

Annual Return 2004/05

Overview for WIC

DOCUMENT CONTROL

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Scottish Water
 Castle House
 Carnegie Campus
 Dunfermline
 KY11 8GG

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1. Executive Summary

1.1 Scottish Water Performance in 2004/05

In 2004/05 Scottish Water has made further progress in terms of efficiencies, systems rationalisation and, importantly, in improvements to customer service facilitated by new ways of working. Our key achievements in 2004/05 are highlighted below.

Service

- An increase in customer satisfaction levels across the year from 80% in March 2004 to 95% in September 2004 as measured through an independent survey.
- Our performance against key levels of service indicators improved, for properties at risk of low water pressure, telephone calls answered in 30 seconds and billing contacts responded to within 10 days, compared to 2003/04.
- We again maintained unconstrained supplies to all our customers during a period of relatively dry weather.
- We have continued to improve our collection of charges in the household sector and, by implementing service level agreements with local authorities, a full set of WIC 4 returns have been received.
- Our new Code of Practice has been signed-off and implemented during 2004/05.
- Our clean up response time for sewer flooding incidents have improved. In 2003/04 98.52% were cleaned up within 8 hours, whereas in 2004/05 this has improved to 100%.

Value

- We successfully delivered our services within the available finances from customer revenue and borrowings from the Scottish Executive, and we met all the financial objectives set by Scottish Ministers.
- Further real operating efficiencies of £30 million were achieved in 2004/05. We are now saving £100m per annum in real operating costs compared to those of the former water authorities for the benefit of Scottish customers and we are continuing towards meeting the targets set by Scottish Ministers for 2005/06.
- We continued delivery of our capital programme in 2004/05 with investments of £527.4 million. £519.9 million was invested in the delivery of the Quality and Standards II regulatory capital programme and £7.5 million was invested as part of the Spend to Save programme. Further good progress was made with the agreed outputs, for example 2354km of water mains and 223km of sewers have been rehabilitated during 2002 - 2005.
- Good progress was made with reduction in aged debt in the business sector with many customer issues resolved as part of debt reduction and data cleansing initiatives during the year. Similar initiatives will continue throughout 2005/06.

Compliance

- Overall regulatory compliance with drinking water quality standards improved to 99.57% in 2004 from 99.44% in 2003 and shows continued improvement since 2002.
- Chloramination was extended across more water treatment works and has reduced THM failures and reduced taste complaints (a key source of complaints from customers).
- The Glasgow cryptosporidium action plan was completed, and monitoring systems and contingency plans have been developed across Scottish Water's operational areas to reduce the risk to public health from cryptosporidium.
- In 2004/05, 65 water quality undertakings were delivered, with 169 remaining.
- The best ever compliance results for bathing waters in 2003 were achieved for Scotland's 60 designated bathing beaches and was repeated again in 2004, with only 1 bathing water failing to meet the required standards as a result of Scottish Water discharges.

- The overall total compliance for 2004 is 63 waste water treatment works (inc PPP) exceeding their consent limits which is a significant improvement on the 2003 result of 82 (including PPP).

1.2 Informing the Strategic Review of Charges 2006-2010

This Annual Return follows on from our draft business plan submissions of October 2004 and March 2005.

Due to the timing of submissions the data submitted for 2004/05 in the draft business plans were predicted year-end results, which are now superseded by actual year-end results in this Return.

Annual Return data has been cross-checked with the draft business plan submissions and the key issues are discussed in section 8 of this overview.

It is our understanding that the contents of this Annual Return will be used by the WIC in preparing the final determination for the Strategic Review of Charges 2006-2010. Due to the phasing of investment there will be new assets due to come on line in 2005/06 and 2006/07 which require a pro-rated allowance for new opex in the predicted opex for 2006-10. This is discussed further in section 6.

1.3 Governance

The methodologies used for producing the detailed information in Scottish Water's 2004/05 Annual Return to the Water Industry Commissioner (WIC) have been further developed this year to ensure robust reporting of data and to clearly show data sources, calculations, assumptions and dependencies. This approach, along with the audits carried out by the Regulatory Reporters, for both this Annual Return and Scottish Water's 2nd draft business plan submitted in March 2005, has ensured that this submission is based on sound processes and is more robust than previous Returns. The governance of the production of this Return has also benefited from increased project management and governance processes this year and from the Board approval processes.

Signed.....Date.....

Jon Hargreaves, Chief Executive, Scottish Water

2. Introduction

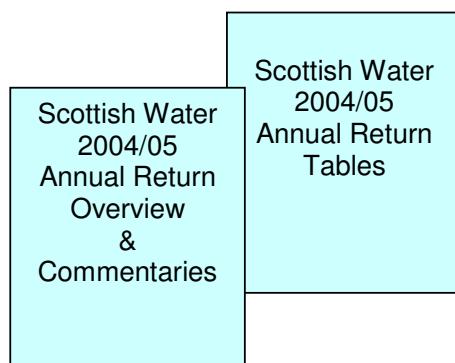
2004/05 Annual Return

Scottish Water is keen to continually improve its regulatory reporting and as such, further improvements have been made this year to the processes and governance of the Annual Return.

Additional technical approaches have been developed and last year's technical approaches have been expanded to include dependencies.

In terms of governance, the Annual Return has been project managed by a Governance Group led by Regulation & Strategy which was guided by a Steering Group consisting of the General Managers from Finance, Customer Service and Assets, chaired by the General Manager Regulation & Strategy. This group has reported monthly to the Regulatory Management Group consisting of Finance, Customer Service and Assets Executive Directors.

For 2004/05 Scottish Water's Annual Return consists of:



The Annual Return is summarised by the Overview for WIC comprising a summary of outputs delivered, progress on the investment programme, financial and customer service performance, high-level details on changes to the asset stock, and Scottish Water's assessment of its efficiency position.

In the commentaries to the tables, Scottish Water has explained movements in data and results when compared to previous returns and explained assumptions made and methodologies used.

The Annual Return has been cross-checked with Scottish Water's draft business plan submissions for the Strategic Review of Charges and key differences in the data are noted in this overview.

The Annual Return consists of 63 Tables (spreadsheets) populated with Scottish Water data (more than 200,000 cells with confidence grades attached), along with commentary tables. Scottish Water has provided detailed commentaries for all of the data in the Annual Return, along with other relevant information such as details of asset information improvements and levels of service.

Special Factors were submitted with the draft Business Plans. Once Scottish Water has fully assessed the impact of the Annual Return data on the Special Factors, revised Special Factors submissions will be submitted at a later date.

Brief description of the Table contents:

A Tables: Base Information	<ul style="list-style-type: none">• Populations• Properties• Leakage• Metered/unmetered customers, etc
B Tables: Outputs to Customers	<ul style="list-style-type: none">• Resources• Pressure/interruptions• Flooding• Levels of service to customers
C Tables: Quality and Environmental Outputs	<ul style="list-style-type: none">• Compliance• Asset performance/outputs
D Tables: Asset Information	<ul style="list-style-type: none">• Changes during the year (fed from other tables)
E Tables: Operating Costs & Efficiency	<ul style="list-style-type: none">• Activity Based Costing – water/wastewater• PPP• Resources & treatment• Treatment works, water mains, sewers, etc by size, by type etc.• Employee numbers
F Tables: Statutory Accounts	<ul style="list-style-type: none">• Income/expenditure• Balance sheet• Analysis of debtors/creditors• Cashflow• Analysis of income
G Tables: Investment Plan (Actual & Forecast)	<ul style="list-style-type: none">• Water/wastewater etc for Base, Quality, Growth• Expenditure by project, by driver
H Tables: Asset Inventory & Asset Performance	<ul style="list-style-type: none">• Current asset stock, condition, performance, etc• Water/wastewater, infrastructure/non-infrastructure• Support services
P Tables: Tariff Basket Information	<ul style="list-style-type: none">• Customer revenue information

Role of Reporter

The Reporters are again auditing our Annual Return. The Reporter's team auditing the robustness of processes and methodologies, and the audits are a useful, additional check of our data and processes and an opportunity to learn where improvements can be made.

Detailed information and system audits are now ongoing and will be complete in late June. The Reporter expects to report on our Annual Return in early July 2005.

3. Outputs Achieved for Customers and the Environment

3.1 Levels of service to customers

3.1.1 Customer service satisfaction

Scottish Water closely monitors the needs, expectations and experiences of its customers.

Customer satisfaction continues to improve. This is measured independently twice a year through a survey of a random sample of the Scottish household population.

Satisfaction has risen from 75% in the first quarter of 2002 to 95% in September 2004 as shown in the graph below.



Customer Service Performance (DG Indicators)

Scottish Water's performance against the key levels of service indicators was mixed in 2004/05 as shown in the table below. The DG indicators, DG1 to DG9, are defined and used by Ofwat in England & Wales (E&W) to measure levels of customer service. In Scotland 7 of the 9 DG Indicators are used by WIC to measure our levels of customer service as compared to E&W.

Levels of service indicators

Indicator	2002/03	2003/04	2004/05	Change in year
	%	%	%	
DG2: Properties at risk of low pressure	0.62	0.52	0.48	↓
DG3: Properties subject to unplanned interruptions of 12 hours or more	0.12	0.77	0.37	↓
DG5 Properties subject to sewer flooding incidents	0.032	0.015	0.02	↑
DG5 Properties at risk of sewer flooding once in 10 years	0.023	0.02	0.02	↔
DG5 Properties at risk of sewer flooding twice in 10 years	0.023	0.026	0.03	↑
DG6 Billing contacts responded to within 10 days	94.8	93.7	96.3	↑
DG7 Written complaints responded to within 10 days	97.8	99.8	99.6	↓
DG9 Telephone calls answered within 30 seconds	90.1	84.5	91.7	↑

DG2 Properties at risk of low pressure

In 2004/05, the number of properties receiving low pressure was reduced from 12,988 to 11,839 or 0.48% of connected properties. This improvement is largely the result of better information but 63 of the properties removed were due to operational improvements.

DG3 Supply interruptions

The number of properties subject to unplanned interruptions of 12 hours or more fell from 19,036 in 2003/04 to 9,103 in 2004/05 despite an increase in the number of water mains bursts, due to improved responsiveness by Scottish Water operational staff.

DG5 Flooding from sewers

The number of properties subject to sewer flooding incidents has risen from 349 in 2003/04 to 512 in 2004/05. This rise is primarily due to severe weather events occurring on 10 May and 11 August 2004 where staff attended a number of flooding incidents.

The total number of properties at risk of flooding from sewers increased from 1105 in 2003/04 to 1343 or 0.056% of connected properties in 2004/05. During the ongoing enhancement of the "at risk" register priority flooding areas were identified for the current investment period, and this resulted in the addition of over 200 properties to the register.

DG6 Billing contacts

In 2004/05 Scottish Water received 274,642 billing contacts of which 264,637 or 96.3% were responded to within 10 days, a 2.6% increase in performance compared with 2003/04. Significant progress was made during the year with resolving disputed accounts that were generating customer contacts with some 21,000 disputed bills reviewed and fixed. This facilitated a significant reduction in aged debt in the business sector.

DG7 Written complaints

The number of written complaints received in 2004/05 was 8,833 which was a decrease of 687 over the number received in 2003/04. The number answered in 10 working days remains high at 99.6%

DG9 Ease of telephone contact

In 2004/05, Scottish Water received 964,719 calls in office hours of which 884,627 or 92% were answered within 30 seconds. This is a significant improvement on the 2003/04 performance of 84%.

3.2 Maintaining water quality and environmental compliance

3.2.1 Water quality compliance

Extreme Weather Event – August 2004

Many parts of Scotland experienced severe weather events in August 2004. As a result we operated under extremely difficult conditions over a four week period during that part of the year.

The resulting high colour and turbidity loadings experienced at the water treatment works (WTWs) identified weaknesses in several treatment processes. In the affected areas this resulted in:

- Poorer microbiological compliance and general worsening of water quality
- Increased colour penetration through treatment processes
- Increased turbidity in treated water leading to higher chlorine demand and increased THM risk
- Increased customer complaints due to water quality

During the extreme weather period, incidents were declared at 37 WTWs (10% of Scottish Water's WTWs). An additional 89 WTWs were also adversely affected but due to extensive operational intervention no further incidents were declared. A detailed report on the impact of the extreme weather was submitted to the DWQR.

New Regulations

As a result of the full implementation of the Water Supply (Water Quality) (Scotland) Regulations 2001 in December 2003 there have been a number of significant changes affecting water quality monitoring. These are:

1. Maximum size of a regulation zone was increased from 50,000 to 100,000 populations. Consequently regulation zones were redrawn for 2004 resulting in a reduction in zones from 482 in 2003 to 394 in 2004.
2. Changes in monitoring requirements resulted in 12 parameters being removed from the sampling programme and 20 parameters having revised (and in most cases) more stringent PCVs. In addition new parameters were added to the sampling programme.

Compliance with the water quality regulations is measured as a percentage of samples passing against the number of samples taken. This removes the possibility that one failing sample in a zone results in a failing zone and gives a truer measure of overall performance.

As a result of these changes the water quality analysis for 2004 effectively establishes a new baseline level of water quality performance for Scottish Water.

Overall water quality compliance

Overall regulatory compliance for 2004 was 99.57%, which continues with the improvements achieved since 2002. Overall compliance for 2003 was 99.44%.

Microbiological quality

Microbiological standards apply to water leaving treatment works, in service reservoirs and supplied at customer's taps.

a) water leaving treatment works

During 2004, 34,524 samples were taken for total and faecal coliform analysis. Compliance with total coliforms standards was 99.66% and with faecal coliform standards was 99.84%.

b) water in service reservoirs

56,340 samples were taken for total and faecal coliform analysis in 2004. Compliance with total coliform standards was 99.42% and with faecal coliform standards was 99.87%.

c) water at customers' taps

13,988 samples were taken at customers' taps for total and faecal coliform analysis in 2004. Compliance with the total coliform standards was 99.12% and for faecal coliform standards was 99.87%.

The following summary table highlights performance in water quality for microbiological quality from 2002 to 2004 based on regulation samples:

Table 3.1: Microbiological quality of water

		2002 fails	2002 compliance	2003 fails	2003 compliance	2004 fails	2004 compliance
Treatment Works	Coliforms	131	99.67	108	99.69	118	99.66
	Faecal Coliforms	75	99.81	59	99.83	55	99.84
Service Reservoirs	Coliforms	403	99.31	244	99.57	327	99.42
	Faecal Coliforms	94	99.84	47	99.92	73	99.87
Customer Taps	Coliforms	204	98.75	135	99.14	123	99.12
	Faecal Coliforms	29	99.82	24	99.85	18	99.87

Chemical sampling

Physical and chemical standards apply to water supplied at customers' taps. During 2004, 124,342 tests were carried out for these parameters. Of these 99.41% complied with the regulatory standards.

The following summary table highlights the performance of the key chemical parameters for 2002 to 2004.

Table 3.2: Chemical quality of water

	2002 fails	2002 compliance	2003 fails	2003 compliance	2004 fails	2004 compliance
THM Total	575	82.90%	478	85.54%	131	92.58%
Iron	261	96.03%	233	94.64%	127	97.49%
Colour	151	95.63%	121	96.20%	165	96.74%
Manganese	36	99.06%	53	98.49%	62	98.77%
Aluminium	35	99.18%	39	98.82%	27	99.46%

3.2.2 Environmental compliance

Wastewater Treatment

SEPA authorise discharges to the aquatic environment by means of consents issued under the Control of Pollution Act (COPA) and report compliance with WWTW consent conditions based on the audit monitoring that they carry out. SEPA reports on compliance in its annual report based on the results for the calendar year. This year Scottish Water is reporting compliance based on the calendar year to match with SEPA.

The overall total compliance for 2004 is 63 (including 1 PFI) works exceeding their consent limits. This is an improvement on the level of compliance over the calendar year 2003 which was 82 (including 4 PFI) works exceeding their consent limits.

In 2003/04 Annual Return we highlighted the problems experienced with SEPA with respect to compliance reporting and also that there were differences in how compliance was assessed in Scotland as opposed to England and Wales.

Scottish Water has worked closely with SEPA throughout the year to improve compliance reporting. As a result of this SEPA has moved to monthly rolling compliance and reports Look up Table compliance and overall compliance. This allows Scottish Water to better report compliance in a manner similar to England and Wales. For 2004 the compliance with Look up Table standards, which is one of the measures used by Ofwat for company performance comparison, was 35 works failing.

Since the beginning of 2005 SEPA have been experiencing difficulties in providing compliance reports due to a change of their reporting system. At the time of writing, SEPA have still not fully solved their reporting issues and Scottish Water is unable to predict what adverse effect this may have on compliance reporting for 2005.

Secondary Treatment

The proportion of works receiving an improved level of treatment continues to rise with the population receiving secondary treatment rising from 73% in 2001/02 to 94% in 2004/05.

Bathing Waters

During the 2004 bathing season there was again only one failing Bathing Water of the fifty five Bathing Waters that can be impacted by Scottish Water's discharges. This continued good performance is a result of a combination of delivery of capital investment projects in waste water treatment and collecting systems next to bathing waters, and increased vigilance and improved operating and monitoring procedures by Scottish Water staff. This success was delivered despite less than favourable weather during the 2004 Bathing Season.

3.3 Progress on delivery of quality programmes

Water Quality Improvements

Within this programme, water quality improvements are being delivered via a number of routes, including construction of new treatment works, upgrading of existing processes, water main replacement and extension of existing mains networks to allow the closure of some small treatment works. The majority of these projects are still in the process of delivery.

Over 100 water quality driven projects are currently being progressed.

In March 2004 Scottish Water commenced construction of the new £120m water treatment works at Milngavie, to supply Greater Glasgow. This works is being designed to supply 240 megalitres per day. This together with the additional 150 megalitres per day to be supplied from Balmore Water Treatment Works will bring significant improvements in water quality to our Greater Glasgow customers. The new supply will be introduced in December 2007.

To date we have delivered investment to address 129 water quality undertakings. These include either replacement of or improvements to existing treatment works at 36 locations. Significant investment was made at works highlighted in the following table.

Significant Projects Delivered in 2004/05

- Calder Hoy to serve Caithness, Dounreay & North Sutherland WTW and Associated Pipework – September 2004
- Invercannie Membrane – July 2004
- Turrif WTW – March 2004
- Afton WTW – December 2004
- Lerwick WTW (Sandy Loch) – October 2004
- Fort Augustus WTW – December 2004

Further investment to deliver a further 97 undertakings is programmed for delivery in 2005.

3.4 Delivery Against Regulatory Compliance Deadlines

3.4.1 Water Quality Undertakings

The table below reports the actual and forecast delivery performance in relation to the Drinking Water Quality Undertaking projects within the Q&SII investment programme.

The Water Quality projects delivering the total 628 WQ outputs will also deliver the 308 WQ Undertakings.

The 44 Dec 2003 WQ Undertakings currently forecast as still outstanding to be delivered are mostly in the North West area. Of these 20 are forecast to be delivered by the end of Aug 2005. A further 7 are associated with the Kyle Regional scheme which is currently delayed awaiting resolution of the Water Order issues. Of the remaining 17, 5 are being delivered by projects recently added to the Q&SII programme, Trislaig WTW and Barclye & Palnure WTW, the remainder are delayed for a variety of reasons.

Of the 37 Dec 2003 to Dec 2006 WQ Undertakings currently forecast to be delivered late, 32 will be delivered by the Loch Katrine project.

The number of WQ Undertakings delivered to date is 154 with 154 still to be delivered.

Water Quality Undertaking Delivery – April 2005.

Undertaking Delivery Date	Total No	Delivered to Date	Del F/Cast On Time	Undertakings F/cast To Be Del Late			Tot F/Cast Late
				0 - 6 months late	6 - 12 months late	More Than 12 months late	
Pre Dec 2003	157	113	0	0	0	44	44
Dec 03 - Dec 06	139	39	63	4	1	32	37
Post Dec 2006	12	2	10	0	0	0	0
Totals:	308	154	73	4	1	76	81
Cum %		50%	74%	75%	76%	100%	
%		50%	24%	1%	1%	24%	26%

3.4.2 Environmental Directives

The tables below report the actual and forecast agreed WIC 18 project delivery performance in relation to the Environmental Legislative Compliance dates.

Environmental Compliance Performance- UCSO's								
Projects	a) On time	b) Up to 3 months late	c) Up to 6 months late	d) Up to 9 months late	e) Up to 12 months late	f) Up to 24 months late	g) > 24 months late	Grand Total
Sum of UCSO projects	251	8	3	1	0	1	2	266
Environmental Compliance Performance- Wastewater Treatment								
Total	a) On time	b) up to 3 months late	c) up to 6 months late	d) up to 9 months late	e) up to 24 months late	f) up to 48 months late	g) > 24 months late	Grand Total
UWWTD	328	25	10	3	5	7	2	380
Bathing	8	0	2	0	0	0	2	12
Shellfish	13	13	1	0	0	0	1	28
Fisheries	11	2	2	0	0	0	0	15
COPA	40	27	3	4	2	0	2	78
Sum of WW-C projects	400	67	18	7	7	7	7	513

UWWTD

Of the projects greater than six months late major projects including Dunoon, Tayport, Stonehaven and Invergordon are subject to delay due to planning issues. Tobermoray and Bowmore have been delayed due to agreeing proposals to deal with the distilleries.

Shellfish

Projects around Loch Ryan have been removed and are being reworked to meet SEPA's new requirements for the shellfish water.

4. Q&SII OUTPUT DELIVERY

The outputs delivered to date against the WIC18 baseline targets are detailed in the table below which shows that overall 53% of Q&SII outputs have been delivered to date. The outputs delivered to date on the Quality programmes have still to be signed off by the quality regulators.

Q&SII PROGRAMME			Delivered Outputs to End March 2005	% To date	WIC18 Target
DW – FT	Properties receiving FT provision of water	nr	270	66%	408
DW – P	Removal of properties from the poor pressure register	nr	817	59%	1391
DW – WQ	Drinking Water drivers addressed	nr	261	42%	628
WM – R	Mains rehabilitated	km	2354	77%	3051
WW – C	Continuous discharges removed	nr	179	29%	613
WW – FR	Removal of properties from 'at risk' flooding register	nr	490	59%	829
WW – FT	Properties receiving FT provision of sewerage	nr	311	25%	1229
WW – R	Sewers rehabilitated	km	223	54%	410
WW UCSO	UCSO's removed	nr	283	66%	432
			Overall	53%	

All of the targets are in line with the WIC18v3 baseline programme which is currently being updated to reflect the latest position regarding substitution. The final baseline including all substitutions has been submitted to the Capital Investment Group for agreement at the 20 June meeting.

A significant risk to delivery of the capital programme remains the successful achievement of planning approvals.

To date 81% of planning applications have been submitted and 61% approved.

Planning Applications	
Status	Number
Not yet submitted	76
Submitted, awaiting decision	78
Submitted and approved	246
Total	400

Q&SII PHASING

We have had further discussions with WIC over the past 3 months regarding the size of the Q&SII overhang and its impact on Q&SIII.

Our latest best estimate is a spend post 2005/06 of £284m with a range of +£30m to -£20m. The range reflects the possible changes as projects accelerate or are further delayed, due to risks associated with planning approvals, land purchase, regulator substitution and consents. All of these figures include the additional obligations that have been added to the baseline programme with a value of £110m of which £47m is forecast to overhang into Q&SIII.

The WIC has submitted his initial view of funding allowance for post 2005/06 spend which is in the range £140 to £180m. This figure is £100 to £140m short of the actual required funding and we responded with our view on these issues on 20 May 2005.

The main challenges ahead are to minimise the post 2005/06 spend through achieving a significant level of approvals at CAPEX3 over the next 3 months and maintaining the pace of delivery.

4. Financial Performance

4.1 Financial and Business Review

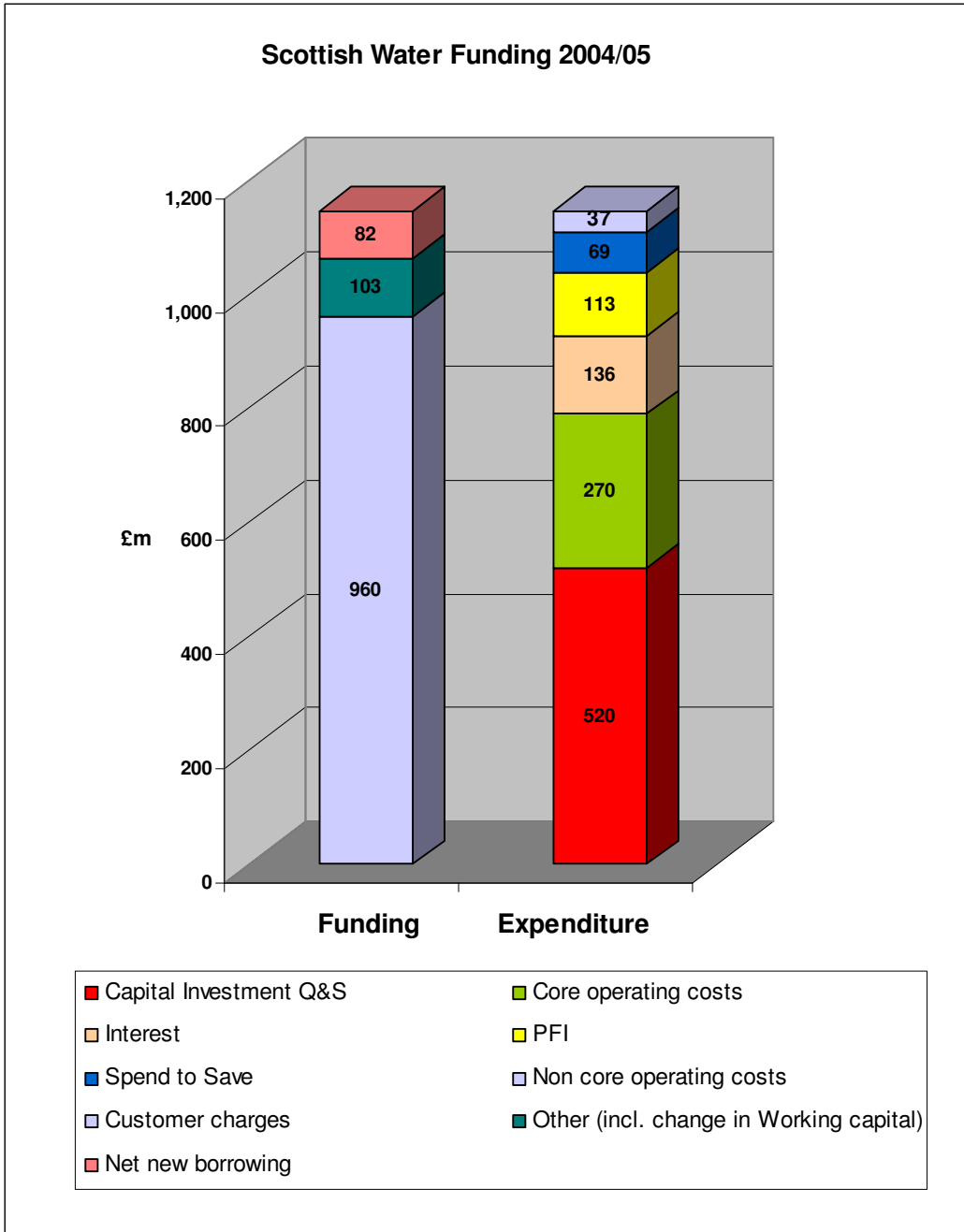
Financial Framework

Scottish Water operates within a regulated environment where a cap is set on the amount of revenue that can be raised from customer charges. The revenue cap for the years 2002-06 was set by Scottish Ministers on the advice of the Water Industry Commissioner for Scotland.

The revenue cap was set so that when taken together with net new loans they will finance the totality of Scottish Water's operations and capital investment programme over the 2002-06 period.

Financial results

The graph below highlights the key sources of funding and how these were applied to Scottish Water's activities. All of the revenue raised from customers, together with £82.0 million of net new loans, was used to finance Scottish Water's operational activities and capital investment programme. The surplus before tax of £91.4 million was fully reinvested in the business to enable the delivery of the capital investment programme.



Turnover

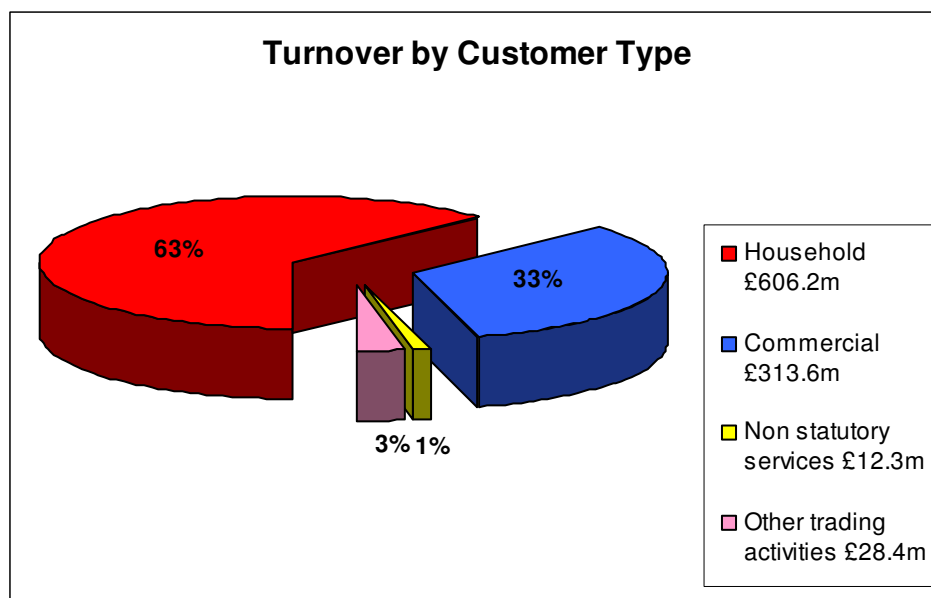
Total turnover for the year increased by 0.2% to £960.5 million. Turnover from core water and wastewater services supplied to household customers increased by 4.4% to £606.2 million driven mainly by the tariff increase effective from 1 April 2004. Turnover from services supplied to business customers decreased by 11.7% to £313.6 million. The decrease in core business turnover arose primarily as a result of the volume of credit adjustments required as part of the data cleansing exercise to improve the robustness of customer data held on the new billing system.

The proportion of core business turnover derived from household customers has now increased to 63% in the year ended 31 March 2005 compared to 58% in the year ended 31 March 2002, the final year of the former Water Authorities.

Turnover from the provision of non-core services, provided traditionally by the former water authorities, declined by 20.6% to £12.3 million.

Scottish Water's new trading activities relate primarily to the sale of contracting services to Scottish Water Solutions and the provision of water-related services to major business customers. Turnover from those activities increased from £7.4 million in 2003/04 to £28.4 million in 2004/05. £21.7million (2004, £4.0 million) of this income relates to mains rehabilitation and other capital investment activities carried out on a commercial basis by Scottish Water's contracting division for Scottish Water Solutions Limited. Scottish Water Solutions Limited has been accounted for under FRS9 *Associates and Joint Ventures* as a JANE (Joint Arrangement Non Entity) and not as a subsidiary (see below and note 1 to the financial statements). Consequently, this trading income for sales to Scottish Water Solutions Limited is included in turnover and associated costs within cost of sales.

An analysis of turnover by customer type is summarised below:



Operating costs

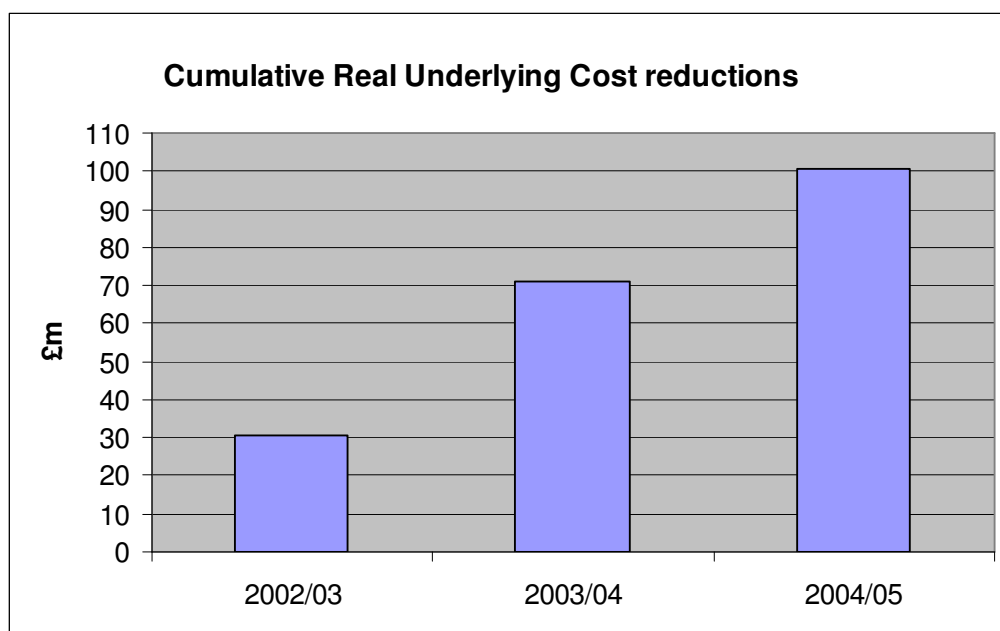
Total reported costs reduced by £9.8 million to £671.2 million (£554.5 million cost of sales and £116.7 million administration costs) but this is after absorbing increased costs of new trading activities of £20.7 million and reflecting additional gains on asset sales of £7.0 million. Excluding these two items, costs reduced by £23.5million.

The cost of PFI schemes in the year was £112.7 million; £0.3 million lower than 2003/04.

Depreciation, including infrastructure maintenance charges, reduced by £2.3 million to £260.3 million but these costs will rise in the future as a consequence of Scottish Water's significant capital investment programme to improve the quality, reliability and efficiency of service provision.

From a Regulatory cost perspective, nominal operating costs (i.e. excluding depreciation, PFI charges and costs associated with new trading activities) reduced by £20.9 million to £279.7 million (£270.3 million for core services and £9.4 million for traditional non-core services) compared to £300.6 million in 2003/04. Continued focus on improving operating efficiency through the major business transformation programme has driven this reduction in nominal operating costs.

Real underlying operating costs, when compared to the similar costs of the three former water authorities in 2001/02 (i.e. excluding new operating costs associated with newly commissioned plant), have reduced by £101 million or 29% since the creation of Scottish Water - £30 million in 2002/03, £41 million in 2003/04 and £30 million in 2004/05, as depicted in the following graph.



Exceptional costs

Exceptional costs charged in the year totalled £61.8 million and related to restructuring and transformation costs undertaken as part of the £200 million 'Spend to Save' programme allowed for by the Water Industry Commissioner for Scotland (WIC) in his Strategic Review of Charges 2002-2006. This programme is for a discrete category of expenditure up to 2005-06, allowed by the WIC, to cover one-off transformation and restructuring costs that will reduce future annual operating costs.

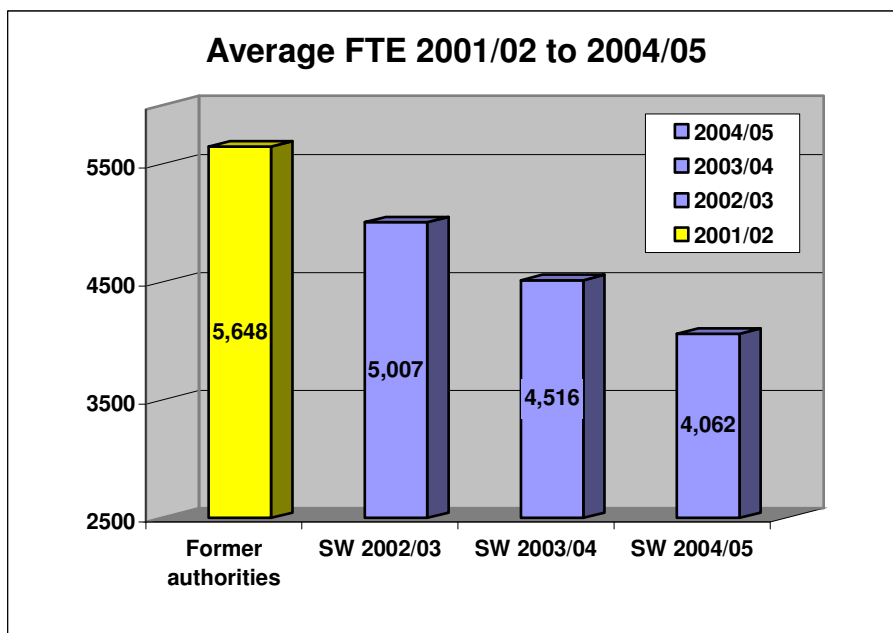
An analysis of the total cumulative "spend to save" expenditure over 2002/03, 2003/04 and 2004/05 is set out in the table below. Exceptional costs are summarised in note 4 to the financial statements.

	2002/0 3 £m	2003/0 4 £m	2004/05 £m	Cumulative total £m
Business transformation	15.3	18.7	20.4	54.4
Staff severance costs	9.3	34.1	41.4	84.8
Total charged to income and expenditure account	24.6	52.8	61.8	139.2
New capital investment to improve efficiency *	15.3	21.6	7.5	44.4
Total	39.6	74.4	69.3	183.6

* Cost for 2002/03 and 2003/04 have been revised to reflect corrections in classification between spend-to-save capital investment and the Quality and Standards 2 capital investment programme. Consequently, expenditure reduced by £1.6 million in 2002/03 and increased by £2.3 million in 2003/04.

By effective use of the employee voluntary severance scheme, the average number of employees during the year reduced by 454 or 10% to 4,062. Compared with the average level employed by the former water authorities in 2001/2 this equates to a reduction of 1,586 or 28% in the first three years of Scottish Water.

The number of people employed at the end of the year, after taking account of 260 leavers on 31 March, reduced to 3,756. The table below shows the average number of employees compared with the final year of the three former water authorities.



Finance costs

During the year, net debt increased by £85.1 million to £2,267.3 million. The increase was driven by £247.4 million of new long-term loans at a weighted average interest cost of 4.75%, partially offset by £90.4 million repayment of long-term loans, a £75.0 million net reduction in short-term loans and a £3.1 million reduction in cash balances.

At 31 March 2005 the weighted average interest cost of the £2,274.8 million outstanding debt was 6.24% (2004- 6.34%). Net interest payable during the year was £136.1 million; £0.6 million lower than 2003/04. Interest cover, based on cash generated before capital expenditure, increased from 2.5 in 2003/04 to 3.1 in 2004/05.

Capital expenditure

Capital investment in the year was £527.4 million, up £118.9 million compared to 2003/04. £519.9 million (2004-£389.3 million) was invested in the delivery of the Quality and Standards regulatory capital programme and £7.5 million related to capital expenditure incurred as part of the “spend-to-save” programme.

Of the £519.9 million regulatory capital investment programme, £360.5 million was delivered through the programme allocated to Scottish Water Solutions Limited. This included the £21.7 million of turnover generated by Scottish Water Contracting referred to above. The nature of the contractual agreement between Scottish Water and the other shareholders in Scottish Water Solutions Limited is such that the parties are engaged in joint activities that do not constitute an entity carrying on a trade or business in its own right. Consequently, Scottish Water Solutions Limited, has been accounted for under FRS 9 *Associates and Joint Ventures* as a JANE (Joint Arrangement Non Entity). On this basis Scottish Water accounts directly for its own gross assets, liabilities and cash flows in the joint arrangement thus dispensing with the need for Group Accounts.

Taxation

The tax charge on the income and expenditure account was £27.1 million, (2004 -£27.2 million) a rate of 29.6%,(2004 -31.0%) recognising deferred taxation, thus no corporation tax is payable. The effective tax rate was below 30% and reflected a lower chargeable gain, for tax purposes, than shown in the financial statements associated with the gain on asset disposals.

Pensions

The full implementation of Financial Reporting Standard No.17

“Retirement Benefits” has been deferred by the Accounting Standards Board. The disclosure information required is included in note 19 to the financial statements. Under the standard a snapshot is taken of pension fund assets and liabilities at a specific point in time. Movements in equity markets and discount rates create volatility in the calculation of scheme assets and liabilities. At 31 March 2005, after taking account of deferred taxation, there was a shortfall of assets over respective liabilities of £125.4 million. This was an improvement of £5.7 million from 2003/04 and was mainly due to increases in actuarial gains of £13.9 million, reflecting the upturn in equity markets and partially offset by a lower discount rate on increased pension liabilities.

The employer contribution rates, set by the funds’ actuaries, will increase Scottish Water’s average contribution, as a percentage of salary, from 15.8% in 2004/05 to 16.6% in 2005/06.

International Accounting Standards

All European Union listed companies are required to adopt International Accounting Standards (IAS) for their financial statements from 2005. The adoption of IAS by Scottish Water in future years will be on the basis of instructions from Ministers in the form of Accounts Direction but because Scottish Water is not a listed company it is under no requirement to prepare its financial statements on an IAS basis. However, Scottish Water

has identified that the main areas of impact would include: the accounting treatment for defined benefit pension schemes and the abolition of renewals accounting currently permitted under Financial Reporting Standard 15 *Tangible Fixed Assets*, which will impact on depreciation charges for infrastructure assets.

Compliance with Government Financial Targets

Sufficiency of revenue

Scottish Water is required to cover costs with revenue one year with another. Scottish Water reported a surplus before tax of £91.4 million for the year. The surplus before tax consisted of a surplus on trading of £153.2 million before charging exceptional costs of £61.8 million.

Borrowing Limit

For 2004/05 Scottish Ministers set Scottish Water's maximum net new borrowing limit at £100.0 million. Actual net new borrowings were £82.0 million.

5. Efficiency

5.1 Operating Efficiency

We have made further progress towards the efficiency targets in the financial year 2005/06. The following sections present our analysis of this year's efficiency gains and explanation of the key movements.

Econometric Modelling Results 2004/05

The efficiency position for the financial year 2004/05 has been assessed using the Ofwat 2003/04 Econometric Models with data from the 2004/05 Annual Return.

In the assessment of Scottish Water's efficiency position, we have undertaken the following analysis:

- a comparison of actual and predicted operating costs and residuals; and
- an assessment of efficiency gains/losses;

Table 1 compares modelled operating costs (excluding PFI costs) for 2004/05 with 2003/04 using the 2003/04 Ofwat econometric models.

Given the extent to which the co-efficients of the Ofwat models have changed over recent years, the reliability of the ongoing efficiency analysis using the SR02 explanatory variables is questionable and has not therefore been included within this year's overview.

Table 1: Modelled Operating Costs 2003/04 & 2004/05 (Ofwat 2003/04 models) (excluding PFI costs)

Model	Reported AR04 Actual £m	Restated Actual ¹ £m	2003/04		2004/05		Movement in Residuals 04/05-03/04 £m	
			Predicted £m	Residual £m	Actual £m	Predicted ² £m		Residual £m
Water Resources & Treatment	36.69	36.36	38.99	-2.63	33.49	39.86	-6.37	-3.74
Water Distribution	55.81	56.39	53.21	3.18	45.66	53.41	-7.76	-10.93
Power	8.49	8.81	6.96	1.85	9.32	7.75	1.58	-0.28
Business Activities	44.15	44.48	32.27	12.21	40.68	32.33	8.35	-3.87
Water sub-total	145.13	146.05	131.44	14.61	129.15	133.35	-4.21	-18.81
Sewer Network	35.90	35.90	23.63	12.27	33.83	23.67	10.16	-2.11
Large Treatment Works	6.84	6.79	9.20	-2.41	7.08	9.75	-2.67	-0.26
Small Treatment Works	18.98	19.46	20.74	-1.28	19.63	19.43	0.20	1.48
Sludge Treatment & Disposal	11.24	11.25	4.27	6.98	8.83	5.12	3.71	-3.26
Business Activities	37.75	37.69	27.98	9.71	37.65	28.02	9.61	-0.08
Sewerage sub-total	110.72	111.09	85.83	25.26	107.02	86.00	21.02	-4.24
Total	255.85	257.14	217.27	39.87	236.17	219.35	16.82	-23.05

¹ Minor changes have been made to 2003/04 actuals in order to match tables W1 & W2 of the Business Plan

² Predicted costs have been inflated by 3.2% and then reduced by 2% to reflect estimated average efficiency improvements in England & Wales

In the 2002-03 Unit Cost and Relative Efficiency Report, Ofwat introduced adjustments to the residuals of all companies to take account of errors in the data and in the statistical process. Ofwat adjusted the water residuals by 10% and the sewerage residuals by 20%.

Table 2 presents the Scottish Water efficiency position after adjustments have been made to residuals and deductions made for Special Factors³ given in SR02.

Table 2 Ofwat 2004 Econometric Models following adjustments

	Scottish Water Actual £m	Ofwat 2004 Econometric Models		Adjusted Residuals £m
		Predicted £m	Residual £m	
Water Resources & Treatment	33.49	39.86	-6.37	-5.73
Water Distribution	45.66	53.41	-7.76	-6.98
Power	9.32	7.75	1.58	1.42
Business Activities	40.68	32.33	8.35	7.51
Water sub-total	129.15	133.35	-4.21	-3.78
Sewer Network	33.83	23.67	10.16	8.13
Large Treatment Works	7.08	9.75	-2.67	-2.14
Small Treatment Works	19.63	19.43	0.20	0.16
Sludge Treatment & Disposal	8.83	5.12	3.71	2.97
Business Activities	37.65	28.02	9.62	7.70
Sewerage sub-total	107.02	86.00	21.02	16.82
Total	236.17	219.35	16.82	13.03
Less Special Factors				4.8
Adjusted Actual & Residual				8.2

Details of movements in modelled costs

Water Models

Actual costs fell by £16.90m to £129.15m. Predicted costs increased by £1.92m to £133.35m. The net effect is a reduction in the residual of £18.84m to -£4.21m.

Water Resources and Treatment

Actual costs have fallen from £36.36m to £33.49m as a result of treatment efficiency initiatives e.g. implementation of a task scheduling system.

Predicted costs for this model have increased by £0.87m to £39.86m as a result of the increase in the proportion of distribution input taken from river sources. The residual has fallen by £3.74m.

Scottish Water currently looks efficient in the water resources and treatment model having a residual of -£6.37m. However, an additional £6m per annum of new opex is still to be brought on from new treatment currently being procured as part of the Q&SII investment programme.

³ No adjustment has been made for lateral sewers as these were included within the data set for modelled opex

Water Distribution

Actual costs have fallen by £10.73m to £45.66m primarily as a result of reduced expenditure on mains repairs. This is due principally to 2 main factors:

- 1) At the end of 2003/04, Network Maintenance activities were transferred from Scottish Water Contracting to Operations, along with the teams undertaking water network maintenance activities. The operational areas (mainly South West) have now absorbed these activities and are delivering the service for significantly less cost (i.e. staff and materials costs).
- 2) Reduction of costs due to Water Network efficiency initiatives.

Predicted costs are similar to 2003/04.

Power

Predicted costs have increased by £0.79m to £7.75m following further improvements to pumping head data. Average pumping head is now at 56.3m. The increase is primarily due to distribution pumping head in the North West and North East operational areas.

Actual costs have increased by £0.51m. In future, power costs for all Scottish Water sectors will increase further following electricity price increases imposed by the supplier.

Business Activities

Predicted costs have remained similar to last year. Actual costs have fallen by £3.80m, mainly due to the reduction in doubtful debt of £2.73m but also due to customer service efficiency initiatives.

Sewerage Models

Actual costs have fallen by £4.07m to £107.02m in 2003/04. Predicted costs have marginally increased to £86.00m. The net effect is a reduction in the residual of £4.24m to £21.02m.

Sewer Network

Predicted costs have remained similar to last year. Actual costs have reduced by £2.07m due to network efficiency initiatives. The net effect is a reduction in the residual of £2.11m to £10.16m.

Wastewater Treatment Works

Large Works (excluding PFI)

Large Works actual operating expenditure has increased by £0.29m. However predicted opex has increased by £0.55m resulting in a net change in the residual of -£0.26m to -£2.67m.

Small works

Actual costs have increased slightly from £19.46m to £19.63m. Predicted costs have fallen by £1.31m, partly as a result of the exclusion of sludge imported to sludge treatment centres (except for their contribution to return liquors). Therefore the residual has increased by £1.49m.

Sludge Treatment and Disposal

Actual costs have decreased by £2.41m since 2003-04. This is due to:

- a) Power costs (£0.4m) being included in wastewater treatment, under estimated sludge costs associated with large wastewater treatment works, instead of sludge treatment and disposal.
- b) Employment costs (£1.1m) relating to operatives involved in de-sludging wastewater treatment works, have been allocated to wastewater treatment. This is the last stage in the wastewater treatment process.
- c) Hired and contracted services costs have decreased since 2003/04 (by £0.7m). This is primarily due to a real reduction in sludge disposal contract costs in SW & NE.
- d) Reductions in materials and other direct costs.

Predicted opex has increased by £0.85m due to reporting pre-digestion rather than post-digestion sludge loads in line with reporting methods in England and Wales and as recommended by the Reporter. The digester process results in approximately 35% solid reduction. In addition there has been some movement between the sludge treatment categories. The net effect on the residual is a reduction of £3.26m to £3.71m.

Business Activities

Both actual and predicted costs are almost identical as for 2003/04.

Controllable Opex Performance 2004/05

In 2004/05 Scottish Water's controllable operating expenditure was £307.7m. This consisted of:

- core opex of £270.3 million, a reduction of £17.8 million
- old non core opex of £9.4 million, a reduction of £3.1 million
- new non core of £27.9 million, an increase of £20.7 million

Analysis of Controllable Operating Expenditure 2004/05

	2004/05
Audited operating costs	742.4
Less depreciation	-115.3
Less infrastructure depreciation	-145.0
Less PFI contract costs	-112.7
	369.5
Less exceptional costs	-61.8
Scottish Water underlying opex	307.7
Per F1.9 Total Costs	420.34
Less F1.3 PPP Operating Costs	-112.7
	307.7

Reconciliation of Modelled Opex to E tables 2004/05

	Scottish Water 2004/05 (£m)	
Audited Opex	742.417	
Less PPP	(112.659)	
Less depreciation	(115.291)	
Less infrastructure depreciation	145.000	
		369.466
Modelled Opex Table E1	129.149	
Table E2	107.020	
		<u>236.169</u>
SEPA	6.757	
Local Authority Rates	23.571	
Third Party (non-core)	41.183	
Exceptionals	61.786	
PPP		133.297
		<u>369.466</u>

Audited Opex- Summary 2004/05

Audited Opex:	£m
Total operating costs core and old non-core	279.7
PFI	112.7
Depreciation	115.3
Infrastructure Depreciation	145.0
Spend to Save	61.8
New non-core opex	27.9
	742.4

6. Adequacy of Asset Stock

Condition & Performance Grades

We still believe that there are fundamental inadequacies within our asset stock. This manifests itself in:

- an increased incidence of asset failures and the associated requirement for more frequent repairs; and therefore
- a higher risk of non-compliance with regulatory obligations

In our business plan we explained that historic underinvestment in capital maintenance has led to this position. This, along with future funding only to maintain current levels of service from 2006-10, will prevent Scottish Water from converging on similar levels of service as the companies in E&W.⁴

In previous returns⁵, we have also argued that comparative analysis of our assets with companies in E&W, based on condition and performance, is flawed due to the varying intercompany approaches. We still believe this to be the case.

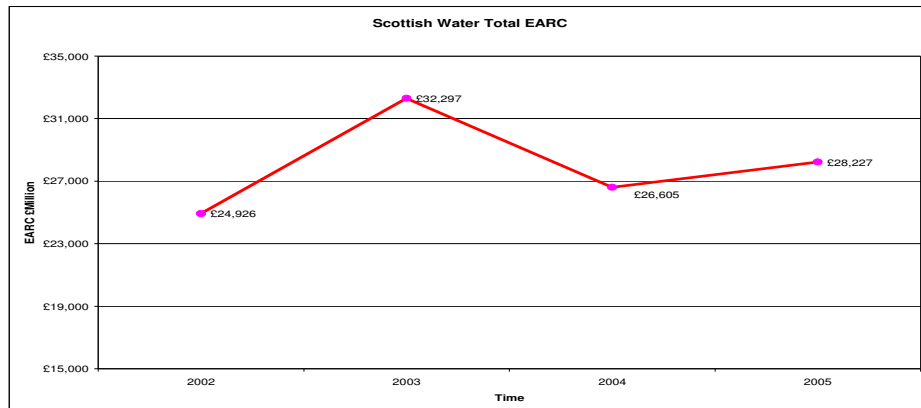
During the report year 2004/05 the condition and performance of our asset stock has slightly improved, with a 1% improvement in both condition and performance during the year.

Asset Valuation

Scottish Water’s overall Equivalent Asset Replacement Cost (EARC) is one of the key figures in this Return. There have been changes in the valuations of most of our asset groups as a result of improved valuation methodologies and data quality improvements. This year’s approach is considered much more accurate and the rise in the asset values is due to:

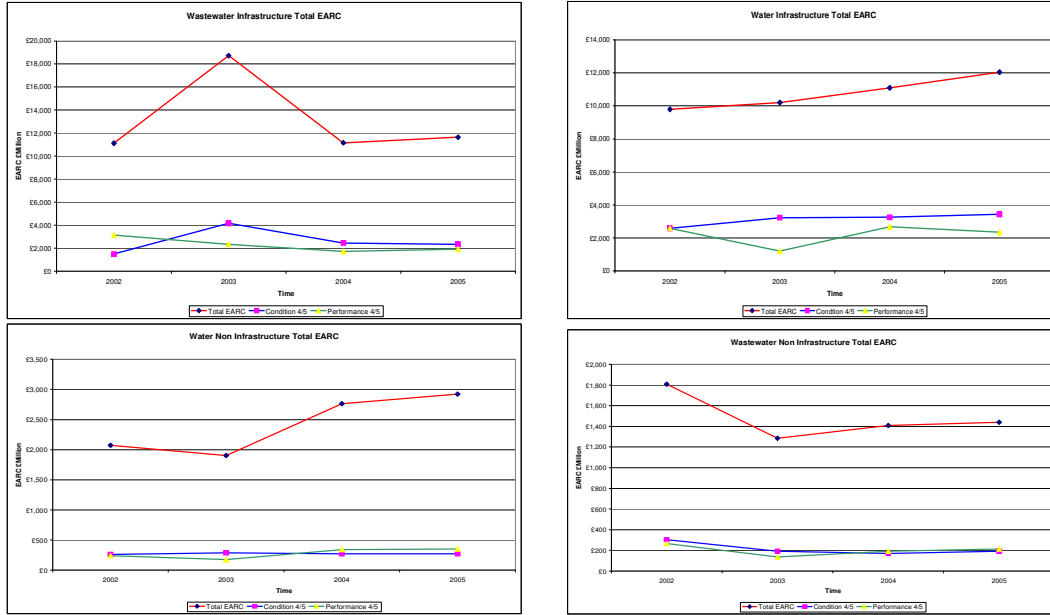
- a COPI adjustment factor being added to the 2003/04 data as discussed with WIC and,
- asset values increasing due to capital investment in new, complex plant and equipment, such as membrane plants

This has resulted in an overall increase in the Scottish Water total EARC value from c£26.5bn to c£28bn.



⁴ 2nd draft business plan page A-16, & B1.3.3 page B1-21

⁵ 'Annual return 2003/04 Overview for WIC' 23 June 2004



Changes in the asset condition and performance grades were as a result of the data quality improvements some of which are listed below.

Improvements

- Improvement in WTW & WWTW data (status, size banding, etc) as a result of data cleansing workshops with the Asset Planners
- Reclassification of the outfalls to accurately define long and short outfalls.
- Consolidation of pumping station information across SW into one single pumping station database
- Additional surveys of asset stock to establish condition and performance of infrastructure

Asset Information Improvement Strategy

Improving our asset information continues to present a significant challenge for us. We are continuing to commit dedicated resource into improving asset information. The two main strands of the strategy are 'Asset Data Improvement' and 'IT Rationalisation'. These initiatives contain various projects focusing on data improvement, processed and system development as detailed in Appendix 1.0.

During Q&SII these programmes of work have been delivering the fundamental asset information building blocks that will enable Scottish Water to operate efficiently at all levels of the organisation using a single approach, as opposed to an amalgamation of legacy systems and practices. The emphasis of activity to date has been on implementation of large corporate systems and data improvement for Water Network Management, Risk Based Maintenance and reports that include the Annual Return.

7. Annual Return reconciliation to 2nd Draft Business Plan submission

This Annual Return will be used to calculate the Final Determination of Charges for 2006-2010. This submission follows on from our 2nd Draft Business Plan submission in April 2005 and there are some areas of variance, due to 2004/05 forecast versus actual outturns for or definitive differences that need to be highlighted:

Customer data:

The customer data submitted as part of the 2nd draft business plan was based on predicted year-end information (largely period 9 plus a forecast), whereas the Annual Return data has been produced from actual data reported at the year-end. Note the Annual Return data is reported as per the WIC definitions of properties and populations at mid-year and volumes at year-end. This data was updated in our response to WIC queries on 23 May 2005.

Finance data:

The finance data tables submitted in the 2nd draft business plan were based on a forecast of the year-end position and the data submitted in this Annual Return is based on actual, year-end data.

Assets data:

The asset data submitted in the 2nd draft business plan reflected the best available information at that time and included predictions of the year-end position based on extrapolations of the 2003/04 data or, where available, estimates of the status of the assets as a result of planned capital investment for the year.

Key asset data differences between the 2nd draft business plan submission and the Annual Return are explained below.

uCOs	Annual Return 2004/05	= 930
	SR06 2004/05	= 1011

The data used for SR06 was a predicted year-end figure and, the AR05 actual year-end figure was determined based on Q&S2 project delivery results and further clarification of outputs required in Q&S3.

SLUDGE	Annual Return 2004/05	= 29,183 tds (Table A4)
	Annual Return 2004/05 (PPP)	= 114,126 tds (Table E3)
	SR06 2004/05	= 113,000 tds

The AR05 figure of 143,309 tds is the total for Scottish Water's own sludge and excludes PPP sludge combined. The SR06 figure of 113,000 tds was predicted based on the 2003/04 Annual Return, which includes PPP sludge.

In previous Annual Returns the sludge quantities reported have been the sludge quantities recycled to each route. This year the quantities reported are the total sludge treated at the sludge treatment facilities including the sludge destroyed through the treatment process. This is in accordance with the methodology used in England & Wales and has been discussed fully with the WIC Reporter.

FLOODING (other causes)	Annual Return 2004/05	= 331
	SR06 2004/05	= 345

The SR06 figure was predicted in using the Asset Planners' monthly monitoring reports. Flooding performance is dependent on actual weather conditions and the AR05 data is the actual performance recorded for the total year.

COMPLIANCE Annual Return (2004 calendar year) = 63
 SR06 (2004 calendar year) = 40

The 63 figure for total number of discharges confirmed as failing, is based on Total Compliance (i.e. discharges failing due to; Look Up Table Failures and Upper Tier Failures and Single Tier Failures and Non-Numeric Consent Failures and Absolute Non-Sanitary Consent Failures for the 2004 calendar year). The SR06 figure was based on an estimate of the predicted end of year failures for 2004 at a time when SEPA was unable to report compliance.

INTERRUPTIONS > 6 hours
 Annual Return 2004/05 = 33520
 SR06 2004/05 = 60747

The SR06 figure was estimated based on the 2003/04 Annual Return, with an allowance for increased disruption during 2004/05. However, the actual year-end performance recorded in 2004/05 has shown a decrease in properties affected by unplanned interruptions > 6 hours.

WATER AVERAGE PUMPING HEAD

Scottish Water's overall pumping head has increased from 50.6m to 56.3m. The increase is in distribution pumping head due to improved lift and pumping volume data. The largest changes were in the north west and north east. The north east had the greatest impact on the Scottish Water average.

SEWER LENGTHS

The total length of Critical Sewers has increased from 5,869.84 km in 2004 to a total of 10,595.4 km in 2005, an increase of 4,725.56 km. This increase is due to the revised method of determining the proportion sewers that are critical and is explained in greater detail in the commentary.

WWTW LOADS

This area of the Return has become more robust as a result of the link between domestic and non domestic customers with the water supply zones and catchments. This allowed accurate introduction of spatial referencing of the data from customer databases including the customer name, location and volume being discharged relative to waste water assets. From this the loads to each WWTW have been established.

DISTRIBUTION INPUT

As above, this area of the Return has become more robust as a result of the link between domestic and non domestic customers with the water supply zones and catchments. This allowed accurate introduction of spatial referencing of the data from customer databases including the customer name, location and volume of water being supplied relative to water assets. From this the water supplied from each WTW has been established.

8. Data Quality

To improve the quality of data used by Scottish Water and reported in this annual return, a number of initiatives were put in place or continued during 2004/05.

The Business Critical Data (BCD) project led to the creation of a key set of data for Scottish Water's decision making. This had been used successfully for the 2002/03 Return and has allowed data providers to focus on areas for improvement during 2003/05. Further data cleansing was carried out on Scottish Water's customer database and on our Ellipse asset database.

Also, the requirement of Technical Approaches for all data items in this return and the expanded governance within Scottish Water for regulatory submissions, have both contributed to the data quality improvements across Scottish Water.

A summary of Business Critical Data items linked to the Annual Return and the movement in confidence grades is listed in the table overleaf.

Business Critical Data Items	CG 01/02	CG 02/03	CG 03/04	CG 04/05	Move- ment
Number of written complaints (Billing and non-billing)	B2	B2	B2	B2	↔
Number of enquiries (Billing and non-billing)	B2	B2	B2	B2-A1	↑
Number of GSS payments	B2	A1	A1	A1	↔
% Written complaints with replies in 10 days (Billing & non-billing)	B2	B2	B2	B2	↔
% Telephone calls answered within 30 seconds (CCC and Billing)	B2	A1	A1	A1	↔
% Telephone calls abandoned (CCC and Billing)	A2	A1	A1	A1	↔
Number of properties affected by internal sewer flooding	B4	B3	B3	B4	↓
Number of properties affected by unplanned interruptions > 12 hours excluding trunk mains	B4	B3	B3	B3	↔
Revenue	B2	A1	A1	A1	↔
Capex	A1	A1	A1	A1	↔
Number of employees (FTEs at year end)	B3	B2	A1	B2	↓
Average pumping head – water	C4	C4	C5	C4-C3	↔
Average pumping head – waste water	D4	D4	C6	C5	↑
Treatment input to distribution	B4	B4	B4	C4	↓
Non-domestic water volumes	B3-B4	B2	B2	A2	↑
Waste water loads/volumes	B3	B2	B2-B3	B3-A2	↑
Sludge loads/method of disposal	B3	B3	B3	B3	↔
Leakage	C5	C4	C4	C4	↔
Raw water input from sources	B4	B4	B4	C4	↓
Properties with low pressure	C5	C4	C4	C4	↔
Properties at risk of flooding	M	B4	B4	B4	↔
Numbers of assets by type	C4-B4	C3-B3	C4-B2	B4-A1	↑
Length of mains	B2	B2	B2	A2	↑
Length of mains > 300mm diameter	B2	B2	B2	A2	↑
Total capacity of service reservoirs	B4	C4	C4	B4	↑
Total capacity of water towers			C4	B2	↑
Length of sewers	B3	B3	C3	B4-B3	↔
Length of critical sewer	C3	B3	B3	A4	↑
Area of sewerage districts	B2	A1	A1	A1	↔
Total number of sewage pumping stations	A3	A3	A3	B3	↓
Restrictions to supply (Hosepipe bans)	B2	A1	A1	A1	↔
Population (Summer)	C5	B3	B2	B2	↔
Non-domestic demand	B2	B2	B2	A2	↑
Water Mains Bursts	B3	B3	B3	A3	↑
Number of sources	B4	B4	B4	B2	↑

As can be seen above, thirteen of the key items have improved confidence grades and the majority have maintained acceptable or high grades. For the five items where the confidence grades have reduced, these are due to more accurate assessments of the confidence grades to be applied and this is further explained in the individual commentaries.

There has been further development of Scottish Water's Corporate Data Warehouse that is the single source for a number of key data items within Scottish Water, with data quality controls in place. The Corporate Data Model has developed further and is now being used at a high level to assess IT links, data gaps, data owners and system interdependencies and is used as part of the IT Business Demand procedures.

Ongoing development of the Ellipse Work & Asset Management System (WAMS) for Scottish Water, has seen additional categories of Asset data (tbs) added during 2004/05.

As a result of the above initiatives, the data in this year's return is more robust than the 2003/04 submission.

Appendices

Appendix 1 Asset Information Improvement Strategy

Work completed during 2004/05 included:

Data Improvements - completed

- A further 150 treatment and pumping sites have been surveyed down to E&M detail.
- Data improvement on a further 1,197 sites to enable Risk Based Maintenance planning and maintenance work scheduling. Carried out as site visits or knowledge interviews.
- More than 45,500 data field updates during 2004/05 in the new Ellipse Asset Inventory enabled by asset data feedback processes and through use of the Asset Information Help Desk.
- Completion of the sewer laterals representative sample audit to confirm that approximately 16,000km of lateral sewers are under Scottish Water's management.
- Completion of Water Operational Area, Water Supply Zone and DMA polygon establishment within the GIS system - this now contains 4,775 polygons. This work has enabled improved operational cost capture, future development of infrastructure asset whole life costs and operational leakage management through integration of work management, GIS, Finance and Integrated Network Management systems.
- 9,590 critical boundary valves checked in the field validating WOA, WSZ and DMA boundaries.

Systems Improvements - completed

- Delivery of GIS Phase 2 enhanced functionality for emergency planning improvement and enhanced geographical information management.
- Development of information handling templates and mobile solutions for use with the new Work and Asset Management System.
- Delivery of the new wide area network based Integrated Network Management System (INMS), which has now been rolled out Scotland wide to match DMA coverage, with enhanced (Perform Spatial Plus) functionality for better data integration and analysis. This has been integrated to the single Laboratory Information Management, Customer Promise, Work Management and GIS systems.
- Delivery of a new mobile working system for automated data return on flooding events, which, from June 04, has collected mass data enabling analysis of flooding cause as opposed to simple occurrence.
- Further development on the 25 key smaller databases, previously consolidated down from a review of 300 disparate legacy information sources. These databases have now been transformed into robust Oracle based Tactical Applications, ensuring full IT support, new user functionality and processes for sustained upkeep. New Tactical Applications which will allow root cause analysis and action plan record keeping, currently under User Acceptance Testing, include:
 - Low Pressure Register
 - Interruptions to supply Register
 - Action Plan Database
 - SWARM
 - Flooding Register

Business Process Improvements - completed

- Establishment of an Asset Information Newsletter providing focused awareness communications and briefing notices for key stakeholders and the wider asset management staff. This has built on the successful Intranet Communications and Help Line (the latter of which received 500 contacts during 2004/05).

- Asset information surgeries held around Scotland raising awareness of asset information activity and needs within the business.
- Development of draft Asset Information processes for data returns to corporate systems from routine work and project activities.

Further work programmed for the Q&S II period up to March 2006 includes:

Data Improvement – ongoing to March 06

- Completion of asset data harmonisation across corporate asset systems – GIS, Ellipse, Telemetry and Gemini – to enable more efficient and accurate cross functional reporting.
- Historic assessment of sewer flooding causal information – currently in process populating Flooding Register.
- Collation and transfer of records from past Drainage Area Studies and other waste Water Network activities to the corporate GIS system.
- Further flow, pressure and PCC surveys to validate leakage modelling, and to provide a better understanding of customer supply pipe losses.
- Confirmation of metered customer demands on the network, allocated to DMAs for leakage management.

System Improvements – ongoing to March 06

- Delivery of Scottish Water wide standard asset reports and information based performance monitoring and decision making environment for Asset Planning, Operation and Investment purposes. This will be delivered through the new data warehouse *Business Intelligence* initiative.
- Extension of the new mobile working system to include further functionality.

Process Improvement – ongoing to March 06

- Formal roll out and implementation of remaining asset data return processes.
- Further focused culture change and communication initiatives to accompany process roll out to all asset management and related business activity staff.
- Delivery of data processes associated with new Tactical Applications.