Part II Detailed explanations

8. Customers' priorities and the outputs to be delivered

- On average, 79% of customers expressed satisfaction with water and sewerage services and more than half considered them to be good value for money.
- Customers want a reliable, continuous supply of safe tap water.
- Our price limits will allow companies to undertake more activity to maintain their existing assets.
- Companies can undertake more activity to meet the demands of existing and new customers.
- Further improvements can be made to service levels, water quality and the environment.

8.1 Involving customers

Customers play an important role in the decisions we take about future water and sewerage charges. We have taken account of customers' views in arriving at our price limits.

This chapter sets out customers' priorities and how our price limits meet these priorities. It also covers, in broad terms, the services and improvements the companies will deliver in the period 2005-10.

The WaterVoice Committees told us what they thought of the companies' business plans. These plans set out the companies' views on the profile of price limits and the outputs they should deliver.

WaterVoice said that it would prefer to see a better balance between customers' priorities and investment in environmental improvements determined by the Government. It considers that customers' priorities include a safe, reliable and continuous water supply and better maintenance of the sewerage network, particularly to prevent the risk of homes and gardens being flooded with sewage.

Together with others, we have also undertaken customer research to understand the improvements that customers consider to be important and what they are willing to pay for them.

In their representations on our draft determinations, WaterVoice and customers who responded directly to us said that customers' priorities have not changed markedly. Ensuring a safe and reliable high-quality drinking water supply and preventing sewer flooding remain priorities. Customers affected by smells from sewage treatment works are also keen for these to be reduced. However, keeping price increases to a minimum and avoiding the risk of unexpected price increases through interim determinations are also important in the light of our draft determinations.

What the customer research told us about customers' views and priorities

The key finding from the research was that customer satisfaction with services is high. On average, 79% of customers expressed satisfaction with water and sewerage services and more than half consider that they are good value for money. Customers also want existing levels of service maintained, rather than reduced.

Most customers supported the companies' investment proposals. Most support was given to:

- ensuring the safety of tap water;
- managing the appearance, taste and smell of tap water; and
- ensuring a reliable and continuous supply.

This was followed by maintaining water and sewerage systems, reducing sewer flooding and improving water pressure. Less support was given to environmental and customer service aspects, although on average all of these categories were supported by more than 50% of customers.

A majority of customers were willing to pay for the proposals in companies' draft business plans. The majority of bill-paying customers stated that they were definitely (14%) or probably (46%) willing to pay the price increases associated with the companies' strategies.

However, a significant minority were probably (19%) or definitely (14%) not willing to pay, either because the costs were too much for the improvements, or because they could not afford the increases.

Overall, 9% of the sample surveyed stated that they were not willing to pay the price increases because they could not afford the higher bills. This group included higher than average proportions of customers who were elderly and from low income households.

Some customers would accept delays to companies' proposals to keep bills down. Four in ten customers indicated that they would not be concerned if the proposals they supported were delayed to keep bills down.

Customers strongly supported steady price increases rather than step increases in bills. When asked if they would prefer to see bills change gradually, in one go, or up and down in line with company costs (assuming they did not pay more as a result), customers strongly indicated that they would prefer to see steady changes every year throughout the period.

We are aware of the effect of price increases on customers who find it difficult to afford water bills. We are contributing to the Government review which is examining the issue of affordability of water bills and options to help customers who have problems. We recognise that this is an important issue, and while we cannot set price limits on the basis of affordability, we have worked hard to ensure that customers' bills are no higher than they have to be.

8.2 How our proposed package addresses customers' priorities

We have tried to reflect customers' priorities in our proposals.

Keeping the bill impact to a minimum

Companies' final business plans included capital expenditure of £21 billion (less capital contributions), on capital programmes, compared with the £17 billion in our determinations.

We have challenged the number of schemes proposed, reducing or excluding them where value for money or the outputs are not clear. Some improvement schemes have been excluded because they do not have the support of the quality regulators. We have set the companies challenging but achievable efficiency targets.

This keeps the increase in customers' bills as low as possible but allows the companies to make the necessary improvements.

As part of our attempt to minimise the bill impact on customers, we have also examined the possibility of deferring some projects. However, the scope to do this has been limited by statutory deadlines for some improvements and by the general need to make sure that the companies' capital programmes could be managed and delivered effectively.

In our draft determinations we excluded company proposals with a gross cost of £1.4 billion, because we considered that they required further scrutiny. This could be either reappraisal, confirmation that they were required, or they did not meet our criteria for inclusion in the quality programme. Since then the companies and quality regulators have provided us with further information to clarify some of these proposals. The quality programme is now £0.4 billion larger than our assumptions in draft determinations. This is the net result of the companies and quality regulators defining projects so that they now meet our criteria; the quality regulators confirming that some projects are not now required; and refining the costs of proposals. There will be additional work confirmed as needed during the 2005-10 period; for example, resulting from the outcome of 379 investigations on the environmental impact of the sewerage service. These investigations may find that companies need to carry out further asset improvements. There are mechanisms in place to allow additional projects to be undertaken between price reviews. These are described in chapter 16.

More activity by companies to maintain their assets

Our price limits will allow companies to undertake more activity to maintain their assets. This should ensure that they continue to provide a safe, reliable water supply to customers and a high standard of treatment of discharges to the environment.

We have assumed that companies will invest £8.4 billion to maintain their pipes, sewers and treatment works over the next five years. This is a 22% increase over the assumptions made at the last review. Although less than the companies wanted to spend (over £9 billion), it is significantly more than has been spent in any period since privatisation.

Our price limits, including the associated quality improvements, would allow companies to undertake the following activities in the next five years.

- Around 23,400 km of water mains to be laid, renewed or relined over the five-year period.

- The replacement, renovation and laying of around 6,400 km of sewers.

- Refurbishing or building around 520 water treatment works and around 340 water pumping stations.

- Refurbishing or building around 1,620 sewage treatment works, 160 sludge treatment works and 640 sewage pumping stations.

More activity to maintain the balance between supply and demand so customers' demands continue to be met adequately

Our determinations assume that companies will invest £3.1 billion (gross of capital contributions) to ensure that the supply of water meets essential demands and that companies' sewerage systems can deal with the volume of waste disposed. This would include, for example, companies' continued actions to reduce leakage and projects to develop new sources of water. It would also include upgrading water and sewage treatment plants, and pipes and sewers to connect new properties in areas of housing growth.

This will deliver the following outputs.

- Installing around 1.2 million meters for household customers who opt to have a meter installed free of installation charge.

- Installing 350,000 selective meters for household customers at the companies' initiative as part of their strategy to manage demand.

- Delivering 315 Ml/d in reduced leakage by 2010 from distribution networks and customer supply pipes, including a reduction of 220 Ml/d for Thames, compared with its position in 2003-04.

- Providing water and sewerage services to over 800,000 new homes in areas of housing growth.

- Improving the security of water supplies, as measured by our security of supply index, for 13 companies.

- Carrying out investigations into water resource developments necessary to secure supply over the long term, including five potential new reservoir developments and two potential schemes to augment existing reservoirs.

- Upgrading 1,200 km of the London mains network to support leakage reductions by Thames.

- Implementing projects to increase the water available for use by more than 500 Ml/d to support supplies in 14 companies.

- Resolving newly emerging sewer flooding problems associated with extra demands placed on companies' sewerage assets.

- Carrying out improvements to meet additional flow at more than 600 sewage treatment works.

Improvements to service levels, water quality and the environment

These improvements address both the guidance provided by Defra Ministers and the Welsh Assembly Government on the quality and environmental programmes, and other improvements, principally to tackle sewer flooding.

The programmes included in our price limits assume that around £2.0 billion will be invested in improving water treatment works; and renovating water pipes, to improve the quality of drinking water delivered to customers' taps. Price limits also include £3.5 billion upgrade sewage treatment works to meet higher standards, and improve overflows from the sewerage system to limit pollution damage of the environment. The price limits also provide for some improvements to the level of service to customers, principally to reduce sewer flooding, at a cost of £0.6 billion. This is in addition to the improvements that arise from maintaining and upgrading sewers.

The programmes would deliver the following improvements for customers.

Drinking water quality

- Improving 227 water treatment works, of which 75 are needed to reduce levels of nitrates, caused by diffuse pollution, in sources of drinking water.

- Renovating 13,400 km and cleaning 8,850 km of water distribution mains, to improve the quality of drinking water delivered to customers' taps.

Environment

- Carrying out 167 investigations and/or options appraisals to ascertain the possible impact of water abstraction for the public supply on nature conservation sites.

- Carrying out 16 projects to alleviate the impact of water abstraction on the environment, such as the construction of passes and intake screens to protect fish.

- Upgrading 1,043 sewage treatment works to meet tighter consents to further protect the environment, serving the population equivalent of 21.5 million people.

- Improving 2,005 intermittent discharges and overflows from the sewerage system to limit pollution damage to the environment.

- Carrying out 379 investigations to identify any improvements needed to meet legal obligations to protect the environment.

Levels of service

- Dealing with low flow and water pressure at around 19,000 properties supplied by Severn Trent, Southern, Bristol and Cambridge.

- Improving the taste and odour of the drinking water supplied to all 190,000 properties supplied by Bournemouth & West Hampshire, and for customers supplied from three treatment works by Severn Trent.

- Reducing the hardness of drinking water for around 21,000 customers supplied by Severn Trent.

- Solving 5,360 known problems of internal and 6,030 problems of external sewer flooding. A further 3,850 newly emerging internal problems will be dealt with.

Early start programme

At previous price reviews, companies and others have told us that the price review process can interrupt the companies' capital investment programmes, followed by a peak later in the five-year period. Suppliers and contractors believe that this creates higher cost solutions.

To dampen this rollercoaster effect, in December 2003 we identified a number of capital schemes to deliver benefits to customers and the environment in the first two years of the price review period, 2005-06 and 2006-07. We have assumed that these schemes will cost £549 million for the water service for 236 schemes, and £430 million for the sewerage service for 794 schemes. These schemes include completion of outputs identified in the period 2000-05 and routine work to maintain asset systems, as well as investment to install water meters and to reduce sewer flooding. The number of schemes and associated capital expenditure differ from those published in RD42/03, 'PR04 – Early start initiative capital works to be completed by March 2007' due to changes agreed with individual companies earlier this year. Companies have subsequently agreed to the exclusion of some projects which do not have support in ministerial guidance, and these have been removed from the early start programme.

8.3 The investment programme in context

Water and sewerage services are provided through extensive asset systems built up over many generations. The water and sewerage companies need to maintain and enhance these systems to meet continuing demand. This requires substantial ongoing capital investment.

Figure 3 Actual and projected capital investment 1981-2010

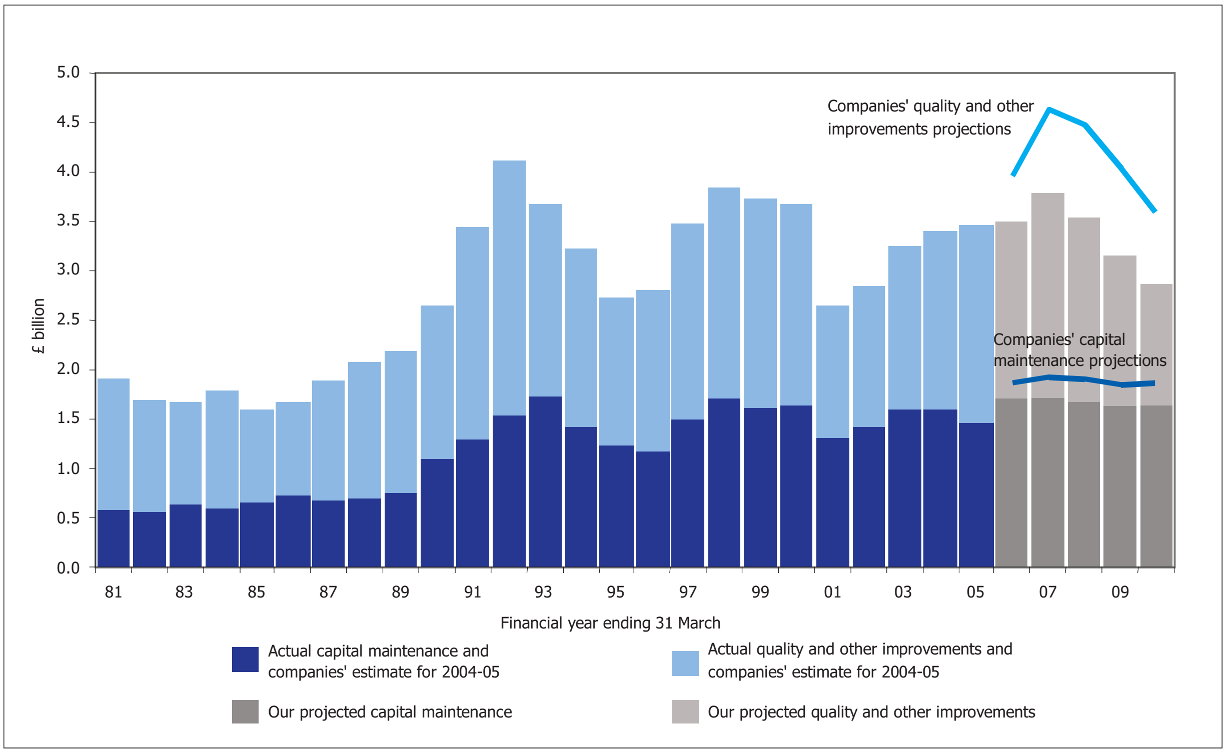

Figure 3 sets out the capital investment undertaken by the companies since 1981; it breaks investment down between investment to maintain existing assets, and quality and other enhancements. For the period 2005-10 a comparison is made between the assumptions included in our price limits and the companies' business plan projections. In overall terms, capital investment since privatisation in 1989 will amount to more than £67 billion by March 2010, which equates to around £2,900 per property served. While investment varies from year to year, and dips around price reviews, the average level is reasonably consistent at between £3.0 and £3.5 billion a year.

Planning for the next five years requires the companies and all the regulators to make judgements about the most likely capital investment and operating expenditure needed to meet the requirements placed upon the companies. The overall expenditure assumptions are a large component of the determination of price limits. As at previous price reviews, there is a divergence of views between what the companies consider they need and what we consider is reasonable. The differences between the companies (in aggregate) and our assumptions are set out both by service and by output in table 10.

Table 10 Projections of expenditure 2005-10

	Final business plans			Final determinations		
	Water £m	**Sewerage £m**	**Total £m**	**Water £m**	**Sewerage £m**	**Total £m**
Capital expenditure[1] (five-year total)						
Base service:						
Infrastructure renewals expenditure	2,242	1,144	3,386	1,868	1,028	2,896
Non-infrastructure capital maintenance	2,485	3,576	6,061	2,356	3,158	5,514
Supply/demand balance	2,409	925	3,334	1,699	590	2,289
Quality enhancements	2,336	4,516	6,852	2,061	3,450	5,512
Enhanced service levels	82	1,015	1,097	24	602	626
Total	**9,554**	**11,177**	**20,731**	**8,009**	**8,828**	**16,837**
£ per property	406	494	900	341	391	732
Operating expenditure (annual average)						
Base service	1,671	1,278	2,949	1,586	1,250	2,836
Supply/demand balance	34	15	49	23	10	33
Quality enhancements	46	109	155	22	60	82
Enhanced service levels	2	4	6	1	1	2
Total	**1,753**	**1,406**	**3,159**	**1,633**	**1,321**	**2,953**
£ per property	75	62	137	70	58	128

1 Capital expenditure is net of capital contributions.

Overall we consider that, provided the companies become more efficient year by year, they can meet our regulatory expectations within a capital investment programme of just under £17 billion over the five-year period. This compares with the companies' projections of just under £21 billion, a difference of around £4 billion. In both cases these figures are net of capital contributions, ie they represent the investment that customers would need to finance through their bills. Customers' bills will also need to continue to support the investment carried out in earlier periods.

For operating expenditure our projections are £200 million a year less than the companies' projections of around £3.2 billion a year.

There are a number of reasons for the differences between our projections and those of the companies. We have set out the major reasons for the differences in chapter 1 and these are also explained in later chapters of this report.

To help explain the £4 billion difference between our capital investment assumptions and those of the companies we have set out three main areas of difference. This follows on from our initial reallocation of companies' projections between output areas to achieve consistency between the companies' and our assessment categories. The three areas of difference are:

- 'Parked' outputs – where we consider that there is insufficient evidence or justification for an enhancement proposal to be included in price limits as yet. In some instances there is insufficient information on what is required. In others, we are concerned that the proposed projects appear to represent poor value for money. In all cases there is a need for further information and justification. Once this is available, the companies can use the MD197 'AMP4 change protocol' to include the projects in price limits. However, it is possible that work up to a value of £500 million may be confirmed for inclusion in price limits during 2005-10.

- Changes in scope – where we consider that a company has taken an unnecessarily cautious view on what needs to be done to achieve its required outputs. These differences relate partly to specific projects that we are not convinced are necessary; and partly to different assumptions about the level of uplift over past investment levels that is needed in future or the pace of change required – this is particularly the case for capital maintenance expenditure. The difference in changes in scope amount to £2.4 billion, compared with around £2.8 billion at our draft determinations.

- Greater efficiency – where we consider there is scope for greater improvements in efficiency than the levels assumed by the company in its projections. We have assumed around £1 billion more efficiency in price limits compared with the business plan projections (£0.2 billion less than assumed in our draft determinations).

Table 11 Projected capital investment: differences between the companies' projections and our final determinations

	Final business plans		**Final determinations**		Analysis of differences		
	As submitted	After reallocations	**Total**	**Difference**	Parked outputs	Changes in scope	Greater efficiency
	£ billion	£ billion	**£ billion**	**£ billion**	£ billion	£ billion	£ billion
Outputs							
Base service	9.4	9.6	**8.4**	**-1.2**	0	-1.0	-0.2
Supply/demand balance	3.3	3.1	**2.3**	**-0.8**	0	-0.4	-0.4
Quality enhancements	6.9	7.1	**5.5**	**-1.6**	-0.5	-0.8	-0.3
Enhanced service levels	1.1	0.9	**0.6**	**-0.3**	0	-0.2	-0.1
Totals	**20.7**	**20.7**	**16.8**	**-3.9**	**-0.5**	**-2.4**	**-1.0**

Table 12 sets out, for each company, the total capital expenditure we have assumed in price limits. We also set out the annual £ per property figure for each company so that direct comparisons between companies can be made.

The £ per property figures for the water and sewerage companies are much higher than for the water only companies, reflecting the respective size of the capital programmes for water and for sewerage. The figures also clearly demonstrate the impact of capital expenditure on bills. The company with the highest levels of investment per property, South West, also has the highest increase in bills as a result of our price limits.

Table 12 Capital expenditure by company

	Total capital expenditure 2005-10	
Company	**£m**	**£/property per year**
Water and sewerage companies		
Anglian	1,466	132
Dŵr Cymru	1,145	177
Northumbrian	839	113
Severn Trent	2,201	125
South West	762	216
Southern	1,563	195
Thames	3,092	150
United Utilities	2,505	170
Wessex	755	190
Yorkshire	1,453	141
WaSC total	**15,782**	**151**
Water only companies		
Bournemouth & W Hampshire	43	45
Bristol	117	48
Cambridge	17	27
Dee Valley	25	43
Folkestone & Dover	25	68
Mid Kent	105	84
Portsmouth	45	31
South East	174	58
South Staffordshire	92	34
Sutton & East Surrey	75	56
Tendring Hundred	15	41
Three Valleys	322	52
WoC total	**1,055**	**50**
Industry total	**16,837**	**147**

1 Capital expenditure is net of capital contributions.

Table 13 includes details of the annual average operating expenditure for each company that we have included in our price limits. For the water service, Portsmouth has the lowest figure at £53 per property and Folkestone & Dover the highest at £97. This reflects the differing operating conditions and treatment processes that each of them faces. For the sewerage service Thames has the lowest figure at £42 per property and South West the highest at £83, again reflecting the differing operating environments of these companies. South West operates dispersed assets to maintain bathing water standards for a very long coastline relative to the size of the company and to its customer base.

Table 13 Operating expenditure by company (annual average)

	Operating expenditure (annual average) 2005-10					
Company	**Water £m**	**Sewerage £m**	**Total £m**	**Water £/property**	**Sewerage £/property**	**Total £/property**
Water and sewerage companies						
Anglian	134	168	302	70	68	137
Dŵr Cymru	106	97	203	83	74	157
Northumbrian	130	73	203	70	63	133
Severn Trent	204	208	412	62	56	118
South West	58	54	112	78	83	161
Southern	62	113	175	60	62	123
Thames	271	228	498	78	42	120
United Utilities	200	199	399	67	68	135
Wessex	40	68	108	73	63	136
Yorkshire	125	112	237	61	54	115
WaSC total	**1,330**	**1,321**	**2,650**	**69**	**58**	**128**
Water only companies						
Bournemouth & W Hampshire	14		14	75		75
Bristol	36		36	73		73
Cambridge	9		9	72		72
Dee Valley	9		9	74		74
Folkestone & Dover	7		7	97		97
Mid Kent	17		17	69		69
Portsmouth	16		16	53		53
South East	45		45	74		74
South Staffordshire	34		34	63		63
Sutton & East Surrey	21		21	77		77
Tendring Hundred	5		5	74		74
Three Valleys	90		90	73		73
WoC total	**303**		**303**	**71**		**71**
Industry total	**1,633**	**1,321**	**2,953**	**70**	**58**	**128**