anglianwater

PR09 Final Business Plan
Part A: The Company Strategy

PR09 Final Business Plan: Part A

anglianwater.co.uk

Final Business Plan: Part A

1	Foreword	1
2	Structure of Part A	3
3	Changes since Draft Business Plan	5
4	Context and background	8
5	Bills and affordability	14
6	Our proposed investment programme	20
7	Maintaining service to customers	24
8	Protecting and improving drinking water quality and the environment	31
9	Providing for growth	36
10	Improving services for customers	42
11	What we need to deliver our plan: operating costs	46
12	Dealing with risks and uncertainties	51
13	Financial issues	54
14	Hartlepool	59
15	Summary	63
16	Tables	66

1 Foreword

1.1 We are pleased to present our Final Business Plan for the five years 2010 to 2015.

1.2 Our long term strategy is framed by our Strategic Direction Statement. In addition, our recent thinking and our planning has been dominated by the impact of the current economic crisis. Rarely have long-term business strategies had to be considered and determined in such volatile circumstances. But throughout, we have remained focused on what we consider to be a fair and reasonable outcome for all our customers, fully aware that some are more vulnerable than most to the consequences of the economic downturn.

1.3 Fundamental to our approach is affordability, both for our customers, and for our business. We have struck a balance between meeting our commitments, being trusted to deliver an exceptional service, and being able to invest within acceptable and appropriate limits for the future of the service we provide. In achieving this, we have drawn on expertise and experience within the company, together with the active involvement of a wide range of external expert opinion panels. These panels have included representatives from our quality regulators, business, consumer groups, development authorities, local and regional government, academics, and special interest groups.

1.4 Taken in the round, the panels' views represent the unique nature of our growing region where the impact of climate change is likely to be very significant. They have a detailed understanding of our business and the issues we face. Many are also actively engaged in work that underpins the economic viability of this region. We have benefited hugely from their input. This business plan comes with the assurance that our proposals have been subject to the rigour of thorough and detailed scrutiny. We believe that the outcome puts the interests of our customers, and the region we serve, at the heart of our plans.

1.5 The future cost of raising capital to finance our business is, at present, highly uncertain. The scale and depth of the current financial crisis and deterioration in the general economy are unprecedented in recent decades. In preparing this business plan we have not assumed that these conditions continue beyond 2009. Rather, we have based the plan on a return to more stable conditions in the financial markets by the start of AMP5. However, if current financial conditions continue or worsen then our key assumptions on the cost of finance would need to be revised.

1.6 In summary, our plans will:

- secure the supply of reliable and resilient water and wastewater services
- offer an innovative and affordable pricing structure
- ensure we meet our goal of limiting average bill increases to an average of less than 1% p.a. above inflation for the AMP5 period
- build additional capacity in our networks to meet the needs of housing growth over the next five to ten years
- reduce even further the risk of customers being without water because of flooding, drought or exceptional events
- actively encourage water efficiency, in particular by increasing the number of customers on meters
- safeguard the precious environment in which we operate
- allow us to develop further our business in a sustainable way for the benefit of all our customers.

1.7 We believe that this Final Business Plan is realistic and affordable, and I commend it for your consideration. It comes with a strong personal commitment from the Board as well as the management team. We undertake to meet the significant challenges we face, to continue to work with the communities we serve, and to deliver on our commitments for the five years 2010 to 2015.

Jonson Cox
Chief Executive, Anglian Water Group

2 Structure of Part A

Here, we set out a detailed summary of our Final Business Plan.

Section 3 outlines how we have fundamentally challenged every section of this plan to ensure the best possible outcome for customers, set against the background of the turmoil in the economy.

Section 4 sets out the changes we have made to our plan, in response to the information and feedback we received on our Draft Business Plan

Section 5 outlines the impact of our plans on prices and bills and discusses issues of affordability.

Section 6 contains a summary of our proposed investment programme.

Sections 7 to 10 contain details of our investment programme

Section 11 describes the changes we propose in future operating costs

Final Business Plan: Part A

Structure of Part A

Section 12 describes the key uncertainties affecting our plans, and lists the items we consider should be treated as Relevant Changes of Circumstance, Notified Items or annual cost pass-through adjustments.

Section 13 describes our financing strategy and the material financial assumptions in the plan.

Section 14 summarises our plans for Hartlepool.

Section 15 provides an overall summary of our Business Plan.

Section 16 contains the Ofwat data tables.

3 Changes since Draft Business Plan

3.1 The world has changed since we prepared our Draft Business Plan and we are having to be adept at managing our day-to-day operations, while planning for the future at a time of unprecedented uncertainty. The economy is in deep recession; some of our customers are facing increasing difficulty in paying their bills; the financial markets are in turmoil; and the pace of housing growth has slowed considerably. We are continuing to see increased upward pressure on our operating costs; pension costs continue to rise too, in large part due to falling interest rates; and business rates have escalated further.

3.2 Despite these challenging circumstances, throughout the business planning process we have been determined to do all we can to meet our aspiration of limiting increases in customer bills to no more than an average of 1% p.a. over the next five years. We take considerable pride in having achieved this. Our rigorous approach to the production of the Plan has included listening carefully to customers, regulators and others. Their feedback has been constructive and positive, and we have continued to challenge every aspect of the Plan to bear down on cost, to be realistic on forecasting and to focus on priorities and affordability. With this in mind, our forecasts have been revised as follows:

- we have reassessed our forecasts for economic growth and housebuilding in our region. We now assume a sharper slowdown and a much longer recovery period, leading to a reduction in the infrastructure investment required to connect houses and businesses to our networks
- we now forecast lower economic growth, affecting business customer demand. Additional demand is expected from a number of large customers on the South Humber Bank, but the net impact of these changes has decreased the investment required in new sources of supply
- we now expect to recover £14m more from developers and others in contributions toward growth investment, following a review of our assumptions
- we have adjusted our forecasts of construction price inflation to reflect current economic conditions. Our forecasts do not assume any difference between construction price increases and RPI over AMP5 (2% p.a. at Draft Business Plan).

3.3 There have also been changes in the scope of our investment programme, as well as a refinement of our cost base, which taken together have reduced our proposed investment programme from £2.39bn to £2.26bn (net of grants and contributions). In summary:

- investment in the resilience of our water supply networks has been subject to a rigorous cost benefit test, resulting in some schemes being excluded. A more economic solution has been found to resolve resilience issues in Lincolnshire, giving an overall reduction in investment of £40m
- investment to protect against the risk of *Cryptosporidium* entering our water supply system has been reduced by £26m following challenge from Regulators. All water quality investment included in our plan has received DWI support
- the National Environment Programme has been finalised, resulting in a £39m reduction in required investment
- we have reduced by £20m the investment to improve facilities needed for the disposal of sewage sludge

- we have increased by £9m the investment in schemes required to prevent sewer flooding, targeting our investment towards properties suffering more frequently from internal flooding
- we have re-assessed required expenditure on capital maintenance and to meet water supply demand as a result of more detailed work, requiring a small overall increase in investment of less than £1m.

Table 3.1 Capital expenditure 2010 - 2015

Programme area	Draft Business Plan		Final Business Plan	
	Capex (£m)	Opex (£k p.a.)	Capex (£m)	Opex (£k p.a.)
Maintaining service to customers	1,164	0.0	1,199	0.0
Protecting and improving drinking water quality and the environment	527	8.9	440	10.6
Providing for growth	481	12.7	443	13.5
Improving services for customers	221	0.4	178	0.2
Total	**2,393**	**22.0**	**2,260**	**24.3**

Table 3.2 Base operating costs by 2014-15

Draft Business Plan (£m p.a.)	Final Business Plan (£m p.a.)
404	405

3.4 In its draft baseline, Ofwat set out its view of our proposed investment programme. Clearly, greater clarity was required of us to explain fully why each element of our proposed investment programme is required, and we have done this, providing additional supporting evidence. In particular, we have improved the transparency of the link between the unit costs submitted for comparative efficiency purposes, and how we have derived costs for our proposed investment programme.

3.5 Ofwat's baseline document confirmed that our approach to asset management was amongst the best in the industry. Nevertheless, Ofwat reduced the allowed investment in maintaining service under its scoring mechanism. We do not agree that necessary maintenance investment should be reduced for companies which are assessed as leading, and so we have decided not to reflect Ofwat's proposed adjustment in this Final Business Plan.

3.6 Ofwat's baseline also confirmed that we are amongst the most efficient water and wastewater companies. Ofwat sets allowed capital expenditure on the basis of a central estimate of costs for a company of average efficiency. We have not pre-empted an adjustment for this in our plan, which is based on our own efficient level of costs. Ofwat has said that it will include the baseline efficiency adjustment it calculates as a result of the updated comparative efficiency assessment in its Determinations.

3.7 Some operating costs have continued to move upwards, leading to a slight increase overall of £1m. Energy prices have abated substantially and our forecasts are £9m p.a. lower than in the Draft Business Plan. However, we now have better information on likely increases in annual business rates, which we estimate to be around £33m p.a. more than in 2007-08 by 2014-15, and £12m p.a. more than assumed in the Draft Business Plan by 2014-15. We anticipate that Ofwat will reflect actual rates costs at the time of the Final Determination.

3.8 Despite the well-publicised deterioration in global financial markets, which has resulted in a substantial increase in our pension deficit, we have allowed only a marginal increase in the cost of pensions since the Draft Business Plan. We have written separately in relation to the current deficit estimates and the status of discussions with our pension scheme trustees regarding future contributions.

3.9 Our operating cost efficiency adjustment in the Draft Business Plan was based on our comparative efficiency performance for 2006-07. Our relative efficiency position on the sewerage service deteriorated in 2007-08 and so we have applied a more challenging efficiency adjustment in our Final Business Plan. We have followed Ofwat's approach to setting efficiency targets and we anticipate that if our position has improved in 2008-09, this will be reflected in Ofwat's Final Determination.

3.10 Since our Draft Business Plan we have completed our revaluation of assets held in March 2008. The resulting more robust valuations have increased our charge for Current Cost Depreciation (CCD) by around £100m compared to Draft Business Plan. Looked at over the long term our CCD is broadly consistent with what we need to invest in maintaining our above-ground assets.

3.11 We have assumed that the current uncertainty in the financial markets will not be prolonged and that we will return to more stable conditions in 2010. We require a cost of capital of 4.9%, which reflects the increased financing costs since the delivery of our Draft Business Plan. This is conditional on economic recovery during AMP5, and it is important to be clear that our required cost of capital would not be sufficient if current conditions were maintained. We expect Ofwat to provide greater clarity about potential regulatory responses, and in particular how the Substantial Effects clause might be used, in such conditions.

3.12 The overall impact of these and other changes is to reduce our average bill increase from 0.7% p.a. to 0.6% p.a. This remains in line with our strategic aspiration for price rises of no more than 1% p.a. on average over the next 25 years. We have made significant effort to challenge investment needed and to reduce operating costs where we can.

4 Context and background

Achievements in AMP4

4.1 During AMP4 we have made significant progress in improving the reliability, efficiency and quality of services to customers. Ten particular highlights are:

- Achieved the highest OPA score in the industry for two consecutive years in 2006-07 and 2007-08.
- Lowest overall K factor in the industry.
- Made a step change in meeting our promises to customers by increasing the number of jobs completed within levels of service from 54% in 2003-4 to over 90% in 2008-9. We have extended our service guarantee to all customer jobs.
- Significantly improved the relative efficiency of the business in relation to operating costs and in delivering capital investment.
- Achieved our best waste water compliance results ever, despite more and tighter consents, regaining stable serviceability.
- Managed through the drought of 2006 without the need for hosepipe bans. We tightened our leakage targets in resource-constrained areas.
- Created a single view of the infrastructure requirements needed to support growth in the region, by working with others to bring together spatial strategies and water cycle strategies.
- Concentrated our management of operations in a new Operating Management Centre which has improved the control and speed of response to routine maintenance, customer call outs and unplanned incidents.
- Delivered our capital programme, each year, on target, including ‘early start’ schemes.
- Developed our capability through a Licence To Operate qualification required of all our operators.

Our strategy

4.2 Our Strategic Direction Statement, published in December 2007, outlines our long-term strategy. A diagram summarising our approach can be found inside the front cover of this document. The focus of our strategic goals over the next twenty-five years is to:

- keep bills at current levels of affordability
- increase the resilience and reliability of our water and wastewater services
- secure and conserve water resources
- anticipate and invest for growth in our region
- improve the environment
- mitigate and adapt to the impacts of climate change
- improve our efficiency and flexibility.

4.3 We are confident that we will make substantial progress toward meeting these goals.

Consulting our customers and others

4.4 We have undertaken the largest programme of consultation ever done by Anglian Water. This began in early 2006 and has been highly influential in shaping our long-term strategy and our Draft and Final Business Plans. We place a high value on this approach and it will continue into AMP5. We have consulted:

- residential and business customers, customer representatives including the Consumer Council for Water (CC Water), community and consumer bodies such as the Citizen's Advice Bureau and Rotary, business groupings such as the Confederation of British Industry (CBI) and Chambers of Commerce
- the Drinking Water Inspectorate, the Environment Agency and Natural England
- national, regional and local government in our region including regional assemblies, city and county councils and unitary authorities, Government Offices, together with Defra and Department for Communities and Local Government (DCLG)
- other organisations involved with the challenge of planning for sustainable growth in our region such as the Association of Drainage Authorities, land and housing developers, and development agencies
- organisations and individuals involved with sustainability, environmental and heritage issues such as the East of England Climate Change Partnership, the Tyndall Centre, the Wildlife Trusts, the Sustainable Development Forum, the East of England Biodiversity Forum and English Heritage.

4.5 We set out below a summary of the views of a number of these groups. We also set out relevant customer and other perspectives in the following sections of this document.

Figure 4.1 Customer and other perspectives

	Domestic customers	Business customers	Consumer Council for Water	Environment Agency	Natural England	Drinking Water Inspectorate	Developers	Regional authorities and agencies
Drinking water quality	●	●	●	○	○	●	●	●
Low water pressure	○	○	⊙			○		
Resilience	●	●	●	⊙	⊙	●		●
Planning for growth	○	⊙	⊙	●	⊙	○	●	●
Climate change	⊙	○	⊙	●	●	⊙	⊙	⊙
Domestic customer metering	○		⊙	●	⊙			○
Smart meters		⊙	⊙	⊙	⊙		⊙	⊙
Water efficiency	⊙	⊙	⊙	●	●		⊙	⊙
Leakage	●		⊙	●	⊙			
Sewer flooding	●	○	●	⊙	⊙			⊙
Sewage odour	⊙		○					⊙
Environment and biodiversity	○			●	●		○	○
Catchment management			○	●	●	●		⊙
Recreation facilities	○		○		⊙			○
Customer service	●	●	●			○		
Affordability of bills	●	●	●		○			○
Support for vulnerable customers	⊙		●					
Added value services		●					⊙	⊙
Anglian Water employees			○	○	○	○		

● very high priority ⊙ important priority ○ priority (lower priority)

Talking to our customers

4.6 We talk regularly to our customers and listen to their views so that we can better understand their opinions about the service we provide. We have collated their views from our own customer research, including focus groups and large surveys, from research conducted at an industry level on behalf of all sector regulators, consumer representatives and companies, and from discussions with others, including the Consumer Council for Water.

4.7 Most of our research was conducted ahead of our Draft Business Plan. Some important common themes emerged:

- a large majority of customers are satisfied with the services that they currently receive, a consistent finding over many years of surveys
- the highest priority is placed on maintaining safe, reliable drinking water supplies and an effective wastewater service
- customers expect us to quickly and efficiently tackle leakage and they see the extension of metering and encouraging greater water efficiency as an important part of our role
- customers have an increasing concern about climate change
- around two thirds of our customers are prepared to pay more for improved services, of which the reduction in sewer flooding, reducing the risk of supply interruptions (especially of long duration) and improving the taste and odour of water were most frequently cited as priorities
- a substantial minority of residential customers would be concerned about any increase in bills.

4.8 Views of residential and business customers converge on many points, although business customers vary in their willingness to pay more for improved services, reflecting the differing circumstances of businesses in the region. Business customers place greater emphasis on value for money than on price levels and also emphasise the importance of providing secure water supplies and wastewater services. They also highlight the need to provide infrastructure for growth, to help underpin the economic well-being of their businesses as well as the region.

Feedback on our Draft Business Plan

4.9 National research was carried out after companies' business plans were published in August 2008. This research canvassed the opinions of around 300 of our customers within a much larger national survey. It was conducted in November and December 2008, after the onset of the global financial crisis, but at an early stage of the current recession.

4.10 The research confirmed that a large majority of our customers remain satisfied with the services that we currently provide. Around two thirds of those sampled found our plans and the impact on bills to be acceptable as a whole, whilst only around 20% of customers rated our Draft Business Plan as poor value for money. This picture is similar to that presented by our own research, conducted before the Draft Business Plan and the onset of the current recession. It is not out of line with responses to other water companies' plans and is more positive than research conducted at a similar stage at the 2004 Price Review.

4.11 The Board and/or Executive Directors have met with the Consumer Council for Water on at least five occasions since we submitted the Draft Business Plan, to gain feedback on our proposals. In particular, the Consumer Council for Water would like to see:

- a smooth profile of price increases, avoiding a large increase in year one compared with other years
- further investment to prevent sewer flooding (it supports our Final Business Plan proposals to reduce sewer flooding)
- affordable price increases, especially for unmetered customers and a recognition that Hartlepool customers are affected more by the differential in price increases for unmetered customers
- more focus on introducing smart metering.

Regional Expert Opinion Panels

4.12 At the outset of the 2009 Price Review process, we established five independently-chaired Regional Expert Opinion Panels consisting in total of around 60 individuals, representing customers, consumer and citizen groups, business, local and regional government bodies, non governmental organisations, development authorities, academia and special interest groups.

4.13 These groups have provided valuable and insightful feedback by:

- allowing more in depth consideration of issues and priorities than is possible in a survey
- discussing issues that are important in service provision but which are not usually visible to customers directly, e.g. planning for growth
- giving an independent and considered view.

4.14 Views and interests varied between panels and their members, but on some matters there was consistency. All panels emphasised the need for Anglian Water to play a proactive role in tackling the challenges of growth and of climate change. The panels have challenged us to rethink how we can meet, in a sustainable way, our customers' expectations in a region which is already water-stressed and faces increasing pressures from a changing climate, as well as growth and demands on the environment. Collaborative working is seen as a key to future success.

4.15 Panels emphasised the importance of water conservation and of Anglian Water taking a leading role in promoting this. Metering was regarded as the fairest way of charging, and the panels recognised that our success in having 63% of households billed on the basis of a meter was towards the forefront of the water industry. They strongly recommended the extension of metering to other customers, together with the introduction of smart metering technology. Panels encouraged the innovative use of tariffs both to encourage water conservation and to address affordability concerns.

Regional growth

4.16 Dealing with the impact of growth in our region, which is uniquely affected by potential climate change, is one of our major challenges. Government is planning a major programme of house-building over the coming decade, but while the current recession will have an impact on progress in the short-term, it is unlikely to change longer term growth targets. Indeed, the government has instructed regional planning bodies to test current statutory plans for significantly higher levels of housing across our region reflecting the underlying social, demographic and economic need.

4.17 The provision of water and wastewater infrastructure is essential for growth. We see the experience and expertise we have to offer as essential to the planning process. Failure to provide timely effective infrastructure would be seen as an impediment to development.

4.18 In recent years, we have put substantial effort into understanding and influencing key planning processes so that we can provide the essential infrastructure at the right time and in the most cost-effective way possible. To do so, we have been working closely with local government and planning bodies, the Environment Agency, central government and others. A number have written to us in support of our approach, commending our use of statutory spatial plans as a key source of planning assumptions.

Conclusion

4.19 We have carefully considered all feedback as we have refined this Final Business Plan. Affordability is a top priority for our customers as well as ourselves. We deal with this issue in Section 5. Our Final Business Plan also includes an increase in investment in schemes to alleviate sewer flooding and plans for a more extensive trial of smart meters. Growth remains a key priority and has been a principal consideration throughout the drafting of this Plan.

Final Business Plan: Part A
Bills and affordability

5 Bills and affordability

The views of customers and stakeholders

When asked about their willingness to pay for service improvements, about a third of customers would prefer to see bills stay at current levels and forego enhanced services. However, two thirds of customers are prepared to pay for service improvements, in some cases large amounts.

Strategic Direction Statement - our 25 year plan

Limit increases in bills to current affordability, with an aspiration to limit annual bill increases to an average of 1% p.a. above inflation for the next 25 years.

5.1 At a time of economic uncertainty, we know that more than at any time in the past, our customers are looking to us to provide a reliable and efficient service, at a fair and affordable price. In preparing our Business Plan, this has been our overriding priority too. We are pleased that we have been able to limit our bill increases to around 0.6% p.a. over the period 2010 - 2015. At less than 1% p.a., this meets one of the principal and most important aspirations of our Strategic Direction Statement.

Table 5.1 Price limits and bills

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	% Average change p.a.
Proposed K factor		8.0%	1.3%	2.5%	1.7%	0.1%	2.7%
Average Bill (£) [1]	£362	£384	£382	£382	£380	£373	
Change in average bills (%)		6.2%	-0.4%	-0.1%	-0.6%	-1.9%	0.6%

1. 2007-08 price base

5.2 Overall, we believe that the package of measures described represents value for money for customers. Savings from past efficiencies, together with out-performance and lower costs of finance have reduced pressure on bills. This has allowed us to make the investments required to maintain and enhance service, provide for growth, and meet our obligations. A large proportion of the costs associated with the forecast growth in our region will be covered by revenue from new customers as well as contributions from developers.

Figure 5.1 Movements in average bills

5.3 We are fully aware that the step change in bills in 2010-11 may increase the challenge that our customers face in budgeting to pay their bills. It is possible to smooth the profile of price increases, as set out in Table 5.2 'Alternative Profiles' but most of these options will increase customers' overall bill by 2014-15. We will therefore consult customers and their representatives on their preferred bill profile to help inform Ofwat's Determination.

Table 5.2 Alternative Profiles

	2010-11	2011-12	2012-13	2013-14	2014-15	Average K p.a.	Average bill in 2014-15	Average change in bill p.a.
Option 1	3.7%	3.7%	3.7%	3.7%	3.7%	3.7%	£390	1.5%
Option 2	5.0%	5.0%	1.8%	1.8%	1.8%	3.1%	£379	0.9%
Option 3	6.3%	6.3%	0.0%	0.0%	0.0%	2.5%	£369	0.4%

Metering and typical bill impact of price increases

5.4 We have taken the greatest care to review our customer profile in line with our proposed pricing structure, with the purpose of:

1. identifying any groups who will be particularly vulnerable to price increases
2. offering customers a fair and reasonable choice of tariff based on individual circumstances
3. encouraging as many as possible of the 37% of households who are not currently charged using a meter to switch and take advantage of alternative affordable tariffs.

5.5 The price increase shown on an individual bill is different from the K factor, principally because of the effect of existing customers switching to a metered basis of charging. Over AMP4, our customers saw the average residential bill rise by around 7% in real terms, which

was the lowest of all water and sewerage companies (industry average 19%). During AMP5, our plans will result in the average bill rising from £362 in 2009-10 to £373 in 2014-15, an increase of 0.6% p.a. in real terms, over five years.

5.6 We have a clear and long-standing strategy to increase the level of metering across our dry, water-stressed region. We believe that metering is the fairest way to pay for water and is an effective driver for much greater water efficiency. This is in line with government strategy, as set out in Future Water.

5.7 Our metering programme is an important part of our business strategy overall. As a water stressed area we are required to consider compulsory metering, and we favour a phased approach. Over AMP5, we plan to increase meter penetration from 63% to 80%. We require new sources of water supply and will pursue all credible demand management options. We do not, at this stage, favour compulsory metering, as our customers tell us that they are strongly against it. So we favour a programme that includes cost beneficial measures to accelerate the rate of metering.

5.8 Increasing levels of metering mean that a typical unmetered customer will see higher price rises than a typical metered customer, as existing cross subsidies between metered and unmetered customers unwind, an outcome of the tariff setting mechanism. Table 5.3 'Typical bills' shows the household bill movements that will be experienced by a typical metered or unmetered customer who starts and ends the period on the same tariff, in the same property (unmetered customer) and with the same level of consumption (metered customer).

Table 5.3 Typical bills

	2009-10	2014-15	% Average change in typical bill p.a.
Metered - water	£142	£157	2.0
Metered - sewerage	£182	£188	0.7
Unmetered - water	£198	£271	6.6
Unmetered - sewerage	£240	£288	3.7

5.9 Metered residential customers, who form the majority of our customer base, will therefore see their bills increase by substantially less than unmetered customers. The impact on unmetered customers will vary, because properties with a high rateable value will attract a greater proportionate increase.

Affordability of our bills

5.10 The ability of low income households to afford their water bills is a major concern for government, customer representatives, regulators and water companies. A number have raised concerns about the prospect of real terms increases in the typical bills of those least able to afford them.

5.11 Overall, we believe that our proposed pricing structure will meet the expectations of the great majority of our customers. However, concern has been expressed about the impact of price rises on the less well off. Through the range of tariff options we have developed over the last 15 years, we can now ensure that the following vulnerable customers are protected:

- customers on low incomes and in receipt of benefits using more than 75m^3 p.a., or customers with a medical condition that requires high water use, can take advantage of either the Aquacare Plus or the Watersure tariff
- customers using less than 75m^3 p.a. can choose our SoLow tariff.

5.12 The vast majority of our unmeasured customers who are less well off, and are in receipt of benefits, will benefit from switching to a meter. There is a small minority of such customers who live in houses with a low rateable value, but who have a high demand for water. These customers are receiving a large cross subsidy and would not benefit by switching. Our research indicates that this group is no more than 1,000 customers in the Anglian region. We are able to consider other ways to provide assistance to them.

5.13 In addition to alternative metered tariffs, we already have a number of measures in place to protect vulnerable customers, whether indebted or not:

- our Watercare register identifies those who are particularly vulnerable to interruption or deterioration of water supplies
- the Anglian Water Trust Fund provides financial assistance to certain eligible customers
- an assessed measured charge is available where it is not possible to fit a meter and customers wish to switch to a meter
- all customers choosing to move to a measured supply may switch back to an unmeasured basis of charging after metering. We have recently extended the duration of this protection to two years
- we encourage all customers having difficulty paying their bills to switch to a measured supply where it will help save them money
- quarterly billing for some customers having difficulty with debt, making it easier for them to budget
- detailed earnings and expenditure assessments for those with debt problems
- a targeted marketing campaign focused on health centres to identify vulnerable customers.

5.14 We will continue to take tough action to recover debt from those who 'won't pay' their bills, regarding this as being fair to all customers.

5.15 We are considering further measures to help those customers who are in debt, recognising that this is likely to be an increasing problem during recession. We plan to implement measures which are self-funding due to lower default rates. We are also considering how we might better reach those who are vulnerable but close to default and extend assistance to them too. For example, we are looking at working with the Citizens Advice Bureau to identify and target assistance to vulnerable customers. We are also considering offering those in default the option to move immediately to an assessed measured charge if the move to a metered supply cannot take place within a specified period.

Conclusion

5.16 We believe that our plans reflect a reasonable balance between the need to maintain our service and meet our obligations, with fair and reasonable prices to customers in a very challenging operating and financial environment. We will work continuously to improve the range of measures available to our more vulnerable customers.

Final Business Plan: Part A

Our proposed investment programme

£0.9 million scheme to increase surface-water sewer capacity for a new development, and to reduce the risk of flooding in Cromer, Norfolk.

6 Our proposed investment programme

A balanced investment programme

6.1 We believe that this Plan will deliver sustainable operations over the long-term given the considerable challenges and risks that we face in our region. It takes account of the feedback received from Ofwat and a wide range of others. We remain highly focused on achieving our key objectives:

- to maintain our services at current high standards while keeping increases in bills to an affordable minimum
- to provide for growth in our region in a changing climate
- to improve levels of service to customers where benefits justify the costs
- to enhance the quality of drinking water and the environment as required by legislation.

6.2 The investment plan requires a £380m (20%) increase in investment compared with the current five year period. This is before efficiency and real price increases. There are six main drivers to increase investment:

- the need to maintain a growing and ageing asset base: this requires an increase of £50m (5%) for capital maintenance on a like for like basis, and £85m (8%) for exceptional items
- an increase of £179m (68%) to provide for the significant growth that is planned for our region. In total, £443m will be required over the next five years
- improvements in the standard of resilience for our customers, with additional investment of £58m in AMP5
- the impact of climate change, with investment of £37m to reduce the risk of flooding of assets
- investment of £61m to meet the requirements of the Security and Emergency Measures Direction
- these are offset by a reduction of £97m in investment needed to meet water and wastewater quality obligations.

6.3 Additional annual operating costs of £24.3m will be required by 2014-15 to operate new assets and meet new legal and regulatory requirements.

Summary of investment

Table 6.1 Capital investment by expenditure category

Investment Driver	Capital investment (£m) [1]	Change in operating costs in 2014-15 (£m)
Capital maintenance - water	557	0
Capital maintenance - wastewater	642	0
Total maintenance investment	**1,199**	**0**
Quality - water	130	1.7
Quality - wastewater	310	8.9

Investment Driver	Capital investment (£m) [1]	Change in operating costs in 2014-15 (£m)
Supply demand - water	281	6.8
Supply demand - wastewater	162	6.7
Enhanced service	178	0.2
Total enhancement investment	**1,061**	**24.3**
Total investment	**2,260**	**24.3**

1. 2007-08 price base, net of contributions

6.4 Planned capital expenditure is profiled over AMP5 as shown below. Figures include AMP5 elements of our planned programme for AMP6.

Table 6.2 Capital expenditure profile over AMP5

	2010-11 (£m)	2011-2012 (£m)	2012-13 (£m)	2013-14 (£m)	2014-15 (£m)	Total (£m)
Maintenance	243	269	247	223	217	1,199
Enhancement	124	247	267	230	193	1,061
Total	**367**	**516**	**514**	**453**	**410**	**2,260**

Capital Incentive Scheme baseline

6.5 We assume that Ofwat will set its final Capital Incentive Scheme (CIS) baseline on the basis of a company of average efficiency. We have therefore assumed that Ofwat will adjust assumed capital expenditure in its Determination in accordance with the CIS mechanism to take account of relative efficiency compared to other companies in the industry. We understand that the adjustment will be calculated by Ofwat on the basis of unit cost data submitted by all water companies at the same time as this business plan and is therefore currently uncertain.

6.6 In line with Ofwat's advice, we have not made any assumption about the size of this adjustment in this Final Business Plan. The latest information on relative costs (collected by Ofwat in March 2008) suggests we achieve better than average efficiency in capital delivery. We have, over AMP4, been particularly effective in driving down the unit costs in our planned investment programme and customers continue to benefit from this.

Our investment programme in detail

6.7 Our investment programme is split into four broad areas:

- maintaining service to customers
- protecting and improving drinking water quality and the environment
- providing for growth
- improving services to customers.

6.8 The following four sections describe each of the four areas of our investment programme in more detail. It is structured in the following way:

The views of customers and stakeholders

We report the views of our customers and stakeholders.

Strategic Direction Statement - our 25 year plan

We provide the link to our 25 year strategy as published in the SDS.

Our plans for 2010 to 2015

We summarise our plans for the next five years.

Supporting evidence

We provide our supporting evidence for our plans.

Investment

We provide more detail of our planned investment.

Final Business Plan: Part A

Maintaining service to customers

Water jetting of sewers to ensure they remain free-flowing. The latest generation of vehicles re-cycle their water, reducing waste and improving efficiency.

7 Maintaining service to customers

The views of customers and stakeholders

A large majority of our customers are satisfied with their water and wastewater services.

Customers consistently tell us that providing safe, reliable, clean drinking water and the removal and treatment of wastewater should be our highest priorities.

They want to see effective maintenance of the infrastructure as well as an efficient system for repairs to pipes, especially leaks.

Our Regional Expert Opinion Panels support the views of our customers. They particularly highlight the need for us to:

- continue to meet the water quality standards set by regulators
- invest to prevent leakage from our water network
- undertake adequate preventative maintenance to help avoid flooding.

Continuing investment in the capability of our employees is also a priority for panels, who believe that it is essential that we have well qualified people working to deliver our plans and service to customers.

Strategic Direction Statement - our 25 year plan

Approach to asset management and investment planning

Make investments and operational changes to balance risk, service and cost over the lifetime of our assets.

Collaborate with suppliers using commercial incentives to encourage innovation and continual improvement.

Maintenance of water supply assets and networks

Replace at least half of our 6,000km uPVC (unbranched polyvinyl chloride, a type of plastic) pipes by 2035.

Replace all 10,000km of iron mains over 50 to 60 years.

Replace all remaining asbestos cement mains.

Replace or refurbish many of our water storage reservoirs and towers.

Renew or refurbish advanced treatment processes (e.g. for nitrate or pesticide removal) at over 100 water treatment works.

Replace 500,000 domestic water meters in AMP5 and 300,000 in later AMPs.

Maintenance of wastewater supply assets and networks

Renew c50% of cast iron and uPVC rising mains over 30 years.

Refurbish pumping stations that we have built over the last 20 years.

Maintain a steady increase in rate of sewer rehabilitation and replacement.

Renew plant that we have already installed to meet the higher environmental standards taking effect over the next 15 years.

Our plans for 2010 to 2015

We have generated our capital maintenance investment plans using sophisticated validated and calibrated models and tools which allow us to balance service, cost and risk. To maintain serviceability to our customers at current levels we plan to undertake the following activities:

Water infrastructure (below ground assets)

- rehabilitation of 541km of water mains
- maintain the economic level of leakage levels between 210-220 Ml/d
- continuation of repairs to customers' service pipes
- cleansing of 19,000km of water main
- protection of the shorelines at three reservoirs.

Water non infrastructure (above ground assets)

- replacement of 607,000 domestic water meters that are at the end of their useful life
- significant refurbishment or additional treatment at seven water treatment works
- minor refurbishment at 39 water treatment works
- inspection of over 200 storage reservoirs
- refurbishment or replacement of 29 groundwater boreholes.

Wastewater infrastructure (below ground assets)

- rehabilitation of 300km of sewers and rising mains
- CCTV of 500km of sewer to assess the condition of the network
- jetting of 1,250km of sewer to prevent blockages returning.

Wastewater non infrastructure (above ground assets)

- refurbishment of more than 150 wastewater treatment works
- refurbishment of five sludge treatment plants
- refurbishment of 500 sewage pumping stations.

Management and General

- replacement of our telemetry system
- replacement of over 3,000 desk top computers
- upgrading of our SAP system
- continued management of our 49 Sites of Special Scientific Interest (SSSI)
- maintenance of access arrangements to the public at our reservoirs.

Supporting evidence

Ofwat's Capital Baseline issued in December 2008 shows that Anglian Water achieved the highest overall score. Our record over the last four years, taken together with third party endorsements and performance against service levels demonstrates the effectiveness of our approach to asset management.

We are committed to achieving best practice in the management of our assets. The investment programme that we have proposed is the minimum we need to refurbish or replace individual pieces of equipment and components of our infrastructure 'just in time' to maintain services to customers. Our six stage approach, illustrated below, balances risks, service performance, costs and benefits.

Our approach starts with our strategic objective to deliver a reliable supply of safe, clean drinking water and to supply effective waste water services. This strategic objective is further defined by 21 quantifiable service measures. The performance and risk of failure of individual pieces of equipment (for example, pumps, tanks or pipes) is then assessed in terms of the impact on those defined service measures. This allows us to formulate highly targeted investment plans for replacing or refurbishing specific items of equipment at the most appropriate time, taking account of the characteristics of each item and its importance to the overall performance of the treatment plant or network.

Our detailed understanding of asset by asset performance and risk at a process or works level enables us to avoid the premature replacement of serviceable equipment and hence we can maintain service at a lower cost.

Risk assessment defines the probability of failure by considering i) the probability that an asset will fail and ii) the probability that the asset failure will cause a service failure. We believe that our approach is unique in the water industry. We are therefore able to reach appropriate decisions, for example, we may determine that there is no need for proactive maintenance because of the existence of standby capacity (which means failure of one piece of equipment does not cause an immediate service failure). We derive a monetary value of the consequences of service failure from internal data, customer willingness to pay studies and published data. This process provides a relative and consistent risk evaluation.

We have undertaken large surveys of residential and business customers to understand the value that they place on current services and potential improvements. A variety of other information has also been used to help us value the benefits of potential investments. We have used these values to inform the cost benefit analysis which has been used in choosing an intervention (e.g. replace, refurbish, fix on fail) at the lowest level. The scope and timing of this solution at lowest cost helps us to build up a cost effective plan to maintain stable serviceability to our customers.

Our achievements

- stable serviceability to customers in all service areas
- improved wastewater compliance
- reduction in sewer collapses
- delivery of excellent quality drinking water
- two years with the leading Overall Performance Assessment score
- identified as an efficient company
- meeting our obligations under the National Environment Programme
- connecting nearly 7,000 properties to our wastewater network for the first time
- delivery of enhanced biosolids treatment facilities
- improved resilience of our water supply network.

Our approach to asset management

This approach will give us the correct balance of service, cost and risk through the knowledge that we:

- have the right level of Investment (capex and opex Costs)
- can set and achieve the right level of service
- are operating with an acceptable level of risk
- are providing value to our customers.

This has been achieved by implementing best practice asset management:

- investment linked to day to day activities
- corporate data used extensively
- fully risk based
    - probability of asset failure

  - probability of service failure (allowing for resilience and redundancy) linked to 21 service measures
  - cost consequence values are monetised
- full validation and calibration of 332 deterioration models and tools covering over 300,000 items of equipment
  - statistically validated
  - validated against actual failures
- service impact modelling at 6,155 sites
- full validation and calibration of 17 multi variant (complex) pipe classes deterioration models covering over one million separate pipes
  - with greater than 80% confidence
  - validated against actual failures
- service impact modelling of over 81,000km of pipes
- investment priced using over 700 validated and calibrated cost models with the majority using corporate data with:
  - direct linkage with deterioration models
  - solution templates for consistent pricing
- use of private, social and environmental benefits linked to 21 service measures
- full cost benefit analysis for investment.

Investment

Table 7.1 Investment in maintaining service to customers

Investment Driver	AMP5 Capital investment (£m) [1]	Change in operating costs in 2014-15 (£m p.a.)
Water infrastructure	230	0.0
Water non-infrastructure	249	0.0
Wastewater infrastructure	163	0.0
Wastewater non-infrastructure	363	0.0
Management and General	194	0.0
Total	**1,199**	**0.0**

1. 2007-08 price base, net of contributions

We plan to increase expenditure in capital maintenance by 5% in AMP5 compared with AMP4. Exceptional items increase expenditure in AMP5 by a further 8%. These include step changes in expenditure, for example investment previously included as quality investment (Biosolids £24m), or maintenance investment that has not been required to date, such as investment in shoreline protection at our three major raw water reservoirs at Rutland, Grafham and Pitsford (£12m).

It is to be expected that maintenance will need to increase given the £4.4bn of enhancement investment since privatisation, required to meet environmental and drinking water quality standards. This growing asset base includes many short-lived assets (typically mechanical and electrical treatment processes) which are approaching the end of their useful lives.

Our investment in maintenance does not aim to provide improvements in the current levels of service but to maintain the current high standards. We have identified some aspects of our service which customers see as a priority for improvement and are willing to pay for. We discuss this in Section 10: Improving services for customers.

Our integrated investment plan balances service, cost and risk and allows for overlaps with the enhancement programme and is a total package to ensure we maintain service to our customers.

Final Business Plan: Part A

Protecting and improving drinking water quality and the environment

As a result of our successful reintroduction project, ospreys are breeding in England again after an absence of more than 150 years. This magnificent bird is now a relatively common sight at Rutland Water.

8 Protecting and improving drinking water quality and the environment

The views of customers and stakeholders

Our customers have told us that safe, clean drinking water is an over-riding priority. It is the area of service that would cause customers most concern if our Plan proposed were delayed or stopped.

It is also an important priority for our Regional Expert Opinion Panels who agree that we must continue to meet, and where possible exceed, the quality standards set by our regulators. They also support a risk based water safety plan approach.

Protecting and improving the environment is a key priority for our panels. They want us to have a role in making the region 'a great place to live' by helping achieve a balance between the needs of people and wildlife. Our panels support an integrated catchment management approach working in partnership with others. They challenge us to make the most of opportunities for multi-purpose schemes and softer engineering approaches, for example, using shallow fenland reservoirs to develop water resources while enhancing biodiversity. They also want to see us continue our commitment to set and meet targets for biodiversity.

Climate change is an issue of increasing priority for our customers. Our panels also consider this an important area and want us to adapt to the challenges it presents as increasingly extreme weather events lead to increased risk of flooding and drought. They want us to reduce our carbon emissions and act innovatively and responsibly working in partnership with others, to mitigate the impact of climate change.

The proposed quality programme reflects the overall guidance from our Quality Regulators: the Environment Agency, the Drinking Water Inspectorate and Natural England, and has been subject to challenge and Cost Benefit Analysis.

Strategic Direction Statement - our 25 year plan

Drinking Water Quality

Maintain excellent drinking water quality achieving compliance with standards.

Promote and implement approaches to improving raw water quality that consider complete water and nutrient cycles over entire river catchments.

Our obligation to protect and improve the environment

Implement all legislative obligations.

Challenge the need for higher standards of quantity or quality where not cost beneficial or sustainable.

Sustainable recycling of sewage sludge

We will recycle most biosolids to land but investigate alternatives to mitigate against loss of the disposal route.

Connecting communities

Continue to connect rural communities to our sewer networks.

Adopt privately owned sewers.

Greenhouse gas emissions

Reduce carbon emissions by 50% of 2010 levels by 2035.

Biodiversity

Implement regional biodiversity action plans.

Our plans for 2010 to 2015

Drinking water quality

Additional treatment due to deteriorating raw water quality at five water treatment works.

Relocation of one water treatment works where the raw water is at risk from groundwater pollution.

Catchment management solutions for 20 water sources classed as high risk from nitrates, pathogens and/or pesticides.

Provision of a risk-based package of measures to meet the new more stringent standard for lead.

Enhanced security at operational sites in line with government requirements.

Implementing measures to reduce risks from *Cryptosporidium* at three priority sites.

Wastewater quality

Additional wastewater treatment to reduce nutrients and other parameters in effluent required by the National Environment Programme.

Advanced hydrolysis and digestion plant at eight biosolids treatment centres in continuation of our ten year strategy.

New biosolids stockpiling and composting facilities in continuation of our ten year strategy.

Installation of storm tanks at four sites.

Enhanced security at operational sites in line with government requirements.

Provision of first time sewerage connections for 3,000 homes where duty has been assessed or is likely to be assessed.

Supporting evidence

We have discussed our proposed quality programme with our quality regulators, the Drinking Water Inspectorate (DWI), Environment Agency (EA) and Natural England (NE), where appropriate, challenging the need for and benefits of specific schemes. In line with the expectations of the DWI, and as required under the Water Supply (Water Quality) Regulations 2000, we have used our risk-based Drinking Water Safety Planning approach to identify where quality schemes are needed. We have undertaken detailed risk assessments across all of our supply systems, from catchment through our water treatment works and within our distribution system to identify those risks that need to be addressed.

The DWI supports all of the schemes or packages of schemes included in our proposed plan.

We have established working groups with the DWI and the EA which have met regularly throughout the development of our proposed plan. We also established five way panel meetings with the DWI, EA, NE and Consumer Council for Water, which meet regularly to discuss key aspects of our proposed plan. The EA and NE are also active members of our Environment Regional Expert Opinion Panel.

During the course of AMP5, we propose to deliver 38 first time rural sewerage schemes. These will meet accepted duties in accordance with Section 101A of the Water Industry Act 1991. For a capital investment of £70 million nearly 3,000 homes in 42 communities will be able to connect to a mains sewer for the first time.

Our Certifier has confirmed that our proposals meet the111 requirements of the SEMD (Security and Emergency Measures Direction), the associated Advice Notes and other related documents having similar status, and conform to the guidance contained within these documents. We have allocated expenditure in this area to quality enhancements and we propose to deliver the outputs over two AMP periods.

Investment

Table 8.1 Investment in protecting and improving drinking water quality and the environment

Investment Driver	AMP5 Capital investment (£m) [1]	Change in operating costs in 2014-15 (£m p.a.)
Protecting drinking water quality	75	1.1
Protecting and improving the environment	149	7.0
Sustainable disposal of sewage sludge	86	0.8
Providing sewerage service to rural communities	70	1.1
Security and Emergency Measures Direction	61	0.6
Total	**440**	**10.6**

1. 2007-08 price base, net of contributions

The carbon impact of our plans

Not withstanding all of the efforts we are making to reduce carbon emissions, we estimate our reported operational carbon emissions will increase by 53.7 kt CO_2e [1] by 2015, an increase from our current baseline of 10%. Almost half of this reported increase in emissions arises because we are required to comply with the Carbon Accounting Guidelines, recently changed to exclude the benefit of energy generated from biosolids. The remainder arises from meeting our statutory obligations such as quality and growth schemes.

We continue to invest in improving the energy efficiency of our existing asset base, purchase green energy and generate renewable power. These activities contribute to emissions reductions within the UK as a whole. By 2010 we will have saved 50 GWh/y [2] of electricity through energy efficiency projects since 2006, and increased our renewable power generation from 11.5 GWh/y to 59.8 GWh/y. We expect to continue this progress throughout AMP5 focusing on the following areas:

- using less energy and transport fuels to operate our business
- generating renewable power from methane and wind
- purchasing green power where economically viable
- ensuring new assets are energy-efficient
- working with our supply chain to encourage carbon reductions and increase awareness of climate change.

1 kilo tonnes of carbon dioxide equivalent, the recognised measure of greenhouse gas emissions
2 gigawatt hours per year

Final Business Plan: Part A
Providing for growth

Checking a customer's meter. 65% of our domestic customers have a metered supply.

9 Providing for growth

The views of customers and stakeholders

Our customers expect us to plan for anticipated growth and new housing while at the same time continue to give over-riding priority to maintaining current good levels of service. Customer representatives are particularly concerned that increased demand on the sewerage network should not lead to more sewer flooding.

Our business customers are very concerned that lack of infrastructure does not impede business development and that we invest for the growth in housing that will support a growing population driving economic development.

Despite the current economic downturn, our stakeholder panels believe that we must continue to invest to ensure that adequate water and wastewater infrastructure is in place to support growth.

In meeting growth requirements, the panels emphasised the importance of collaborative working across the numerous organisations involved in planning for new development. This is a consistent message from representatives of regional assemblies, city and county councils, development agencies, government offices, and others involved in the planning process. Growth needs to be sustainable. Water efficiency and sustainable urban drainage need to be fully integrated into all aspects of planning, property design, land use and drainage management. Panels see opportunities for working together to deliver better flood protection and for multi-purpose schemes delivering biodiversity and recreation with surface water storage.

In providing for a growing population, customers have stressed the importance of minimising leakage. This is consistently ranked as a top priority in regular customer surveys. Panel members highlighted that action on leakage is essential if we are to be credible in promoting water efficiency to customers.

In general, customers regard metering as the fairest and best way to charge for water. They want to see us go even further in promoting efficient water use.

Panel members also emphasised the importance of our continuing to increase metering and taking a lead in encouraging water saving. Panels stressed the need to balance demand and supply and emphasised that water is a resource to be nurtured, borrowed and returned to our environment, not simply consumed. Panels would like to see more widespread use of smart meters in helping customers better manage water use.

Given the uncertainties regarding the rate of future growth, the panels believe that a modular approach with built-in resilience should be adopted when investing in capital projects.

Strategic Direction Statement - our 25 year plan

Securing a balance of water supply and demand

Secure and provide sufficient high quality water supplies.

Strategy for managing population growth focuses on: extending metering, wasting less water and making new supplies available.

Metering and water efficiency

Meter all residential customers by 2035, using enhanced metering programmes if proven effective in encouraging switching.

Encourage customers to switch voluntarily as the preferred option for extending metering.

Undertake trials of intelligent metering and adopt widely by 2035.

Make efficient use of water by customers a priority.

Encourage homes that use efficient fittings and appliances, promote changes in customer behaviours, consider the use of tariffs, and explore rainwater use and grey water re-use.

Leakage

Keep leakage at sustainable economic levels, lower than in other regions.

New water supplies

Develop substantial new water supplies by 2035, focusing on sustainable re-use of water resources and transfer of raw water from adjacent catchments.

Impact of growth on the wastewater service

Secure a sustainable wastewater service to meet the challenges of growth and climate change.

Invest in strategic treatment and sewerage to accommodate expected growth.

Adopt sustainable drainage schemes in new developments, preferably on a large scale.

Promote integrated water and spatial planning with local government and other partners, using water cycle studies as a key planning tool.

Our plans for 2010 to 2015

Supply and demand - water

Targeted enhanced metering of an additional 183,000 properties in water-stressed areas.

Trial of smart meters to assess the technology and potential benefits.

Water efficiency measures to help customers save water in water-stressed areas and further reduce demand during drought conditions.

Leakage control measures to maintain leakage at economical levels.

Eleven strategic resource schemes, including the development of a new 20 Ml/d source to make water available within individual planning zones.

Schemes to move water between planning zones, to resolve local supply / demand issues and to support growth.

Provision of 117,000 new connections to the water supply system for new customers, and recovery of appropriate grants and contributions from developers.

Supply and demand - wastewater

Additional treatment capacity at 28 sites to cater for growth.

Strategic network reinforcements including a key sewerage reinforcement scheme at Broadholme to support future growth.

Requisitions and adoptions of 800 km of gravity sewer and 100 km of rising main to support growth.

Recovery of appropriate grants and contributions from developers.

Supporting evidence

Our planned investment in both wastewater and water is based on forecasts of demand at planning zone level which reflect expected economic growth, demographic trends and numbers of connections. Demand is forecast for each of the discrete areas of the water supply network that are used for supply / demand forecasting. The Office of National Statistics is a primary source of data although we cross-check our forecasts against a number of other credible sources. In relation to housing, we have regard to regional spatial strategies and local development plans.

We have adjusted our forecasts in the light of the current recession. We are forecasting substantially fewer new connections in the short term and a longer recovery period. We have taken a cautious phased approach to meeting increased industrial demand for water on the South Humber Bank.

For the water service, we have used well-established methodologies to select from supply enhancement and demand reduction options to achieve an economic balance of supply and demand. Our business plan is consistent with our Water Resources Management Plan.

For the wastewater service, we have based our plans on a detailed bottom-up understanding of requirements at sewerage catchment level. This approach is a significant improvement on the past and has only been possible because of our extensive effort to engage with planning bodies and others in relation to predicted growth in our region.

The understanding gained from this collaborative approach has allowed us to develop well-targeted, least-cost investment plans which appropriately deal with local catchment circumstances and allow for a strategic approach to infrastructure. Our approach has been strongly supported by a range of stakeholders and our plan is crucial to the delivery of planned growth across our region.

We have estimated developer contributions and other income through a bottom-up assessment of costs that can be recovered. For water and sewerage requisitions we have looked at specific schemes included in our plan. We have tested our forecasts against previous contribution rates. It is worth noting that contributions tend to be lower in our region than national averages because higher than average revenue from new developments results in a higher offset against costs and consequently lower contributions being payable by the developer.

Investment

Table 9.1 Investment required to provide for growth

Investment Driver	AMP5 Capital investment (£m) [1]	Change in operating costs in 2014-15 (£m p.a.)
Water		
New sources of supply, associated treatment and demand management	150	6.8
Local extensions to water supply networks	180	0
Grants and Contributions	-49	0
Total water	**281**	**6.8**
Sewerage		
Additional treatment capacity	116	6.5
Network reinforcement and extension	115	0.2
Connecting new customers to the network	17	0
Grants and Contributions	-86	0
Total sewerage	**162**	**6.7**
Total	**443**	**13.5**

1. 2007-08 price base, net of contributions

We expect that the AMP5 Change Protocol will provide a process for agreeing additional investment during the period if economic recovery and growth is greater than allowed for in our projections. This is particularly important in respect of potential growth on the South Humber Bank.

Final Business Plan: Part A
Improving services for customers

40km of pipes are laid as part of a £115 million project around Rutland Water to meet increased demand for water and to improve the security of supply. The land affected is being fully restored to its original use.

10 Improving services for customers

The views of customers and stakeholders

A large majority of our customers are satisfied with the overall service that they receive from us. They expect us to provide reliable, safe services under almost all circumstances.

Our research indicates that customers would be willing to pay for improvements to certain aspects of our service. These include reducing the incidence of sewer flooding, reducing odour from sewage treatment works and the avoidance of supply interruptions. Our detailed research has allowed us to quantify, far more precisely than in the past, how much customers would be willing to pay for these improvements, allowing the development of a robust cost beneficial programme of investment to deliver higher service standards.

Sewer flooding

Customers have told us that flooding from sewers is unacceptable. They are willing to pay for improvements to reduce it. Our Expert Opinion Panels also consider that addressing sewer flooding should be a key priority. They believe that sewer flooding is unacceptable in today's society and counts as a massive service failure.

The Consumer Council for Water and our Panels felt that our proposals at Draft Business Plan did not go far enough to tackle sewer flooding and that we should increase investment in this area. The Consumer Council for Water believes that solving some problems would be justified even if not cost beneficial.

Odour

Customers are willing to pay for improvements in reducing odour from sewage treatment works. Our panels felt that this was also a key priority and were particularly keen that the problem was not exacerbated by housing growth.

Aesthetic quality of drinking water

Customers expect us to provide drinking water of the highest possible quality as it is a fundamental element of service. Taste, odour and colour of drinking water are important issues in terms of aesthetics and customers are willing to pay to improve it. Customers are less willing to pay to tackle water hardness, although this is experienced by a number of customers in our region.

Resilience of water supplies

Customers increasingly expect us to be able to maintain supplies under almost all circumstances and are willing to pay to reduce risks of supply interruptions, particularly those of longer duration. Dealing with the impact of flooding has become particularly important, with some customers citing the flooding events of summer 2007 as influencing their views.

Strategic Direction Statement - our 25 year plan

Flooding from sewers

Eliminate flooding caused by insufficient hydraulic capacity in sewers by 2020 except in exceptional circumstances.

Odour

Reduce cases of persistent odour nuisance to negligible levels.

Adaptation to climate change

Adapt our operations and assets to the impacts of climate change.

Increased resilience of water supply networks

Provide alternative supplies to major population centres in case of catastrophic outage.

Protection of assets from river and storm related flooding

Adapt our operations and assets to the effects of severe weather-related events.

Our plans for 2010 to 2015

Alleviation of the risk of sewer flooding through a cost beneficial programme which will provide

- permanent solutions for 153 properties currently at risk of flooding internally once in 10 years or more frequently
- permanent solutions for 60 properties currently at risk of flooding internally once in 20 years
- permanent solutions for 295 external areas at risk of flooding once in 20 years or more frequently
- mitigation measures for the remaining properties at risk and those expected to be identified as at risk over AMP5.

Reduction in odour from our wastewater assets through a cost beneficial programme.

Provision of resilient water supplies to populations of 50,000 or more, benefiting 707,000 people in total.

Increased protection from area flooding for the 27 water and 144 sewage treatment works most at risk.

Supporting evidence

We have applied a robust cost benefit test to all aspects of our investment programme. Our cost benefit analysis has been particularly important in deciding the extent of investment to improve services to customers. We have employed a variety of techniques, including three substantial customer surveys to derive values for the benefits of our proposed investments.

The surveys use advanced techniques, breaking new ground in some areas, and our approach has been validated by a number of leading academics in the field. We have applied the resulting values to our estimates of risk, based, in turn, on advanced risk modelling at a detailed level.

Most of our proposed investment is cost beneficial. We have applied sensitivity analysis to confirm that our proposals are robust to the inherent uncertainties involved in estimating benefits. Where we propose investment that is not cost beneficial, we have provided a clear rationale for it to be included. This is particularly so for investment to solve some sewer flooding problems. Our sewer flooding programme as a whole is cost beneficial, although some individual schemes in the programme are not. The programme is designed to remove 50% of the properties on the internal 1 in 10 and 2 in 10 risk registers at 31 March 2010. We aim to reduce external flooding on the 1 in 10 and 2 in 10 registers by 20%. As far as possible, all remaining properties on the current register and all new properties that emerge over the next five years will have sewer flood risk mitigation measures in place.

We have taken full account of government policy and guidance. In particular, our plans align with the Pitt Review and the government response to it.

Investment

Table 10.1 Service improvement investment

Investment Driver	AMP5 Capital investment (£m) [1]	Change in operating costs in 2014-15 (£m p.a.)
Water supply resilience	58	0
Sewer flooding	74	0
Odour reduction	9	0.2
Protection of assets from flooding	37	0
Total	**178**	**0.2**

1. 2007-08 price base, net of contributions

Final Business Plan: Part A

What we need to deliver our plan: operating costs

The inside of a water tower being jet-washed and cleaned before being put back into service.

11 What we need to deliver our plan: operating costs

Base operating costs

11.1 Over the last four years, we have made significant progress towards being a frontier company. We have reduced total operating costs in real terms, despite substantial increases in energy and commodity prices, beyond those assumed at the last price review. We are facing further substantial increases in operating costs in AMP5. The most significant current pressures are:

- an increase in the assessed rateable value of our water assets
- a change in approach to determining rateable value at wastewater sites that could result in large rates rises
- increases in pension contributions to defined benefit schemes, mainly as a result of the fall in interest rates and evidence of the increase in longevity. All schemes were closed to new members in 2002.

11.2 We have reduced our forecast of energy costs by £9m p.a. since we submitted our Draft Business Plan. This reflects the moderation of prices in the last few months. However, prices remain volatile and we are seeking to mitigate this risk by fixing energy costs for the AMP5 period. If this is not possible, or if the premium required is excessive, then we believe that a cost pass through adjustment mechanism would be a fair and transparent way of allocating energy price risks between the company and customers.

11.3 There is early evidence to suggest that the recession will result in an increasing level of bad debt but we have not provided for any increase in bad debt costs in our Final Business Plan. We continue to adapt our tariff structure to meet the requirements of our broad customer base, whilst being tough in recovering debt from those customers who choose not to pay their bills. There is a risk, however, that bad debts may escalate markedly despite our best efforts. A Notified Item is an appropriate mechanism for sharing risk in relation to bad debt and avoids the need for an allowance for increasing bad debt in the Final Business Plan.

11.4 Our forecast of changes in base operating costs for 2008-09 and 2014-15 are summarised below (in 2007-08 prices):

Table 11.1 Our forecast of changes in base operating costs

	Actual 2007-08 £m [1]	Forecast 2008-09 £m	2014-15 £m
2007-08 base operating cost [2] per JR08	323	323	323
Energy		11	14
Pensions - deficit funding/cash basis adjustment	11	11	19
Pensions - future service contribution		-	4
Rates		-	33
Traffic Management Act		1	2
EA charges		1	7

	Actual 2007-08 £m [1]	Forecast 2008-09 £m	2014-15 £m
Other changes		2	3
Adjusted/forecast base operating costs	**334**	**349**	**405**

1. All costs at 2007-08 price base across entire table
2. Excluding pensions deficit contributions and atypical costs

Figure 11.1 PR09 Base Opex Increases in 2014-15

Operating efficiency

11.5 We set out in 2005 to improve significantly the efficiency of our operations. In 2006-07, we were in Band A in Ofwat's [1] efficiency assessment for both water and wastewater services. Although in 2007-08 the assessment for wastewater slipped to Band B, we are working hard to improve our efficiency for 2008-09.

11.6 We have used Ofwat's methodology in calculating 'catch-up' efficiency factors, resulting in efficiencies of 0.3% p.a. for water operating costs and 1.5% p.a. for sewerage operating costs. We expect that the efficiency factor applied by Ofwat in the Final Determination will reflect the efficiency assessment for 2008-09. Whilst we hope to have restored our position for wastewater to Band A, we have not anticipated this in our Final Business Plan.

11.7 We have considered the scope for further improvements in frontier efficiency. Our assessment is that the frontier company can continue to match the productivity improvements achieved by other firms in the economy, but these savings will be offset by significant increases in the cost of the inputs needed to run the business. This is supported by the detailed economic analysis set out in a report by First Economics, an independent economic consultancy, which has been made available to Ofwat.

1 Ofwat assesses companies in five bands of efficiency. For opex, a Band A company's costs are within 5% of the frontier, Band B within 15%, Band C within 25%, Band D within 35% and Band E within 45%.

Energy

11.8 Energy prices during AMP4 have proven to be significantly higher than allowed for at the previous Determination, and continue to be highly volatile and difficult to predict. By 2009-10, energy is forecast to account for almost a fifth of our total operating costs.

11.9 Our approach to the procurement of energy has changed significantly over AMP4. We now purchase energy on the forward markets in a phased approach, typically up to 24 months ahead of each season. This approach enables us to manage our short to medium term risk, but we do not seek to profit from this forward purchasing.

11.10 There is no reliable information about forecast price trends into AMP5, with wide variations in potential scenarios. We have not allowed for additional operating costs in AMP5 to cover potential forecast rises in wholesale energy prices. We are currently investigating the feasibility of fixing energy costs over AMP5. Should this prove impractical or uneconomic we believe that a cost pass through adjustment mechanism would be appropriate to mitigate against the significant risk of a rapid and structural rise in energy costs once global economic growth returns. We intend to continue to discuss this further with Ofwat and provide up-to-date evidence in time to inform its Determinations.

11.11 There is evidence that our cost base in AMP5 will be affected directly by the significant and permanent rise in non-wholesale costs, specifically in the area of transmission, distribution and balancing charges. These energy costs are regulated by Ofgem, which has allowed them to rise significantly in recent years. We have managed our costs during AMP4 by entering into fixed term contracts covering these elements, but we will incur substantial price rises in AMP5 above costs incurred in base year. We have increased our operating cost base assumption in AMP5 by £3m p.a. to reflect this known cost increase.

Pensions

11.12 Our aim is that pension costs should be no more than is the case for any leading commercial business, and we have taken a number of significant and industry leading steps to minimise our pension costs. For example, the defined benefit sections of the Anglian Water Group Pension Scheme (Mirror Image Section and Water Pension Section) were closed to new members in 2002. The Executive Pension Section was closed to new entrants in 2003 and then closed to future benefit accrual in 2005 at which time active members of the scheme transferred to the Water Pensions Section. In 2006 we increased employee contributions from 6.0% to 8.5% for those wishing to retain Rule of 85 benefits. We took action to reduce the forward service employer contribution rate from 20.1% to an average 15.0%.These actions are reflected in lower annual pension costs than is the case for many other water and sewerage companies.

11.13 At the last periodic review, an allowance was made to reduce the deficit in the fund at that time. In the intervening period, the deficit also reduced because of movements in the capital markets. Recognising the ongoing volatility in the markets and increasing longevity of pension scheme members, we continued to pay the deficit funding allowed at the last Determination into the pension fund.

11.14 The actuarial triennial valuation as at March 2008 shows a scheme deficit of £200m, and recommends future service contributions of 21.2%. An update on the valuation as at December 2008 indicates that this deficit had increased to £480m, and recommends future service contributions of 25.6%. The trustees have told us of their intention to carry out a full actuarial valuation as at 31 March 2009, and we expect the deficit to be at least £500m.

However, we have only included the funding requirements based on the March 2008 valuation, and therefore highlight the need for this to be fully allowed in our Determination over the proposed 12 year deficit catch up period.

Rates

11.15 In 2007-08 rates costs were £44m. Substantial increases are expected from 2010-11 on both water and sewerage rates, with total rates costs expected to rise to £77m (20% of operating costs) by 2014-15.

11.16 Water rates are set on a notional profits basis, and are reviewed every 5 years by the central Valuation Office Agency (VOA). Based on the draft assessment issued by the VOA in December 2008, we are forecasting an increase of £26m in water rates by 2014-15. We have assumed that the poundage will reduce from the 2009-10 level and that transitional relief will reduce the impact in the first three years.

11.17 Sewerage rates are related to asset values, primarily construction costs, and are also reviewed every 5 years, but by the local Valuation Office teams. Construction costs have increased significantly since the last valuation date. We also expect the VOA to increase their assessment of land values, particularly where these are close to areas of development. Based on advice from a rating specialist, we are forecasting a total increase of £7m in sewerage annual rates by 2014-15.

11.18 For both water and sewerage rates, we expect the actual valuations to be reflected in the Final Determination, as in previous price reviews.

Environment Agency Charges

11.19 The Environment Agency (EA) levies charges to ensure that water resources are effectively managed. We have received formal notification from the EA of their intention to increase our abstraction charges by 10% p.a. until the end of AMP5, leading to an increase of £6.6m by 2014-15. We have included this increase in our operating cost base.

Traffic Management Act

11.20 The Traffic Management Act passed into law on 1 April 2008. It governs the conduct of streetworks and requires water companies to incur additional costs such as the cost of permits and additional contractor costs. We aim to minimise these costs by scheduling and carrying out streetworks efficiently. We have made a detailed assessment of the impact of this on our capital and operating cost base, and have included an increase in our operating cost base of £2m a year, at the lower end of our range of forecasts.

Final Business Plan: Part A
Dealing with risks and uncertainties

Great Yarmouth, September 2006. Around £8 million is being spent in the town on a range of measures to help reduce the impact of surface water flooding caused by extreme storms.
(Picture courtesy of Archant)

12 Dealing with risks and uncertainties

12.1 We have identified material risks affecting our Final Business Plan, indicating in each case what, if any, allowance should be made for the setting of prices. This section brings together our consideration of these risks.

12.2 The following table sets out the risks and uncertainties that could have a material impact on our Plan and our proposals to manage them.

Table 12.1 Notified Items

Risk or uncertainty	Final Business Plan proposal
Traffic Management Act	We have allowed for some increase in our base opex but on the basis that this may be a significant under estimate, this should be made a Notified Item
Bad debt	Notified Item If a Notified Item is not applied to bad debt, then we would expect Ofwat to include an adjustment to base opex to reflect a central estimate of the expected adverse impact of these factors in AMP5
Taxation (impacts of IFRS and abolition of capital allowances)	Notified Item
Accounting separation and competition	Notified Item

Table 12.2 Notified Item or cost pass through if not resolved when the Final Determination is issued

Risk or uncertainty	Final Business Plan proposal
Energy prices	Our best estimate is reflected in opex projections and efficiency assumptions Our preference is to manage risk through forward purchase of power but if we cannot do this efficiently we will seek some form of cost pass-through mechanism
Rates	Increase in base operating expenditure Contingent Notified Item if valuation not finalised in time to be allowed in price limits

Table 12.3 Already covered by Relevant Change in Circumstance or Change Protocol

Risk or uncertainty	Final Business Plan proposal
Construction costs reflected in Notified Index	Relevant Change of Circumstance
Adoption of private sewers	Relevant Change of Circumstance

Risk or uncertainty	Final Business Plan proposal
North Sea Infraction proceedings	Relevant Change of Circumstance
Increased growth	Change Protocol and logging up

Table 12.4 No additional adjustment mechanism - Substantial Effects clause

Risk or uncertainty	Final Business Plan proposal
Climate change impacts	Final Business Plan reflects our risk management strategy
Capital market conditions	Cost of capital assumed in Final Business Plan reflects our current view of risks. Ofwat need to provide greater clarity on how risk mitigation mechanisms might be deployed in the event of a severe and persistent recession or further deterioration in financial markets
Availability of agricultural route for biosolids recycling	No specific risk management mechanism Final Business Plan reflects our risk management strategy
Pensions costs	Increase in base operating costs Substantial Effects clause may be triggered if deficits do not recover from the March 2009 level

12.3 Our Final Business Plan is designed to enable us to manage the majority of these risks. However, the combined scale and nature of the risks that we face is substantially greater than those that have faced us at previous price reviews. Regulatory mechanisms have not been tested against risks of this scale. We therefore feel that it is essential that further consideration is given to the fair allocation of risks and appropriate risk-sharing mechanisms.

Final Business Plan: Part A
Financial issues

13 Financial issues

Financing the business plan

Strategic Direction Statement - our 25 year plan

Secure continued access to long-term finance.

Continue our efficient debt-based financing strategy.

Seek a cost of capital which maintains consistency of investment and secures access to capital markets.

13.1 Our financial structure has proved to be robust since it was introduced in 2002 and our approach to financing is proving effective in the current challenging and volatile market conditions.

13.2 Future costs for financing are highly uncertain. The scale and depth of the current financial crisis and deterioration in the general economy are unprecedented in recent decades. The collapse of Lehman's in September 2008 and subsequent bank crisis, together with monetary interventions to control the economy has severely affected financing. Over the past 12 months corporate debt spreads have widened by around 250 basis points and the markets have been closed for considerable periods of time.

13.3 Over recent months the market has re-opened for higher rated corporates, with a flight to quality making it extremely challenging for any issuer having a rating below the A category. The index-linked debt market remains closed and the syndicated banking market barely open. Bank margins have widened from 30 basis points to 175-200 basis points, and maturities limited to three years. Overseas banks are indicating a retreat from the UK markets on the basis that their limited availability of capital is now reserved for domestic lending, and UK banks have little capital for additional funding. Rates of interest on cash deposits are low, increasing the cost of necessary pre-funding. The recent Water UK Investor Survey also appears to show that equity investors are demanding substantially higher returns in a general re-pricing of risk.

13.4 We believe that assuming a continuation of these conditions is an inadequate basis on which to prepare our five year Business Plan. We have therefore prepared our Final Business Plan on the basis that more stable conditions in the financial markets will emerge in 2010. Clearly, these conditions may be different to what was regarded as 'normal' before the financial crisis. However, we assume that stable conditions will be characterised by a good range of banks offering finance at lower margins than currently, ready availability of investment grade debt at reasonable coupon rates and a more reasonable spread between debt and deposit costs. On this basis we have assumed a weighted cost of capital of 4.9% in real terms.

13.5 However, if current financial conditions continue or worsen then our key assumptions would need to be revised. A continuation of high borrowing costs or lack of available finance would seriously weaken our ability to finance our business unless there were adjustment in price limits.

13.6 We trust that Ofwat will consider the most recent evidence available to it before setting the financial assumptions underlying its Determination. We also ask Ofwat to provide greater clarity about how it would respond to further deterioration in the credit markets and on the role, and practical application, of the Substantial Effects clause.

Cost of capital

13.7 Assuming a return to more stable financial conditions, we require a weighted average cost of capital of 4.9%, to finance this plan for the next five years. At this level our plan is financeable on a notional and actual basis.

13.8 NERA has conducted, on behalf of the industry, a broad and comprehensive survey of available sources of evidence on the cost of capital, up to December 2008. It estimates that the cost of capital is in the range 4.6 to 5.1%, some 0.2% more than its estimates from similar work for the Draft Business Plan. We have set our required cost of capital at 0.1% more than we assumed at the Draft Business Plan which reflects the substantial deterioration since August 2008 but also the marginal improvements in bond market conditions in 2009.

13.9 Our proposed cost of capital:

- is supported by the evidence available, taking into account the difficulty and cost of raising debt since the start of the current financial crisis
- is premised on a continuing improvement in the availability of finance and continued moderation in its cost in line with most recent trends
- reflects substantially increased costs of liquidity and pre-financing
- assumes the notional financial structure used by Ofwat, based on the maintenance of an A-/A3 investment grade credit rating
- avoids the need for an additional financeability adjustment
- does not require adjustment for costs of embedded debt
- is subject to qualification regarding foreseeable scenarios on the downside severely affecting availability and cost of finance, and obtaining greater clarity about the regulatory response.

Table 13.1 Cost of capital assumptions

Component	Assumption
Net debt/RCV	60%
Pre-tax cost of debt (real)	4.0%
Post-tax cost of equity (real)	7.9%
Post-tax cost of capital (real)	4.9%

13.10 We expect to raise £1.8bn in new financing for the AMP5 period, a substantially higher level of issuance than in AMP4. Around half of this amount is required to refinance existing debt. Our assumed cost of debt reflects both the costs of new debt and of existing debt which we will not need to refinance during AMP5. It also reflects the carrying cost of debt raised in advance of capital expenditure, but assuming a return to more normal carrying costs in AMP5.

Financeability

13.11 We believe that it is essential for Ofwat to set price limits which enable companies to issue debt at a minimum A- rating. Assumed lower ratings for new debt would jeopardise our ability to finance the capital programme: it is therefore critical that we secure A- ratings on the bulk of our senior debt.

13.12 We expect Ofwat to continue to test for financeability in the same manner as at PR04. We have used the following test ratios, consistent with an A- credit rating, to test for financeability on the basis of a notional balance sheet and a notional 25% index linked debt.

Table 13.2 Key ratios for a notionally financed company

Ratio	Test level
Cash interest cover (funds from operations:gross interest)	2.9x
Adjusted cash interest cover (funds from operations less capital charges:gross interest)	1.5x
Adjusted cash interest cover (funds from operations less capital maintenance expenditure:gross interest)	1.9x
Funds from operations:debt	13%
Retained cash flow:debt	7%
Gearing (net debt:regulatory capital value)	70%

13.13 We believe these ratios represent appropriate test levels for a company geared at 60% to maintain credit ratings appropriate for an A-/A3 rated company.

Current Cost Depreciation

13.14 Our total Current Cost Depreciation (CCD) charge for AMP5 is £1,338m. This takes account of the revaluation of our assets as at 31 March 2008 on a Modern Equivalent Asset Value basis and is broadly consistent with required investment in maintenance over the periods AMP5 to AMP8.

13.15 The total value of our non-infrastructure asset base has not changed significantly as a result of our revaluation, but there have been changes to values of specific asset classes. This has contributed towards a 9% increase in CCD compared to pre-valuation figures. Overall, we are seeing an increase in the use of shorter life assets in construction and maintenance resulting in higher CCD on future capital expenditure. It also affects the modern equivalent asset valuations used to calculate CCD on our current asset base.

Infrastructure renewals charge (IRC)

13.16 We have calculated our IRC over AMP5 to be £405m, based on projected Infrastructure Renewals Expenditure for 2011 to 2025. We believe that this is consistent with our long-term view of planning for maintenance of our assets.

13.17 In 2007-08, we changed our accounting policy to base our IRC on a 15 year forward basis. This resulted in an increase in our IRC of £17m in 2007-08. At the higher level of charge, we expect our prepayment to unwind over five years. We do not expect to need any specific adjustment to the IRC to adjust for prepayments or accruals.

Taxation

13.18 We have calculated taxation payable on the basis of UK GAAP. This reflects the key changes introduced by the Finance Act 2007: reduction on the corporate tax rate; reduced writing down allowances in the Capital Allowance General Pool and the phasing out of Industrial Building Allowances.

13.19 In calculating the net interest allowance for taxation, we have used a cost of debt that is consistent with our weighted average cost of capital. If Ofwat assumes a different cost of debt, then the interest allowance used for calculating taxation would need to be re-calculated.

13.20 It is likely that changes in UK GAAP will take effect early in AMP5 to make them consistent with International Accounting Standards. This change is likely to substantially increase taxation payable by water companies as a result of the abolition of renewals accounting and other changes. Abolition of capital allowances is also a possibility, which would also be material. We propose that these uncertainties are covered by a Notified Item for AMP5.

Base revenue forecasts

13.21 Base revenue forecasts show a broad continuation of recent trends. We assume a slow continuing decline in the non-domestic sector (volumes, trade effluent loads), especially in the short term, as a result of the current slowdown in the economy, offset by continued growth in the domestic sector. Against this trend, we forecast increasing demand from large industrial customers located on the South Humber Bank.

13.22 We have revisited our forecast of the rate of growth of housing stock over the period to 2014-15 in the light of the sharply deteriorating economic situation since our Draft Business Plan. We now expect a substantial reduction in housing connections against long term forecasts, with no return towards trend rates of growth until the final years of AMP5 and full recovery of previous shortfalls not being achieved until towards the end of AMP6.

13.23 We forecast an upward trend in the rate of optional metering, reflecting recent developments and heightened awareness amongst customers, reinforced by our Enhanced Metering Programme which is targeted in those areas of our region in which pressure on water resources is greatest.

13.24 There are strong downward effects on base revenue caused by more successful water efficiency initiatives, especially for new properties, for which we have brought our estimates of water use in line with Defra targets.

Final Business Plan: Part A
Hartlepool

14 Hartlepool

The views of customers and stakeholders

Our Hartlepool Water Regional Expert Opinion Panel identifies six key priorities:

- reducing the risk of interruptions to supply
- maintaining high water quality standards
- reducing the impact on the environment
- accommodating growth
- responding to climate change
- keeping customers' bills low.

Recommendations on these priorities have been summarised along with those of the other panels in previous sections. Some recommendations are specific to Hartlepool.

The aquifer should be protected from the risk of minewater ingress from the disused coal mines in the area in order to ensure that high water quality standards are maintained. The panel also wants us to continue to maintain the reverse osmosis plant which provides high quality water for large industrial users.

The panel is keen that local growth is supported. They would like us to work closely with the new Wynyard hospital development to ensure that water efficiency and resilience are incorporated early in the plans. There was also recognition of the need to cater for increased tourism and service growth associated with the Tall Ships race in 2010.

The panel supports the promotion of metering and water efficiency, despite the fact that the Hartlepool area faces less pressure on water resources than elsewhere in the Anglian region. However, the panel and the Consumer Council for Water recognise that there is a higher level of deprivation in Hartlepool than in the Anglian region as a whole. Because of this, and the lack of concern regarding environmental water stress, they would only want customers to move to measured tariffs if they benefited financially.

Our customer surveys to explore priorities and willingness to pay found that Hartlepool Water customers have significantly lower willingness to pay for improvements than those in the Anglian region. Given the economic profile of Hartlepool, ensuring affordability of bills and helping vulnerable customers is an important panel priority.

Strategic Direction Statement - our 25 year plan

Continue to provide on-site secondary water treatment.

Manage risks of mine water ingress to aquifers.

Maintain customer service performance.

Our plans for 2010 to 2015

Replace around 6km of cast iron main per year.

Maintain three high-specification reverse osmosis and resin treatment plants.

Install roof membranes at four treated water reservoirs at Dalton.

Phosphate dosing to maintain compliance with the lead standard of 10 µg/l.

Lay 7km of water main to provide additional supples to the new hospital at the Wynyard development.

Supporting evidence

Our plans for Hartlepool are based on similar methodologies and a consistent standard of evidence as for the remainder of our plan. Details of the planned investment and outputs for Hartlepool can be found within tables HPL A1 - 10.

Investment

Table 14.1 Hartlepool Water Investment Summary

Investment Driver	AMP5 Capital investment (£m) [1]
Maintaining the distribution system	6.0
Maintaining Water Treatment Works	1.3
Maintaining Storage Reservoirs	0.5
Maintaining Impounding Reservoirs	0.3
Wynyard growth	1.6
Total	**9.7** [2]

1. 2007-08 price base.
2. Hartlepool investment is included within the overall programme of £2,26m.

Prices and bills

Customers in Hartlepool will be subject to the same level of price increases as those in the Anglian region. However, bills in Hartlepool are substantially lower than those faced by customers in the rest of our region and this difference will remain. The table below shows the increase in average bills in Hartlepool.

Table 14.2 Hartlepool customer bills

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	% Average change p.a.
Average Bill (£) [1]	£118	£125	£128	£132	£136	£135	
Change in average bills (%)		5.7%	2.4%	3.2%	2.7%	-0.6%	2.7%

1. 2007-08 price base

Final Business Plan: Part A
Summary

15 Summary

Overall strategy for the period 2010 - 2015 and beyond

This Final Business Plan has been shaped by the current economic circumstances and the impact this is having on individuals and businesses across our region: a region that presents unique challenges to us in terms of its geography, its planned growth and in particular its vulnerability to climate change. Affordability has therefore been an over-riding consideration for our customers and for the business. We have listened very carefully to what our customers and community representatives have had to say, and this has helped in deciding what our spending priorities should be. This rigorous approach has helped us achieve what we consider to be an acceptable and workable balance between the charges we are proposing to make, and the high level of service we are confident we can deliver.

Our pricing proposals meet our aim of limiting annual bill increases to an average of less than 1% above inflation over the long term: the increase in the average total bill over the next five years will be £11 (0.6% p.a.). At the same time we are to keep in place our range of affordable tariffs: we will encourage even greater numbers of customers to move to a metered supply and we are targeting help and support to those who are most vulnerable.

We have achieved this despite increased upward pressure on our operating costs: the rise in energy costs and pension costs since prices were last reviewed in 2004 and an escalation in business rates by over £33m each year. We think the proposed increase in rates places an unfair additional tax on our customers.

Our proposed investment programme of £2.26bn for the AMP5 period takes account of our review of forecasts for economic growth and of the impact of the current recession.

In summary, our plans will:

- secure the supply of reliable and resilient water and wastewater services
- offer an innovative and affordable pricing structure
- ensure we meet our goal of limiting price increases to an average of less than 1% above inflation for the AMP5 period
- build additional capacity in our networks to meet the needs of housing growth over the next five to ten years
- reduce even further the risk of customers being without water because of flooding, drought or exceptional events
- actively encourage water efficiency, in particular by increasing the number of customers on meters
- secure the precious environment in which we operate
- allow us to develop our business in a sustainable way for the benefit of all our customers.

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Indicative price limit (water service)	2.7%	6.3%	3.6%	4.6%	4.0%	0.4%
Av. metered household bill	£141	£146	£148	£150	£151	£148
Av. unmetered h'hold bill	£197	£214	£224	£238	£253	£262
Av. household bill	**£160**	**£167**	**£170**	**£172**	**£173**	**£170**
Indicative price limit (sewerage service)	2.7%	9.1%	-0.2%	1.1%	0.2%	-0.1%
Av. metered household bill	£181	£194	£191	£189	£186	£183
Av. unmetered h'hold bill	£240	£266	£268	£275	£281	£287
Av. household bill	**£201**	**£217**	**£213**	**£210**	**£206**	**£203**
Overall average bill	**£362**	**£384**	**£382**	**£382**	**£380**	**£373**
Overall indicative price limit		**8.0%**	**1.3%**	**2.5%**	**1.7%**	**0.1%**

Final Business Plan: Part A
Summary

Quality and service improvements for the period 2010 - 2015 and beyond
There are four particular areas in which we propose to invest a total of £2.26bn: Base Service Maintenance – We plan to invest £1,199m during AMP5 to maintain current levels of customer service. We have been told by our customers that their over-riding priority is the maintenance of a quality and reliable service, and our extensive consultation process has revealed no appetite among them for lower levels of service in exchange for lower bills. Service Enhancements – We are proposing an investment of £178m in AMP5 to tackle the problems of particular concern for customers, including reducing the risk of flooding from sewers, ensuring our supply systems are resilient and reducing odour from sewage treatment works and pumping stations. Quality Enhancements – Our proposed investment programme of £440m in AMP5 will deliver significant benefits to customers while ensuring that we meet in full our obligation to comply with the strict regulations and standards for drinking water quality and for environmental improvements. Supply/Demand Balance – Our proposed investment of £443m (net of grants and contributions) provides for the predicted level of growth in terms of people and properties in our region. It also allows us to meet the unique challenge that our region will face as the area in the UK expected to suffer the worst environmental impacts.

What is driving the changes in bills?		Water	Sewerage
Average household bill in 2009-10		**£160.3**	**£201.4**
Less	Efficiency savings and out-performance during 2005 - 2010	**-£0.7**	**-£0.6**
Plus	Maintaining base service, of which	**£3.6**	**-£2.2**
	Changes in revenue	-£1.4	-£3.3
	Changes in operating costs to maintain current services	£4.9	£1.2
	Changes in costs of maintaining assets	£1.9	£0.5
	Changes in impact of taxation	£1.6	£1.9
	The change in the cost of capital	-£3.4	-£2.5
	Maintaining and enhancing security of supplies	**£2.3**	**£0.3**
	Impact of improvements in services, of which	**£4.6**	**£4.0**
	Drinking water quality	£3.1	-
	Environmental improvements	-	£2.9
	Improvements in service levels	£1.5	£1.1
Less	Scope for reduction through future efficiency improvements	**-£0.1**	**-£0.4**
Average household bill in 2014-15		**£170.0**	**£202.5**

Annual average for the period 2010 - 2015 (£/prop p.a.)	Water	Sewerage
Operating costs to maintain current services to consumers	£90	£84
Operating costs to improve services to consumers and protect the environment	£2	£5
Cost of maintaining assets to deliver current services to customers	£79	£56
Cost of improving assets to deliver improvements for the environment and consumers	£20	£33

Assumed cost of capital	Pre-tax debt, post-tax equity basis	5.57%	Fully post-tax basis	4.90%

This plan is submitted with the full support of the Board and Management Team. We have struck a balance between meeting our commitments, being trusted to deliver an exceptional service, and being able to invest within acceptable and appropriate limits for the future.

Tables

OFWAT

Tables

16 Tables

Final business plan

A1

PART A - COMPANY STRATEGY

Table A1 - ANH - Price limits, bills, water sales and supply/demand balance

	Line description	Units	AMP4			AMP5				
			2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
A	**Price limits & infrastructure charge limit**									
1	Proposed price limit "K" (including U)	nr	2.8	2.5	2.7	8.0	1.3	2.5	1.7	0.1
2	Water service indicative "K"	nr	3.6	2.3	2.7	6.3	3.6	4.6	4.0	0.4
3	Sewerage service indicative "K"	nr	2.3	2.6	2.7	9.1	-0.2	1.1	0.2	-0.1
4	Proposed infrastructure charge limit - water service	£	276.81			276.81				
5	Proposed infrastructure charge limit - sewerage service	£	276.81			276.81				
6	RPI year by year assumption	%	3.9%	4.3%	3.0%	-0.3%	2.5%	2.5%	2.5%	2.5%
B	**Projected household bills - water service**									
7	Typical unmeasured h'hold bill (base yr avg chg) - real terms	£	189.80	184.96	197.56	215.07	226.32	242.61	260.34	271.33
8	Typical measured h'hold bill (base yr avg chg) - real terms	£	138.65	141.86	142.33	148.29	151.87	156.05	159.49	157.47
9	Average household bills - real terms	£	158.70	157.43	160.33	167.46	169.51	171.65	173.30	169.97
10	Average household bills - nominal terms	£	158.70	164.17	172.21	179.37	186.10	193.16	199.90	200.95
C	**Projected household bills - sewerage service**									
11	Typical unmeasured h'hold bill (base yr avg chg) - real terms	£	229.66	230.92	239.75	265.71	268.04	275.62	281.53	287.95
12	Typical measured h'hold bill (base yr avg chg) - real terms	£	175.18	178.44	181.77	194.92	193.14	192.74	190.65	188.06
13	Average h'hold bills - real terms	£	196.71	197.90	201.39	216.52	212.79	210.34	206.41	202.55
14	Average h'hold bills - nominal terms	£	196.71	206.36	216.32	231.92	233.62	236.70	238.08	239.48
D	**Water sales & supply/demand balance**									
15	Billed water delivered	Ml/d	968.60	959.92	952.61	950.20	949.85	949.10	947.90	946.82
16	Total volume of sewage collected	Ml/d	961.78	962.35	955.67	953.39	949.39	945.18	942.10	940.01
17	Total water available for use baseline (dry year annual average)	Ml/d	1352.18	1352.11	1352.35	1418.21	1418.03	1415.90	1415.50	1413.87
18	Distribution input (dry year annual average)	Ml/d	1196.44	1202.57	1201.66	1198.89	1200.92	1208.88	1217.34	1241.99
19	Total leakage	Ml/d	208.55	212.56	213.35	214.40	215.71	216.43	217.72	218.39
20	Total water savings achieved or assumed from company's water efficiency strategy	Ml/d	0.00	0.00	0.00	0.53	1.05	1.58	2.10	2.63

PART A - COMPANY STRATEGY

Table A2 - ANH - Water service - Current performance & planned outputs

	Line description	Units	Level of performance 2002-03	Level of performance 2007-08		Level of performance by 2014-15	Level of performance by 2019-20
A	**Service performance**						
1	DG2 Properties at risk of receiving low pressure	nr	3037	651		651	
2	DG3 Supply interruptions (overall performance score)	nr	0.89	0.27		0.35	
3	DG6 % billing contacts dealt with within 5 days	%	99.2%	99.9%		99.7%	
4	DG7 % written complaints dealt with within 10 days	%	100.0%	100.0%		100.0%	
5	DG8 % metered customers receiving bill based on a meter reading	%	99.8%	99.7%		99.7%	
6	DG9 % calls abandoned	%		11.5%		4.0%	
7	DG9 % calls receiving the engaged tone	%		2.3%		2.0%	
8	Security of supply index (dry year annual average - planned levels of service)	nr	97	94		100	
9	Security of supply index (critical index)	nr		94		100	
B	**Quality & environmental compliance**						
10	% distribution input covered by section 19 undertakings at water treatment works	%		7.991%		0.000%	
11	% distribution input not affected by section 19 undertakings or temporary relaxations or Authorised Departures	%	99.913%	92.009%		100.000%	
12	% of properties in water supply zones affected by section 19 undertakings in distribution o Authorised Departures	%		1.002%		0.000%	
13	% mean zonal compliance with drinking water regulations	%		99.960%		99.960%	
C	**Serviceability to customers (maintaining asset systems fit for purpose)**						
14	Below ground assets assessment - infrastructure pipelines	text	STABLE	STABLE		STABLE	STABLE
15	Surface assets assessment (non infrastructure)	text	STABLE	STABLE		STABLE	STABLE
					Level of performance by 2009-10		
D	**Carbon Accounting**						
16	Carbon emissions produced in providing the service in 2014-15	ktonnes/year			172.6	181.3	
17	Other GHG emissions (as CO2e) produced in providing the service in 2014-15	ktonnes/year			16.3	16.4	

Final business plan

A3

PART A - COMPANY STRATEGY

Table A3 - ANH - Sewerage service - Current performance & planned outputs

	Line description	Units	Level of performance 2002-03	Level of performance 2007-08	Level of performance by 2014-15	Level of performance by 2019-20
A	**Service performance**					
1	DG5 properties at risk of flooding (2 in 10 years)	nr	702	279	180	142
2	DG5 properties at risk of flooding (1 in 10 years)	nr	406	143	55	33
3	D5 properties at risk of internal flooding (1 in 20 years)	nr		253	452	540
4	Properties internally flooded in year due to overloaded sewers excluding severe weather	nr		94	64	59
5	DG5 properties internally flooded in year due to other causes	nr	147	170	190	100
6	Areas flooded externally due to overloaded sewers, excluding severe weather	nr		324	717	826
7	Areas externally flooded in year due to other causes	nr		2152	2282	2282
B	**Quality & environmental compliance**					
8	% Intermittent discharges satisfactory	%	98.3%	99.3%	100.0%	
9	% Bathing waters not meeting "excellent" quality	%			46.7%	
10	% Bathing waters not meeting "good" quality	%			18.5%	
11	% Bathing waters not meeting "sufficient" quality	%			0.0%	
12	% of sewage treatment works non compliant (Water Resources Act numeric consents)	%		0.6%	1.0%	
13	% of sewage treatment works non compliant (Urban Waste Water Treatment Directive consents)	%		1.6%	2.0%	
14	% of total p.e. served by sewage treatment works in breach of Water Resources Act consent (LUT)	%		0.0%	0.0%	
15	% of total p.e. served by sewage treatment works in breach of Urban Waste Water Treatment Directive consents (LUT)	%		0.4%	0.5%	
C	**Serviceability to customers (maintaining asset systems fit for purpose)**					
16	Below ground assets assessment (infrastructure)	text	DETER'NG	STABLE	STABLE	STABLE
17	Surface assets assessment (non-infra)	text	MARGINAL	STABLE	STABLE	STABLE

			Level of performance by 2009-10	Level of performance by 2014-15
D	**Carbon Accounting**			
16	Carbon emissions produced in providing the service in 2014-15	ktonnes/year	207.2	243.9
17	Other GHG emissions (as CO2e) produced in providing the service in 2014-15	ktonnes/year	126.5	134.7

Final business plan

A4

PART A - COMPANY STRATEGY

Table A4 - ANH - Water service - Key activity projections

	Line description	Units	Activity in AMP5 period relating to base service	Activity in AMP5 period relating to enhancements	Total planned activity in AMP5 period	Profile of activity	Total planned activity in AMP6 period
A	**Key activity projections - water resources**						
1	Length of raw water aqueducts refurbished	km	0	59.1	59.1	F	15.0
2	Work on dams & impounding reservoirs	nr	4	1	5	F	1
3	Capital investment in aqueducts, dams and impounding reservoirs	£m	30.950	19.848	50.798	F	20.875
B	**Key activity projections - water treatment**						
4	Number of refurbished or new treatment works	nr	46	58	104	F	57
5	Ml/day of refurbished or new treatment works	Ml/d	1292.00	578.80	1870.80	S	1445.50
6	Capital investment in refurbished or new treatment works	£m	162.120	267.048	429.168	F	350.157
C	**Key activity projections - water distribution**						
7	Length of mains renewed	km	516.0	0.0	516.0	S	516.0
8	Length of mains relined	km	0	0	0	S	0.0
9	Length of new mains	km	0	925.9	925.9	S	933.0
10	Number of refurbished or new district meters & pressure control valves	nr	1234	0	1234	S	1234
11	Capital investment in underground water distribution activity (incl investment in meters reported in Block E of this table)	£m	269.042	214.645	483.687	S	518.650
12	Number of refurbished or new pumping stations	nr	1	9	10	F	4
13	Capital investment in refurbished or new pumping stations	£m	8.469	13.458	33.877	F	23.530
14	Number of refurbished or new service reservoirs	nr	1	0	1	S	1
15	Capital investment in refurbished or new service reservoirs	£m	8.602	10.679	19.281	R	22.354
D	**Key activity projections - management & general**						
16	Offices, labs, depots, workshops	m^2	11772	0	11772	S	11772.0
17	Capital investment in offices, labs, depots, workshops and vehicles	£m	16.909	0	16.909	S	17.800
18	Capital investment in instrumentation, control and automation (ICA), telemetry & computers	£m	60.519	0	60.519	F	63.500
E	**Key activity projections - metering performance**						
19	Number of household meters renewed	nr			606637	F	424117
20	Optional meters: households	nr			258100	P3	116267
21	Selective meters: households	nr			1798	F	1045
22	Percentage of households metered (at the end of the period)	%			81%	R	88%
F	**Total - water service**						
23	Total capital investment in the water service	£m	556.611	525.678	1082.289		1016.866

AMP5 profile codes
S - Stable
R - Rising
F - Falling
P - Peaking in a particular year (* = 1 to 5)
T - Trough in a particular year (* = 1 to 5)

Final business plan

A5

PART A - COMPANY STRATEGY

Table A5 - ANH - Sewerage service - Key activity projections

	Line description	Units	Activity in AMP5 period relating to base service	Activity in AMP5 period relating to enhancements	Total planned activity in AMP5 period	Profile of activity	Total planned activity in AMP6 period
A	**Key activity projections - sewers**						
1	Length of critical sewers renewed	km	91.0	0.0	91.0	R	100.0
2	Length of critical sewers renovated	km	32.0	0.0	32.0	R	35.0
3	New critical sewers	km	0.0	113.9	113.9	R	130.0
4	Length of non-critical sewers renewed	km	49.0	0.0	49.0	R	55.0
5	Length of non-critical sewers renovated	km	97.0	0.0	97.0	R	110.0
6	New non-critical sewers	km	0.0	154.5	154.5	R	170.0
7	Capital investment in critical and non-critical sewers	£m	162.546	168.613	331.159	R	396.443
8	Number of refurbished or new intermittent discharges	nr	0	6	6	S	0
9	Capital investment in refurbished or new intermittent discharges	£m	0.000	7.600	7.600	S	0.000
B	**Key activity projections - sewage treatment & disposal.**						
10	Number of refurbished or new treatment works	nr	61	192	252	P3	275
11	Population equivalent of refurbished or new treatment works	000	2752.00	2210.00	4962.00	P3	5200.00
12	Capital investment in refurbished or new treatment works	£m	222.494	271.161	493.655	P3	533.866
13	Number of refurbished or new sludge treatment works	nr	4	9	13	P3	5
14	Capital investment in refurbished or new sludge treatment works	£m	67.223	85.719	152.942	P1	95.000
C	**Key activity projections - sewerage service**						
15	Number of refurbished or new pumping stations	nr	1	175	176	R	175
16	Capital investment in refurbished or new pumping stations	£m	73.268	137.000	210.268	R	200.000
17	Number of refurbished or new sea outfalls	nr	1	0	1	S	0
18	Capital investment in refurbished or new sea outfalls	£m	0.675	0.000	0.675	S	0.000
D	**Key activity projections - management & general**						
19	Offices, labs, depots, workshops	m^2	0	0	0	S	0
20	Capital investment in offices, labs, depots, workshops and vehicles	£m	25.364	0.000	25.364	S	26.632
21	Capital investment in instrumentation, control and automation (ICA), telemetry & computers	£m	90.778	0.000	90.778	F	95.317
E	**Total - sewerage service**						
22	Capital investment in the sewerage service	£m	642.348	670.093	1312.441		1347.258

AMP5 profile codes
S - Stable
R - Rising
F - Falling
P - Peaking in a particular year (* = 1 to 5)
T - Trough in a particular year (* = 1 to 5)

PART A - COMPANY STRATEGY

Table A6 - ANH - Efficiency improvements

	Line description	Units	AMP3	AMP4					AMP5				
			2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
A	**Operating expenditure outperformance since PR04**												
1	Water operating expenditure outperformance	£m	0.272	16.033	16.195	19.472	10.225						
2	Water outperformance as a % of regulatory expectations	%	0.2%	10.1%	10.2%	12.4%	6.5%						
3	Total adjusted water opex incentive revenue allowance	£m							10.225	0.000	0.000	0.000	0.000
4	Sewerage operating expenditure outperformance	£m	0.000	0.000	0.000	0.000	0.000						
5	Sewerage outperformance as a % of regulatory expectations	%	0.0%	0.0%	0.0%	0.0%	0.0%						
6	Total adjusted sewerage opex incentive revenue allowance	£m							0.000	0.000	0.000	0.000	0.000
B	**Capital expenditure outperformance since PR04**												
7	Water service capex outperformance	£m	5.350	9.860	10.852	11.759	-25.509	-8.996					
8	Water service capex outperformance as a % of regulatory expectations	%	7.7%	9.4%	8.1%	8.5%	-18.2%	-8.0%					
9	Sewerage service capex outperformance	£m	17.426	24.843	-28.780	17.104	50.751	33.728					
10	Sewerage service capex outperformance as a % of regulatory expectations	%	8.8%	14.5%	-15.5%	8.7%	21.8%	18.6%					
C	**Water service - overall compounded efficiency improvements**												
11	Operating expenditure (base service)	%					0.00%	0.00%	0.30%	0.60%	0.90%	1.19%	1.49%
12	Operating expenditure (enhancements)	%					0.00%	0.00%	0.30%	0.60%	0.90%	1.19%	1.49%
13	Capital maintenance expenditure -infrastructure	%					0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
14	Capital maintenance expenditure - non-infrastructure	%					0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
15	Capital enhancement expenditure - infrastructure	%					0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
16	Capital enhancement expenditure - non-infrastructure	%					0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
17	Capital enhancement expenditure - meters	%					0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
D	**Sewerage service - overall compounded efficiency improvements**												
18	Operating expenditure (base service)	%					0.00%	0.00%	1.50%	2.98%	4.43%	5.87%	7.28%
19	Operating expenditure (enhancements)	%					0.00%	0.00%	1.50%	2.98%	4.43%	5.87%	7.28%
20	Capital maintenance expenditure – infrastructure	%					0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
21	Capital maintenance expenditure – non-infrastructure	%					0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
22	Capital enhancement expenditure – infrastructure	%					0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
23	Capital enhancement expenditure – non-infrastructure	%					0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Final business plan

A7

PART A - COMPANY STRATEGY

Table A7 - ANH - Water service - Expenditure projections

	Line description	Units	AMP4			AMP5				
			2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
A	**Base service levels (£/property served)**									
1	Operating expenditure to maintain current services to consumers	£/prop	70.52	75.46	79.62	82.17	84.30	87.10	90.37	89.59
2	Expenditure on pipelines, dams and aqueducts to maintain current services to consumers - "infrastructure"	£/prop	21.63	18.72	22.49	21.28	21.98	24.33	24.67	22.63
3	Expenditure on surface assets (includes abstraction, treatment, pumping and service storage) to maintain current services to consumers - "non-infrastructure"	£/prop	23.55	29.68	39.33	37.04	43.25	34.70	25.60	23.51
B	**Enhanced service levels (£/property served)**									
4	Additional operating expenditure for improving services to consumers	£/prop	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.02
5	Additional capital expenditure for improving services to consumers	£/prop	0.41	0.02	0.01	0.98	4.29	5.65	11.61	10.15
C	**Supply/demand balance (£/property served)**									
6	Additional operating expenditure to continue to maintain and improve the balance between the water available and the demand from consumers	£/prop	0.00	0.17	0.57	1.94	2.33	2.80	3.29	3.81
7	Additional capital expenditure to continue to maintain and improve the balance between the water available and the demand from consumers	£/prop	28.27	44.04	27.51	18.34	36.32	37.17	34.94	13.75
D	**Quality enhancements (£/property served)**									
8	Additional operating expenditure to meet new environmental and water quality standards	£/prop	0.00	0.36	0.97	1.11	1.39	1.65	1.73	1.81
9	Additional capital expenditure to meet new environmental and water quality standards	£/prop	16.04	16.96	6.18	13.86	17.63	12.32	12.03	9.51
E	**Enhancements - large projects (£/property served)**									
10	Additional operating expenditure for large projects	£/prop	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Additional capital expenditure for large projects	£/prop	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F	**Water service totals (£/property served)**									
12	Total operating expenditure	£/prop	70.52	75.99	81.16	85.23	88.03	91.55	95.41	95.23
13	Total capital expenditure excluding grants and contributions	£/prop	89.90	109.42	95.52	91.50	123.48	114.17	108.86	79.55
14	Average connected properties (excluding empty properties)	000	1918.01	1934.31	1943.73	1957.27	1974.59	1996.76	2019.95	2042.17
G	**Water service totals (£m)**									
15	Total operating expenditure	£m	135.253	146.990	157.752	166.815	173.825	182.803	192.716	194.478
16	Total capital expenditure excluding grants and contributions	£m	172.427	211.654	185.662	179.095	243.823	227.972	219.895	162.457
17	Total capital grants, contributions and compensation for abstractions	£m	18.558	8.233	4.989	6.892	8.750	10.635	11.455	11.315

Final business plan

A8

PART A - COMPANY STRATEGY

Table A8 - ANH - Sewerage service - Expenditure projections

	Line description	Units	AMP4			AMP5				
			2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
A	**Base service levels (£/property served)**									
1	Operating expenditure to maintain current services to consumers	£/prop	78.51	81.66	85.11	85.28	84.25	82.03	79.84	77.76
2	Expenditure on below ground assets (includes sewers and storm overflows) to maintain current services to consumers - "infrastructure"	£/prop	14.37	13.74	11.33	11.94	12.85	13.12	12.95	12.89
3	Expenditure on surface assets (includes sewage treatment & disposal and pumping) to maintain current services to consumers - "non-infrastructure"	£/prop	36.64	33.55	27.54	39.60	42.66	37.22	33.99	33.96
B	**Enhanced service levels (£/property served)**									
4	Additional operating expenditure for improving services to consumers	£/prop	0.00	0.01	0.02	0.03	0.05	0.07	0.09	0.11
5	Additional capital expenditure on improving services to consumers	£/prop	5.36	5.97	4.86	6.05	8.67	9.86	10.08	9.08
C	**Supply/demand balance (£/property served)**									
6	Additional operating expenditure to continue to accommodate and deal with increased waste water from consumers	£/prop	0.00	0.48	0.75	0.87	1.16	2.39	2.61	3.04
7	Additional capital expenditure to continue to accommodate and deal with increased waste water from consumers	£/prop	1.21	1.77	1.57	3.81	17.62	15.70	14.13	12.15
D	**Quality enhancements (£/property served)**									
8	Additional operating expenditure to meet new environmental standards	£/prop	0.00	1.52	3.86	4.07	3.83	4.97	5.92	6.84
9	Additional capital expenditure to meet new environmental standards	£/prop	30.80	32.29	25.29	13.78	25.83	35.68	19.02	26.52
E	**Enhancements - large projects (£/property served)**									
10	Additional operating expenditure for large projects	£/prop	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Additional capital expenditure for large projects	£/prop	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F	**Sewerage service totals (£/property served)**									
12	Total operating expenditure	£/prop	78.51	83.67	89.75	90.25	89.30	89.46	88.47	87.74
13	Total capital expenditure excluding grants and contributions	£/prop	88.38	87.31	70.60	75.17	107.62	111.58	90.17	94.61
14	Average connected properties (excluding empty properties)	000	2460.762	2480.796	2492.114	2508.579	2529.763	2557.502	2586.472	2614.213
G	**Sewerage service totals (£m)**									
15	Total operating expenditure	£m	193.199	207.565	223.660	226.393	225.902	228.792	228.830	229.382
16	Total capital expenditure excluding grants and contributions	£m	217.486	216.609	175.934	188.571	272.258	285.375	233.230	247.320
17	Total grants and contributions received by companies from third parties	£m	10.894	8.881	5.462	18.244	12.738	15.154	16.969	22.581

Final business plan

A9 Public Domain

PART A - COMPANY STRATEGY

Table A9 - ANH - Financial projections - Public domain

	Line description	Units	AMP4	AMP 5	
			2007-08	2010-11	2014-15
A	**Current cost profit & loss and financial indicators**				
1	Turnover	£m	957	1078	1111
2	Operating costs	£m	323	393	424
3	Capital charges	£m	326	338	339
4	Operating profit	£m	316	345	347
5	Regulatory capital value-year end	£m	5127	5240	5584
6	Pre tax return on regulatory capital value	%	6.2%	6.6%	6.2%

PART A - COMPANY STRATEGY

Table A10 - ANH - Water and sewerage services - Summary of justification of company investment proposals

	Line description	Units	Contribution to annual average household bill in 2014-15	Net present value of costs arising from investment proposals in 2010-15	Net present value of benefits arising from investment proposals in 2010-15	Capital expenditure proposed for 2010-15	Operating expenditure in 2014-15
			£/year	£m	£m	£m	£m/year
1	2		3	4	5	6	7
A	**Water Service**						
1	**The total plan for the water service 2010-15**		9.00	1,630.00	2,694,683.00	1,082.00	9.00
2	Water service - Investment proposals demonstrated to be cost-beneficial		5.00	1,576.00	2,694,659.00	609.00	2.00
3	Water Service - Investment proposals demonstrated to be non-cost-beneficial		1.00	54.00	24.00	42.00	0.00
4	Water service - Investment proposals not assessed		3.00	0.00	0.00	431.00	7.00
5	Enter description						
5….	Enter description						
B	**Sewerage Service**						
6	**The total plan for the sewerage service 2010-15**		5.00	2,479.00	192,338.00	1,313.00	16.00
7	Sewerage service - Investment proposals demonstrated to be cost-beneficial		3.00	1,763.00	192,127.00	854.00	5.00
8	Sewerage service - Investment proposals demonstrated to be non-cost-beneficial		2.00	716.00	211.00	325.00	10.00
9	Sewerage service - Investment proposals not assessed		0.00	0.00	0.00	134.00	0.00
10	Enter description						
10….	Enter description						

Model FBP2009PD-ICS
Version 1.7.12
Company HPL
Table A1

PD Final Business Plan 2009

Hartlepool
Price limits, bills, water sales and supply/demand balance

	Line description	Units	AMP4			AMP5				
			2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
A	Projected household bills - water service									
1	Typical unmeasured h'hold bill (base yr avg chg) - real terms	£	116.69	117.70	119.34	128.89	133.71	140.18	146.02	146.69
2	Typical measured h'hold bill (base yr avg chg) - real terms	£	113.57	119.13	124.76	127.35	130.66	134.93	138.98	139.32
3	Average h'hold bills - real terms	£	116.18	116.92	118.18	124.90	127.88	131.98	135.57	134.72
4	Average h'hold bills - nominal terms	£	116.18	121.92	126.94	133.78	140.40	148.52	156.38	159.28
B	Water sales & supply/demand balance									
5	Billed water delivered	Ml/d	23.32	23.13	22.81	22.66	22.60	22.55	22.50	22.45
6	Total water available for use baseline (dry year annual average)	Ml/d	46.77	46.70	46.83	46.63	46.55	46.47	46.33	45.92
7	Distribution input (dry year annual average)	Ml/d	26.94	26.95	26.85	26.67	26.57	26.53	26.48	28.10
8	Total leakage	Ml/d	5.28	5.29	5.29	5.30	5.32	5.35	5.38	5.40
9	Total water savings achieved or assumed from company's water efficiency strategy	Ml/d	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Model FBP2009PD-ICS
Version 1.7.12
Company HPL
Table A2

PD Final Business Plan 2009

Hartlepool
Water service - Current performance & planned outputs

	Line description	Units	Level of performance 2002-03	Level of performance 2007-08	Level of performance by 2009-10	Level of performance by 2014-15	Level of performance by 2019-20
A	Service performance						
1	DG2 properties at risk of receiving low pressure	nr	30	0		0	
2	DG3 Supply interruptions (overall performance score)	nr	0.00	0.28		0.20	
3	DG6 % billing contacts dealt with within 5 days	%	100.0%	97.0%		97.0%	
4	DG7 % written complaints dealt with within 10 days	%	34.0%	100.0%		100.0%	
5	DG8 % metered customer's receiving bill based on a meter reading	%	99.9%	99.5%		99.5%	
6	DG9 % calls abandoned	%		0.2%		0.2%	
7	DG9 % calls receiving engaged tone	%		0.1%		0.1%	
8	Security of supply index (dry year annual average planned levels of service)	nr		100		100	
9	Security of supply index (critical index)	nr		100		100	
B	Quality & environmental compliance						
10	% distribution input covered by section 19 undertakings at water treatment works	%		0.000%		0.000%	
11	% distribution input not affected by section 19 undertakings or temporary relaxations or Authorised Departures	%	100.000%	100.000%		100.000%	
12	% of properties in water supply zones affected by section 19 undertakings in distribution or Authorised Departures	%		0.000%		0.000%	
13	% mean zonal compliance with drinking water regulations	%		100.00%		100.00%	
C	Serviceability to customers (maintaining asset systems fit for purpose)						
14	Below ground assets assessment - infrastructure pipelines	Text	STABLE	STABLE		STABLE	STABLE
15	Surface assets assessment (non-infrastructure)	Text	STABLE	STABLE		STABLE	STABLE
D	Carbon Accounting						
16	Carbon emissions' produced in providing the service	ktonnes/yr			3.9	3.9	
17	Other GHG emissions (as CO2e) produced in providing the service	ktonnes/yr			0.2	0.2	

Model FBP2009PD-ICS
Version 1.7.12
Company HPL
Table A4

PD Final Business Plan 2009

Hartlepool
Water service - Key activity projections

	Line description	Units	Activity in AMP5 period relating to base service	Activity in AMP5 period relating to enhancements	Total planned activity in AMP5 period	Profile of activity	Total planned activity in AMP6 period
A	Key activity projections - water resources						
1	Length of raw water aqueducts refurbished	km	0.0	0.0	0.0	S	0.0
2	Work on dams & impounding reservoirs	nr	4	0	4	S	1
3	Capital investment in aqueducts, dams & impounding reservoirs	£m	0.250	0.000	0.250	S	0.250
B	Key activity projections - water treatment						
4	Number of refurbished or new treatment works	nr	1	0	2	S	2
5	Ml/day of refurbished or new treatment works	Ml/d	6.20	0.00		S	0.00
6	Capital investment in refurbished or new treatment works	£m	1.350	0.000	1.350	S	1.350
C	Key activity projections - water distribution						
7	Length of mains renewed	km	30.0	0.0	30.0	S	30.0
8	Length of mains relined	km	0.0	0.0	0.0	S	0.0
9	Length of new mains	km	0.0	7.0	7.0	S	0.0
10	Number of refurbished or new district meters & pressure control valves	nr	0	0	0	S	0
11	Capital investment in underground water distribution activity (incl investment in meters reported in Block E of this table)	£m	6.060	1.550	7.610	S	6.060
12	Number of refurbished or new pumping stations	nr	0	0	0	S	0
13	Capital investment in refurbished or new pumping stations	£m	0.000	0.000	0.000	S	0.000
14	Number of refurbished or new service reservoirs	nr	4	0	4	S	0
15	Capital investment in refurbished or new service reservoirs	£m	0.537	0.000	0.537	S	0.000
D	Key activity projections - management & genera						
16	Offices, labs, depots, workshops	m²	1,400.0	0.0	1,400.0	S	1,400.0
17	Capital investment in offices, labs, depots, workshops and vehicles	£m	0.000	0.000	0.000	S	0.000
18	Capital investment in instrumentation, control and automation (ICA), telemetry & computers	£m	0.000	0.000	0.000	S	0.000
E	Key activity projections - metering performance						
19	Number of household meters renewed	nr			1,720	S	1,720
20	Optional meters: households	nr			4,199	S	3,525
21	Selective meters: households	nr			56	F	47
22	Percentage of households metered (at the end of the period)	%			37%	R	49%
F	Total - water service						
23	Total capital investment in the water service	£m	8.197	1.550	9.747		7.660

Model FBP2009PD-ICS
Version 1.7.12
Company HPL
Table A7

PD Final Business Plan 2009

Hartlepool
Water service - Expenditure projections

	Line description	Units	AMP4			AMP5				
			2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
A	Base service levels (£/property served)									
1	Operating expenditure to maintain current services to consumers	£/prop	87.28	93.33	102.27	106.16	109.57	113.88	118.89	118.61
2	Expenditure on pipelines, dams and aqueducts to maintain current services to consumers - "infrastructure"	£/prop	14.90	12.15	9.81	31.33	32.89	30.23	29.04	28.82
3	Expenditure on surface assets (includes abstraction, treatment, pumping and service storage) to maintain current services to consumers - "non-infrastructure"	£/prop	7.84	9.96	12.26	11.50	11.28	9.95	6.47	6.42
B	Enhanced service levels (£/property served)									
4	Additional operating expenditure for improving services to consumers	£/prop	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Additional capital expenditure for improving services to consumers	£/prop	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C	Supply/demand balance (£/property served)									
6	Additional operating expenditure to continue to maintain and improve the balance between the water available and the demand from consumers	£/prop	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	Additional capital expenditure to continue to maintain and improve the balance between the water available and the demand from consumers	£/prop	0.00	0.00	0.00	3.79	22.62	11.23	0.00	0.00
D	Quality enhancements (£/property served)									
8	Additional operating expenditure to meet new environmental and water quality standards	£/prop	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	Additional capital expenditure to meet new environmental and water quality standards	£/prop	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E	Enhancements - large projects (£/property served)									
10	Additional operating expenditure for large projects	£/prop	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Additional capital expenditure for large projects	£/prop	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F	Water service totals (£/property served)									
12	Total operating expenditure	£/prop	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	Total capital expenditure excluding grants and contributions	£/prop	22.74	22.11	22.08	46.62	66.79	51.42	35.51	35.24
14	Average connected properties - water (excluding empty properties)	000	40.46	40.66	40.77	40.92	41.11	41.41	41.73	42.05
G	Water service totals (£m)									
15	Total operating expenditure	£m	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	Total capital expenditure excluding grants and contributions	£m	0.920	0.899	0.900	1.907	2.746	2.129	1.482	1.482
17	Total capital grants, contributions and compensation for abstractions.	£m	0.173	0.042	0.054	0.067	0.081	0.112	0.121	0.123

Model FBP2009PD-ICS
Version 1.7.12
Company HPL
Table A10

PD Final Business Plan 2009

Hartlepool
Water and sewerage services - Summary of justification of company investment proposals

	Line description	Units	Contribution to annual average household bill in 2014-15	Net present value of costs arising from investment proposals in 2010-15	Net present value of benefits arising from investment proposals in 2010-15	Capital expenditure proposed for 2010-15 AMP5	Operating expenditure in 2014-15
			£/year	£m	£m	£m	£m/year
A	Water Service						
1	The total plan for the water service 2010-2015		0	9	32,469	10	0
2	Investment proposals demonstrated to be cost-beneficial		0	6	32,470	2	0
3	Investment proposals shown to be non-cost-beneficial		0	2	0	2	0
4	Investment proposals not assessed		0	0	0	6	0

Want to know more about Anglian Water?
Visit www.anglianwater.co.uk.

Corporate Communications
Anglian Water Services Ltd
Anglian House, Ambury Road
Huntingdon, Cambridgeshire
PE29 3NZ

Tel 08457 919155
Fax 01480 323112
Email: Regulation@anglianwater.co.uk

Registered in England No. 2366656