

# Investment and asset management report 2003-06

## Detailed findings

PERFORMANCE

### Overview

This report provides detailed information about Scottish Water's investment performance during 2003-04 to 2005-06.

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## CHAPTER 1

## Chapter 1: The outputs Scottish Water was required to deliver

### Introduction

Scottish Water spends around £500 million each year on maintaining and improving its network of pipes, reservoirs and treatment works. This capital investment programme accounts for around half of Scottish Water's total annual expenditure. Objectives for the investment programme are set by Ministers through the Quality and Standards process.

The Quality and Standards 2 programme covered the period 1 April 2002 to 31 March 2006. This chapter explains the outputs that Scottish Water was required to deliver during that time and the funding that was allowed for to achieve this by the former Water Industry Commissioner.

### The Quality and Standards 2 outputs

The Quality and Standards 2 outputs that Scottish Water was required to deliver were set out in the Strategic Review of Charges 2002-06, and are shown in Table 1.

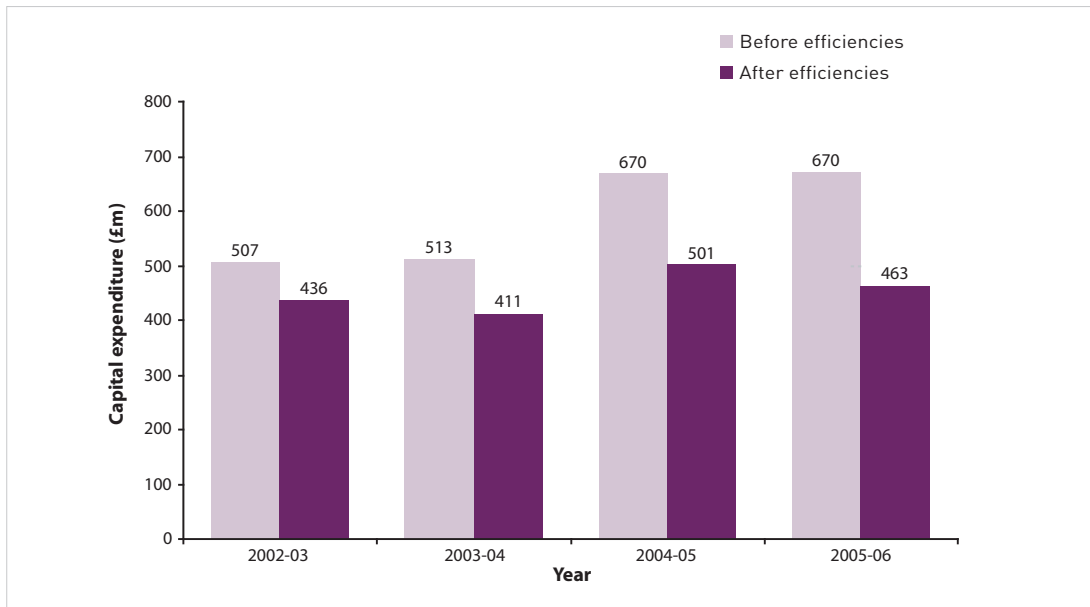
**Table 1: Required Quality and Standards 2 outputs**

Output	Target number
<b>Drinking water quality</b>	
Properties receiving first time provision of water	408
Number of water quality improvements	604
<b>Environmental quality</b>	
Number of continuous discharges removed	591
Properties receiving first time provision of sewerage	667
Number of unsatisfactory overflows removed	429
<b>Other</b>	
Properties removed from the poor pressure register	1,391
Mains rehabilitated (km)	3,051
Properties removed from the 'at risk' of flooding register	829
Sewers rehabilitated (km)	409

### The allowed for budget to deliver these outputs

At the Strategic Review of Charges 2002-06 (published in November 2001), the Quality and Standards 2 investment programme was costed at more than £2.3 billion, before taking account of the scope for capital efficiency in delivering the programme. Once the former Water Industry Commissioner's efficiency targets had been applied, Scottish Water was required to deliver the investment outputs for £1.8 billion. Figure 1 shows the projected expenditure both before and after the efficiency targets.

Figure 1: The allowed for investment on Quality and Standards 2 outputs (before and after efficiency targets)



During the Quality and Standards 2 period, adjustments were made to update the amount of financing available to deliver revised investment outputs. These adjustments reflected changes associated with higher than expected inflation and the impact on Scottish Water of having to meet additional outputs, including new legislative requirements on health and safety and increased site security. The adjustments are set out in Table 2.

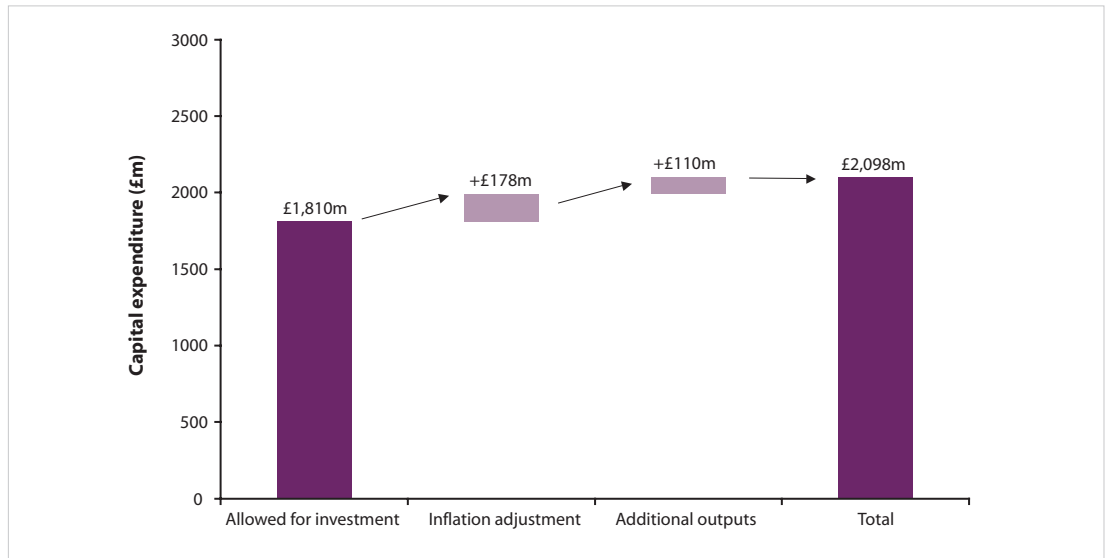
Table 2: Adjustments that were made to Scottish Water’s allowed for funding

Item	Adjustment
Higher than expected inflation	£178 million
Additional security requirements	£32 million
New legislative requirements relating to health and safety	£40 million
Increased contributions to developers	£38 million
<b>Total</b>	<b>£288 million</b>

# CHAPTER 1

Figure 2 shows the impact of these adjustments on Scottish Water's overall allowed for budget.

**Figure 2: Adjustments to the investment allowance determined at the Strategic Review of Charges 2002-06**



## Chapter 2: How Scottish Water has performed

### Performance in delivering the outputs

Overall, Scottish Water reports that 86% of the Quality and Standards 2 outputs had been completed to beneficial use by March 2006. Beneficial use means that, in Scottish Water's opinion, customers are receiving the benefits of the promised investment. Table 3 provides information on progress against the specific objectives.

**Table 3: Delivery of Quality and Standards 2 outputs to March 2006**

Outputs	Target number	Outputs delivered to date	% delivered
<b>Drinking water quality</b>			
Properties receiving first time provision of water	408	407	99.8%
Number of water quality improvements	604	471	78.0%
<b>Environmental quality</b>			
Number of continuous discharges removed	591	416	70.4%
Properties receiving first time provision of sewerage	667	377	56.5%
Number of unsatisfactory overflows removed	429	383	89.3%
<b>Other</b>			
Properties removed from the poor pressure register	1,391	1,391	100.0%
Mains rehabilitated (km)	3,051	2,990	98.0%
Properties removed from the 'at risk' of flooding register	829	728	87.8%
Sewers rehabilitated (km)	409	390	95.4%

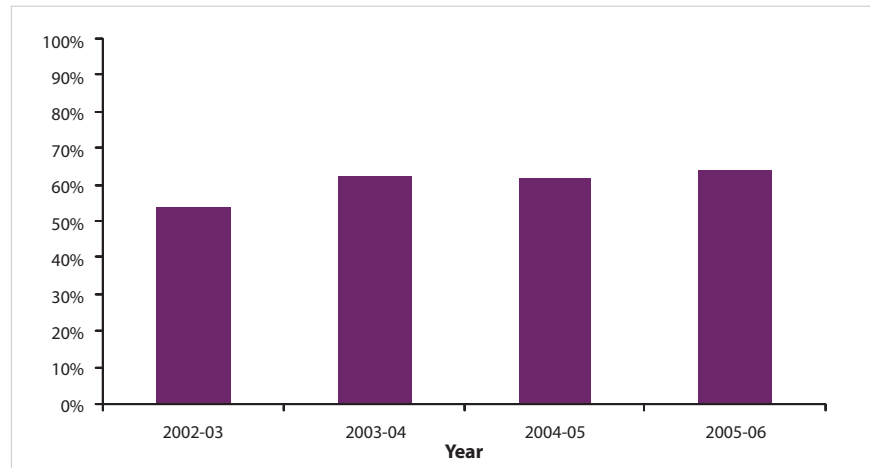
There is a shortfall in the delivery of water quality and environmental improvement outputs, with around 21% of these outputs yet to reach beneficial use.

# CHAPTER 2

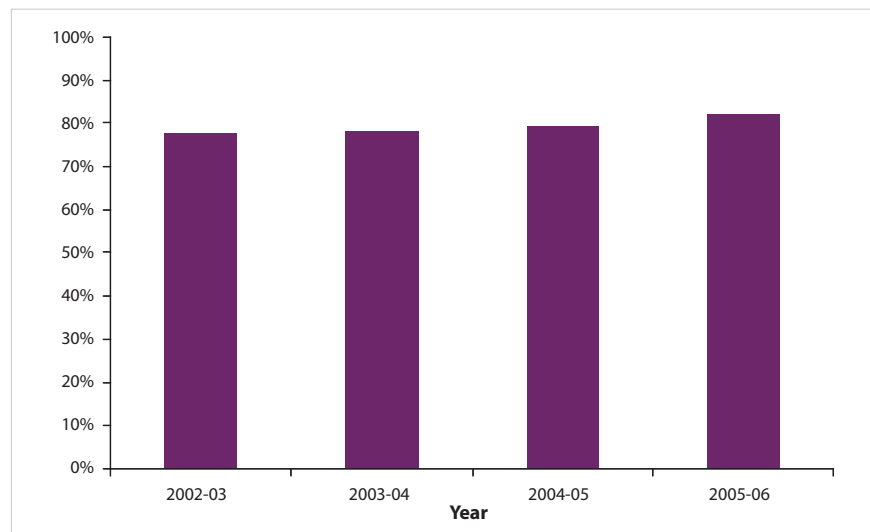
For example, there is a shortfall in first time sewerage provision, where 290 properties remain to be connected. Scottish Water has reported that insufficient properties have been identified where it is economically viable to provide connections to the sewer network. It has been agreed that the target in this area should be reduced from 1,222 properties to 667 properties<sup>1</sup>. However, as only 377 properties were connected by 1 April 2006 there is some way to go to meet this revised target. An adjustment will be made to the Quality and Standards 2 allowed for expenditure by 'logging down'<sup>2</sup> the costs to reflect the lower target.

Scottish Water has largely met its targets for replacing worn out water mains and sewers, although 61km of mains renewal and 19km of sewer rehabilitation remain to be completed. To assess the impact of this work, the reported condition grades of water mains and sewers over the four years of Quality and Standards 2 were examined, with a particular focus on the percentage of assets which are reported as being in an adequate or better condition<sup>3</sup>. This is shown in Figures 3 and 4.

**Figure 3: Water mains in adequate or better condition (% of the total gross value of water mains)**



**Figure 4: Sewers in adequate or better condition (% of the total gross value of sewers)**



<sup>1</sup> The revised target was agreed by the Capital Monitoring Group.

<sup>2</sup> Logging up and logging down is an adjustment that takes place at the end of the regulatory control period to reflect differences in cost from the original determination.

<sup>3</sup> Asset condition is assessed using five grades, where Grade 1 is very good, Grade 2 is good, Grade 3 is adequate, Grade 4 is poor and Grade 5 is very poor.

Figures 3 and 4 show that the reported condition of these critical assets is gradually improving. This is likely to have contributed to improvements in customer service.

Overall, the Commission concludes that the requirement to maintain the asset base over the Quality and Standards 2 period has been met. This has been confirmed by the independent industry Reporter, who recently commented that he had "not identified any indication of significant improvement or deterioration in the underlying asset base".<sup>4</sup>

### Delays in the signing off process

For the water quality and environmental improvement elements of the programme, there is a formal process by which the DWQR and SEPA confirm that the required outputs have been delivered. There is currently a significant shortfall between the number of Quality and Standards 2 outputs that Scottish Water states are at beneficial use and the number that have been signed off by the quality regulators, as Table 4 shows.

**Table 4: Number of projects that have been signed off**

Total number of projects	1,164
Projects reported at beneficial use	838
Number of projects that have been formally signed off	283

On the basis of this information, the relevant regulators have so far only satisfied themselves that 24% of the water quality and environmental programme projects had been delivered to the required standard by the end of the Quality and Standards 2 period.

The Commission has raised its concerns about this shortfall in reporting with both Scottish Water and the quality regulators. Its understanding is that measures have been put in place to address the backlog of projects that require sign off. The Commission will continue to monitor progress in this area carefully through the Output Monitoring Group.

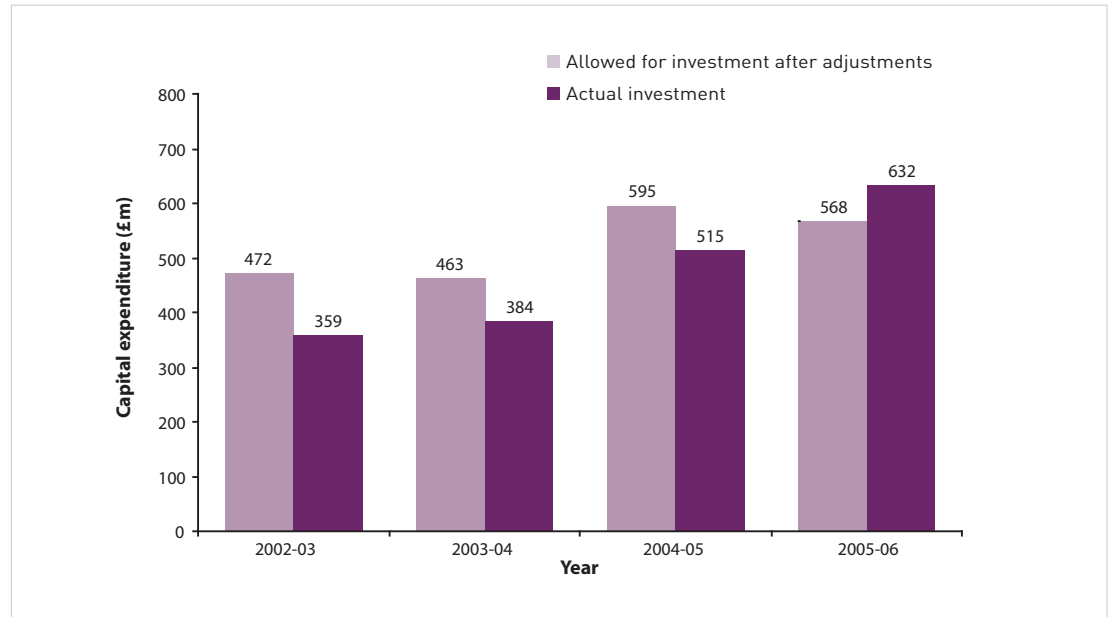
<sup>4</sup> Reporter Services, Annual Return 2005-06 Reporter's Report, section 8.1.4, July 2006, Black & Veatch Ltd.

# CHAPTER 2

## Expenditure to March 2006

In the period to March 2006, Scottish Water invested £1,890 million on delivering Quality and Standards 2 outputs<sup>5</sup>. This is shown in Figure 5, which also shows the expenditure profile that was projected at the Strategic Review of Charges 2002-06 (after the adjustments explained in Chapter 1).

Figure 5: Allowed for and actual capital expenditure to March 2006



<sup>5</sup> Actual expenditure on Quality and Standards 2 outputs includes additional outputs and contributions but excludes Quality and Standards 3 development costs, 'spend to save' and completion projects.

## Chapter 3: Delivery of the remaining outputs

In its final determination, the Commission allowed the £274 million that Scottish Water said in its 2005 business plan was required to deliver the remaining Quality and Standards 2 outputs<sup>6</sup>.

The Commission is pleased that, in their statement on charges, Scottish Ministers confirmed the view expressed in the methodology for the Strategic Review of Charges 2006-10 that customers should not pay twice for Quality and Standards outputs. In the light of this ministerial statement, the Commission did not allow for any additional capital inflation on the outputs that remain to be delivered. If there is any capital inflation during the period when Scottish Water delivers the remaining Quality and Standards 2 outputs, Scottish Water will need to deliver the remainder of the investment programme for 2006-10 more efficiently than was assumed in the final determination.

### The outputs that remain to be delivered

The 823 Quality and Standards 2 outputs that are still to be completed are currently at various stages of progress:

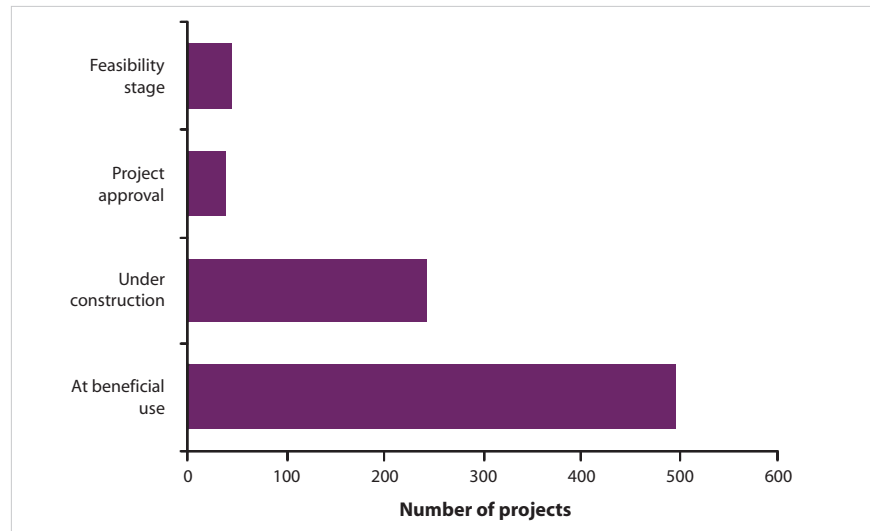
- 496 projects are reported as being at beneficial use but waiting to be signed off by the appropriate quality regulator;
- 327 projects remain to be completed; and
- 83 of these 327 projects have yet to start construction.

These 83 projects account for £120 million, or 43%, of the forecast cost of completing delivery of the required outputs. Figures 6 and 7 show the progress of the remaining projects by the number of projects and their value.

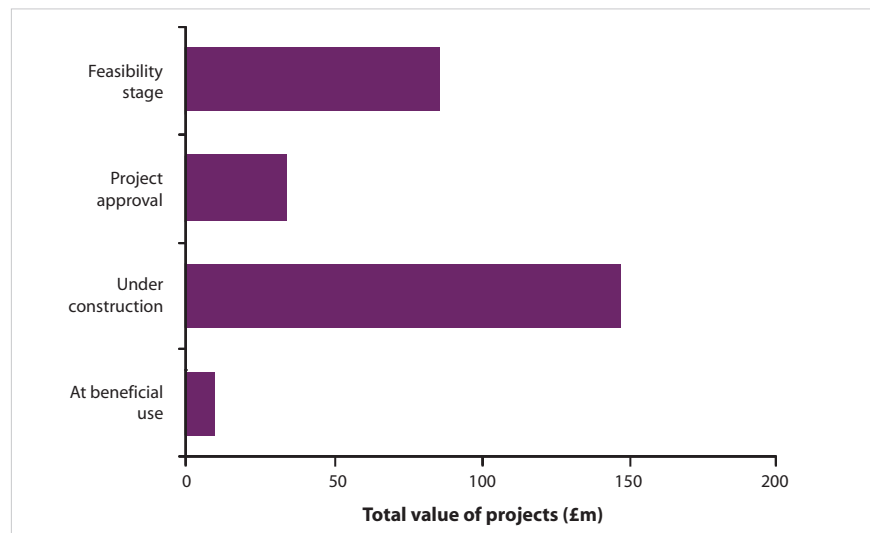
<sup>6</sup> As this report explains, the Commission did not allow for the additional costs associated with capital expenditure inflation.

# CHAPTER 3

**Figure 6: Progress of Quality and Standards 2 outputs still to be delivered, by project**



**Figure 7: Progress of Quality and Standards 2 outputs still to be delivered, by value**

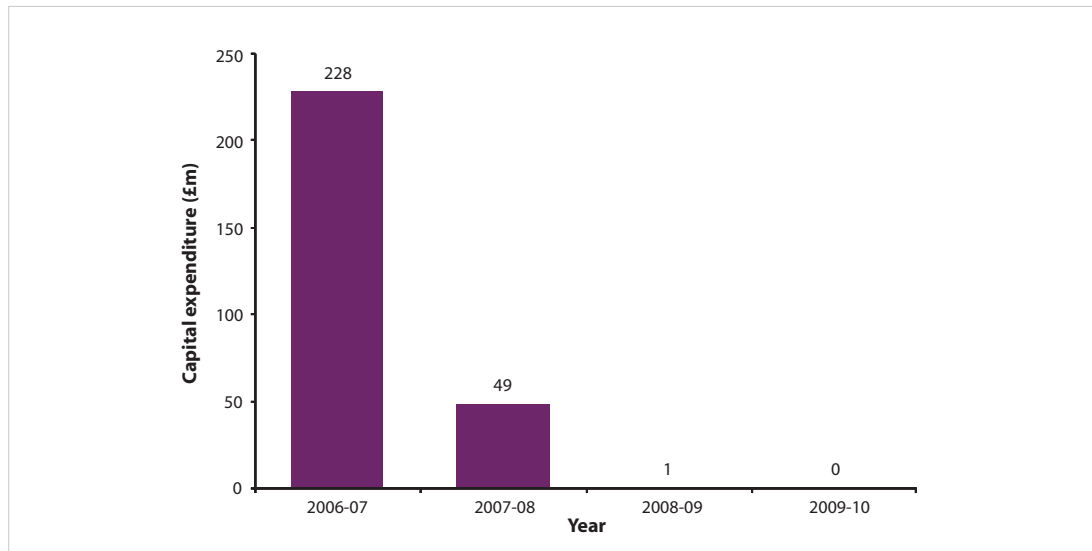


### The financing allowed for to deliver the remaining outputs

Scottish Water currently forecasts that it will spend a further £279 million after March 2006<sup>7</sup>. This gives a gross total of £2,168 million. Scottish Water forecasts that this will be offset by around £20 million as a result of expected contributions, for example for new connections work. This suggests that Scottish Water will spend around £51 million (or 2%) more than the adjusted allowance for Quality and Standards 2.

Delivery of the remaining Quality and Standards 2 is forecast to continue until September 2008. Scottish Water is forecasting expenditure of £228 million in 2006-07, £49 million in 2007-08 and £1 million in 2008-09. Figure 8 shows the forecast expenditure profile for delivering the remaining Quality and Standards 2 outputs.

<sup>7</sup> This information was provided by Scottish Water in its June 2006 Annual Return.

Figure 8: Scottish Water's forecast expenditure for delivering remaining outputs<sup>8</sup>

### Factors that may impact on the cost of delivering the remaining outputs

The Commission considers that the following factors appear to have increased the challenge of completing the investment that was required by the final determination within the allowed for budget.

- Inflation on capital investment projects is continuing. This means that the cost of delivering projects is increasing and the longer Scottish Water delays delivering the programme, the higher the costs will become. The provisional assessment for capital inflation in 2005-06 now indicates higher capital inflation than was forecast at the final determination. The Commission estimates that this will add around £5 million to the challenge faced by Scottish Water.
- A reduction in the number of outputs relating to first time sewerage provision will reduce, through the logging down mechanism, the allowance that is made for delivering these outputs. The impact of this is currently estimated at around £3 million.
- Scottish Water's forecasts suggest that not all of the additional funding that was allowed in the Quality and Standards 2 period (for example to meet requirements under new health and safety legislation) will now be required. Additional funding of £110 million had been agreed for these additional outputs<sup>9</sup>. This will lead, again through logging down, to less funding being available to complete the outstanding projects. Based on Scottish Water's forecasts, we estimate that this will be reduced by between £3 million and £17 million.

As a result of these potential factors, the Commission currently estimates that Scottish Water will need to improve the efficiency of the remainder of its capital investment programme by approximately £10 to £25 million to perform in line with the final determination. This is summarised in Table 5.

<sup>8</sup> Source: Scottish Water's Delivery Plan, 2006.

<sup>9</sup> No efficiency target was applied to Scottish Water's estimated expenditure. Scottish Water should not therefore benefit from any reduction in the level of resource required. This benefit should be passed on to customers.

## CHAPTER 3

Table 5: The efficiency challenge for the remainder of the Quality and Standards 2 capital investment programme

Factor	Potential impact
Additional capital inflation	£5 million
Under-delivery of financed outputs	£3 million
Allowed for additional funding that has not been required	£3-£17 million
<b>Total</b>	<b>Potential range of approximately £10 to £25 million</b>

**Additional risk factors**

The Commission has also identified additional risk factors that could further increase the efficiency challenge faced by Scottish Water in delivering the remaining Quality and Standards 2 outputs. In coming to its conclusions, the Commission took account of the Reporter's scrutiny of Scottish Water's Annual Return. He indicated that there is a high level of uncertainty in Scottish Water's future estimates of the cost of completing Quality and Standards 2. He commented that "the future spend for completion of Quality and Standards 2 is dominated by projects which have proved difficult to scope and progress" and that this "creates a higher level of uncertainty in the out-turn cost than would be expected in a more balanced portfolio of projects".

The additional risk factors are difficult to quantify at this stage, but could increase the efficiency challenge faced by Scottish Water from around £10 million to up to £90 million<sup>10</sup>. They are:

- further inflation risk, ie the cost of further delays or further increases in capital expenditure inflation in delivering Quality and Standards 2 outputs, (current estimate up to an additional £20 million);
- a risk of additional work being required to secure regulatory sign-off, (current estimate up to £10 million);
- a risk of unit costs higher than those allowed for being incurred in delivering the remainder of the outputs, (current estimate up to £25 million); and
- changes in the work required to meet expected new obligations, (current estimate up to £25 million).

<sup>10</sup>It should be noted that the ranges shown here are the Commission's assessment of the potential risk based on the best available information at this time.

This is summarised in Table 6.

**Table 6: Further risk factors and potential impact on the efficiency challenge**

<b>Risk factor</b>	<b>Potential impact</b>
Further inflation risk	Up to approximately an additional £20 million
Risk of additional work to secure sign-off	Up to approximately £10 million
Risk of higher unit costs	Up to approximately £25 million
Additional work to meet new obligations	Up to approximately £25 million
<b>Total</b>	<b>Potential range of up to £80 million</b>

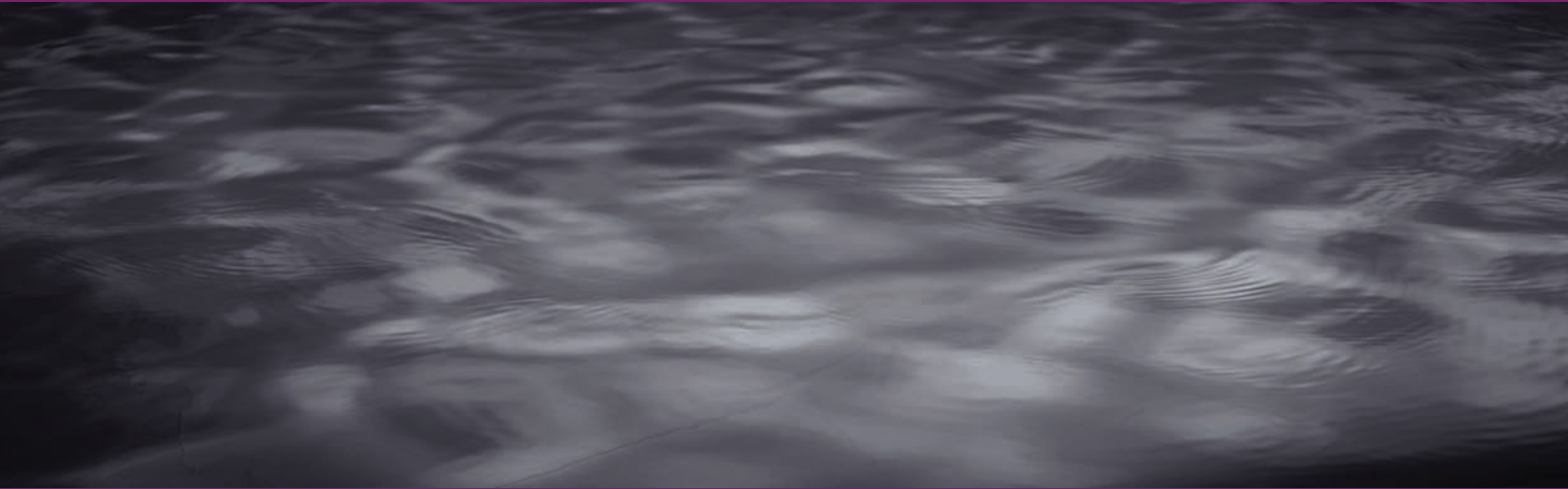
The Commission's analysis of these potential risks is not necessarily inconsistent with the commitment in Scottish Water's delivery plan that it would deliver all of the outputs specified in the determination, including the remainder of Quality and Standards 2 outputs, within the agreed price caps.

#### **Future monitoring**

The Commission will update its analysis in this area in the next 'Investment and asset management report', which is due to be published in October 2007.

The Output Monitoring Group meets on a quarterly basis to review Scottish Water's investment performance. The 2007 report will take account of the views of the group.

18.10.06



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