



**Financial performance  
and expenditure of the  
water companies in  
England and Wales**

**2005-06 report**

# **Financial performance and expenditure of the water companies in England and Wales**

2005-06 report

September 2006



## Contents

List of tables and figures	3
Foreword	5
Summary – key facts	8
1. Introduction	11
1.1 Scope of the report	11
1.2 Indexation	11
2. Financial performance	13
2.1 Aggregate industry performance	13
2.2 Financial indicators	16
2.3 Turnover and operating profits by service	18
2.4 Cash flow	21
2.5 Balance sheet	25
2.6 Debt and gearing	26
2.7 Return on capital	28
2.8 Dividends	32
2.9 Accounting charges	36
3. Operating expenditure	39
3.1 Performance in 2005-06	39
3.2 Where costs changes are occurring	41
4. Capital investment	44
4.1 Overview of investment in 2005-06	44
4.2 Investment by purpose category and service area	45
4.2.1 Investment by purpose category	45
4.2.2 Investment by service area	50
4.3 Variance in investment compared to the 2004 price review assumptions	53
4.4 Measuring investment by outputs	55
4.5 Levels of activity	60
4.6 Serviceability and service to customers	65
4.7 Sustainable procurement	70
5. Transfer pricing	72
5.1 Compliance with RAG 5 in 2004-05	72
6. Property development and land disposal	76

Appendix 1: Reconciliation of current cost and historic cost profit before tax 2005-06	77
Appendix 2: Serviceability indicators and trends	78
Appendix 3: Quality enhancement – AMP4 sewerage programmes	83

## List of tables

Table 1	Current cost profit and loss account	14
Table 2	Financial indicators	16
Table 3	Current cost turnover and operating profit by service	18
Table 4a	Turnover by company	20
Table 4b	Current cost operating profit by company	21
Table 5	Cash flow statement	22
Table 6	Key cash flows by company	24
Table 7	Current cost balance sheet at 31 March	25
Table 8	Net debt and gearing by company at 31 March	27
Table 9	Return on capital measured by regulatory capital value by company	29
Table 10	Dividends reported plus interest payable as a percentage of regulatory capital value	31
Table 11	Return on capital by service measured by average MEA – industry	32
Table 12	Dividend covers by company	34
Table 13	Analysis of special dividends	35
Table 14	Comparison of infrastructure renewals expenditure and charge 2001-06	37
Table 15	Total operating expenditure by service	39
Table 16	Total operating expenditure by company	40
Table 17	Industry total operating expenditure by service by function	43
Table 18	Gross capital investment by service – industry	45
Table 19	Gross capital investment by purpose category – industry	46
Table 20a	Gross capital investment by purpose category 2005-06 – water and sewerage companies	47
Table 20b	Gross capital investment by purpose category 2005-06 – water only companies	48
Table 21	Gross capital investment by service area – industry	51
Table 22	Gross capital investment by service area 2005-06 – by company	52
Table 23	Activity in 2005-06	61
Table 24	Activity on underground assets – industry	62
Table 25	Activity on underground assets by company – 1990-91 to 2005-06	64
Table 26	Water and sewerage serviceability assessments for 2005-06	67
Table 27	Trade with other companies within the group	75
Table 28	Number of, and gross proceeds from, disposals of land in 2005-06 – by CCWater area	76

## List of figures

Figure 1	Comparison of infrastructure renewals expenditure and charge	38
Figure 2a and 2b	Breakdown of the variances in gross capital investment 2005-10	54
Figure 3	Serviceability – water mains networks	79
Figure 4	Serviceability – sewer networks	80
Figure 5	Serviceability – water treatment works and service reservoirs	81
Figure 6	Serviceability – sewage treatment works	82
Figure 7	Programme for completion of intermittent discharge schemes	83
Figure 8	Programme for completion of continuous discharge schemes	83
Figure 9	Programme for completion of first time sewerage schemes	84
Figure 10	Programme for completion of investigations	84

## Foreword

In December 2004 we set price limits for the five years 2005-10. This report reviews the performance of individual companies and the industry at large over the first year of the period, 2005-06, against the targets and assumptions made for that year and in the context of the period to 2009-10 as a whole.

2005-06 has seen much public concern about the service provided by the water industry to consumers. Thus, the drought caused by prolonged shortage of rainfall has raised concerns about companies' control over leakage at the same time as some have imposed hosepipe bans and made other pleas for restraint. It has also raised issues about long-term security of supply. Customers have also noted that most companies have announced significant increases in profits during the year, following increases in prices that were allowed by Ofwat and that were well above inflation.

The main reason for the increase in prices was the need for another very large investment programme (an estimated £16.8 billion) – on top of the £50 billion or so invested since 1990. Moreover, increased operating cost pressures more than matched the further efficiency gains expected over the five-year period.

This is just the first year of the five-year period, but capital investment was around £1 billion (23%) less than we assumed in price limits for 2005-06. Although companies have in general delivered the environmental outputs that were expected in 2005-06, levels of investment across the full range of company activities have fallen short of those anticipated in price limits. In some cases, initial progress has been so slow that the companies concerned will face a stiff challenge if they are to deliver all the outputs required of them over the five-year period.

We know that, faced with a drought, companies have been taking special measures to minimise the need for constraints on their customers. But it is just as important that they should be strengthening where necessary the long-term requirement for security of supply and we have challenged those companies with the most to do to demonstrate progress against their objectives.

Capital maintenance, which accounts for almost half the total investment programme, is another area of concern. Although the companies have been making progress in reducing flooding from sewers broadly in line with our expectations for 2005-06, in other respects performance on maintaining the assets has been disappointing. We review performance trends for each company's asset systems annually to assess whether they remain fit for purpose now and into the future. Although overall our assessment at industry level for most systems remains 'stable', for the above-ground sewerage works it is only 'marginal' and for six companies at least one in four of their service areas is

assessed as 'deteriorating'. All companies must achieve stable serviceability for all their asset systems by 2010. Some (particularly Thames Water) have much still to do if they are to achieve this objective. Where companies do not achieve their targets, at the next periodic review we will adjust price limits to reflect the financial value of any shortfall.

Capital expenditure has always fallen in the year immediately after a price review, leading to a roller coaster pattern of investment which builds up later in the period. We established an 'early start programme' for the first time for this period to give the companies greater certainty to enable them to plan projects in advance with the aim of mitigating the roller coaster effect. In practice, gross capital expenditure of £3.4 billion represents a fall of 8% compared with 2004-05. This is much less than the fall of 27% following the 1999 price review but we are concerned that the companies have not organised their supply chains in such a way as to reduce the inefficiencies associated with the roller coaster effect. We will participate in the research managed by UK Water Industry Research around supply chain issues.

Companies' operating costs have increased by 5% in real terms compared with 2004-05. The increase in cost pressures, especially from rising energy prices, which were anticipated at the last price review, has affected all companies. Some of the change is due to technical factors, including re-classification of leakage control costs to operating expenditure.

We expect companies to seek to outperform our price limit assumptions. This benefits customers in the long term since efficiency improvements can be built into future price limits. The need to generate profits by becoming more efficient has helped to keep increases in bills at a much lower level than would otherwise have been needed.

Operating profits increased by 17% to £2.6 billion in 2005-06 on the back of the increase allowed in customers' bills. Some of the increase is explained by the 'catch-up' effect whereby low profits were made in 2004-05, as companies coped with significant extra costs. Some is explained by the slow start for the capital expenditure for some companies. Companies also face higher tax bills and part of the increase is to cover this. Indeed, profits after tax are lower this year than last year.

Dividends have also increased in the year, even after adjusting for special dividends made by these companies. Again comparisons are made difficult by technical factors, including the introduction of a new accounting standard for 2005-06.

A single year is not an adequate basis on which to assess the overall performance of the companies. It is for the companies to assess their performance and in particular to ensure that they deliver fully the outputs which they accepted as part of the price limit package – outputs designed to make sure that water and wastewater assets will be made fit for purpose for long-term service, and that secure supplies and environmental objectives will be fully achieved. Ofwat and its fellow regulators, the Environment Agency and Drinking Water Inspectorate will monitor closely the industry's performance.

A handwritten signature in black ink, reading "Philip Fletcher". The signature is written in a cursive style with a large initial 'P' and 'F'.

**Philip Fletcher**  
**Chairman**

## Summary – key facts

### Financial performance

- Turnover was 9.4% higher than 2004-05 (after adjusting for inflation). This is slightly lower than the industry average price limit, or K factor, of +9.6%.
- Companies' operating profits increased in 2005-06 to £2.6 billion. This is an increase of £382 million (17%) compared with 2004-05, and reflects:
  - increased turnover, partially offset by;
  - increased operating costs; and
  - an infrastructure renewals charge (IRC) 38% higher than in 2004-05.
- The pre-tax return on capital in 2005-06 for the industry, based on the current cost operating profit and regulatory capital value (RCV), is 6.6%, compared with the 5.9% achieved in 2004-05. The return assumed in price limits for 2005-06 was 6.4%. For 2004-05 the allowed return on the RCV was similar (6.5%) but the actual return was lower. This highlights the increased costs borne by companies prior to the last price review, which were addressed by the increases allowed in price limits. This results in the relatively large percentage change in operating profits between the two years.
- The current taxation charge increased significantly from £64 million in 2004-05 to £297 million this year. This increase was mainly caused by a change in the industry's current agreements with the Inland Revenue (HMRC). This means that certain types of expenditure were treated differently for tax purposes, resulting in a bigger tax charge.
- Profits after current taxation were £114 million lower (or 7%) in 2005-06 compared with 2004-05.
- Changes in accounting standards make year-on-year comparison of dividends difficult to make. Dividends paid, excluding special dividends, increased by 29%. In addition, three companies paid special dividends totalling £313 million during the year.
- Net debt now stands at £23.5 billion, which is 1.9% higher than in 2005. Gearing has fallen from 61% to 58.5% (measured as net debt/RCV).
- Financial indicators appear to be well within levels expected of an industry at its current level of gearing and consistent with a credit rating well within investment grade.

### Operating expenditure

- Total operating expenditure in 2005-06 was £3.2 billion, excluding exceptional items. This is £152 million (5%) more than in 2004-05 and is partly due to rising energy costs of around £67 million. Over £50 million was also due to some companies moving leakage control costs from capital to operating expenditure in line with our assumptions at the 2004 price review. However, this is £62 million (2%) less than we assumed in price limits for 2005-06.

## Capital investment and outputs

- Gross capital investment in 2005-06 totalled £3.4 billion – this comprised £2.8 billion on above-ground assets and £0.6 billion of expenditure on infrastructure renewals.
- Of this, £1.65 billion was invested in the water service and £1.75 billion in the sewerage service. This is a decrease of around 8% compared with 2004-05. It is £1 billion or 23% less than what we expected when we set price limits.
- Although capital maintenance expenditure is £195 million more than last year, it is around 14% lower than assumed when setting price limits. This is mainly as a result of delays whilst companies set up their AMP4 delivery models.
- We have assessed the serviceability of companies' assets. At an industry level, three out of the four service asset categories have been assessed as 'stable' and one category (sewerage non-infrastructure) has been assessed as 'marginal'. This is the same as 2004-05. We require companies with deteriorating assessments to develop action plans and we expect to see sustained improvement to confirm stable serviceability.
- On sewerage non-infrastructure, Northumbrian Water's action plan has moved them from 'deteriorating' to 'marginal' this year. Two other companies, Southern Water and Yorkshire Water, are making slower progress and continue to be assessed as 'deteriorating'. Anglian Water, in slipping from 'marginal' to deteriorating' this year has work to do, but we believe it is possible for the company to achieve stable serviceability during 2005-10. Thames Water still has much to do and faces a stiff challenge to achieve required serviceability by the due date.
- Quality enhancement investment in 2005-06 totalled £1 billion. It is 31% lower than anticipated in price limits. Delays with the planning process, access difficulties, land acquisition and appeals against modified consents and early expenditure in 2004-05 have all contributed to the underspend. This has mainly affected schemes that were due to start in the year but would not be completed until later in the period. The degree to which increased efficiency by companies in delivering the outputs has contributed is expected to become clearer later in the 2005-10 period.
- Companies have made a good start on the delivery of the quality enhancement schemes assumed within price limits. The outputs that were due in the report year have been delivered and in many cases exceeded.
- Mean Zonal Compliance was 99.96%, an improvement over 2004.
- The Environment Agency reports that following the particularly good year in 2004, there was some slippage in various aspects of companies' environmental performance. Compliance with the look-up table sanitary conditions of consents dipped slightly to just under 99% of sewage treatment works. Sewage-related pollution incidents increased over the previous year. However, compliance of bathing waters with both the mandatory and guideline European standards improved to reach record levels.

- Supply/demand balance including enhanced security of supply investment in 2005-06 totalled £0.5 billion, which is 7.5% lower than 2004-05, and around 32% lower than we assumed in price limits.
- Investment to reduce the number of properties at risk from internal flooding has continued, and more than 1,600 properties benefited in 2005-06. This is broadly in line with expectations for the first year of the price review period.

## **Transfer pricing**

- The level of trade with associates in the industry decreased by 15% to £464 million.
- We are disappointed with United Utilities' lack of progress on long-standing transfer pricing issues.
- Three companies provide examples of best practice in the industry.

## 1. Introduction

### 1.1 Scope of the report

The data in this report has been drawn from the June returns and regulatory accounts submitted to us by the 10 water and sewerage companies and the 12 water only companies<sup>1</sup>. The June returns provide breakdowns and commentaries on actual operating expenditure, capital investment and activity in the years up to and including 2005-06.

On a current cost basis, analyses of operating expenditure, operating profits, cash flows, balance sheets and capital investment of the regulated water and sewerage companies are included in this report. Although most of the regulated companies are part of larger groups, this report does not include the performance of other associated companies within the group. This is because water companies have a statutory duty to trade at arm's length with associate companies in their group and the parent company. We include an analysis of the volume of trade undertaken by the regulated business with associated companies.

The water companies prepare their regulatory accounts on a current cost basis. Assets in the water industry are characterised by their very long lives and reporting on an historic cost basis would not reflect this. The regulatory accounts can be obtained either from our library or on companies' websites. The accounts include an independent auditors' report which set out the scope of the independent auditors' report and the duty of care owed by the auditors.

We will add an annex to this report on our website at [www.ofwat.gov.uk](http://www.ofwat.gov.uk) later in the year. This will summarise each company's individual financial performance.

### 1.2 Indexation

The information in this report is set out in 2005-06 prices. Figures for earlier years are generally indexed by reference to the Retail Price Index (RPI). This is consistent with the indexation base in the pricing formula  $RPI + K$  and the principle underlying the regulatory accounts, where profits are calculated after the maintenance of real financial capital.

---

<sup>1</sup> The performance of Cholderton & District Water Company Ltd and Albion Water Ltd, which are both exceptionally small companies, has not been included in this report and does not have a material effect on any of the summary tables.

Before drawing conclusions on companies' capital investment performance, account must be taken of the choice of index used in the analysis. In this report we compare actual capital investment with assumptions included in price limits using the Construction Output Price Index (COPI). We also use COPI in the annual June returns to inflate the capital investment assumed in price limits when comparing it to actual capital investment. Companies provide us with a reconciliation of the variances and explain reasons for these based on this comparison.

The COPI index issued with the June return guidance for the 2005-06 average was an estimated value (150.8), which has since been updated by the Department of Trade and Industry. The expenditure reported in this publication has been adjusted using the most up-to-date index (152.3) for 2005-06.

COPI and RPI have performed very differently over the period covered by this report. In 2005-06, RPI increased by 2.6% (financial year average), but COPI increased by 5.0%.

The table below sets out the indices used in this report.

	2001-02	2002-03	2003-04	2004-05	2005-06
<b>Retail Price Index</b> Financial year average	173.9	177.5	182.5	188.2	193.1
<b>Retail Price Index</b> Financial year end	174.5	179.9	184.6	190.5	195.0
<b>Construction Output Price Index</b> Financial year average	125.5	128.3	135.3	145.0	152.3

Tables have been indexed using the following indices.

Table/figure	Index
1, 3, 4a, 4b, 5, 6, 9, 12, 13, 14, 15, 16, 17, 18, 19, 20a, 20b, 21, 22, 27	RPI financial year average
7 and 8	RPI financial year end
10 and 11	Both the financial year average and year end RPI bases used
Figures 2a and 2b	Construction Output Price Index

## **2. Financial performance**

### **2.1 Aggregate industry performance**

We regulate the water industry by limits on prices charged to customers, rather than on profits or rates of return. This provides incentives to companies to pursue their objectives, including meeting their statutory obligations, as efficiently as possible. Customers benefit from these efficiency savings when price limits are reset, as they were in 1994, 1999 and 2004. For companies to finance their functions, profits need to be sufficient to remunerate investors and lenders, and to attract additional funds to finance capital programmes. Funds may be difficult to raise if returns to investors compare unfavourably with returns available elsewhere in the capital markets.

Under price cap regulation, and in the absence of direct competitive pressures, companies must expect to justify any increases in prices (in real terms) and, consequently, the level of profits and dividends achieved.

Table 1 shows the industry aggregate current cost profit and loss account for 2005-06 and for the four previous years. We continue to use UK accounting standards as the basis for our regulatory accounts (commonly known as UKGAAP) despite the introduction of new international accounting standards (IFRS) that must be adopted by all listed companies.

Turnover increased by 9.4% in real terms in 2005-06 compared with 2004-05. The industry average price limit was +9.6% for 2005-06. Turnover (the income from customers) is largely determined by the price limits we set. It is used to pay for ongoing operating expenditure, to cover capital maintenance charges and taxation, and to provide returns to investors and lenders.

**Table 1 Current cost profit and loss account**

2005-06 prices	2001-02	2002-03	2003-04	2004-05	2005-06	2004-05 to 2005-06 change
	£m	£m	£m	£m	£m	£m
<b>Turnover</b>	<b>7,265</b>	<b>7,213</b>	<b>7,334</b>	<b>7,520</b>	<b>8,228</b>	<b>708</b>
Operating expenditure	(2,939)	(2,984)	(3,038)	(3,056)	(3,196)	(141)
Capital maintenance charges:						
– Current cost depreciation	(1,672)	(1,736)	(1,777)	(1,839)	(1,830)	8
– Infrastructure renewals charge	(490)	(511)	(471)	(468)	(643)	(176)
Working capital adjustment <sup>1</sup>	12	10	6	5	(3)	(8)
Other operating income	38	49	56	32	22	(10)
<b>Current cost operating profit</b>	<b>2,213</b>	<b>2,041</b>	<b>2,111</b>	<b>2,195</b>	<b>2,577</b>	<b>382</b>
Other income	11	25	18	13	11	(2)
Net interest	(1,027)	(1,079)	(1,116)	(1,159)	(1,289)	(130)
Financing adjustment <sup>1</sup>	226	574	535	684	554	(131)
<b>Current cost profit before tax</b>	<b>1,423</b>	<b>1,560</b>	<b>1,547</b>	<b>1,733</b>	<b>1,853</b>	<b>120</b>
Current taxation	(67)	(58)	(67)	(64)	(297)	(234)
Deferred taxation	(141)	(387)	(68)	(194)	(253)	(59)
Dividends reported <sup>2</sup>	(971)	(1,592)	(1,287)	(1,257)	(1,642)	(386)
<b>Current cost profit retained</b>	<b>245</b>	<b>(478)</b>	<b>126</b>	<b>219</b>	<b>(340)</b>	<b>(559)</b>

**Notes:**

1. The working capital adjustment accounts for the impact of general inflation on the real value of working capital to the business. The financing adjustment accounts for the impact of general inflation on the real value of net finance for the business.
2. Dividends reported exclude capital restructuring dividends. These were £7.2 million in 2001-02 (in 2005-06 prices). No such dividends were paid in 2002-03, 2003-04, 2004-05 and 2005-06. In 2002-03, Anglian Water waived the capital restructuring dividend of £806 million reported in 2000-01. The effect of this waiver has been excluded from the dividends reported for 2002-03.

The trends in operating expenditure are set out in more detail in chapter 3. Operating expenditure in 2005-06 accounted for 39% of turnover.

Capital maintenance charges consist of the infrastructure renewals charge (IRC) and current cost depreciation and account for 30% of turnover. They are discussed further in this chapter. The IRC for 2005-06 of £643 million was 38% higher than in 2004-05. Current cost depreciation (CCD), which is the most significant component of capital maintenance charges, decreased marginally in real terms to £1,830 million.

Current cost profits before tax in 2005-06 totalled £1,853 million, an increase of £120 million or 7% compared with 2004-05. However, after business taxes, profits fell by £114 million or 7%. The significantly higher levels of current taxation caused this.

Current taxation totalled £297 million in 2005-06, an increase of £234 million compared with 2004-05. This increase was mainly caused by changes in the industry's current agreements with the Inland Revenue (HMRC). From April 2005, HMRC changed the way it treated certain types of expenditure for tax purposes, so that the treatment of water companies is brought into line with other sectors in the economy. The price limits we set assumed these changes in taxation would take place.

Profits are at the highest levels that we have seen over the last five years. However, they are still lower than the level of profit before tax seen in 1999-2000. Allowing for inflation, profit before tax was £2,443 million in 1999-2000, which means that the 2005-06 figure was 24% lower than the peak in 1999-2000.

Pre-tax returns, (measured as operating profit as a percentage of regulatory capital value) increased from 5.9% to 6.6%.

Although current cost accounting is the preferred basis of reporting in the water industry, companies also prepare historic cost accounts for statutory purposes. Historic cost operating profits are greater than current cost operating profits in each year. This reflects the higher depreciation charges on a current cost basis of accounting. Appendix 1 reconciles historic profit before tax with the current cost profit before tax for 2005-06.

## 2.2 Financial indicators

Table 2 shows some key financial indicators for the water industry as a whole over the five-year period.

**Table 2 Financial indicators**

	2001-02	2002-03	2003-04	2004-05	2005-06
<b>Cash-based indicators</b>					
Cash interest cover (net) <sup>1</sup>	4.8	3.6	3.8	3.5	3.6
Cash interest cover (gross) <sup>2</sup>	4.3	3.4	3.5	3.2	3.2
Adjusted cash interest cover I <sup>3</sup>	2.1	1.6	1.7	1.5	1.5
Adjusted cash interest cover II <sup>4</sup>	2.7	2.0	2.1	2.1	2.0
Debt payback period (years)	4.2	4.9	5.1	5.2	4.9
Cash flow to capital expenditure	76.4%	44.1%	50.4%	60.8%	67.0%
Funds from operations:debt	18.7%	14.8%	14.0%	13.4%	14.3%
Retained cash flow:debt <sup>5</sup>	12.1%	7.6%	8.1%	8.7%	8.0%
<b>Accounting-based indicators</b>					
Historic cost dividend cover <sup>6</sup>	1.6	0.8	1.1	1.1	1.0
Current cost dividend cover <sup>6</sup>	1.3	0.8	1.1	1.2	1.0
Interest cover	2.7	2.1	2.0	1.9	2.5
<b>Gearing<sup>7</sup></b>					
Gearing – net debt/RCV	50.7%	56.7%	59.3%	61.2%	58.5%

**Notes:**

1. Cash interest cover (net) is calculated as: net cash flow from operating activities/net interest.
2. Cash interest cover (gross) is calculated as: funds from operations/gross interest.
3. Adjusted cash interest cover I is calculated as: (funds from operations less capital maintenance charges)/gross interest.
4. Adjusted cash interest cover II is calculated as: (funds from operations less capital maintenance expenditure)/gross interest.
5. Retained cash flow:debt is calculated as: (funds from operations less dividends paid)/net debt.
6. Dividend covers exclude capital restructuring dividends. Dividend covers will not reconcile to those reported in table 12. Dividend covers in the table above additionally exclude all special dividends, thereby eliminating distortions to the industry trends.
7. Net debt and gearing excludes loans to group companies for the purposes of capital restructuring.
8. For the first time in this report, we have adjusted the indicators to exclude the effect of arrangements where inter-company payments of dividends are made effectively in lieu of interest. This restatement has been made for the 2005-06 results only.

Financial indicators provide a snapshot of the financial health of the companies. Dividend cover relates the level of dividend payable to profitability. Interest cover is a similar measure relating interest payable to profitability. Gearing (the net debt expressed as a percentage of the regulatory capital value) shows the relative level of borrowing.

Analysts, the credit rating agencies and lenders make the assessments of the financial health of the companies. They place great emphasis on the cash-based financial indicators. Table 2 includes the range of indicators that we considered as part of our 2004 price review.

For the first time in this report, we have adjusted the indicators to exclude the effect of arrangements where inter-company payments of dividends are made effectively in lieu of interest. We have also excluded the non-equity dividends from the interest charge. Following the introduction of a new accounting standard FRS 25, companies are required to classify such dividends as interest.

Cash interest cover indicators were broadly unchanged compared to 2004-05. They are, however, in line with the assumptions used for 2005-10 at the 2004 price review.

Dividend cover (excluding all special dividends), calculated on a current cost basis, fell slightly for 2005-06 to 1.0 for the industry as a whole. Current cost dividend cover provides a measure of the long-term sustainability of dividend payments and the ability of the companies to raise additional equity capital. Dividend cover (excluding all special dividends), calculated on an historic cost basis, was also 1.0.

Gearing in 2005-06, measured on a debt to RCV basis, fell slightly to 58.5% from 61% in 2004-05. This is against a trend of consistent rises in gearing. Companies have benefited from increased revenues due to the price limits set for the first year of the period 2005-10 and have spent less than we expected on capital expenditure (see chapter 4).

## 2.3 Turnover and operating profits by service

Table 3 shows an analysis of current cost turnover and operating profit by service for 2005-06 and for the previous four years.

**Table 3 Current cost turnover and operating profit by service**

2005-06 prices	2001-02	2002-03	2003-04	2004-05	2005-06	2004-05 to 2005-06 change
	£m	£m	£m	£m	£m	£m
<b>Water service</b>						
Turnover:						
Measured water revenue	1,171	1,195	1,274	1,325	1,501	176
Unmeasured water revenue	2,075	2,032	2,011	2,039	2,214	176
Large users	190	178	179	184	279	95
Other	137	142	138	138	102	(36)
<b>Total turnover – water</b>	<b>3,573</b>	<b>3,548</b>	<b>3,603</b>	<b>3,687</b>	<b>4,096</b>	<b>410</b>
Operating expenditure	(1,669)	(1,664)	(1,684)	(1,658)	(1,761)	(103)
Capital maintenance charges:						
Current cost depreciation	(705)	(768)	(777)	(776)	(775)	1
Infrastructure renewals charge	(321)	(334)	(370)	(349)	(422)	(73)
Working capital adjustment	5	4	2	2	(2)	(4)
Other operating income	16	16	21	20	18	(2)
<b>Current cost operating profit</b>	<b>900</b>	<b>801</b>	<b>795</b>	<b>926</b>	<b>1,153</b>	<b>228</b>
<b>Sewerage service</b>						
Turnover:						
Measured sewerage revenue	1,147	1,159	1,244	1,339	1,501	162
Unmeasured sewerage revenue	2,257	2,207	2,186	2,190	2,284	95
Large users	103	115	138	144	213	69
Trade effluent revenue	126	113	91	91	82	(9)
Other	57	72	73	70	51	(19)
<b>Total turnover – sewerage</b>	<b>3,692</b>	<b>3,665</b>	<b>3,731</b>	<b>3,833</b>	<b>4,132</b>	<b>299</b>
Operating expenditure	(1,270)	(1,319)	(1,353)	(1,399)	(1,435)	(36)
Capital maintenance charges:						
Current cost depreciation	(968)	(968)	(1,000)	(1,063)	(1,055)	7
Infrastructure renewals charge	(169)	(177)	(101)	(119)	(221)	(102)
Working capital adjustment	7	6	4	3	(1)	(4)
Other operating income	22	32	35	12	5	(7)
<b>Current cost operating profit</b>	<b>1,313</b>	<b>1,240</b>	<b>1,316</b>	<b>1,268</b>	<b>1,424</b>	<b>156</b>

The proportion of revenue collected from metered customers (including large users) rose over the five-year period from around 36% in 2001-02 to 42% in 2005-06. This reflects the increase in the numbers of households receiving a metered supply.

Current cost operating profit for the year ended 31 March 2006 increased for the water service by 25% over 2004-05 compared with 12% for the sewerage service.

Higher revenues contributed the biggest increase, which were only partly offset by higher operating expenditure and IRC.

Current cost operating profits were higher for sewerage services than for water. The profit margin for the sewerage service was 34%, compared to 28% for water. These higher profits need to be assessed in relation to the capital employed, which is discussed in section 2.7.

Operating costs and capital maintenance charges are reported by detailed function in the regulatory accounts. An industry aggregate analysis for 2005-06 is discussed in more detail in chapter 3. Water supply distribution accounted for more costs than water resources and treatment. For the sewerage service, sewage treatment was by far the most costly component. The corresponding maintenance activity in these areas explains why the mix of CCD and IRC for water and sewerage shown in table 3 is different. For water there is a higher proportion of IRC, to reflect the higher maintenance needs of the underground infrastructure, but for sewerage the CCD is higher due to the above-ground treatment assets needing more intensive maintenance.

Tables 4a and 4b show the turnover and current cost operating profit for each company for the five years to 2005-06. The water and sewerage companies accounted for 92% of industry turnover and 93% of operating profit in 2005-06. This share has remained largely unchanged since privatisation.

**Table 4a Turnover by company**

2005-06 prices	2001-02 £m	2002-03 £m	2003-04 £m	2004-05 £m	2005-06 £m
<b>Water and sewerage companies</b>					
Anglian	797.1	782.6	802.6	810.1	856.7
Dŵr Cymru	503.6	497.9	490.0	499.1	544.8
Northumbrian	468.9	458.7	461.1	500.4	532.0
Severn Trent	991.8	984.5	1,000.0	1,016.7	1,127.5
South West	280.9	285.3	298.4	306.0	340.0
Southern	470.7	469.0	474.5	479.8	533.9
Thames	1,171.0	1,168.1	1,169.4	1,171.9	1,351.3
United Utilities	1,049.4	1,049.8	1,081.2	1,155.5	1,219.7
Wessex	288.0	284.3	296.8	307.9	337.4
Yorkshire	622.3	617.7	640.4	656.8	693.9
<b>Total WaSCs</b>	<b>6,643.9</b>	<b>6,597.9</b>	<b>6,714.3</b>	<b>6,904.1</b>	<b>7,537.2</b>
<b>Water only companies</b>					
Bournemouth & W Hampshire	29.8	29.6	30.1	30.8	34.5
Bristol	73.3	73.8	72.8	70.0	79.7
Cambridge	15.6	15.8	15.8	15.7	17.5
Dee Valley	18.2	17.6	17.6	17.2	18.3
Folkestone & Dover	13.9	14.3	14.6	14.6	15.4
Mid Kent	39.9	40.0	41.2	40.2	44.4
Portsmouth	32.8	32.1	32.5	32.1	32.1
South East	98.4	96.3	98.1	97.4	112.6
South Staffordshire	65.7	64.0	63.9	63.4	69.6
Sutton & East Surrey	41.3	42.2	41.9	41.1	45.9
Tendring Hundred	13.0	13.1	13.8	13.9	14.3
Three Valleys	179.4	176.5	177.6	179.0	206.4
<b>Total WoCs</b>	<b>621.2</b>	<b>615.4</b>	<b>619.7</b>	<b>615.4</b>	<b>690.7</b>

**Table 4b Current cost operating profit by company**

2005-06 prices	2001-02 £m	2002-03 £m	2003-04 £m	2004-05 £m	2005-06 £m
<b>Water and sewerage companies</b>					
Anglian	245.4	208.5	254.0	247.0	257.6
Dŵr Cymru	137.3	111.4	108.4	128.6	169.3
Northumbrian	142.4	107.5	105.4	145.3	171.5
Severn Trent	319.3	294.9	317.6	283.7	358.5
South West	106.9	106.7	114.2	91.4	97.7
Southern	140.8	138.7	125.3	131.5	163.0
Thames	330.9	327.8	306.1	308.0	386.1
United Utilities	323.5	295.4	325.0	372.2	412.1
Wessex	114.6	106.8	114.1	119.4	133.8
Yorkshire	186.7	194.7	195.0	221.4	234.1
<b>Total WaSCs</b>	<b>2,047.8</b>	<b>1,892.5</b>	<b>1,965.1</b>	<b>2,048.6</b>	<b>2,383.6</b>
<b>Water only companies</b>					
Bournemouth & W Hampshire	7.1	6.5	6.9	8.1	9.0
Bristol	14.1	15.1	15.7	11.5	17.8
Cambridge	4.0	4.2	11.0	4.7	3.9
Dee Valley	5.3	3.3	4.2	4.8	3.3
Folkestone & Dover	5.0	4.5	4.0	4.9	5.2
Mid Kent	11.9	10.3	14.2	12.3	13.6
Portsmouth	10.8	8.6	8.7	8.5	5.7
South East	33.7	31.8	26.3	17.2	42.6
South Staffordshire	12.0	12.9	12.1	13.5	16.4
Sutton & East Surrey	12.7	11.5	8.6	9.4	9.8
Tendring Hundred	5.3	4.4	5.1	5.7	5.8
Three Valleys	43.2	34.8	28.3	45.5	60.3
<b>Total WoCs</b>	<b>165.1</b>	<b>147.7</b>	<b>145.2</b>	<b>145.9</b>	<b>193.4</b>

## 2.4 Cash flow

The cash flow statement in table 5 shows the aggregate cash position of the companies in each year.

The net cash flow before financing for 2005-06 (ie, the cash expenditure on interest, dividends and capital assets compared with that generated from operating activities) showed an outflow of £1,195 million, an increase in cash outflow of £73 million compared with 2004-05. There have been significant net cash outflows in each of the last five years. In the five-year period covering 2001-06, aggregate net cash outflow before financing was £6,713 million.

Over the five-year period this cash outflow has been largely financed by borrowings. Shareholders have financed the remainder through retained profits (in the form of retained cash, cash equivalents and liquid resources).

**Table 5 Cash flow statement**

2005-06 prices	2001-02	2002-03	2003-04	2004-05	2005-06	2004-05 to 2005-06 change
	£m	£m	£m	£m	£m	£m
<b>Net cash flow from operating activities<sup>1</sup></b>	<b>4,173</b>	<b>4,172</b>	<b>4,341</b>	<b>4,469</b>	<b>4,824</b>	<b>355</b>
Returns on investment and servicing of finance:						
Net interest	(868)	(1,087)	(911)	(1,023)	(1,076)	(53)
Dividends paid on non-equity shares	(23)	(30)	(46)	(43)	(26)	17
	(891)	(1,116)	(957)	(1,066)	(1,102)	(36)
Taxation paid	(165)	(83)	(65)	(69)	(194)	(125)
Investing activities:						
Purchase of fixed assets <sup>2</sup>	(2,471)	(2,949)	(3,140)	(2,909)	(2,550)	359
Infrastructure renewals expenditure	(547)	(577)	(517)	(482)	(544)	(62)
Disposal of fixed assets <sup>3</sup>	72	72	78	47	55	8
	(2,946)	(3,454)	(3,579)	(3,344)	(3,039)	305
Dividends paid on equity shares	(1,032)	(1,450)	(1,342)	(1,113)	(1,684)	(571)
<b>Net cash flow before financing</b>	<b>(861)</b>	<b>(1,931)</b>	<b>(1,602)</b>	<b>(1,122)</b>	<b>(1,195)</b>	<b>(73)</b>
Financing:						
Net loans	1,088	2,624	1,409	1,375	407	(968)
Finance lease capital payments <sup>4</sup>	65	27	3	223	53	(169)
Proceeds of share issues	0	(71)	381	11	375	364
	1,152	2,579	1,792	1,609	835	(774)
Management of liquid resources	(243)	(392)	(5)	(340)	89	429
<b>Increase/(decrease) in cash and cash equivalents</b>	<b>48</b>	<b>257</b>	<b>186</b>	<b>146</b>	<b>(272)</b>	<b>(418)</b>

**Notes:**

1. Net cash flow from operating activities is calculated by adjusting the current cost operating profit shown in table 1 for items which are not direct cash flows, ie depreciation and the change in the components of working capital which are mainly debtors and creditors. It is also adjusted for infrastructure renewals expenditure (IRE) which is shown as an investing activity.
2. The timing of cash payments means that the amounts shown in the cash flow statement for purchase of fixed assets cannot be directly reconciled to the gross capital expenditure amounts discussed later in this report. This line includes any purchases of subsidiaries.
3. For 2001-02, this excludes a loan of £342.8 million from Anglian Water to AWG plc (at 2005-06 prices) and for 2002-03 a similar loan of £1,410.4 million. These have been included in the net loans category.
4. This includes the draw down of finance lease facilities netted off finance lease repayments.

The profile of the capital expenditure programme usually dictates the pattern of cash outflows. However, in 2005-06, whilst the overall change in net cash flow before financing was small, there were several large offsetting movements behind this. There were increased operating cash flows of £355 million and capital expenditure spend was £305 million less. These were more than offset by an increase in dividend payments of £571 million (including special dividends of £313 million) and taxation payments, which were £125 million higher.

Dividend payments (both equity and non-equity) represent the largest cash flow after capital expenditure, and amounted to £6,789 million over the five-year period. Dividends are discussed in more detail later in this chapter.

Interest represents around 22% of net cash flow from operations. This is indicative of companies' continued large borrowing requirements in order to fund the capital programmes, as well as financial restructuring exercises, which have increased gearing.

In September 2003, United Utilities plc raised £500 million as the first tranche of a £1 billion rights issue. The second placement of £500 million took place in June 2005. This was the first time that equity capital has been raised directly for the regulated business since privatisation. During 2005-06, £400 million of the second tranche had been invested in the water business as equity capital.

Bournemouth & West Hampshire Water cancelled its £25 million preference shares as part of a financial restructuring exercise. This has been shown as a reduction in the proceeds from share issues in table 5.

Table 6 shows key cash flow totals for each company. The majority of companies have net cash outflows before financing in every year. Five water only companies are self-financing. Overall, the water and sewerage companies had an increased cash outflow of around 9%. However, two companies, Dŵr Cymru and United Utilities, had significant uplifts in cash flow due to stronger operating cash flows and lower capital expenditure. Significantly increased dividend payments by Thames Water and special dividends made by South West Water and Yorkshire Water were the principal drivers for lower cash flows at these companies.

In 2003-04 Bristol Water had an exceptionally high net cash outflow before financing. This was mainly a result of a loan being advanced to a group company in the year as part of a financial restructuring exercise.

**Table 6 Key cash flows by company**

2005-06 prices	Net cash flow from operating activities					Net cash flow before financing					Net increase/(decrease) in cash					
	2001-02	2002-03	2003-04	2004-05	2005-06	2001-02	2002-03	2003-04	2004-05	2005-06	2001-02	2002-03	2003-04	2004-05	2005-06	
	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	£m	
<b>Water and sewerage companies</b>																
Anglian <sup>1</sup>	420.0	451.7	484.0	547.9	525.3	(97.9)	(33.1)	(169.7)	13.1	(4.4)	(209.2)	274.3	91.9	(116.2)	(4.9)	
Dŵr Cymru	275.3	268.1	267.2	277.1	307.2	(46.2)	(195.7)	(161.5)	(146.1)	(41.2)	(19.8)	20.7	(1.4)	1.6	0.0	
Northumbrian	248.7	215.7	232.0	264.7	295.8	(107.3)	(157.9)	(16.3)	(84.8)	(52.9)	0.0	(3.4)	(8.5)	(7.2)	(3.1)	
Severn Trent	588.9	581.5	592.1	591.6	635.7	(22.5)	(124.6)	(117.8)	(80.5)	(114.0)	326.4	(114.0)	(15.1)	3.7	(230.2)	
South West	174.4	186.0	184.2	199.2	184.8	(135.5)	(123.3)	(83.1)	(68.0)	(271.0)	(27.9)	20.9	15.5	5.6	16.5	
Southern	221.5	355.7	259.7	305.7	327.4	(195.6)	(59.5)	(151.0)	(35.3)	(81.5)	(8.5)	8.5	149.0	147.9	(10.6)	
Thames	687.2	631.0	682.5	704.9	756.7	111.2	(210.3)	(146.1)	0.9	(197.1)	3.1	1.0	(10.0)	(3.3)	13.7	
United Utilities	697.3	652.1	710.1	624.0	785.3	(121.0)	(296.8)	(483.5)	(517.2)	(145.2)	21.1	8.3	(34.3)	18.3	(6.5)	
Wessex	182.0	142.9	206.7	209.1	221.5	(89.6)	(399.3)	(73.6)	(66.2)	(19.4)	(9.0)	8.8	(3.7)	85.3	(57.7)	
Yorkshire	386.4	399.4	403.3	441.1	434.2	(90.3)	(139.8)	(83.4)	(77.8)	(226.0)	(6.1)	8.2	(5.6)	7.6	2.0	
<b>Total WaSCs</b>	<b>3,881.8</b>	<b>3,884.2</b>	<b>4,021.9</b>	<b>4,165.3</b>	<b>4,473.9</b>	<b>(794.6)</b>	<b>(1,740.5)</b>	<b>(1,486.0)</b>	<b>(1,061.8)</b>	<b>(1,152.9)</b>	<b>70.1</b>	<b>233.4</b>	<b>177.8</b>	<b>143.2</b>	<b>(280.8)</b>	
<b>Water only companies</b>																
Bournemouth & W Hampshire	12.6	15.6	16.1	16.5	18.1	(3.2)	(4.6)	(0.3)	1.9	(16.3)	0.6	(1.4)	1.2	1.3	4.5	
Bristol	31.6	32.0	34.7	34.9	33.5	(7.8)	(1.9)	(67.9)	1.5	(23.8)	0.0	2.7	(1.6)	0.0	(0.5)	
Cambridge	8.0	6.5	7.3	5.7	10.7	(3.0)	2.3	7.3	(22.6)	1.9	(4.0)	1.4	4.3	0.0	0.4	
Dee Valley	7.6	(17.1)	10.0	8.3	7.7	(1.8)	(25.7)	(1.9)	(1.3)	(0.2)	(0.5)	4.0	(0.1)	(0.1)	(0.0)	
Folkestone & Dover	6.2	8.9	7.8	8.8	8.5	(5.8)	(3.1)	(2.1)	(1.1)	(6.3)	(0.3)	0.3	0.0	0.3	(0.9)	
Mid Kent	19.8	16.3	23.4	22.7	24.3	(19.2)	(42.5)	(11.2)	(11.6)	(9.2)	(4.1)	0.2	(0.5)	0.0	0.1	
Portsmouth	15.8	17.1	16.7	16.1	16.2	4.1	(67.8)	1.3	(0.3)	4.5	(1.8)	0.7	0.7	(0.3)	0.1	
South East	49.0	55.7	53.9	55.3	58.4	(7.5)	(13.0)	(14.8)	(16.8)	(30.1)	(1.7)	2.4	7.3	2.5	(21.1)	
South Staffordshire	26.3	28.2	29.2	26.3	34.8	(7.2)	(6.6)	(7.2)	(3.3)	11.9	(8.0)	12.8	(8.3)	(1.0)	25.7	
Sutton & East Surrey	21.9	20.0	23.2	24.0	20.3	0.5	(4.7)	(5.0)	(5.8)	2.5	1.4	(2.7)	3.4	(2.4)	1.7	
Tendring Hundred	8.7	8.4	9.1	9.8	8.0	1.4	(0.4)	0.7	1.9	(0.3)	(0.2)	0.7	(0.3)	0.4	(0.3)	
Three Valleys	83.5	96.4	88.1	75.4	109.7	(16.8)	(22.3)	(14.9)	(3.2)	21.9	(3.4)	1.8	1.9	1.9	(1.2)	
<b>Total WoCs</b>	<b>291.0</b>	<b>288.1</b>	<b>319.5</b>	<b>303.9</b>	<b>350.1</b>	<b>(66.3)</b>	<b>(190.3)</b>	<b>(115.9)</b>	<b>(60.6)</b>	<b>(43.7)</b>	<b>(22.1)</b>	<b>23.0</b>	<b>8.0</b>	<b>2.7</b>	<b>8.5</b>	
<b>Industry</b>	<b>4,172.8</b>	<b>4,172.3</b>	<b>4,341.4</b>	<b>4,469.2</b>	<b>4,824.1</b>	<b>(860.8)</b>	<b>(1,930.8)</b>	<b>(1,602.0)</b>	<b>(1,122.5)</b>	<b>(1,196.5)</b>	<b>48.0</b>	<b>256.4</b>	<b>185.8</b>	<b>145.9</b>	<b>(272.4)</b>	

**Note:**

1. Anglian Water's net cash flow before financing excludes a £342.8 million loan to AWG plc in 2001-02 and a similar loan of £1,410.4 million in 2002-03 (at 2005-06 prices), which have been included in financing activities.

## 2.5 Balance sheet

Table 7 sets out the aggregate current cost balance sheet for the industry at 31 March for each of the last five years.

**Table 7 Current cost balance sheet at 31 March**

2005-06 prices	2001-02	2002-03	2003-04	2004-05	2005-06	2004-05 to 2005-06 change
	£m	£m	£m	£m	£m	£m
<b>Fixed assets</b>						
Tangible assets	220,820	222,240	222,751	227,098	227,815	717
Third party contributions since 1989-90	(3,608)	(3,791)	(3,998)	(4,227)	(4,536)	(309)
	<b>217,212</b>	<b>218,448</b>	<b>218,753</b>	<b>222,870</b>	<b>223,279</b>	<b>409</b>
Total working capital	116	(141)	(57)	245	(445)	(690)
<b>Net operating assets</b>	<b>217,327</b>	<b>218,307</b>	<b>218,697</b>	<b>223,115</b>	<b>222,834</b>	<b>(281)</b>
Cash and investments	1,039	1,787	2,665	2,929	1,814	(1,115)
Borrowings	(18,555)	(22,181)	(23,847)	(25,104)	(25,299)	(194)
Non-trade debtors less creditors	(1,792)	857	945	953	1,865	912
Provisions for liabilities and charges	(61)	(100)	(98)	(116)	(152)	(36)
Deferred tax provision	(2,558)	(2,866)	(2,861)	(2,966)	(3,353)	(388)
<b>Net assets employed</b>	<b>195,400</b>	<b>195,804</b>	<b>195,502</b>	<b>198,812</b>	<b>197,709</b>	<b>(1,103)</b>
<b>Capital and reserves</b>						
Called up share capital	6,009	5,825	5,784	5,609	5,699	90
Share premium	952	924	1,175	1,144	858	(286)
Profit and loss account	(789)	(460)	(303)	(76)	(645)	(568)
Current cost reserve	188,838	189,129	188,471	191,774	191,442	(331)
Other reserves	391	384	375	363	355	(9)
<b>Total capital and reserves</b>	<b>195,400</b>	<b>195,804</b>	<b>195,502</b>	<b>198,812</b>	<b>197,709</b>	<b>(1,103)</b>

Net assets employed at 31 March 2006 totalled £198 billion. In comparison, the net asset value on an historic cost basis at 31 March 2006 was £13 billion.

The balance sheet is dominated by the tangible assets included at modern equivalent asset (MEA) valuations. An MEA value is the cost of replacing an old asset with a technically up-to-date asset, with the same service capability, but allowing for the remaining service potential of the old asset compared with a new one.

Tangible assets reflect not only new capital investment (net of depreciation), but also revaluations following a reassessment by companies of their MEA values. These are incorporated into the companies' regulatory accounts. Most companies carried out a reassessment of MEA values for the 2004 price review, which was then included in the accounts for 2004-05.

Tangible assets totalled £228 billion at 31 March 2006, an increase of £0.7 billion compared to 31 March 2005.

## **2.6 Debt and gearing**

The reported net debt position at 31 March 2006 was £23.5 billion, an increase of £0.5 billion compared with last year. This is 34% higher than net debt at 31 March 2002. It reflects the considerable cash outflows from both capital investment and financial restructuring of the companies over the five-year period.

The proportion of total industry net debt held by the water and sewerage companies was 94%, with 6% held by the water only companies. This reflects the relative levels of capital expenditure made by water and sewerage companies compared with water only companies.

Each company's net debt for the five years is set out in table 8. The level within the water and sewerage companies increased in 2005-06 by around 1%. The level in the water only companies increased by 13% to £1.4 billion compared to 31 March 2005. The increase is largely due to financial restructuring by Bournemouth & West Hampshire Water, Bristol Water and South Staffordshire Water.

**Table 8 Net debt and gearing by company at 31 March**

2005-06 prices	Net debt					Gearing – net debt/RCV				
	2001-02 £m	2002-03 £m	2003-04 £m	2004-05 £m	2005-06 £m	2001-02 %	2002-03 %	2003-04 %	2004-05 %	2005-06 %
<b>Water and sewerage companies</b>										
Anglian	2,217.6	3,585.2	3,693.1	4,013.6	3,538.3	51.9	82.0	82.2	89.7	78.6
Dŵr Cymru	2,086.6	2,174.5	2,284.7	2,254.7	2,242.9	87.9	84.9	83.4	79.6	73.7
Northumbrian	1,352.0	1,472.5	1,456.0	1,499.5	1,521.2	59.1	62.6	59.5	61.5	58.0
Severn Trent	2,300.5	2,357.2	2,421.4	2,443.1	2,484.8	49.8	49.5	48.9	48.2	47.2
South West	833.6	942.2	1,009.8	1,055.0	1,280.6	50.5	53.6	54.6	55.2	61.2
Southern	1,343.9	1,362.8	2,108.7	2,095.6	2,412.3	58.2	57.4	85.5	85.6	95.8
Thames	2,320.7	2,450.2	2,541.7	2,467.6	2,613.0	45.7	47.3	47.9	46.6	44.4
United Utilities	2,516.9	2,696.2	3,000.4	3,428.5	3,262.4	47.6	48.2	52.9	58.7	51.3
Wessex	739.0	1,114.7	1,133.7	1,164.6	1,157.1	48.8	69.8	67.9	70.0	63.1
Yorkshire	1,164.4	1,268.7	1,319.7	1,356.5	1,551.2	38.4	39.6	39.7	39.8	42.2
<b>Total WaSCs</b>	<b>16,875.2</b>	<b>19,424.3</b>	<b>20,969.2</b>	<b>21,778.7</b>	<b>22,063.7</b>	<b>52.0</b>	<b>57.7</b>	<b>60.2</b>	<b>61.6</b>	<b>58.4</b>
<b>Water only companies</b>										
Bournemouth & W Hampshire	20.1	24.2	23.9	21.2	64.6	18.8	23.2	20.9	18.2	52.3
Bristol	79.7	81.1	148.3	141.7	177.2	42.3	40.8	67.4	58.1	75.6
Cambridge	16.5	13.7	6.1	28.4	25.9	36.3	30.2	13.0	57.5	51.9
Dee Valley	(4.1)	23.7	25.2	26.7	26.6	n/a	48.9	50.5	55.2	48.6
Folkestone & Dover	14.4	17.0	18.6	19.2	24.9	32.0	33.4	33.9	34.3	42.4
Mid Kent	61.2	138.3	150.0	154.4	164.5	35.8	76.7	81.1	78.1	77.4
Portsmouth	6.9	74.9	74.0	74.2	70.2	7.0	75.9	75.9	79.5	73.2
South East Water	145.0	153.7	164.7	374.8	417.6	31.7	32.6	34.3	78.8	82.2
South Staffordshire	25.7	104.4	111.6	114.6	147.1	17.6	65.8	65.2	66.8	80.5
Sutton & East Surrey	52.6	57.8	65.3	72.8	84.6	47.8	48.2	51.3	52.9	59.4
Tendring Hundred	11.3	11.5	10.4	8.1	8.2	20.2	20.6	18.2	14.3	15.6
Three Valleys	183.6	201.2	212.0	224.6	209.6	32.1	35.3	34.8	36.0	32.5
<b>Total WoCs</b>	<b>613.0</b>	<b>901.5</b>	<b>1,009.9</b>	<b>1,260.7</b>	<b>1,420.8</b>	<b>30.0</b>	<b>42.9</b>	<b>45.6</b>	<b>55.7</b>	<b>60.2</b>
<b>Industry</b>	<b>17,488.1</b>	<b>20,325.5</b>	<b>21,978.8</b>	<b>23,037.6</b>	<b>23,484.5</b>	<b>50.7</b>	<b>56.7</b>	<b>59.3</b>	<b>61.2</b>	<b>58.5</b>

Table 8 shows the gearing for each company, which is calculated using the ratio of net debt to RCV. This was our primary measure of gearing for the 2004 price review, and is widely used by analysts.

One benefit of using this measure is that, unlike net debt to debt plus equity, it is not distorted by fluctuation in the value of shareholder funds caused by changes in certain accounting standards that do not represent changes in economic value.

Average gearing in the industry increased rapidly over the five-year period and is now 58.5%. The average gearing for the water and sewerage companies of 58% is now lower than the water only companies where the average is 60%. This is the first year that this has occurred.

Levels of gearing for individual companies cover a wide range. This is particularly true for the water only companies, which range from 16% for Tendring Hundred Water to 82% for South East Water. The range is slightly narrower for the water and sewerage companies – Yorkshire Water is 42% geared, while Southern Water stands at 96%. The increase at Southern Water is partly due to the preference share capital now being classified as debt following the introduction of a new accounting standard, FRS 25.

## **2.7 Return on capital**

Although the current cost regulatory accounts provide a useful framework for monitoring performance, they do not provide a meaningful measure of the capital base to be remunerated. We established a more appropriate measure of the capital base, the regulatory capital value, during the 1994 price review. The RCV uses the market valuation (including debt) of the companies around the time of the initial price setting. We adjust this to take account of the net new capital expenditure (after allowing for current cost depreciation) assumed at the time of initial price setting and at subsequent price reviews. The measured returns based on the RCV for each company are set out in table 9 for the five-year period.

**Table 9 Return on capital measured by regulatory capital value by company**

2005-06 prices	Average regulatory capital value					Return on capital employed				
	2001-02	2002-03	2003-04	2004-05	2005-06	2001-02	2002-03	2003-04	2004-05	2005-06
	£m	£m	£m	£m	£m	%	%	%	%	%
<b>Water and sewerage companies</b>										
Anglian	4,164.2	4,281.6	4,387.3	4,466.8	4,452.2	5.9	4.9	5.8	5.5	5.8
Dŵr Cymru	2,321.2	2,443.8	2,624.6	2,777.4	2,947.2	5.9	4.6	4.1	4.6	5.7
Northumbrian	2,268.6	2,298.6	2,377.7	2,434.1	2,550.2	6.3	4.7	4.4	6.0	6.7
Severn Trent	4,580.8	4,646.3	4,811.9	4,990.9	5,177.5	7.0	6.3	6.6	5.7	6.9
South West	1,596.5	1,687.2	1,785.4	1,873.4	2,026.9	6.7	6.3	6.4	4.9	4.8
Southern	2,316.6	2,319.4	2,397.8	2,448.4	2,435.6	6.1	6.0	5.2	5.4	6.7
Thames	5,008.1	5,079.1	5,193.5	5,283.8	5,694.5	6.6	6.5	5.9	5.8	6.8
United Utilities	5,137.1	5,382.9	5,574.3	5,735.6	6,217.3	6.3	5.5	5.8	6.5	6.6
Wessex	1,452.5	1,540.9	1,617.7	1,660.7	1,782.1	7.9	6.9	7.1	7.2	7.5
Yorkshire	2,961.8	3,086.8	3,232.2	3,352.3	3,560.4	6.3	6.3	6.0	6.6	6.6
<b>Total WaSCs</b>	<b>31,807.3</b>	<b>32,766.6</b>	<b>34,002.4</b>	<b>35,023.5</b>	<b>36,843.8</b>	<b>6.4</b>	<b>5.8</b>	<b>5.8</b>	<b>5.8</b>	<b>6.5</b>
<b>Water only companies</b>										
Bournemouth & W Hampshire	104.1	104.6	108.1	114.9	123.0	6.8	6.3	6.4	7.0	7.3
Bristol	183.0	191.5	207.3	229.6	230.1	7.7	7.9	7.6	5.0	7.7
Cambridge	44.7	44.9	45.5	47.8	49.3	8.9	9.2	24.2	9.8	7.9
Dee Valley	46.4	47.1	48.6	49.0	52.1	11.3	7.0	8.7	9.7	6.3
Folkestone & Dover	42.6	47.5	52.4	55.3	56.2	11.6	9.5	7.7	8.9	9.2
Mid Kent	164.6	174.0	180.8	190.7	202.9	7.3	5.9	7.9	6.4	6.7
Portsmouth	95.8	98.1	97.2	95.0	95.1	11.3	8.7	9.0	8.9	5.9
South East	448.3	459.8	471.4	476.6	494.0	7.5	6.9	5.6	3.6	8.6
South Staffordshire	140.9	150.9	163.3	170.7	178.8	8.5	8.5	7.4	7.9	9.2
Sutton & East Surrey	108.9	113.8	122.3	131.8	139.0	11.6	10.1	7.0	7.1	7.1
Tending Hundred	55.0	55.1	55.6	56.6	52.3	9.6	8.0	9.2	10.1	11.2
Three Valleys	568.3	565.6	584.1	614.4	630.2	7.6	6.2	4.9	7.4	9.6
<b>Total WoCs</b>	<b>2,002.5</b>	<b>2,052.9</b>	<b>2,136.5</b>	<b>2,232.4</b>	<b>2,303.0</b>	<b>8.2</b>	<b>7.2</b>	<b>6.8</b>	<b>6.5</b>	<b>8.4</b>
<b>Industry</b>	<b>33,809.8</b>	<b>34,819.6</b>	<b>36,138.9</b>	<b>37,255.8</b>	<b>39,146.8</b>	<b>6.5</b>	<b>5.9</b>	<b>5.8</b>	<b>5.9</b>	<b>6.6</b>

The RCVs for the period 2000-05 were established at the 1999 price review. They have subsequently been updated for interim determinations that have taken place since then. We set RCVs for 2005-10 (including those for 2005-06) at the 2004 price review. These were published in RD07/05, 'Regulatory capital values 2005-10'. At price reviews, future RCVs are adjusted to reflect past capital efficiencies and, in this way, the benefits of these efficiencies are passed back to customers. In order to preserve incentives for companies to achieve further efficiencies, they retain the benefit of past capital efficiencies for five years. This is then captured in the RCV through a rolling adjustment.

The overall pre-tax return achieved on the RCV in 2005-06, based on operating profit was 6.6%, compared to 5.9% in 2004-05. This was driven largely by the price limits for 2005-06, which was the first year of the price setting period 2005-10.

The return on RCV assumed in price limits for 2005-06 was 6.4%. This is lower than the actual returns achieved. The principal reason for this is due to higher actual revenues compared to those assumed in price limits. For 2004-05 the allowed return on the RCV was similar (6.5%) but the actual return was only 5.9%. This highlights the increased costs borne by companies prior to the last price review, which were addressed by the increases allowed in price limits. This results in relatively large percentage changes in operating profits between the two years.

The returns achieved by individual companies in 2005-06 ranged from 4.8% for South West Water to 11.2% for Tendring Hundred Water. The average return for water and sewerage companies was 6.5% (5.8% in 2004-05) and 8.4% (6.5% in 2004-05) for water only companies.

The return allowed for the water only companies in 2005-06 was 7.2%. The two largest companies, Three Valleys Water and South East Water, were principally responsible for the outperformance compared to our allowed return, due to lower operating expenditure than assumed in our price limits and profit from disposals of land (for which we assumed nil proceeds) respectively.

**Table 10 Dividends reported plus interest payable as a percentage of regulatory capital value**

2005-06 prices	Dividends reported					Interest payable					Dividends plus interest payable as a percentage of capital value				
	2001-02 £m	2002-03 £m	2003-04 £m	2004-05 £m	2005-06 £m	2001-02 £m	2002-03 £m	2003-04 £m	2004-05 £m	2005-06 £m	2001-02 %	2002-03 %	2003-04 %	2004-05 %	2005-06 %
<b>Water and sewerage companies</b>															
Anglian	0.0	297.2	262.1	257.5	301.2	114.0	115.8	55.2	65.7	62.5	2.7	9.6	7.2	7.2	8.2
Dŵr Cymru	52.7	15.2	14.8	14.4	0.0	128.3	141.9	158.7	147.3	151.3	7.8	6.4	6.6	5.8	5.1
Northumbrian	80.8	81.5	103.7	65.6	33.4	74.8	76.3	84.8	84.3	87.8	6.9	6.9	7.9	6.2	4.8
Severn Trent	154.5	154.4	167.2	150.9	152.8	132.6	129.3	131.0	134.2	129.4	6.3	6.1	6.2	5.7	5.5
South West	74.1	79.1	80.0	81.5	197.9	44.5	48.3	51.4	52.7	96.6	7.4	7.6	7.4	7.2	14.5
Southern	0.0	74.0	65.9	56.2	41.8	79.9	98.3	98.9	105.3	126.1	3.4	7.4	6.9	6.6	6.9
Thames	137.9	138.3	138.7	140.7	270.2	140.1	128.5	134.7	139.7	133.2	5.6	5.3	5.3	5.3	7.1
United Utilities	225.8	219.9	218.2	216.6	222.8	164.4	173.8	202.8	223.7	239.0	7.6	7.3	7.6	7.7	7.4
Wessex	48.0	299.6	44.9	43.2	52.2	36.4	43.1	63.7	69.5	68.3	5.8	22.2	6.7	6.8	6.8
Yorkshire	109.2	109.7	106.1	108.5	268.3	71.2	77.3	79.4	78.8	81.7	6.1	6.1	5.7	5.6	9.8
<b>Total WaSCs</b>	<b>882.9</b>	<b>1,468.7</b>	<b>1,201.5</b>	<b>1,135.0</b>	<b>1,540.6</b>	<b>986.3</b>	<b>1,032.6</b>	<b>1,060.4</b>	<b>1,101.3</b>	<b>1,176.0</b>	<b>5.9</b>	<b>7.6</b>	<b>6.7</b>	<b>6.4</b>	<b>7.4</b>
<b>Water only companies</b>															
Bournemouth & W Hampshire <sup>3</sup>	3.8	3.8	3.9	4.9	4.0	1.0	1.0	1.1	1.2	17.8	4.6	4.6	4.6	5.3	17.8
Bristol	7.3	18.4	7.7	8.3	10.1	5.1	5.6	6.6	6.8	6.5	6.8	12.5	6.9	6.6	7.2
Cambridge	4.6	2.5	2.5	24.5	0.0	1.0	1.1	1.1	0.8	1.3	12.6	7.9	7.9	53.1	2.6
Dee Valley	3.0	1.4	1.4	1.3	1.3	(0.1)	1.2	2.3	2.0	1.9	6.1	5.5	7.5	6.8	6.1
Folkestone & Dover	2.6	2.5	2.4	3.2	3.8	0.8	1.0	1.0	1.2	0.9	8.0	7.2	6.5	8.0	8.5
Mid Kent	4.3	32.3	5.1	4.5	6.6	4.6	6.3	7.5	8.1	7.4	5.4	22.2	7.0	6.6	6.9
Portsmouth	5.5	7.6	4.4	3.9	3.6	2.0	0.6	2.2	1.7	(0.5)	7.8	8.4	6.8	5.9	3.2
South East	13.1	13.2	15.3	24.5	29.9	9.1	8.6	9.0	10.6	25.0	4.9	4.7	5.1	7.4	11.1
South Staffordshire <sup>4</sup>	6.8	5.2	4.4	8.6	6.0	1.2	5.2	6.9	6.9	34.4	5.7	6.9	6.9	9.1	22.6
Sutton & East Surrey	5.8	5.4	6.3	6.1	5.0	3.3	3.6	5.5	5.4	6.5	8.4	7.9	9.7	8.8	8.2
Tendring Hundred	3.6	3.3	3.3	3.9	3.5	0.7	0.6	0.5	0.6	0.4	7.8	7.0	6.9	7.9	7.5
Three Valleys	26.9	28.2	28.1	28.5	28.1	12.3	12.1	11.8	13.8	11.8	6.9	7.1	6.8	6.9	6.3
<b>Total WoCs</b>	<b>87.4</b>	<b>123.7</b>	<b>84.9</b>	<b>122.3</b>	<b>101.9</b>	<b>40.8</b>	<b>46.8</b>	<b>55.4</b>	<b>59.2</b>	<b>113.4</b>	<b>6.4</b>	<b>8.3</b>	<b>6.6</b>	<b>8.1</b>	<b>9.3</b>
<b>Industry</b>	<b>970.1</b>	<b>1,592.5</b>	<b>1,286.4</b>	<b>1,257.4</b>	<b>1,642.5</b>	<b>1,027.1</b>	<b>1,079.4</b>	<b>1,116.0</b>	<b>1,160.7</b>	<b>1,289.3</b>	<b>5.9</b>	<b>7.7</b>	<b>6.6</b>	<b>6.5</b>	<b>7.5</b>

**Notes:**

1. In 2005-06 dividends were reported on a different basis due to a new UK accounting standard (FRS 21). Under this standard, any dividend declared post year-end could not be recognised in the accounts for that year. Therefore the 2005-06 dividend figure will include amounts relating to 2004-05 which were declared and paid in 2005-06.
2. Dividends reported include special dividends.
3. In 2005-06 interest payable included £13.75 million relating to the redemption of its preference shares. If this was excluded, the return would be 6.6%.
4. In 2005-06 interest payable included £27.7 million relating to an exceptional refinancing loss. If this was excluded, the return would be 7.1%.

Table 10 shows the returns actually received by investors and lenders (for example, dividends and interest as a percentage of the RCV). This measure is similar to the dividend yield measure used by equity investors and stock market analysts. The majority of companies fell within a range of 4.5% to 7.5% in 2005-06.

Returns on capital employed based on the average net MEA values for 2001-06 are shown in table 11. Returns measured on this basis are very low compared with returns earned on the RCV of 6.6%. This is due to the large difference between the current cost net asset values of the companies and the market value of the companies at privatisation, which is the basis of the RCV.

**Table 11 Return on capital by service measured by average MEA – industry**

2005-06 prices		2001-02	2002-03	2003-04	2004-05	2005-06
<b>Water service</b>						
Current cost operating profit	£bn	0.90	0.80	0.80	0.93	1.15
Average net MEA – infrastructure	£bn	67.81	68.33	68.84	69.03	69.17
Average net MEA – non-infrastructure	£bn	11.33	11.50	11.54	11.86	12.19
<b>Average net MEA value – all assets</b>	<b>£bn</b>	<b>79.14</b>	<b>79.84</b>	<b>80.37</b>	<b>80.86</b>	<b>81.36</b>
<b>Return on capital employed</b>	<b>%</b>	<b>1.11</b>	<b>1.13</b>	<b>1.00</b>	<b>0.99</b>	<b>1.42</b>
<b>Sewerage service</b>						
Current cost operating profit	£bn	1.31	1.24	1.32	1.27	1.42
Average net MEA – infrastructure	£bn	123.76	124.05	124.15	125.36	126.81
Average net MEA – non-infrastructure	£bn	17.41	17.65	17.97	18.71	19.31
<b>Average net MEA value – all assets</b>	<b>£bn</b>	<b>141.17</b>	<b>141.70</b>	<b>142.13</b>	<b>144.06</b>	<b>146.11</b>
<b>Return on capital employed</b>	<b>%</b>	<b>0.93</b>	<b>0.87</b>	<b>0.92</b>	<b>0.88</b>	<b>0.97</b>
<b>Total</b>						
Current cost operating profit	£bn	2.21	2.04	2.11	2.19	2.58
Average net MEA – infrastructure	£bn	191.57	192.38	192.99	194.39	195.97
Average net MEA – non-infrastructure	£bn	28.74	29.15	29.52	30.56	31.49
<b>Average net MEA value – all assets</b>	<b>£bn</b>	<b>220.31</b>	<b>221.53</b>	<b>222.50</b>	<b>224.92</b>	<b>227.47</b>
<b>Return on capital employed</b>	<b>%</b>	<b>1.00</b>	<b>0.92</b>	<b>0.95</b>	<b>0.97</b>	<b>1.13</b>

## 2.8 Dividends

Table 10 sets out dividends reported for each company (adjusted for capital restructuring dividends) for the last five years; table 12 shows the related dividend covers on both a current cost and historic cost basis.

In 2005-06 dividends were reported on a different basis due to a new UK accounting standard (FRS 21). Under this standard, any dividend declared post-year end, even if it

relates to that year's performance, should not be recognised in the accounts for that year. Therefore, the 2005-06 dividend figure includes amounts relating to 2004-05 that were declared and paid in 2005-06.

Total dividends declared in the year ended 31 March 2006 of £1,332 million (excluding special dividends) were 8% higher than those in the year ended 31 March 2005.

The increase is largely due to the change in accounting standards described above. However, there were some specific payments that increased the level of dividends. Thames Water had a significant increase in reported dividends. Of the dividends they declared for 2004-05 only 30% were paid in the year, so the 2005-06 figure (reported under FRS 21) includes a significant part of the 2004-05 dividends which have been reported in the previous year. Thames Water have also reviewed their dividend policy with the intention of increasing its dividend yield. This has resulted in a significant increase in the dividend for the year.

Although the dividends declared by the regulated companies are paid to parent companies (and not to the ultimate shareholders), the regulated companies are expected to adopt appropriate and sustainable dividend policies.

We have suggested that such a dividend policy should comply with two principles. These are that:

- the company's ability to finance its regulated business should not be impaired; and
- under a system of incentive regulation, dividends reward efficiency and the management of economic risk.

In 2005-06, dividend cover was lower at 0.8 for both a historic cost basis and for current cost. This was because of the higher levels of dividends reported following implementation of FRS 21, and special dividends. We recognise that investor confidence must be maintained, but the level of dividend also needs to be sustainable over the long term. Dividends from the regulated business should reflect the cost of capital and distribution to shareholders of a proper portion of the benefits of greater efficiency.

**Table 12 Dividend covers by company<sup>1</sup>**

2005-06 prices	Dividend cover (current cost basis)					Dividend cover (historic cost basis)				
	2001-02	2002-03	2003-04	2004-05	2005-06	2001-02	2002-03	2003-04	2004-05	2005-06
<b>Water and sewerage companies</b>										
Anglian <sup>2</sup>	n/a	0.3	1.1	1.0	0.7	n/a	0.4	1.2	1.0	0.8
Dŵr Cymru	0.7	0.6	(0.4)	3.3	n/a	0.9	0.2	(1.1)	1.9	n/a
Northumbrian	1.2	0.7	0.7	1.4	2.3	1.4	0.5	0.7	1.2	2.4
Severn Trent	1.1	1.1	1.2	1.5	1.4	1.2	0.9	1.1	1.2	1.2
South West <sup>3</sup>	0.9	0.9	1.0	0.7	0.2	0.9	0.7	0.8	0.6	0.1
Southern	n/a	0.7	0.6	1.0	1.3	n/a	0.9	0.8	1.2	1.4
Thames	1.1	1.5	1.3	1.4	0.9	1.4	1.5	1.3	1.3	0.9
United Utilities	0.8	0.7	1.2	1.0	0.7	1.1	0.7	1.1	0.9	0.7
Wessex	1.5	0.3	1.9	1.9	1.4	1.6	0.2	1.5	1.2	1.2
Yorkshire <sup>3</sup>	1.1	1.0	1.2	1.5	0.5	1.5	1.1	1.4	1.6	0.6
<b>Total WaSCs</b>	<b>1.3</b>	<b>0.7</b>	<b>1.1</b>	<b>1.2</b>	<b>0.8</b>	<b>1.6</b>	<b>0.7</b>	<b>1.1</b>	<b>1.1</b>	<b>0.8</b>
<b>Water only companies</b>										
Bournemouth & W Hampshire	1.2	0.9	1.2	1.2	(2.6)	1.7	1.5	1.7	1.6	(1.9)
Bristol	0.9	0.3	1.2	0.8	0.8	1.5	0.5	1.5	1.0	1.1
Cambridge	0.6	1.1	3.5	0.1	n/a	0.7	1.1	3.7	0.1	n/a
Dee Valley <sup>2</sup>	1.2	0.3	(0.2)	0.5	(0.1)	1.8	2.1	1.3	2.0	1.6
Folkestone & Dover	1.0	1.2	1.0	0.9	0.8	1.4	1.5	1.3	1.0	0.9
Mid Kent	1.6	0.2	1.8	1.9	1.1	2.0	0.3	1.6	1.4	1.0
Portsmouth	1.1	0.8	1.1	1.3	1.1	1.3	0.8	1.2	1.4	1.3
South East <sup>3</sup>	1.5	1.7	1.4	0.3	0.5	2.1	1.9	1.6	0.4	0.6
South Staffordshire <sup>3</sup>	1.1	1.1	1.1	0.8	(1.8)	1.8	1.8	1.8	1.0	(1.7)
Sutton & East Surrey	1.4	2.0	0.6	1.4	0.7	1.6	2.0	0.7	1.4	0.6
Tendring Hundred	1.0	1.1	1.0	0.9	1.1	1.2	1.1	1.1	1.0	1.1
Three Valleys	1.0	1.0	0.5	0.9	1.4	1.3	1.2	0.7	0.9	1.3
<b>Total WoCs</b>	<b>1.1</b>	<b>0.8</b>	<b>1.0</b>	<b>0.7</b>	<b>0.7</b>	<b>1.5</b>	<b>1.0</b>	<b>1.3</b>	<b>0.8</b>	<b>0.7</b>
<b>Industry</b>	<b>1.3</b>	<b>0.7</b>	<b>1.1</b>	<b>1.2</b>	<b>0.8</b>	<b>1.6</b>	<b>0.7</b>	<b>1.1</b>	<b>1.1</b>	<b>0.8</b>

**Notes:**

- Dividends reported are those declared in the profit and loss account for the year. These will not correspond with dividends paid during the year (as shown in the cash flow statement in table 5) because of timing between declaring a dividend and payment. Interim dividends are normally declared and paid in the same financial year, but final dividends are normally paid in the financial year following the declaration.
- Dividends reported exclude capital restructuring dividends. These were £7.2 million in 2001-02 (in 2005-06 prices). No such dividends were paid in 2002-03, 2003-04, 2004-05 and 2005-06. In 2002-03, Anglian Water waived the capital restructuring dividend of £806 million reported in 2000-01. The effect of this waiver has been excluded from the dividends reported for 2002-03.
- In 2005-06 South West Water, Yorkshire Water and South East Water paid special dividends (see table 13). South Staffordshire Water reported an exceptional financing cost of £27.7 million. When these costs are excluded from the calculations for dividend covers, the restated amounts are:

	Current cost	Historic cost
South West	0.6	0.5
Yorkshire	1.2	1.4
South East	0.6	0.8
South Staffordshire	2.8	2.9

**Table 13 Analysis of special dividends**

2005-06 prices	2001-02 £m	2002-03 £m	2003-04 £m	2004-05 £m	2005-06 £m	Total £m
<b>Increased gearing</b>						
Wessex		228				228
Bristol		11				11
Mid Kent		29				29
Portsmouth		4				4
Cambridge				22		22
South West					145	145
<b>Efficiency savings</b>						
Yorkshire					161	161
<b>Proceeds from land sales</b>						
South East					7	7
<b>Total</b>	<b>0</b>	<b>272</b>	<b>0</b>	<b>22</b>	<b>313</b>	<b>607</b>

Special dividends totalled £313 million in 2005-06. Yorkshire Water paid a special 'efficiency' dividend of £161 million and South West Water paid £145 million relating to financial restructuring. Special dividends in the first ten years since privatisation (1990-99) totalled £5,535 million. These were in respect of operational efficiencies and to pay for the windfall tax. Special dividends have been considerably less significant in the period 2001-06, totalling £607 million. They have largely been paid as part of the refinancing carried out by some companies. An analysis is set out in table 13.

As part of their refinancing arrangements, a number of companies have made a loan to another group company specially created for this purpose. The regulated business pays a dividend to this 'special purpose' company. The special purpose company repays the same amount to the regulated business as interest on the loan. In cash terms, there is therefore no impact on the regulated business. The dividends reported in table 13 include those paid to 'special purpose' companies.

The dividends in tables 12 and 13 exclude capital restructuring dividends where a dividend is paid, but the parent company subscribes for additional new shares in the company for the same amount. Such transactions do not change the net debt position of the company and for this reason are excluded. There were no such dividends in 2002-03, 2003-04, 2004-05 or in 2005-06, although one company paid dividends for this purpose in 2001-02. These are set out in the footnote to table 12.

## 2.9 Accounting charges

It is the accounting charges and not capital expenditure that drive customers' bills in the short term. Capital expenditure for above-ground assets (such as treatment works) and underground assets (such as sewers and pipes) contribute to the accounting charges in customers' bills in different ways.

- Customers pay in their bills for the new quality improvement programme (when it consists of above-ground assets) over the life of the investment through returns on the net investment and depreciation charges rather than immediately the investment is incurred.
- Customers pay for above-ground capital maintenance over the life of the asset through returns on the net investment and current cost depreciation charges.
- Underground network capital maintenance expenditure known as infrastructure renewals expenditure (IRE) is averaged over a suitable period of time. It is this average IRC that is paid through customers' bills rather than conventional depreciation.

### Current cost depreciation (CCD)

CCD is the most significant component of capital maintenance charges and has increased in real terms since 2001-02. This is a reflection of the increase in the capital programme during this time. The 2005-06 charge was 0.4% lower than in 2004-05 but 9% higher than in 2001-02.

Total CCD charged in 2005-06 was 9% less than what we assumed when we set prices in 2004. Total CCD in 2004-05 was 20% higher than we allowed in 1999.

Eight companies have seen decreases in their annual CCD charge compared to 2004-05. This has more than offset the increases in annual CCD charge seen in the remaining companies and we are reviewing this further to understand the reasons for the decrease.

The charges made by companies have no impact on their cash position. It is the CCD allowed in price limits that companies receive in cash through customers' bills.

Where companies revalued their current cost asset base as part of the 2004 price review, the revalued amounts were reflected in the 2004-05 regulatory accounts. The impact at an industry level on the CCD charge in that year was negligible.

### Infrastructure renewals accounting

The water companies adopted infrastructure renewals accounting before privatisation in 1989. It reflects the way infrastructure assets are managed, operated and maintained in a better way than conventional depreciation policies.

Table 14 shows the IRE and IRC by service in 2005-06 and in the previous four years.

**Table 14 Comparison of infrastructure renewals expenditure and charge 2001-06**

2005-06 prices	2001-02	2002-03	2003-04	2004-05	2005-06	2004-05 to 2005-06 change
	£m	£m	£m	£m	£m	%
<b>Water service</b>						
Infrastructure renewals expenditure	368	373	317	316	342	8.1
Infrastructure renewals charge	321	334	369	349	422	21.1
Difference	47	39	(52)	(33)	(81)	
<b>Sewerage service</b>						
Infrastructure renewals expenditure	180	203	200	166	202	21.7
Infrastructure renewals charge	169	176	102	119	221	85.6
Difference	10	27	98	47	(19)	
<b>Total</b>						
Infrastructure renewals expenditure	548	577	517	482	544	12.8
Infrastructure renewals charge	490	511	471	468	643	37.5
Difference	57	66	46	14	(99)	

IRE had been in decline following the peak in 2002-03. However, in 2005-06 it increased (by 13%) to £544 million. This is primarily due to uplifts allowed in setting price limits to address issues with water and sewerage networks over 2005-10. This is discussed in chapter 4.

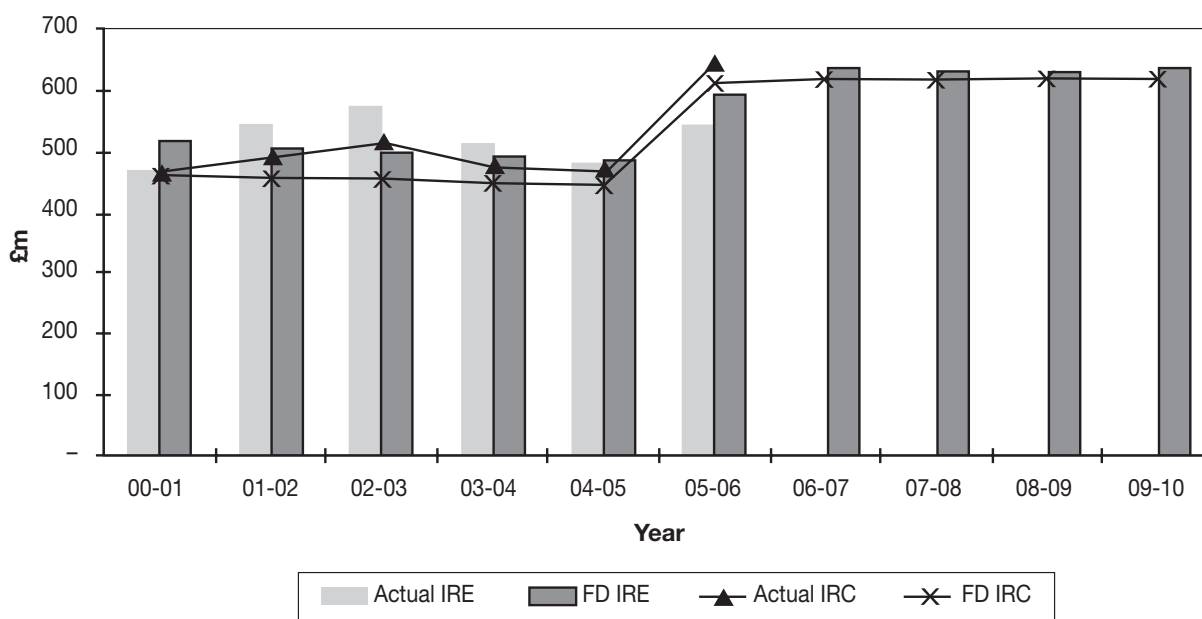
The IRC increased by 38% in 2005-06 compared to 2004-05. As explained in the 2004-05 report we expected to see a stepped increase in last year's charge. When we set price limits for 2005-10 we recognised companies' cases in business plans that higher levels of expenditure would be required in future. We therefore expected to see an increase in the level of IRC in 2004-05 to reflect these anticipated increases. In 2004-05 we did not see such an increase in the charge. This indicated that the level of IRC in the profit and loss account was not reflective of the medium- to long-term views of IRE. We raised this issue with each company to ask them to explain how their IRCs complied with the regulatory accounting guidelines (RAGs) and the requirements for the IRC to reflect a medium- to long-term view.

The 38% increase in the reported level of IRC for 2005-06 therefore represents the stepped increase in the level of IRE. Most companies are now considering a medium- to long-term view of IRE. However, a small number of companies appear to be adopting a short-term view and we are raising queries with these companies.

The most significant movement on service level can be seen on the sewerage service. Of the £175 million increase in 2005-06, £102 million is attributable to the sewerage service, where the charge increased from £119 million to £221 million (an 86% increase). This is primarily due to United Utilities' approach to IRC in the comparative year.

Figure 1 sets out the actual IRE and IRC reported by the industry in the period 2000-06, together with what we assumed when we set price limits in 1999 and 2004.

**Figure 1 Comparison of infrastructure renewals expenditure and charge**



A fairly constant IRC is expected under infrastructure renewals accounting if the networks are stable. But if, as suggested by some companies, the network requires higher levels of expenditure on a long-term basis, then we expect this to be reflected in higher IRC levels. Companies' IRCs should equal their medium- to long-term views of their IRE. Any accrual or prepayment would consequently need to be justified in relation to the companies' medium- to long-term view.

### 3. Operating expenditure

#### 3.1 Performance in 2005-06

Total water and sewerage industry operating expenditure in 2005-06 was £3.2 billion, excluding exceptional items (see footnote to table 15). This is £152 million more than in 2004-05, a 5% increase in real terms. More than a third of this increase is because some companies have moved leakage control costs from capital to operating expenditure in line with our assumptions at the 2004 price review.

It is £62 million (2%) less than that assumed in price limits for 2005-06 and £159 million (5%) less than companies projected in their 2004 business plans. However, the difference compared to price limits is partly due to the new accounting standard for pensions (FRS 17). Under this new standard, the costs are split between operating expenditure and interest.

We used companies' operating expenditure for 2003-04 at the 2004 price review to establish the base level of costs. On top of this base level we allowed for some specific increases in costs and then we applied our assumptions on the scope for efficiency from 2005-06. Therefore, we have used 2003-04 for our operating expenditure comparisons in this report.

Table 15 shows the trend at the industry level, by service. Total operating expenditure in 2005-06 was £129 million higher than in 2003-04 (4% in real terms). Table 16 shows the performance of individual companies. A comparison of the water and sewerage companies by service will be published on our website at [www.ofwat.gov.uk](http://www.ofwat.gov.uk).

**Table 15 Total operating expenditure by service**

2005-06 prices	2003-04 £m	2004-05 £m	2005-06 £m	2004-05 to 2005-06 change £m
Water service	1,685	1,636	1,747	111
Sewerage service	1,351	1,377	1,417	41
<b>Total</b>	<b>3,036</b>	<b>3,013</b>	<b>3,165</b>	<b>152</b>

**Notes:**

- The numbers above do not reconcile to table 1, due to:  
 Exceptional items, excluded from the above, are as reported in June returns, and do not correspond to those stated in table 1 which are reported under our regulatory accounting guidelines.  
 Table 1 operating costs are net of operating income.
- Numbers may not add due to rounding.

Operating expenditure shown in tables 15, 16 and 17 excludes reported exceptional items. However, some companies have significant one-off costs, such as restructuring, that they do not declare as exceptional. Because these costs are included in the tables, comparisons of cost movements across companies should be treated with caution.

**Table 16 Total operating expenditure by company**

2005-06 prices	2003-04 £m	2004-05 £m	2005-06 £m	% change since 2003-04
<b>Water and sewerage companies</b>				
Anglian	305.4	295.5	310.6	1.7
Dŵr Cymru	224.3	215.3	205.2	(8.5)
Northumbrian	220.5	217.7	222.4	0.9
Severn Trent	409.2	432.9	442.2	8.1
South West	110.9	118.3	127.0	14.6
Southern	181.8	175.0	172.6	(5.1)
Thames	515.1	501.4	592.5	15.0
United Utilities	415.8	426.5	425.8	2.4
Wessex	93.7	98.7	104.3	11.3
Yorkshire	232.4	223.3	246.0	5.9
<b>Total WaSCs</b>	<b>2,709.0</b>	<b>2,704.6</b>	<b>2,848.6</b>	<b>5.2</b>
<b>Water only companies</b>				
Bournemouth & W Hampshire	14.4	13.9	13.5	(6.4)
Bristol	37.0	36.7	37.6	1.6
Cambridge	9.4	8.9	9.1	(2.6)
Dee Valley	8.9	8.5	8.8	(1.9)
Folkestone & Dover	7.5	6.9	7.1	(6.3)
Mid Kent	17.6	16.8	19.3	10.0
Portsmouth	16.5	16.1	19.0	15.1
South East	52.5	47.9	47.5	(9.5)
South Staffordshire	35.0	32.9	36.6	4.5
Sutton & East Surrey	22.5	21.1	22.5	0.0
Tendring Hundred	6.0	5.6	5.3	(11.5)
Three Valleys	99.3	92.7	89.9	(9.5)
<b>Total WoCs</b>	<b>326.5</b>	<b>308.1</b>	<b>316.0</b>	<b>(3.2)</b>
<b>Industry</b>	<b>3,035.5</b>	<b>3,012.8</b>	<b>3,164.6</b>	<b>4.3</b>

**Notes:**

1. Numbers may not add due to rounding.
2. Excludes exceptional items.

### 3.2 Where costs changes are occurring

Table 17 shows operating expenditure by functional area within each service and by type of expenditure within each function for 2003-04 and 2005-06.

There are some areas where companies made savings in 2005-06 compared to 2003-04. However, these savings have been offset by increases in costs elsewhere.

Companies' largest savings were in indirect costs. These include:

- customer services;
- scientific services;
- regulation;
- local authority rates; and
- bad debts.

There was a decrease of £10 million (6%) in doubtful debt costs across both the water service and sewerage service, but this has led to increases in customer services costs. Scientific services also decreased by £10 million or 9% in real terms.

The largest increase in expenditure in 2005-06 was due to rising power costs, which were £74 million or 30% higher than in 2003-04. This has mainly been the result of rising energy unit prices. We made allowances for power costs in our final determinations. The increase in the unit cost of power has also fed through into the cost of chemicals, leading to higher materials and consumables costs than in 2003-04.

The cost of hired and contracted services increased by £36 million or 9% compared with 2003-04. This reflects increases in contractor rates faced by some companies and the move by some companies towards contracting out functions that were previously carried out by their own employees. Labour costs decreased slightly by £2 million or 1%.

General and support expenditure is the support costs for the direct activities. The direct activities are:

- water resources and treatment;
- water distribution;
- sewerage;
- sewage treatment; and
- sludge treatment and disposal.

The general and support costs include:

- administrative staff costs;
- the operating costs of vehicles; and
- the maintenance of buildings, land and equipment.

In 2005-06, general and support expenditure increased by £16 million, around 3%, compared to 2003-04.

**Table 17 Industry total operating expenditure by service by function**

2005-06 prices	2003-04				2005-06				
	Water service		Sewerage service		Water service		Sewerage service		Industry total £m
	Water resources and treatment £m	Water service total £m	Sewerage treatment £m	Sewerage treatment and disposal £m	Water resources and treatment £m	Water services total £m	Sewerage treatment £m	Sewerage treatment and disposal £m	
Employment costs	80	113	41	82	78	106	43	46	356
Power	55	72	22	73	77	90	27	31	320
Hired and contracted services	39	139	71	53	36	183	70	91	432
Materials and consumables	48	17	6	27	52	18	5	34	138
Service charges	95	0	13	34	101	0	15	0	150
Other direct costs	29	21	5	6	30	21	8	16	83
<b>Total direct costs</b>	<b>346</b>	<b>362</b>	<b>158</b>	<b>273</b>	<b>374</b>	<b>418</b>	<b>169</b>	<b>217</b>	<b>1,481</b>
General and support expenditure	139	178	64	140	138	186	67	72	618
<b>Functional expenditure</b>	<b>485</b>	<b>540</b>	<b>222</b>	<b>413</b>	<b>512</b>	<b>604</b>	<b>236</b>	<b>289</b>	<b>2,099</b>
Customer services		179		146		177			335
Scientific services		75		34		69			98
Other business services		27		19		23			41
<b>Total business activities</b>	<b>281</b>	<b>212</b>	<b>199</b>	<b>109</b>	<b>270</b>	<b>205</b>	<b>204</b>	<b>129</b>	<b>474</b>
Local authority rates		81		91		78			334
Doubtful debts									162
<b>Total operating expenditure less third party services</b>	<b>1,599</b>	<b>1,326</b>	<b>1,351</b>	<b>1,326</b>	<b>1,669</b>	<b>1,417</b>	<b>1,400</b>	<b>1,417</b>	<b>3,069</b>
Third party services operating expenditure	86		24	110	78				96
<b>Total operating expenditure</b>	<b>1,685</b>	<b>1,351</b>	<b>1,351</b>	<b>3,036</b>	<b>1,747</b>	<b>1,417</b>	<b>1,417</b>	<b>1,417</b>	<b>3,165</b>

**Note:**

1. Numbers may not add due to rounding.

## 4. Capital investment

### 4.1 Overview of investment in 2005-06

The aggregate gross capital investment in 2005-06 was £3.4 billion compared to £3.7 billion in 2004-05. It comprised £2.8 billion of additions to fixed assets and £0.6 billion of expenditure on infrastructure renewals. Table 18 shows capital investment at industry level since 2001-02.

The level of investment we expected for 2005-06 was £4.3 billion, consisting of £2.2 billion in the water service and £2.1 billion in the sewerage service. The actual investment of £3.4 billion consisted of £1.65 billion in the water service and £1.75 billion in the sewerage service. Of the £3.4 billion invested in 2005-06, just over £0.6 billion related to expenditure identified as part of the early start programme (ESP). Actual investment was around 30% less than the ESP assumptions made when setting price limits. Some ESP outputs have been delayed due to re-profiling of the capital programme and delays in setting up the systems to deliver the outputs in 2005-10.

Since privatisation the industry has continued to invest at high levels. This has totalled more than £63 billion, equating to an average annual capital investment in the water industry in excess of £3.7 billion since privatisation. This compares with an equivalent investment figure of £2 billion per year during the 1980s.

Water industry capital investment in 2005-06, excluding infrastructure renewals expenditure, accounted for 1.3% of the gross domestic fixed capital formation (GDFCF) in England and Wales.

In recent years, the water industry has invested, on average, around half of its turnover in new assets. In 2005-06, this proportion was slightly lower at 41%, compared with 49% in 2004-05. This remains at a high level when compared with other industries.

Throughout this report all expenditure is given in 2005-06 prices. Historic expenditure is indexed using RPI year average. In order to compare actual spend with the assumptions made when setting prices, the final determination values are indexed into the year of spend prices using COPI.

**Table 18 Gross capital investment by service – industry**

2005-06 prices	2001-02	2002-03	2003-04	2004-05	2005-06	Five-year total
	£m	£m	£m	£m	£m	£m
Water service	1,657	1,875	1,771	1,685	1,648	<b>8,635</b>
Sewerage service	1,656	1,907	2,160	1,999	1,745	<b>9,466</b>
<b>Industry total</b>	<b>3,313</b>	<b>3,781</b>	<b>3,931</b>	<b>3,683</b>	<b>3,393</b>	<b>18,101</b>

**Notes:**

1. All investment is stated gross of capital contributions, including IRE which was previously reported as net of capital contributions. As a result of this, expenditure in this table does not match previously reported data.
2. Assets adopted at nil cost are excluded from gross capital investment in tables 18-22.

## 4.2 Investment by purpose category and service area

### 4.2.1 Investment by purpose category

We categorise capital expenditure by water companies according to the following four purposes.

- The continuing provision of the base service, which includes maintenance of underground assets (IRE) and above-ground assets (MNI).
- Maintaining the balance between supply and demand.
- Legally required outputs to improve water quality and the environment.
- Improvements to the levels of service to customers not covered by the companies' legal obligations.

Table 19 shows the expenditure breakdown by purpose for the industry and table 20 provides a company-level breakdown.

**Table 19 Gross capital investment by purpose category – industry**

2005-06 prices	2001-02	2002-03	2003-04	2004-05	2005-06	Five-year total
	£m	£m	£m	£m	£m	£m
<b>Water service</b>						
<u>Base service</u>						
IRE Maintenance of underground assets	404	411	346	342	365	1,868
MNI Maintenance of above-ground assets	456	523	468	449	463	2,359
Improving and maintaining the supply/demand balance	293	351	412	468	434	1,959
Quality enhancement programmes	500	585	543	422	384	2,434
Enhanced service levels	3	4	2	4	2	16
<b>Water service total</b>	<b>1,657</b>	<b>1,875</b>	<b>1,771</b>	<b>1,685</b>	<b>1,648</b>	<b>8,635</b>
<b>Sewerage service</b>						
<u>Base service</u>						
IRE Maintenance of underground assets	205	234	228	192	223	1,082
MNI Maintenance of above-ground assets	555	650	762	601	728	3,297
Improving and maintaining the supply/demand balance	83	107	103	101	92	487
Quality enhancement programmes	775	857	990	1,007	573	4,203
Enhanced service levels	37	58	76	97	129	398
<b>Sewerage service total</b>	<b>1,656</b>	<b>1,907</b>	<b>2,160</b>	<b>1,999</b>	<b>1,745</b>	<b>9,466</b>
<b>Industry total</b>	<b>3,313</b>	<b>3,781</b>	<b>3,931</b>	<b>3,683</b>	<b>3,393</b>	<b>18,101</b>

**Notes:**

1. All investment is stated gross of capital contributions, including IRE which was previously reported as net of capital contributions. As a result of this, expenditure in this table does not match previously reported data.
2. Assets adopted at nil cost are excluded from gross capital investment in tables 18-22.
3. In the water service, security of supply expenditure has been reported in the supply/demand balance category to align with the PR04 final determination assumptions. Historic expenditure has been updated to allow a comparison to be made.

**Table 20a Gross capital investment by purpose category 2005-06 – water and sewerage companies**

2005-06 prices	Base service: maintenance of underground assets £m	Base service: maintenance of above- ground assets £m	Improving and maintaining the supply/ demand balance £m	Quality enhancement programmes £m	Enhanced service levels £m	Total investment £m
<b>Water service</b>						
Anglian	23.2	47.1	38.3	17.5	1.4	127.5
Dŵr Cymru	34.9	27.4	8.8	36.8	0.0	107.9
Northumbrian	26.2	33.2	19.7	47.7	0.0	126.8
Severn Trent	57.7	52.7	39.9	23.8	0.5	174.6
South West	9.6	20.8	21.5	61.1	0.0	113.1
Southern	21.8	20.7	12.4	4.7	0.0	59.7
Thames	31.9	69.6	194.9	22.5	0.0	318.9
United Utilities	51.1	65.8	17.7	79.0	0.0	213.5
Wessex	11.0	12.1	8.8	11.8	0.1	43.8
Yorkshire	33.3	54.6	8.4	57.6	0.0	153.9
<b>Water service total</b>	<b>301</b>	<b>404</b>	<b>370</b>	<b>363</b>	<b>2</b>	<b>1,440</b>
<b>Sewerage service</b>						
Anglian	20.0	78.1	11.0	46.2	9.2	164.5
Dŵr Cymru	18.8	29.4	5.5	72.4	3.6	129.7
Northumbrian	7.4	31.4	13.2	39.9	7.7	99.7
Severn Trent	43.4	129.4	18.8	58.0	15.8	265.4
South West	8.5	27.8	11.1	36.0	1.1	84.5
Southern	24.1	122.5	9.2	92.1	9.8	257.6
Thames	34.1	124.2	8.4	28.6	51.0	246.3
United Utilities	30.6	90.7	2.1	105.1	12.0	240.5
Wessex	9.2	23.0	8.3	31.7	8.5	80.7
Yorkshire	27.0	72.0	4.4	62.6	10.4	176.5
<b>Sewerage service total</b>	<b>223</b>	<b>728</b>	<b>92</b>	<b>573</b>	<b>129</b>	<b>1,745</b>

**Notes:**

1. All investment is stated gross of capital contributions, including IRE which was previously reported as net of capital contributions. As a result of this, expenditure in this table does not match previously reported data.
2. Assets adopted at nil cost are excluded from gross capital investment in tables 18-22.
3. In the water service, security of supply expenditure has been reported in the supply/demand balance category to align with the PR04 final determination assumptions. Historic expenditure has been updated to allow a comparison to be made.

**Table 20b Gross capital investment by purpose category 2005-06 – water only companies**

2005-06 prices	Base service: maintenance of underground assets £m	Base service: maintenance of above- ground assets £m	Improving and maintaining the supply/ demand balance £m	Quality enhancement programmes £m	Enhanced service levels £m	Total investment £m
<b>Water service</b>						
Bournemouth & W Hampshire	1.9	4.6	2.9	0.2	0	9.6
Bristol	8.7	4.9	4.7	4.2	0	22.6
Cambridge	1.5	1.4	1.7	0.4	0	5.0
Dee Valley	1.9	2.8	1.2	0.0	0	5.9
Folkestone & Dover	0.6	1.4	5.5	0.5	0	8.0
Mid Kent	5.2	7.5	10.8	2.7	0	26.2
Portsmouth	3.1	0.9	1.3	1.7	0	7.1
South East	12.6	10.1	8.1	10.2	0	41.0
South Staffordshire <sup>4</sup>	9.0	7.8	7.2	(1.1)	0	22.9
Sutton & East Surrey	4.1	3.9	3.2	0.3	0	11.5
Tendring Hundred	1.5	0.4	0.4	0.0	0	2.4
Three Valleys	14.1	12.6	16.8	2.0	0	45.7
<b>Water service total</b>	<b>64</b>	<b>59</b>	<b>64</b>	<b>21</b>	<b>0</b>	<b>208</b>

**Notes:**

1. All investment is stated gross of capital contributions, including IRE which was previously reported as net of capital contributions. As a result of this, expenditure in this table does not match previously reported data.
2. Assets adopted at nil cost are excluded from gross capital investment in tables 18-22.
3. In the water service, security of supply expenditure has been reported in the supply/demand balance category to align with the PR04 final determination assumptions. Historic expenditure has been updated to allow a comparison to be made.
4. In the quality enhancement category, South Staffordshire Water's negative investment represents grants and contributions received during 2005-06 in payment for projects completed in 2004-05.

**Base service**

- Total capital maintenance expenditure (base) in 2005-06 was more than £195 million higher (12%) than that reported in 2004-05. Water service expenditure increased by about 5% and sewerage service expenditure increased by 20% compared with 2004-05.
- Investment in the sewerage service for both underground and above-ground sewerage assets increased to reduce sewer flooding. Additional investment was made to improve the serviceability of above-ground assets, which had been classified as marginal at an industry level in 2004-05.
- At an industry level capital maintenance expenditure during 2005-06 was around 14% lower than projected in price limits (compared to approximately 8% in 2004-05). This mainly reflects delays companies have experienced in setting up the systems needed to deliver outputs in 2005-10. Expenditure is lower than projected in price limits by 18% and 10% in water and sewerage services respectively.

## **Improving and maintaining the supply/demand balance**

- Expenditure in this category includes the investment needed to improve security of supply.
- Gross capital investment to improve and maintain the supply/demand balance was 7.5% lower than in 2004-05.
- At an industry level, supply/demand balance expenditure during 2005-06 was around 32% lower than projected in price limits. The main reasons are less developer activity than forecast and slow progress in delivering the 2005-10 capital programme. Around 50% of the water service variance reflects the planning delays to the Thames Water Gateway desalination project.
- Fourteen companies have investment programmes to improve their security of supplies over the period up to 2010. There was in excess of five times more investment in this area in 2005-06 than in 2004-05, reflecting the significant increase in the size of the programme assumed in price limits.
- Most projects funded in 2005-06 have started, but a number have been delayed.

## **Quality enhancements**

- Quality enhancement expenditure was 33% lower in 2005-06 than in 2004-05. Water and sewerage service expenditure was 9% and 43% lower than 2004-05 respectively.
- This is due to a combination of large investment in 2004-05 needed to complete AMP3 quality obligations and delays in delivering 2005-06 schemes.
- At an industry level, 2005-06 expenditure was 31% lower than assumed in price limits. Water service was 35% less and sewerage service 27% less than our assumptions.

## **Enhanced service levels**

- Enhanced service levels (ESL) includes all investment associated with customer service.
- Industry-level enhanced service level expenditure is 30% higher than 2004-05, because of the increased investment needed to reduce the risk of sewer flooding.
- At an industry level, ESL expenditure during 2005-06 was generally in line with the assumptions made when setting price limits.
- Some companies have continued to invest in projects to ease water pressure problems and reduce the risk of sewer flooding. More information on service levels will be contained in our 'Levels of service in the water industry in England and Wales 2005-06 report', to be published later in the year.

#### 4.2.2 Investment by service area

Capital expenditure can also be categorised by each aspect of the water or sewerage service process as set out below.

##### **Water service**

---

- Resources
- Treatment
- Distribution
- General

##### **Sewerage service**

---

- Sewerage
- Treatment
- General

Table 21 shows capital investment trends by service area at industry level. The 2005-06 expenditure by each company by service area is given in table 22.

- Overall investment in the water service fell slightly (2%) compared to 2004-05. Investment in the distribution system is the only category in which expenditure increased compared with 2004-05. It continues to make up the majority of expenditure in the water service and reflects the increase in mains renewal and mains relining activity in 2005-06. There was a decrease in all other water service areas compared with the previous year.
- Investment in the sewerage service fell by approximately 13% compared with 2004-05. The sewerage general category (which relates to investments such as new IT systems) is the only one in which expenditure increased in 2005-06 compared with the previous year. This reflects increased investment to update systems needed to deliver the outputs in 2005-10.

**Table 21 Gross capital investment by service area – industry**

2005-06 prices	2001-02	2002-03	2003-04	2004-05	2005-06	Five-year total
	£m	£m	£m	£m	£m	£m
<b>Water service</b>						
– Resources	97	127	160	127	79	590
– Treatment	355	478	420	366	323	1,941
– Distribution	1,020	1,075	1,029	995	1,065	5,183
– General	185	197	162	198	181	923
<b>Water service total</b>	<b>1,657</b>	<b>1,876</b>	<b>1,771</b>	<b>1,685</b>	<b>1,648</b>	<b>8,637</b>
<b>Sewerage service</b>						
– Sewerage	545	743	852	781	699	3,620
– Sewage treatment	943	1,043	1,169	1,120	886	5,162
– Sewerage general	167	119	138	96	160	680
<b>Sewerage service total</b>	<b>1,655</b>	<b>1,905</b>	<b>2,159</b>	<b>1,997</b>	<b>1,745</b>	<b>9,462</b>
<b>Industry total</b>	<b>3,313</b>	<b>3,781</b>	<b>3,930</b>	<b>3,682</b>	<b>3,393</b>	<b>18,100</b>

**Notes:**

1. All investment is stated gross of capital contributions, including IRE which was previously reported as net of capital contributions. As a result of this, expenditure in this table does not match previously reported data.
2. The above table has been adjusted into 2005-06 prices using year average RPI.
3. Assets adopted at nil cost are excluded from gross capital investment in tables 18-22.
4. In the water service, all IRE grants and contributions have been accounted for in the distribution category (although it is acknowledged that a small proportion of them may relate to water resources).
5. In the sewerage service, all IRE grants and contributions are included within the sewerage category.

**Table 22 Gross capital investment by service area 2005-06 – by company**

2005-06 prices	Water resources £m	Water treatment £m	Water distribution £m	Water general £m	Water total £m	Sewerage £m	Sewerage treatment £m	Sewerage general £m	Sewerage total £m
<b>Water and sewerage companies</b>									
Anglian	6.1	31.1	71.3	19.0	127.5	58.5	77.5	28.5	164.5
Dŵr Cymru	1.9	13.7	83.5	8.8	107.9	67.8	58.4	3.5	129.7
Northumbrian	8.8	36.7	71.6	9.6	126.8	49.7	45.0	5.0	99.7
Severn Trent	2.6	27.0	112.6	32.3	174.5	99.9	142.9	22.6	265.4
South West	1.5	24.1	77.0	10.5	113.1	30.5	46.9	7.1	84.5
Southern	3.1	12.6	35.0	9.0	59.7	91.0	145.4	21.2	257.6
Thames	22.8	63.5	217.3	15.3	318.9	112.3	115.3	18.6	246.3
United Utilities	8.8	43.6	130.5	30.6	213.5	84.5	122.9	33.2	240.5
Wessex	2.9	11.2	26.6	3.1	43.8	31.8	43.9	5.0	80.8
Yorkshire	10.1	35.2	93.4	15.1	153.9	73.3	88.0	15.1	176.5
<b>Total WaSCs</b>	<b>69</b>	<b>299</b>	<b>919</b>	<b>153</b>	<b>1,440</b>	<b>699</b>	<b>886</b>	<b>160</b>	<b>1,745</b>
<b>Water only companies</b>									
Bournemouth & W Hampshire	0.6	2.8	4.9	1.5	9.7				
Bristol	2.0	1.8	16.1	2.7	22.6				
Cambridge	0.1	0.3	3.5	1.1	5.0				
Dee Valley	0.2	2.0	3.3	0.4	5.9				
Folkestone & Dover	1.6	0.7	4.6	1.1	8.0				
Mid Kent	0.7	2.8	20.3	2.5	26.2				
Portsmouth	0.4	1.1	4.7	1.0	7.1				
South East	2.7	5.2	28.8	4.3	41.0				
South Staffordshire	0.5	2.0	16.9	3.4	22.9				
Sutton & East Surrey	1.3	1.4	7.3	1.5	11.5				
Tending Hundred	0.0	0.1	2.0	0.3	2.4				
Three Valleys	0.6	3.9	33.4	7.9	45.7				
<b>Total WoCs</b>	<b>11</b>	<b>24</b>	<b>146</b>	<b>28</b>	<b>208</b>				
<b>Industry total</b>	<b>79</b>	<b>323</b>	<b>1,065</b>	<b>181</b>	<b>1,648</b>	<b>699</b>	<b>886</b>	<b>160</b>	<b>1,745</b>

**Notes:**

1. All investment is stated gross of capital contributions, including IRE which was previously reported as net of capital contributions. As a result of this, expenditure in this table does not match previously reported data.
2. Assets adopted at nil cost are excluded from gross capital investment in tables 18-22.
3. In the water service, all IRE grants and contributions have been accounted for in the distribution category (although it is acknowledged that a small proportion of them may relate to water resources).
4. In the sewerage service, all IRE grants and contributions are included within the sewerage category.

### **4.3 Variance in investment compared to the 2004 price review assumptions**

- Actual gross expenditure was £0.96 billion (or 22%) lower than the assumptions made when we set price limits.
- Companies reported that approximately 90% of this variance is the result of changes to the timings of the projected schemes (caused by delays, re-profiling, slippage in setting up AMP4 delivery teams, etc).
- Efficiency savings accounted for 3% of the variance. These were achieved mainly through changes in supply chain management. This is much lower than in 2004-05, but comparable with the first year of the last price review period.
- The reasons for variance are similar in both water and sewerage service.
- With the exception of ESL, expenditure in all purpose categories for both water and sewerage service is less than the assumptions made when setting prices. Specific reasons can be found in the relevant purpose category in section 4.2.1.

Figures 2a and 2b illustrate the breakdown of variances in water and sewerage service capital investment for 2005-06.

**Figure 2a and 2b Breakdown of the variances in gross capital investment 2005-10**

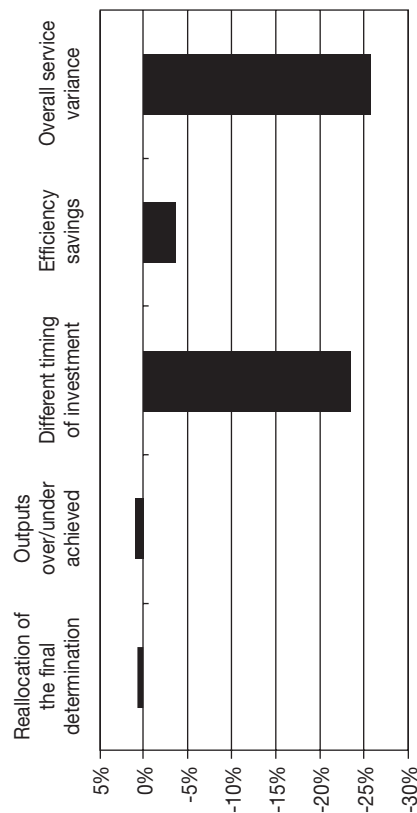
Water service	£m
Assumed total investment activity 2005-06	2,208
Actual total investment activity 2005-06	1,648
Variance	560 (-25%)

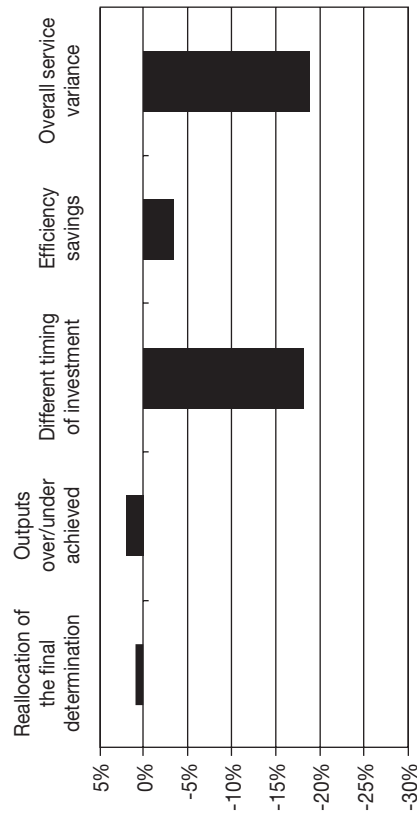
Sewerage service	£m
Assumed total investment activity 2005-06	2,140
Actual total investment activity 2005-06	1,745
Variance	395 (-18%)

Note: Actual investment and final determination assumptions are both reported gross of grants and contributions.

**Water service  
Industry variance breakdown 2005-06**



**Sewerage service  
Industry variance breakdown 2005-06**



## **4.4 Measuring investment by outputs**

We monitor outputs by asset category in order to understand the relationship between capital expenditure and service drivers.

The breakdown of the assumed net capital expenditure allowed for in price limits for 2005-10 was broadly the following.

- Around 50% of the assumed capital programme was investment to allow companies to maintain stable service performance of their existing assets to customers and the environment.
- Around 33% was assumed to meet new quality standards.
- Around 17% was assumed to maintain the supply/demand balance and provide enhanced service levels to customers.

### **Base service**

The output required from base service capital investment is to achieve and maintain stable serviceability to customers. This includes continued compliance with current quality standards.

The trends in levels of service performance continued to be broadly satisfactory. A detailed assessment for 2005-06 can be found in section 4.6.

### **Quality enhancements**

These outputs are those required to implement new legislative requirements relating to drinking water quality and wastewater treatment by the statutory due dates. They also include the continuation of investment programmes to meet current legislative requirements.

### **Water service quality enhancements**

The quality of drinking water in both England and Wales continues to be very good.

In 2004 the DWI brought in a new measure, Mean Zonal Compliance, to reflect compliance with the new drinking water regulations and standards that came into force in December 2003. It is based on water supply zones and does not include tests carried out at treatment works and service reservoirs. The introduction of new regulations and standards effectively reset the baseline for measuring drinking water quality.

Mean Zonal Compliance continues to be used by the Drinking Water Inspectorate (DWI) as an overall measure of compliance. In 2005, water companies in England and Wales

carried out just over two million tests on samples from supply points and customers' taps and the Mean Zonal Compliance was 99.96%. This is an improvement from the figure for 2004 of 99.94%.

Further details of each company's performance against these standards can be found in the DWI report, 'Drinking Water 2005'.

The industry's forward programme of drinking water quality improvement for the period 2006-11 was agreed in 2004. These improvement programmes, mostly at water treatment works, are principally to address the risk of the likelihood of failure of the drinking water standards for nitrate and pesticides and cryptosporidium.

In England and Wales, of the 40 parameters used to calculate compliance, 18 had a Mean Zonal Compliance figure of 99.99% or above. For a further 13 parameters, it was between 99.95 and 99.99%. The three lowest figures were for nickel (99.67%), iron (99.63%) and lead (99.76%). However, improvement in compliance has continued with both the lead and iron standards. This can be attributed to the continuation of the programmes of work carried out by the water companies to renovate their distribution systems and the installation of additional water treatment at works to reduce the take-up of lead from pipework.

The main cause of the low level of compliance with the iron standard in 2005 was pick-up from old iron mains. The continuing renovation programme will address this problem. It is important that, once the remedial work has been completed, sufficient maintenance is carried out to ensure that the renovated assets remain in good condition so as to minimise any risk of supplying discoloured water in the future. To this end, the DWI has worked with the companies and us to develop operational and maintenance strategies that will inform decisions on the activity levels necessary for companies to maintain asset serviceability in this area.

### **Sewerage service quality enhancements**

Companies continued with the delivery of outstanding quality improvements originally scheduled for completion in 2000-05, but which had suffered delays or had been re-programmed. Some of the delays experienced have been due to unforeseen problems with the planning process, access difficulties, land acquisition or other reasons beyond the control of the companies. In the case of United Utilities, issues have arisen between the regulators and the company on the work required which are also contributing to delays. We are working closely with United Utilities and the Environment Agency to resolve these.

Around 300 schemes originally programmed for delivery by the end of 2005 were completed in 2005-06, leaving around 250 to be delivered over the remaining four years

of the period 2005-10. Three companies (Southern Water, Dŵr Cymru and United Utilities) account for a large majority of the outstanding schemes.

Every year, the Environment Agency reports progress against the delivery of the 2005-10 environment programme and the companies report progress on other quality enhancements to the sewerage service funded in price limits. During the report year discussions between the Environment Agency, Ofwat and the companies has resulted in revisions to companies' quality enhancement programmes. Most are changes to project completion dates and have occurred for a number of reasons, including land acquisition and planning issues. Where companies are experiencing delays, we expect companies to advance other projects to counter-balance and keep the overall progress on track. We will be publishing the minor changes to the quality enhancement schedules on our website.

Companies have made a good start on the delivery of the schemes assumed within price limits for the period 2005-10, with marginally more outputs being delivered in 2005-06 than were expected. In terms of total outputs delivered, five companies exceeded our expectations while four under-achieved. At an industry level, there has been mixed progress with the delivery of the s101A (first time sewerage) programmes. Some companies have made a slow start because they have been reviewing the extent of their obligations under s101A of the Water Industry Act 1991 in the light of our final determinations.

Because of the time needed to take a capital scheme from the early planning and design stages through to construction and commissioning, relatively few improvements are expected in the first year of a five-year programme. In the past, this has contributed to a characteristic dip in activity and investment by the industry at the end of one five-year cycle and the start of the next. In 2005-06 there was fair progress on the quality enhancement early start programme – an initiative designed to address this cyclical dip in investment. Two companies delivered as expected, three marginally exceeded the expected outputs and five achieved fewer outputs than expected.

The statutory date for completing continuous discharge schemes serving fewer than 15,000 population equivalent required by the Urban Waste Water Treatment Directive (UWWTD) was 31 December 2005. The Environment Agency is taking enforcement action on outstanding UWWTD schemes. Companies completed 17 of these schemes in 2005-06, leaving around 50 to be delivered. The majority are progressing according to the timetable agreed with the Environment Agency and are expected to be completed within the next year or so. However, the delivery of the largest scheme serving Brighton & Hove by 2010 depends on the outcome of the recent Public Inquiry.

Price limits made provision for the industry to carry out around 380 investigations in 2005-10 to assess the impact of sewerage service assets and activities on the

environment. In 2005-06 there was excellent progress across the industry, with companies completing more of these investigations than expected. But we will be monitoring closely the delivery of the groundwater investigations, where companies have experienced a slow start. The Environment Agency has stated that these projects must be completed by March 2007.

Apart from monitoring companies' progress in delivering schemes expected in the report year, we and the Environment Agency need assurance that sufficient progress is being made towards the timely delivery of schemes scheduled for later in the 2005-10 period. For this reason, we asked companies to report in their June returns on progress on a number of specific schemes for which they had previously notified us of 'milestone' dates, for example, the date on which detailed design is programmed to start. This allows us to identify any potential problems with completing the environmental programme at an early opportunity, be aware of any slippage each year and, if necessary, for companies to identify corrective action.

The information from companies in their 2006 June returns indicates that most schemes are on track. Where there are delays, most companies are still confident of meeting the due dates for completion. Company reporters have generally agreed that the flexibility built into the timetable will allow this as long as there are no further significant hold-ups. United Utilities, however, is an exception, with delays experienced so far expected to have a 'knock on' effect on the completion date of four of its 11 milestone schemes.

After a particularly good year in 2004, the proportion of sewage treatment works complying with all numeric conditions of their discharge consents in 2005 fell slightly to 96%. Compliance with the 'look-up table' sanitary conditions also dipped slightly to just under 99% of sewage treatment works. The slight deterioration in performance was mirrored by falls in the percentage of the equivalent population served by compliant sewage treatment works.

The numbers of category 1 (major), category 2 (significant) and category 3 (minor) sewage-related pollution incidents all increased in 2005 over the previous year. It was particularly disappointing to record a 14% rise in serious (category 1 and 2) incidents; minor incidents rose by 3%. Nevertheless, the total number of sewage-related incidents across all three categories was still the second lowest (after 2004) in the last ten years. The proportion of these incidents that occurred in the sewerage networks, that is, at combined sewer overflows, pumping stations or foul sewers, was 82% this year.

More encouraging signs from indicators of environmental quality tempered these results. Compliance of designated coastal bathing waters with the mandatory standards of the Bathing Water Directive improved to a best-ever 99% in England and Wales in 2005. A record 76.5% of coastal bathing waters meeting the more onerous guideline standards (involving both coliforms and faecal streptococci) matched this improvement. The fine weather may have been responsible in part for the improvement, but the

continuation of companies' capital programmes to reduce the impact of consented discharges on the environment has helped sustain the high level of compliance over the last four years.

In England and Wales the biological quality of rivers has improved by 6.3% in the period 2000 to 2005, though there has been a 0.5% deterioration in chemical quality over the same period. Higher temperatures have contributed to this chemical deterioration by producing lower dissolved oxygen levels and increased algal BOD, resulting in lower GQA grades. The small change at a national level masks larger movements regionally. Notable deteriorations in Anglian and Southern regions have been largely offset by significant improvements in the north of England and in Wales. Overall, rivers are over 40% better chemically than at privatisation.

As in previous years, we will be discussing environmental performance with each of the water and sewerage companies to confirm that compliance with discharge consents and sewerage asset performance are accorded the right priority.

### **Improving and maintaining the supply/demand balance**

Outputs in this category serve to ensure that supplies are kept in balance with current and future demands. In the water service, this can be achieved, for example, through;

- measures to reduce customer demand, such as cistern devices;
- reductions to leakage;
- improvements to the capacity to transfer water around a company's operating area; and
- the development of new resources.

In the sewerage service outputs serve to increase the capacity of sewers or increase treatment capacity at sewage treatment works. There are a number of delays to projects in both water and sewerage areas.

Where there are risks in the water service that supply may not meet demand in a dry year, or during periods of peak demand, outputs serve to improve the security of supply offered to customers. Allowance was made in our 2004 final determinations for 14 companies to improve the current security of their supplies. There are a number of delays to projects that were intended to deliver improvements to security of supply.

### **Enhanced service levels**

Outputs in this area are those that achieve a demonstrable, permanent improvement in existing levels of service to customers, aggregated over the entire customer base. Some companies have invested in projects to alleviate water pressure problems and to reduce the risk of sewer flooding.

After the wetter weather in the summer of 2004, the number of properties subject to internal flooding from sewers decreased slightly in 2005-06. Investment to reduce the number of properties at risk has continued, and more than 1,600 properties benefited in 2005-06. Sewer flooding remains a major concern for customers and companies plan further investment to reduce the risk.

Full details on company performance against these and other customer service measures will be reported in our 'Levels of service in the water industry in England and Wales 2005-06 report'.

## **4.5 Levels of activity**

Tables 23, 24 and 25 show the amount of activity carried out in 2005-06 and how it compares with historic activity levels.

Following our consultation on reporting guidelines (RD11/05, 'Consultation: AMP4 June returns 2005-10') the threshold for reporting capital maintenance activity on treatment works has been modified. A number of companies felt that the previous method did not reflect the true level of capital maintenance activity carried out each year. Therefore, all maintenance activity on treatment works costing £100,000 or 10% or more of the gross modern equivalent asset (GMEA) value of the asset involved is reported in the June returns. This reduced threshold means that the number of schemes reported reflects the general activity levels being carried out. Activity levels carried out during 2005-06 are shown in table 23.

**Table 23 Activity in 2005-06**

	Mains renewed and relined km	Length of refurbished aqueducts km	Dams and impounding reservoirs refurbished no.	Existing water treatment works refurbished no. <sup>1</sup>	New or enhanced water treatment works no. <sup>1</sup>	Pumping stations refurbished no.	Service reservoirs and water towers refurbished no.
<b>Water service</b>							
Anglian	56	1	0	5	1	0	1
Dŵr Cymru	510	0	0	2	1	2	1
Northumbrian	591	0	0	2	0	5	0
Severn Trent	267	0	0	5	6	3	5
South West	690	0	0	0	4	0	2
Southern	17	0	0	1	1	0	0
Thames	254	3	0	4	6	4	2
United Utilities	729	0	0	0	7	1	2
Wessex	75	0	0	1	5	0	0
Yorkshire	676	0	1	0	3	0	2
Bournemouth & W Hampshire	6	0	0	1	0	0	0
Bristol	21	0	0	0	0	0	0
Cambridge	10	0	0	1	0	0	0
Dee Valley	13	0	0	0	0	0	0
Folkestone & Dover	5	0	0	0	0	0	0
Mid Kent	24	0	0	2	0	2	0
Portsmouth	23	0	0	0	0	1	0
South East	183	0	0	2	2	0	0
South Staffordshire	56	0	0	0	0	0	0
Sutton & East Surrey	26	0	0	0	0	0	0
Tendring Hundred	1	3	0	0	0	0	0
Three Valleys	63	0	0	0	0	2	1
<b>Water service total</b>	<b>4,297</b>	<b>7</b>	<b>1</b>	<b>26</b>	<b>36</b>	<b>20</b>	<b>16</b>
	Sewers renovated and replaced km	Intermittent discharges refurbished no.	Sewage treatment works refurbished no.	New or enhanced sewage treatment works no. <sup>1</sup>	Sludge treatment works refurbished no. <sup>1</sup>	Pumping stations refurbished no.	Sea outfalls refurbished no.
<b>Sewerage service</b>							
Anglian	49	0	2	0	0	3	0
Dŵr Cymru	13	0	4	81	0	0	0
Northumbrian	25	0	13	9	0	14	0
Severn Trent	41	0	50	11	2	32	0
South West	6	0	5	18	1	3	0
Southern	27	2	24	13	3	2	0
Thames	37	0	8	12	2	9	0
United Utilities	47	0	3	13	0	4	0
Wessex	22	0	0	16	0	1	0
Yorkshire	34	0	6	79	1	4	0
<b>Sewerage service total</b>	<b>301</b>	<b>2</b>	<b>115</b>	<b>252</b>	<b>9</b>	<b>72</b>	<b>0</b>

**Note:**

1. Activity shown represents 10% or more of the gross replacement cost of the asset involved (or £100,000 or more). This is a reduction in the reporting threshold, which for previous years has been 25%.

The following key conclusions can be drawn from activity levels reported in 2005-06.

- The industry rehabilitated around 4,300 km of water mains and 300 km of sewers. Of the total capital investment reported in 2005-06, 17% has been invested in water and sewerage infrastructure.
- The majority of substantive activity carried out in 2005-06, and captured by the revised reporting threshold, was associated with the quality enhancement programmes. Out of the 288 new or enhanced sites, 36 were new or enhanced water treatment work schemes and 252 were sewage treatment works needed to meet new quality obligations.
- Activity in the water service was considerably lower than the activity levels forecast by the companies in their monitoring plans.
- Activity in the sewerage service is also not in line with company monitoring plan forecasts. There is a general trend of companies carrying out more activity on new critical and non-critical sewers than forecast, but considerably less activity renovating and relining existing sewers (critical and non-critical).
- Activity on water and sewage treatment works is generally in line with the company forecasts. However, activity levels have decreased when compared to 2004-05 despite the reduction in reporting threshold.

Table 24 shows the activity levels over the last ten years.

**Table 24 Activity on underground assets – industry**

	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
<b>Water service</b>										
Water mains relined (km)	1,896	2,380	1,899	2,115	1,597	2,275	1,877	1,846	1,660	1,595
Water mains renewed (km)	3,329	3,499	3,893	4,082	2,489	2,799	2,831	2,725	2,362	2,702
Communication pipes replaced (number)	233,936	249,804	258,191	239,156	157,268	146,393	113,390	123,469	108,743	117,524
<b>Sewerage service</b>										
Critical sewers renovated (km)	143	178	182	104	132	94	105	68	60	81
Critical sewers replaced (km)	105	92	80	85	54	40	77	47	39	66
Non-critical sewers renovated (km)					52	71	96	82	72	66
Non-critical sewers replaced (km)					53	60	112	82	86	88

**Note:**

1. Non-critical sewer data is only available from 2000-01.

The following key conclusions can be drawn from industry infrastructure trends.

- Around 49,850 km of water mains have been renewed or relined since 1996-97, out of the industry's current total of 336,925 km. This equates to an industry average annual rehabilitation rate of about 1.5% of the total length of mains.
- The overall level of activity on water mains in 2005-06 increased slightly compared to 2004-05 because of the large mains renewals programmes that several companies have in place to help to reduce leakage levels.
- The number of communication pipes replaced has slightly increased compared to 2004-05, which reflects the current high level of mains activity, leading to opportunistic communication pipe replacement.
- The overall level of activity on critical sewers increased in 2005-06 compared to 2004-05 because of the increased focus on targeting sewer flooding.
- The increase in critical sewer activity this year is still lower than historic levels, suggesting that companies are continuing to defer sewer rehabilitation. We continue to believe that the understanding of the economic level of maintenance should be improved. Further UKWIR research on deterioration rates of sewers has been undertaken during 2005-06 which should help companies to improve their evidence base.

Table 25 shows the trends in network activity levels at company level since 1990-91. These asset categories are chosen to show progress with Section 19 undertakings (which was introduced in 1990-91) and make comparisons between water and sewerage activities.

**Table 25 Activity on underground assets by company – 1990-91 to 2005-06**

	<b>Water mains relined km</b>	<b>Water mains renewed km</b>	<b>Communication pipes replaced no.</b>	<b>Critical sewers renovated km</b>	<b>Critical sewers replaced<sup>1</sup> km</b>
<b>Water and sewerage companies</b>					
Anglian	406	5,333	288,814	112	87
Dŵr Cymru	1,600	4,973	239,377	64	157
Northumbrian	3,472	3,641	226,848	393	38
Severn Trent	7,103	7,352	584,807	176	397
South West	3,253	1,223	66,998	41	18
Southern	519	766	90,078	52	40
Thames	4,787	1,061	197,139	386	168
United Utilities	187	11,202	673,870	336	270
Wessex	972	1,124	48,441	141	34
Yorkshire	4,556	3,229	126,470	61	43
<b>Water only companies</b>					
Bournemouth & W Hampshire	24	100	31,797		
Bristol	236	455	48,251		
Cambridge	24	216	6,630		
Dee Valley	227	192	31,163		
Folkestone & Dover	165	44	10,342		
Mid Kent	425	340	26,862		
Portsmouth	11	479	49,365		
South East	2,470	587	67,255		
South Staffordshire	7	751	45,219		
Sutton & East Surrey	190	487	22,689		
Tendring Hundred	90	135	9,258		
Three Valleys	568	1,000	165,744		

**Note:**

1. The figure for critical sewers replaced are from 1991-92 only.

The following key conclusions can be drawn from company-level infrastructure trends.

- The majority of companies have completed Section 19 mains renovation work as part of their AMP3 capital programmes of improvement. This has resulted in improved water quality and better compliance with the iron standard.
- Six companies have mains renovation work during AMP4. These are Dŵr Cymru, United Utilities, Northumbrian Water, South West Water, Yorkshire Water, and South East Water. Price limits assume that over 13,000 km of mains will be renovated during 2005-10.

## 4.6 Serviceability and service to customers

The water and sewerage companies are required to maintain their non-infrastructure assets and networks of water mains and sewers so that they can provide services to customers over the long term, whilst protecting our environment. At price reviews, we assess each company's outputs in recent years and its plans for future maintenance. Price limits are set at a level that we believe allows for sufficient maintenance of the asset systems.

In the regulatory context, 'serviceability' is the capability of a system of assets to deliver a reference level of service to customers and to the environment now and into the future. Our approach focuses on trends in both headline services and key asset performance indicators. It takes account of commentaries from companies in their annual returns and the views of the independent reporters. The trends help us to make judgements as to whether the capital maintenance activity carried out by the companies over the period resulted in changes in the serviceability and service to customers. The assessments are made on the following scale (best to worst): 'improving', 'stable', 'marginal' or 'deteriorating' service to customers. An independent consultant has reviewed the analysis and has generally concurred with our judgements, which are also informed by supplementary statistical analysis. Companies are required, as a minimum, to maintain (or achieve and maintain) stable serviceability.

Serviceability is deemed to be stable when the assessment of trends in a defined set of service and asset performance indicators demonstrates that service is in line with the reference level of service and, by inference, is likely to remain so into the future. Unless demonstrably sub-optimal or atypical, the reference levels of service and asset performance are taken as the best historic levels achieved by the company.

We will continue discussions with individual companies where our assessments show performance to be less than stable. We expect these companies to demonstrate to us that they understand the causes and that they have planned management actions to address serviceability shortfalls. We require companies with deteriorating serviceability to produce an action plan to achieve and maintain stable serviceability, against which we monitor progress. We also engage with companies that have marginal serviceability to ensure that they understand our assessment and have plans to restore stable serviceability.

Appendix 2 describes the indicators we use to assess serviceability and illustrates, by sub-service, the trends for the water companies of England and Wales as a whole. In 2002 we introduced a number of new indicators to help to inform our serviceability assessments and at the time said that we would review them following the 2004 price review. The review has taken place during the year, through a joint project with UKWIR. We are broadly supportive of its recommendations (some of which we have outlined), and we will set out our response in detail in a letter to Regulatory Directors.

## **Our assessments of serviceability**

Table 26 summarises our serviceability assessments at a company level for 2005-06. It also includes a simple relative asset performance comparison based on a key indicator for each sub-service. This reflects some companies' concern that, where they have historically managed to keep service failures at a low level (for example, good service), a deterioration of that service will look disproportionately large compared with a similar deterioration by companies that historically have had a large number of service failures (for example, poor service).

Other factors, such as different operational management practices, also cause differences in relative service to customers and the environment. Comparative levels of service to customers and to the environment will be set out in our 'Levels of service for the water industry in England and Wales 2005-06 report'.

An assessment of 'marginal' or 'deteriorating' may indicate that the company needs to improve its methods of targeting expenditure on the assets at most risk of compromising serviceability. Where the assessment has been 'deteriorating' we have required companies to submit action plans to restore stable serviceability, which we monitor until stable serviceability has been achieved. Seven companies will now be subject to this additional reporting. We have received updates to action plans from all companies with deteriorating serviceability prior to 2005-06, which have been subject to scrutiny by our reporters. All companies have co-operated fully and we are broadly satisfied with the approaches presented. There is a lead-time between activity and a change in outputs, and improvements take time to deliver and confirm. Progress is mixed, but Northumbrian Water stands out as achieving an upgrade from 'deteriorating' to 'marginal' this year for sewerage non-infrastructure, having put in place a robust engineering asset management process. Two other companies, Southern Water and Yorkshire Water, are making slower progress, the latter suffering a setback this year. At Anglian Water, sewerage non-infrastructure has slipped from 'marginal' to 'deteriorating'. South West Water appears to have at last recovered to a 'stable' position for sewerage infrastructure from 'marginal' last year resulting from an action plan which we initiated in 2004.

Thames Water still has three sub-services as less than stable. Progress will not be immediate on water infrastructure. Better understanding of inaccurate data and some improvement has enabled an assessment of marginal for sewerage infrastructure. Of real concern is sewerage non-infrastructure, which, already deteriorating, has slipped badly this year. The company has identified the problems, which it needs to address with some urgency.

In general, we expect companies to continue to sustain improvements in performance over time and we expect companies to regain lost ground in achieving stable serviceability during 2005-10.

Table 26 Water and sewerage serviceability assessments for 2005-06

Water and sewerage companies	Water infrastructure	Bursts	Water non-infrastructure	WTW samples with coliforms	Sewerage infrastructure	Collapses	Sewerage non-infrastructure	STWs non-compliant
Anglian	Stable	●	Stable	☆	Deteriorating	●	Deteriorating	●
Dŵr Cymru	Improving	●	Stable	●	Stable	▼	Stable	●
Northumbrian	Stable	●	Stable	●	Marginal	☆	Marginal	☆
Severn Trent	Stable	●	Stable	●	Stable	●	Stable	●
South West	Marginal	●	Stable	●	Stable	●	Improving	●
Southern	Stable	●	Stable	●	Stable	●	Deteriorating	●
Thames	Deteriorating	▼	Stable	●	Marginal	●	Deteriorating	▼
United Utilities	Stable	●	Improving	●	Improving	●	Stable	☆
Wessex	Marginal	●	Stable	●	Stable	●	Stable	☆
Yorkshire	Stable	▼	Stable	●	Marginal	●	Deteriorating	●
<b>WaSC assessment</b>	<b>Stable</b>		<b>Stable</b>		<b>Stable</b>		<b>Marginal</b>	
<b>Water only companies</b>								
Bournemouth & W Hampshire	Deteriorating	●	Stable	●				
Bristol	Marginal	●	Stable	☆				
Cambridge	Marginal	●	Stable	▼				
Dee Valley	Stable	☆	Stable	●				
Folkestone & Dover	Improving	☆	Stable	●				
Mid Kent	Stable	●	Stable	●				
Portsmouth	Improving	●	Stable	●				
South East	Stable	●	Improving	☆				
South Staffordshire	Marginal	▼	Stable	●				
Sutton & East Surrey	Marginal	☆	Marginal	▼				
Tendring Hundred	Stable	☆	Stable	☆				
Three Valleys	Deteriorating	▼	Improving	☆				
<b>WoC assessment</b>	<b>Stable</b>		<b>Stable</b>					
<b>Industry assessment</b>	<b>Stable</b>		<b>Stable</b>					

**Key:**

- ☆ Better than industry average performance by over 50% (25% for bursts).
- Between +/- 50% (25% for bursts) of industry average performance.
- ▼ Worse than industry average performance by over 50% (25% for bursts).

## **Water infrastructure assets**

We have assessed water infrastructure assets as 'stable' at an industry level. Performance is weaker than in 2004-05, with an increased number which are assessed as less than 'stable'. This reflects both a climatic variation (2004-05 was mild) and perhaps some slowness in company activity. The trend in serviceability indicators for water infrastructure is set out in appendix 2.

The numbers of properties with low water pressure continued to reduce and are at a low level. Unplanned supply interruptions were up overall, but largely due to increases among several water only service providers, Sutton & East Surrey Water in particular. Water mains bursts are up on last year's low, perhaps reflecting a less mild winter, which has exposed less robust parts of some networks. Six companies have a worse serviceability assessment than last year. Two water only companies have achieved 'improving' status.

In 2005-06, we again made a 'deteriorating' assessment for Thames Water. Two other companies, Bournemouth & West Hampshire Water and Three Valleys Water, are also now assessed as 'deteriorating'. South West Water and Cambridge Water have a 'marginal' assessment for the first time. This reflects emerging adverse trends in burst mains.

Of those companies that we assessed as 'marginal', both South Staffordshire Water and Wessex Water have improved headline service to customers (water pressure and interruptions, although interruptions are up this year) against a clear, adverse trend in burst mains. We expect both companies to address this adverse trend during 2005-10. At Wessex Water the current burst rate is still less than that of many companies and the rate of increase in bursts is relatively small. The company's view is that this was mainly due to increased leakage control activity. We expect some recovery now that their economic level of leakage target has been reached.

## **Water non-infrastructure assets**

Serviceability indicators for non-infrastructure assets reflect operational management and other factors, as well as capital maintenance needs. The commentaries provided by companies and their reporters have helped us to understand the June return data.

At an industry level the serviceability trend in the indicators for water non-infrastructure (as shown in appendix 2, figure 5) has shown an improvement for a number of years. This is particularly so for the water and sewerage companies as a group. Serviceability to customers from water non-infrastructure assets is assessed as at least 'stable' for all companies, except Sutton & East Surrey Water, which this year is 'marginal'.

## **Sewerage infrastructure assets**

Our assessment of serviceability to customers from sewerage infrastructure assets at the industry level is 'stable', although we have assessed one company as 'deteriorating' and three as 'marginal'. Pollution incidents associated with foul sewers and combined sewer overflows are the same as last year overall, with Thames Water and Wessex Water up on last year. Sewer collapses are similar to last year overall. Sewer collapses in United Utilities, Wessex Water and South West Water are on a falling trend.

We have made a 'deteriorating' assessment for Anglian Water, as we did last year. Some progress has been made. Sewer collapses and pollution incidents have come down, but it is too early to upgrade our assessment. Our assessment for Thames Water has moved from 'deteriorating' last year to 'marginal' this year, following errors found by company in its reporting system. We have detected an adverse trend in sewer collapses for Yorkshire Water, leading to a 'marginal' assessment, which they will need to address quickly if they are to recover lost ground by 2009.

## **Sewerage non-infrastructure assets**

We have assessed serviceability to customers at an industry level from sewerage infrastructure assets as 'marginal', because there is significant variation between companies. We have assessed four companies as 'stable', four as 'deteriorating', one as 'marginal' and one 'improving'.

We have moved Northumbrian Water to 'marginal', reflecting progress achieved through implementation of their action plan (notwithstanding a suspended solids compliance failure at a major works, which has impacted on appendix 2, figure 6).

We have maintained last year's 'deteriorating' assessment for Southern Water and Yorkshire Water. Southern Water has a new action plan which appears to be progressing well. The company has this year easily the best headline performance of all companies on 'look-up table compliance population equivalent' (PE LUT). Some of the work already done has still to bear fruit in compliance terms, and work remains to fully address some underlying problems. We are therefore being cautious in not upgrading the assessment to 'marginal' this year. But on current progress we expect that the plan will be successfully implemented by December 2007. The significant improvement by Yorkshire Water last year has suffered a similarly significant reverse. This is not acceptable to the company. It has re-assessed some of its proposals, particularly for BOD, which will require major investment, and identified new procedures to bring its target back on line.

At Anglian Water, the company has advised us that some headline compliance failures this year were due to operational issues that have already been addressed.

Nevertheless concerns remain on underlying trends and we are requiring an action plan from them in line with our policy on 'deteriorating' assessments.

We have assessed Thames Water as 'deteriorating'. The company has completed a thorough review and has recognised shortcomings in a number of key areas and has begun to address them. We are disappointed that the company has not made progress sooner, and this is reflected in its worst performance to date. The company will find it very difficult to meet its regulatory output of stable serviceability in 2008.

South West Water has gained an 'improving' assessment this year, indicating a complete recovery from the 'marginal' assessment in 2003.

## **4.7 Sustainable procurement**

We have for a number of years asked companies to describe in their June returns their policy and practice towards attaining sustainable procurement. They should also set out their commitments to adopting the British Water 'Guide to Sustainable Procurement', and the 'Confederation of Construction Clients Charter'. Sutton & East Sutton Water did not respond to our request. Portsmouth Water, Three Valleys Water, Folkestone & Dover Water and Tendring Hundred Water reported no further developments in their practices and commitments compared with their previous years' reports.

There continues to be a high level of commitment to sustainable procurement. The majority of companies either endorsed the British Water guide, or considered that their procurement practices followed its key principles. There was a lower level of commitment to the Confederation of Construction Clients' Charter.

Companies are increasingly describing in their report on sustainable procurement the links to their sustainable development efforts and how these are influencing their procurement policies and practices. Extensive examples cited by companies include:

- focusing on the minimisation of waste in the supply chain;
- encouraging suppliers to achieve ISO 14001;
- employing best practice approaches in selecting products, services and suppliers in order to minimise environmental and social life-cycle impacts;
- mitigating risks associated with sustainability issues through sustainable procurement strategies involving procurement at an early stage;
- giving attention to whole life costs; and
- the requirement for environmental impact assessments for schemes irrespective of mandatory requirements.

British Water published and shared with us the results of the 2005-06 survey completed by the wider industry supply chain of water companies' performance and progress towards sustainable procurement. It considered the following aspects of companies' procurement performance:

- contractual approach;
- attitude and professionalism;
- impact on supply chain;
- policies;
- communication; and
- partners and contractors.

For this survey, Yorkshire Water was the best performing company overall, closely followed by Severn Trent Water. The survey will be repeated again this autumn.

## 5. Transfer pricing

Water companies have a statutory duty to trade at arm's length with associate companies in their group and with the parent company. One of the main reasons for this is to ensure that price limits are set on the basis of the actual costs of providing water and sewerage services to customers and not costs inflated by cross-subsidy. Arm's length trading will also prevent transactions taking place on preferential terms that are not warranted.

A small number of companies could not demonstrate arm's length trading with associates for some transactions in the years up to the 2004 price review. We therefore made downward adjustments to the base operating and capital costs for these companies to ensure that customers were not disadvantaged.

Our revised transfer pricing guideline, 'Regulatory Accounting Guideline 5.04 (RAG 5)', applied to all transactions from April 2005. It takes account of our powers, from 1 April 2005, to fine companies for breach of a licence condition.

RAG 5 helps companies meet their statutory duty to trade at arm's length. It sets out procedures and industry best practice for trading with associate companies. It ensures that the regulated companies' (the 'Appointees') pay a fair price for services and products received from associates and that common costs are allocated appropriately between the Appointee and associates.

Table 27 provides, for each company, the financial value of trade in 2005-06 with associates. This sets out the total values for operating and capital expenditure items and the percentage of the Appointee's turnover this represents. In 2005-06, this amounted to 6% of turnover. The comparable figure for 2004-05 was 7%. Overall, the level of trade with associates in the industry decreased from £532 million in 2004-05 (2005-06 prices) to £463.5 million in 2005-06. In real terms, this is a decrease of 14.8%.

The performance of each company in meeting the requirements of RAG 5 in 2004-05 is also recorded in table 27. This assessment of performance lags by one year to allow us to review and discuss issues with the companies. This ensures our assessment is made after a thorough analysis of issues.

### 5.1 Compliance with RAG 5 in 2004-05

As part of our annual monitoring process, we reviewed the information submitted by the companies and the accompanying long form reports from their respective auditors. In some cases, reporters assisted the auditors in this process. Following this analysis, we visited a number of companies to look at areas of concern in greater detail.

The visits covered a range of transactions. We focused on the key aspects of the regulated business' trading arrangements with associates and the procedures and practices used by the companies to enable them to demonstrate that trade with associates is at arm's length.

During the year, we visited Anglian Water, Northumbrian Water, Severn Trent Water, Thames Water, United Utilities Water, Wessex Water, Yorkshire Water, Mid Kent Water and Three Valleys Water. The range and type of issues reviewed at each company varied.

Our visits to Anglian Water, Wessex Water and Yorkshire Water allowed us to gain a greater understanding of arrangements in place at those companies. The companies provided sufficient information and explanation to address our concerns.

Thames Water and Three Valleys Water had both taken action to address our concerns from previous years and both were able to demonstrate satisfactory compliance with RAG 5 for 2004-05. Our visits to those companies during the year addressed different issues and we will continue to monitor these.

At Northumbrian Water we reviewed the procurement processes for contracts which were awarded to associates and other aspects of intra-group trading. The company responded positively to the findings and has improved its procurement processes as a result of the visit.

We reviewed the process undertaken which led to the award of a contract to an associate at Mid Kent Water. We identified areas for improvement and we will continue to monitor the new arrangements in place.

We examined a number of trading arrangements and procurement exercises undertaken at Severn Trent Water. We also re-examined a number of areas of concern from previous years. We identified a number of improvements which needed to be made to the procurement function at the company. The company has undertaken a review of its processes and has responded positively.

Our work at United Utilities involved the review of a number of issues identified in previous years and the procurement process which resulted in the award of a contract to an associate company. This work continued through 2005-06 and is ongoing. We are disappointed that the company had not made as much progress with remedying concerns identified in previous years as was envisaged. We expect to see a significant improvement during 2006-07.

We will continue to monitor companies' trading arrangements with associates to ensure trade is at arm's length. We expect companies to demonstrate that the selection and evaluation process is fair, objective and supported by proper documentation, which will

lead to greater transparency. This should help illustrate that services from associates are received on competitive, economically advantageous terms. We visit companies where we consider action is required to improve the systems and procedures to ensure transactions with group companies take place at arm's length.

We have provided feedback to the auditors on the focus and content of their audit reports on RAG 5. The reporters also have an important role in reviewing engineering and analytical services. The reporters' skills complement those of the auditors and help deliver a balanced, focused audit that provides a comprehensive review of all relevant, material transactions.

**Table 27 Trade with other companies within the group**

2005-06 prices	Total value of trade with other group companies 2005-06 £m	Trade as a % of appointed business turnover		Compliance with RAG 5.03 2004-05	Examples of industry best practice 2004-05
		2005-06	2004-05		
<b>Water and sewerage companies</b>					
Anglian	12.3	1	1	►	
Dŵr Cymru	0.0	0	0	●	
Northumbrian	22.4	4	9	►	
Severn Trent	56.9	5	9	►	*
South West	14.6	4	5	●	
Southern	0.5	<1	<1	►	
Thames	123.5	9	10	●	
United Utilities	160.6	13	14	○	
Wessex	17.2	5	6	●	
Yorkshire	23.3	3	4	●	*
<b>Total WaSCs</b>	<b>431.2</b>	<b>6</b>	<b>7</b>		
<b>Water only companies</b>					
Bournemouth & W Hampshire	0.8	2	3	●	*
Bristol	2.4	3	13	●	
Cambridge	0.3	2	2	►	
Dee Valley	0.0	0	0	●	
Folkestone & Dover	0.8	5	9	●	
Mid Kent	1.2	3	3	►	
Portsmouth	0.3	1	1	●	
South East	2.1	2	4	●	
South Staffordshire	18.9	27	21	►	
Sutton & East Surrey	0.1	<1	<1	●	
Tendring Hundred	1.2	8	12	►	
Three Valleys	4.3	2	8	●	
<b>Total WoCs</b>	<b>32.3</b>	<b>5</b>	<b>8</b>		
<b>Industry total/average</b>	<b>463.5</b>	<b>6</b>	<b>7</b>		

**Key:**

- Satisfactory compliance with RAG 5.
- Some areas to be improved.
- Significant improvement required.
- \* Examples of industry best practice.

**Note:**

Numbers may not add up due to rounding.

## 6. Property development and land disposal

Information about the disposal of water companies' land holdings is provided to us to ensure that water companies are complying with Condition K of their licences.

The purpose of this condition is two-fold:

- to make sure that the land to be disposed of is surplus to the carrying out of regulated activities; and
- that the best price is obtained for it.

Table 28 shows the total number of land disposals and the gross proceeds from them. The information submitted by the companies is treated as confidential. Figures are therefore stated in aggregate by Consumer Council for Water (CCWater) area.

Companies are required to notify us of disposals over £500,000 to associates and of sales to external third parties in excess of £1 million.

In 2005-06, we considered 9 cases totalling £14.4 million and in total 658 disposals were reported with an aggregate value of £59.2 million. This is higher than the average figure for the previous five years of £54.7 million and the £38.5 million reported in 2004-05.

**Table 28 Number of, and gross proceeds from, disposals of land – by CCWater area**

	Value £m	Number of cases
CCWater Midlands	3.7	332
CCWater Eastern	11.1	34
CCWater Northumbrian	4.4	19
CCWater North West	7.3	43
CCWater South West	2.4	8
CCWater Southern	13.6	29
CCWater Thames	11.5	25
CCWater for Wales	0.9	24
CCWater Wessex	0.2	6
CCWater Yorkshire	4.0	138
<b>Total</b>	<b>59.2</b>	<b>658</b>

## Appendix 1: Reconciliation of current cost and historic cost profit before tax 2005-06

2005-06 prices		£m
<b>Historic cost profit before tax</b>		<b>1,886</b>
Adjustments to operating profit		
Depreciation	(563)	
Working capital adjustment	(3)	
Asset disposals and other operating items	<u>(21)</u>	
		(587)
Financing adjustment		554
<b>Current cost profit before tax</b>		<b>1,853</b>

## **Appendix 2: Serviceability indicators and trends**

During 2005-06 we worked with UKWIR to review the current set of serviceability indicators. Some of the recommendations are indicated in the text here. We will be responding to the report in due course.

### **Serviceability of the water main networks (water infrastructure)**

The indicators that we use to decide whether a company has maintained serviceability to customers in water mains networks are:

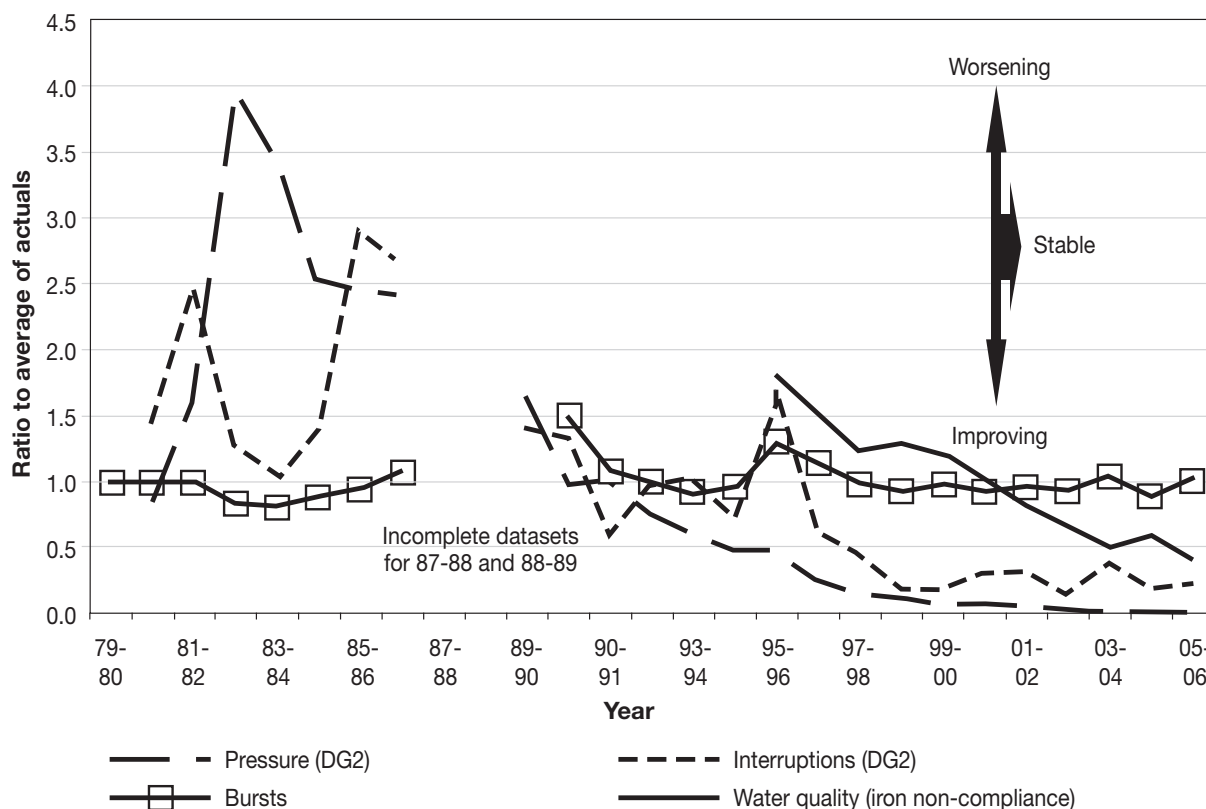
- the extent of low pressure problems (DG2);
- the scale of interruptions of supplies to customers – unplanned interruptions to supplies greater than 12 hours (DG3);
- compliance in respect of the level of iron in water; and
- the number of burst water mains.

From this year, we have adopted a new measure for iron compliance, called mean zonal compliance, which is considered by DWI to be more representative of the performance of distribution systems. The iron mean zonal compliance has been back-cast, using the same sample data results to produce a new time series to replace the old one, which was based on the number of zones with compliance failures.

The indicator for the amount of iron pick-up in distribution, which we had developed in 2002, has been dropped, as we considered it was not sufficiently representative of a company's distribution system as a whole.

There are recommendations in the UKWIR report regarding aggregation of the interruption indicator to include those of shorter duration (six hours) and a dis-aggregation in reporting of burst mains (reported and detected).

**Figure 3 Serviceability – water mains networks**



**Note:**

The trend in bursts (emboldened line) provides the strongest guide to the state of the assets.

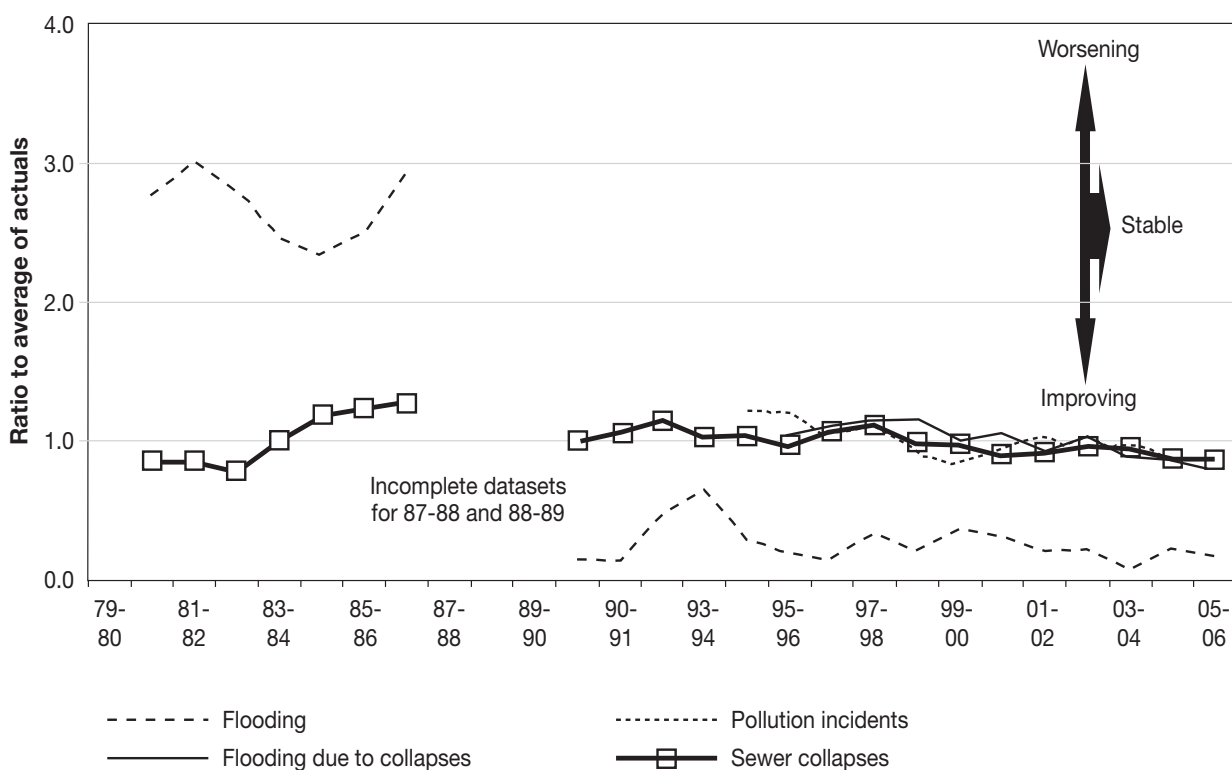
**Serviceability of the sewer networks (sewerage infrastructure)**

The indicators that we use to decide whether a company has maintained serviceability to customers in sewer networks are:

- the number of pollution incidents occurring at combined sewer overflows and sewers;
- properties flooded because of insufficient sewer capacity (DG5);
- incidents of property flooding due to sewer collapses (DG5); and
- the number of sewer collapses.

Enhanced measures that relate sewer collapses and equipment failures to DG5 flooding incidents were reported for the first time in 2002. There are recommendations in the UKWIR report to drop the enhanced measures, extend the pollution incident indicator to include rising mains, add an indicator for flooding due to causes other than overloaded sewers, and to include reporting of sewer blockages.

**Figure 4 Serviceability – sewer networks**



**Note:**

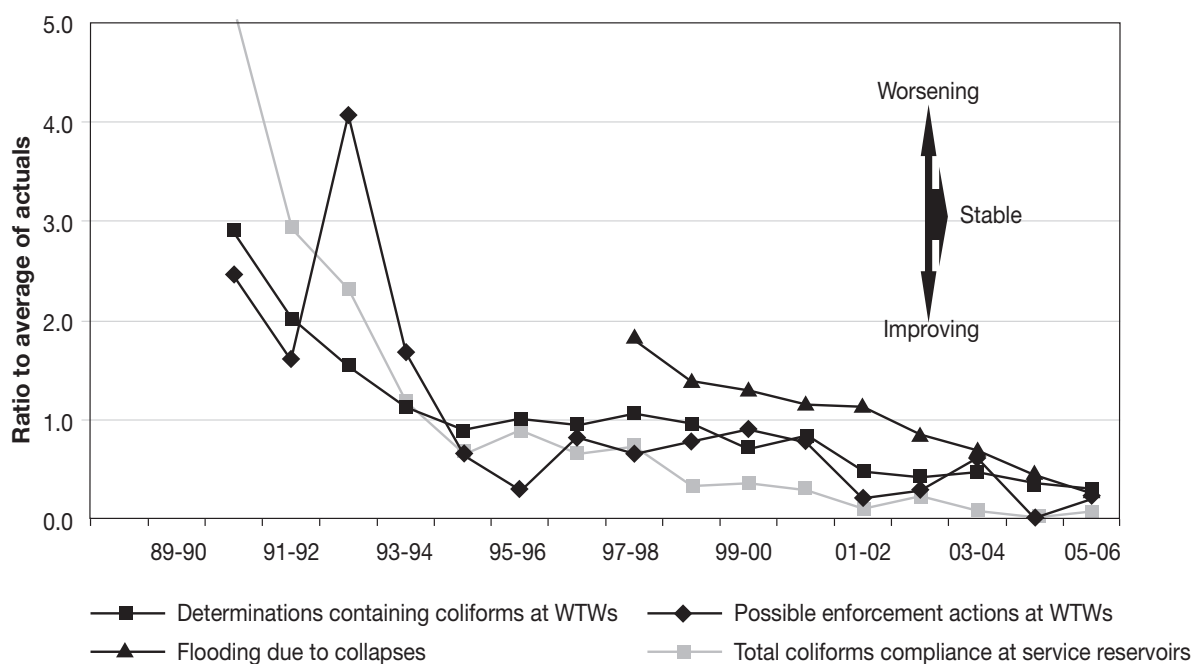
The trend in sewer collapses (emboldened line) provides the strongest guide to the state of the assets.

**Serviceability of water treatment works, service reservoirs and pumping stations (water non-infrastructure assets)**

The indicators that we use to decide whether a company has maintained serviceability to customers in this area are:

- the percentage of the total number of samples taken at water treatment works containing coliforms;
- the number of water treatment works where enforcement action was considered because of contravention of the coliforms standard;
- the number of service reservoirs with coliforms detected in more than 5% of samples, which is the current standard; and
- the number of water treatment works where turbidity (water clarity) exceeds a threshold value within the permitted range. This data can be affected by raw water quality at some types of treatment works, and thus does not provide a guide to serviceability in some cases.

**Figure 5 Serviceability – water treatment works and service reservoirs**



Work on the indicator for pumping station performance, which was reported on for the first time in 2002 has been suspended due to measurement difficulties. We plan to work with companies to produce an indicator that is more easily measured, and that is more meaningful to companies. We see pumping station performance as a key indicator of the state of the machinery that drives the flow of water to customers. It is hoped that the simplified indicator may have application across other asset types that may provide a useful addition to the basket of indicators.

### Serviceability of sewage treatment works and pumping stations (sewerage non-infrastructure assets)

The key indicators that we use to decide whether a company has maintained serviceability to customers in this area are:

- the percentage of sewage treatment works failing numeric consents (including look-up table consents); and
- the percentage of equivalent population served by non-compliant works failing look-up table consents.

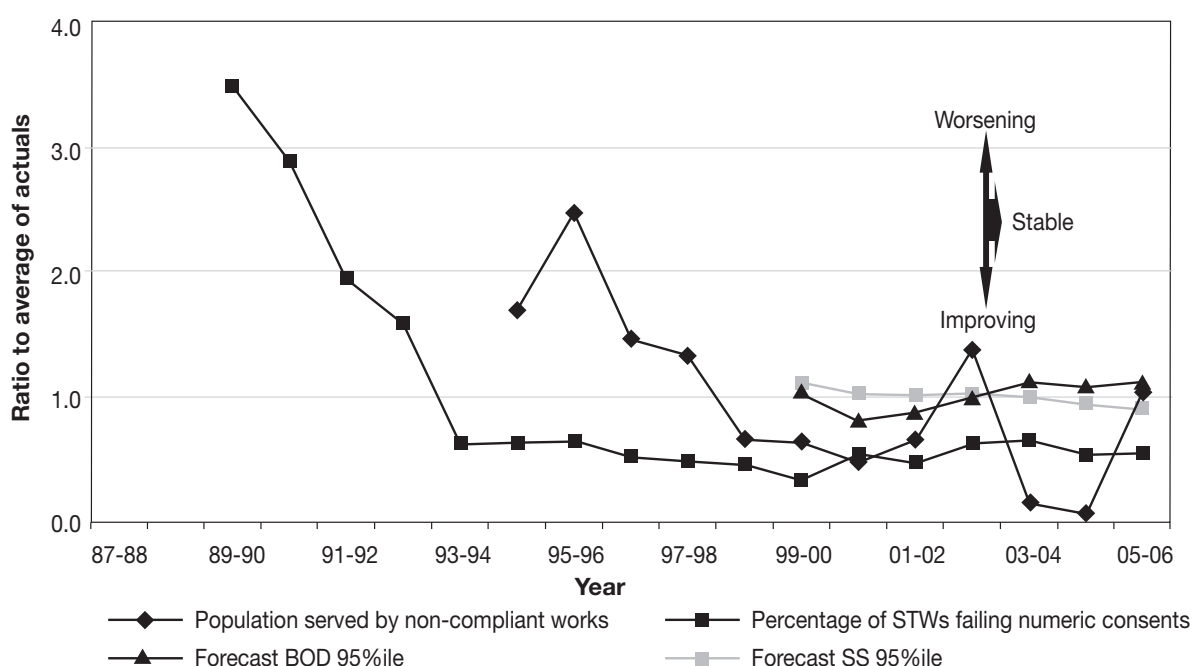
We include works with Urban Wastewater Treatment Directive consents.

The following two indicators were reported for the first time in 2002.

- The underlying performance of sewage treatment works, using six indicators<sup>2</sup>. Companies have provided data for prior years to allow us to assess trends.
- We have added ammonia performance to reporting this year, to reflect the extension of the asset base to provide for higher effluent quality in many areas.

Work on pumping station performance has been suspended due to measurement difficulties. As with the water service, we plan to work with companies to produce an indicator that is more easily measured, and that is more meaningful to companies.

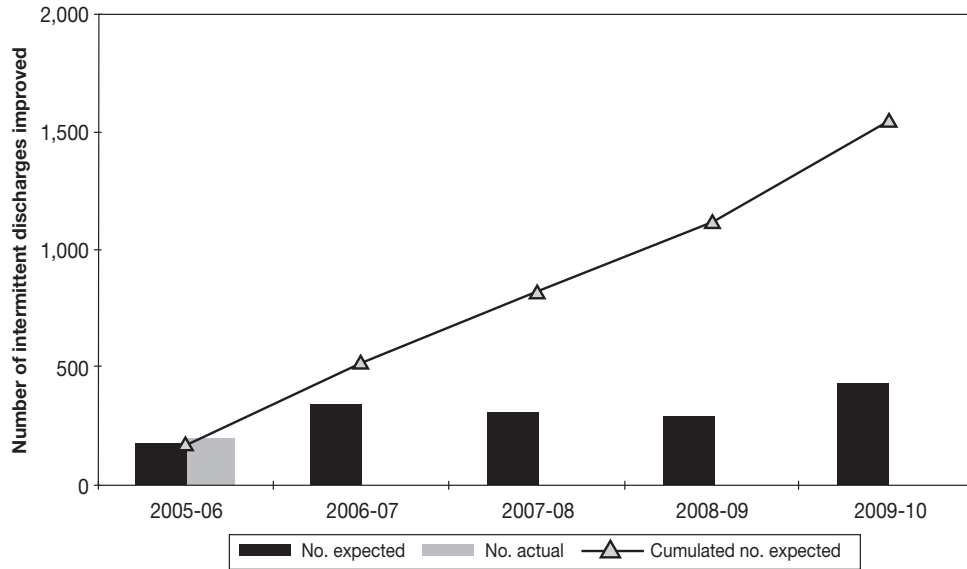
**Figure 6 Serviceability – sewage treatment works**



<sup>2</sup> Based on the mean, 95 percentile and maximum for each of BOD and SS determinands.

## Appendix 3: Quality enhancement – AMP4 sewerage programmes

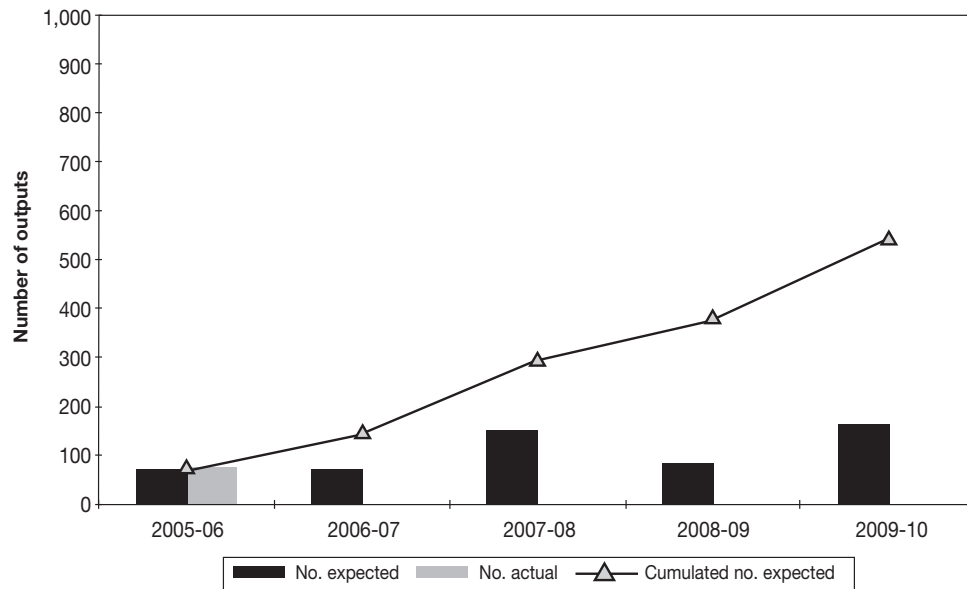
**Figure 7 Programme for completion of intermittent discharge schemes**



**Notes:**

1. The expected outputs includes any minor change protocols agreed by the Environment Agency and Ofwat prior to 31 March 2006.
2. The actual outputs delivered are as reported by the Environment Agency in their annual report to Ofwat.

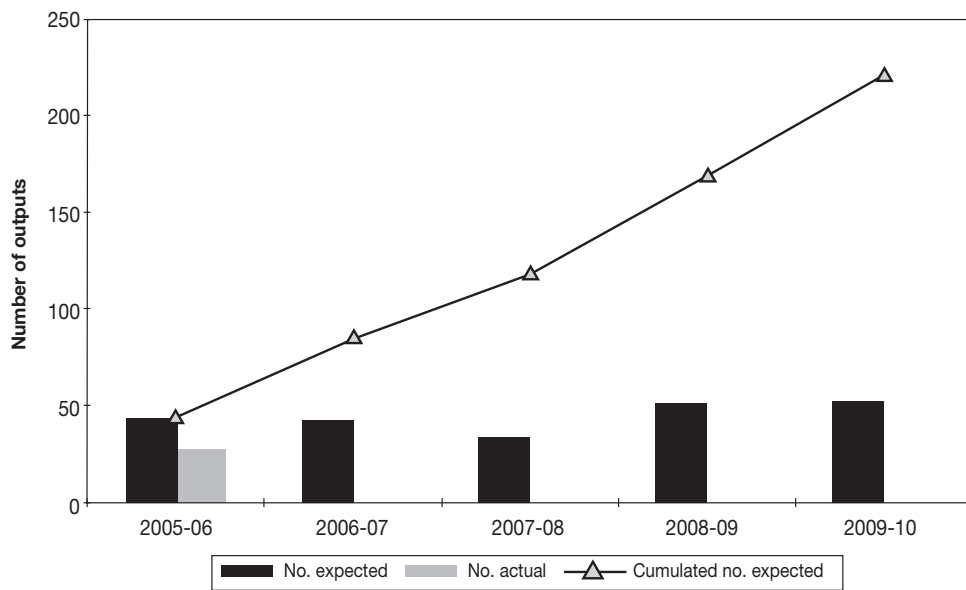
**Figure 8 Programme for completion of continuous discharge schemes**



**Notes:**

1. The expected outputs includes any minor change protocols agreed by the Environment Agency and Ofwat prior to 31 March 2006.
2. The actual outputs delivered on the environment programme are as reported by the Environment Agency in their annual report to Ofwat.

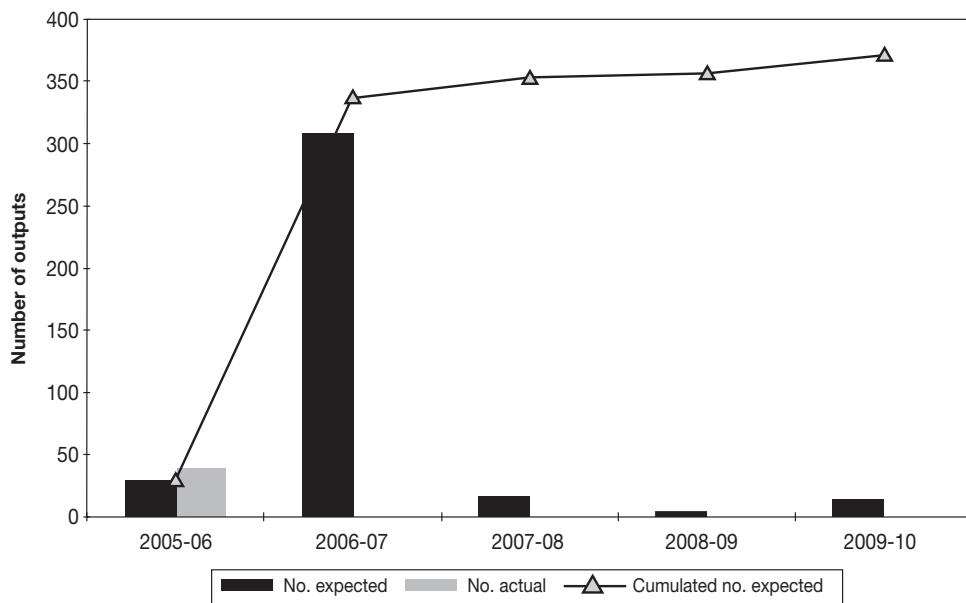
**Figure 9 Programme for completion of first time sewerage schemes**



**Notes:**

1. The expected outputs includes any minor change protocols agreed by Ofwat prior to 31 March 2006.
2. The actual outputs are as reported by companies in the 2006 June return.

**Figure 10 Programme for completion of investigations**



**Notes:**

1. The expected outputs includes any minor change protocols agreed by the Environment Agency and Ofwat prior to 31 March 2006.
2. The actual outputs delivered are as reported by the Environment Agency in their annual report to Ofwat.



Ofwat

Centre City Tower, 7 Hill Street, Birmingham B5 4UA

Telephone: 0121 625 1300 Fax: 0121 625 1400

Website: [www.ofwat.gov.uk](http://www.ofwat.gov.uk) e-mail: [enquiries@ofwat.gsi.gov.uk](mailto:enquiries@ofwat.gsi.gov.uk)

ISBN 1 904655 30 0

Printed on 75% minimum de-inked post-consumer waste paper

© Crown Copyright 2006