

This report outlines the strategy we will adopt for the next 25 years to ensure that we continue to deliver a reliable supply of safe, clean water and effective wastewater services to the customers of **anglianwater**



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All financial information in this document is stated at 2007/8 prices.

Anglian Water publications

Strategic Direction Statement 2010-2035*
Annual Report and Accounts 2007
Community and Environment Report 2007
Drinking Water Quality Summary Report 2006



To receive any of these publications, please call 08457 919155.

* Large print version available online at www.anglianwater.co.uk.



Key messages

Anglian Water's fundamental goal is to deliver a reliable supply of clean, safe drinking water and effective wastewater services at an affordable price.

We are pleased to set out Anglian Water's long-term strategy for our customers and our business. We believe this will deliver outstanding service, reliability and value for money. This section, on pages two to five, sets out a summary of our key challenges and strategic priorities for the next twenty-five years.

Setting out our strategic direction

Anglian Water was set up as a regulated public company in 1989. Since then the company, together with other water and wastewater companies, has been subject to price reviews every five years. Each review has considered the standards for drinking water quality, environmental standards and customer service.

For the first time we are now setting out our 25-year plan. This sets the strategy within which long-term decisions will be made. It also forms the context for the next five-yearly price review in 2009.

We have identified a number of challenges that face the Anglian Water region. The two most significant are:

- ⇒ Faster rates of housing and economic growth.
- ⇒ The need to adapt to the impacts of climate change.

Our business is long-term and we need to plan for some assets, such as reservoirs and other new sources of water, many years before they are needed. Hence we need to invest now to prepare for the future.

The consequences of failing to invest in the short to medium-term could be severe and hinder the delivery of a reliable and resilient supply of drinking water and effective wastewater services at an affordable price.

Many of the key issues will need to be carefully considered with Government and regulators. In particular, these issues include:

- ⇒ The timing of investment needed to deal with the combined impacts of growth and climate change
- ⇒ The ability of water customers to pay more than a reasonable proportion of the costs of adaptation to climate change.
- ⇒ The planning of major water resource transfers and reservoirs.

Our region

Anglian Water provides water or wastewater services to 5.5 million people and 125,000 businesses in the east of England and the town of Hartlepool in the north east. Our region is bounded to the south by the River Thames, to the north by the Humber Estuary, and extends west to Northampton and Milton Keynes.

Predominantly flat and rural, our region is the driest in the UK and has one of the faster rates of housing growth. The Environment Agency has assessed the region as being one of 'serious water stress'.

Challenges

We have identified seven main challenges, of which most are of significance to all water and wastewater companies. Two are of particular importance to the Anglian region: climate change and growth.



“ *Anglian Water is likely to be one of the most vulnerable UK water companies to climate change. It already operates in the driest region of the country, which is expected to have drier summers in the future, accompanied by increased demand in particular growth areas. Many of Anglian Water’s assets are also vulnerable to sea level rise and coastal flooding.* **”**

**Dr Suraje Dessai, Senior Research Fellow,
Tyndall Centre for Climate Change Research**

Housing, population and economic growth

Growth in population, housing and the economy will put increasing demand on water and wastewater services. Securing sustainable supplies will demand substantial improvements in the efficiency of water usage by us and by our customers. Protecting the water environment will require growth in our region to be planned with consideration of sustainable drainage and water resources.

Climate change

Our region is particularly vulnerable to the impacts of climate change: temperature rise, the potential reduction in summer rainfall, lower available water resources, increased flood risk and rising sea levels. The ecological sensitivity of many of the wetland sites in the east of England adds a further challenge. The impact of hotter, drier summers, combined with a growing population, will increase the demand for water. Coastal and low-lying assets face an increased risk of flooding.

Our customers’ expectations

The challenge is to deal with growth and climate change and to meet the expectations of customers, while keeping bills at least as affordable as they are now. Customers expect us to maintain existing infrastructure to a high standard, and this is likely to require an increase on current expenditure. Customers will also expect continued improvements, including reducing the risk of service interruptions and improving the look and taste of drinking water. Surface water flooding is also an issue of particular concern for our customers. An ageing population will increase the number of customers who are particularly dependent on our services.

Effects of environmental pressures

We must meet our legal and regulatory obligations to protect the environment. Achieving sustainable improvements will, however, require farmers and others to reduce diffuse pollution.

Innovation

We must act to take advantage of advances in technology to improve service, efficiency and compliance.

Employees and employment

Recruiting skilled labour in the east of England is becoming increasingly competitive. Challenges will also be created by an increasingly aged and diverse workforce.

Structure and financing of the industry

A drive to introduce competition may change the structure of the industry over the period. However, it will remain important that large investment programmes can be financed efficiently.

Key messages

Strategic priorities

We have considered these challenges, in consultation with customers and other stakeholders, so as to balance service, risk and the impact on our customers' bills.

The choices we have made are to enable us to achieve our goals of delivering a reliable supply of clean, safe drinking water and effective wastewater services.

Our key priorities for the next 25 years are to:

Increase the resilience and reliability of our water and wastewater services

⇒ Adapting to the combined challenges of climate change and growth are key priorities for our customers and stakeholders.

Secure and conserve water resources

⇒ Climate change and regional growth combined will create a major challenge to maintaining water supplies.

Anticipate and invest for growth in our region

⇒ Infrastructure needs to be planned well in advance to enable services to be maintained and to mitigate adverse effects on the environment.

Improve the environment in our region

⇒ Customers have indicated that environmental concerns are important. Although not all customers are willing to pay more, continuing current levels of investment will allow further improvements to be made.

Mitigate and adapt to climate change impacts

⇒ Climate change is the biggest risk facing Anglian Water in the long-term.

Improve our efficiency and flexibility

⇒ Efficiency and flexibility will be needed to manage the major uncertainties we face.

Keep bills at current affordability

⇒ Most customers would like current levels of service to be maintained without any increase in bills in real terms and would like further investment to be justified by the benefits.

Our aspiration is that we should be able to deliver our strategy while limiting bill increases to an average of one per cent above inflation over the long-term. However, this will not be possible if Anglian Water and our customers are required to pay for major investment to adapt to the impacts of climate change.

We hope that you will find this document informative. We welcome your feedback.



Jonson Cox
Chief Executive, Anglian Water Group

Feedback

We welcome your feedback on our strategy, which will help us prepare our detailed business plans in the coming months.

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

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

Strategy overview

The diagram inside this fold-out summarises the challenges facing us, our priorities for the next 25 years and the key elements of our strategy.

Anglian Water's fundamental goal is to deliver a reliable supply of safe, clean drinking water and effective wastewater services.

The challenges we face

Environmental pressures => page 34

Climate change => page 18

Structure of the industry => page 42

Housing growth => page 12

Employment => page 40

Customer expectations => page 26

Innovation => page 38

Weighing up the issues and making choices

Pressures from the challenges

Customer and stakeholder views

Balance of service, cost and risk

Key strategic priorities

- ⇒ 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 in our region
- ⇒ Mitigate and adapt to climate change impacts
- ⇒ Improve our efficiency and flexibility
- ⇒ Keep bills at current affordability

Our strategy for the next 25 years

Secure and provide sufficient high quality water supplies and a sustainable wastewater service to meet the challenges of growth and climate change ⇒page **46**

Provide the resilience of our operations and assets that customers expect and meet the challenge of climate change ⇒page **53**

Provide safe, reliable, problem-free services to customers and developers, extending the range of services where valued ⇒page **55**

Maintain our assets to enable reliable provision of services ⇒page **57**

Protect and enhance the environment in a sustainable manner where benefits justify the costs ⇒page **59**

Take action to prepare for and influence the introduction of competition ⇒page **61**

Secure the skills and capabilities we need to provide our services and obtain the benefits of innovation ⇒page **62**

Play a full part in the development of the region we serve ⇒page **64**

Secure continued access to long-term finance ⇒page **65**

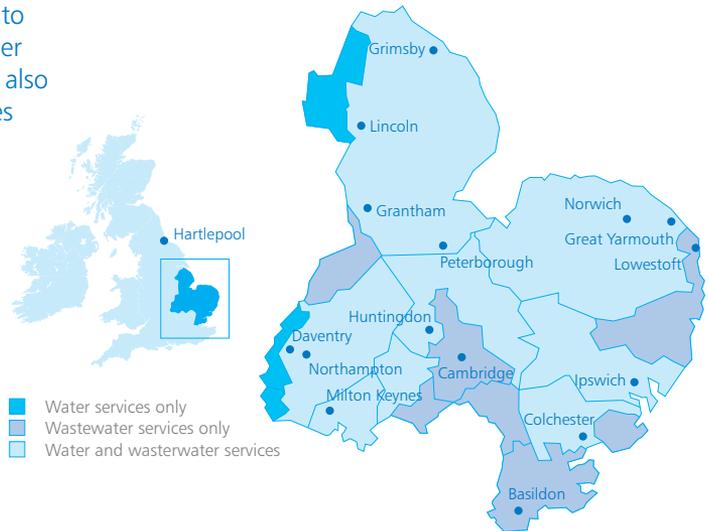
Limit bill increases to current affordability ⇒page **66**

How others can help us deliver our strategy

- ⇒ Set standards for climate change
- ⇒ Improve incentives to innovate
- ⇒ Maintain investor confidence
- ⇒ Help customers who cannot pay
- ⇒ Support standards for resilience
- ⇒ Clear decisions on competition
- ⇒ Responsible customer behaviour
- ⇒ More powers to collect unpaid bills

Our business today

Anglian Water provides water services to 1.8 million households and wastewater services to 2.4 million households. We also provide water and wastewater services to 125,000 non-domestic properties.



Anglian Water today:

- ⇒ Serves 18 per cent of the land area in England and Wales.
- ⇒ Provides water services to 4.2 million people via:
 - > A network of 36,800 kilometres of water mains.
 - > Supplies from rivers (five per cent), groundwater (50 per cent) and reservoirs (45 per cent).
- ⇒ Provides wastewater services to 5.5 million people via:
 - > 1,083 wastewater treatment works (17 per cent of all those in England and Wales).
 - > 43,400 kilometres of sewers.
 - > 4,333 pumping stations (22 per cent of the industry total).
- ⇒ 42 per cent of customers live in rural areas.
- ⇒ 62 per cent of households are metered.

Our region includes:

- ⇒ The lowest lying area in England and Wales, only 69 metres above sea level on average.
- ⇒ Nutrient-rich, slow-flowing rivers, a concentration of intensive arable agriculture and many sensitive wetlands. We have to reduce phosphorus at wastewater treatment works serving 42 per cent of the population to help reduce eutrophication, that is where watercourses with excessive nutrients suffer from algal blooms (industry average of 18 per cent).
- ⇒ A coastline vulnerable to sea level rise and erosion but which has many Blue Flag beaches.

Hartlepool Water provides water services to 90,000 people via:

- ⇒ 585 kilometres of water mains.
- ⇒ Water supplies from significant groundwater reserves.
- ⇒ 17 per cent of households are metered.





Reading meters in a housing estate in the Anglian Water region.



Listening for leaks; the first stage in detection and repair.

Over the past three years, Anglian Water has made many improvements across the business, and has ranked well consistently on most operating measures.

Water conservation

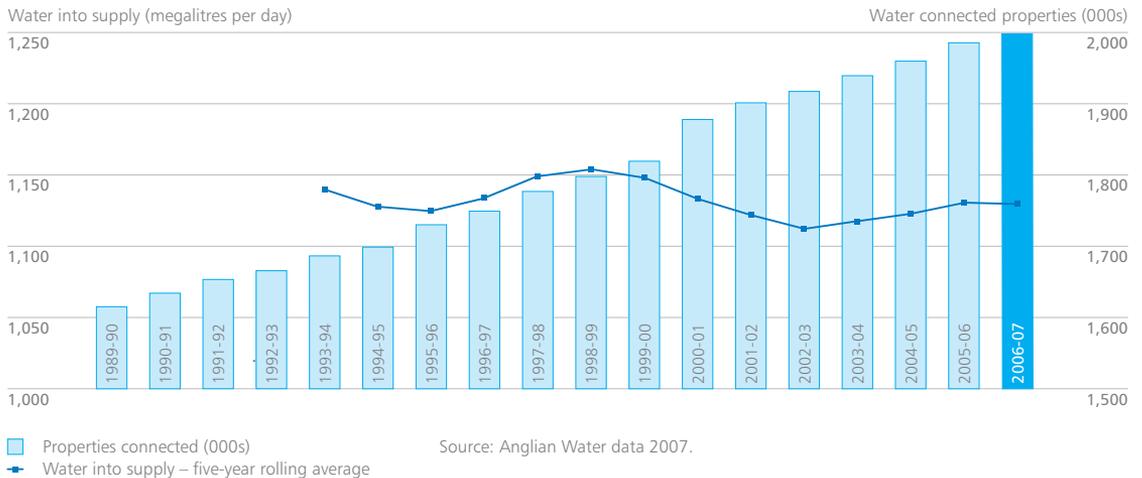
As we serve a dry region, we work hard to maintain a low leakage level. We meet targets for leakage that are among the lowest in the country.

Our meter penetration is nearly twice the average for England and Wales. The bills of 62 per cent of our households are based on how much water they use.

As a result of our metering policy, our focus on leakage, and investment in our networks to allow us to move water around our region more effectively, we have not had to impose a hosepipe ban on our customers since 1991, despite several periods of drought.

These measures have also enabled us to meet current demand with the same volume of water as in 1989 in spite of 20 per cent more properties being connected to our water network. See Figure 1 below.

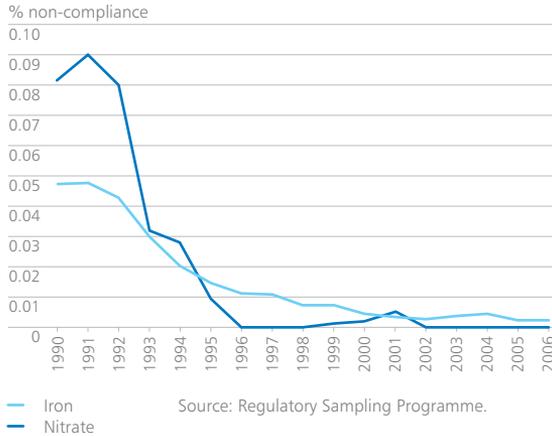
Figure 1: Water into supply and the number of connected properties



Drinking water quality

Our drinking water quality is consistently very good with an overall compliance (Mean Zonal Compliance) figure for 2006 of 99.95 per cent. The graph below shows the improved compliance since 1990 with the standards for iron and nitrate at customers' taps.

Figure 2: Iron and nitrate non-compliance at customers' taps



In recent years we have completed a major programme of water mains replacement to reduce discolouration. We have also installed a number of new treatment plants to sustain high-quality water standards where raw water quality is at risk of deterioration, and have taken steps to meet a stricter standard for lead.

Low water pressure

As a result of significant investment, only around 900 out of 1.8 million properties are now at risk of experiencing low water pressure.

Environmental standards

The standard of wastewater treatment and the quality of effluent returned from treatment works to rivers and sea has improved significantly since 1989.

River water quality meeting the 'good' or 'very good' standard has improved from 17 per cent (chemical) and 45 per cent (biological) in 1990 to 47 per cent (chemical) and 78 per cent (biological) in 2006.

Compliance with the mandatory standard for bathing waters has improved from 95 per cent in 1992 to 100 per cent in nine of the past 11 years. Compliance with the stricter guideline standard, a requirement for a beach to gain Blue Flag status (an internationally recognised award for high-quality beaches), increased from 22 per cent in 1992 to 70 per cent in 2007.

Most of the sludge that is produced by the wastewater treatment process is recycled to farmland as a soil conditioner.

Sewer flooding

The number of customers at risk from flooding because of overloaded sewers has fallen. Fewer than 600 properties are now included on our risk registers compared with more than 1,100 five years ago.

Customer service

Our customers tell us consistently that they are broadly satisfied with the service we provide.

Our customer research indicates that, on average, 86 per cent are 'fairly' or 'very satisfied' with our overall service. On average, 65 per cent of our customers are 'fairly' or 'very satisfied' with the overall value for money we offer.

In the past two years we have invested in new systems to improve our services to customers. Improvements have been made in meeting target times for work and in reducing the number of customer complaints.

Overall Performance Assessment

Anglian Water has performed consistently well in Ofwat's Overall Performance Assessment and historically has ranked in the top half of water and wastewater companies. We were the highest ranked water and wastewater company for the year 2006/7.

Condition of our network

Our performance has improved substantially through investment and better knowledge of asset condition. For example, the annual number of bursts per 1,000 kilometres of main was 266 in 1990. By 2006 this had fallen to 123.

However, there is more still to do: Ofwat currently assesses the status of our water network and treatment plant assets' serviceability as 'stable'. However, our wastewater treatment works are assessed as 'deteriorating' and the wastewater network as 'marginal'. These assessments are a concern for us and we are implementing action plans to improve on them.

Operational management

We have now created a single operational management centre and have automated operational tasks such as scheduling of work. As a result, there have been improvements in customer service, better management of risks and greater efficiencies. The new ways of working have enabled us to deal effectively with difficult operating conditions such as the drought conditions in 2006 and the severe storms and floods in 2007.

Efficiencies

We continue to seek efficiencies in our operating costs, capital delivery and financial costs.

Two years ago we set a target to have reduced our energy costs by 10 per cent by 2010. We are on track to have made these reductions by improving energy efficiency. We are also investing in renewable power generation.

We have developed effective delivery routes for the large capital expenditure programmes. An alliance of six major construction and engineering companies (the Alliance) delivers around 50 per cent of the capital investment programme. Together, we are exceeding efficiency targets.



Employees at Anglian Water's central operational management centre in Lincoln.



Operating a combined heat and power (CHP) generator at Dunstable, which turns biogas from the wastewater treatment process into energy.

Our key challenges

In this section we consider the seven principal challenges we have identified.

The two greatest challenges facing Anglian Water are climate change and growth. The diagram below illustrates these. Their impacts are described in more detail in the following pages.

| | |
|--|--|
| <p>Two-thirds of the average annual rainfall for England and Wales Wetter winters and drier summers could reduce availability and quality of water resources.</p> | <p>Over 750 Sites of Special Scientific Interest Extensive ecologically sensitive wetlands are vulnerable to drought and higher temperatures.</p> |
| <p>Large areas at risk of flooding More intense rainstorms will increase the risk of flooded drains, sewers and treatment works.</p> | <p>Changing agricultural landscape Climate change will alter agricultural practices and associated water needs. More land might be devoted to biofuels.</p> |
| <p>Around one million new homes Growth will increase demand for water and put more pressure on watercourses receiving treated wastewater.</p> | <p>1,238 kilometre coastline Our region is low-lying. Of our major assets, 60 are vulnerable to a 0.4 metre rise in sea levels. More than 1,000 pumping stations are at risk of flooding.</p> |

Figure 3: Impacts of climate change and growth



Our key challenges

Housing, population and economic growth

“ *New growth does bring environmental pressures and these need to be planned for in a strategic way to minimise undesired impacts. Improved infrastructure planning will help achieve better environmental outcomes as well as reducing overall costs. A crucial part of getting this right is to plan effectively to supply and manage the demand for water, provide facilities for waste water and mitigate the risks of flooding, particularly in the light of climate change.* ”

Department for Communities and Local Government Green Paper: *Homes for the future: more affordable, more sustainable*, July 2007



Connecting properties at a new housing development in Scunthorpe, Lincolnshire.

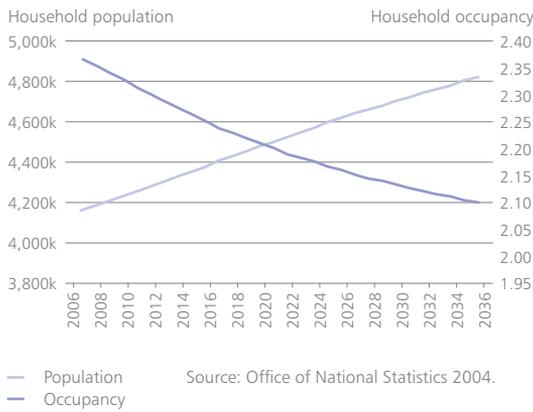
Our key challenges Housing, population and economic growth

Anglian Water serves one of the faster growing regions of the UK. Government forecasts and plans suggest that our region will be disproportionately affected by housing growth.

Drivers for growth

The Office of National Statistics forecasts that the population of our region will continue to grow rapidly over the next 25 years. Together with a continuing trend towards fewer occupants per household, there will be a continuing need for new houses.

Figure 4: Population and occupancy forecast



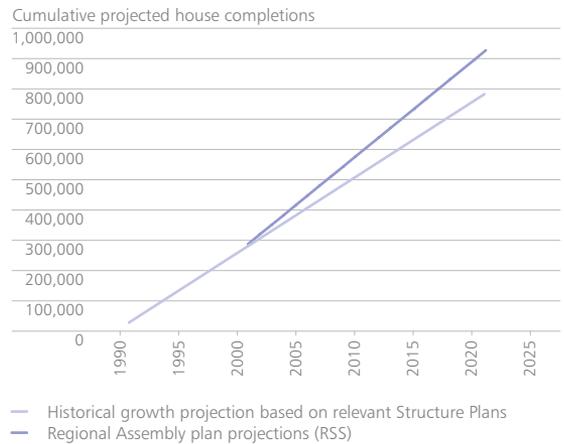
Much of the region is economically prosperous compared with other parts of the UK and has experienced consistently strong economic growth. Its prosperity and proximity to London make the region attractive for businesses and people.

Government plans for new homes

To help meet the demand for new homes and because of long-term demographic and economic trends, the Government has made clear its aspiration to increase housebuilding substantially in the south and east of England. The Department for Communities and Local Government has recently published its Green Paper: *Homes for the future: more affordable, more sustainable*, which sets out its aims for new housing in England. The proposals include:

- ⇒ Two million new homes by 2016 and three million by 2020.
- ⇒ Acceleration of housebuilding from 185,000 to 240,000 per year by 2016.
- ⇒ Further reviews of targets.
- ⇒ New growth points in addition to the growth areas and growth points already identified and 10 new 'eco-towns'.

Figure 5: Cumulative house completions for Anglian Water operating area 1991-2021



Our region contains a large part of three of the four growth areas defined by Government and a number of growth points. See Figure 3 on page 11.

The area we serve covers some or all of six Government regions in England, each of which is developing a Regional Spatial Strategy (RSS) looking forward to the 2020s. The planned rate of growth is significantly higher than in previous plans. See Figure 5.

However, there is some variation in the planning horizon, progress and the extent of our coverage of each region, as shown in Table 1 below.

Planned housing growth will affect our region substantially. The spatial strategies suggest that around 530,000 new homes are planned in our region that will require water services. This would add 29 per cent more homes to those we currently serve.

Around 640,000 new homes that will require wastewater services are planned for our region. This would add 25 per cent more homes to those we currently serve.

We expect Government plans to become even more ambitious: the planned national rate of housing growth in all spatial strategies is 37,000 per annum less than the Government's 240,000 per annum aspiration.

Such growth will require close attention to planning and financing the water and wastewater infrastructure that will be needed. New customers' demands for water must be met and, once used, this water must be treated and returned to the environment. These demands need to be achieved sustainably, and customers and the public will expect us to have anticipated and planned for this growth. Unlike in other areas of the country, the industrial sector in our region is relatively small. At present the sector is also buoyant. This will add to the pressure from residential demand.

Drainage

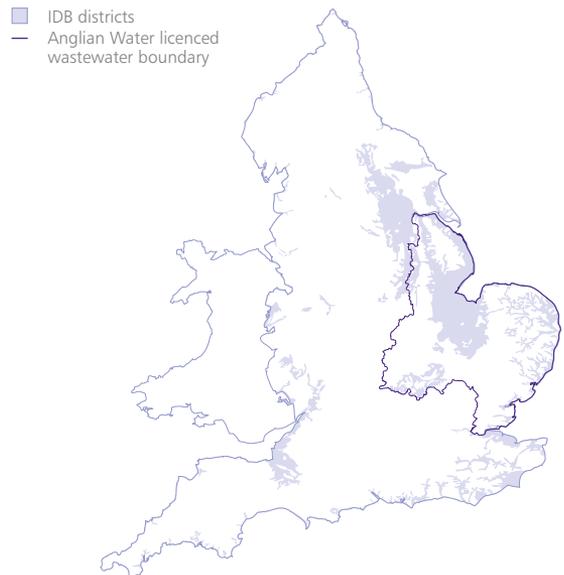
Drainage is at least as great a challenge in our region as the increased demand for water.

Much of the land in the east of England is flat and low-lying. Figure 3 on page 11 shows that large areas of our region are at risk of flooding. The many Internal Drainage Boards that have been established over time in our region indicate the complexity of land drainage in our region. See Figure 6.

The characteristics of our region also make surface and foul water drainage more difficult.

The large number of bodies with responsibility for different aspects of drainage makes an integrated approach both necessary and challenging.

Figure 6: Internal drainage boards (IDBs) coverage in England and Wales



Source: JBA Review of IDBs Report 2006
Courtesy of Bedford Group of Drainage Boards.

Table 1: Housing growth in Regional Spatial Strategies (excluding Hartlepool)

| Region | Timescale | Status | Planned new houses in Anglian Water region | |
|--|-----------|--|--|----------------|
| | | | Water | Wastewater |
| East of England | 2021 | Proposed changes to draft RSS published by Government Office | 233,000 | 362,000 |
| East Midlands | 2026 | Examination in Public (EIP) completed, Panel Report awaited | 224,000 | 207,000 |
| South East | 2026 | Panel Report issued following EIP | 62,000 | 61,000 |
| Yorkshire and Humber | 2021 | Proposed changes to draft RSS published by Government Office | 17,000 | 10,000 |
| London | 2017 | EIP in progress | 0 | 1,000 |
| Total planned new houses in area served by Anglian Water (excluding Hartlepool) | | | 536,000 | 641,000 |

Source: Anglian Water and Savills data 2007.

Our key challenges Housing, population and economic growth

Water resources

Eastern England is the driest region in the UK, receiving only around 600 millimetres rainfall per annum, around two-thirds of the average for England and Wales. The Environment Agency, which manages the region’s natural water resources, seeks to balance overall supply against the competing needs of water for drinking, industry, farmers and food producers.

The Environment Agency recognises the challenges and has classified the Anglian Region as being one of ‘serious’ water stress. The Environment Agency may, in future, seek to limit water abstraction because of pressure on the natural environment.

Water shortages in other parts of England in 2006 highlighted that a plentiful supply of clean, safe drinking water cannot always be taken for granted. In response, the Government intends to set new minimum standards to support sustainable water use in new homes at 125 litres per head per day, which is around 15 per cent lower than current estimated average for all households in our region. These changes, with further measures such as metering, could help moderate the additional demand from new growth.

The importance of location

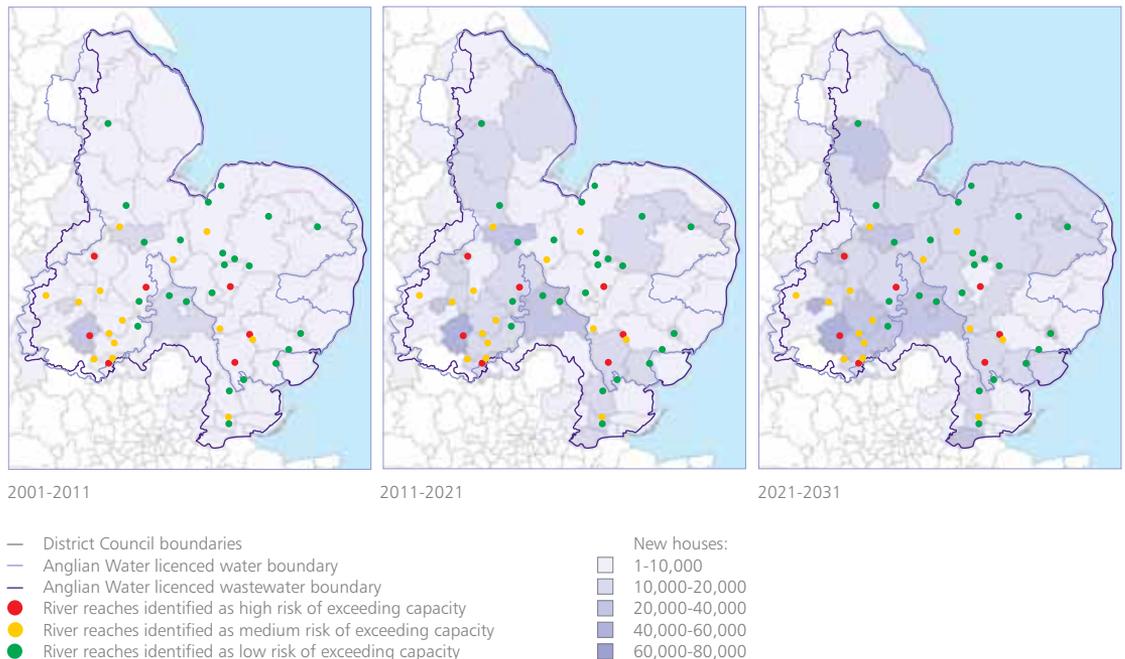
Aggregate housing projections do not fully reflect the scale of the challenge.

The provision of drainage, in particular, is specific to location. The maps below show in more detail where in our region housebuilding is predicted to take place using the Local Authority level forecasts upon which the Regional Spatial Strategies are based.

Much of the planned growth is in areas that are at risk of flooding.

There will also be more specific impacts. Figure 7 shows which river reaches in our region are already close to the limits of their environmental capacity to receive flows of effluent. Growth is predicted in a number of areas where rivers are close to capacity. Detailed growth plans need to take account of these risks.

Figure 7: Growth is planned in some areas with limited scope for additional consents to discharge wastewater



Sources: Regional Assemblies within our region, Anglian Water.



New housing development in our region.

Key challenges

1. Plan against demanding and uncertain housing growth and demographic trends.
2. Ensure spatial plans take account of water supply and drainage issues.
3. Substantially reduce wastage of water by us and by our customers.
4. Secure sustainable supplies of water to meet new demand.
5. Secure sustainable arrangements for wastewater drainage.

Our planning assumptions

Annual net new connected households:

| | |
|--------------|---------------|
| ⇒ Water | 26,000-32,000 |
| ⇒ Wastewater | 31,000-38,000 |

Population growth 2010-35 14-18 per cent

Persons per household in 2035 2.1-2.3

Excess of estimated peak demand over supply in 2035, assuming no additional sources of supply: 300 megalitres per day.

Improved regulatory incentives to adopt Sustainable Drainage Systems.

Strategy

Our strategy for addressing these challenges can be found in:

- ⇒ Provision of water supply and wastewater services, pages 46-52.
- ⇒ Protecting and enhancing the environment, pages 59-60.

Our key challenges

Climate change





“ *The east of England is particularly vulnerable to climate change. It is already dry, and this may worsen. Much of the region is already low-lying, and increased storminess and sea level rise will bring potential risk of more flooding and erosion.* ”

Government Office of the East of England

Driving through floodwater in Great Yarmouth during a storm, September 2006.

Picture courtesy of Archant Norfolk.

Our key challenges

Climate change

Climate change is the biggest risk to our business over the next 25 years.

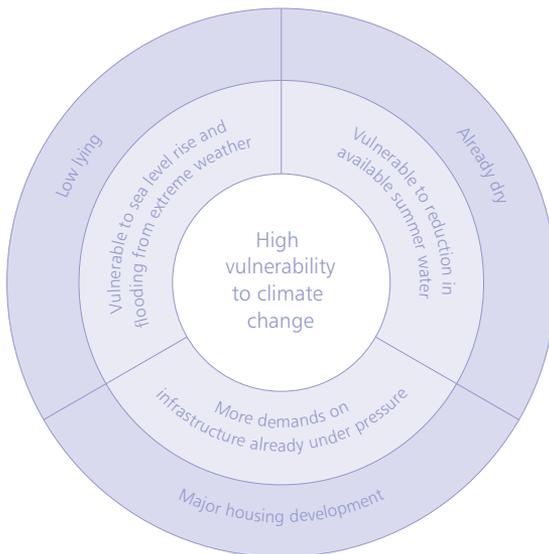
More extreme weather events are already having an impact. More than 85 per cent of the incidents managed by our wastewater incident team in 2006/7 were weather-related, far more than in previous years.

Climate change vulnerability and adaptation

Anglian Water will need to continue to provide water and wastewater services in a changing and uncertain climate. The rate of change is uncertain, but it is very likely we will have to operate with higher average temperatures, wetter winters, drier summers, rising sea levels and more frequent extreme weather events.

Climate change is a particularly serious challenge in the east of England. Most experts agree that the east of England is likely to be the region most vulnerable to climate change. See Figure 8 below.

Figure 8: Causes of Anglian Water's vulnerability to climate change



Source: Anglian Water.

Adaptation priorities

Immediate

Manage the impact of immediate risk of flooding and other weather-related incidents.

Imminent

Manage seasonal changes in climate by increasing winter storage and reducing summer peaks in demand for water.

On the horizon

Ensure future capital investment is designed to be resilient to the impacts of climate change for the next 40 years and beyond.

We operate in the driest region in the UK, receiving only two-thirds (approximately 600 millimetres) of the average annual rainfall in England and Wales.

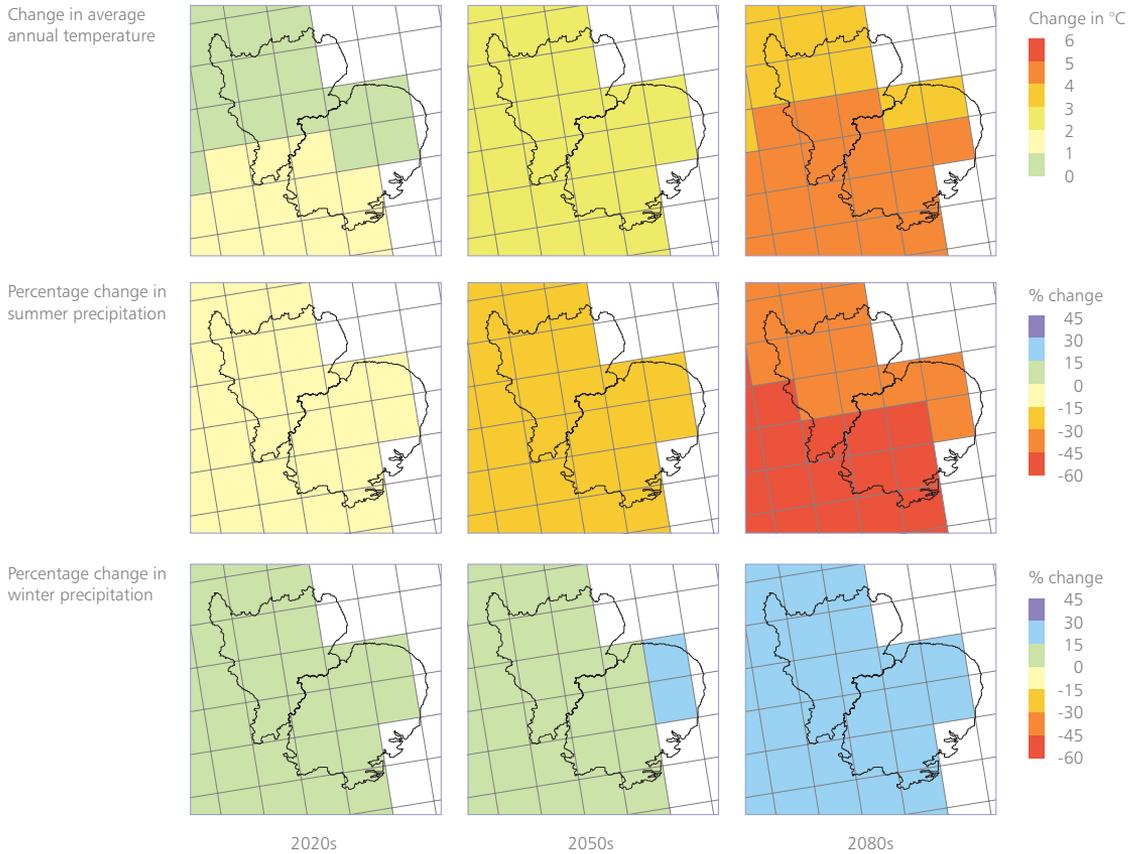
Wetter winters and drier summers, together with increased demand from customers because of substantial planned growth, will affect our region's water resources, water quality and biodiversity.

We will need to adapt the way we operate to maintain the level of services our customers expect of us, for example, by storing more winter rainfall for summer use, by groundwater recharging and by more sustainable drainage schemes.



Increasing surface water sewer capacity to accommodate new development and reduce the risk of flooding in Cromer, Norfolk.

Figure 9: Impacts of climate change: UK Climate Impacts Programme high emissions scenario (UKCIP02)



Source: UKCIP02 Climate Change Scenarios.

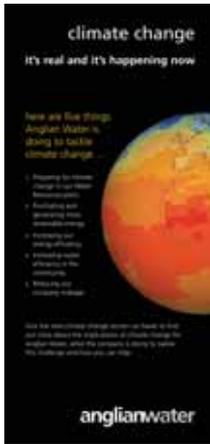
Figure 9 (above) shows the changes forecast by the UK Climate Impacts Programme in temperature and summer and winter rainfall in our region over the period to 2080, under its high emissions scenario.

Table 2: Climate change impacts on Anglian Water

| | Potential climate change | Potential impact |
|---------------------------------------|--|--|
| Water resources | Temperature rise | Increase in demand for water in summer; increased evapotranspiration |
| | Winter rainfall increase | Opportunity for more water storage; increased diffuse pollution |
| | Summer rainfall decrease | More frequent low river flows; increased competition for water; degraded wetlands |
| | Sea level rise | Saline intrusion |
| | Increase in weather extremes (heatwaves, intense rainfall, storms) | Increased run-off reduces recharge of aquifers; reduced river water quality |
| Water supply and customer service | Temperature rise | Increased peak demand; faster asset deterioration; new pests and diseases; changes in process efficiency |
| | Winter rainfall increase | Inadequate pump capacity for raw water |
| | Summer rainfall decrease | Increased peak demand; changing customer expectations |
| | Sea level rise | Asset loss |
| | Increase in weather extremes (heatwaves, intense rainfall, storms) | Increased flooding and risk of service loss; increased subsidence – pipe failure; increased contamination; decrease in raw water quality – increased treatment cost; security of power; peak demand delivery during heat waves |
| Wastewater collection and treatment | Temperature rise | Faster asset deterioration; changes in process efficiency; increase in odour |
| | Winter rainfall increase | Insufficient infrastructure capacity |
| | Summer rainfall decrease | Tightening of discharge consent; reduced flexibility – effluent required to maintain river flows |
| | Sea level rise | Asset loss |
| | Increase in weather extremes (heatwaves, intense rainfall, storms) | Increased flooding and risk of service loss; increased clean-up costs; inability of infrastructure to cope; increased subsidence – pipe failure |
| Asset creation/construction programme | Temperature rise | Impact on construction processes; site staff exposure to UV |
| | Winter rainfall increase | Narrower construction window |
| | Summer rainfall decrease | – |
| | Sea level rise | Fewer suitable site locations |
| | Increase in weather extremes (heatwaves, intense rainfall, storms) | Change to design standards; damage to construction site |
| Social implications | Temperature rise | Political pressure for free essential water use – schools/hospitals; increased tourism; greater use of air conditioning, leading to increased energy use/emissions; new pests and diseases |
| | Winter rainfall increase | Increased flooding of properties; land required for new water storage |
| | Summer rainfall decrease | Exacerbating problems created through housing growth; reduced risk to bathing waters from combined sewer outflows |
| | Sea level rise | Relocation of coastal populations |
| | Increase in weather extremes (heatwaves, intense rainfall, storms) | Health and safety of staff; failure of bathing waters; increased insurance claims |

These are just some of the potential impacts of climate change on our business. We will also experience indirect impacts, eg, as a result of changing agricultural practices, or impacts on other industries on which we rely such as electricity supply. We plan to better understand our vulnerability to direct and indirect climate change impacts, by identifying vulnerable assets and critical weather-related thresholds across the business.

Source: Anglian Water.



Examples of communication materials used to raise awareness among employees of the need to be energy efficient and how they can contribute.

Climate change, taken together with growth, presents an additional pressure on the Sites of Special Scientific Interest (SSSIs) in our region, of which 61 per cent are wetland habitats that are already sensitive to warmer, drier conditions (see Figure 3 on page 11). Of the SSSIs in our region that are in unfavourable and declining condition, 91 per cent are wetland habitats. Measures required to protect these sites could further constrain our ability to abstract water or to discharge effluent.

Our coastal networks and treatment works are highly vulnerable to sea level rise and coastal flooding. Figure 3 on page 11 shows the area that would be flooded should there be a 0.4 metre sea level rise, assuming no substantial investment in flood defences. Nearly 60 of our wastewater treatment works and in excess of 1,000 pumping stations, which would cost more than £500 million to replace, lie in this area.

More intense storms and floods will continue to test the capacity of our sewers, particularly combined sewers that carry both foul and surface water. These events will threaten water and wastewater treatment works and pumping stations. Events in Gloucestershire in 2007 demonstrated just how vulnerable water and wastewater infrastructure can be.

It is therefore essential that we adapt to protect customers, services, sites, infrastructure, employees and the environment from the risks associated with climate change. Table 2 on page 22 summarises some of our analyses of the impacts of climate change on our business.

Mitigating climate change

The Government expects businesses to make a substantial contribution towards meeting the target it set out in the Climate Change Bill to reduce current greenhouse gas emissions by 60 per cent by 2050.

Water companies will be subject to the Carbon Reduction Commitment from 2010. We anticipate that policy in this area is likely to develop substantially and different climate change mitigation mechanisms are likely to emerge. At present, it is not clear whether or not water industry regulators will set further climate change targets.

Increasing standards of water and wastewater treatment and the growing numbers of customers mean that our electricity consumption has increased by 27 per cent over the past 10 years. This means that our contribution to greenhouse gas emissions is also increasing.

There are also direct and indirect emissions of other greenhouse gases, such as methane from the recycling of biosolids. Figure 10 and Table 3 on page 24 show the sources of our carbon emissions and our estimated carbon footprint in 2006/7.

Mitigation priorities

Immediate

Improve energy efficiency and better understand our carbon footprint.

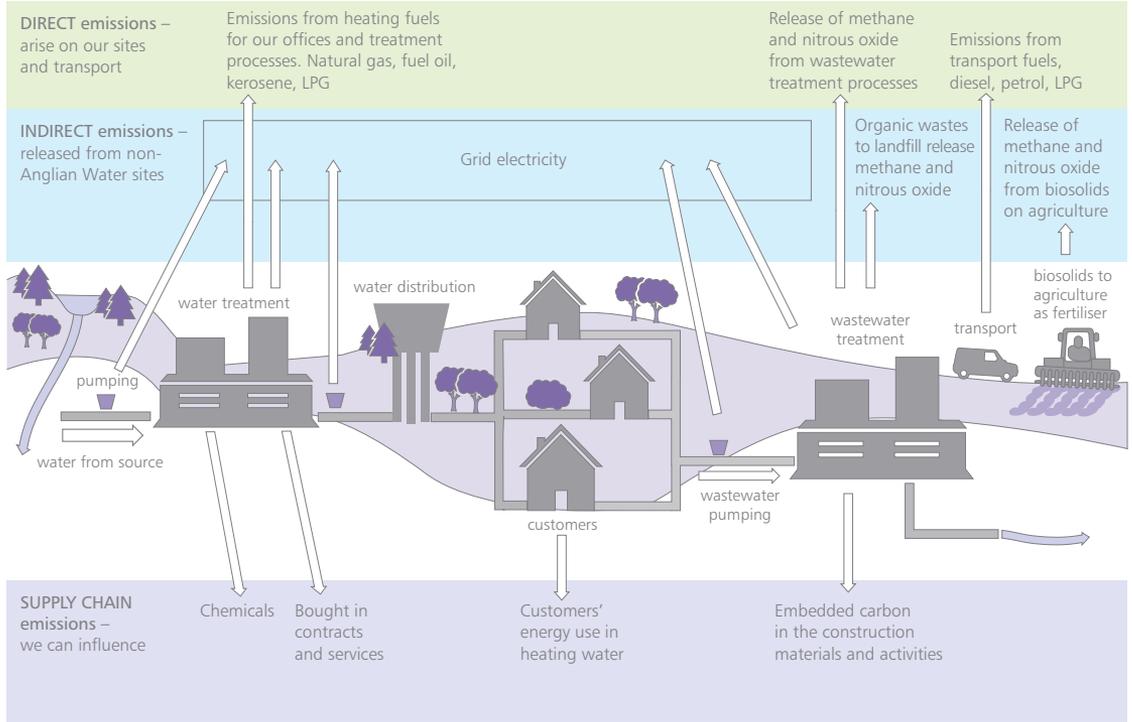
Imminent

Invest in renewable energy generation and promote water efficiency.

On the horizon

More sustainable treatment and delivery systems. New standards for investment to minimise our carbon footprint.

Figure 10: Sources of CO₂ emissions



Source: Anglian Water 2007.

Table 3: Carbon footprint by emission type 2006/7

| Emission type | CO ₂ equivalents (tonnes) | Category |
|--|--------------------------------------|----------|
| Transport emissions | 16,000 | Direct |
| Wastewater process emissions | 11,000 | Direct |
| Fuels used at operational sites | 10,000 | Direct |
| Sludge treatment process emissions | 6,000 | Direct |
| Self-generated renewable electricity | 0 | Direct |
| Purchased electricity | 253,000 | Indirect |
| Sludge to land emissions | 160,000 | Indirect |
| Water sludges to land | 2,000 | Indirect |
| Wastewater grit and screenings to landfill | 1,000 | Indirect |
| Purchased green electricity | 0 | Indirect |
| Total | 459,000 | |

Note: Estimates of carbon footprint are subject to varying levels of confidence.

Source: Anglian Water 2007.

Key challenges

1. Protecting our vulnerable inland and coastal assets from flooding.
2. Dealing with increased wastewater flows while protecting the water environment in our region.
3. Maintaining supplies of water to a growing population in drier, hotter summers.
4. Planning for the great uncertainty associated with climate change.
5. Reducing substantially our carbon footprint.

Our planning assumptions

We will use the best available climate change science to underpin our planning. Currently, we are using the UK Climate Impacts Programme's High Emissions scenario (UKCIP02).

Under this scenario the following changes may occur by 2080 in the east of England:

- ⇒ Sea level rise of 0.22-0.77 metres.
- ⇒ Temperature rise of 3-5°C.
- ⇒ Winter rainfall increase by up to 30 per cent.
- ⇒ Summer rainfall decrease by up to 60 per cent.
- ⇒ Increased frequency of intense storms.

Once available, we will use the UKCIP08 scenarios.

New industry design standards for water and wastewater assets will be agreed.

An industry assumption for the cost of carbon will be agreed by regulators.

The Carbon Reduction Commitment will be implemented as planned.

Strategy

Our strategy for addressing these challenges can be found in:

- ⇒ Provision of water supply and wastewater services, pages 46-52.
- ⇒ Resilience of our operations, pages 53-54.
- ⇒ Protecting and enhancing the environment, pages 59-60.

Our key challenges Our customers' expectations



“ We welcome the long-term planning to address issues of climate change, resource planning and development. We believe this will ensure customer service will be designed proactively rather than reactively. ”

Consumer Council for Water – Eastern Region



Visitors to Norwich Market, one of the oldest and largest open markets in the country.

Our key challenges

Our customers' expectations

Our customers are central to the way we have planned our strategy and we have consulted with our stakeholders to help us understand their priorities.

How we have engaged with customers and stakeholders

We have:

- ⇒ Conducted 10 focus groups with 80 residential customers.
- ⇒ Surveyed 1,000 residential customers.
- ⇒ Conducted telephone surveys and interviews with non-domestic customers.
- ⇒ Interviewed senior representatives of 40 organisations in our region who have an interest in what we do.
- ⇒ Set up five independently chaired expert opinion panels to debate findings.
- ⇒ Set up regular progress meetings with the Consumer Council for Water, the Drinking Water Inspectorate, the Environment Agency and Natural England.
- ⇒ Continued our regular surveys of customers' views.

Views of our customers

Customers expect us to maintain the quality of our service and manage future challenges such as regional growth and climate change.

Quantitative research indicates that a majority is willing to pay for improvements. However, a third of residential customers surveyed said they were not willing to see any increase in bills to further improve levels of service.

It is therefore clear that we need to consider carefully the costs and benefits of investment, especially where it will lead to a permanent increase in customers' bills.

Drinking water

While quantitative research indicated that many customers are happy with their current level of service, some are willing to pay to avoid the risk of long duration interruptions and incidents and to avoid restrictions during periods of severe drought.

These customers also value improvements in taste, odour, the colour of drinking water and reducing water hardness. Customers are less willing to pay to resolve low water pressure issues.

The focus groups that we held had the same priorities for drinking water.

“ *I would be prepared to pay for any percentage reduction in flooding from sewers because of the misery it causes.* **”**

Customer comment from focus group



An Anglian Water employee at our main customer contact centre in Lincoln.

Wastewater services

When asked about overall concerns, dealing with surface flooding was by far the most important concern for customers, more important than avoiding pollution, preventing sewer flooding and improving the quality of river water.

Focus groups prioritised reduction in flooding from sewers and improved bathing water quality.

The initial results of quantitative research have not been so clear-cut, although there is some support for resolving odour and sewer flooding problems.

Environmental improvements

Residential customers are concerned about water quality at beaches. However, quantitative analysis indicates it is not a high priority.

When asked about general environmental issues, customers now place more importance on climate change than when a national research survey was carried out in 2002. Of those surveyed, 37 per cent of customers mentioned climate change as a priority most in need of urgent attention, compared with 20 per cent in 2002. Climate change is now seen as being as important as protecting the water environment.

Information

Residential customers want more information at a local level. They want more detail about how their money is invested and what investment has been made in their area. This would, in some cases, increase their willingness to pay.

Business customers and developers

Business customers want value for money and to work in partnership with Anglian Water on value-added services, such as advice on water efficiency. They also want to see high-quality drinking water maintained and customer service and flexible solutions sustained to support their businesses.

Developers' priorities are for co-operative working relationships, reliability, added value and early involvement in the planning cycle. Developers are particularly keen for water companies to adopt sustainable drainage schemes, especially at large scale.

“ *If it was visible where your extra £2 was going to, if it is visible that it is going to make a difference to your area, in the direct vicinity – then yes [I would be willing to pay more].*

Customer comment from focus group

Views of stakeholders

In general, stakeholders believe that Anglian Water should focus on the challenges of climate change and growth, while maintaining reliable supplies of high-quality water. There was also marked support for action to improve efficiency of water use.

Discussions with regional and local government bodies and our quality regulators have welcomed a long-term approach and have highlighted the importance of an integrated and sustainable approach to planning the development of our networks.

They want to see plans aimed at delivering value for money, with decisions made on strong evidence that take customers' priorities and the impact on the environment into account.

“ *Our long-term priorities for Anglian Water are that they:*

- a) Continue to protect, and where necessary improve the water environment.*
- b) Provide reliable supplies of water.*
- c) Encourage water efficiency by all customers.*
- d) Plan for and manage the impact of growth and climate change in the region.*

Environment Agency – Anglian region

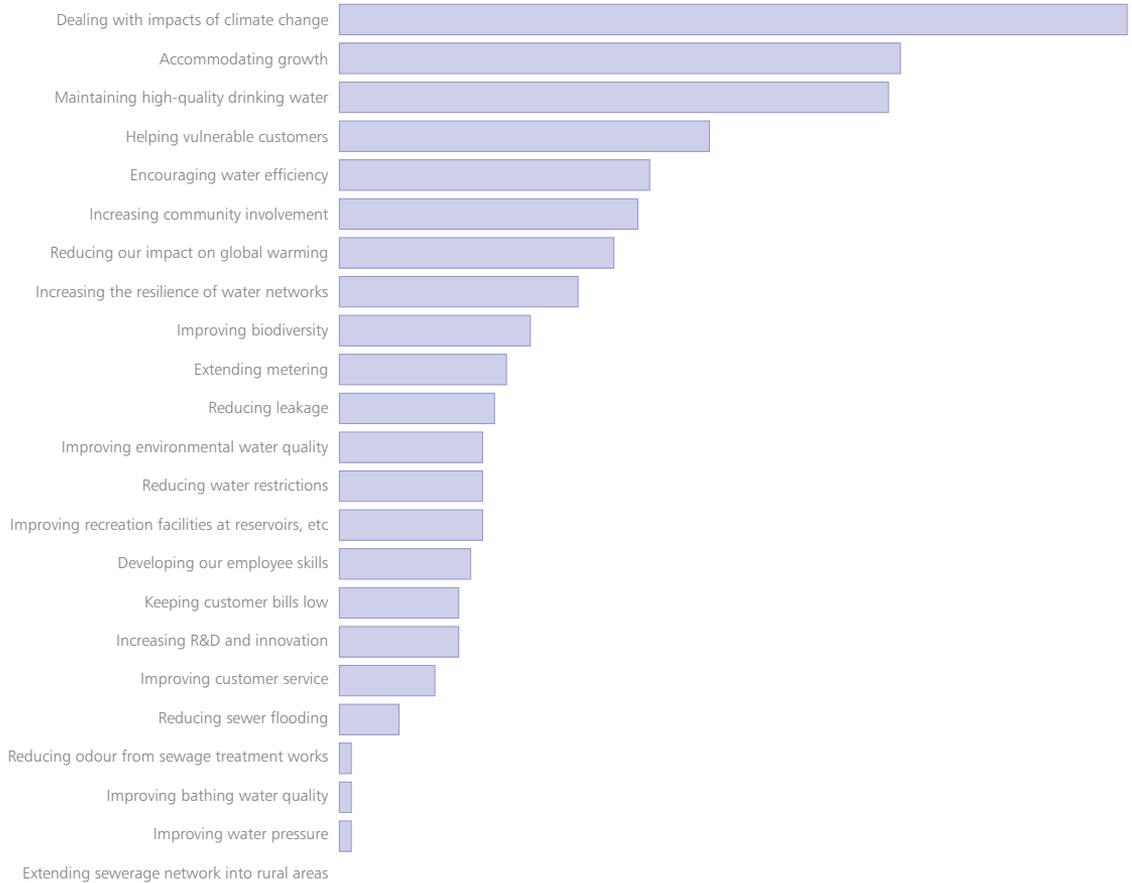


Our key challenges

Our customers' expectations

Figure 11 aggregates priorities for the organisations to whom we spoke in one-to-one interviews. These organisations covered a range of interests, including residential and business customers, the environment and government.

Figure 11: Relative stakeholder priorities in aggregate



Relative priorities based on results of stakeholder interviews.

Source: Results of interviews with stakeholders from May 2007 to October 2007.

“ We will work closely with water companies and other organisations in protecting water supply sources from pollution and in promoting sustainability through ‘using water wisely’.

Environment Agency – north east region



“ Our priorities are: tackling water resource and quality problems affecting sites of special scientific interest, especially earlier investigations and previously unfunded water resource schemes; developing schemes and investigations to help Wetland Biodiversity Action Plan habitats; and developing more sustainable approaches, such as potential catchment scale solutions to protect water sources and deliver more sustainable land management.

Natural England



The priorities of environmental groups are focussed on the challenge of climate change, reducing our impact on global warming and accommodating growth. Water efficiency and integrated catchment management are also high on their list.

Bringing customer and stakeholder priorities together

Figure 12 presents overall priorities of stakeholders and customers and highlights that many priorities are shared.

All stakeholder groups would like to see opportunities for working in partnership to be exploited fully. They would like to see Anglian Water take a role in leading change and communicating with customers to encourage their support.



Anglian Water’s ‘house of bottled water’ is made up of 1,000 half-litre bottles, representing the amount of water an average family of four uses every day.

Figure 12: Common ground between stakeholder interest groups



Source: Results of interviews with stakeholders from May 2007 to October 2007.

Our key challenges

Our customers' expectations

“ I welcome the Strategic Direction Statement which Anglian Water has prepared. It provides a basis for long-term planning which is to the advantage of existing and future generations of water and sewerage customers and should assist local and regional policy coordination. ”

Consumer Council for Water –
Northumbria Region (includes Hartlepool)



Linking customers' and stakeholders' priorities to wider trends

The priorities identified by our customers and stakeholders are supported by emerging trends affecting our society.

The need to deal with the impact of climate change is consistent with greater public concern about the environment. A Guardian/ICM poll in 2006 indicated that 63 per cent would approve of 'green' taxes, substantially more than in the past. The same survey found that people were willing to pay for improvements to make their homes more environmentally friendly.

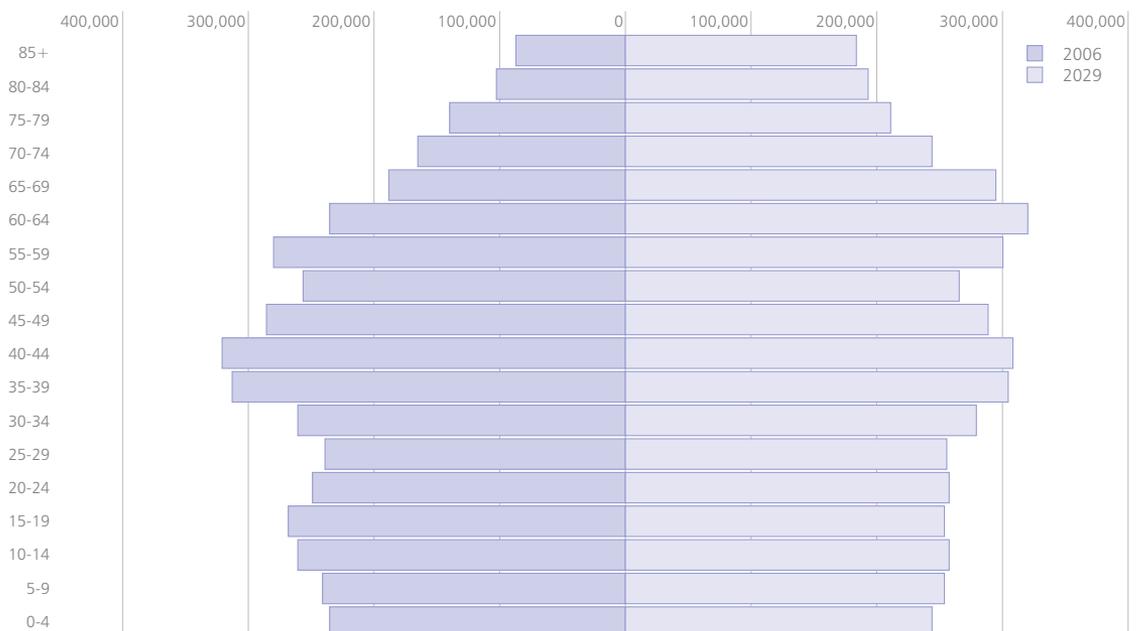
Increasing attention to efficiency in water use has driven changes in Government and regulatory policy. Examples include new water efficiency standards for new buildings and trials of regulatory targets for water efficiency.

The Environment Agency has set regional 'water stress' classifications, together with obligations for water companies operating in areas of serious water stress.

Another trend, while not highlighted particularly by our customers, might also be important. Government forecasts predict an ageing population. This could mean more people who are vulnerable financially or for whom continuity and quality of our service are particularly important.

All of these trends challenge us to maintain and improve the standards of service to customers.

Figure 13: Age profile in Anglian Water's region, 2006 and 2029



Source: Office of National Statistics 2004.



Anglian Water's new customer support unit was the focal point for customers following localised flooding in Norfolk.



Investing in new technologies; customers can now choose to receive incident updates by text message.

Key challenges

1. Maintain our services in the face of challenges of growth and climate change while keeping bills at current affordability.
2. Reduce the risk of major service interruptions.
3. Secure significant advances in water efficiency.
4. Improve drinking water quality aesthetics.
5. Respond to demands caused by an ageing customer base.

Our planning assumptions

Minimal interruptions to our service.

The Government will take a lead in helping customers who cannot afford their water bills.

Customers will be willing to pay for reasonable investment in supporting technology, systems and processes to enable us to meet increasing expectations of our service.

Strategy

Our strategy for addressing these challenges can be found in:

- ⇒ Provision of water supply and wastewater services, pages 46-52.
- ⇒ Resilience of our operations, pages 53-54.
- ⇒ Customer service, pages 55-56.

Our key challenges

Effects of environmental pressures

“ *The infrastructure that removes our waste and sewage, supplies us with water and protects us from flooding also helps to stop our environment from becoming polluted and damaged. But it needs adequate investment, early planning and good management.* ”

Environment Agency 2007 report:
hidden infrastructure



After an absence of 150 years in England, the magnificent Osprey is now a relatively common sight at Rutland Water following a 10-year project to establish breeding pairs. For more information see www.ospreys.org.uk.

Our key challenges

Effects of environmental pressures

Anglian Water affects the natural water environment by abstracting water and by returning treated wastewater to watercourses.

The natural environment in the east of England is particularly sensitive. Our inland and coastal waters sustain a huge variety of natural habitats and species, and many parts of our region are recognised and protected internationally under the Habitats Directive. There are more than 750 Sites of Special Scientific Interest (SSSI) in the region. A majority of these are rivers or wetlands.

The Water Framework Directive is a new approach to planning the management of the water environment. The Environment Agency's *Water for Life and Livelihoods* consultation report 2007 identifies the significant water management issues for the Anglian River Basin Management District, which encompasses a major part of our operational area.

Arable farming is the dominant form of agriculture and the associated diffuse pollution of water has a disproportionate effect on waters in our region. As a result, for example, more than 40 per cent of the population is served by wastewater treatment works with consents that limit the discharge of phosphorus, compared to 17 per cent for all of England and Wales.

Protecting and improving these waters provides a diverse and important regional amenity, which improves the quality of life for everyone living in or visiting our region.

In the past 15 years, we have invested to improve the water quality of rivers, lakes and coastal waters. See Figures 14, 15 and 16. In many cases, however, higher standards have been achieved using energy and chemical intensive processes, which have increased greenhouse gas emissions.

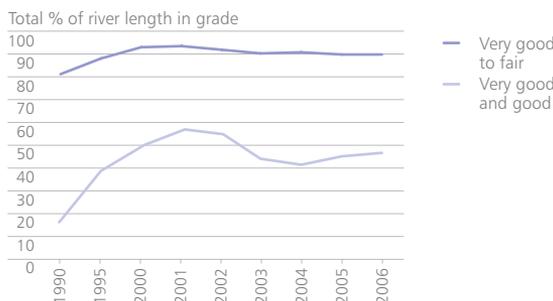
Over the next 25 years there will be new and amended legislation. Some important emerging issues include amendment of the Sludge Directive, which governs how we recycle treated sewage sludge to agriculture, and how climate change considerations will be given weight when implementing other environmental legislation.

Our region covers more than 1,200 kilometres of coastline with many high-quality bathing beaches on which the tourism industry depends. We have made significant investments beyond our legal obligations to improve the quality of coastal waters, and visitors to beaches in the region enjoy excellent water quality as a result.

However, further investment may be needed to help achieve the higher standards of the new revised Bathing Water Directive and the Marine Strategy Directive.

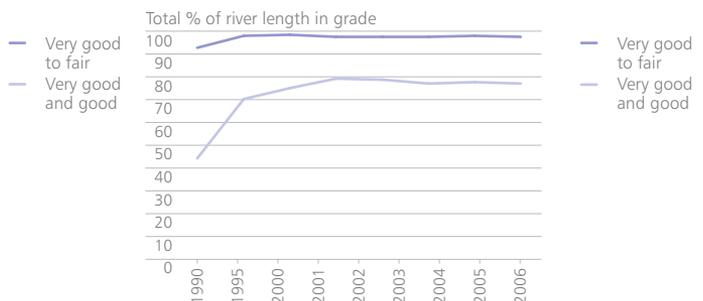
The European Union is considering bringing legal proceedings against the Government concerning the designation of the North Sea as an environmentally sensitive area. If these are successful, Anglian Water will be required to make significant future investment to enhance treatment of wastewater, which will increase our carbon footprint. Anglian Water is actively supporting the Government in

Figure 14: Chemical grades of rivers in the Environment Agency's Anglian region



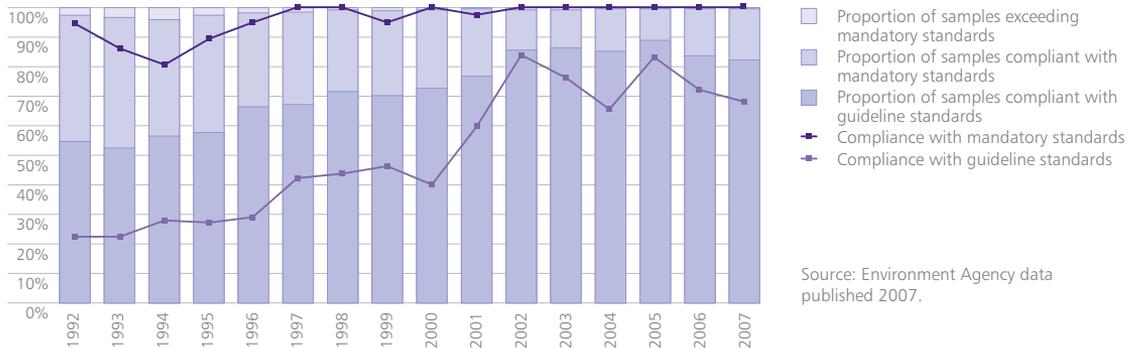
Source: Environment Agency data published 2007.

Figure 15: Biological grades of rivers in the Environment Agency's Anglian region



Source: Environment Agency data published 2007.

Figure 16: Bathing water compliance in Anglian Water's region



addressing this challenge on the grounds that potential benefits are not supported by the substantial cost.

We will also need to meet the requirements of other new and existing legislation including, for example, the Nitrates Directive, the proposed Floods Directive, the Shellfish Waters Directive and Waste Framework Directive.

Growth and climate change will affect the capacity of the water environment in parts of our region to receive treated

effluent. Low flows in receiving waterways could also lead to the need for stricter standards for the quality or quantity of final effluents, as well as reducing our ability to abstract water.

Many of these requirements will require us to invest more. However, we also expect changes to agricultural and industrial practices to contribute significantly towards achieving standards in a sustainable way. A key driver for this will be the implementation of the Water Framework Directive.

Key challenges

1. Meet all current and future legal and regulatory obligations to protect and enhance the water environment while limiting greenhouse gas emissions so as to reduce our contribution to climate change.
2. Implement the Water Framework Directive and legislative requirements so that the 'polluter pays'.
3. Engage constructively in the policy debate regarding the sustainability of future regulatory requirements.
4. Work effectively with others, including the agricultural and industrial sectors, to improve the water environment in a sustainable way.

Our planning assumptions

Compliance with all statutory and regulatory requirements.

Quality regulators and Government will implement new legislation in a way that takes account of its overall sustainability, including its impact on the carbon footprint.

Investment in trial catchment management schemes and innovative approaches to securing environmental improvements will be supported by customers and regulators.

Strategy

Our strategy for addressing these challenges can be found in:

- ⇒ Provision of water supply and wastewater services, pages 46-52.
- ⇒ Protecting and enhancing the environment, pages 59-60.

Our key challenges Innovation



As part of the introduction of a centralised operational management centre, employees now receive job scheduling information remotely via 'toughbook' laptops.

Innovation is integral to delivering benefits in efficiency, customer service and water and environmental quality. In recent years we have implemented the following innovations:

- ⇒ Extending the life of granular activated carbon (GAC) filters, based on better scientific understanding.
- ⇒ Energy benchmarking systems.
- ⇒ Use of water treatment sludge as a cement additive.
- ⇒ Advanced phosphorus removal processes.
- ⇒ Low-cost nitrate removal.
- ⇒ Alternative approach to pesticide removal.
- ⇒ Use of reed beds for wastewater treatment.
- ⇒ Asset monitoring and automation control through Europe's largest telemetry system.

Information technology increasingly has a major impact on how we run our business, and making best use of information technology is an important area of focus.

A recent report by UK Water Industry Research raised concerns that current industry structures and regulatory arrangements create obstacles to more effective innovation. Anglian Water agrees with its conclusion that improved incentives for water companies to innovate would be beneficial.

“ *...misalignment of expectations between the supply chain, the water companies, the regulators and government... is limiting the sector's ability to fully exploit its capacity for technological innovation...* ”

Barriers to Innovation, UKWIR, December 2006

Likely areas of future research include:

- ⇒ Intelligent metering.
- ⇒ Underground asset monitoring and performance management.
- ⇒ Minimisation of chemicals in drinking water and used in wastewater treatment.
- ⇒ Energy management.
- ⇒ Leakage reduction.

Climate change is likely to prove a stimulus to innovation. We are already working to reduce our energy usage and carbon footprint at all our sites. The need to build in resilience to climate change will also drive new thinking.

Innovation will also be important in customer services, in understanding customer behaviour, for example, to promote water efficiency, and in managing our impact on the natural environment.

Key challenges

1. Overcome regulatory or other barriers to innovation.
2. Ensure the need to invest in innovation is recognised in price limits.

Our planning assumptions

Innovation will be at the heart of our approach to delivering our service.

Investment in innovation will be increased from current levels.

Academic institutions, other utilities and our supply chain will continue to be prepared to collaborate with us and deliver substantial innovations.

Regulatory incentives to innovate will be strengthened.

Strategy

Our strategy for addressing these challenges can be found in:

- ⇒ Improving our capabilities, pages 62-63.

Our key challenges

Employees and employment



Anglian Water has one of the largest workforces in the east of England, with 3,800 permanent employees.

Health and safety

The water industry uses complex and potentially hazardous processes. We expect best practice to develop further so that the standards that Anglian Water aspires to meet become higher.

Of our employees, 50 per cent are field-based, many in manual roles that are physically demanding. Many of these roles require our employees to work in difficult operational environments, where detailed safety education and training are essential.

Age of our workforce

The average age of Anglian Water's workforce is increasing. Since 1998, the average age of our workforce has increased by 10 years. Over that period, the proportion of employees over 40 has risen from 44 to 51 per cent. This trend is likely to continue, making it harder for us to find people willing to do the more manual or physically demanding jobs.

Current indications suggest that the normal retirement age may increase in the coming 25 years. Therefore, larger numbers of employees may choose to work beyond the current retirement age, or may believe that they have no alternative other than to do so. This will place greater emphasis on employees being fit, particularly for manual work.

As more employees live longer, the cost of providing retirement benefits will rise, although later retirement may mitigate this to an extent. Overall, we anticipate that pension costs will rise. We have already begun to see costs increase year-on-year as actuarial assumptions are revised.

Increasing costs will require us to adopt considerable flexibility and to plan even more stringently, despite the difficult steps we have taken to bring Anglian Water's pension provision in line with the rest of British industry.

Labour market pressure

We are already experiencing difficulty in securing skilled or trades people due to changing educational trends. A new generation will need to be more encouraged to fill the electrical, scientific or engineering roles currently filled by older employees.

Southern and eastern England has naturally been a centre for infrastructure investment and this will continue. Major projects and the challenge of delivering the Government's plans for housing growth will make the market for skills more challenging.

Maintaining the capability of our workforce will be vital for us to continue to deliver our public service effectively and efficiently.

Key challenges

1. Secure skilled labour in the face of increasing labour market competition.
2. Operate safely with an increasingly aged and more diverse workforce.
3. Continue to develop and promote ourselves as a regional employer of choice.

Our planning assumptions

Our workforce will continue to age and become more diverse.

The market for skilled engineers and technicians will be even more competitive.

Provision for retirement costs will remain broadly in line with British industry.

Best practice for health and safety at work will continue to improve.

Strategy

Our strategy for addressing these challenges can be found in:

⇒ Improving our capabilities, pages 62-63.

Our key challenges Structure and financing of the industry



Since privatisation in 1989, the water industry in England and Wales has operated as regional monopolies. The industry's regulators monitor adherence to quality standards and set prices that allow companies to finance the delivery of service and raise capital for investment. Comparative competition has contributed considerably towards substantial improvements in efficiency and service since privatisation.

Competition

Competition plays a role in some aspects of the industry, for example, larger customers often choose to treat effluent from industrial processes before discharging it to our sewers, rather than pay us to do it. Recently, there has been interest in inset appointments in which a new entrant takes over full responsibility for supplying services to a specific site, typically a housing development or industrial site.

Ofwat is now considering how to stimulate competition in other parts of the water industry and we expect some change. In the medium-term we could see:

- ⇒ An increase in the number of inset appointments.
- ⇒ A move to open retail services to competition for all business customers.

Anglian Water supports competition that is of overall benefit to its customers and which avoids discriminating between existing suppliers and new entrants.

Financing

Water companies are seen currently as attractive by investors because of relatively predictable inflation-linked regulated cashflows, capital intensity and long asset lives. Increasingly, water companies have been financed with

high proportions of debt. This financing approach relies on the current industry structure and its stability. In recent years, the financial markets' perception of the water industry has improved considerably, aided by better communication by Ofwat with the markets.

Anglian Water's own financial structure (over 80 per cent of our financing is debt, much of it very long-dated reflecting asset lives) has led to efficient raising of finance from which customers have benefited.

Anticipated levels of capital maintenance and enhancement expenditure mean that there is little prospect of positive cashflows within the next 25 years. We will therefore need continued access to competitive debt markets to finance our business.

Debt and equity investors place considerable reliance on a transparent and stable regulatory framework. Continued stability and adequate returns on investment are essential for us to secure funds from existing and new sources of finance at acceptable costs. A material change in the regulatory framework could increase the cost of capital.

Our planning assumptions

Competition will be introduced in retail water and wastewater services to non-domestic customers of all sizes by 2015. Licensed water companies will be required to disaggregate the part of their business offering business retail services.

Further new inset appointments will be made, and will be regulated effectively.

Other than this, the structure of the industry will remain largely unchanged. In particular, treatment and distribution will remain integrated.

Ofwat will set a cost of capital to attract continued high levels of debt and equity investment, ensure long-term stability of appropriate financial returns for efficient, well-managed companies and ensure that companies are able to maintain adequate investment grade credit ratings.

Key challenges

1. Continue to raise substantial amounts of finance efficiently even if industry structure changes substantially.
2. Help to secure continued stability of the regulatory framework.
3. Respond effectively to changes in the structure of the water industry that extend competition, and make the most of the resulting opportunities.
4. Understand the potential costs and benefits of competition and explain these to our customers.
5. Continue to maintain standards of service to customers and the environment under changed industry structures.

Strategy

Our strategy for addressing these challenges can be found in:

- ⇒ Financing and risk, page 65.

Our strategy

This section explains our strategy and its implications in more detail.

Key strategic priorities

- ⇒ 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 in our region
- ⇒ Mitigate and adapt to climate change impacts
- ⇒ Improve our efficiency and flexibility
- ⇒ Keep bills at current affordability

Our strategy for the next 25 years

Secure and provide sufficient high quality water supplies and a sustainable wastewater service to meet the challenges of growth and climate change ⇒page **46**

Provide the resilience of our operations and assets that customers expect and meet the challenge of climate change ⇒page **53**

Provide safe, reliable, problem-free services to customers and developers, extending the range of services where valued ⇒page **55**

Maintain our assets to enable reliable provision of services ⇒page **57**

Protect and enhance the environment in a sustainable manner where benefits justify the costs ⇒page **59**

Take action to prepare for and influence the introduction of competition ⇒page **61**

Secure the skills and capabilities we need to provide our services and obtain the benefits of innovation ⇒page **62**

Play a full part in the development of the region we serve ⇒page **64**

Secure continued access to long-term finance ⇒page **65**

Limit bill increases to current affordability ⇒page **66**

Our strategy

Provision of water supply and wastewater services

Key elements of our strategy

Secure and provide sufficient high-quality water supplies and a sustainable wastewater service to meet the challenges of growth and climate change.

- ⇒ Maintain excellent drinking water quality, achieving full compliance with standards.
- ⇒ Implement catchment management to improve raw water quality.
- ⇒ Promote integrated water and spatial planning with local government and other partners.
- ⇒ Adopt sustainable drainage schemes in new developments, preferably on a large scale.
- ⇒ Meter all residential customers.
- ⇒ Make water use efficiency a central business objective.
- ⇒ Keep leakage at the economic levels expected in a dry region.
- ⇒ Secure 300 megalitres per day of new water supplies.
- ⇒ Recycle biosolids to land.

We must plan to provide our core service against a background of planned growth in housing, the ecological sensitivity of the region and the potentially large and uncertain impacts of climate change. Climate change and growth together will put pressure on water resources and the environment, as well as increasing the risk of floods.

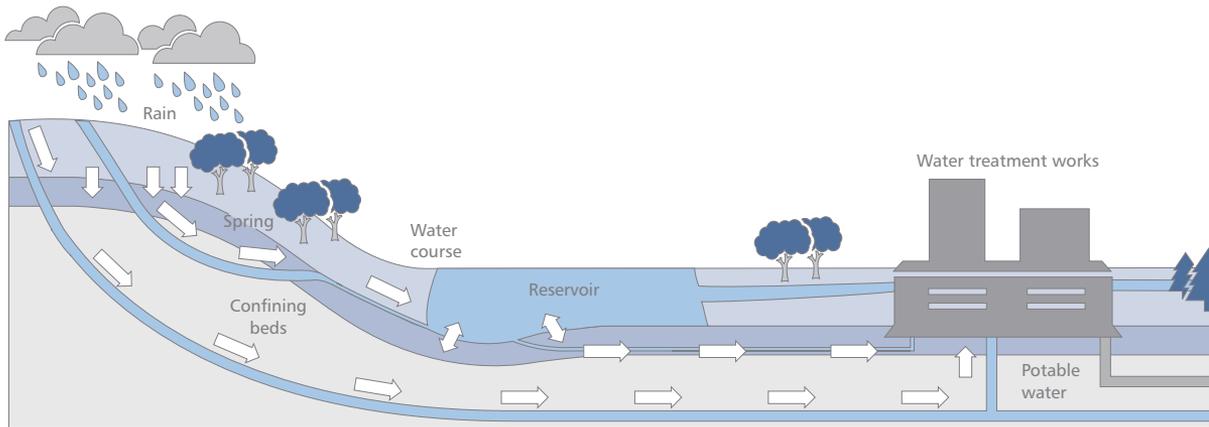
Drinking water quality

We will continue to enhance our sustainable management of drinking water quality. We have already started to implement a Drinking Water Safety Plan approach to maintaining water treatment works and pipe networks.

Anglian Water aims to manage drinking water quality efficiently and sustainably by looking at water and nutrient cycles affecting entire river catchments. Improving the quality of reservoirs, rivers and groundwater should lessen the need for expensive and carbon-intensive treatment to improve chemical and biological quality. By 2035 we want to adopt this approach to drinking water quality for much of our region, in line with the Water Framework Directive.

Others need to act with us to achieve this. Diffuse pollution, especially from agriculture, can significantly affect raw water quality. Anglian Water is accountable for meeting water quality standards, although not all the actions to achieve those standards are fully within our control.

Figure 17: Water infrastructure and the water cycle



Source: Corby Water Cycle Study 2006
Courtesy of Halcrow Group.

The Environment Agency has lead responsibility for action in this area and Anglian Water will promote and support research and trials over the next few years in parts of our region.

We do not expect to see substantially stricter water quality standards in the medium-term. An exception is the standard for lead, which will be more stringent after 2013. We will meet this by replacing lead pipes where we are already doing other work for customers. We will aim to keep chemical dosing of water supplies to a minimum.

We will explore joint initiatives with local authorities to replace the lead pipes that connect customers to our main network and those within customers' homes in order to tackle the risk of non-compliance. In the short-term we will not seek to undertake a major pipe replacement programme because customers do not see this as good value for money.

Aesthetic water quality

When surveyed, our customers have expressed more concern about the aesthetic quality of water than about chemical and biological quality, which is generally very good.

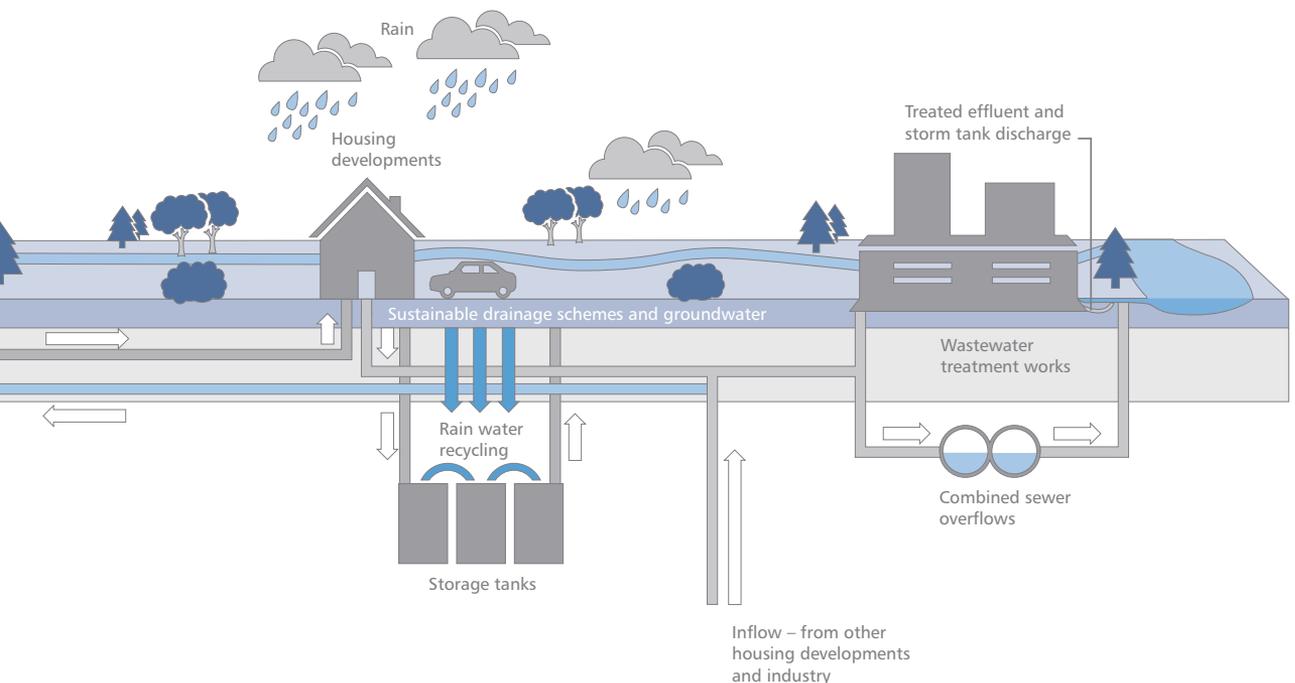
Replacing or refurbishing unlined iron mains can reduce discolouration of water. Over the next 50 to 60 years, we will have replaced all of our old unlined iron mains, as well as other pipework made of materials that have proved to be unsuitable.

Hardness of water is often mentioned by customers but we have little evidence that customers are willing to pay for the investment required for softening.

Integrating water and spatial planning

Spatial and water planning processes need to be aligned so that decisions on the type, design and location of new housing can be made with a good understanding of the requirements for infrastructure. These include water resources, treatment, distribution, land drainage and surface water systems as well as foul water collection, treatment and receiving watercourses. Figure 17 (below) illustrates elements of the water cycle.

We will promote water cycle strategies and water partnerships with local government and businesses concerned with the impacts of growth in our region.



Our strategy Provision of water supply and wastewater services

Water cycle strategies

Water cycle strategies consider all aspects of water management in a specific area. We will encourage their inclusion in the Local Development Frameworks, which form planning guidance at local level, so that growth aspirations can be delivered sustainably and without undue cost to our customers.

We will use water cycle strategies to develop forward-looking plans to balance supply and demand for wastewater. We are planning the strategic wastewater infrastructure upgrades needed to support regional growth. The key areas of expected growth in our region are Greater Cambridge,

Grantham, the Haven Gateway (Felixstowe, Ipswich and Colchester), Chelmsford, north Northamptonshire (Kettering, Corby and Wellingborough), Lincoln, Milton Keynes, Norwich, Stevenage, Aylesbury, west Northamptonshire, Thetford and Boston.

We expect that we will need to invest in wastewater treatment facilities and major new sewers to accommodate this growth. Such investments involve long lead times for planning, and need to be completed ahead of houses being built. Work will need to start in the next asset management period if we are to meet the requirements of growth.

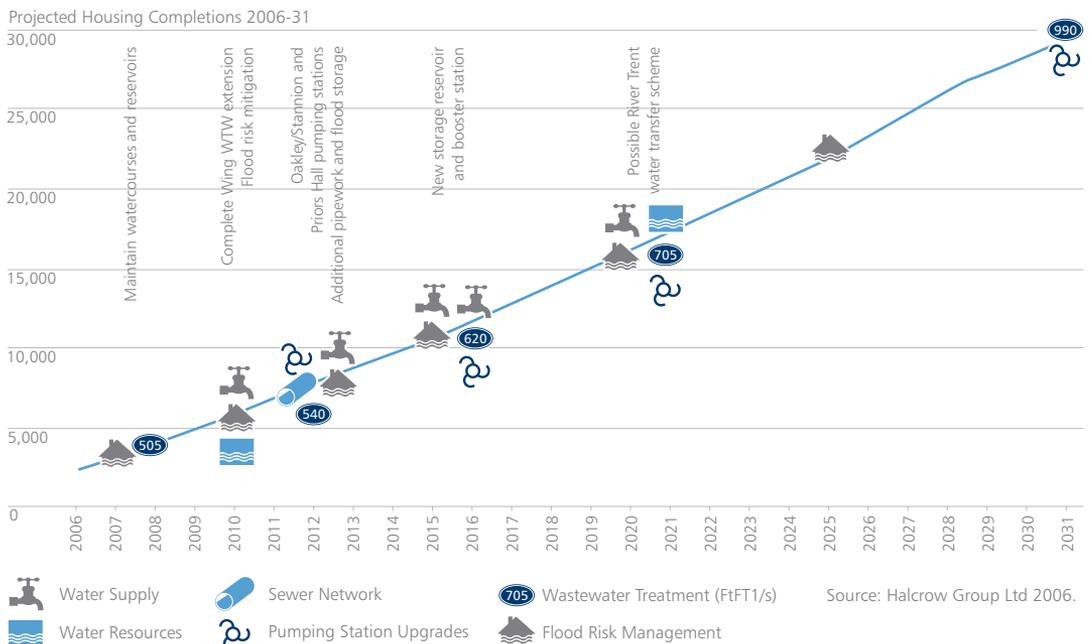
The Corby Water Cycle Strategy

Regeneration plans for Corby, Northamptonshire will lead to a doubling of its population. The Environment Agency and Anglian Water were concerned that the increased volumes of discharges from our wastewater treatment works could exacerbate local flooding problems. Anglian Water contributed to a water cycle strategy led by North Northants Development Corporation. This identified land drainage

and river improvements that allowed higher flows from the existing works, and avoided having to build a costly and energy-intensive second works: a more sustainable solution with greater overall benefits compared to costs.

The diagram below shows the predicted increase in new houses over time and the nature and timing of actions needed.

Figure 18: Corby Water Cycle Strategy



Water Partnership for the East of England

We have formed a partnership with the Government Office of the East of England and the Environment Agency to explore how integrated planning for growth can be promoted in the east of England. The partnership will:

- ⇒ Support the development of the evidence base for the review of the East of England Regional Spatial Strategy.
- ⇒ Manage a programme of water cycle strategies and help integrate them into the local planning guidance.
- ⇒ Provide data required to secure funding for critical water infrastructure, for example, by providing growth forecasts for water industry planning and to help inform flood defence programme priorities.

Sustainable drainage

We will look to encourage the adoption of schemes that will provide a more sustainable solution to drainage problems.

In the medium to long-term we will look for opportunities to implement strategic 'landscape-scale' sustainable drainage schemes as well as smaller schemes that service particular homes or developments. Such large-scale initiatives yield multiple benefits, are more robust, easier to maintain and yield greater biodiversity and amenity value.

Managing the demand for water

Population growth in our region will increase demand for water substantially over the next 25 years. Our strategy for managing this growth in demand focuses on:

- ⇒ Extending metering.
- ⇒ Wasting less water.
- ⇒ Making new supplies available.

Strong measures in all of these areas will be necessary to make sure we can continue to meet customers' needs. However, demand-side measures alone will not be enough to handle the major growth we expect in future.

Metering

Of our supplies to residential households, 62 per cent currently are metered. Over the next 25 years we want all water supply customers' properties to be metered, except where it is not practical.

Extending domestic metering in our region has been a major means by which we have managed customers' demand for water. When a customer opts for a metered supply, on average usage falls.

It is already our policy to meter all new houses. Encouraging other customers to switch voluntarily is our preferred option for extending metering, and we will look at ways to increase the rate of switching. We are currently running a trial to investigate if customers are more likely to switch where a meter is already installed and we will extend this if it proves cost beneficial.

However, it may be necessary to introduce compulsory metering, using a power that will be available to water companies designated as serving areas of serious water stress.

Wasting less water

Anglian Water will make efficient use of water by customers and others a central priority.

We cannot expect customers to conserve water unless we, at Anglian Water, can demonstrate that we are serious about not wasting it. We will keep leakage from our pipe networks at sustainable economic levels. Because our region is dry, leakage should be lower than in other regions.

We will help our customers to waste less water. We do not think customers should always use less, as there are many benefits from using water. But we will look at how customers can get these benefits while wasting less and we will improve our communication with customers to help promote water efficiency.

Anglian Water will:

- ⇒ Explore how rain water and 'grey' water can be used by residential customers, especially in new housing developments.
- ⇒ Promote amendments to the regulations that apply to water efficiency measures in the construction of buildings and water fittings installed in them.
- ⇒ Work with developers and housing associations to build homes that are more water-efficient.
- ⇒ Enable and encourage our customers to choose water-efficient fittings. We support regulations mandating water usage ratings on appliances to help customers.
- ⇒ Explore ways of encouraging customers to think about the water they use, for example, using real-time water usage displays.
- ⇒ Explore how water conservation might be encouraged using tariffs.

Our strategy Provision of water supply and wastewater services

Intelligent metering

Most meters installed in our region to date have been simple, manually read meters. Intelligent metering refers to the use of electronic meters that allow more sophisticated measurement of usage, for example, by time of day or peak demand.

We have not so far adopted this technology widely because of concerns about its technical reliability and cost-effectiveness. Such concerns have been largely addressed. We therefore plan to commence trials in the short-term and anticipate more widespread implementation over the period to 2035. However, we do not believe that the same approach is appropriate in all cases. The type of meter fitted will depend on the benefits for different classes of customers, and might include:

- => Enabling more efficient, automated meter reading.
- => Providing up-to-date information on consumption to customers to assist them to manage their demand for water and identify leaks.
- => Providing information on which to base more sophisticated tariffs.

New supplies of water

We will have to develop new supplies of up to 200 megalitres per day (ML/d) by 2025 and 300 ML/d by 2035 compared with the current maximum resources available of 1,800 ML/d.

When the extension to Wing water treatment works is operational it will increase the maximum resources available and create headroom for a short time. However, despite the demand-side measures that we plan, we predict that further investment in new sources of supply will be required to avoid the risk of peak demand exceeding available supplies after 2011, as shown in Figure 19.

Predicted wetter winters and drier summers, together with greater uncertainty about rainfall patterns and other aspects of the water cycle expected as a result of climate change, are important drivers of the need for new supplies and storage capacity.

We are developing our water resources strategy to secure new resources for the region over the next 25 years. The major strategies for water resources development will focus on re-using effluent from wastewater plants and transferring raw water from adjacent catchments such as the River Trent.

Options to develop a major storage reservoir in the Lincolnshire fens will be evaluated as will local solutions such as managed aquifer recharge and groundwater development. We will plan to mitigate the impact of new water resources. Desalination will be considered if less energy-intensive technology emerges. At present, it is not a sustainable option in our region.

Figure 19: Projected water deficit

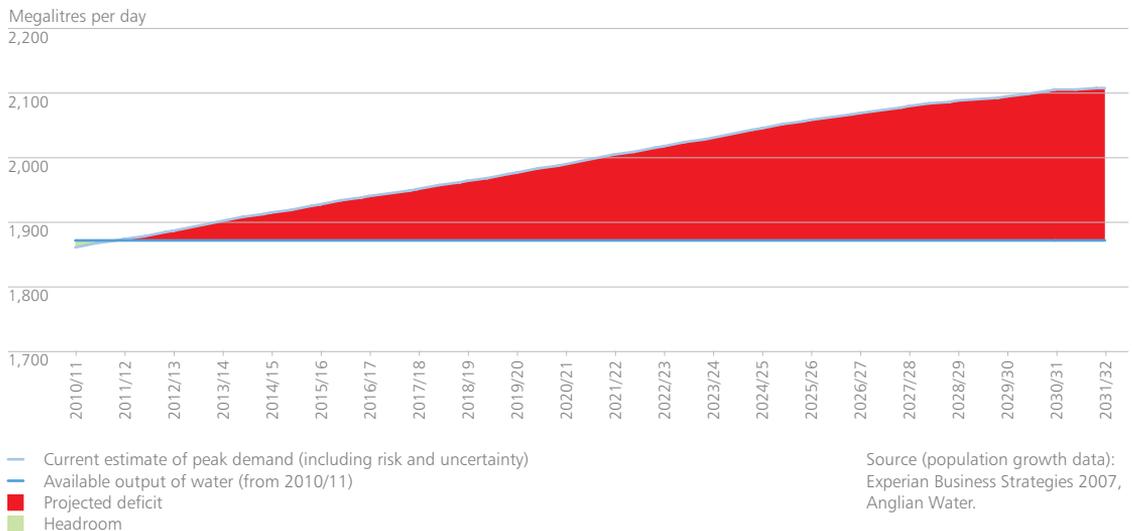


Figure 20 shows where supply/demand deficits are forecast to occur and options for new supply schemes.

Figure 20: Water resource development options



Major schemes could take 10 to 15 years to develop and commission. We will therefore need to start work in the next five years. Specifically, we will need to secure appropriate planning consents, and undertake necessary public consultations, feasibility studies and design work.

Source: Experian Business Strategies 2007, Anglian Water.

Our strategy

Provision of water supply and wastewater services

Wastewater networks

Within the next five years we expect to adopt the majority of privately owned wastewater sewerage systems. As a result, our wastewater network will nearly double in length. It is likely that some of the adopted systems will require substantial operational involvement and capital investment.

We will consider adopting private and local authority treatment works.

We will continue to invest to connect communities to our mains wastewater network where the benefit of such investment to customers and the environment can be demonstrated.

Investment to improve the modelling and monitoring of our wastewater network will continue. The ability to monitor our entire wastewater network remotely and model it in real-time will help us:

- ⇒ Achieve goals for compliance and pollution incidents.
- ⇒ Reduce our carbon footprint.
- ⇒ Anticipate and react to operational problems before they affect our customers.

Biosolids

We will continue to adopt a strategy of recycling biosolids (treated wastewater sludge) to land, but will also continue to consider, according to circumstances, investing in alternative arrangements such as thermal destruction to mitigate against loss of the land recycling route.

Farmers increasingly want biosolids that meet 'advanced treated' status under the regulations currently governing recycling of sludge to land. We expect to be treating half our sludge production to this standard by 2010 and even more after that. Meeting market demand is important to sustain the agricultural land bank.

As well as benefiting from recycling organic matter and its value as a soil conditioner, we aim to maximise environmental benefits from our sludge operations by generating renewable energy. We will work with local authorities and other waste management providers to produce innovative and sustainable solutions for combined biosolids and green waste recycling.

Trade effluent

It is our statutory duty to regulate the discharge of trade effluent into our wastewater systems. We will work closely with our business customers to achieve the best solutions for them and for the environment.

Self-monitoring

Regulatory approaches are likely to change and Anglian Water could become increasingly responsible for monitoring its own performance. This is potentially more efficient and hence beneficial to customers. We will continue to develop our management systems to enable us to take advantage of this opportunity.



A tractor spreading treated biosolids, a by-product of the wastewater treatment process, to agricultural land as a high-quality soil conditioner.

Key elements of our strategy

Provide the resilience of our operations and assets that customers expect and meet the challenge of climate change.

- ⇒ Adapt our operations and assets to the impacts of climate change and effects of severe weather-related events.
- ⇒ Provide alternative piped drinking water supplies to major centres of population in the event of a catastrophic outage.

Customers expect us to provide a continuous supply of clean, safe drinking water and to be able to dispose of wastewater in almost all circumstances.

Our operations and assets therefore need to be resilient: they must be able to support delivery of expected standards of service even in adverse circumstances whether from sudden events or from gradual worsening of operational conditions.

The major risks to the resilience of our operations over the next 25 years will result from the impact of climate change or will be weather-related.

The Government does not currently set standards for resilience. Nevertheless, we believe we must meet public expectations. The severe floods in the summer of 2007 reinforced public expectations of water companies' responsibilities to ensure continued delivery or, in extreme circumstances, to ensure a very rapid return to normal service.

We have started to engage with the Government to establish clear direction on the expected standards for resilience and to steer policy towards a sensible planning approach that recognises the expectations of customers.

Adapting to climate change

We need to increase the resilience of our water and wastewater assets and operations to the effects of climate change.

We are already managing the effects of severe weather. In 2006/7; more than 85 per cent of the incidents managed by our wastewater incident team were related to the weather, an unprecedented level compared with previous years. We have improved the speed and effectiveness of our response to such events.

In the medium-term we need to ensure that the investments we make are informed by a good understanding of the potential risks from climate change. We are already looking at different design standards for new assets.

We are assessing the impact of intense rainfall on the capacity of our wastewater network and the associated risk of sewer flooding. We are also looking for ways in which we can best manage the risks of flooding from rivers on our treatment plants and networks throughout the region.

We are improving our understanding of the risks and impact of slow onset effects that may not become important until well after 2035. We are currently assessing the vulnerability of coastal water and wastewater treatment works and networks to sea level rise.

Some of these risks cannot be managed reasonably by us alone; designing the appropriate response will need the involvement of other stakeholders.

For example, the response to sea level rise could range from managed retreat to full flood protection, with both scenarios likely at different points along our coastline.

Our strategy

Resilience of our operations

Policy towards flood risk

The Government is reviewing its policy towards flood risk in the light of recent events. We will develop our own plans to reflect emerging policy. Some aspects are particularly important for our planning, for example, to what extent new housebuilding will be permitted in flood plains.

We set out below some of the key actions that we will need to take to increase our resilience to climate change over the next 25 years.

- ⇒ Identify which sites, processes, people and systems are most at risk from climate change, using the best available science and research.
- ⇒ Identify critical weather-related thresholds affecting the business, beyond which impacts are intolerable or irreversible.
- ⇒ Assess the indirect impacts of climate change on our business, for example, the impacts on other sectors on which we depend.
- ⇒ Identify and implement cost-effective and sustainable adaptation actions to manage risks to our business, customers and the environment.
- ⇒ Monitor the impacts of climate change and the success of our adaptation measures.
- ⇒ Engage our customers in the climate change issue, communicating how it may affect our operations, the consequent impact on services and the part they can play in helping us adapt.
- ⇒ Work closely with other members of the East of England Climate Change Partnership to develop an integrated response to climate change in our region.

Mitigating the impact of major loss of water supplies

We will also improve the resilience of our water supply network so that we have more than one water source of supply for centres of population. For many parts of our network, this is not currently the case, so that an incident resulting in a specific treatment works or critical pumping station being lost may mean an extended loss of water supplies.

A resilient network would allow us to switch to alternative sources of supply in the event of major disruption.

We will make a case to Ofwat to allow for investment in 2010 to 2015 to ensure that all population centres of greater than 50,000 people become resilient. This figure accords with other regional planning policies.

Our current analysis indicates that this could require alternative supplies of water to the populations served by six water treatment works. We have already committed to investing in alternative supplies for customers in Norwich and in Peterborough and the surrounding area before 2010.

In the longer term we will look to protect population centres with 20,000 to 50,000 people.

In looking for sensible and cost-effective solutions to these problems we plan to co-ordinate with other water companies adjoining our region.

Security at our operational sites

We are working to further understand the potential threats to our infrastructure and will implement the recommended security measures designed to mitigate them. We will continue to respond to changes in levels of threat.

Some of our processes and sites are characterised by unusual risks to health and safety. We will look to ensure that our operational processes and site security prevent our employees and members of the public being able to place themselves at risk. We will also look to invest in order to counter some of the more minor threats to our operations such as theft.

Business continuity

We will always ensure that we plan for major disruptions. This is what we do now, but we will need to do more if our world is one in which the risk of major disruption is increasing.

Key elements of our strategy

Provide safe, reliable, problem-free services to customers and developers, extending the range of services where valued.

- ⇒ Meet expected standards of health and safety in our business.
- ⇒ Reduce service interruptions to minimal levels.
- ⇒ Eliminate flooding from sewers by 2020, except in exceptional circumstances.
- ⇒ Reduce cases of persistent odour nuisance to negligible levels.
- ⇒ Offer more services to customers, including non-potable supplies and water efficiency services.
- ⇒ Provide direct access to systems and data.
- ⇒ Deal effectively with developers.

Anglian Water aspires to be known by customers for a high level of reliability in delivering services and trusted in our approach to customer service. We aspire to meet these goals at an affordable level of bills.

Customer and public safety

We will invest in all aspects of our operations to ensure that standards of safety in our business are met. We will do this by rigorously implementing a Drinking Water Safety Plan approach so that the quality of drinking water is assured right from its source through to the customer tap.

We will also invest to maintain the security of our treatment works and other assets against unauthorised access that could jeopardise health and safety.

Operational excellence

We plan to deliver a problem-free service and an effective response on the occasions when things do not go according to plan.

Over the period from 2010 to 2035 Anglian Water aims to minimise risks of service failure to our customers. Specifically, we will aim to:

- ⇒ Have minimal planned or unplanned interruptions to service.
- ⇒ Unless weather conditions are exceptional, have no properties that are at risk of sewer flooding by 2020 and a substantial reduction against today's levels at risk by 2015.
- ⇒ Reduce cases of persistent odour nuisance from our wastewater treatment works to negligible levels.

To achieve these aims, we must make substantial changes to the way we operate, building on the major changes we have already started to implement.

Our approach is to centralise operational decision-making, collect more and better data about our operations, and improve our analysis of risk and our decision-making capacity using technology and systems. These changes will allow us to better integrate: day-to-day operations; how we invest to maintain and enhance our assets; how we deliver services to customers, and manage the risks to those services.

This will benefit customers by providing them with a better understanding of how levels of service, risks to service and the potential for greater efficiency can be balanced with their demands and expectations.

We will make these improvements over the next five to 10 years. Looking further ahead, we aim not to have to rely on our customers to tell us when things have gone wrong. This will demand a substantial improvement in telemetry and remote monitoring and data collection systems, together with more sophisticated diagnostic, decision analysis and response control systems.

Odour from wastewater facilities

Odour arising from pumping stations and treatment plants is an annoyance for our customers. We will aim to reduce complaints about odour to negligible levels.

We will focus on prevention because reacting to mitigate an odour problem is generally many times more costly. We will work in partnership with local authorities and other bodies to limit the discharge to sewers of substances that can cause odour, for example, fats, oils and greases.

Pressure for new housing on brownfield sites could result in residential developments being closer to our wastewater treatment works. In certain circumstances we will consider relocating assets to release planning value. Such schemes will be costly and they will only be carried out where there is a clear benefit. An added benefit of any relocation could be a reduction in the risk of odour problems for our customers.

Flooding from sewers

In recent years Anglian Water has invested to reduce the number of homes and public areas in our region at risk of suffering from flooding from sewers, both inside and outside properties. The number of properties on our risk register has fallen.

Sewer flooding is extremely distressing for those affected and it is unacceptable in modern society. Customers are willing to see some bill increases to avoid sewer flooding, but we also know that more frequent storms and flooding brought about by climate change make sewer flooding more likely but less predictable.

The rainfall events in the summer of 2007 highlighted this. They also reinforced the complex nature of flooding incidents and the need for a multi-agency approach for solutions.

Over the next 10 years we aim to make sure that none of the properties in our region are at risk of sewer flooding, due to sewer overloading, other than in exceptionally severe weather conditions.

New services for customers

We will be looking to develop additional services for customers that will help meet the challenges of growth and climate change, as well as meeting our customers' expectations.

Dual supplies

We will consider developing separate service offerings for potable and non-potable water. Although this will require an upgrade in infrastructure, the potential benefits of not having to treat water used outside the house to the same standards as drinking water seem large both in financial and environmental terms. In the short-term we will look to explore the costs and benefits and undertake pilot studies, focussing particularly on the opportunities offered by new businesses and housing developments.

Water efficiency services

We will promote water efficiency as a central objective and we will achieve this by offering a much wider range of services to customers who want help in managing their water and wastewater needs. Simple examples might include visible consumption displays, remote usage monitoring and/or leak detection, consumption diagnosis and advice. We expect to be able to make services like these available to our customers in the short to medium-term, once the required technology is in place.

Water softening

Water hardness is a common concern related to water quality, as evidenced in our regular customer surveys and in the increasing use of water softeners and filters. We could offer targeted local water softening to specific customers or groups who are prepared to pay for it. However, current water softening technology is both chemical and energy-intensive. Offering this service would increase our carbon footprint and would not be compatible with our aim to move away from treatment-based solutions to water quality problems. We will therefore not develop this service.

Communicating with our customers

We will offer customers choices in how they communicate and do business with us. As technology and consumer preferences evolve, we will ensure that we have the most suitable forms of communication available to our customers.

We will give customers more direct access to our business systems. Customers will benefit from being able to access data and communicate with us how and when they want.

Structuring our charges for water and wastewater

Our approach to charges has been a priority area for Anglian Water over the last 10 years. We aim to make our charges cost-reflective, offer customer choice, recognise those in need, and maintain a good relationship with our customers.

Many of our customers have already opted for a metered supply and thus face a price incentive in relation to their water use. Our remaining unmetered residential customers can opt to change.

We have tailored tariffs to different sizes of business customers. Our largest customers pay tariffs that include a charge for peak demand as well as for usage. We will explore whether or not such ideas could be extended to other customers, given appropriate proven technology.

Rising block tariffs, where customers pay more for water beyond a defined level of essential usage, are frequently promoted. Unless future research indicates differently, we will not implement such tariffs. There is no evidence that metered demand is sensitive to foreseeable price changes. In contrast, moving to metered supply for the first time represents a much more significant price signal. There are also implementation difficulties with such tariffs as fairness would require them to take account of the number of occupants in each property and this data is not available to the company.

Tackling vulnerability

We will ensure that we identify and offer assistance to those who are particularly dependent on the services we provide, particularly in adverse circumstances.

We believe it is primarily for the Government to offer support to those who cannot afford to pay their bills. However, in the absence of such support, we will continue to offer limited support to customers who cannot, rather than will not, pay.

Unpaid customer bills

In recent years we have experienced much higher levels of unpaid customer bills. It appears that there is an increasing number of people who will not pay their bills, even though they have the resources to do so. We intend to use all available cost-effective, legal means to recover debt from such customers, ensuring that the majority do not subsidise those who choose not to pay.

Developers

We will improve how we deal with land and housing developers by seeking a consistent, transparent and non-discriminatory regulatory framework. We will look for a fair allocation of costs between water customers and house-buyers, with more cost-reflective connection charges. We will take a more active role in managing the risk of surface water flooding in new developments using sustainable drainage schemes.

Key elements of our strategy

Maintain our assets to enable reliable provision of services.

- ⇒ Make investments and operational changes that manage effectively the balance of risk, service and cost over the whole lifetime of our assets.
- ⇒ Invest in renewal and replacement of groups of assets that are approaching the end of their useful lives.
- ⇒ Collaborate with our suppliers using incentive-based commercial arrangements to create value through innovation and continual improvement.

Anglian Water aims to make operational changes and investments at the right time and in the right place to manage the complex balance of risk, service and cost on a day-to-day basis and over the whole lifetime of our assets.

The performance of our assets affects the services to customers, risks to compliance with standards and the efficiency with which we operate.

Our approach to asset management is being enhanced so that we can better understand:

- ⇒ The operational characteristics of individual assets, processes and operational sites, the risk of asset failure and the resulting impact on services.
- ⇒ How risks change over time assuming different levels of investment and maintenance.
- ⇒ The financial, environmental and social costs and benefits of different types of investment.
- ⇒ How long-term investment plans over time will achieve objectives related to service delivery, performance of assets or risk.
- ⇒ How decisions about investment plans can be linked to better tactical maintenance and to day-to-day operational management decisions.

In the short to medium-term, maintenance spending will need to rise compared with recent years. We expect the level of spending to be around 25 per cent higher in 2010 to 2015 than has been planned for in 2005 to 2010 and we expect further increases in later years.

This step-change in spending will be needed to renew or refurbish plant installed to meet the higher water and wastewater quality standards implemented progressively since the early 1990s. Our reliance on shorter life assets for control, automation and remote monitoring has also increased. We are planning to replace our central remote monitoring system within the next five years at an estimated cost of £50 million.

The need for more expenditure to replace or maintain specific types of assets over the next 25 years is reasonably foreseeable. Below are some of these needs for the water and wastewater services.

Water

- ⇒ At least half our 6,000 kilometres of uPVC pipes will need replacing by 2035 at an approximate cost of £550 million. The rate of pipe replacement will be progressively increased with priority being given to the pipes causing greatest problems for customers.
- ⇒ We have over 10,000 kilometres of lined and unlined iron mains that will need replacing over the next 50 to 60 years at a cost of around £1.9 billion, to reduce the risk of bursts and supply interruptions, and to reduce discolouration from iron corrosion.
- ⇒ During the next 25 years we will initiate a programme to replace our remaining stock of 7,000 kilometres of asbestos cement mains. The overall pipe renewal programme will be in the order of 300 kilometres per year from 2010 to 2015, increasing to more than 400 kilometres in the future.
- ⇒ Necessary replacement of domestic water meters will increase to around 500,000 meters in AMP5 (2010-2015) compared with around 250,000 in AMP4 (2005-2010). We expect the subsequent rate of replacement to be around 300,000 every five years.
- ⇒ We will take the opportunity to renew pipes linking customer properties to the main network as part of our mains renewal and meter replacement programmes. We expect to replace a substantial proportion of around 500,000 non-plastic pipes.
- ⇒ We have more than 100 complex water treatment sites, many of which have technologically advanced treatment processes installed in the early 1990s, principally for the removal of nitrates and pesticides. These will need renewal and refurbishment in the short to medium-term. This will require in excess of £200 million of investment over the next 10 years.
- ⇒ Continuing growth will stretch the capacity of our 400 water storage reservoirs and towers. Many were constructed in the 1950s and many will require refurbishment or replacement with booster pumps over the next 10 years at a cost of around £30 million.

Our strategy

Asset stewardship

Wastewater

- ⇒ Sewer replacement and rehabilitation will continue to increase steadily, although there will be no need for a step-change.
- ⇒ We will need to renew around half our cast iron and uPVC wastewater rising mains over the next 30 years at a cost of around £150 million.
- ⇒ Plant installed at wastewater treatment works will need renewal or refurbishment in the next 15 years.
- ⇒ Over the next 20 years we will need to refurbish pumping stations that were originally built for the significant expansion in our wastewater network in the 1960s. We anticipate investing in excess of £300 million to sustain service performance.

Regulatory expectations

Ofwat measures the capacity and capability of our assets to support services to customers by assessing 'serviceability'. It expects a forward-looking, risk-based approach to determining maintenance spending requirements.

The Drinking Water Inspectorate expects companies to implement risk-based Drinking Water Safety Plans to support our investment in maintenance. We are committed to ensuring that we meet these regulatory expectations.

Our supply chain

Anglian Water typically spends around 60 per cent of its turnover with suppliers and contractors.

In recent years, we have rationalised our supply base and improved systems and processes for sourcing and managing suppliers.

We are adopting more collaborative relationships (based on incentive-based commercial models) with strategic suppliers and we will continue developing these arrangements in the future. These aim to create value through innovation and continual improvement.



Constructing an extension to a wastewater treatment works.

Our strategy

Protecting and enhancing the environment

Key elements of our strategy

Protect and enhance the environment in a sustainable manner where benefits justify the costs.

- ⇒ Implement all legislative obligations.
- ⇒ Cause no serious pollution incidents.
- ⇒ Challenge the need for increases in standards for quality and quantity that are not cost beneficial or sustainable.
- ⇒ Promote and implement approaches to environmental stewardship that consider the entire water and nutrient cycles operating over each river catchment.
- ⇒ Aspire to reduce carbon emissions by 50 per cent compared to 2010 levels by 2035.
- ⇒ Implement regional biodiversity action plans.

Stewardship of the water environment

Throughout the next 25 years Anglian Water will provide high-quality stewardship of the water environment.

The Anglian region contains some of the most ecologically sensitive watercourses in the country. Ensuring the quality of wastewater effluent discharges will continue to be of paramount importance to us.

Anglian Water will comply with required standards for the quality and quantity of treated effluents we discharge.

It is impossible to eliminate all risk but our aspiration will be for no pollution incidents that result from discharges outside consented levels.

New legislative requirements

We will implement all new legislative requirements within the timeframes required.

Standards could become more stringent over the next 25 years, because receiving waters might have less capacity to handle biological and chemical loads in effluent as a result of the impact of climate change and growth.

We might also need to limit the discharge of substances on which we are not currently regulated. For example, control of endocrine disrupting chemicals (EDCs) is being considered.

Anglian Water will seek to understand the financial, environmental and social costs and benefits of proposed changes in standards for the water environment, considering especially, but not only, the carbon emissions of the processes needed to meet the higher standards.

Where the benefits do not warrant the costs, we will challenge the need for higher standards in line with our objective of limiting customer bills.

Consistent with the 'polluter pays' principle, we will challenge where it appears that water customers are paying to resolve pollution to the environment caused by others.

Catchment management

Anglian Water will promote approaches to improving drinking water and environmental water quality that consider complete water and nutrient cycles operating over entire river catchments. These approaches might involve changing agricultural, industrial or land management practices as well as, or instead of, enhancing treatment to achieve environmental goals.



The River Great Ouse at the point of discharge from Bedford wastewater treatment works.

Our strategy

Protecting and enhancing the environment

Such approaches are likely to be challenging to design and implement. Over the next five to 10 years we will promote research projects and pilot schemes to resolve how potential problems might be overcome, in particular looking at issues associated with:

- ⇒ Improving understanding of diffuse pollution and its impact on catchments.
- ⇒ How the current compliance regime, which places strict legal liability on water companies, could be made to work effectively when compliance actions depend on the actions of others.
- ⇒ Legal and other rights arising from land ownership.
- ⇒ The role and acceptability of financial and other incentives in securing appropriate behaviour by farmers, industries and others.
- ⇒ The use of transfer payments to water companies by polluters.
- ⇒ The interaction of catchment management schemes with rural and urban planning requirements.

Successful pilot schemes will be rolled out more widely.

Beaches and coastal waters

Anglian Water will work closely with local authorities and with other partners to improve the quality of coastal waters and beaches.

Meeting the requirements of the new Bathing Waters Directive is expected to require investment of around £250 million.

Reducing carbon emissions

We aim to have reduced our emissions in 2050 by at least 60 per cent in line with the Government's stated target.

To achieve this, we expect to have reduced our emissions by around 50 per cent from their 2010 level by 2035.

Achieving these aspirations will be difficult, but we have already started to put resources and effort into the challenge.

In 2006, Anglian Water committed to reduce its energy costs by 10 per cent by 2010. By then, we plan to be generating 20 per cent of our energy needs from biogas and wind power and we will procure certified green energy to cover more than a quarter of our remaining energy needs. These measures will reduce our existing carbon emissions (from 2006/7) by 19.5 per cent.

We cannot yet be confident of delivering the further ambitious reductions we aspire to. It will be a considerable challenge, especially given the potential range of other obligations that we will have to meet. We are, however, committed to working with our customers, regulators and others to achieve this outcome.

To understand our carbon footprint, we will:

- ⇒ Develop methodologies to incorporate carbon accounting into our business processes.
- ⇒ Research those areas of carbon emissions that are less well understood and well defined, such as process emissions.
- ⇒ Use the outputs of this work to identify further opportunities for carbon reduction.

In working with stakeholders we will:

- ⇒ Explore opportunities to maximise energy-reduction of our business, our supply chain and our customers.
- ⇒ Work with polluters in order to minimise the need for energy-intensive investment in treatment.
- ⇒ Work with Government to promote the most sustainable options for biosolid treatment and disposal.
- ⇒ Work with regulators to develop appropriate incentives and targets for emission reduction and renewable power generation.

To reduce our emissions we will:

- ⇒ Invest in cost-effective renewable power generation and purchase green energy to cover around 75 per cent of our electricity requirement.
- ⇒ Take full part in the new Carbon Reduction Commitment.
- ⇒ Work with our customers and suppliers to influence their emissions.
- ⇒ Reduce water use and increase meter penetration.
- ⇒ Reduce business mileage.
- ⇒ Invest in low carbon innovation and technologies.
- ⇒ Inspire our employees to reduce emissions.

Protecting biodiversity and heritage

We will continue to work to manage our impacts on Sites of Special Scientific Interest (SSSIs) and on other protected sites. Going beyond minimum compliance with obligations, we will continue to implement our regional biodiversity action plans, building on the national approach to biodiversity. We will deliver projects that contribute to regional biodiversity and heritage and the quality of life of those in our region where these are cost beneficial.

Our strategy

Competition and commercial opportunities

Key elements of our strategy

Take action to prepare for and influence the introduction of competition.

- ⇒ Engage with policy-makers for greater clarity over policy for competition.
- ⇒ Separate our non-domestic retail business.
- ⇒ Compete in new markets where we see an opportunity.

Many of the services we provide to businesses are already subject to competition.

Competition has the potential to deliver better outcomes for customers, for example, by stimulating more innovative service offerings or by further improving efficiency for lower prices. We support the extension of competition that delivers such outcomes.

We are already preparing for competition by taking steps to separate our service to business customers, which is potentially contestable, from the rest of the regulated business. Initially, we will prepare separate accounts in order to better understand the costs in each business.

We will challenge competition where the costs will outweigh the benefits. Inset appointments, which are simply new monopolies, are unlikely to improve choices available for residential customers. Increasing numbers of these could prove an obstacle to an integrated approach to planning for the impacts of growth and climate change. We would be concerned if the effects of introducing competition were to transfer benefits from customers to produce higher returns for new entrants and developers.

Where competition in new markets is introduced, we will assess whether or not we are well placed to compete in these markets on a case-by-case basis. There is no presumption that we will compete in all new markets.



Water is an essential part of food preparation processes for many of our business customers.

Our strategy

Improving our capabilities

Key elements of our strategy

Secure the skills and capabilities we need to provide our services and obtain the benefits of innovation.

- ⇒ Keep our employees safe and well.
- ⇒ Secure and retain the technical skills we need by recruiting high calibre employees and providing outstanding training and development.
- ⇒ Building a culture of commitment to excellence and the highest standards.
- ⇒ Make innovation central to our strategy.

Employees, skills and capabilities

We will continue to live by our most important aspiration of no accidents and no harm to people.

We aim to demonstrate our commitment by achieving and retaining the highest accreditations from organisations such as the Royal Society for the Prevention of Accidents, the Health and Safety Executive and Institute of Occupational Health and Safety.

Anglian Water will ensure that our employees are committed, engaged and properly trained. We will use our influence to incorporate best practice into nationally recognised standards and to support all our employees to qualify to those standards.



Duncan French, one of 34 successful applicants, is now a Network Technician Trainee at Grafham Water Treatment Works.

We will develop externally accredited qualifications for our technical staff, creating a long-term platform for the professional development of our employees.

Results from our independent annual survey show that our employees feel committed to the goals of Anglian Water. In some areas of employee satisfaction our scores are among the leading ten companies, not just in our sector, but in the country. We intend to maintain and build on this performance and achieve a high level of employee engagement through development, communication and performance review processes.

Recruiting and developing new talent in the east of England through our apprentice, graduate and management entry programmes will widen the pool of future leaders and managers. Surveys show that our employees enjoy and appreciate working for Anglian Water. We want to use this information to help Anglian Water continue to attract the highest calibre applicants.

We value employees who have chosen to spend their entire careers with Anglian Water. At the same time, we aim to build flexible working practices to ensure that we continue to provide the right opportunities for employees to develop the skills and experience that we need.

Innovation

We will make innovation central to our business culture, building on initiatives that are already in place.

We will look for new ways to overcome regulatory obstacles to innovation.

We will pursue research in three ways:

- ⇒ Collaborate with academic institutions and other organisations to pursue research and innovation opportunities.
- ⇒ Collaborate with other water companies.
- ⇒ Research into local application of innovation to satisfy specific needs in our region.

We will work to an innovation agenda which includes:

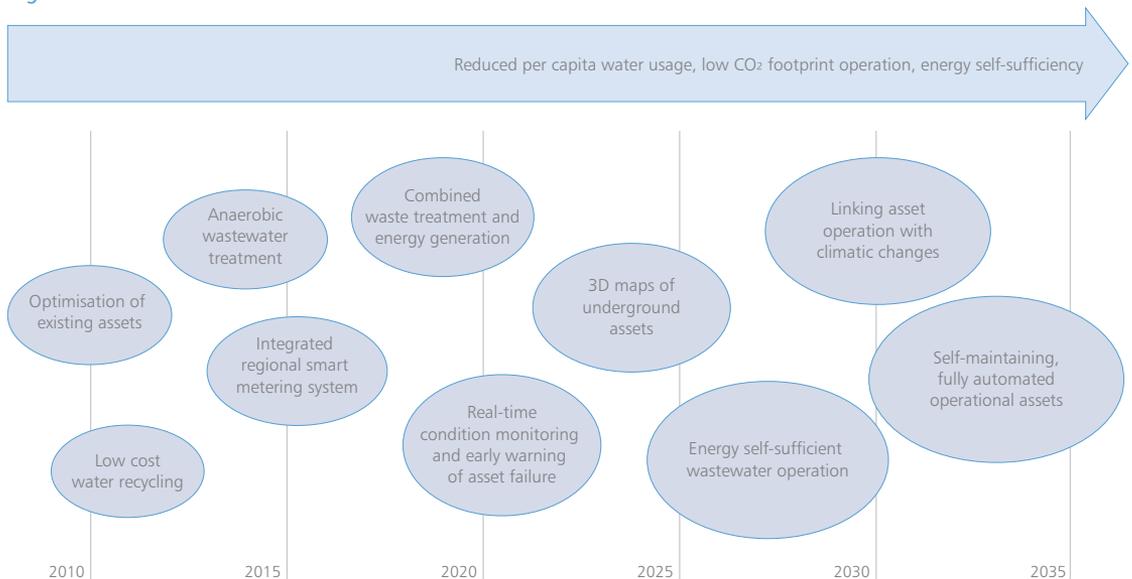
- ⇒ Intelligent metering.
- ⇒ Underground asset monitoring and automated management.
- ⇒ Minimising chemicals in drinking water or used in wastewater treatment.
- ⇒ Energy management.
- ⇒ Water conservation, re-use and recycling.
- ⇒ Management of waste.
- ⇒ Climate change mitigation, including carbon accounting and renewable energy generation.
- ⇒ Climate change risk management and adaptation.
- ⇒ Resilience and risk management, including flood protection, alternative water supplies and early warning systems.
- ⇒ Better understanding of customer behaviours and expectations.
- ⇒ Managing river catchments as a whole to best secure water resources and ensure environmental water quality.

Figure 21 shows when some specific innovations might be expected over the next 25 years.

We will explore advances in information technology to:

- ⇒ Further exploit telemetry systems.
- ⇒ Improve access to our systems for customers, suppliers and business partners.
- ⇒ Improve data management.
- ⇒ Explore opportunities in telecommunications, such as fixed/mobile and device convergence.
- ⇒ Exploit automation.

Figure 21: Innovation timeline



Source: Anglian Water 2007.

Key elements of our strategy

Play a full part in the development of the region we serve.

- ⇒ Work with others to address the challenge of climate change in the east of England.
- ⇒ Contribute to regional policy on growth and other issues.
- ⇒ Promote water efficiency and the benefits of water for health to young people.
- ⇒ Contribute to the amenity of our region through, for example, our recreation facilities at reservoirs.



Primary school children with Anglian Water's 'Captain Splosh', part of an education programme that teaches the value of water and its role in health.

Anglian Water will continue to play an important role in supporting the economic prosperity and social fabric of our region. Our approach to climate change and growth issues supports this goal.

Health and education

Our *Water for Health* campaign supports better nutritional standards in schools and encourages everyone to drink more water as part of a healthier lifestyle. We have launched the campaign in the region's primary and secondary schools and we will continue to promote mains-fed water coolers for all schools.

We have two educational centres and a mobile education unit, staffed by qualified, experienced teachers, to encourage young people and the community to foster responsible attitudes to water usage, waste disposal and hydration issues. We will continue to develop this programme.

Recreation, amenity and natural heritage

We will continue to offer recreational opportunities. The equivalent of approximately 16 per cent of our customers visited our reservoirs during 2006 and more than 26,000 people attended water sports courses.

Our region contains a wide variety of habitats from the Lincolnshire Fens to the Norfolk Broads. We will continue to invest to protect the best habitats and most important species found on our sites and to encourage biodiversity in the region. An important current project is the provision of a new set of lagoons at Rutland Water to enhance the nature reserve there.

We initiated and will continue to support the RiverCare project, which enables community groups to take an active role in improving the quality of their local waterside areas. We expect to sponsor similar schemes that involve local communities.

Employee volunteering

We agree to match an employee's own time spent on community activities with work time as part of our *give me five* scheme. We will continue this programme.

Key elements of our strategy

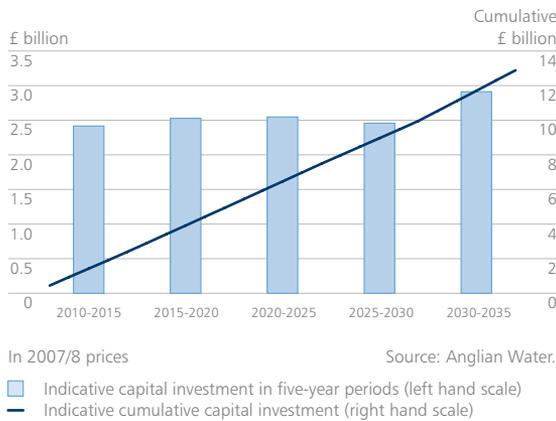
Secure continued access to long-term finance.

- ⇒ Seek a cost of capital which maintains consistency of investment and secures access to the capital markets.
- ⇒ Continue our efficient debt-based financing strategy.

Required capital investment

The capital investment to enable us to deliver our strategy is set out in Figure 22. These estimates are indicative at this stage and may change.

Figure 22: Indicative capital investment to 2035



In 2007/8 prices Source: Anglian Water.

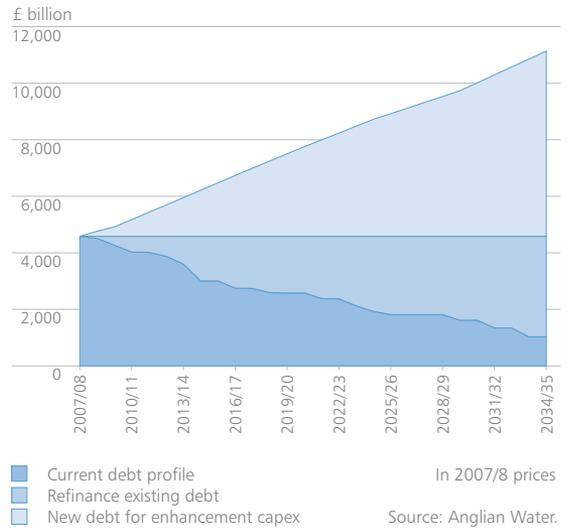
Financing

There is little prospect of positive cashflows before 2035; therefore we will need continued access to competitive debt markets to finance our business. Avoiding regulatory and business uncertainty is central to maintaining efficient financing.

We expect to maintain our current financing strategy for the foreseeable future. In particular, we expect that our balance sheet will continue to rely on substantial amounts of debt, including a proportion of index-linked debt. Based on our current plans, we expect to have to raise around £2.5 billion of debt over the next five years, of which about £1.25 billion is to refinance existing debt. Similar amounts are likely in subsequent five-year periods. Figure 23 illustrates the need for new debt for additional investment and refinancing over the next 25 years.

However, no matter how effective our financing approach, it is the regulatory assumption of the cost of capital and stability of the pricing methodology that underlies the

Figure 23: Illustrative debt maturity and new debt profile



financial health of the business and that enables us to retain existing investors and attract new sources of finance.

We will ask Ofwat for an appropriate cost of capital that will enable us to continue to access the capital markets in order to finance our business at a reasonable cost to our customers.

Anglian Water seeks to maintain appropriate credit ratings to attract cost-effective debt investment. We expect Ofwat to maintain a consistent methodology in assessing the financeability of the water industry when setting pricing. This consistency of approach, and provision of an adequate return, is important in maintaining the confidence of and access to capital from equity and debt investors.

Risk

The most important financial risk facing this business over the next 25 years is the impact of climate change. There are combinations of climatic and regulatory scenarios that could place substantial strain on Anglian Water's finances. The key to avoiding this risk is continued substantial effort to predict and understand the impacts and a sensible debate about who should pay for the costs of climate change.

Risks of increasing costs in delivering our capital programmes are also considerable in our region. Scarcity of construction labour caused by projects such as Crossrail, the London Olympics and the general construction demands associated with housing growth will affect construction costs.

Construction price inflation in the south and east of England has run ahead of national inflation in recent years and such demands are likely to see this continue. Competing global demands for commodities, for example, from China, could continue to drive up costs.

Key elements of our strategy

Limit bill increases to current affordability.

- ⇒ Keep the average increase in customer bills within the rate of economic growth over 25 years in real terms, assuming that the costs of climate change are not excessive.
- ⇒ Set charges to customers that are fair, that provide value for money and that ensure we can finance the service we provide.
- ⇒ Secure an agreement with the Government and regulators about how major costs of climate change should be met.

The strategic context

Our strategy is to maintain the overall affordability of water. We believe this will be achieved in general if annual increases in customers' bills in real terms do not exceed the rate of economic growth.

Implications of current plans for customer bills

Based on the investment set out in this plan and other planning assumptions, we aspire to limit annual price increases to around one per cent above inflation on average over the next 25 years. This would mean that, for most customers, the amount spent on water and wastewater services will not increase over time as a proportion of disposable income.

Customers' willingness to pay

Most customers are willing to pay more to improve specific aspects of our service. The increase in charges is consistent in general with what customers are willing to pay for service improvements.

Up to a third of the residential customers we surveyed were unwilling to see any increases in bills to improve the levels of service that we currently offer.

It is therefore clear that we need to consider carefully the costs and benefits of any investment that will lead to a permanent increase in the level of bills.

The impact of climate change and growth

Our region is particularly vulnerable to the combined impact of climate change and growth. The overall costs of climate change are highly uncertain.

Our plans assume around £1 billion of investment to deal with adapting to, and mitigating, climate change. This is in addition to the investment needed to meet other obligations and priorities.

If water companies and customers are expected to pay for substantial additional costs, it would be difficult to limit the increase in bills to one per cent per annum. It may also result in customer bills on average rising faster than the rate of economic growth.

In these circumstances we will seek a robust debate about priorities for expenditure and secure an agreement with Government and regulators over who should pay.

Key elements of our strategy

Adopt appropriate strategies for Hartlepool Water

- ⇒ Continue to provide on-site secondary water treatment.
- ⇒ Manage risks of mine water ingress to aquifers.
- ⇒ Maintain customer service performance.

Hartlepool Water is a geographically separate water supply business operating in a different economic, environmental and regulatory region from the rest of Anglian Water. Most aspects of our strategy apply equally to Hartlepool Water but there are some differences.

Hartlepool Water is a water-only supply business but it collects wastewater charges and manages debt by agreement with Northumbrian Water. Customer service performance and drinking water quality compliance are dealt with separately by regulators. Hartlepool Water consistently has been assessed as leading on customer service within the sector.

More than half its water is delivered to an industrial sector dominated by three large customers. On-site secondary treatment of potable water to process water standards will continue to be considerable.

The northeast of England is recognised as being particularly deprived compared with other regions, and Hartlepool itself is particularly disadvantaged. A legacy of poor health and high dependency on benefits from the declining industrial sector still prevails.

Good value for money is therefore important to customers who are, on average, willing to pay substantially less for improvements. Customer bills are, on average, lower than those paid by customers in the rest of Anglian Water's region.

Water resources are available readily from substantial groundwater reserves. Only 17 per cent of Hartlepool Water's residential households are metered. Even so, measures to promote water efficiency are seen as being increasingly important.

With plentiful, high-quality water resources, opportunities to expand the customer base competitively will be sought.

Research will continue into the threat of mine water ingress to the underground water resources to mitigate operational risks and ensure continued compliance with drinking water quality standards. A Drinking Water Safety Plan approach has been implemented.



HMS Trincomalee, built in 1817 and restored in 2001, represents Hartlepool's proud maritime heritage.

How others can help us

Delivery of our strategy depends upon others:

- ⇒ Agreeing standards for dealing with the impact of climate change.
- ⇒ Support standards for resilience.
- ⇒ Clear decisions regarding competition.
- ⇒ Maintain the confidence of the capital markets.

The way legal and regulatory policies are formulated and implemented is important to whether or not we are able to deliver our strategy.

We will engage with the Government and other stakeholders to help set joined-up policies, based on sound evidence, clearly and unambiguously implemented in legislation or regulation.

Agree standards for dealing with the impact of climate change

There is no general agreement yet on exactly what responsibilities the water industry should have in dealing with the impact of climate change or in acting to reduce or moderate emissions of greenhouse gases.

If the costs of climate change prove to be large, there will be a debate about how such costs should be paid for.

Government policy is still developing and does not yet completely cover the activities of water companies. There remains complexity and confusion, for example, regarding the Government's overall objectives and policy framework for carbon mitigation.

Our ability to meet policy targets for carbon mitigation is highly dependent on regulatory outcomes, for example, through requirements to invest in energy-intensive processes to meet consented standards for water and wastewater quality. We will engage with the Environment Agency to help develop solutions to environmental issues in a holistic way: contribution to climate change, as well as effects on the water environment.

We believe better outcomes are more likely if policy and regulation over climate change adaptation and mitigation are more clearly thought out.

Support standards for resilience

Recent events have demonstrated that water and wastewater infrastructure is not always resilient to the impacts of severe weather-related events.

Further investment would improve the level of resilience and we are working to understand how much our customers would be willing to pay to mitigate against the risks, but it is likely that more investment will be required.

We believe that further careful consideration of appropriate standards for resilience of critical infrastructure is needed and we will engage with policy-makers in this area.

Clear decisions regarding competition

How the role of competition in the water sector might change is one of the major uncertainties we face.

We will engage with policy-makers and regulators to set out clearly how policy in this area is to be developed, taking into account the views of relevant stakeholders, and to demonstrate robustly how chosen policies reflect the balance of priorities and relevant costs and benefits.

Maintain the confidence of the capital markets

We will need to finance substantial capital programmes over the next 25 years. Attracting the necessary capital at reasonable costs to customers will require us to play our part, but will also depend on how confident capital markets are about the regulatory framework and mechanisms in the water industry.

We need our regulators and policy-makers to balance risks to confidence against other objectives when contemplating changes to the regulatory regime. We also rely on regulators to adhere to the principles of better regulation.

Customers can contribute to achieving desired outcomes

Successful delivery of our strategy depends in part on responsible behaviour by our customers. Specifically, customers can help by:

- ⇒ Not wasting water.
- ⇒ Not discharging substances to our sewers that cause blockages, such as fats, oils, greases and biodegradable wastes.
- ⇒ Behaving responsibly with regard to climate change.

Help customers who cannot afford to pay

We believe it is primarily for the Government to assist customers who cannot afford to pay their water bills, for example, by making changes to the benefits system.

Greater powers to deal with customers who will not pay

We will engage Government and Ofwat to explore whether or not more powers to collect debt would be appropriate, for example, by deduction from benefits payments.

Improve incentives to innovate

We will work with Ofwat and other industry stakeholders to examine how improvements to the regulatory regime could be made to encourage more innovative approaches.

Key requirements

We welcome your feedback on our strategy, which will help us prepare our detailed business plans in the coming months. See page 4 for how to contact us.

Acknowledgements

We have consulted widely in producing our Strategic Direction Statement, and we would like to acknowledge the input of the following organisations in helping us define our future strategy.

However, their contributions and inclusion in this list should not be taken as an endorsement of this strategy or any statement within it.

ADAS

Association of Drainage Authorities
Barratt Homes
Bedfordshire County Council
British Energy Generation Ltd
British Trust for Ornithology
Broads Authority
Business Link
Cambridgeshire and Peterborough Health Protection Team
Cambridgeshire Chambers of Commerce
CBI
Citizens Advice Bureau
Consumer Council for Water
Cranfield University
Drinking Water Inspectorate
East Cambridgeshire District Council
East of England Biodiversity Forum
East of England Climate Change Partnership
East of England Development Agency
East of England Regional Assembly
ENCAMS
English Heritage

Environment Agency
Essex County Council
Forum for the Future
Friends of the Earth
Gallagher Estates
Government Office for the East of England
Hartlepool Borough Council
Hartlepool Business Forum
Hartlepool Partnership
Health and Safety Executive
Huntsman Tioxide
Lincolnshire County Council
Major Energy Users Council
Millennium Inorganic Chemicals
Milton Keynes Council
Natural England
Northamptonshire County Council
Norwich City Council
Peterborough City Council
Premier Foods
Rotary International
RSPB
Society for the Environment
Sport England
Stockton on Tees Borough Council
Suffolk County Council
Tyndall Centre
UK Climate Impacts Programme
University of Cambridge
Wildlife Trusts
Women's Institute



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

We welcome your feedback on our strategy, which will help us prepare our detailed business plans in the coming months.

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

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