.357	0.392	0.035
			16.292	**18.237**	**1.945**

E3.3 Population equivalent of total load received

The population equivalent (PE) of total load, as calculated by the Data Transformation Dept, has increased by 0.1% (see Table 4 below).

Table 4: Population equivalent of total load received change AR24 to AR25

E3_Column	E3_Pfi_Area_Name	E3_Stw_Name	AR24 E3.3	AR25 E3.3	Difference
30	Tay	Hatton	239.105	237.472	-1.633
80	Moray Coast	Lossiemouth	44.789	44.058	-0.731
90	Moray Coast	Buckie	36.862	26.576	-10.286
100	Moray Coast	Banff/Macduff	12.592	12.173	-0.419
110	AVSE	Seafield	807.681	795.903	-11.778
120	AVSE	Newbridge	30.243	31.539	1.296
130	AVSE	East Calder	104.511	110.095	5.584
140	AVSE	Blackburn	21.902	21.853	-0.049
150	AVSE	Whitburn	14.293	13.991	-0.302
160	Levenmouth	Levenmouth	193.524	203.564	10.040
170	Dalmuir	Dalmuir	546.697	557.826	11.129
180	Daldowie	Daldowie	0	0	0.000
190	MSI	Meadowhead	222.722	221.524	-1.198
200	MSI	Stevenston	80.835	81.087	0.252
210	MSI	Inverclyde	85.008	84.494	-0.514
			2440.764	**2442.155**	

The movement in total load received for the works is consistent with previous years except for:

- Moray Coast (Buckie) which has reduced by around 12% due to a reduction in Trade Effluent loads at the WwTW.

Lines E3.4-E3.8 - Scope of Works

A breakdown of the scope of the PPP works is detailed in Table 5 and has not changed from AR24.

Table 5: Sewerage Information (E3.4).

PPP Works	Scope of works
Lossiemouth	Includes 7 pumping stations and extensive pumping mains.
Buckie	Includes 12 pumping stations and extensive pumping mains.
Banff/Macduff	Includes 10 pumping stations and extensive pumping mains.
Hatton	Includes 16 pumping stations and associated pumping mains/gravity sewers.
Levenmouth	Includes 8 pumping stations and associated pumping mains and gravity sewers.
Seafield	Includes 7 pumping stations, the Esk Valley trunk sewerage network with associated pumping and a number of storm water works with overflows.
Newbridge	Includes 2 pumping stations, a section of gravity sewer and a storm water works with overflow.
Whitburn	Includes 1 pumping station located within the site boundary.
Daldowie	Daldowie
Inverclyde	Includes a short section of gravity sewer.

E3.5 - Sewage Treatment

All PPP schemes have sewage treatment with the exception of Daldowie as it is exclusively a Sludge Treatment Centre (STC).

E3.6 - Sludge Treatment

Permanent sludge treatment facilities for the PPP works are detailed in Table 6. These have not changed from AR24.

Table 6: Permanent sludge treatment facilities (E3.6).

PPP Permanent Sludge treatment facilities	Details
Lossiemouth	Indigenous sludge, imports from Buckie and Banff/Macduff plus Scottish Water imports.
Hatton	Indigenous sludge plus Scottish Water imports.
Levenmouth	Indigenous sludge plus Scottish Water imports.
Seafield	Indigenous sludge, imports from Newbridge, East Calder, Blackburn and Whitburn, plus Scottish Water imports.
Newbridge	Occasional treatment of indigenous sludge, occasional imports from East Calder, Blackburn and Whitburn depending on operational status of Seafield WwTW.
Dalmuir	A permanent sludge treatment facility centrifuges some of the indigenous sludge in order to limit the pass forward of Dalmuir sludge to Daldowie STC to a maximum ferric content of 2 tonnes/day.
Daldowie	Receives sludge from Dalmuir and Scottish Water wastewater treatment works (Daldowie, Shieldhall, Paisley, Dalmarnock and Erskine) by sludge pipeline and from Scottish Water tankered imports.
Meadowhead	Indigenous sludge plus imports from Stevenston and Inverclyde.

E3.7 - Terminal Pumping Station

Terminal Pumping Stations are pumping stations that are the final point on the forward flow path from a sewerage network into a wastewater treatment works and may include both pumping of all/partial Flow to Full Treatment (FFT) flows or stormwater flows to storm tanks and/or storm outfalls. The Terminal Pumping Station may form part of the sewerage network (i.e., be remote from the WwTW) or may be associated with a WwTW depending on actual location and power supply source. It is not a Combined Pumping Station or a Stormwater Pumping Station.

The works detailed in Table 7 below include incoming terminal pumping stations as part of the PPP schemes. Maximum capacity (l/s) of these terminal pumping stations, excluding standby capacity, is given in brackets. These have not changed from AR24.

Table 7: Works with terminal pumping stations (E3.7).

PPP Works	Details
Lossiemouth	Duffus Junction (33 l/s), Moycroft (300 l/s).
Buckie	Nook (84 l/s), Shipyard (70l/s), Buckie WwTW (13 l/s).
Banff/Macduff	Craigfauld (552l/s), Banff/Macduff WwTW (222 l/s).
Hatton	South Balmossie (1,563 l/s), West Haven (110 l/s), Inchcape Park (241 l/s).
Levenmouth	All flow delivered via terminal pumping stations; Methil M2 (125 l/s), Leven (212 l/s), Buckhaven (133 l/s), Levenmouth WwTW inlet FFT flows (1,650 l/s), Levenmouth WwTW inlet storm flows (2,347 l/s).
Seafield	A proportion of total flow is delivered via Marine Esplanade Terminal PS (1420 l/s).
Newbridge	A proportion of total flow is delivered via the Ratho Sewer Terminal PS (196 l/s).
Whitburn	A proportion of total flow is delivered via the Harrison Sewer Terminal PS (45 l/s).

E3.8 – Other

There are no works in the category 'Other.'

E3.9–E3.14 - Effluent consent standards

Where an effluent consent standard (**Lines E3.9-3.13**) includes both Controlled Activities Regulations (CAR) and Urban Wastewater Treatment Directive (UWWTD) elements the stricter standard is given in the Annual Return. The effluent consent standards, based on data from the current SEPA licences, are summarised as:

- Suspended solids consent (**Line E3.9**) – All CAR
- BOD consent (**Line E3.10**) – All UWWTD, except Newbridge, East Calder, Blackburn and Whitburn which are CAR parameters
- COD consent (**Line E3.11**) – All UWWTD
- Ammonia consent (**Line E3.12**) – All CAR
- Phosphate consent (**Line E3.13**) – All CAR

At Newbridge, East Calder, Blackburn and Whitburn the CAR consent is expressed as 'mean concentration of total phosphorus of any series of instantaneous samples taken at regular but randomised intervals in any period of 12 months'.

E3.14 - Compliance with effluent consent standards

BOD, COD, SS, ammonia, and phosphate are reported for each works, based on the total number of sample results and exceedances (upper and lower tier) for sanitary determinands (to the exclusion of other parameters that may be included in the SEPA consent). Where an effluent consent standard includes both CAR and UWWTD standards, both sets of samples are used for the calculation of compliance.

Percentage compliance is calculated as:

(1-(total number of failures/total number of samples)) x 100

The Operator Self-Monitoring (OSM) results for the period ending 31 December 2024, downloaded from Power BI, have been taken as the definitive data source and, as such, it has been assigned a confidence grade of A1.

Failures and exceedances at the PPP sites are listed in Table 8. A comparison of these is shown in the subsequent two tables (Table 9 and Table 10) which show an increase in the number of exceedances from 2 to 4 and no failures in either year.

The SEPA Licences generally contain two tiers of numerical standards. A 'Failure' can be considered as a gross breach of Licence (the Upper Tier) which would result in a Failing classification for the year ahead. An 'Exceedance' is a lower grade breach, a sample result that sits between Lower and Upper Tier boundaries. The Licence permits a small number of these breaches without affecting regulatory compliance. Any result below the Lower Tier limit is a compliant sample.

Table 8: Exceedances and Failures 2024.

Site	CAR/UWWTD standards	Parameter	Exceedance (E) / Failure (F)	
Levenmouth	UWWTD	BOD	E	24/01/2024
Inverclyde	UWWTD	BOD	E	04/07/2024
Inverclyde	UWWTD	COD	E	04/07/2024
Buckie	UWWTD	COD	E	19/07/2024

Table 9: Exceedances 2023 vs 2024.

Site	CAR/UWWTD standards	Parameter	2023 (AR24)	2024 (AR25)
Buckie	UWWTD	COD		1
Levenmouth	UWWTD	BOD		1
Seafield	UWWTD	BOD	1	
Inverclyde	UWWTD	BOD	1	1
Inverclyde	UWWTD	COD		1

Table 10: Failures 2023 vs 2024.

	CAR/UWWTD standards	Parameter	2023 (AR24)	2024 (AR25)
*			-	-

* No Failures recorded in 2023 or 2024, therefore the table has been left intentionally blank

E3.15-E3.21 Treatment works category

Information contained in the lines on treatment works category (**Lines E3.15-E3.21**) is extracted from the project agreements and is given a confidence grade of A1. These have not changed from AR24.

- Primary (**Line E3.15**) – all plants except Lossiemouth, Buckie, Banff/ Macduff, Levenmouth and Meadowhead
- Secondary activated sludge (**Line E3.16**) - includes all plants except Blackburn
- Secondary biological (**Line E3.17**) - Blackburn
- Tertiary A1 (**Line E3.18**) – summarised in Table 11
- Tertiary A2 (**Line E3.19**) – summarised in Table 12
- Tertiary B1 (**Line E3.20**) - no plants in this category
- Tertiary B2 (**Line E3.21**) – summarised in the Table 13

Table 11: Tertiary A1 – Activated sludge process (E3.18).

Site	Treatment Process Details
East Calder	Nitrifying filters
Whitburn	Nitrifying filters
Dalmuir	Nitrifying filters

Table 12: Tertiary A2 – Activated sludge process (E3.19).

Site	Treatment Process Details
Levenmouth	Densadeg lamella settlement tanks
Newbridge	Low head loss sand filters
East Calder	Disc filters
Whitburn	Low head loss sand filters.
Meadowhead	Biofors tertiary filter.

Table 13: Tertiary B2 – biological sludge process (E3.21).

Site	Treatment Process Details
Blackburn	Disc filters.

E3.22 to E3.32 - Sewerage data

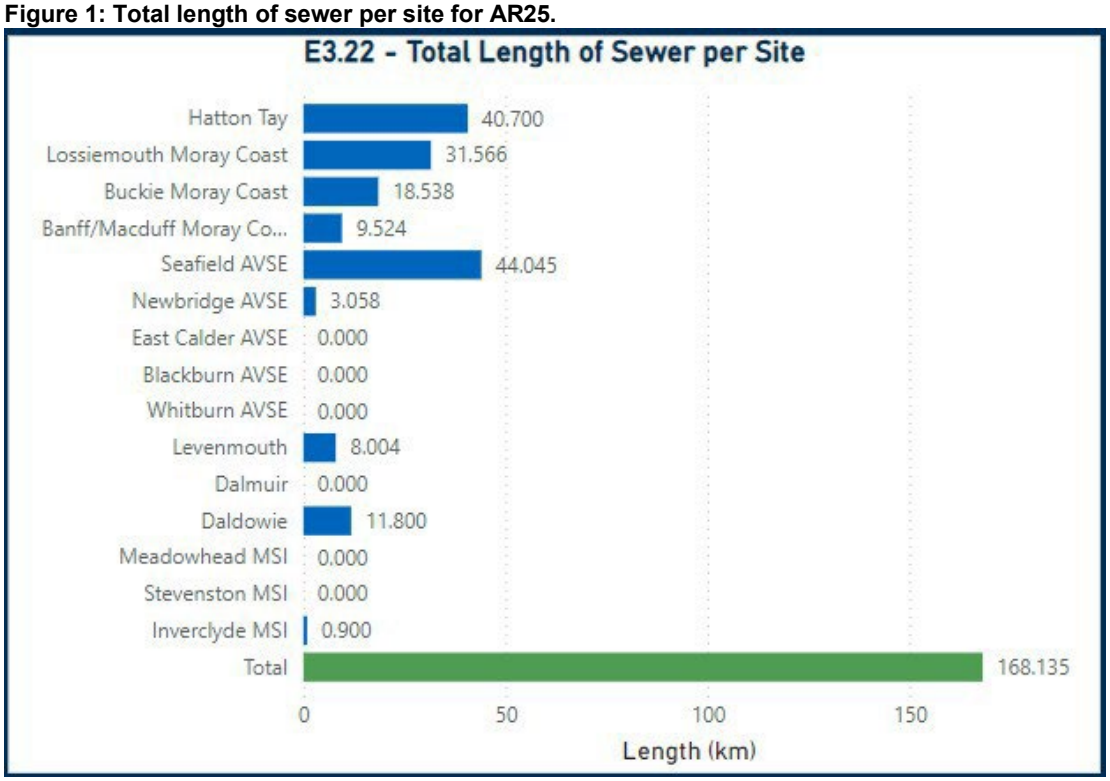
The sewerage data includes all sewerage (sewers, pumping stations, rising mains, outfalls and long sea outfalls).

Data sources include Concession Contracts, Operator O&M manuals, Operator asset inventories, Scottish Water Geospatial Information system (GIS), as built drawings and SEPA consents. Pump capacity (kW) has been obtained from motor drive rating, not the pump duty point. The total length of outfalls, unless noted otherwise, is included in the overall length of sewers/pipelines. Where terminal pumping stations are located remotely from a wastewater treatment works, the length of rising main connecting the terminal pumping station and wastewater treatment works is included. Further detail capturing the Total length of sewer per site has been included in Figure 1 below.

E3.22 Total length of sewer

The total length of outfalls, unless noted otherwise, is included in the overall length of sewers/pipelines. Where terminal pumping stations are located remotely from a wastewater treatment works, the length of rising main connecting the terminal pumping station and wastewater treatment works is included. Further detail capturing the Total length of sewer per site has been included in Figure 1 below.

Figure 1: Total length of sewer per site for AR25.



No change from AR24.

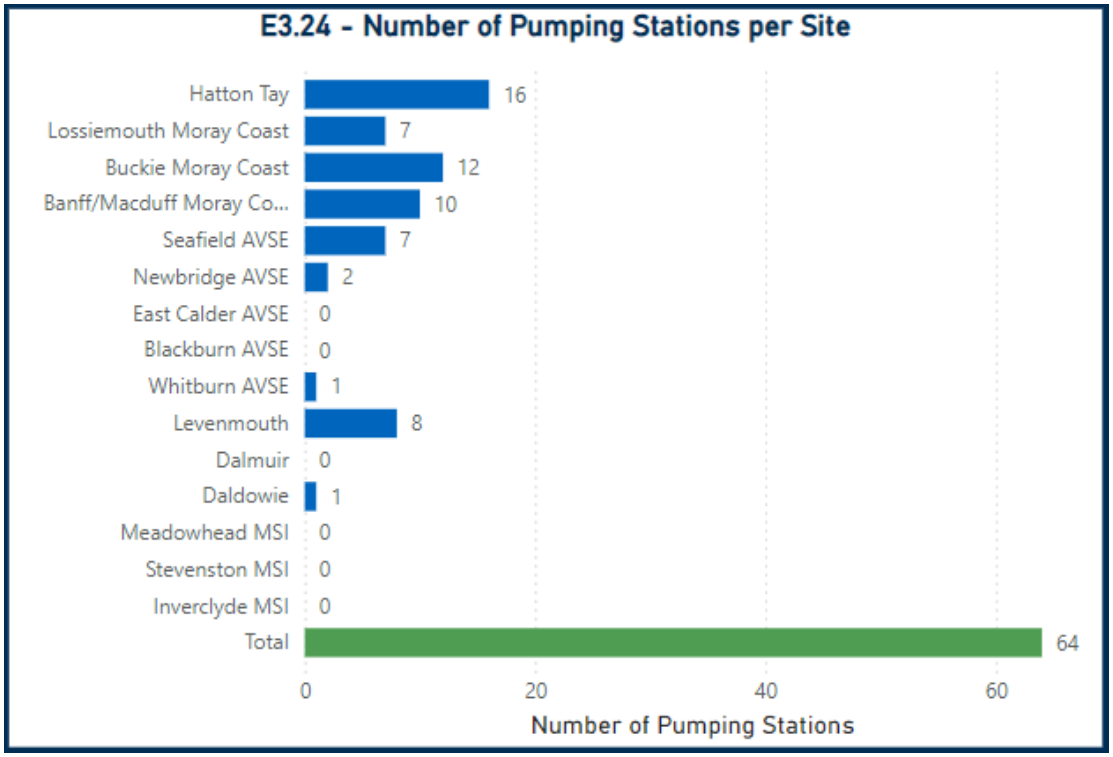
E3.23 Total length of critical sewer

All PPP sewers (including relief sewers, rising mains and CSO outfalls) are deemed to be critical therefore the commentary for **Line E3.22** also applies to this line.

E3.24 Number of pumping stations

Includes stormwater, combined and terminal pumping stations. Interstage and final effluent pumping stations forming part of a wastewater treatment plant are not included. Further information capturing the number of pumping stations per site has been included within Figure 2. No change from AR24.

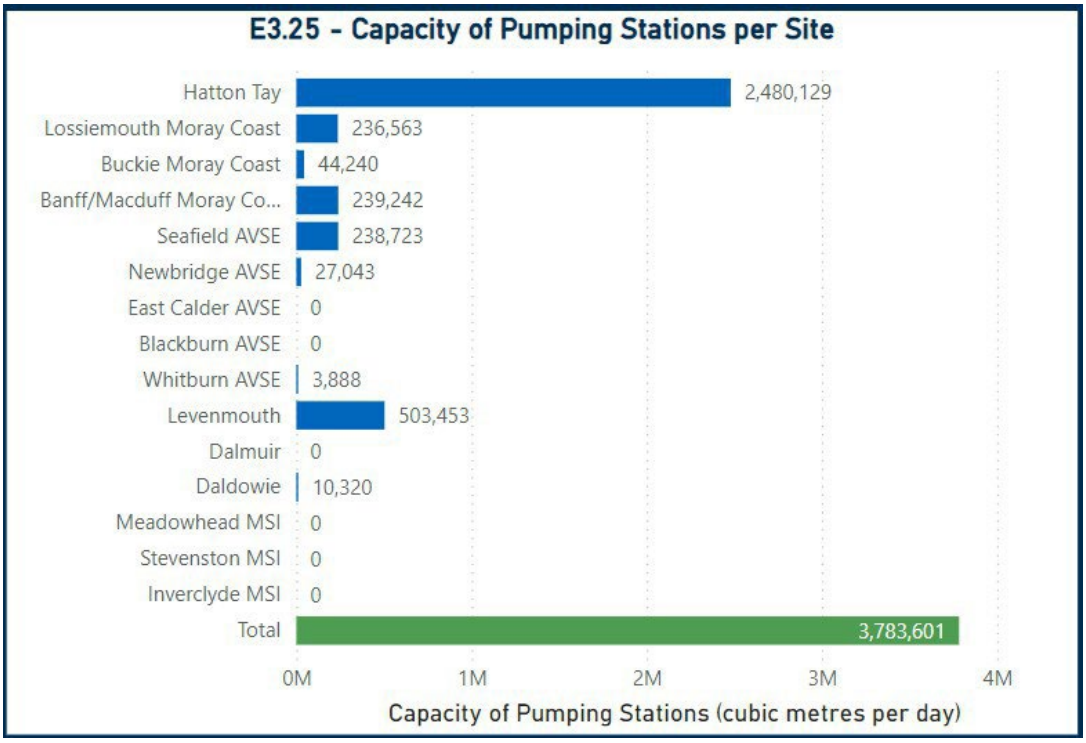
Figure 2: Number of pumping stations per site for AR25.



E3.25 Capacity of pumping stations (m^3/d)

Includes stormwater, combined and terminal pumping stations. Maximum flow pumped forward per day. This excludes the capacity of standby pumps. No change from AR24. Further information capturing the Capacity of pumping stations per site has been included within Figure 3 below.

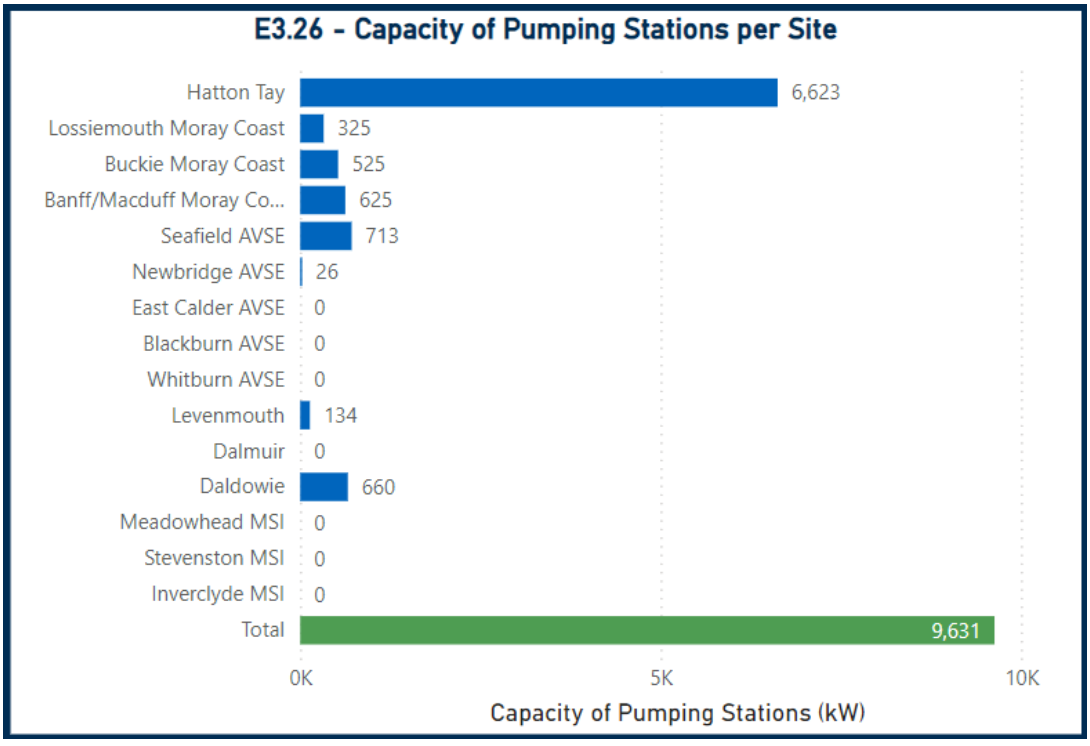
Figure 3: Capacity (m_3/d) of pumping stations per site for AR25.



E3.26 Capacity of pumping stations (kW)

Includes stormwater and combined pumping stations, but not terminal pumping stations. Includes capacity of standby pumps. No change from AR24. Further information capturing the capacity of pumping stations per site has been included within Figure 4.

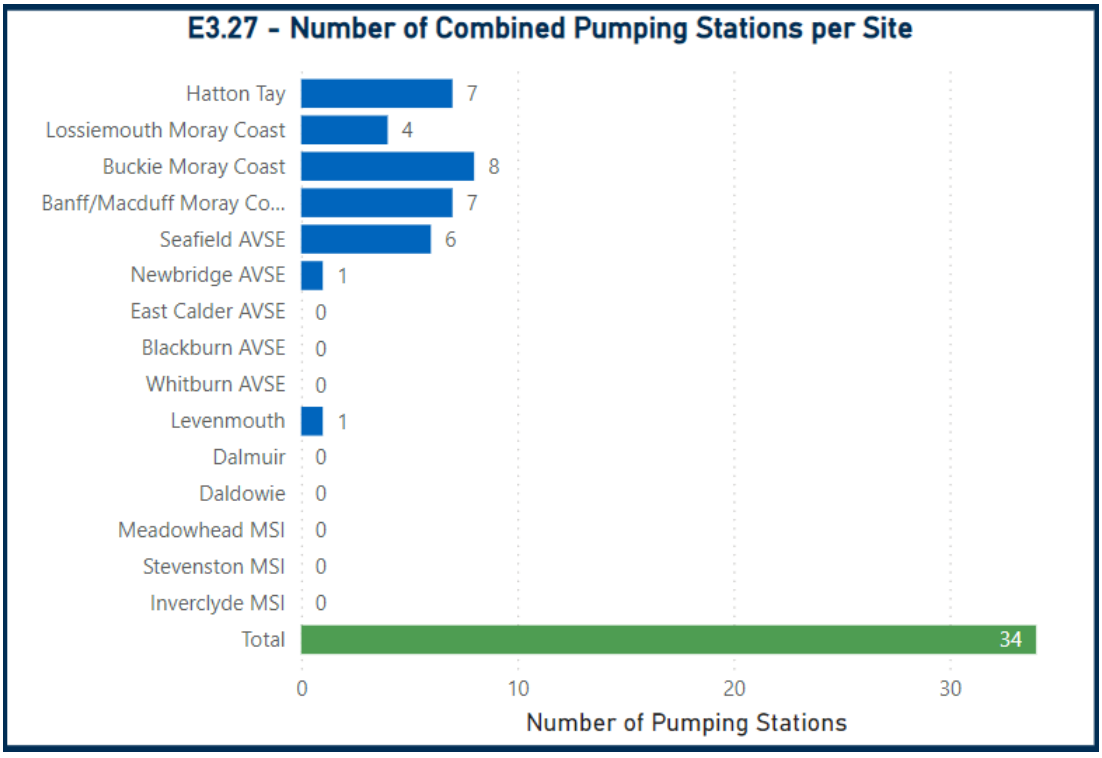
Figure 4: Capacity (kW) of pumping stations per site for AR25.



E3.27 Number of combined pumping stations

Combined pumping station means a network wastewater pumping station containing a pump or pumps transferring wastewater and surface drainage within the downstream sewerage network. The transferred wastewater flow rate from the combined pumping station is known as the FFT rate, the generally accepted term used in design and SEPA consents. For the sake of clarity, where storm water storage tank returns are pumped back into the sewerage system for onward flow, this shall be classed as a combined pumping station (as such flows become part of FFT). Terminal pumping stations are not included. No change from AR24. Further information capturing the number of combined pumping stations per site has been included within Figure 5 below.

Figure 5: Number of combined pumping stations per site for AR25.



The combined pumping stations listed in Table 14 are included.

Table 14: Combined pumping stations (E3.27).

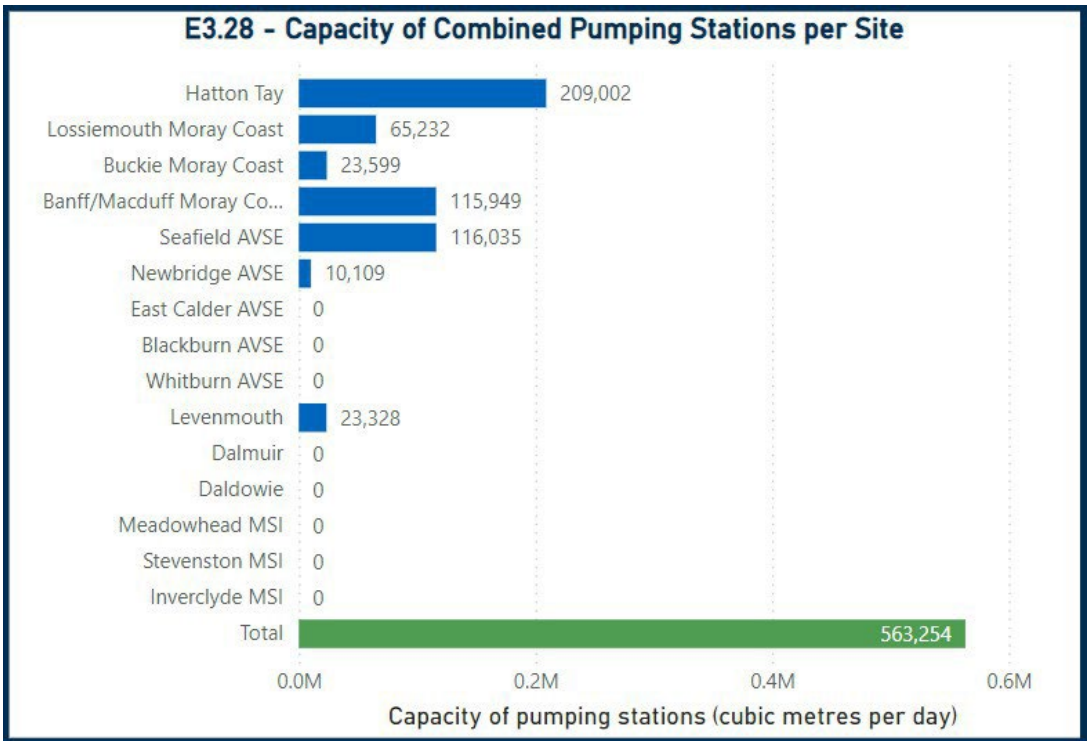
Site	Description
Lossiemouth	Burghead, Cummingston, Hopeman, Moycroft
Buckie	Portgordon West, Portgordon East, Seatown, Cluny, Cullen East, Portknockie, Findochty, Portessie
Banff/Macduff	Whitehills, Whitehills Harbour, Inverboyndie, Scotstown, Castlehill Park, Union Road, Bankhead
Hatton	Riverside, KGV, Stannergate, West Ferry, Broughty Castle, Fort Street, Gray Street
Levenmouth	Methil M1
Seafield	Wallyford Transfer, Wallyford SWW, Portobello SWW, Harelaw SWW, Dalkeith SWW, Mayshade SWW*
Newbridge	Broxburn SWW

*Mayshade SWW: pumping station comprises a separate duty/standby pump set in two separate storm tanks. As only one duty pump operates at any one time (ie storm tank 1 emptied before commencing emptying of storm tank 2) these four pumps have been entered as a single combined pumping station on a 1 duty/3 standby basis.

E3.28 Capacity of combined pumping stations (m^3/d)

This is the maximum flow pumped forward per day and excludes capacity of standby pumps. No change from AR24. Further information capturing the Capacity of combined pumping stations per site has been included within Figure 6 below.

Figure 6: Capacity (m^3/d) of combined pumping stations per site for AR25.



E3.29 Number of stormwater pumping stations

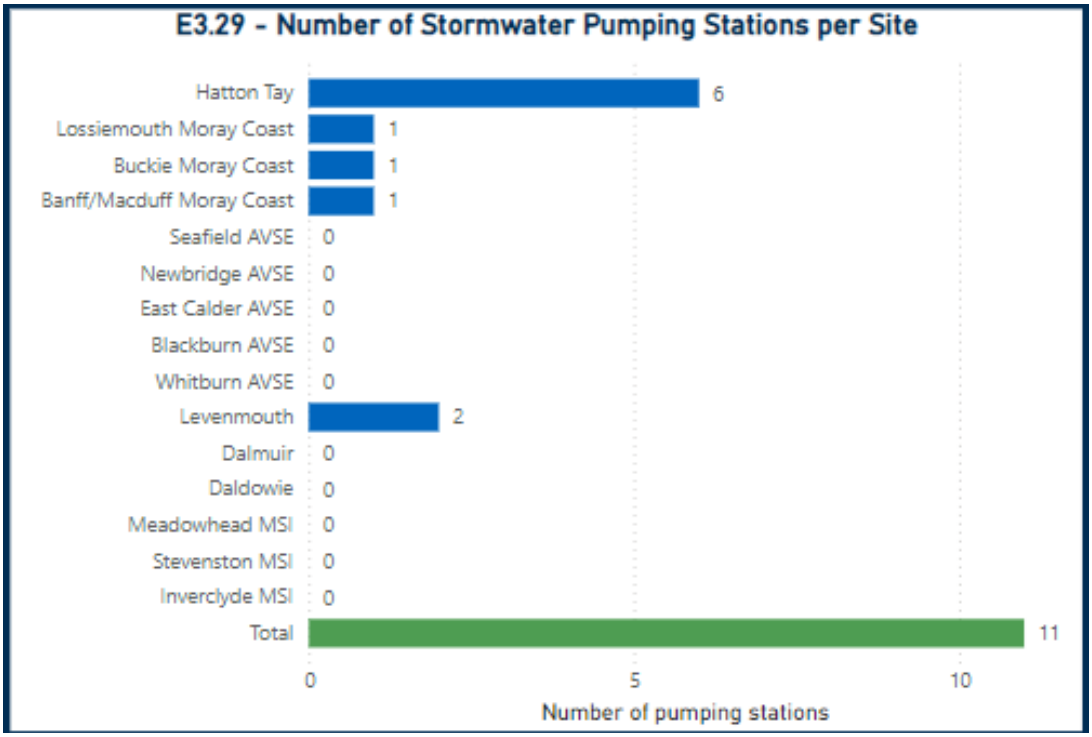
Stormwater pumping station means a network wastewater pumping station containing a pump or pumps transferring wastewater, containing stormwater, to a stormwater storage tank or storm overflow. The stormwater pumping station transfers wastewater in excess of FFT, the generally accepted term used in design and SEPA consents. For clarity, the function of the stormwater pumping station is to prevent and/or limit surcharging of the upstream sewerage system. No change from AR24. Further information capturing the number of storm water pumping stations per site has been included within Figure 7 below.

Table 15: Stormwater pumping stations (E3.29)

Site	Description
Lossiemouth	Moycroft
Buckie	Portessie
Banff Macduff	Bankhead
Hatton	Riverside, KGV, Stannergate, Westhaven, Broughty Castle, Inchcape Park
Levenmouth	Leven, Roundall

The stormwater pumping stations in Table 15 are included.

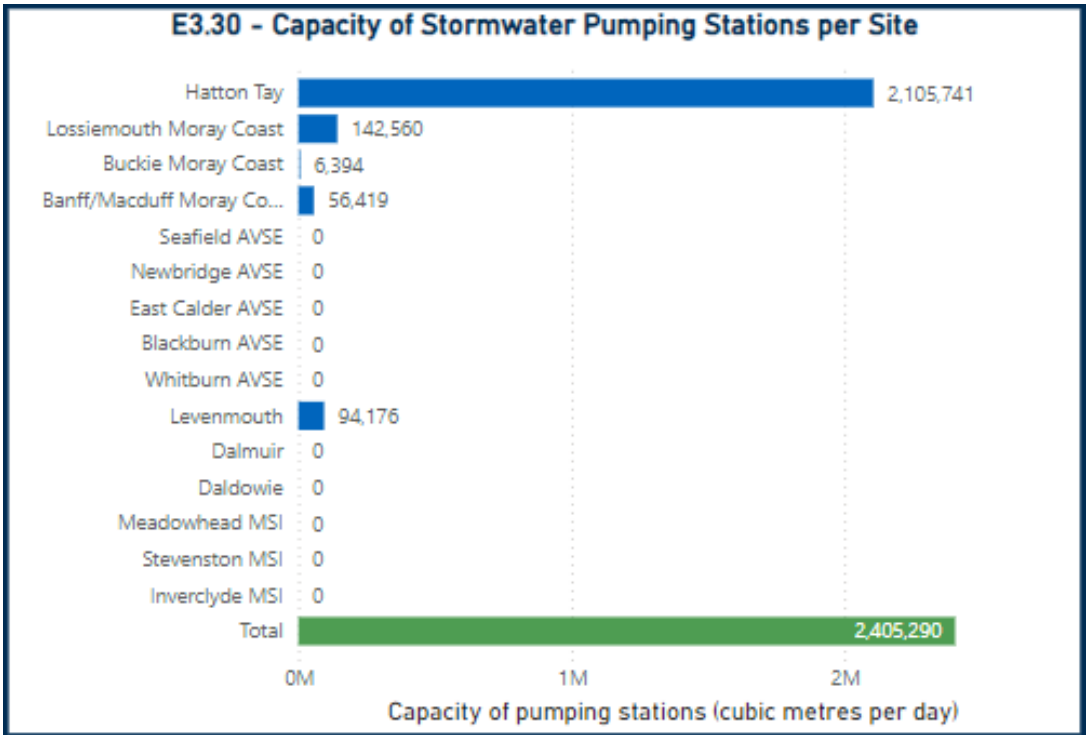
Figure 7: Number of storm water pumping stations per site for AR25.



E3.30 Capacity of stormwater pumping stations (m^3/d)

Maximum flow pumped forward per day. This excludes the capacity of standby pumps. No change from AR24. Further information capturing the capacity of stormwater pumping stations per site has been included within Figure 8 below.

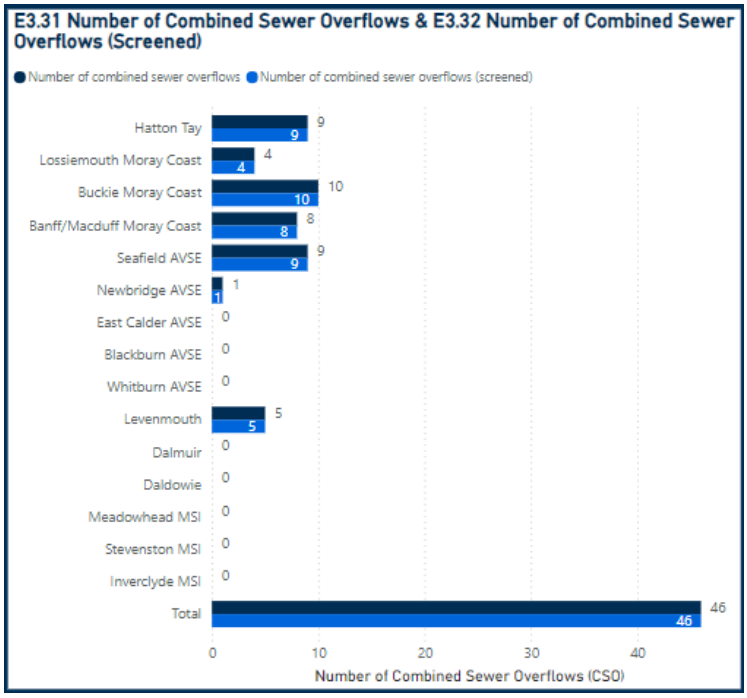
Figure 8: Capacity (m_3/d) of stormwater pumping stations per site for AR25.



E3.31 - Number of combined sewer overflows & E3.32 - Number of combined sewer overflows (CSO) (screened)

CSOs that overflow within the sewerage system rather than to an outfall discharging direct to the environment are not included. No change from AR24. Further information capturing the number of CSOs and the number of CSOs screened per site is included in Figure 9 below.

Figure 9: Number of combined sewer overflows and combined sewer overflows screened per site for AR25



The CSOs in Table 16 are included.

Table 16: List of CSOs (E3.31).

Site	Description
Hatton	Riverside, KGV, Stannergate, South Balmossie, Westhaven, Broughty Castle, Inchcape Park, Panmurefield/Balmossie Mill (2)
Lossiemouth	Burghead, Cummingston, Hopeman, Moycroft
Buckie	Portgordon West, Portgordon East, Seatown, Cluny, Nook, Cullen East, Portknockie, Findochty, Portessie, Shipyard
Banff/Macduff	Whitehills, Whitehills Harbour, Inverboyndie, Scotstown, Castlehill Park, Union Road, Bankhead, Craigfauld
Seafield	Wallyford, Dalkeith*, Hardengreen, Harelaw, Haveral Wood, Middlemills, Newbattle, Newtongrange, Suttieslea*
Newbridge	Broxburn
Levenmouth	Buckhaven, Methil M2 CSO2**, Methil CSO1**, Leven, Roundall

*Seafield - Dalkeith SWW consists of two separate screen overflows on two separate legs of the sewer which combine at the SWW. As each screened overflow is located on the same site and feeds one common storm water tank and outfall, this overflow has been recorded as a single CSO. Suttieslea: 'Copa Sac,' (equivalent to 6 mm screen), provided on outfall from storm tank.

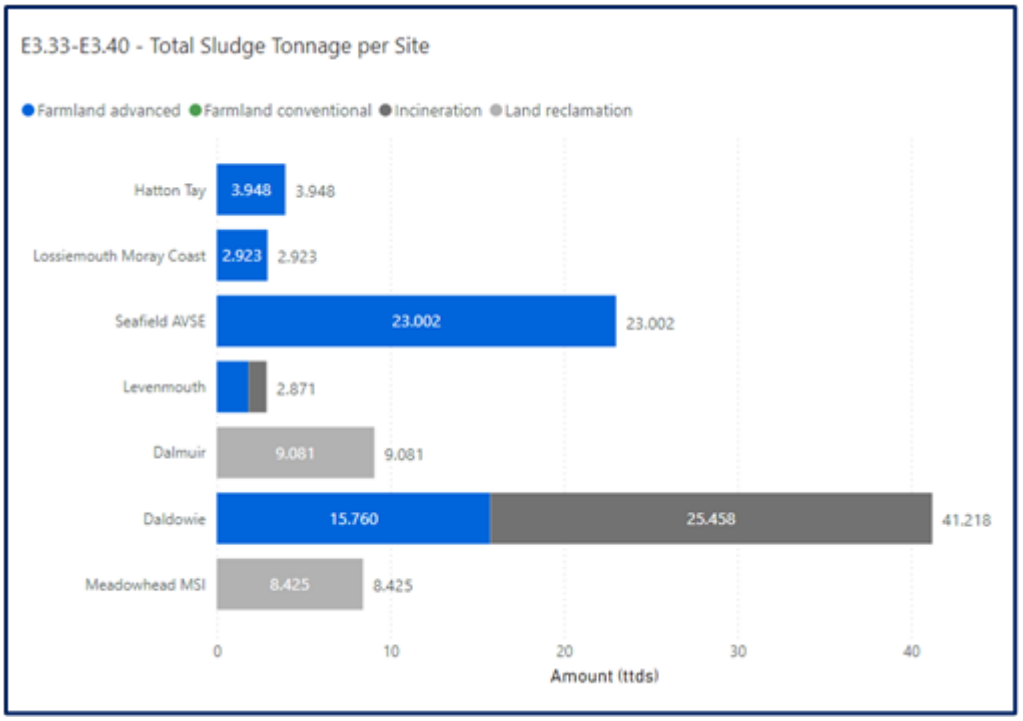
**Levenmouth - Methil CSO1 and Methil M2 CSO2 discharge into a common outfall.

E3.33-E3.40 Sludge Treatment and Disposal Data

The quantities reported are the total sludge tonnages prior to the sludge treatment process. This is in accordance with the methodology used in England & Wales. The information is based on PPP Company records of sludge disposed to the appropriate route.

Further information capturing the total sludge tonnages prior to the sludge treatment process per site is included in Figure 10, and captures data concerning Advanced Farmlands, Conventional Farmlands, Incineration, and Land Reclamations as the sludge treatment and disposal input is zero for the remaining lines.

Figure 10: Total sludge tonnage prior to the sludge treatment process per site for AR25.



For Daldowie, the data comes from the PFI Company and is used for contract payment purposes and therefore is validated. Therefore, a confidence grade of B3 is given. The confidence grade allocated to the other sludge disposal data is B4 as this is not associated with payment and is, therefore, not subject to the same level of contractual validation.

E3.36 Incineration

96% of sludge to incineration came from Daldowie PFI. This data has been allocated a confidence grade of B3 given that:

- The data comes from the PFI Company and is used for contractual payment purposes and therefore is validated in accordance with Scottish Water procedures
- The data provided by the PFI Company is in the form of tonnes of wet sludge and some back calculation is required in order to translate this to tonnes of dry solids as requested in the AR table

The confidence grade allocated to the data relative to Levenmouth is B4 as this is not associated with payment and, therefore, not validated. However, this is only applicable to 4%

of the overall submission (see Table 17). We therefore consider the overall confidence grade of B3 to be appropriate and consistent with previous years.

Table 17: Sludge treatment and disposal data E3.36 Incineration.

Scheme	CG	ttds	% of total
Levenmouth	B4	1.039	4%
Daldowie	B3	25.458	96%
Total	**B3**	**26.497**	

The overall reported ttds of sludge treatment and disposal (**Lines E3.33-E3.40**) will change year on year based on a number of factors including weather, sludge imports, operational incidents and operational decisions.

1.3 Data

1.3.1 Data Sources

Data sources and confidence grades for E3 remain the same as AR24.

1.3.2 Data Improvement Programmes

There have been no notable data improvement programmes in AR25.

1.3.3 Forecast Data

There are no forecast data for E3.

2 Table E3a – PPP cost analysis

2.1 Overview

Table E3a provides operating costs for each PPP scheme. Actual data is not available. Estimated direct operating costs have been calculated from the financial models prepared when the concession agreement was closed. The models do not take account of any additional plant constructed by the concessionaires at the site. Where the financial models do not split costs into specific categories the following has been assumed:

Works with a Sludge Centre: 72% Wastewater Treatment Costs, 28% Sludge Costs.

All other works: 80% Wastewater Treatment Costs, 20% Sludge Costs. These sludge costs have been allocated to the sludge treatment centre where the sludge is treated, e.g. Stevenston sludge costs appear against Meadowhead sludge centre.

The cost split was reviewed in detail and agreed with the Water Industry Commission for Scotland (WICS) auditor in May 2007 and has not been subject to further discussion since that date.

2.2 Performance Trends

The changes between AR24 and AR25 for Scottish Water cost and for annual charges are summarised below.

E3a.1, E3a.8 and E3a.16 Estimated annual direct operating costs
These are based on the Concessionaire's financial model adjusted for actual inflation.

Where the model specifically identified sums for rates and SEPA charges these have been deducted from that figure, otherwise the actual amount charged was deducted.

No adjustments were made at AVSE (for Rates), Daldowie (for Rates), and MSI (SEPA and Rates) as charges are paid by Scottish Water and are not included in the financial model. At Dalmuir, Scottish Water pays these charges, but amounts are also included in the financial model therefore an adjustment to the model costs is made (Rates and SEPA charges included in the model are refunded to Scottish Water).

An adjustment has been made to include the direct operational expenditure of the Dalmuir NTF and sludge treatment costs. 76% of the total fee is considered direct operational expenditure. This is further broken down to account for the ammonia treatment which is 84% of the ammonia fee and is allocated to wastewater treatment (**Line E3a.8**). The remainder is allocated to sludge treatment (**Line E3a.16**).

Additional cost for the operation of the Seafield Odour Project is also included, from AR18, with wastewater treatment (**Line E3a.8**).

During AR20 one of the traders discharging trade effluent through Scottish Water's inlet reached agreement with the Meadowhead PPP operator to discharge directly into the WwTW which resulted in reduced costs to Scottish Water. This reduction of cost for the operation of the Meadowhead WwTW is included, from AR21 onwards, in wastewater treatment (**Line E3a.8**) and sludge treatment (**Line E3a.16**).

Actual costs are not known and could vary considerably from the contractual financial model. A confidence grade of D6 has therefore been used. A confidence grade of A3 was allocated to the Dalmuir sludge treatment costs as there is some visibility of these costs.

E3a.2, E3a.9 and E3a.17 Rates paid by the PPP Contractor
These are based on the rateable value and poundage published on the U K Government website (www.saa.gov.uk). Rates paid by Scottish Water are also included and are based on actual charges for the year (Dalmuir, Daldowie, MSI, AVSE).

Confidence grade for total rates paid for each site is A2, but because rates must be split to take account of the sewerage, treatment and sludge elements, a lower confidence grade has been applied (see Table 18).

Table 18: Confidence grades for total rates paid.

	E3a.2	E3a.9	E3a.17	
Site	**Sewerage**	**Sewage Treatment**	**Sludge Treatment**	**Comment on confidence grade**
Lossiemouth	N	B3	B3	Cost distribution is estimated, based on the Financial Model
Buckie	N	B3	N	No sludge centre at works, sludge cost moved to Lossiemouth
Banff/Macduff	N	B3	N	No sludge centre at works, sludge cost moved to Lossiemouth
Hatton	N	B3	B3	Cost distribution is estimated, based on the Financial Model
Levenmouth	N	B3	B3	Cost distribution is estimated
Seafield	N	B3	B3	Cost distribution is estimated, based on the Financial Model
Newbridge	N	B3	B3	Cost distribution is estimated, based on the Financial Model
East Calder	N	B3	N	No sewerage and no sludge centre at works, sludge cost moved to Newbridge
Blackburn	N	B3	N	No sewerage and no sludge centre at works, sludge cost moved to Newbridge
Whitburn	N	B3	N	No sludge centre at works, sludge cost moved to Newbridge
Dalmuir	N	B3	N	No sludge treatment centre in the conventional sense – intermittent sludge thickening as operational need, no imports
Daldowie	N	N	A2	No sewage treatment at works
Meadowhead	N	B3	B3	Cost distribution is estimated
Stevenston	N	B3	N	No sewerage and no sludge centre at works, sludge cost moved to Meadowhead
Inverclyde	N	B3	N	No sludge centre at works, sludge cost moved to Meadowhead

E3a.3, E3a.10 and E3a.18 SEPA charges paid by the PPP Contractor

Cost allocation is as per the relevant SEPA invoices for AR25.

The confidence grades have been assigned as per Table 19.

Table 19: CGs for PPP Contractor SEPA charges.

	E3a.3	E3a.10	E3a.18	
Site	**Sewerage**	**Sewage Treatment**	**Sludge Treatment**	**Comment on confidence grade**
Lossiemouth	A2	A2	N	No subsistence charge included in invoices
Buckie	A2	A2	N	No sludge centre at works
Banff/Macduff	A2	A2	N	No sludge centre at works
Hatton	A2	A2	N	
Levenmouth	A2	A2	A2	
Seafield	A2	A2	A2	
Newbridge	A2	A2	N	No WML charge included in invoice
East Calder	N	A2	N	No sewerage and no sludge centre at works
Blackburn	N	A2	N	No sewerage and no sludge centre at works
Whitburn	N	A2	N	No sewerage and no sludge centre at works
Dalmuir	N	N	A2	Only WML fees paid by the PFI Co
Daldowie	N	N	A2	Sludge treatment only
Meadowhead	N	N	A2	Only WML fees paid by the PFI Co

E3a.4, E3a.11, E3a.19 and E3.23 Total Direct Costs - Total of E3a.1- E3a.3, E3a.8-E3a.11 and E3a.16-E3a.18.

Total direct costs are the sum of estimated Direct Operating costs (**Lines E3a.1, E3a.8 and E3a.16**), Rates paid by PPP contractors (**Lines E3a. 2, E3a.9, E3a.17**) and SEPA charges paid by the PPP contractor (**Lines E3a.3, E3a.10 and E3a.18**). The most significant element of this calculation is the estimated direct operating costs (**Lines E3a.1, E3a.8 and E3a.16**) which has a confidence grade of D6. Therefore the confidence grade for total direct cost has been allocated as D6. A confidence grade of A3 was allocated to the Dalmuir sludge treatment costs as there is some visibility of these costs.

E3a.5, E3a.12 and E3a.20 Scottish Water general and support expenditure

This includes:

- Costs such as advisors and legal costs, power, rent and insurance and the cost of the Scottish Water PPP department which administers PPP projects. Costs have been allocated to projects, relative to the operational costs at each site. Costs are as per the Profit & Loss (P&L).

- Scottish Water costs for inter-site sludge tankering and terminal pumping costs (where tankering or pumping has taken place between a Scottish Water works and a PFI site) and additional support costs.

The confidence grade for total charges is A1, but because Scottish Water PPP department costs must be split across all sites, and all charges have to be split to take account of the sewerage, treatment and sludge elements, the following confidence grades have been assigned (see Table 20).

Table 20: Confidence grades for total charges.

	E3a.5	E3a.12	E3a.20	Comment
Site	**Sewerage**	**Sewage Treatment**	**Sludge Treatment**	**Comment on confidence grade**
Lossiemouth	C4	C4	C4	
Buckie	C4	C4	N	No sludge centre at works
Banff/Macduff	C4	C4	N	No sludge centre at works
Hatton	C4	C4	C4	
Levenmouth	C4	C4	C4	
Seafield	C4	C4	C4	
Newbridge	CX	C4	C4	Network cost very small
East Calder	N	C4	N	No sewerage and no sludge centre at works
Blackburn	N	C4	N	No sewerage and no sludge centre at works
Whitburn	CX	C4	N	Network cost very small, no sludge centre at works
Dalmuir	N	C4	A3	No sewerage
Daldowie	C4	N	C4	No sewage treatment at works
Meadowhead	N	C4	C4	No sewerage
Stevenston	N	C4	N	No sewerage and no sludge centre at works
Inverclyde	CX	C4	N	Network cost very small, no sludge centre at works

A confidence grade of A3 was allocated to the Dalmuir sludge treatment costs as there is some visibility of these costs.

E3a.6, E3a.13 and E3a.21 Scottish Water SEPA Charges

With the exception of Dalmuir and MSI, all CAR License SEPA charges are paid for by the PPP Company and are included in the service fees (see Table 23 below).

Costs are as per the Profit & Loss account and reflect charges as invoiced by SEPA.

Table 21 only includes sites where SEPA fees are paid by Scottish Water.

Table 21: Confidence grades for Scottish Water SEPA charges.

	E3a.6	E3a.13	E3a.21	Comment
Site	**Sewerage**	**Sewage Treatment**	**Sludge Treatment**	**Comment on confidence grade**
Dalmuir	N	A2	N	Treatment cost only, sludge (WML) costs are paid by the PFI Co
Meadowhead	N	A2	N	Treatment cost only, sludge (WML) costs are paid by the PFI Co
Stevenston	N	A2	N	No sewerage and no sludge centre at works
Inverclyde	BX	A2	N	No sludge centre at works

E3a.7, E3a.14 and E3a.22 Total sewerage cost, total sewage treatment cost, total sludge treatment costs and disposal costs

- Confidence grade is D6 as per **Lines E3a.1, E3a.8 and E3a.16** (estimated direct operating cost) as these are the largest components of the total costs calculations and carry a confidence grade of D6.
- A confidence grade of A3 was allocated to the Dalmuir sludge treatment and disposal costs as there is some visibility of these costs.

E3a.15 Estimated terminal pumping cost

- Reported costs are as per the costs incurred for the Scottish Water operated terminal pumping stations.
- Where the terminal pumping station is part of the PPP scheme the costs are met by the Concessionaire and are included in the tariff rates and not reported as part of **Line E3a.15**.

E3a.24 Total Scottish Water cost

- The Total Scottish Water cost is calculated as the sum of Scottish Water general and support expenditure, and Scottish Water SEPA Charges (**Lines E3a.5-E3a.6, E3a.12-E3a.13, and E3a.20-E3a.21).**

- The confidence grade for total charges is A1 (see Table 18 below), but because Scottish Water PPP department costs and internal recharges must be split across all sites a confidence grade of C4 has been allocated.

- The total costs variance is +£0.421m An explanation of the variance is contained in Table 22.

Table 22: Summary of changes in Scottish Water cost from AR24 to AR25.

Site	AR24 £m	AR25 £m	Variance £m	%age	Comments
Lossiemouth	0.408	0.296	-0.112	(38)%	Variance driven by a reduction in internal tankering costs.
Buckie	0.016	0.014	-0.002	(14)%	
Banff/Macduff	0.025	0.023	-0.002	(9)%	
Hatton	0.629	0.479	-0.150	(31)%	Variance driven by a reduction in internal tankering costs.
Levenmouth	0.336	0.306	-0.030	(10)%	
Seafield	0.461	1.019	0.558	55%	Variance driven by increase in ABM (Activity Based Management) support costs.
Newbridge	0.031	0.029	-0.002	(7)%	Variance due to reduction in the calculated sewage treatment cost (E3a.12) and sludge treatment cost (E3a.20).
East Calder	0.012	0.011	-0.001	(9)%	Variance due to reduction in the calculated sewage treatment cost (E3a.12) and sludge treatment cost (E3a.20).
Blackburn	0.007	0.006	-0.001	(17)%	Variance due to reduction in the calculated sewage treatment cost (E3a.12) and sludge treatment cost (E3a.20).
Whitburn	0.007	0.007	0.000	—%	
Daldowie	4.555	4.793	0.238	5%	Variance driven by an increase in internal tankering costs
Dalmuir	2.469	2.657	0.188	7%	Variance due to increase in the calculated sewage treatment cost (E3a.12) and sludge treatment cost (E3a.20).
Meadowhead	1.056	0.975	-0.081	(8)%	Variance due to reduction in the calculated sewage treatment cost (E3a.12).
Stevenston	0.503	0.445	-0.058	(13)%	Variance due to reduction in the calculated sewage treatment cost (E3a.12).
Inverclyde	0.719	0.595	-0.124	(21)%	Variance due to reduction in the calculated sewage treatment cost (E3a.12).
TOTAL	**11.234**	**11.655**	**0.421**	**4%**	

E3a.25 Total operating cost

Confidence grade for total operating cost is D6 as per **Line E3a.23** Total direct cost, as this is the most significant element of total operating cost.

E3a.26 Annual charge

As per previous reporting years this data is based on the service fees for the year, provisions and business rates (including rebates). Expenditure is taken from the Scottish Water P&L.

The data relative to the annual charges for each of the PPP schemes has been allocated a confidence grade of A1, with the exception of the data relative to annual charges for the individual sites included in the AVSE PPP scheme (Seafield, Newbridge, East Calder, Blackburn and Whitburn). These have been allocated a confidence grade of B3 as the AVSE operator annual charges are based on the total flows from the AVSE PPP rather than for each of the individual sites. The data therefore has to be disaggregated for annual return reporting purposes and the allocation of charges to each site is not validated.

The data relative to the total annual charge for the AVSE PPP in its entirety has been allocated a confidence grade of A1 as it is validated, therefore we consider the overall confidence grade of A1 for the line to be appropriate.

A detailed explanation of the variance is contained in the table.

The changes in Annual Charge from AR24 to AR25 are summarised in Table 23.

Table 23: Summary of changes in Annual Charge from AR24 to AR25.

Site	AR24 £m	AR25 £m	Variance £m	Costs lower than previous year	Costs higher than previous year
Lossiemouth	5.533	5.771	0.238		24/25 inflation, penalties, sludge imports £0.2m, claim for equipment damage £0.038m
Buckie	3.408	3.476	0.068		24/25 inflation £0.068m
Banff/Macduff	3.748	3.579	-0.169	24/25 includes UV rebate £0.225m,	24/25 inflation £0.056m,
Hatton	27.420	27.893	0.473	24/25 includes additional works £0.005m, higher release of accruals £0.097m,	24/25 inflation and flows £0.575m,
Levenmouth	17.877	19.577	1.700	24/25 lower Odour Project costs £0.016m,	24/25 inflation, driven by UK Natural Gas Index and flow £0.871m*, lower release of accruals £0.845m,
Seafield	28.181	29.639	1.458	24/25 includes lower NC Landfill tax £0.024m,	24/25 based on 100% compliance with the contract plus inflation £1.529m, additional works £0.072m, lower release of accruals £0.337m
Newbridge	3.738	3.940	0.202		
East Calder	2.139	2.256	0.117		
Blackburn	1.100	1.160	0.060		
Whitburn	1.324	1.402	0.078		
Dalmuir	21.076	19.870	-1.206	24/25 base tariff change, inflation and flows £0.273m, lower Annual Operations Compensation £0.478m, lower Capital Project opex £0.130m, lower New Capital Investment costs £0.086m, higher release of accruals £0.293m	24/25 includes higher additional works £0.054m,

Site	AR24 £m	AR25 £m	Variance £m	Costs lower than previous year	Costs higher than previous year
Daldowie	25.636	27.972	2.336		24/25 inflation and sludge volumes £2.084m, lower release of accruals £0.252m
Meadowhead	8.644	8.782	0.138	23/24 lower gas cost £0.135, lower additional works £0.1m	24/25 inflation £0.341m, lower release of accruals £0.032m
Stevenston	3.879	4.018	0.139	24/25 inflation and flows £0.072m, includes lower additional works £0.004m,	24/25 includes higher release of accruals £0.215m,
Inverclyde	4.296	4.226	-0.070	24/25 higher release of accruals £0.089m,	24/25 inflation and flows £0.019m,
TOTAL	**156.073**	**163.561**	**5.562**		

* The Levenmouth PFI project tariff is subject to an annual increment linked to a basket of indices comprising the Average Earnings Index, UK Natural Gas Index and the Retail Price Index (all items).

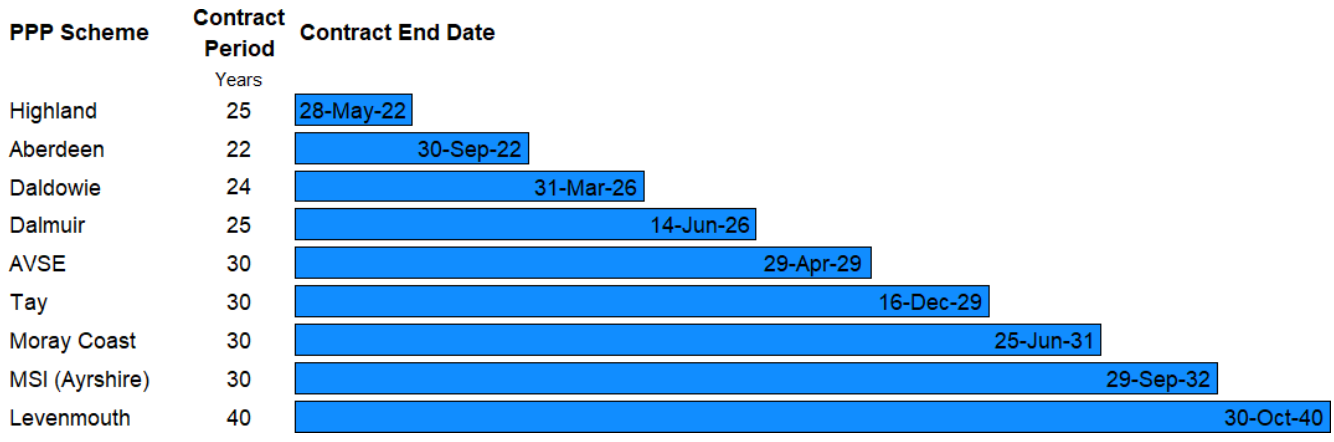
E3a.27 Public sector capital equivalent values

Values were derived from the base model incorporated in a report to the Transport and Environment Committee on 21 June 2001, adjusted for inflation. At Daldowie the PPP cost was used in the absence of a Public Sector Capital Equivalent (PSCE) value. Similarly, for Levenmouth, and AVSE the values have been taken from AR02.

E3a.28 Contract period and E3a.29 Contract end date

The period quoted and the contract end date are as defined in the contract. Further details highlighting the contract period and the contract end dates per site have been captured within the below visual, Figure 11.

Figure 11: PPP scheme contract period and contract end dates.



Changes from AR24

Dalmuir 14/06/26 (was 15/06/25). Change made to clarify that expiry will be midnight on 14/06/26.

Daldowie 31/03/26 (was 01/04/26). Change made to clarify that expiry will be midnight on 31/03/26.

AVSE 29/04/29 (was 30/09/29). Change made in order to clarify a single expiry data for two scheme parts within the Services Contract.

2.3 Data

2.3.1 Data Sources

Data sources and confidence grades for E3a remain the same as AR24.

2.3.2 Data Improvement Programmes

There have been no notable data improvement programmes in AR25.

2.3.3 Forecast Data

There are no forecast data for Table E3a.

3 Table E4 – Water resources and treatment

3.1 Overview

Table E4 provides information on operating costs and efficiencies relating to water resources and treatment allocated to areas.

There is a difference in how source sites are reported in the E and H tables, so there is no direct read across between the two tables. In line with the table definitions, the sources in E4 are only included if they are direct sources, and operational (including emergency) during the year.

Table H3 reports all assets that are operational, emergency, out of service or work in progress (as classified in the Works & Asset Management system (Ellipse)), at the end of the year.

Line H3.3 raw water aqueducts are infrastructure assets that are sourced from Scottish Water's Geospatial Information system (GIS) and have no equivalent asset in the E4 table.

3.2 Performance Trends

3.2.1 Lines E4.1-E4.7 - Source Types

Source Type and **Operational Status** are derived from the Works & Asset Management system (Ellipse), with additional manipulation and classification to determine which sources feed direct to Water Treatment Works (WTW) as well as to check status of a small number of emergency sources each year.

Number of Sources: As per the AR25 guidance for Table E, a source is defined as an independent raw water supply to a treatment works. Only sources which feed directly to the treatment works are counted, so any indirect sources are not included. Standby or mothballed sources from which no water has been obtained in the year are to be included in the number of sources. As a result of this particular definition of sources counted for Table E4, the number of sources should not be expected to match any other source counts included AR24 (e.g. Table H3 which reports all direct and indirect source assets that are operational, emergency, out of service or work in progress at the end of the year.)

Average Daily Output data is exported from the corporate Distribution Input (DI) reporting system (Z-One) - more detail on this data is provided in the Table A2 commentary.

As in previous years and in line with the reporting requirements, columns 110-140 have been completed by assuming that, where multiple sources feed a WTW, the total average daily output comes only from the primary and hardest to treat source. The primary source is therefore allocated 100% of the DI and all other sources are allocated 0%.

There are eight WTWs where the primary source is already assigned as the primary source to another WTW (conjunctive use sources). In order to ensure all WTW DI totals are included, the DI volume for these WTWs is manually re-assigned to the appropriate 'duplicate' conjunctive source entry for the WTW. For example, Megget Reservoir primarily feeds to Glencorse WTW but is also assigned as the primary source for Marchbank and Bonnycraig WTW.

Generally, raw water supply sources, catchments, and the WTW they supply, are located within the same region. However, the following four WTW are supplied from outside their region:

- Daer WTW: Source and WTW are in South Region, but a small proportion of the Daer WOA crosses over into West Region.

- Balmore WTW: Sources and WTW are in West Region, but there are four different WOAs supplied from Balmore; 3 of which are in the South Region (Balmore & Carron Valley WOA, Balmore South Region Nith WOA, Balmore South Region Tweed WOA).
- Afton WTW: Source and WTW are in West Region, but it supplies a small area in South Region (Afton South Region WOA).
- Turret WTW: Source and WTW are in East Region, but it also supplies areas in West Region (Turret West Region WOA).

Since Average Daily Outputs are derived from WTW DI, the cross-boundary flow is accounted for and assigned to the region within its treatment rather than abstraction. This approach is consistent with previous years.

The confidence grade for the number of sources (columns 10-40) is assessed as B1.

- Reliability band is B; changes to source and WTW status are based on data from the corporate Works & Asset Management system (Ellipse) but requires some additional manipulation / interpretation to arrive at final data, e.g., classification of Direct vs Indirect status.
- Accuracy band for number of sources is 1 (accuracy range less than +/- 1%).

The confidence grade for the average daily output of these sources (columns 110-140) is assessed as B2 (in line with reported confidence grade for Table A2, unchanged from AR24).

The overall confidence grade assigned for Table E4 **Lines E4.1- E4.5** is therefore B2 as this is the lower of the two confidence grades described above.

The confidence grade for Table E4 **Lines E4.6- E4.7** (Bulk water exports and imports) is AX as Scottish Water does not have any raw water exports or imports to other water companies.

The overall number of direct sources has reduced by one, from 266 to 265. As shown below in Table 24, the reduction in source count is due to a WTW closure of Fort Augustus WTW. Note that this WTW was mained-out as of October 2022, but it continued to supply 10 properties up until July 2023 and therefore was still included for AR24 reporting. As it has not supplied any customers in the AR25 reporting year (April 2024 to March 2025), the source feeding Fort Augustus WTW is therefore no longer counted.

Table 24: Change in number of sources from AR24 to AR25.

	AR24 No. of sources	**266**
Additions	N/A	0
Reductions	WTW main-out	1
	AR25 No. of sources	**265**

Compared to AR24, DI decreased very marginally by 0.945 Ml/d to 1836.608 Ml/d. Changes to DI in AR25 are detailed in Table 25 below:

Table 25: Changes to DI sources

Source Type	AR24	AR25	Net Change
	Ml/d		
Impounding reservoirs	1522.026	1520.608	-1.418
Lochs	22.035	22.057	0.022
River and burn abstractions	217.494	217.572	0.078
Boreholes	76.180	76.551	0.371
Total	1837.734	**1836.788**	**-0.946**

3.2.2 Lines E4.13-E4.14 Peak Demand and Pumping Head

The Peak Demand used in **E4.13** for the AR25 period was 1,919.54 Ml/d with a Peak to Average ratio of 1.045, which is lower than AR24 (Peak demand = 1,974.99 Ml/d; Peak to average ratio 1.075). The peak week was recorded during the summer in the week ending 19/01/2025. The confidence grade of C3 remains the same as AR24.

The Average Pumping Head is extrapolated from historic data on work done at raw water pumping stations and proportioned based on the change in the total Distribution Input at Scottish Water Region level each year. This is due to Scottish Water not having the meters in the network required to measure and calculate Average Pumping Head. The Average Pumping Head reported in **Line E4.14** is slightly lower in AR25 at 26.823 m (compared to 26.919 m in AR24). All pumping stations where the work done (m4) is known were included in the calculations, which is 66% of the total number of pumping stations. The confidence grade of C4 remains the same as AR24.

3.2.3 Lines E4.15-E4.39 Functional costs by operational area, process and size band

Methodology

For 2024/25, cost analysis in E Tables (E4, E6, E7, E8, E9 and E10) was prepared using reports from Scottish Water's 2022/23 Activity Based Management (ABM) model, updated for 2024/25 general ledger costs, on a historic cost basis excluding IFRS adjustments. The costs included in the E Tables reflect Scottish Water's Tier 1 operating expenditure plus an element of Tier 1a (responsive repair and refurbishment) expenditure that has been recharged to projects during the year, which would have previously been classified as operating expenditure in SR15, to enable a consistent comparison of functional expenditure. Tier 1a expenditure captured directly in projects that was previously classified as operating expenditure in SR15 is not captured in the E Tables but is presented in lines M18.29W and M18.30WW of the M Tables

ABM provides analysis of the costs of key activities and processes and links these to the factors that cause or drive the level of cost. This allows us to develop an understanding of the full cost of providing services, either internally within Scottish Water, or to our external customers.

Cost Allocation

Consistent with prior years, costs are captured or allocated in line with Regulatory Accounting Rules. For allocated costs, a consistent approach with 2023/24 has been adopted whereby costs are allocated based on 2022/23 activity levels.

A more detailed commentary on ABM methodology and cost allocation is provided in support of Regulatory Accounts Tables M18 and is not repeated in this document. ABM data (financial and non-financial) is captured in various corporate systems which are also described in the M18 methodology document.

Lines E4.15-39 Functional costs by operational area, process and size band

	Total
Functional expenditure:	£m
2024/25	88.654
2023/24	90.109
Variance	**+1.455**

Water resources and treatment costs reduced by £1.5m (1.6%) from 2023/24 reflecting the following key movements:

- £1.1m (16%) reduction in hire and contracted costs driven by improved cost capture resulting in more contractors spend being captured directly in projects, an increase in the level of procurement rebates, and lower incident costs because of relatively benign weather conditions throughout the year;
- £0.6m (3%) reduction in power costs due mainly to lower consumption and an increase in self-generation;
- £0.2m (1%) reduction in material and consumable costs driven by lower chemical spend in the year due to fewer compliance issues;
- £0.2m (7%) reduction in other direct costs due mostly to lower transport costs associated with maintaining supplies because of fewer incidents; partially offset by
- £0.7m (4%) increase in employment costs driven primarily by pay inflation.

Analysis of water resources and treatment costs by region:

Functional expenditure:	North £m	East £m	South £m	West £m	Direct £m	General and Support £m	Total £m
2024/25	14.888	21.703	15.074	23.762	**75.427**	13.227	**88.654**
2023/24	15.068	21.170	15.277	25.096	**76.611**	13.498	**90.109**
Variance	**+0.180**	**(0.533)**	**+0.203**	**+1.334**	**+1.184**	**+0.271**	**+1.455**

Functional expenditure in the east region increased mainly due to higher contractor and chemical costs, resulting from a sludge lagoon clean and new sludge plant at Invercannie WTW, Lomondhills WTW returning online after the installation of replacement filter floors during 2023/24, and maintaining water quality at Turriff WTW.

Minor changes to the numbers of WTW by process type and size band have arisen as a result of operational changes and process re-classifications in WTW during 2024/25. This has resulted in three WTW being reclassified from W3 to W4. Re-stating 2023/24 figures on like-for-like basis shows the following variations:

Analysis of water resources and treatment costs by process type:

Process Type	2024/25 £m	2023/24 £m	Variance £m
SD : Simple Disinfection	1.673	1.810	+0.137
W1 : SD plus simple physical or chemical treatment	0.127	0.126	(0.001)
W2 : Single stage complex physical or chemical treatment	14.931	14.916	(0.015)
W3 : Multiple stage complex treatment, excluding W4	49.120	50.141	+1.021
W4 : Very high cost treatment Process	9.576	9.618	+0.042
Direct	**75.427**	**76.611**	**+1.184**
General and Support	13.227	13.498	+0.271
Total	**88.654**	**90.109**	**+1.455**

Analysis of water resources and treatment costs by size band:

Size band	2024/25 £m	2023/24 £m	Variance £m
<=1 Ml/d	8.134	8.125	(0.009)
>1 to <=2.5 Ml/d	4.229	4.094	(0.135)
>2.5 to <=5 Ml/d	4.840	4.961	+0.121
>5 to <=10 Ml/d	5.928	6.700	+0.772
>10 to <=25 Ml/d	11.834	12.475	+0.641
>25 to <=50 Ml/d	14.985	13.663	(1.322)
>50 to <=100 Ml/d	11.975	11.744	(0.231)
>100 to <=175 Ml/d	8.477	9.402	+0.925
>175 Ml/d	5.025	5.447	+0.422
Direct	**75.427**	**76.611**	**+1.184**
General and Support	13.227	13.498	+0.271
Total	**88.654**	**90.109**	**+1.455**

The allocation of costs by size band has remained broadly consistent with 2024/25.

Costs which are directly attributable to abstraction and treatment are charged to the specific asset cost code in the General Ledger, either via direct charging, Ellipse timesheets or work orders. Of the £75.4m total direct resource and treatment costs, £57.4m of costs or 76% have been directly charged to assets in our corporate costing system.

Other costs have been allocated to Water Resources and Treatment through ABM support activity allocation, e.g. stores based on number of issues, IT applications based on number of users, etc. Therefore, support costs are allocated on a resource consumed basis. However, many of these costs are not specific to an asset; they are generally attributable to an employee. Consequently, the majority of these support costs have been allocated to the activities the employees have been completing. For 2024/25 support activity allocations from 2022/23 were used to allocate support costs to Water Resources and Treatment.

Confidence Grades – Confidence grades on Table E4 are consistent with grades in the general Section E commentary and remain consistent with 2023/24.

3.2.4 Lines E4.20-27 Water Treatment Works by Process Type

There are 227 Water Treatment Works reported for AR25 which is two fewer than AR24. One site was added and three removed as shown in Table 26 below.

Table 26: Water Treatment Works Additions and Removals.

Plant No	Site Description	Added/Removed	Process Type
WTW000552	DALWHINNIE WTW 1970 NN637848 - Abandoned and replaced by DALWHINNIE WTW 2019 NN637847	Removed	W4
WTW000741	FORT AUGUSTUS WTW 2005 NH416091 - Abandoned. Area now supplied by INVERMORISTON WTW 2019 NH423150	Removed	W4
WTW000759	INVERMORISTON WTW 2007 NH422157 - Abandoned and replaced by INVERMORISTON WTW 2019	Removed	W4
WTW000831	CRAIGHEAD WTW 2021 NJ496405 - . Replaces CRAIGHEAD WTW 1974 NJ497405	Added	W3

Table 27 shows the three Water Treatment Works with treatment process changes during AR25 that caused a movement in the process category reported.

Table 27: Changes in treatment process.

Plant No	Site Name	Region	AR24 WIC E	AR25 WIC E	Reason
WTW000087	DHU LOCH WTW NS071625	WEST	W3	W4	Organics removal and IEX plant installed
WTW000199	ALEXANDRIA WTW 2000 NS383801	WEST	W3	W4	UV Disinfection System installed
WTW000510	MANNOFIELD WTW 1986 NJ916040	EAST	W3	W4	UV Disinfection System Uninstalled

Combining the above status and process changes in Table 26 and Table 27 the resulting changes to the number of WTW in each process type are as presented in Table 28 below.

The confidence grade of A2 remains the same as for AR24.

Table 28: Changes in process type.

Line Ref	Process Type	AR24 WTWs	AR25 WTWs	Change
E4.20	SD	19	19	0
E4.21	W1	5	5	0
E4.22	W2	23	23	0
E4.23	W3	160	158	-2
E4.24	W4	22	22	0
E4.25	Total	229	227	-2

The total distribution input (1,836.787 Ml/d) reported in **Line E4.26** is the same as that reported in **Line E4.5** (1836.788 Ml/d) with the slight difference due to rounding during allocation.

The confidence grade for **Line E4.26** of B3 remains the same as for AR24.

3.2.5 Lines E4.28-E4.39 Water Treatment Works by Size Band

Of the 227 Water Treatment Works reported in **Line E4.25** the changes in size bands between AR24 and AR25 are shown in Table 29 below.

Table 29: Changes in size band and DI.

Line Ref	Size Band	AR24		AR25		Net Change	
		No.	*%* DI	*No.*	*%* DI	*No.*	*%* DI
E4.28	<= 1 Ml/d	127	1.2	125	1.2	-2	0.0
E4.29	>1, <= 2.5 Ml/d	21	1.3	21	1.3	0	0.0
E4.30	>2.5, <= 5 Ml/d	21	2.9	21	3	0	0.1
E4.31	>5, <= 10 Ml/d	15	4.3	15	4.4	0	0.1
E4.32	>10, <= 25 Ml/d	18	10.2	18	10.4	0	0.2
E4.33	>25, <= 50 Ml/d	12	16.3	12	16.6	0	0.3
E4.34	>50, <= 100 Ml/d	9	22.7	9	22.4	0	-0.3
E4.35	>100, <= 175 Ml/d	4	20.6	4	20.7	0	0.1
E4.36	>175 Ml/d	2	20.4	2	20	0	-0.4
E4.37 & E4.38	**Total**	229	100	227	100	-2	0

The confidence grade of A2 remains the same as AR24 for **Line E4.28-E4.37**, as does the confidence grade of B3 for **Line E4.38.**

3.3 Data

3.3.1 Data sources and confidence grades

Data sources and confidence grades are detailed in the Commentary, where relevant.

3.3.2 Data improvement programmes

No improvement work was carried out on data affecting E4. For Average Daily Output refer to the Commentary for Table A2.

3.3.3 Assumptions used for forecast data

There are no forecast data in E4.

4 Table E6 – Water distribution

4.1 Overview

Table E6 provides information on operating costs and efficiencies relating to water distribution. It covers:

- Area data
- Distribution costs
- Water mains data
- Pumping stations
- Service reservoirs
- Water towers

4.2 Performance Trends

4.2.1 Lines E6.0-E6.6 Area Data

The methodology used to allocate properties and population to the four operational regions remains unchanged from AR24 throughout this table.

The Commentary for Table A2 describes the methodologies used to calculate populations for Section E and includes a discussion of the data for each line.

The figure reported in **Line E6.1** reports the annual average resident connected population in thousands (5,238.30) and is consistent with the figure reported in A2.5. The confidence grade of B2 remains the same as AR24.

The total number of connected properties reported in **Line E6.2** (2,828,301) is consistent with the figure reported in **Line A1.10**. The confidence grade of B4 remains the same as AR24.

Volumes delivered to households and non-households (**Lines E6.3 and E6.4**) are allocated to water operational areas and summed to regional level; the method remains unchanged from AR24. Values used to calculate this section of Table E6 reflect those in the A2 Tables. The confidence grades, B2 and B4 respectively, remain the same as AR24.

The operational regional areas reported in **Line E6.5** remained the same at 79,816.36 km^2. The confidence grade at A1 reflects that the operational region boundaries are taken directly from the corporate Geospatial Information system (GIS).

The number of supply zones reported in **Line E6.6** has decreased by two to 275 as detailed in Table 30 below.

Table 30: Change in number of supply zones (E6.6).

SiteRef	Site name	Region	Reason for Addition
Z005000263496	Yarrowfeus	SOUTH	Zone merged into Howden RSZ due to new WTW supply
Z005000641063	Newmore B	NORTH	RSZ absorbed into Newmore RSZ for 2025

The number of supply zones was calculated using the same methodology as AR24, and matches the number reported to the Drinking Water Quality Regulator. Changes in zone topology are tracked and recorded by the Water Quality Regulation Zone procedure and a full audit trail is available.

4.2.2 Lines E6.7-E6.11 Functional Costs

Cost analysis and allocation methodology for table E6 is outlined in section 3.2.3.

Line E6.11 Water Distribution

	Total
Functional expenditure:	£m
2024/25	85.710
2023/24	91.993
Variance	**+6.283**

Water distribution costs have reduced by £6.3m (7%) from 2023/24 reflecting the following key movements:

- £4.2m (22%) reduction in hired and contracted costs driven by improved cost capture resulting in more contractors spend being captured directly in projects, lower incident costs because of relatively benign weather conditions throughout the year, and an increase in the level of procurement rebates;
- £1.2m (6%) reduction in general and support costs due to mostly to fewer hire costs because of fewer incidents and lower anticipated insurance claim provisions; and
- £0.6m (4%) reduction in power costs due mainly to lower consumption and an increase in self-generation.

Analysis of water distribution costs by region:

	North	East	South	West	Total	General and Support	Total
Functional expenditure:	£m	£m	£m	£m	£m	£m	£m
2024/25	12.026	18.027	13.127	23.543	**66.723**	18.987	**85.710**
2023/24	13.186	19.200	14.852	24.547	**71.785**	20.208	**91.993**
Variance	**+1.160**	**+1.173**	**+1.725**	**+1.004**	**+5.062**	**+1.221**	**+6.283**

Confidence Grades – Confidence grades on Table E6 are consistent with grades in the general E table commentary and remain consistent with 2023/24.

Scottish Water has slightly lower confidence levels on Network cost analysis than treatment cost analysis. This is due to lower levels of direct labour capture on Networks.

4.2.3 Lines E6.22-E6.25 Pumping Stations

E6.22 Total number of pumping stations

The number of Pumping stations reported in **Line E6.22** is 623 for AR25. An overall decrease of 13 sites from AR24.

The confidence grade of A2 remains the same as AR24.

E6.23 Total capacity of pumping stations

The total capacity of pumping stations reported in **Line E6.23** is 2,439,365 m_3/d. An overall decrease of 31,736 m_3/d as compared with AR24.

As the methodology is unchanged the confidence grade of C4 remains the same as AR24.

E6.24 Total capacity of booster pumping stations

The total capacity of booster pumping stations reported in **Line E6.24** is 43,206 kW. An overall decrease of 565 kW as compared with AR24, due to changes in pumping stations (see Table 32 below). The confidence grade of A3 remains the same as AR24.

Details of the removals and additions with the corresponding capacities (**Line E6.23** - m_3/day and **Line E6.24** – kW) are tabulated in Table 31.

Table 31: Added and removed capacities.

Plant No	Site	Added / Removed	Region	E6.23 (m3/d)	E6.24 (kW)
TWP001404	HARESHAWMUIR RD BOOSTER TWP NS490431	Added	West	84.174	1.5
TWP001409	CASTLEVIEW AIRTH TWP NS895877	Added	West	168.348	3
TWP001419	WEST LINTON DOLPHINTON TWP NT101463	Added	South	145.9016	2.6
TWP001421	ACHNAHANAID BRAES TWP NG506379	Added	North	280.58	5
TWP001427	ELLON HIGH TWP NJ944332	Added	East	56.116	1
TWP001432	NEILSTON CRAIG TWP NS475562	Added	West	246.9104	4.4
TWP000123	HOGGANFIELD TWP NS628660	Removed	WEST	17014.3712	303.2
TWP000128	KELLY TWP NS201684	Removed	WEST	123.4552	2.2
TWP000166	MILLBANK TWP NS107640	Removed	WEST	60	0.75
TWP000211	SOUTH MOORHOUSE FARM P.S.	Removed	WEST	123.4552	2.2
TWP000214	ST CATHERINES TWP 2002 NN134081	Removed	WEST	86.4	12.5
TWP000231	WHINHILL TWP NS282747	Removed	WEST	4208.7	75
TWP001014	WATLEE TWP 1986 HP592048	Removed	EAST	432	22
TWP000328	DOUNIE TWP 1997 NH571907	Removed	NORTH	3	1.5
TWP000515	CHECKIEFIELD TWP 1977 NO406530	Removed	EAST	7276.8	60
TWP001085	FOULA TWP 1997 HT969389	Removed	EAST	96	2.2
TWP000560	FLADDABISTER TWP 1992 HU434325	Removed	EAST	345.6	3.6
TWP000579	GRAEMSAY TWP 1988 HY253054	Removed	EAST	691.2	4.8
TWP000594	FAIR ISLE TWP 1980 HZ212718	Removed	EAST	30	50
TWP001121	LOGANS WELL TWP 2004 NS517526	Removed	WEST	841.74	15
TWP001161	GLASGOW STANMORE RD TWP 2007 NS585616	Removed	WEST	84.174	1.5
TWP000705	NEWMARKET TWP NB424365	Removed	NORTH	841.74	15
TWP000711	ELLENBEICH TWP NM748175	Removed	NORTH	56.116	1
TWP000712	ERISKAY TWP NF792106	Removed	NORTH	448.928	8
TWP001328	PORTREE TORVAIG TWP 2014 NG495465	Removed	NORTH	21.88524	0.39

There were no changes to the capacity values of existing pumping stations in **Line E6.23** for AR25, therefore changes reported are solely due to the addition and removal of pumping stations.

There were three changes to the capacity values of existing pumping stations in **Line E6.24** for AR25 (see Table 32).

Table 32: Changes in capacity between AR24 and AR25 (kW).

Plant No	Site	Region	AR24 kW	AR25 kW
TWP000506	AUCHTERHOUSE TWP1980 NO345386	East	6	4.4
TWP001419	WEST LINTON DOLPHINTON TWP NT101463	South	0	2.6
TWP001421	ACHNAHANAID BRAES TWP NG506379	North	1	5

E6.25 Average Pumping Head

The total average pumping head for distribution pumping stations has reduced slightly in AR25 to 29.24m.

As the methodology has remained the same as AR24 the confidence grade remains as C4.

4.2.4 Lines E6.26-29 Service Reservoirs & Water Towers

The number of service reservoirs reported in **Line E6.26** is 1,286 for AR25, an overall decrease of fourteen sites from AR24. The total capacity of the service reservoirs reported in **Line E6.27** is 4014.95 Ml, which is a decrease of 6.3 Ml from AR24.

The number of water towers reported in **Line E6.28** has reduced by one to fifteen for AR25. The total capacity of the water towers reported in **Line E6.29** has reduced to 26.96 Ml. The confidence grade of A2 remains the same as AR24 for **Lines E6.26 to E6.29**.

Details of changes to Service Reservoir and Water Tower numbers with corresponding capacities are tabulated below (Table 33 and Table 34):

Table 33: Service Reservoir Additions and Removals

Plant No	Site	Added / Removed	Region	Design Capacity
TWS003740	DALWHINNIE CWT TWS 2020 NN635862	Added	NORTH	0.3
TWS003745	KERSE NEW DSR NS425131	Added	WEST	3
TWS003756	STONEYBRIDGE A CWT NF773321	Added	NORTH	0.6
TWS003757	STONEYBRIDGE B CWT NF773321	Added	NORTH	0.6
TWS003762	CAMPS MTU DSR NS998223	Added	SOUTH	0.4
TWS002032	HILL OF ROW DSR NN756002	Removed	WEST	0.113
TWS002096	PORT OF MENTEITH DSR NN581018	Removed	WEST	0.091
TWS002102	REDNOCK BPT NN611027	Removed	WEST	0.09
TWS002234	BALREAVIE DSR 1922 NO266064	Removed	EAST	0.545
TWS000188	COLINTRAIVE BPT NS033746	Removed	WEST	0.054
TWS000416	KAIM LARGE CWT 1997 NS347623	Removed	WEST	3.413
TWS000472	KNOCKJARDER DSR NS353150	Removed	WEST	3.565
TWS000754	WHITING BAY DSR NS040261	Removed	WEST	0.7
TWS000954	FISCAVAIG DSR 1960 NG321334	Removed	NORTH	0.04
TWS001109	ACHBUIE DSR 1994 NH567358	Removed	NORTH	0.024
TWS001309	BALLOCH WOOD DSR NE 2001 NJ459485	Removed	EAST	0.4
TWS001312	HERRICKS DSR 1973 NJ458494	Removed	EAST	0.5
TWS001451	CROVIE DSR 1989 NJ807650	Removed	EAST	0.03
TWS001648	KINNAIRD DSR 1998 NN956595	Removed	EAST	0.052
TWS001701	AIRLIE DSR 1961 NO315508	Removed	EAST	0.227
TWS001818	GOURDON DSR NO824711	Removed	EAST	0.26
TWS003435	FORT AUGUSTUS CWT NH416091	Removed	NORTH	0.522
TWS003512	GALSON SR DSR NB441575	Removed	NORTH	0.18
TWS003515	HABOST KERSHADER DSR NB347199	Removed	NORTH	0.07

Table 34: Water Tower Additions and Removals

Plant No	Site	Added / Removed	Region	Design Capacity
TWS001267	LOSSIEMOUTH HIGH DSR 1937 NJ233707	Removed	EAST	0.464

Two service reservoirs have had capacity changes in AR25. The capacity of both Silverburn Distribution Service Reservoirs (DSRs) were updated as shown in Table 35.

Table 35: Service Reservoir and Water Tower Capacity Change

Plant No	Site	Region	Des Cap Prev	Des Cap
TWS002111	SILVERBURN DSR 1 NT204602	South	2.25	1.166
TWS003758	SILVERBURN DSR 2 NT204602	South	0.4	1.171

4.3 Data

4.3.1 Data sources and confidence grades

Data sources and confidence grades are detailed in the commentary, where relevant. The majority of data is sourced from Ellipse and GIS.

4.3.2 Data improvement programmes

There have been no notable data improvement programmes in AR25.

4.3.3 Assumptions used for forecast data

There are no forecast data for the E6.

5 Table E7 – Wastewater explanatory factors - sewerage & sewage treatment by area

5.1 Overview

Table E7 provides information on operating costs and efficiencies relating to wastewater explanatory factors – sewerage and sewage treatment. It covers:

- Area data
- Sewerage data
- Sewerage costs
- Sustainable Urban Drainage Systems (SUDS)
- SUDS costs
- Pumping stations
- Wastewater Treatment Works
- Sewage treatment costs

5.2 Performance Trends

5.2.1 Lines E7.1-E7.7 Area Data

E7.1 Annual average resident connected population

The total figure used for Scotland was correlated to the Scottish Water Region split obtained using GIS properties to ensure there was a consistent figure reported across the Annual Return tables. For AR25 the Annual average resident connected population in thousands is 5,027.253 ('000). This is marginally different from the number reported in A3.3 (5,027,252) due to rounding of figures when splitting across Scottish Water regions.

The confidence grade of B2 remains the same as AR24.

E7.2 Annual average non-resident connected population

As with previous years, tourist population has been determined based on the average bed spaces multiplied by an average occupancy factor. Average occupancy rates are taken from Visit Scotland latest data for the year Jan-Dec 2023 available in the Tourism in Scotland report. For AR25 the Annual average non-resident connected population is 91.7k, compared to 81.8k in AR24. The increase is a result of the greater occupancy recorded at tourist accommodations over the period.

The confidence grade of B3 remains the same as AR24.

E7.3 Volume of sewage collected (daily average)

The daily average volume of sewage collected for the AR25 period is 3,181.8 Ml/d, a decrease of

18.2 Ml/d compared to AR24. This is due to there being a lower total of rainfall over the AR25 period. The reduction was slightly offset by the increased drained area used to model rainfall, as detailed in the E7.6 commentary.

The method used to calculate the volume of sewage data is based on the dry weather flows plus the storm flows within each catchment being summarized at Scottish Water Region level.

The average daily volume collected has been calculated as the flow which arrives in a public sewer (of any type) from any source e.g., rainfall, infiltration, domestic use, industrial use, tidal flows and connected watercourses. The approach used is the same as that in previous years and has been applied consistently across the country. It uses data sets for rainfall, connected

properties and sewered areas consistent with the wastewater elements of the Annual Return. The flow has been calculated in two parts: dry weather flow and storm flow.

Dry Weather Flow: A factor has been established that relates the number of connected properties to the amount of sewer flow in periods without rainfall. To establish this figure a number of recordings of flows with a known connected population were analysed to establish a range of flow per connected population. These factors were averaged and applied to all sewered areas to establish a total dry weather flow contribution per sewered area.

Storm Flow: The storm flow element was calculated by using existing sewer models to establish a relationship between rainfall depth, area of the sewered area and the amount of run-off generated. A selection of models was used and an average value of run-off per millimetre rainfall per hectare of sewered area was established. This was then applied to each sewered area to establish a total storm flow contribution per sewered area.

The total sewage collected was calculated (dry weather plus storm flows) for each sewered area and a total for each operational region calculated.

The confidence grade of C3 for AR25 remains the same as AR24, given the uncertainty in the dry weather flow element of the calculation.

E7.4 Total connected properties

This total is 2,690,305 and is based on the same data used for **Line A1.20** (2,690,305). The total property figure used for Scotland was correlated to the Scottish Water Region split obtained using GIS properties to ensure there was a consistent figure reported across the Annual Return tables.

The confidence grade of B3 remains the same as AR24.

E7.5 Area of sewerage district

The area has remained the same at 79,816.4km^2.

The confidence grade of A1 remains the same as AR24.

E7.6 Drained area

The reported value of the drained area is 2,017.616 km^2 and is a slight increase of 6.6km^2 from AR24. This is a result of on-going verification of the sewered areas in our corporate Geospatial Information system (GIS).

The confidence grade of A1 remains the same as AR24.

E7.7 Annual precipitation

Rainfall data was again calculated by Scottish Water using data extracted from Hyrad. For AR25 the yearly rainfall that fell in each 1km grid that covered our drainage operational areas was determined, then an average for each of the Operational Areas and a total for Scotland was calculated.

Area	Average Rainfall, mm AR24	Average Rainfall, mm AR25
Scotland	1286	1212
South	1173	1058
West	1442	1299
North	1417	1506
East	1111	983

The total rainfall has decreased from 1286mm to 1,212 mm for AR25.

The confidence grade for this line remains at A2 for AR25, as rainfall was calculated internally by Scottish Water relating satellite data to wastewater catchments to establish a precise correlation between rainfall and Scottish Water's assets.

Lines E7.8-E7.14 Sewerage Data

E7.8 Total length of sewer

This reflects values held in our corporate Geospatial Information system (GIS) and a partially statistical calculation of lateral sewer length using unit length connections by dwelling type. For AR25 the total length of sewer reported is 55,200.1km which is an increase of 0.9% from AR24.

The confidence grade of B2 remains the same as AR24.

E7.9Total length of lateral sewer

The statistical calculation of the length of lateral sewers is then used to populate **Line E7.9**. The calculation also uses the number of properties connected to the wastewater network (connected properties). This is the same methodology as used in previous returns. The reported length of lateral sewer is 20,255.62 km, a 1.1% increase compared to AR24.

The confidence grade of B2 remains the same as AR24.

E7.10 Length of combined sewer

The length of combined sewer held in our corporate Geospatial Information system (GIS) is reported as 17,651.9 km for AR25, which is an increase of 5.8 km from AR24.

The confidence grade remains the same as AR24 at A2.

E7.11 Length of separate storm sewer

The length of separate storm sewer reported is 9,206.4 km, which represents an increase of 2.1% (185 km) from AR24, reflecting the adoption of separate storm sewers for new build developments.

The confidence grade remains the same as AR24 at A2.

E7.12 Length of sewer >1000mm diameter

The length of sewer greater than 1000mm diameter held in our corporate Geospatial Information system (GIS) is 810.1 km, which is an increase of 7.0km.

The confidence grade remains the same as AR24 at A2.

E7.14 Sewer collapses

The numbers reported for this section are derived from Microsoft Dynamics. When a customer reports an incident to the Customer Contact Centre, sewer response field teams investigate. Any incidents which require further work due to sewer damage are passed to Network Analysts for further investigation and to arrange repair. The numbers reported in this section are the filtered incidents which have been deemed as sewer collapse after further investigation. For reporting purposes, we include all cases where the pipe is damaged, and a repair has been necessary and rising mains are included in the reported numbers.

The number of sewer collapses over the report year is reported as 2,683 which is an increase of 182 in comparison with AR24. This is an increase of 7.28%.

A number of improvements have led to better visibility and recording of collapses on our systems. These have resulted in the 7.28% increase in reported sewer collapses as we continue to improve on our ability to identify them:

Increase in CCTV Surveys – an increase in the number of CCTV surveys carried out by Sewer Response after every repair has resulted in an increase in the number of sewer collapses. This has resulted in Scottish Water being able to address issues that may have gone undetected before, therefore preventing any future disturbance to customers.

Alternative Resolution Management – this process involves bringing departments together across functions and working in new ways to resolve complex customer problems. It is used to identify and address repeat appointments to customers. This is helping to identify weak spots in the network and as a result we are finding more issues which are a contributing factor in driving the increase in sewer collapses.

The increase in the number of sewer collapses has been driven by these process improvements. Whilst Scottish Water believes asset deterioration to be the main factor towards sewer collapses, there is insufficient data at this stage to confirm.

The confidence grade of B4 remains the same as AR24.

5.2.2 Lines E7.15-E7.19 Sewerage Costs

Cost analysis and allocation methodology for table E7 is outlined in section 3.2.3.

E7.19 - Sewerage Costs

	Total
Functional expenditure:	£m
2024/25	54.459
2023/24	61.454
Variance	**+6.995**

Sewerage costs have reduced by £7.0m (11%) from 2023/24, reflecting the following key movements:

- £7.0m (65%) reduction in hired and contracted costs driven by improved cost capture resulting in more contractors spend being captured directly in projects, a lower level of incidents throughout the year influenced by benign weather conditions, and an increase in procurement rebates;
- £0.8m (6%) reduction in power costs due to primarily to lower consumption attributable to lower average rainfall and more self-generation; partially offset by
- £0.6m (4%) increase in employment costs driven by in the main by pay inflation.

Analysis of sewerage costs by region:

	North	East	South	West	Direct	General and Support	Total
Functional expenditure:	£m	£m	£m	£m	£m	£m	£m
2024/25	4.585	10.952	10.865	13.255	**39.657**	14.802	**54.459**
2023/24	4.786	11.375	13.381	16.959	**46.501**	14.953	**61.454**
Variance	**+0.201**	**+0.423**	**+2.516**	**+3.704**	**+6.844**	**+0.151**	**+6.995**

Confidence Grades – Confidence grades on Table E7 are consistent with grades in the general E table commentary and remain consistent with 2023/24.

Scottish Water has slightly lower confidence levels on Network cost analysis than treatment cost analysis. This is due to lower levels of direct labour capture on Networks.

5.2.3 Lines E7.20-E7.25 - Sustainable Urban Drainage Systems (SUDS)

The number of Sustainable Urban Drainage (SUDS) assets held corporately in the Works & Asset Management system (Ellipse) are reported in **Lines E7.20-25**.

125 new assets are reported in AR25 (mainly SUDS basins) due to the increased implementation of surface water drainage systems in new housing and commercial developments, which then come into Scottish Water ownership.

The movement in individual lines is summarised in Table 36.

Table 36: SUDS changed between AR23 and AR24

Line	AR24	AR25	Change
E7.20 - SUDS Pond	66	82	16
E7.21 - SUDS Basin	255	338	83
E7.22 - Filter Trenches	128	151	23
E7.23 - Swales	21	24	3
E7.24 - Suds Other Wetland	3	3	0
E7.25 - Total SUDS	**473**	**598**	**125**

The Confidence Grades for all the lines are A3 and are consistent with AR24

5.2.4 Lines E7.26-E7.30 SUDS Costs

Costs for maintaining SUDS sites are directly captured in our general ledger system against SUDS asset identifiers. For 2024/25, SUDS costs amounted to £0.2m, an increase of £0.1m from 2023/4 primarily relating to employment costs.

The Confidence Grade for these lines is A4.

5.2.5 Lines E7.31-E7.40 Pumping Stations

A pumping station is defined as an individual site (i.e. not an individual pump). It includes foul, combined and stormwater pumping stations situated at treatment works (but excludes interstage pumping) and in the network. Changes since the last submission are reflective of asset data improvement, changes to pump units, and additions and removals of asset locations to reflect operational revisions.

As with previous years the data that supports the population of lines relating to pumping station capacity (m^3/d) and pumping head is limited. These values are extrapolations based on Table H5 size-banded kW ratings to infill any missing values per pumping station. There is no new pumping station capacity data available for AR25.

E7.31 Total number of pumping stations

There was a net increase of 32 Pumping Stations in AR25 to 2,351 mainly due to the installation at new housing developments. Removals and Additions are detailed in Table 37 below.

Table 37: Pumping Station Additions and Removals in AR24.

Plant No	Site	Added / Removed	Region	Sewer Use
SPS000421	SPRINGHILL FARM 2 WWPS NS673647	Added	West	FOUL
SPS003053	SMITHSTONE WWPS NS723750.	Added	South	FOUL
SPS003638	MARYKIRK GRAMPIAN VIEW WWPS NO684658	Added	East	FOUL
SPS003682	BRIDGE OF EARN OUDENARDE WWPS NO138179	Added	East	FOUL
SPS003766	NERSTON VILLAGE WWPS NS645569.	Added	South	FOUL
SPS003842	INVERURIE URYSIDE ROAD WWPS NJ779223	Added	East	FOUL
SPS003859	LEVEN FOREST PATH WWPS NO379021	Added	East	FOUL
SPS004085	CALDERWOOD WWPS 2013 NT089687	Added	South	FOUL
SPS004094	ALYTH SPRINGBAN WWPS 2012 NO252484	Added	East	FOUL
SPS004104	STANDHILL FARM WWPS 2013 NS967674	Added	South	FOUL
SPS004108	LOCHANS WWTW WWPS 2013 NX068565	Added	South	COMBINED
SPS004120	CONDORRAT MAIN RD WWPS NS724721	Added	South	FOUL
SPS004135	MALLACE AVENUE WWPS 2004 NS948686	Added	South	FOUL
SPS004144	LINWOOD HILLMAN ROAD WWPS NS454636	Added	West	FOUL
SPS004200	ABERDEEN BLAIRS WWPS 2014 NJ881013	Added	East	FOUL
SPS004213	WALLYFORD WWPS 2015 NT369724	Added	South	FOUL
SPS004333	NEWMILNS MILL ROAD WWPS 2016 NS543371	Added	West	FOUL
SPS004351	WHITEFIELD TER WWPS 2017 NS623781	Added	West	FOUL
SPS004381	WALLYFORD SALTERS RD WWPS 2017 NT365715	Added	South	SURFACE WATER
SPS004384	EAST OVERTON FARM WWPS 1 2017 NS711450	Added	South	FOUL
SPS004385	EAST OVERTON FARM WWPS 2 2017 NS710457	Added	South	FOUL
SPS004392	CAMBUSLANG BUTTERCUP CRES WWPS	Added	South	FOUL
SPS004422	ORMISTON LIMEYLANDS ROAD WWPS NT406695	Added	South	FOUL
SPS004437	INVERNESS MERKINCH PL WWPS 2020 NH657460	Added	North	FOUL
SPS004438	ABERLADY MEADOWSIDE WWPS 2018 NT460794	Added	South	FOUL
SPS004467	LIVINGSTON CAWBURN RD WWPS 2 NT066697	Added	South	FOUL
SPS004481	GLASGOW GREENLEES RD WWPS 2019 NS637590	Added	West	FOUL
SPS004514	BUSBY CARTSIDE DRIVE WWPS 2020 NS580567	Added	West	COMBINED
SPS004526	CARRBRIDGE CRANNICH PARK WWPS 2 2019	Added	North	FOUL

Plant No	Site	Added / Removed	Region	Sewer Use
SPS004527	LENZIE BLACKLAND PLACE WWPS NS663714	Added	West	FOUL
SPS004534	KIRKCALDY KINGDOM PRK WWPS 2019 NT298944	Added	East	FOUL
SPS004535	MILTON SHIELDAIG ROAD SPS NS589699	Added	West	COMBINED
SPS004561	GARLIESTON HARBOUR WWPS NX480462	Added	South	FOUL
SPS004610	GLASGOW BURNFIELD RD WWPS NS553656	Added	West	FOUL
SPS004619	WINCHBURGH LOWER TRANSFER WWPS NT091744	Added	South	FOUL
SPS004620	WINCHBURGH UPPER TRANSFER WWPS NT091746	Added	South	FOUL
SPS004630	LINWOOD PHOENIX PARK WWPS NS457643	Added	West	FOUL
SPS004633	ABERNETHY NEWBURGH RD WWPS NO193167	Added	East	FOUL
SPS000157	BALLOCH DRUMKINNON BAY WWPS - PRIVATE	Removed	WEST	FOUL
SPS000334	MINNIGAFF HOLMPARK WWPS NX413652	Removed	SOUTH	COMBINED
SPS000349	NETHERMAINS WWPS NS310421	Removed	WEST	FOUL
SPS000668	LONGMAN DR S/WATER WWPS 2 1975 NH670469	Removed	NORTH	STORMWATER
SPS002066	MILTON WWPS	Removed	WEST	COMBINED
SPS004099	CONNEL SEP WWPS NM890339	Removed	NORTH	TREATED EFFLUENT
		Added	**38**	
		Removed	**6**	
		Total	**32**	

Table 38 summarises the changes at region level.

Table 38: Pumping Station Region summary in AR25

	North	East	South	West	Sum
AR24	540	835	465	479	2319
Added	2	8	18	10	38
Removed	-2	0	-1	-3	-6
AR25	**540**	**843**	**482**	**486**	**2351**

The confidence grade of A3 remains the same as AR24.

E7.32 Total capacity of pumping stations (m^3/d)

For AR25 this is reported as 16,636,408 m^3/d. This is an 11.0% decrease on the value reported for AR24.

The reduction is a result of pump attribute data being added in from Ellipse. Maximum flow in l/s is converted to m^3/d to provide a design capacity for pumps where the information is available.

435 pumps now have a design capacity compared to 363 in AR24.

The known pump design capacities are used to create average design capacity values (one for each of the 5 size bands). As the newly added capacities tend to be lower than the existing dataset values, the effect is to lower the average design capacity values, which are used to infill pumps with no actual value held against them.

Table 39 shows the average design capacity values calculated in AR24 and AR25:

Table 39: average design capacity values calculated in AR24 and AR25

Size Band	Nr of Pumps AR24	Design Capacity m3/ d Avg AR24	Nr of Pumps AR25	Design Capacity m3/d Avg AR25
1	80	901.96	96	821.84
2	153	3,353.52	192	2,705.63
3	73	9,699.65	83	8,541.42
4	42	33,633.89	48	29,809.45
5	15	134,153.00	16	125,806.24
	363		**435**	

The averages are also affected by the addition and removal of pumps in the year as only operational pumps, included in Table E, are components in the calculations.

The overall impact of the new data has been to reduce the design capacity totals in each of the four Scottish Water regions.

The confidence grade of C4 remains the same as AR24.

E7.33 Total capacity of pumping stations (kW)

For AR25 kW capacity is 103,154kW, which is an increase of 381kW from AR24.

The confidence grade of A3 remains the same as AR24.

E7.34 Average pumping head

This is reported as 32.3m for AR25. This represents an increase of 0.4m from the figure reported in AR24. Pumping head is largely influenced by the sewage volume, which was similar in AR25 to AR24. The electricity kw/hr values recorded against the pumps, which are used to create the Scotland average pumping head value, are largely unchanged from AR24. This has resulted in the average pumping head being increasing by 1.3%.

The confidence grade of C5 remains the same as AR24.

E7.35 Total number of combined pumping stations

The total number of combined pumping stations has increased by 1 to 1,348 for AR25.

The confidence grade of A3 remains the same as AR24.

E7.36 Total capacity of combined pumping stations

The total Capacity of Combined Pumping Stations has decreased to 12,027,387.0 m^3/d. This is a decrease of 11.3% on the AR24 reported figure. Combined sewer use pumping stations make up 57% of all wastewater pumping stations. The reason for the reduction in their capacity is given under line E7.32, which includes all wastewater pumping stations.

The confidence grade of C4 remains the same as AR24.

E7.37 Total number of stormwater pumping stations

The total number of stormwater pumping stations is 45, which is a reduction of one from AR24. The confidence grade of A3 remains the same as AR24.

E7.38 Total capacity of stormwater pumping stations

The total capacity of stormwater pumping stations has reduced to 702,614 m^3/d for the reason given under line E7.32, which includes all wastewater pumping stations. The confidence grade of C4 remains the same as AR24.

E7.39 Number of combined sewer overflows (CSOs)

The figure reported is 3,175 for AR25, which is an increase of 45 (1.4%) from AR24.

The confidence grade of A3 remains the same as AR24.

E7.40 Number of combined sewer overflows (screened)

This is reported as 1,407 for AR25, which is an reduction of 7 since AR24. Table 40 shows the additions and removals in the year. 42 were removed as part of the data improvement work being undertaken to add missing overflows to Scottish Water's asset inventory. Those at WwTW have to be related in the inventory to their parent asset. Only after this has been done can the overflows be excluded from the E7.40 data. As this is an ongoing process there can be some movement in the numbers as shown below. Once the improvement work is complete there will be fewer data corrections.

Table 40: Screen change summary in AR25.

AR24		**1414**
Removed	Abandoned / Demolished	-9
Removed	Identified as being at WwTW location (not included in table E7)	-42
Added	New CSO or new screens	44
AR25		**1407**

The confidence grade of A3 remains the same as AR24.

5.2.6 Lines E7.41-E7.42 Sewage Treatment Works (Wastewater Treatment Works)

E7.41 Number of sewage treatment works (Wastewater Treatment Works)

This number of wastewater treatment works has reduced by one to 1,837 for AR25. Full details of the changes and size bands are included in the commentary for E8.

The confidence grade of A2 remains the same as AR24.

E7.42 Total load

This has decreased (1.8%) to 238,279 kg BOD/day. Full details of the changes to load values are included in the commentary for E8. The difference is primarily due to the reduction in the WwTW sludge loads reported in AR25.

The confidence grade of B3 remains the same as AR24.

5.2.7 Lines E7.43-E7.47 Sewage Treatment Costs

E7.47 Functional Expenditure

Cost analysis and allocation methodology for table E7 is outlined in Section 3.2.3.

Sewage Treatment E7.47

	Total
Functional expenditure:	£m
2024/25	89.249
2023/24	90.455
Variance	**+1.206**

Sewage treatment costs have reduced by £1.2m (1%) from 2023/24, reflecting the following key changes:

- £1.6m (6%) reduction in power costs due primarily to lower consumption;
- £1.2m (13%) reduction in hired and contracted costs driven by better cost capture, resulting in more contractors spend being captured directly in projects, and an increase in procurement rebates;

partially offset by:

- £0.7m (9%) increase in SEPA charges linked to inflation-based increases;
- £0.5m (3%) increase in employment costs driven mostly by pay inflation; and
- £0.2m (11%) increase in other direct costs driven by property repairs and maintenance to improve site health and safety and access standards.

Analysis of sewage treatment costs by region:

	North	East	South	West	Direct	General and Support	Total
Functional expenditure:	£m	£m	£m	£m	£m	£m	£m
2024/25	11.892	23.592	21.523	18.665	**75.672**	13.577	**89.249**
2023/24	11.939	22.872	22.920	19.336	**77.067**	13.388	**90.455**
Variance	**+0.047**	**(0.720)**	**+1.397**	**+0.671**	**+1.395**	**(0.189)**	**+1.206**

Functional expenditure increased for the east region, due to an increase in chemical costs arising from project upgrade work at Kirkcaldy Wastewater Treatment Works (WwTW) and an increase in chemical and sludge and waste disposal costs at Nigg WwTW due mainly to increased volumes following operational issues at various sites, including Allanfearn WwTW.

Confidence grades for **Lines E7.43-E7.47** are A2 and remain consistent with AR24.

Scottish Water has slightly lower confidence levels on network cost analysis than treatment cost analysis. This is due to lower levels of direct labour capture on networks.

5.3 Data

5.3.1 Data sources and confidence grades

Data sources and confidence grades are detailed in the Performance Trends section 5.2, where relevant.

5.3.2 Data improvement programmes

Data improvement relevant to individual lines has been documented in the individual line comments.

5.3.3 Assumptions used for forecast data

There are no forecast data for E7.

6 Table E8 – Wastewater explanatory factors - sewage treatment works (Wastewater Treatment Works)

6.1 Overview

Table E8 provides information on operating costs and efficiencies relating to wastewater explanatory factors – wastewater treatment works. It covers:

- Numbers (of works)
- Loading (average daily load)
- Compliance
- Costs

The works reported in the E8 table are those in operation, excluding PFI works, at the end of the report year. The table includes unscreened sea outfalls which have no treatment assets. There are no WwTWs where there is doubt over which band or treatment type applies.

6.2 Performance Trends

6.2.1 Lines E8.1-E8.10 Numbers

The numbers for small sewage treatment works (wastewater treatment works - WwTWs) with specific ammonia consents are sourced from Scottish Water's compliance database and are aligned with **Lines E8.9 and E8.10**, as per previous years.

6.2.2 Lines E8.1-E8.8 Sewage treatment works size bands (Wastewater Treatment Works - WwTW)

As reported in E7 the total number of WwTWs reported for AR25 is 1,837. The size band and treatment category changes from AR24 are shown in Table 41 and Table 42 below.

Table 41: Changes in sewage treatment works.

Plant No	Site	Region	Size Band	Treatment Process	Added Removed
STW003831	WINCHBURGH WWTW NT091745	SOUTH	4	Septic Tank	Added
STW003834	NEWMILL MEADOWS RATHEN SEP WWTW NJ998609	EAST	0	Septic Tank	Added
STW002257	WINCHBURGH WWTW NT092745	SOUTH	0	Ter B2	Removed
STW000330	GLENGAP SEP NX652594	SOUTH	0	Septic Tank	Removed
STW003838	NETHERMAINS SEP WWTW NS310421	WEST	0	Septic Tank	Removed

STW000330 and STW003838 are now recorded under Private ownership and therefore removed from the E8 list. The new Winchburgh WwTW (STW003831) has been added and the abandoned old works (STW002257) has been removed. STW003834 - Newmill Meadows Rathen Septic Tank is a new asset.

Table 42: Changes in sewage treatment works Size Band by Treatment Category

Size Band	0 E8.1	1 E8.2	2 E8.3	3 E8.4	4 E8.5	5 E8.6	6 E8.7	Total
Septic Tanks	4	1	-2	-1	0	0	0	2
Primary	0	0	1	0	-1	0	0	0
Sec Activated Sludge	2	-1	-2	0	3	-3	0	-1
Sec biological	0	-2	0	2	-1	0	0	-1
Tertiary A1	0	0	0	-1	1	0	0	0
Tertiary A2	0	0	0	0	0	-1	1	0
Tertiary B1	0	0	0	0	0	0	0	0
Tertiary B2	0	0	1	-1	-1	0	0	-1
Sea Preliminary	0	0	0	0	0	0	0	0
Sea Screened	0	0	0	0	0	0	0	0
Sea Unscreened	0	0	0	0	0	0	0	0
Total	6	-2	-2	-1	1	-4	1	-1

A comparison of the AR24 and AR25 total number of WwTWs reported by Size Band are shown in Table 43. The confidence grade of B3 remains the same as AR24.

Table 43: Changes in sewage treatment works by Size Band.

Line Ref	Size Band	AR24 Reported	AR25 Reported	Change
E8.1	Size Band 0	1103	1109	6
E8.2	Size Band 1	210	208	-2
E8.3	Size Band 2	150	148	-2

Line Ref	Size Band	AR24 Reported	AR25 Reported	Change
E8.4	Size Band 3	179	178	-1
E8.5	Size Band 4	129	130	1
E8.6	Size Band 5	43	39	-4
E8.7	Size Band 6 (Large Works)	24	25	1
E8.8	Total Sewage Treatment Works	1838	1837	-1

6.2.3 Lines E8.9-E8.10 Small sewage treatment works with ammonia consent

The number of small WwTW with ammonia consent 5-10 mg/l has increased by one, to 49.
The number of small WwTWs with ammonia consent <= 5 mg/l has reduced by two at 63.

The confidence grade of A1 remains the same as AR24.

6.2.4 Lines E8.11-E8.18 Average Daily Load

The total load received at each reported WwTW for AR25 was 231,915 BOD/day (Table 444). This is a decrease of 1.9% from AR24, which was mainly due to the reduction in WwTW Sludge loads in AR25. The largest increase is shown in size band 4 WwTW, where one additional works is reported in AR25. The largest load decrease is in size band 5 which is due to four fewer WwTWs being reported than in AR24.

Table 44: Changes in WwTW Average Daily Loads.

Line Ref	Size Band	AR24 Load (kgBOD/day)	AR25 Load (kgBOD/day)	Change
E8.11	Size Band 0	382	408	26
E8.12	Size Band 1	1,041	1,001	-40
E8.13	Size Band 2	2,086	2,121	35
E8.14	Size Band 3	9,826	9,955	129
E8.15	Size Band 4	36,280	37,643	1,363
E8.16	Size Band 5	38,134	35,678	-2,456
E8.17	Size Band 6 (Large Works)	148,677	145,109	-3,568
E8.18	Total Load Received	**236,427**	**231,915**	**-4,512**

Loads are based on 300g BOD/cubic metre and the population equivalent (PE) is based on 60g BOD/head/day, as specified by the Water Industry Commission for Scotland. Imported sludge liquor loads are calculated from the volume to each WwTW and an average strength of 300g BOD/cubic metre.

The confidence grade of B3 remains the same as AR24.

6.2.5 Lines E8.19 & E8.20 Small sewage treatment works with ammonia consent 5-10 mg/l and <= 5 mg/l

These lines report on the loads received at our small wastewater treatment works with specific ammonia consents. The numbers are sourced from our compliance database and are aligned with **Lines E8.9 and E8.10**.

The total average daily load at small wastewater treatment works with ammonia consent 5-10 mg/l decreased by 158 kgBOD/day, to 7,081kgBOD/day.

The total average daily load at small wastewater treatment works with ammonia consent <= 5 mg/l decreased by 125 kgBOD/day, to 16,463 kgBOD/day from the figures reported in AR24.

The confidence grade of A1 remains the same as AR24.

E8.21-30 Compliance

The percentage compliance was calculated based on the Operator Self-Monitoring Programme which is reported to SEPA. Our methodology for calculating compliance is the same as AR24 and, in the case of two-tier consents, all failures have been counted, not only upper-tier failures. WwTWs that are not sampled are not included in the averaging process for individual treatment categories and size bands. The sampling period is the AR25 period.

Compliance figures, which are reported in **Lines E8.21-E8.30**, show a decrease of three from AR24, with 18 works reported as failing in AR25. These failing WwTWs are listed in Table 45 below.

Table 45: AR25 WwTWs Compliance Failing Sites

Plant No	Site	Treatment Category
STW000218	DALDOWIE WWTW 1974 NS672622	Ter A1
STW000488	LUSS WWTW NS360927	Sec Act Sludge
STW000560	OCHILTREE WWTW NS508215	Sec Act Sludge
STW001435	ABERCHIRDER WWTW 1986 NJ629521	Ter A1
STW001543	NIGG WWTW NJ964046	Sec Act Sludge
STW001546	BALMEDIE WWTW 2004 NJ972177	Sec Biological
STW001562	HATTON OF CRUDEN WWTW 1995 NK055375	Sec Biological
STW001817	FETTERCAIRN WWTW 1940 NO656729	Sec Biological
STW001849	KINNEFF WWTW 1950 NO847769	Ter B1
STW001968	PENICUIK WWTW 2004 NT247609	Sec Act Sludge
STW001969 *	EAST CALDER PFI WWTW NT078680	Ter A2
STW002048	DAIRSIE WWTW NO418166	Sec Biological
STW002078	GIFFORD WWTW 1960 NT532686	Sec Biological
STW002228	BLACKRIDGE WWTW 1950 NS910677	Sec Biological

Plant No	Site	Treatment Category
STW002266	RITCHIE CAMPS WWTW 1997 NT115656	Sec Biological
STW002317	AVIEMORE WWTW 2005 NH903147	Sec Act Sludge
STW003713	ST MARGARETS HOPE WWTW ND451938	Sec Biological
STW003782	CANONBIE WWTW 2014 NY394773	Septic Tank

- STW001969 - East Calder WwTW is a PFI works and therefore not included in table E8.

More details on compliance and parameter failure types can be found in Tables B11b&c.

The Confidence Grade of B2 remains the same as AR24.

6.2.6 Lines E8.31-E8.42 Costs

Cost analysis and allocation methodology for table E8 is outlined in section 3.2.3.

Overall movements are explained in **Line E7.47** Sewage Treatment earlier in this commentary. The costs of treating and disposing of sludge are contained within the E10 Sludge Treatment and Disposal.

Analysis of sewage treatment costs by process type:

No changes to the numbers of wastewater treatment works by process type have arisen as a result of operational changes and process re-classifications in wastewater treatment works during 2024/25:

	Septic tanks	Primary	Secondary	Tertiary	Sea Outfalls	Direct	General and Support	Total
Total treatment works	£m	£m	£m	£m	£m	£m	£m	£m
2024/25	4.017	1.423	54.081	15.733	0.418	**75.672**	13.577	**89.249**
2023/24	3.733	1.586	54.611	16.754	0.383	**77.067**	13.388	**90.455**
Variance	(0.284)	**+0.163**	**+0.530**	**+1.021**	(0.035)	**+1.395**	(0.189)	**+1.206**

Costs which are directly attributable to treatment are charged to the specific asset cost code in the General Ledger, either via direct charging, Ellipse timesheets or work orders. Of the £75.7m total direct wastewater treatment costs, £53.6m of costs or 70.8% have been directly charged to assets in our corporate costing system.

Other costs have been allocated to wastewater treatment through ABM support activity allocation, e.g. stores based on number of issues, IT applications based on number of users, etc. Therefore, support costs are allocated on a resource consumed basis. However, many of these costs are not specific to an asset; they are generally attributable to an employee. Consequently, the majority of these support costs have been allocated to the activities the employees have been doing. For 2024/25 support activity allocations from 2022/23 were used to allocate support costs to wastewater treatment.

Confidence Grades – Confidence grades on Table E8 are consistent with grades in the general E table commentary and remain consistent with 2023/24.

6.3 Data

6.3.1 Data sources and confidence grades

Data sources and confidence grades are detailed in the Performance Trends section 6.2 where relevant.

6.3.2 Data improvement programmes

There have been no notable data improvement programmes in AR25.

6.3.3 Assumptions used for forecast data

There are no forecast data for E8.

7 Table E9 – Large sewage treatment works information database

7.1 Overview

Table E9 provides information on operating costs and efficiencies relating to large wastewater treatment works information database. It covers:

- Works size
- Compliance
- Treatment works category
- Sludge
- Works cost

Large works are defined as those which receive an average loading in excess of 1,500 kg BOD/day including effluent from both domestic and trade sources but excluding any allowance for non-resident population. This is roughly equivalent to a population of 25,000. There were no works upgraded during the reporting year.

This table excludes all wastewater treatment works operated under Public Private Partnership (PPP) that meet the above load criteria.

7.2 Performance Trends

7.2.1 Lines E9.0 & E9.0a - Name and Operational Area

These lines report the specific large non-PPP wastewater treatment works for this reporting year with their operational area noted. Changes in the reported list of assets reflect the variation in both domestic, tanker, and trade effluent loads received at these works. The listed assets reported in **Line E9.0** are aligned with those reported in **Line E8.7**.

The number and list of large non-PPP wastewater treatment works has increased by one to 25 sites as Fraserburgh WwTW has fallen above the BOD threshold for a large Wastewater Treatment Works (WwTW). With a BOD Kg/day of 1,531. There are no other changes to the works included in the E9 table in AR25.

Large wastewater treatment works are defined as those that receive an average loading over 1,500 kg BOD/day, about equivalent to a population of 25,000.

7.2.2 Lines E9.1 & E9.2 - Annual average resident connected population

These lines have been sourced from the same data that contributes to the measured household, unmeasured household and tourist population in Table A. The Confidence Grades for these lines are allocated as B2 and B3, respectively. The source data for **Line E9.2** has changed in AR25 from the non-household (business) population equivalent, which has been reported in previous annual returns, to the non-resident (tourist) population to follow the definition provided.

The confidence grade of B3 remains appropriate.

7.2.3 Lines E9.3 & E9.4 - Trade effluent and Tanker loads received by works

Trade effluent load figures are shown solely in **Line E9.3**, therefore there is no overlap with **Line E9.4**. The Confidence Grades for these lines are allocated as B4 and B3, respectively, these are the same as AR24.

E9.5 Population equivalent of total load received

The overall population equivalent (PE) of the total load received decreased by 79k from 2,478k to 2,399k from AR24, which is mainly due to a reduction in the sludge imports.

Changes to the population equivalent in '000, as reported in **Line E9.5**, of each large WwTW are detailed in the Table 46 below. An increase from Fraserburgh WwTW included in AR25 and a reduction at Shieldhall WwTW caused by the exclusion of septic tank and treatment works sludge that receives sludge thickening, rather than being taken to the head of a WwTW. Improved analysis of the imported loads has enabled identification of which loads to include/exclude as contributing to the PE at each WwTW.

Table 46: Change in Population Equivalent

Plant No	Site	AR24 '000 PE	AR25 '000 PE	Change
STW001223	ALLANFEARN WWTW NH711475	83.211	77.958	-5.253
STW000011	ALLERS WWTW 1964 NS662561	35.965	39.741	3.776
STW001979	ALLOA WWTW NS887918	43.04	43.01	-0.03
STW000033	ARDOCH WWTW 2002 NS374758	62.112	58.575	-3.537
STW000125	CARBARNS WWTW 1973 NS773539	48.33	47.999	-0.331
STW001975	DALDERSE WWTW 1966 NS903822	87.66	87.067	-0.593
STW000218	DALDOWIE WWTW 1974 NS672622	283.231	282.629	-0.602
STW000222	DALMARNOCK WWTW NS611627	176.617	165.43	-11.187
STW001984	DUNFERMLINE WWTW 1973 NT121817	84.263	81.605	-2.658
STW000265	DUNNSWOOD WWTW NS782771	30.207	29.941	-0.266
STW000281	ERSKINE WWTW NS494691	85.552	86.501	0.949
STW001551	FRASERBURGH WWTW 2001 NJ973669	0	25.612	25.612
STW000355	HAMILTON WWTW NS712575	61.75	60.157	-1.593
STW001491	INVERURIE WWTW 2001 NJ781203	26.84	26.54	-0.3
STW001977	KINNEIL KERSE WWTW 2001 NS960811	46.234	49.17	2.936
STW001982	KIRKCALDY WWTW 1987 NT287923	60.559	59.834	-0.725
STW000455	LAIGHPARK PAISLEY WWTW NS485655	98.12	98.435	0.315
STW001543	NIGG WWTW NJ964046	270.368	264.691	-5.677
STW001527	PERSLEY WWTW NJ906098	49.605	45.595	-4.010
STW001712	PERTH CITY WWTW 1971 NO147221	70.032	73.351	3.319
STW001569	PETERHEAD WWTW NK127442	35.14	38.216	3.076
STW000576	PHILIPSHILL WWTW 1948 NS603560	67.591	66.818	-0.773

Plant No	Site	AR24 '000 PE	AR25 '000 PE	Change
STW000642	SHIELDHALL WWTW NS533659	569.67	492.3	-77.37
STW002268	STIRLING WWTW 1968 NS808935	69.64	67.345	-2.295
STW000719	TROQUEER WWTW 1950 NX971745	32.216	30.538	-1.682
	Total	**2477.953**	**2399.058**	**-78.895**

The confidence grade of B3 remains the same as for AR24.

7.2.4 Lines E9.6-E9.10 – Compliance

These lines report on regulatory compliance using consent data as taken from our corporate consents database. CAR or UWWT parameters were used to report, depending on which was the most stringent.

The suspended solids (SS) consent is 100mg/l for most WwTW, which is the same as for AR24. Nigg and Peterhead have no SS consent, as in AR24. There are no changes to the BOD, Ammonia or Phosphate consent values from AR24.

Confidence grades remain at A1, reflecting the data being obtained directly from our corporate consents database.

E9.11 Compliance with effluent consent standard

Line E9.11 - compliance with consent percentage, based on OSM regulatory samples from the SEPA system showed that 15 out of 25 works achieved 100% compliance, compared to AR24 where nine large WwTW achieved 100% compliance. The lowest compliance rate was found at Nigg WwTW which achieved 83% compliance. The remaining number of works had greater than or equal to 95% compliance.

Line E9.11 reports full compliance for each site against each individual sample whereas table B11b reports compliance as a percentage of non-failing works across the year.

The confidence grade of A1 remains the same as for AR24.

7.2.5 Lines E9.12-E9.18 - Treatment Works Category

These lines report the information held in the corporate asset inventory in relation to treatment type. There are 25 large wastewater treatment works in E9; this corresponds with **Line E8.7**.

The Treatment Works Category identification remains unchanged from AR24. The

confidence grade of A1 remains the same as AR24.

7.2.6 Lines E9.19-E9.22 – Sludge

The main areas of difficulty in populating **Lines E9.20 and E9.22** are in allocating inter-site sludge tankering costs to individual sites and identifying sludge treatment/conditioning costs at multi-functional sites. Therefore, **Lines E9.20 and E9.22** are completed based on a combination of: ABM analysis, direct cost capture by asset, and Scottish Water sludge model analysis. Confidence grades for **Lines E9.20 and E9.22** are lower (C3) than other Section E cost analysis for these reasons.

As reported in **Line E9.21**, the following large wastewater treatment works are designated as sludge centres: Allanfearn, Alloa, Dalderse, Daldowie, Dunfermline, Kinneil Kerse, Nigg, Perth City, Shieldhall and Troqueer. The remainder of the large wastewater treatment works, namely: Allers, Ardoch, Carbans, Dalmarnock, Dunnswood, Erskine, Hamilton, Inverurie, Kirkcaldy, Laighpark (Paisley), Persley, Peterhead, Philipshill and Stirling only treat their own sludge as reported in **Line E9.19**.

The Confidence Grades for **Lines E9.19 and E9.21** are A1

7.2.7 Lines E9.23-E9.28 - Works cost

Cost analysis and allocation methodology for table E9 is outlined in section 3.2.3.

Analysis of functional costs for large wastewater treatment works:

	2024/25	2023/24	Variance
	£m	£m	£m
Daldowie	1.504	1.530	+0.026
Fraserburgh	0.444	n/a	(0.444)
Persley	0.469	0.633	+0.164
Tertiary treatment	**2.417**	**2.163**	**(0.254)**
Allanfearn	1.063	1.198	+0.135
Allers	0.533	0.460	(0.073)
Alloa	0.486	0.610	+0.124
Ardoch	0.440	0.725	+0.285
Carbarns	0.505	0.561	+0.056
Dalderse	0.753	0.439	(0.314)
Dalmarnock	2.406	2.342	(0.064)
Dunfermline	0.581	0.629	+0.048
Dunnswood	0.582	0.505	(0.077)
Erskine	0.947	0.888	(0.059)
Hamilton	0.834	0.956	+0.122
Inverurie	0.390	0.687	+0.297
Kinneil Kerse	0.505	0.438	(0.067)
Kirkcaldy	1.123	1.099	(0.024)
Laighpark (Paisley)	1.082	1.092	+0.010
Nigg	2.552	1.802	(0.750)
Perth	0.971	0.949	(0.022)
Peterhead	0.561	0.608	+0.047
Philipshill	1.252	1.434	+0.182
Shieldhall	3.203	3.338	+0.135
Stirling	0.913	0.948	+0.035
Troqueer	0.620	0.606	(0.014)
Secondary treatment	**22.302**	**22.314**	**0.012**
Direct large treatment works	**24.719**	**24.477**	**(0.242)**
General and Support	2.549	2.662	+0.113
Total large treatment works	**27.268**	**27.139**	**(0.129)**

The larger increases (>£0.2m) are explained as follows:

- Fraserburgh Wastewater Treatment Works was reclassified as a large works during 2024/25 from a size band 5 previously. For comparison, 2023/24 costs for Fraserburgh Wastewater Treatment Works were £0.4m;
- Increased chemical costs at Dalderse due to a new Nanofloc chemical trial;

and

- Increased chemical, contractor and plant hire costs at Nigg Wastewater Treatment Works to maintain compliance and accommodate additional volumes due to other site closures.

The larger decreases (>£0.2m) are explained as follows:

- Reduced hired and contracted costs at Ardoch Wastewater Treatment Works due to a high value tank clean in 2023/24, which is not an annual activity;

and

- Reduced hired and contracted costs Inverurie Wastewater Treatment Works due to a high value service contract in the 2023/24 as part of the Nereda project upgrade, which is renewed every 3-3 years.

Confidence Grades – Confidence grades on Table E9, lines 23-28, are consistent with grades in the general E table commentary and remain consistent with 2023/24.

Confidence grades on lines E9.20 and E9.22 reflect the difficulty of separating costs relating solely to sludge activities at dual function works (sludge / wastewater treatment). The main areas of difficulty are inter-site sludge tankering and sludge treatment / conditioning. Therefore, lines E9.20 and E9.22 are completed on the basis of a combination of: ABM analysis, direct cost capture by asset, and Scottish Water sludge model analysis. Confidence grades on lines E9.20 and E9.22 are lower (C3) than other E Table cost analysis due to these reasons.

7.3 Data

7.3.1 Data sources and confidence grades

Confidence grades in E9 are consistent with other grades in the Section E commentary and remain consistent with AR24. More detail is provided in the individual lines' descriptions.

7.3.2 Data improvement programmes

There were no notable data improvement programmes in AR25.

7.3.3 Assumptions used in forecast data

There are no forecast data for E9.

8 Table E10 – Sludge treatment and disposal

8.1 Overview

The allocation of sludge treatment and disposal costs by disposal route relies on sludge movement data linked to financial data. The sludge movement data from the Gemini waste management system is linked to ABM costs to produce the E10 table cost analysis. Financial costs for this table are completed based on a combination of ABM analysis, direct cost capture by asset, and Scottish Water's sludge model analysis.

Sludge treatment and disposal is reported only for sludge treated and recycled or disposed of from Scottish Water's operational sites. Sludge disposal by PPP concessions is not reported in this table.

8.2 Performance Trends

E10.1 Resident population served

The resident population served by each sludge disposal route is reported on **Line E10.1.** The Population Equivalent (PE) reported in **Line E10.1** has increased slightly from 1,631.933k to 1,633.634k (+1.7k). The resident population for each site and the disposal route is shown in Table 47 below

Table 47: Resident Population by site

Plant No	Site	Disposal Method	Resident PE (000)
STC000041	UNDERWOOD (CUMNOCK) STC	Farmland Conventional	3.4718
STC000089	GALASHIELS STC NT513351	Farmland Conventional	113.7203
STC000090	HAWICK STC	Farmland Conventional	19.1955
STC000121	ALLANFEARN STC NH711475	Farmland Conventional	21.3204
STC000019	GIRVAN STC	Farmland Advanced	36.1051
STC000040	TROQUEER STC	Farmland Advanced	94.2831
STC000079	KIRKWALL(HEAD OF WORK) STC 2003 HY475137	Farmland Advanced	9.7270
STC000083	STORNOWAY STC	Farmland Advanced	18.8567
STC000085	PERTH CITY STC	Farmland Advanced	118.2300
STC000092	KINNEIL KERSE STC	Farmland Advanced	24.8235
STC000111	THURSO STC ND131695	Farmland Advanced	12.3695
STC000120	ALNESS AND INVERGORDON STC 2009 NH675690	Farmland Advanced	6.6389
STC000126	NIGG STC NJ964046	Farmland Advanced	357.2226
STC000110	LERWICK ROVAHEAD STC 2000 HU469448	Landfill	16.1600
STC000019	GIRVAN STC	Land Reclamation	1.9400
STC000040	TROQUEER STC	Land Reclamation	0.8418
STC000041	UNDERWOOD (CUMNOCK) STC	Land Reclamation	34.9980

Plant No	Site	Disposal Method	Resident PE (000)
STC000067	PERSLEY STC	Land Reclamation	38.9095
STC000079	KIRKWALL(HEAD OF WORK) STC 2003 HY475137	Land Reclamation	1.8666
STC000085	PERTH CITY STC	Land Reclamation	2.1337
STC000087	DALDERSE STC	Land Reclamation	157.2735
STC000088	DUNFERMLINE STC NT121817	Land Reclamation	131.5125
STC000089	GALASHIELS STC NT513351	Land Reclamation	1.5942
STC000092	KINNEIL KERSE STC	Land Reclamation	90.5555
STC000094	STIRLING STC	Land Reclamation	59.6547
STC000097	KIRKCALDY STC NT286923	Land Reclamation	51.2797
STC000098	ST ANDREWS STC	Land Reclamation	21.1557
STC000120	ALNESS AND INVERGORDON STC 2009 NH675690	Land Reclamation	2.9114
STC000121	ALLANFEARN STC NH711475	Land Reclamation	118.7135
STC000126	NIGG STC NJ964046	Land Reclamation	5.7376
STW000426	KILMORY WWTW 2006 NR864868	Land Reclamation	16.3088
STW000559	OBAN WWTW 2000 NM867314	Land Reclamation	20.6834
STW001569	PETERHEAD WWTW NK127442	Land Reclamation	0.2439
STW001980	CUPAR WWTW 1962 NO388148	Land Reclamation	23.1961

The PE is re-calculated every year from the properties identified as household and wastewater connected in the catchment, and the average property occupancy,

The confidence grade of C3 remains the same as AR24.

E10.2 Amount of sewage sludge

This line reports the mass of sewage bioresource across the noted disposal routes. The total reported volume of 30.440ttds was derived from various internal data sources including our Gemini system. This is an increase of 5.2% from AR24 where the total reported volume was 28.93ttds.

There was an increase of 7.99 ttds in the volume of enhanced treated sludge material produced. The reason for the increase is due to the improved performance at Nigg STC.

There has been a decrease of 0.37 ttds in volume of conventionally treated material recycled to agriculture in AR25. This is primarily due to a decrease in compliance in Cumnock.

A significant reliance is still placed on the use of land restoration outlets due to untreated/non-compliant sludge cakes at a number of Scottish Water operated sludge treatment centres. There has been a decrease of 6.09 ttds of material that utilised land restoration as an outlet. This is linked to the improved throughput and performance at Nigg STC.

0.38 ttds of untreated bioresource material continues to be landfilled in the Shetland Islands.

The confidence grade of B4 remains the same as for AR24.

8.2.1 Lines E10.3-E10.9 - Sludge Treatment and Disposal Costs

E10.9 - Sludge Treatment and disposal: Functional Expenditure

Cost analysis and allocation methodology for table E10 is outlined in section 3.2.3.

Sludge Treatment E10.9

	Total
Functional expenditure:	£m
2024/25	26.472
2023/24	24.851
Variance	**(1.621)**

Sludge treatment costs have increased by £1.6m (7%) from 2023/24, reflecting the following key movements:

- £0.3m higher employment costs linked primarily to pay inflation;
- £0.4m higher chemical costs, due primarily to price inflation maintaining compliance; and
- £1.1m increase in hire and contracted costs due to price inflation and site closures, including Allanfearn due to digester maintenance requirements, resulting in increased sludge tankering costs.

Scottish Water incurs costs associated with the transportation of sludge from its own wastewater treatment works to PPP sludge treatment centres. These costs have been reported within E3a.20 with the corresponding sludge loads reported in E3.

The allocation of sludge treatment and disposal costs by disposal route relies on sludge movement data linked to financial data. Scottish Water links sludge movement data from the Gemini waste management system to ABM costs to produce E10 cost analysis.

Analysis of sludge treatment costs by disposal route:

	2024/25 £m	2023/24 £m	Variance £m
Farmland:			
Untreated	0.000	0.000	+0.000
Conventional	1.256	1.470	+0.214
Advanced	11.754	8.407	(3.347)
Incineration	0.000	0.000	+0.000
Landfill	1.325	1.140	(0.185)
Composted	0.000	0.000	+0.000
Land reclamation	12.137	13.834	+1.697
Other	0.000	0.000	+0.000
Total	**26.472**	**24.851**	**(1.621)**

An increase in costs for disposals via Farmland advanced is primarily due to higher volumes through this route from Nigg, due to increased volumes being treated at site because of other site closures, including Allanfearn, and processing of volumes from Dunfermline WwTW. Additionally, there was a change in disposal route during the year for sludge treated at Kinneil Kerse from land reclamation previously. Consequently, due to the Allanfearn site closure, sludge from Dunfermline being processed at Nigg and the change in disposal route for Kinneil Kerse, there has been a reduction in the costs for disposal via land reclamation and, to a lesser extent, via farmland conventional.

Confidence Grades – Confidence grades on Table E10 are consistent with grades in the general E table commentary and remain consistent with 2023/24.

Sludge cost analysis by ultimate disposal route requires analysis of all sludge treatment, tankering and disposal costs by works, linked to intermediate works (where applicable) and ultimate disposal route. Certain costs are clearly captured by works with identified disposal route. However, certain costs are not fully captured directly against sludge. The main areas of difficulty are inter-site sludge tankering and sludge treatment / conditioning at dual function works (sludge / wastewater treatment). Table E10 is completed on the basis of a combination of: ABM analysis, direct cost capture by asset, and Scottish Water sludge model analysis. Confidence grades on Table E10 are lower (B2) than other E Table cost analysis due to these reasons.

8.3 Data

8.3.1 Data sources and confidence grades

The resident population reported is the total resident population served by Scottish Water treatment works, and excludes the resident population served by PPP works. However, much of the sludge from the population served by Scottish Water treatment works is treated and disposed of through PPP concessions.

The quantity of sludge is taken from the Scottish Water Gemini tanker movement system (except one discharge to one PPP works which is moved via a metered pipeline) which records and tracks sludge from point of production to point of disposal. Sludge is moved by Scottish Water's contractors, and all tanker loading is metered. Sludge is moved by specialist transport for which weigh-bridging or tanker- metering is recorded.

Confidence grades are documented in the individual line comments where relevant.

8.3.2 Data improvement programmes

There have been no notable data improvement programmes in AR23.

8.3.3 Assumptions used in forecast data

There are no forecast data for E10.

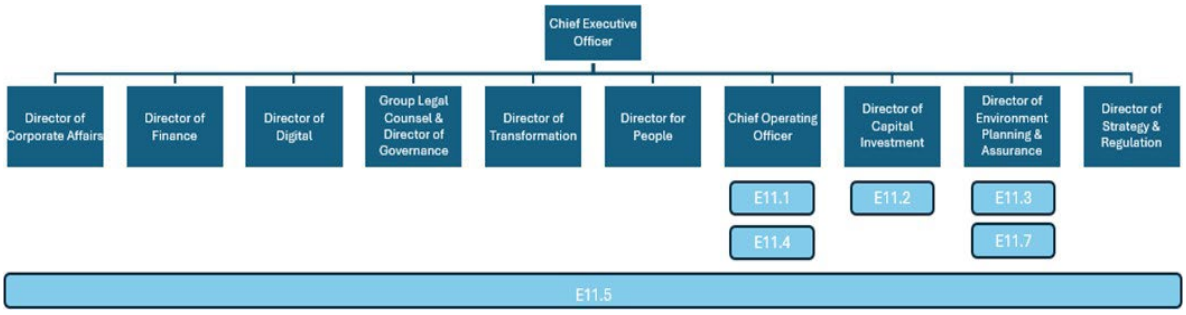
9 Table E11 – Employee numbers – Full-time equivalents

9.1 Overview

This table contains the number of full-time equivalent employees as of the end of March 2025; the split of data is explained in each line, as necessary.

The row headings in table E do not mirror the current organisation structure within Scottish Water therefore the total for each line is either a subset of a business area or is calculated by combining multiple business areas. These combinations are described in the narrative below in Figure 12.

Figure 12: Organisation structure and row ownership for Table E11.



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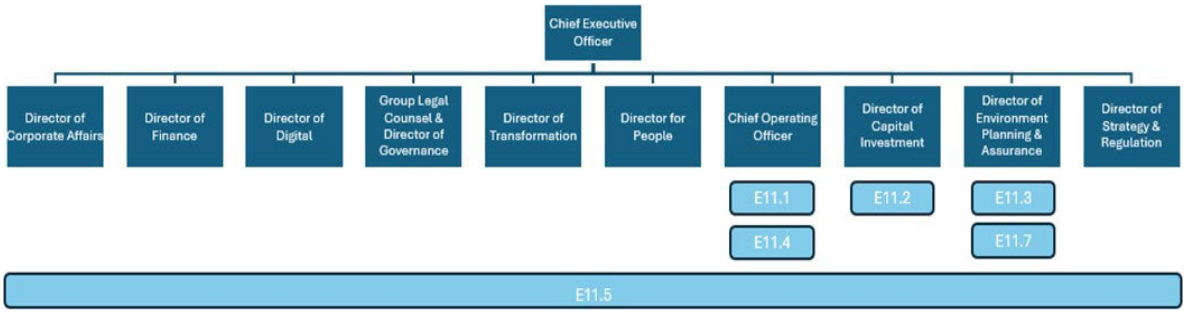


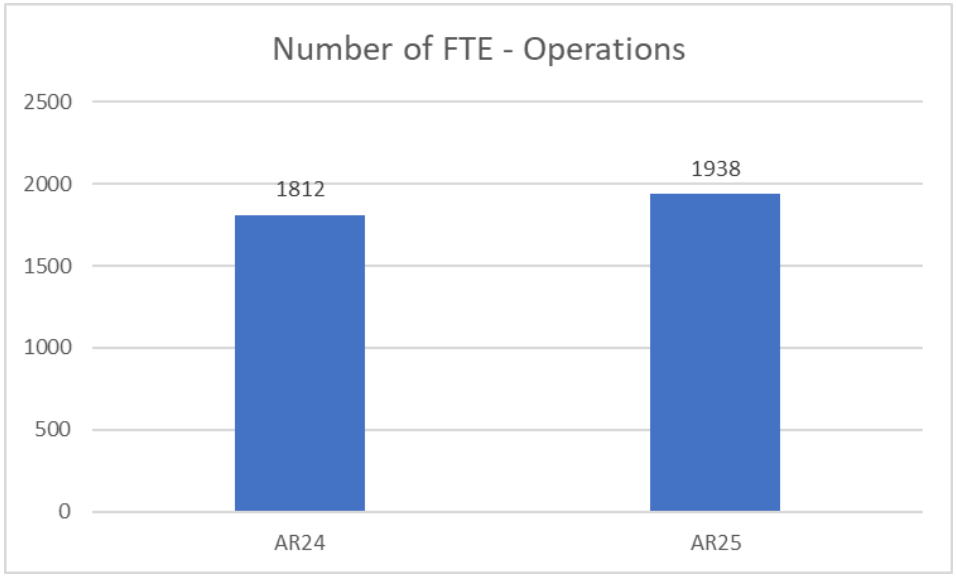
9.2 Performance Trends

9.2.1 Lines E11.1-E11.6 - Delivery of water and wastewater services

E11.1 Operations

The FTE figures contained with Line E11.1 are for the main Water and Wastewater Operations function of Scottish Water. This excludes the focused Customer Service teams such as Contact Centre & Customer Experience and Field, Water and Sewer Response Teams which are captured in Line E11.4. These figures exclude Directors and Managers which are contained within Line E11.5 and include Grampian FTEs. The number of employees (FTE) in this category is 1938. Figure 13 below depicts the change in total number of employees (FTE) across AR24 and AR25.

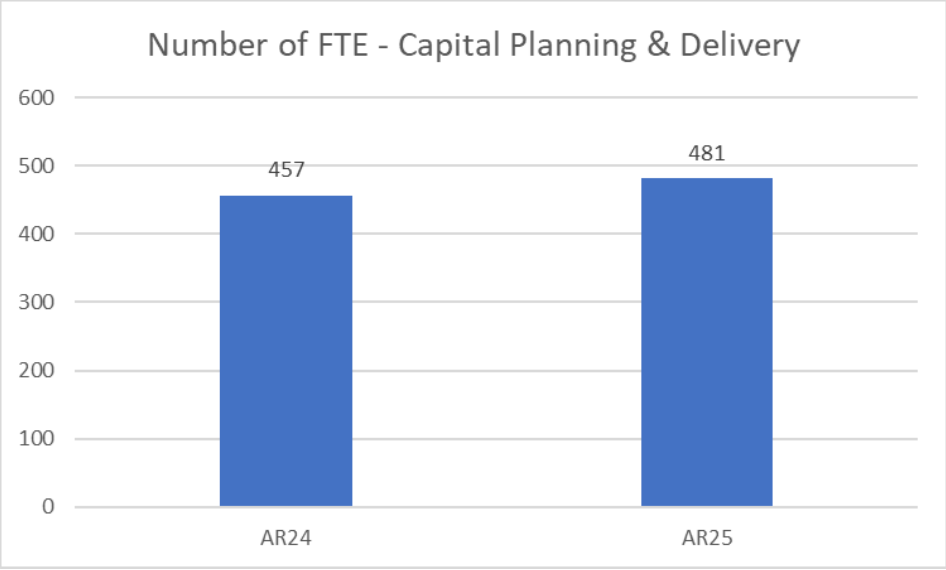
Figure 13: Change in number of employees (FTEs) in operations across AR24 and AR25.



E11.2 - Capital Planning and Delivery

E11.2 contains the FTE for Scottish Water's Capital Investment Planning and Delivery Teams. This focus area includes Alliance Management, Portfolio Management, Investment Delivery, Commercial, Central Procurement and Specialist Services. These figures exclude Directors and Managers which are contained within Line E11.5. The number of employees (FTE) in this category is 481. Figure 14 below depicts the change in total number of employees (FTE)in Capital Investment only across AR24 and AR25.

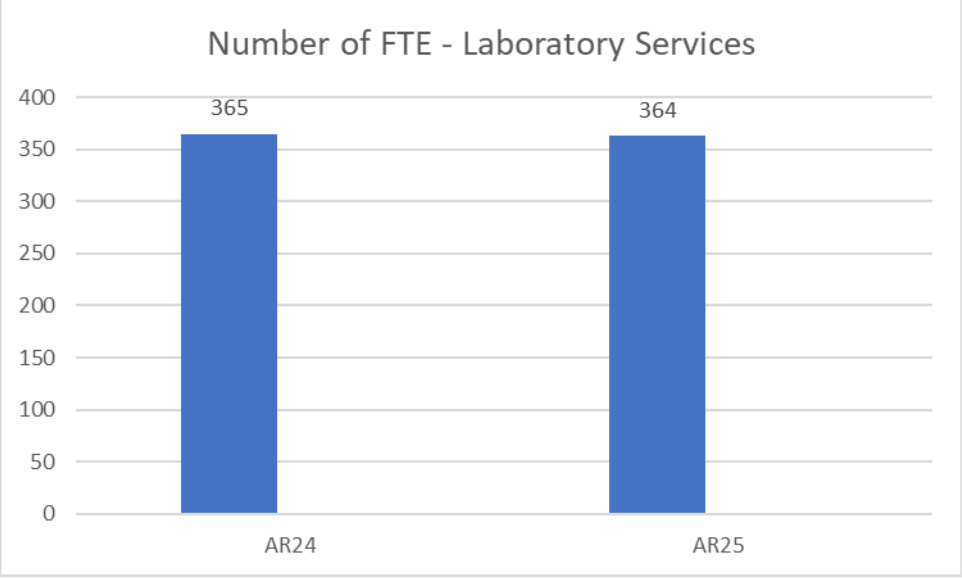
Figure 14: Change in number of employees (FTEs) in capital planning and delivery across AR24 and AR25.



E11.3 Laboratory Services

Line E11.3 captures the FTE for Scottish Water's Scientific Services function. Within this Business area the focus is on Water and Wastewater Sampling and Quality Assessment (Laboratory Services). These figures exclude Directors and Managers which are contained within Line E11.5. The number of employees (FTE) in this category is 364. Figure 15 below depicts the change in total number of employees (FTE) in Laboratory services across AR24 and AR25.

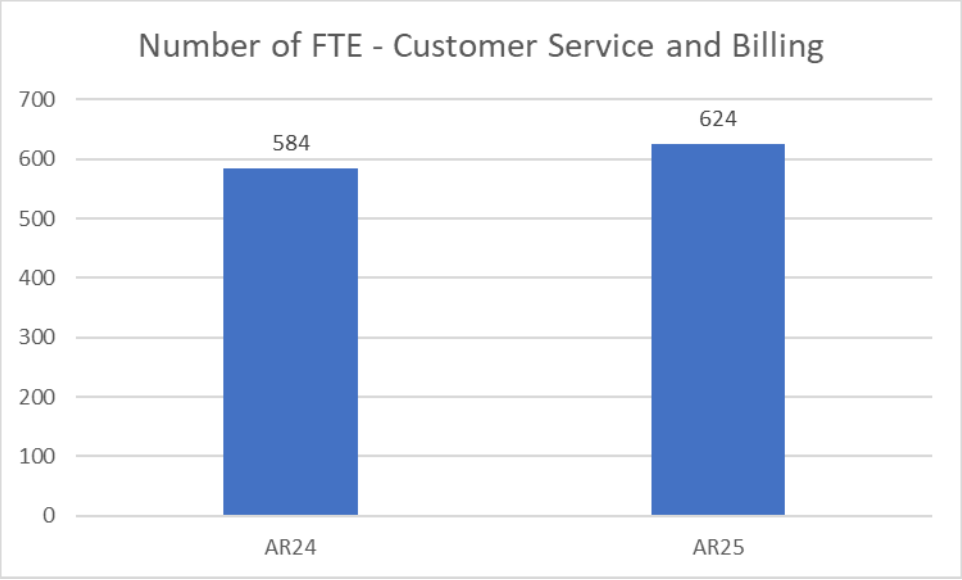
Figure 15: Change in number of employees (FTEs) in laboratory services across AR24 and AR25.



E11.4 Customer service and billing

Line E11.4 includes the FTE associated with the focused Customer Service teams such as Contact Centre & Customer Experience and Field, Water and Sewer Response Teams. The FTE captured under the category of Billing consist of Wholesale Services (Billing and Management). These figures exclude Directors and Managers which are contained within Line E11.5. The number of employees (FTE) in this category is 624. Figure 16 below depicts the change in total number of employees (FTE) for Customer Service and Billing across AR24 and AR25.

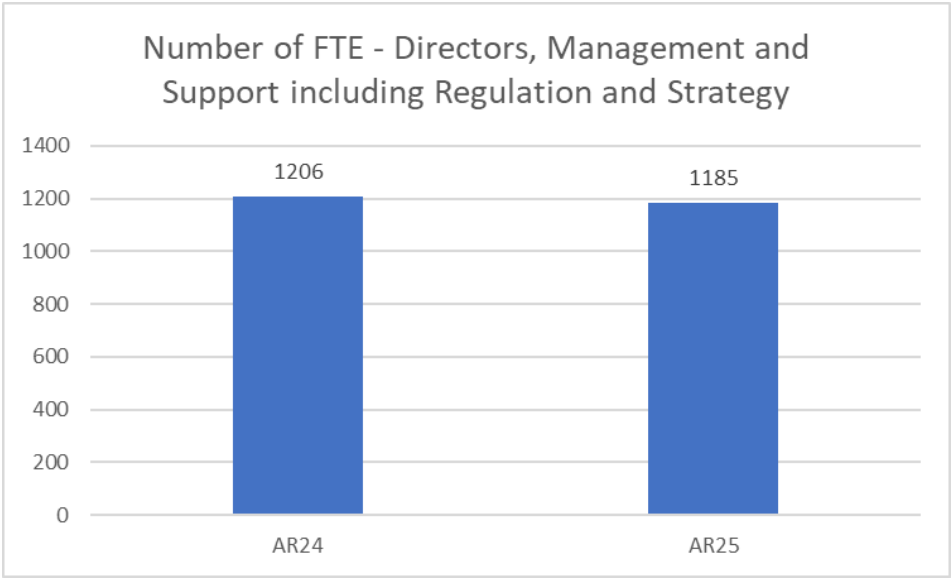
Figure 16: Change in number of employees (FTEs) in customer service and billing across AR24 and AR25.



E11.5- Directors, management and support including regulation and strategy

In Line E11.5 the FTE associated with Scottish Water's CEO, Executive Directors and Directors, General Managers and Business Managers (including Grampian) is recorded. In addition to this, support functions including Finance, People, Corporate Affairs, Digital, Transformation, Environment, Planning & Assurance and Strategy & Commercial are also captured. Scottish Water Horizons (Non-core service) is excluded from these FTE figures. The number of employees (FTE) in this category is 1185. Figure 17 below depicts the change in the FTE associated with Scottish Water's Directors, Management and Support including Regulation and Strategy across AR24 and AR25.

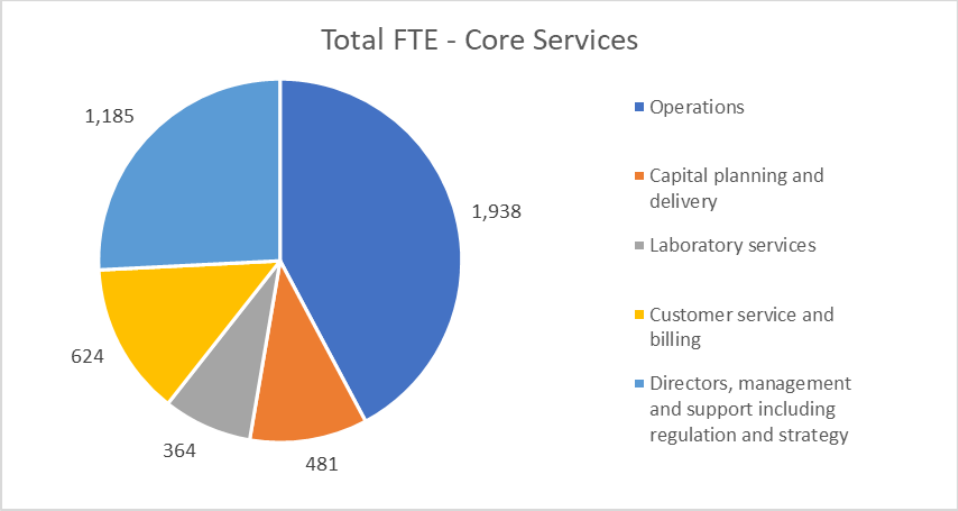
Figure 17: Change in number of employees (FTEs) in directors, management and support including regulation and strategy across AR24 and AR25



E11.6 – Total employee number (core services)

The total FTE of employees working in water and wastewater services delivery, as contained within Lines E11.1 to E11.5 is 4592. The breakdown of this total number is shown in Figure 18 below.

Figure 18: Breakdown of employee numbers working in water and wastewater service delivery for AR25



E11.7 – Total employee numbers (commercial and non-core services)

The total FTE including non-core service, Scottish Water Horizons (and Horizon Managers) and Capital Alliances (formerly Scottish Water Solutions) 98 FTE.

PLEASE NOTE:

The above represents Scottish Water's FTE for Employees only and does not capture the FTE associated with Contingent Workers consisting of Agency and Consultants/Contractors. These are deployed across Scottish Water and total 266 FTE as of 31 March 2025.

9.3 Data

9.3.1 Data sources and confidence grades

All data has been sourced from Scottish Water's corporate HR system (Workday) as of March 2025, and has therefore been given a confidence grade of A1.

9.3.2 Data improvement programmes

There have been no notable data improvement programmes since AR24.

9.3.3 Assumptions used in forecast data

There are no forecast data for E11.