

Sustainability
indicators

2012



vessex
water
a YTL company

Sustainability indicators 2012

Welcome to the ninth edition of our sustainability indicators booklet. The graphs in this publication are organised according to the five capitals model that guides our sustainability work and provide an at a glance view of our performance over the last five years in our efforts towards becoming a truly sustainable water company.

This is the sister publication to the sustainability report Striking the balance which provides information on the progress we have made and the challenges we face. This year Striking the balance has been combined with our annual review.

The Wessex Water region



About Wessex Water

Our aims

Wessex Water aims to provide high quality, sustainable water and environmental services which:

- give customers good service and value for money
- protect and improve the environment
- provide employees with the opportunity for personal development and a satisfying career
- give our investors a good return on their investment.

Our values

We aim to be the best and value everybody's contribution in our pursuit of excellence.

We are honest and ethical in the way we conduct our business.

We treat one another, our customers and the environment with respect.

Facts and figures

Wessex Water supplies 1.3 million customers with around 280 million litres of water a day.

We have:

- 97 water sources
- 110 water treatment works
- 209 booster pumping stations
- 340 service reservoirs and water towers
- and some 11,500 kilometres of water mains.

Wessex Water takes away and treats around 470 million litres of sewage from 2.7 million customers every day.

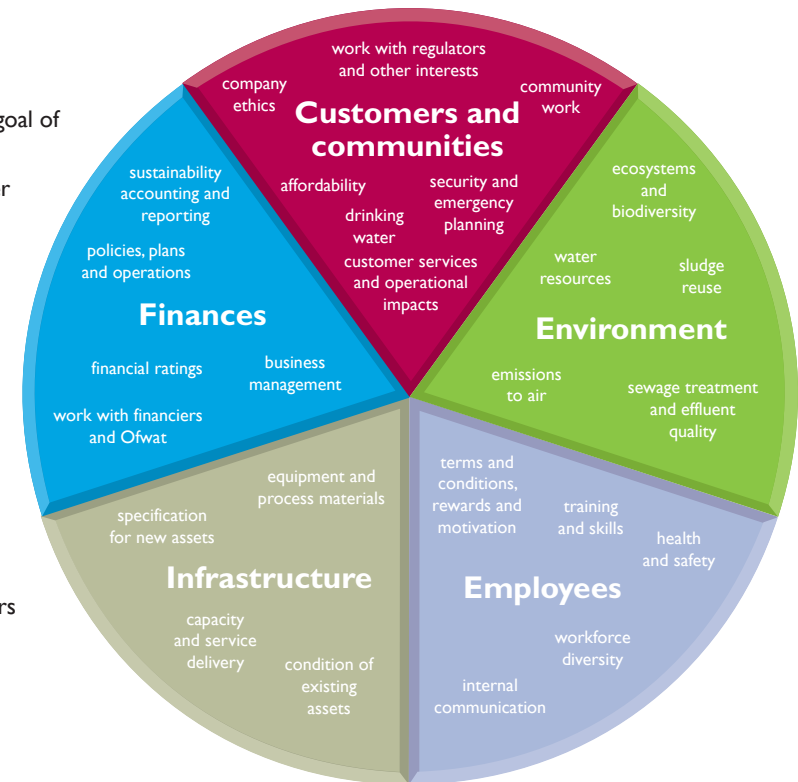
Our sewerage system includes over:

- 35,000 kilometres of sewers
- 400 sewage treatment works
- 1,600 pumping stations.

In 2002 we developed our first sustainability vision. This sets out what we need to do to achieve our long-term goal of becoming a truly sustainable company.

the themes of our vision are divided according to the five capitals model of sustainable development. These cover the issues that matter to a sustainable water company including:

- **Customers and communities** – delivering excellent customer service; having relationships with all our stakeholders that are responsible, clear and co-operative; and having a company culture and ways of working that support sustainability outcomes.
- **Environment** – helping to protect or enhance all resources and services provided by the environment that are used or affected by our operations.
- **Employees** – positively contributing to the health, skills, knowledge and motivation of all our employees.
- **Infrastructure** – ensuring our assets are fit for purpose and for the future; eliminating adverse impacts on society and the environment from the way we build, operate and maintain our assets.
- **Finances** – maintaining a robust balance sheet and long-term stable relationships with investors and regulators who share our commitment to sustainability.



Highlights 2011-12

- We completed our 35th consecutive year without imposing water use restrictions for customers despite exceptionally dry weather.
- Our water abstraction from the environment has continued to fall – made possible by reducing leakage and encouraging customers to use water wisely.
- We once again beat our leakage target, fixing 12,000 leaks in the process.
- We continued design of a water supply grid to add further resilience to supplies and facilitate the transfer of spare water to neighbouring regions in future.
- For the fourth year in a row we have topped Ofwat's league tables for customer service.
- We further improved customer satisfaction while taking on responsibility for the performance and operation of 17,000 kilometres of private sewers – doubling the length of our sewer network.
- We helped more than 12,000 vulnerable households with our affordability schemes.
- We achieved operating efficiency savings offsetting inflation and delivered our capital investment in the first two years of this regulatory cycle at 20% below the allowed cost.
- We achieved a post-tax return of 6.6%.
- We met all of our required environmental outputs.
- We won a number of awards from stakeholders and partners.
- We were named Utility of the Year at the annual utility industry achievement awards.
- We were named by the Scottish Water regulator as the most efficient retailer of water services in Britain.
- We were named as the leading water company in the government's Carbon Reduction Commitment league table.



Drinking water quality and water consumption

Drinking water is treated to standards set by the UK Water Supply Regulations. More than 300,000 compliance tests are conducted every year on around 50,000 water samples taken from water treatment works, service reservoirs and customers' taps. In the last 15 years our compliance with drinking water quality standards has been consistently around 99.9% with 99.98% reported in 2011-12.

Ensuring a secure water supply is an important part of our business planning. We need to ensure we have access to sufficient water resources to meet current and future demands. Over the last five years we have consistently achieved the top score of 100, rating us as having no current difficulties. We have begun constructing our regional water supply grid, which will continue until 2018. The grid will not only make more water available but will also lower the amount of water we need to abstract.

Water companies are duty bound to meet the public's reasonable needs for water. We are pleased that targeted investment and careful resource management mean we have not had a hosepipe ban for 35 consecutive years.

Since the 1980s metered water consumption has been available as an alternative to household rateable value for calculating customers' water bills. All newly built properties since 1989 have water meters fitted as standard but customers without a water meter can request to have one fitted. We recently completed a three-year study to understand the impact of metering and tariffs on customer consumption rates and affordability. Initial results suggest that fitting a meter on change of ownership reduces demand for water by as much as 15%. Smart meters, that enable customers to check their consumption on a daily basis, have been provided as part of this trial so they can see how different activities affect their rate of use.

- Drinking water mean zonal compliance with quality standards at customers' taps (% by calendar year)
- Water consumption unmetered (litres/head/day)
- Water consumption metered (litres/head/day)
- Households metered (% of all households supplied)

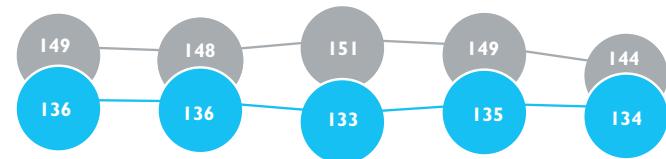
Drinking water quality compliance



National Value 2010-11

99.96%

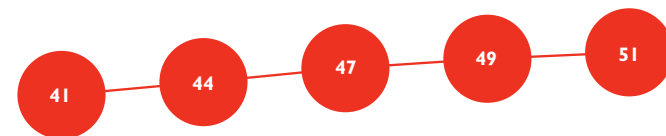
Water consumption



159.5 unmetered

129.0 metered

Household metering



2007-08 2008-09 2009-10 2010-11 2011-12



Performance impacts

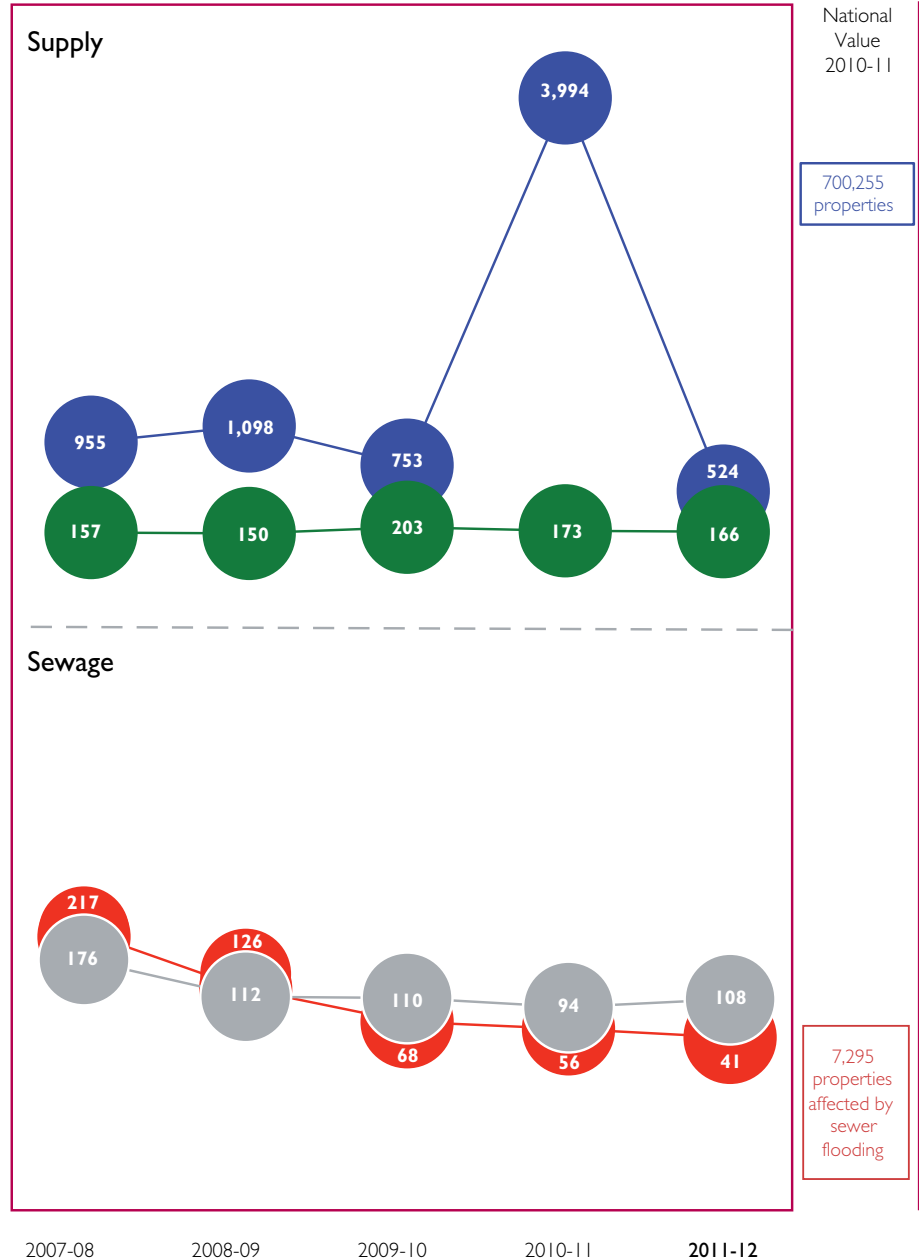
The number of properties with unplanned supply interruptions lasting less than six hours has dropped to the lowest figure for five years. During 2010-11 four events accounted for 84% of the 3,994 properties that were affected by unplanned supply interruptions.

The number of properties receiving low pressure has again decreased, from 173 to 166 this year. This reduction is due to capital investment to remove the additional properties identified through proactive hydraulic modelling. In most cases these properties were removed from the register by separating and replacing and/or enlarging the company communication pipe to remove any restrictions together with, in some cases, associated operational improvements.

Sewage flooding is caused by overloaded sewers during severe weather, equipment failure, blockages or sewer collapses. Work to reduce sewage flooding includes more frequent sewer jetting, pumping station improvements and new storm tanks.

Sewage flooding is taken very seriously and we continue to make significant reductions in the number of properties at risk with year on year improvements on the number of connected properties at risk of a one in 10 year internal sewage flooding event.

- Properties with unplanned supply interruptions (>6 hours)
- Properties at risk of low water pressure
- Properties at risk of sewage flooding (1 in 10 years)
- Properties flooded by sewage





Customer service, community investment and education

We put customers at the heart of everything we do and last year we once more topped Ofwat's service incentive mechanism (SIM). The lower the SIM customer contact score the better.

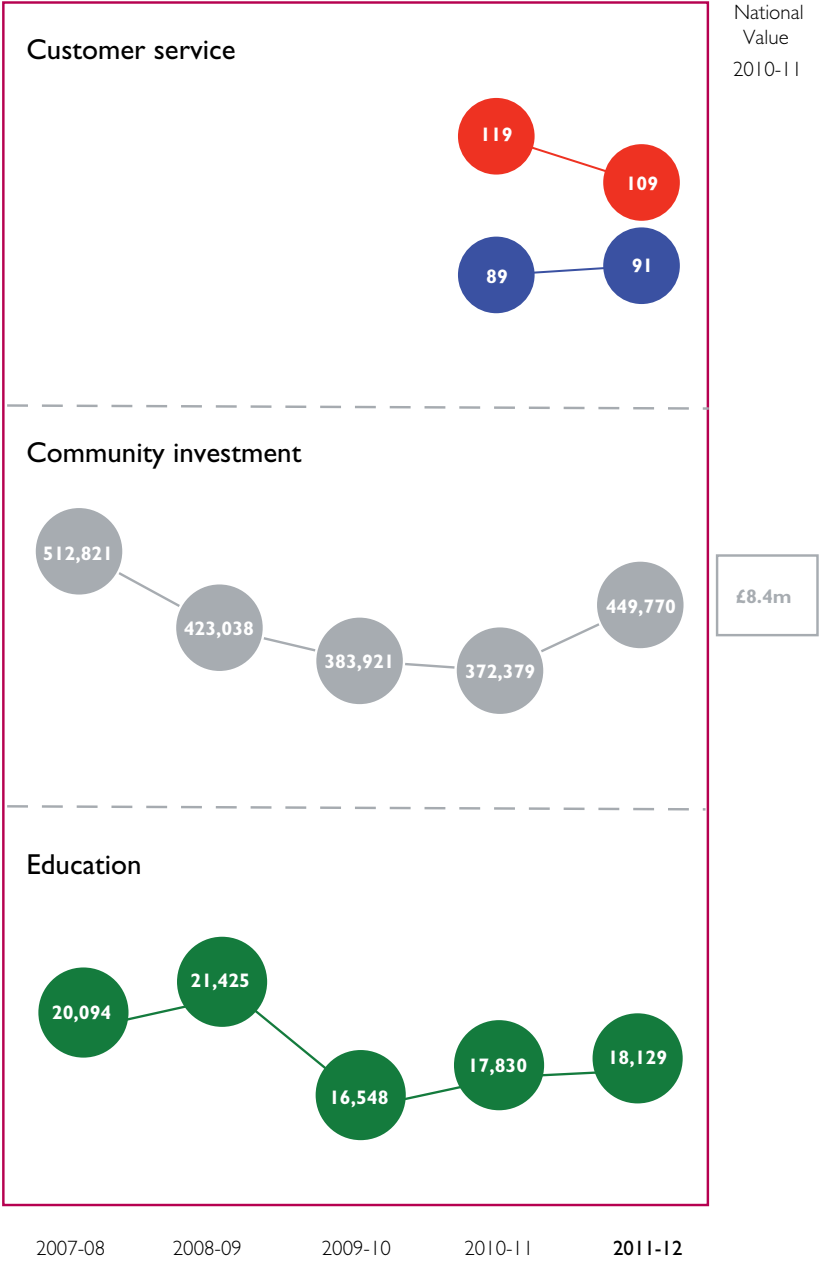
Our high satisfaction score is largely due to prompt, non-recorded telephone answering, quick response, first time resolution of problems and keeping customers informed of what we are doing at all times.

We also retained our government standard Customer Service Excellence award for our approach to customer service, demonstrating the exceptional performance of our staff and our commitment to our customers.

We support many charities working in our region and through our Watermark scheme make a number of donations to various individuals and groups working on environmental projects.

Our education service is run by trained education advisers. Last year more than 18,000 children benefited from this service that gives schools access to nine of our education centres across our region.

- SIM customer contact score
- SIM customer satisfaction score (%)
- Community investment – based on PerCent Club (£)
- Children/students educated





Water abstraction and conservation

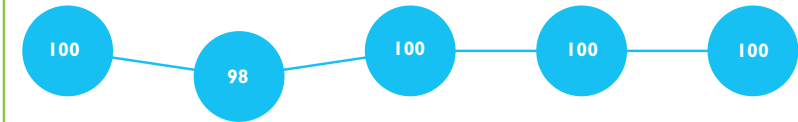
The water we put into supply comes from boreholes, springs, rivers and reservoirs across our region. Most of the water abstracted in the region is from groundwater, eg, chalk and limestone aquifers, and the amount taken is controlled by the Environment Agency through daily and annual abstraction licences.

Wessex Water has a water efficiency strategy to promote the wise use of water by our customers. We provide educational information to customers through publications, events and our website www.wessexwater.co.uk/savingwater.

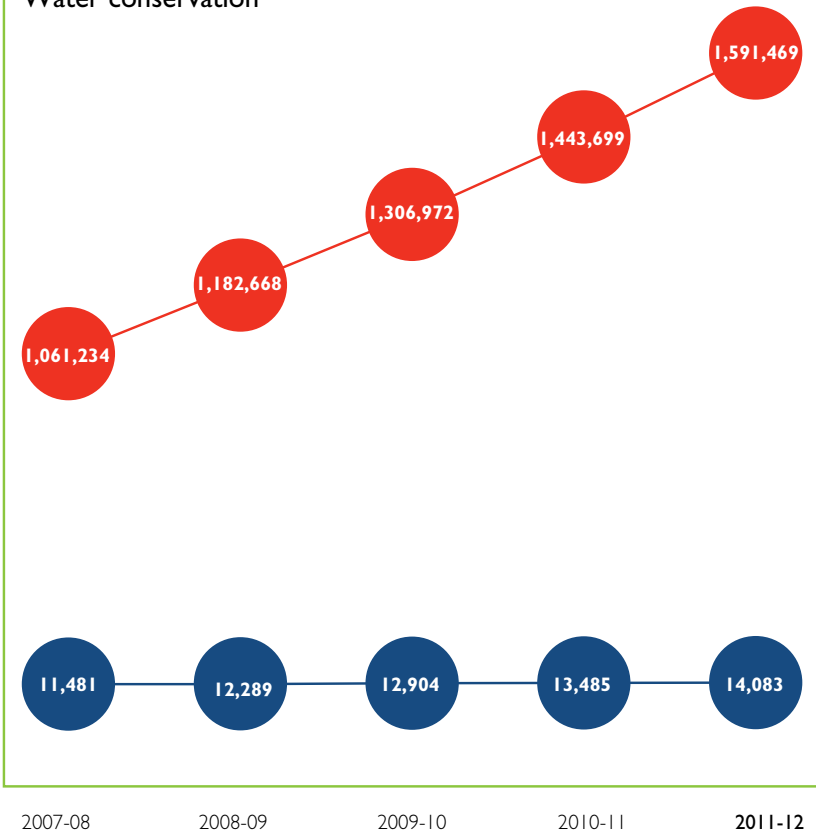
Through promoting free water saving products, year on year we have seen an increase in devices distributed.

- Compliance with abstraction licenses (%)
- Total water saving devices distributed – cumulative since scheme began in 1997
- Household water audit packs distributed – cumulative since scheme began in 2000

Water abstraction



Water conservation



Sewage treatment levels by population equivalent





The level of treatment that sewage receives is driven by legislation such as the Urban Waste Water Treatment Directive and the Bathing Water Directive, which are designed to improve the quality of river and coastal waters. Of all the sewage we treat, 99.99% receives secondary or tertiary treatment. The rest is treated at very small sites that provide primary settlement through septic tanks, each serving an average of just nine people.

Primary settlement of sewage is typically followed by secondary treatment units that allow bacteria to break down organic matter in the presence of oxygen, with further solids separation stage at the end.

Tertiary treatment involves additional purifying processes, such as ultraviolet light disinfection, phosphorus removal or reed bed polishing.

Discharge permits issued by the Environment Agency reflect the requirements of the relevant EU directives and define the standards that each sewage treatment works (STW) has to meet. The permits typically include numerical, sanitary standards for measures such as biochemical oxygen demand, suspended solids and ammonia.

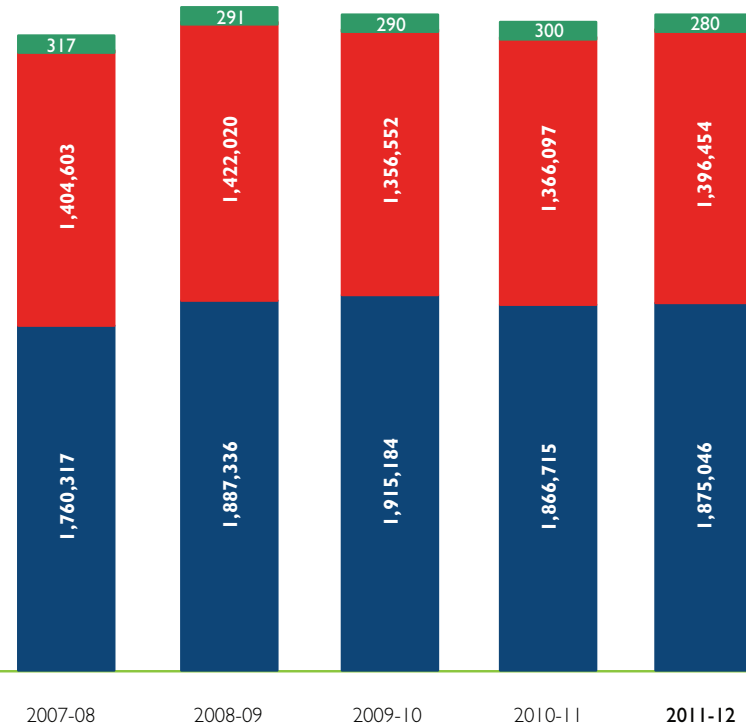
For STWs that receive significant loads from trade waste, specific measures are often included such as pH or heavy metals.

-  Compliance with all numeric consents (% by calendar year)
-  Primary treatment only (population equivalent receiving treatment)
-  Primary and secondary treatment (population equivalent receiving treatment)
-  Primary, secondary and tertiary treatment (population equivalent receiving treatment)

Sewage treatment works with all numerical consents



Sewage treatment



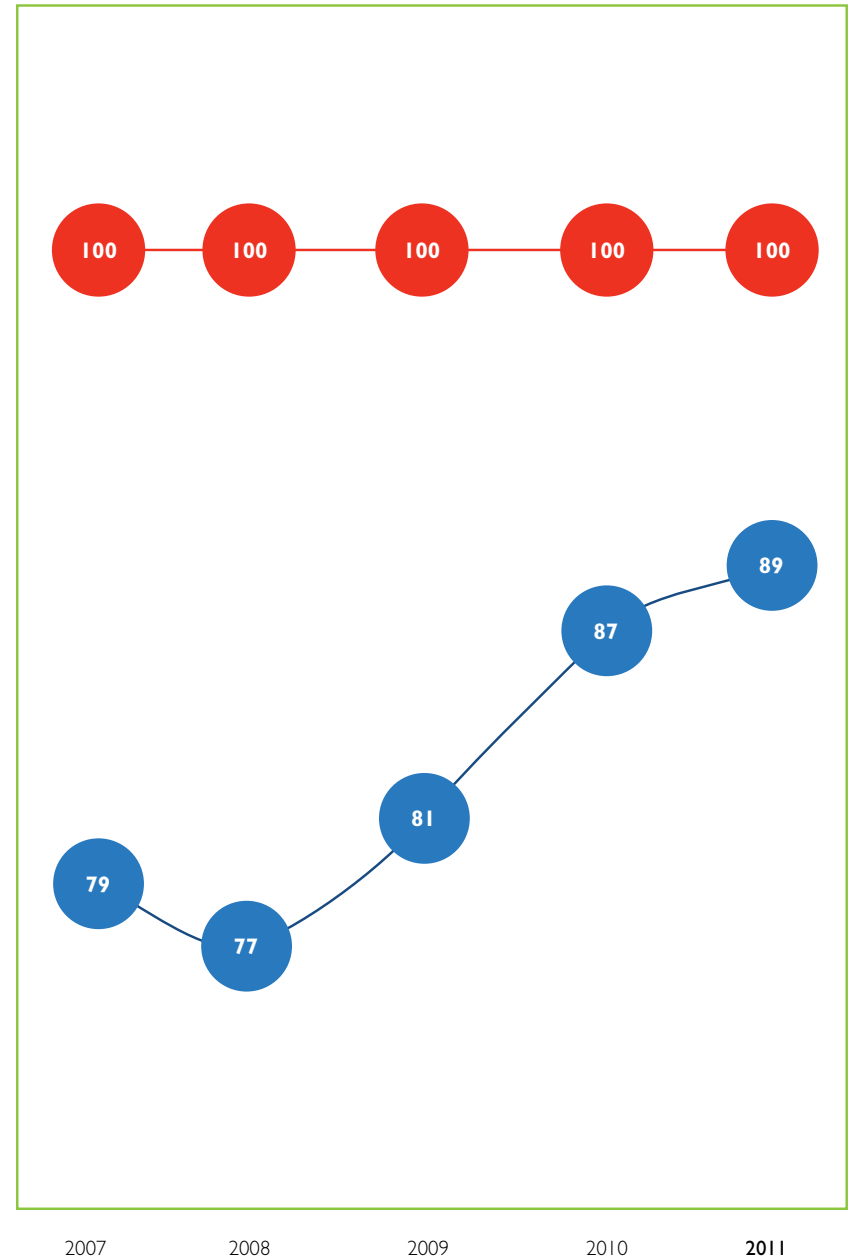
Bathing water compliance

For the eighth year in a row bathing waters around our region achieved 100% compliance with the EU mandatory bathing standards. Compliance with the tighter EU guideline standard improved from 2010 to 89%.

There are a number of factors that affect bathing water quality. Rainfall events as well as industrial and agricultural influences can result in lower water quality at our beaches. However, we have been working hard to understand our impacts on bathing water quality and how we can minimise these by improving both sewage treatment work discharges as well as intermittent discharges such as combined sewer overflows.

Our online system for reporting real time spills at intermittent discharges is called CoastWatch. It allows the public to find out about what may be affecting the bathing water quality at specific beaches and whether there have been any intermittent discharges in the area recently.

- Bathing water quality – compliance with mandatory standards (%)
- Bathing water quality – compliance with guideline standards (%)



Management of sludge and other wastes

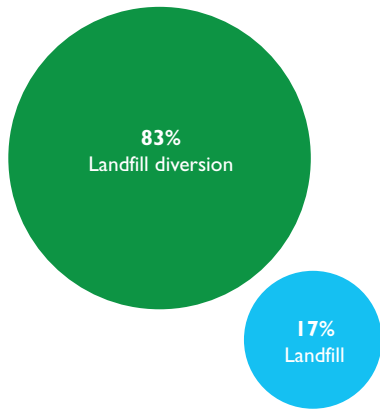
Sludge is a valuable by-product of the sewage treatment process. We treat it to a high standard through digestion or liming processes so that it is suitable for recycling to land. These treatment processes help to stabilise the sludge, reduce odours and remove pathogens.

As well as containing nutrients, sludge also has a calorific value which means that it can be used in energy generation. Currently around half our sludge is limed; the remaining proportion is digested and, looking ahead, this is likely to increase with planned improvements to digestion sites.

The digestion process uses bacteria to convert organic matter in sludge into methane, which can be used as a fuel in combined heat and power plants to generate renewable electricity. Although we have used this approach since the 1960s in recent years we have invested more heavily in this technology to maximise our energy production.

Whilst we already recycle 100% of sludge to farmland, our business operations also generate other forms of waste, such as soil and stone from construction projects, and grit and screenings which are a by-product from the sewage treatment process. We have set the challenging aspiration of zero waste to landfill by 2020 and are currently diverting around 83% of our non-sludge waste from landfill. This includes waste produced by key contractors working on our construction projects.

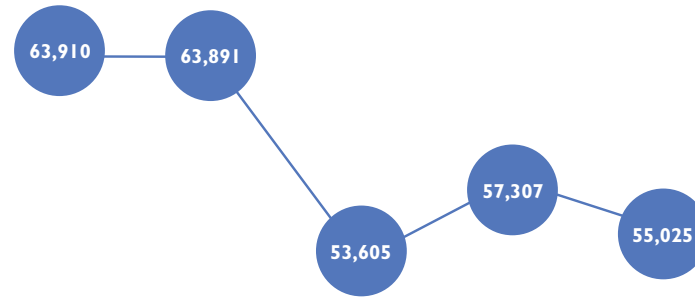
Waste diverted from landfill*



*excludes sludge

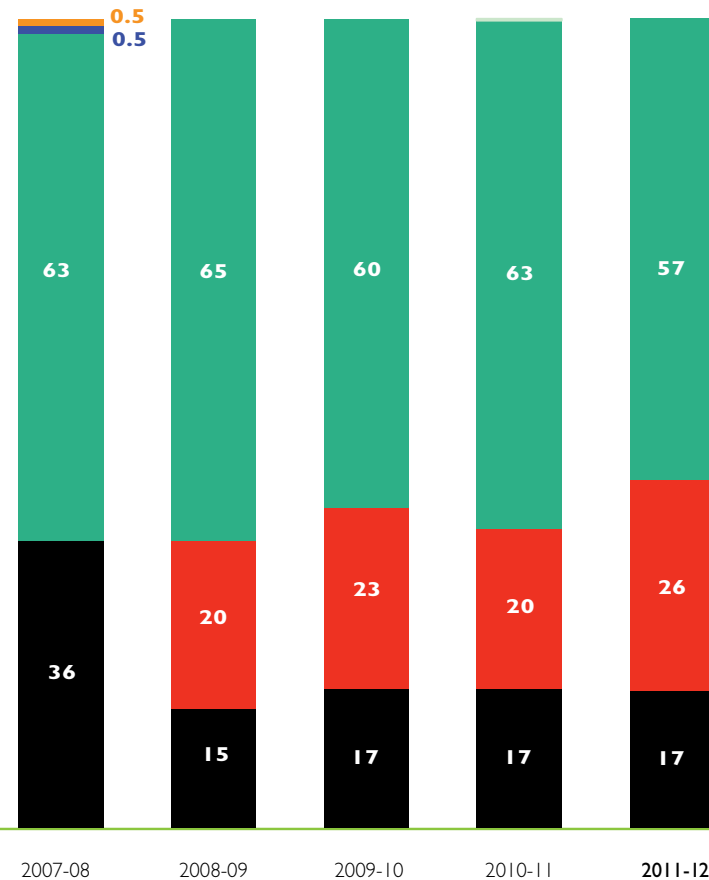
- Total sludge (tonnes)
- Dried sludge (%)
- Composted sludge (%)
- Limed sludge (%)
- Advanced digested sludge (%)
- Conentionally digested sludge (%)

Sludge exported from our treatment centres



National Value
2010-11

1.4m
tonnes





Energy and fuel consumption

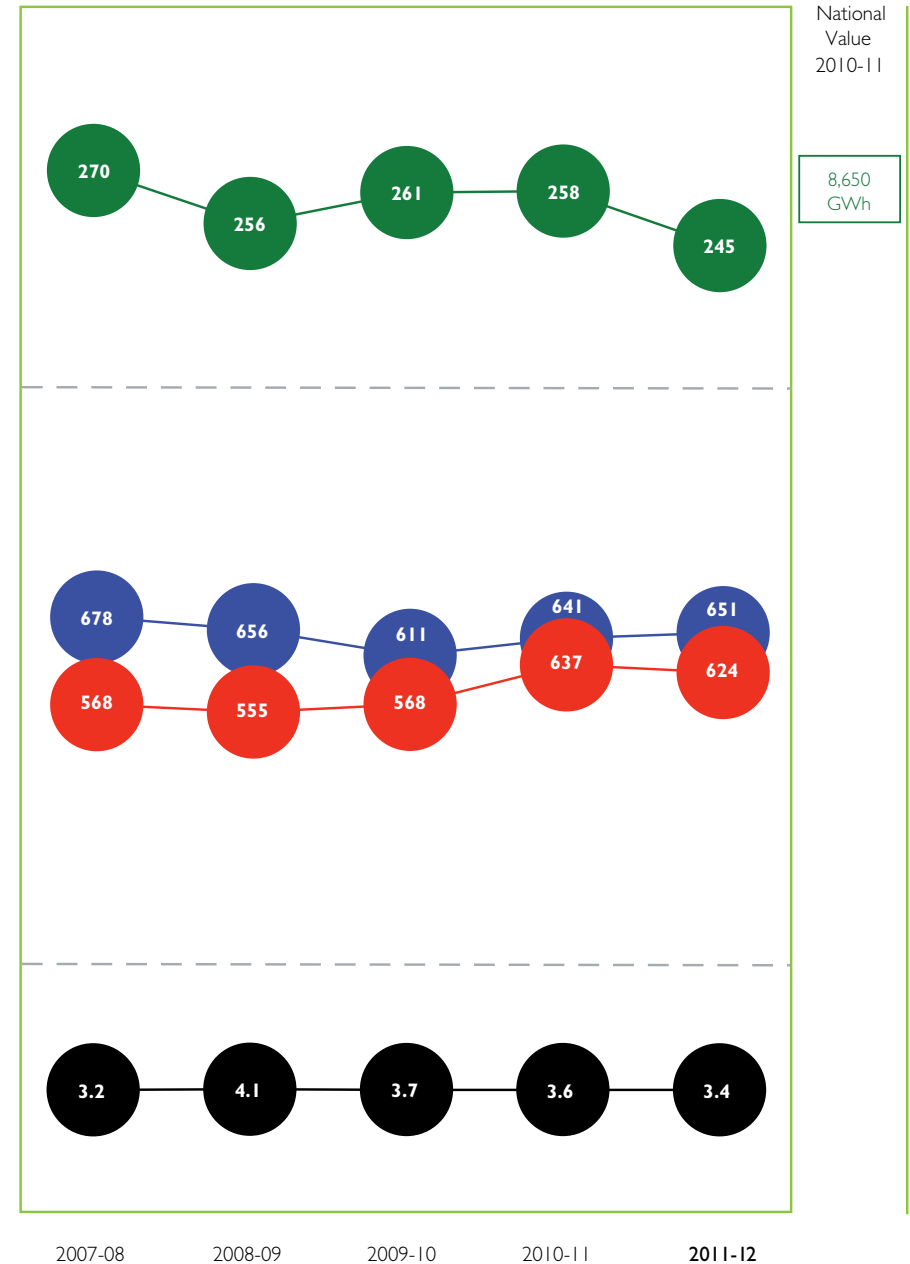
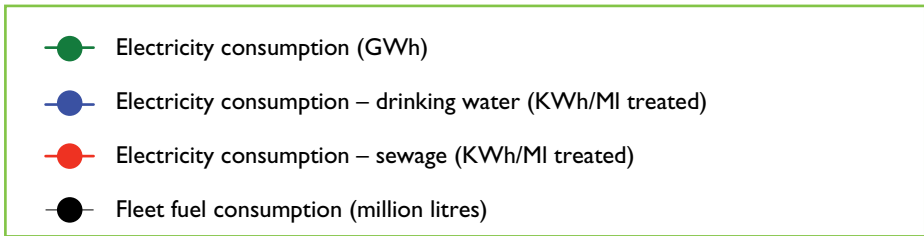
The water industry is an energy intensive business. One cubic metre of water weighs one metric tonne, so simply moving water and sewage and treating it to high standards takes a lot of energy.

In the past, more energy was used to supply water than to treat the same amount of sewage. Today much more energy is used for sewage treatment. This is mainly due to the more advanced treatment that is required to meet tighter regulatory standards. Despite this, energy efficiency measures are helping to offset some of this rise. By continuously reviewing our systems and promoting staff suggestions we are able to spot potential energy savings that we can trial and if successful roll out across the business.

Over the last year we saved 13GWh of electricity, helped by our energy saving activities. These activities include our onsite audit programme, fitting control systems on equipment, heating and lighting and the introduction of the energy bonus designed to engage all staff who can actively help reduce energy consumption. We have also installed more automatic meter reading (AMR) meters for more accurate energy use data, enabling us to pinpoint and resolve any unexpected increases in energy use.

As well as electricity we use natural gas for heating. Use of natural gas varies year on year depending on the amount of sludge drying carried out.

Our vehicle fleet varies in size from company cars and small vans to sludge tankers, with the vast majority diesel-powered.



Energy types

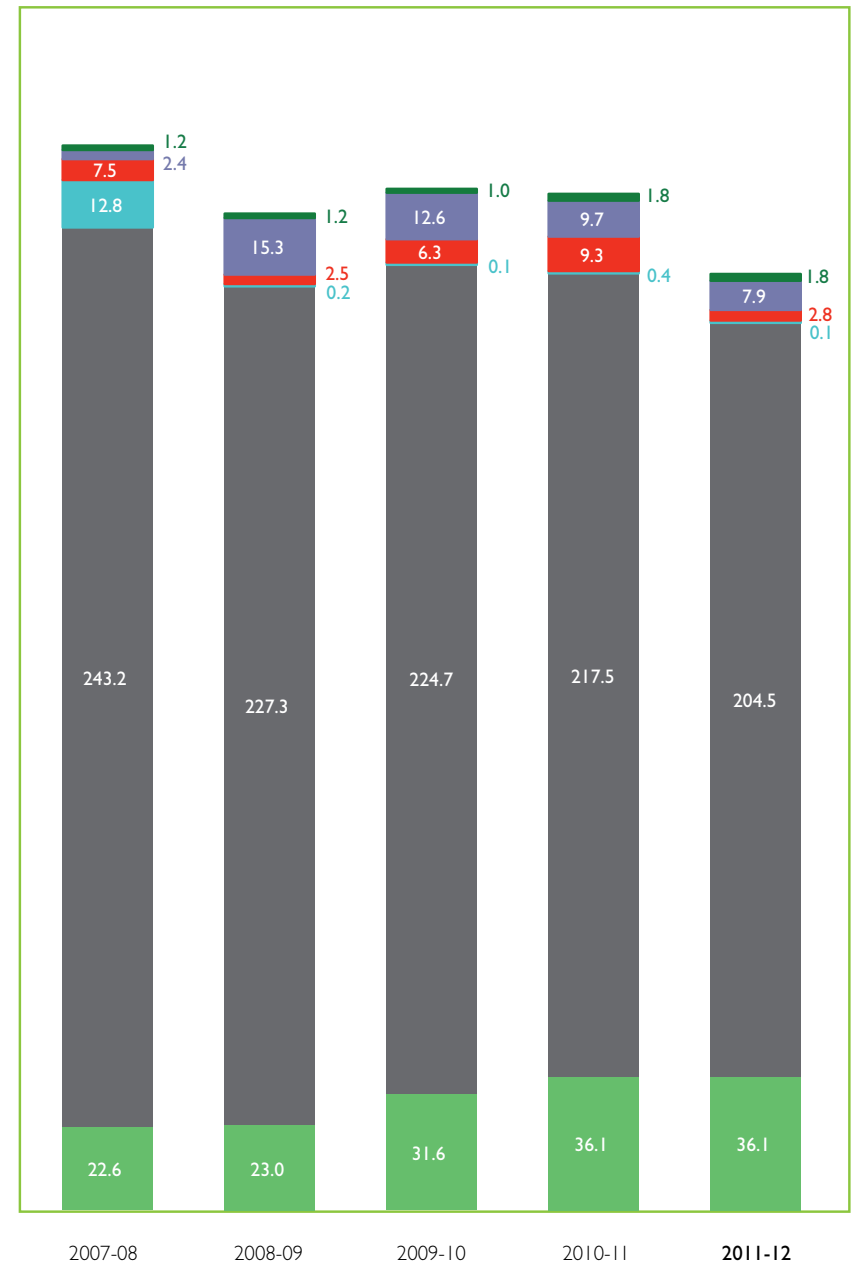
Most of the energy we consume is in the form of electricity, the majority of which is supplied from the national grid.

We have been using anaerobic digestion (AD) as part of our treatment processes since the 1960s. AD breaks down organic matter found in sludge to create biogas that can then be used as fuel to generate renewable electricity. Over the years we have made significant improvements to our processes in order to generate more gas and, as a result of this, more power.

Our Bristol sewage treatment works (STW) operation uses the most advanced anaerobic digestion technology in the UK and digests around 500,000m³ of sludge per annum.

Other sources of energy include natural gas, which can be used for heating, and diesel oil which is used to power standby electricity generators.

- Hydro-electric power (GWh)
- Oil (GWh)
- Natural gas (GWh)
- Gas electricity (GWh)
- Grid electricity (GWh)
- Biogas (GWh)



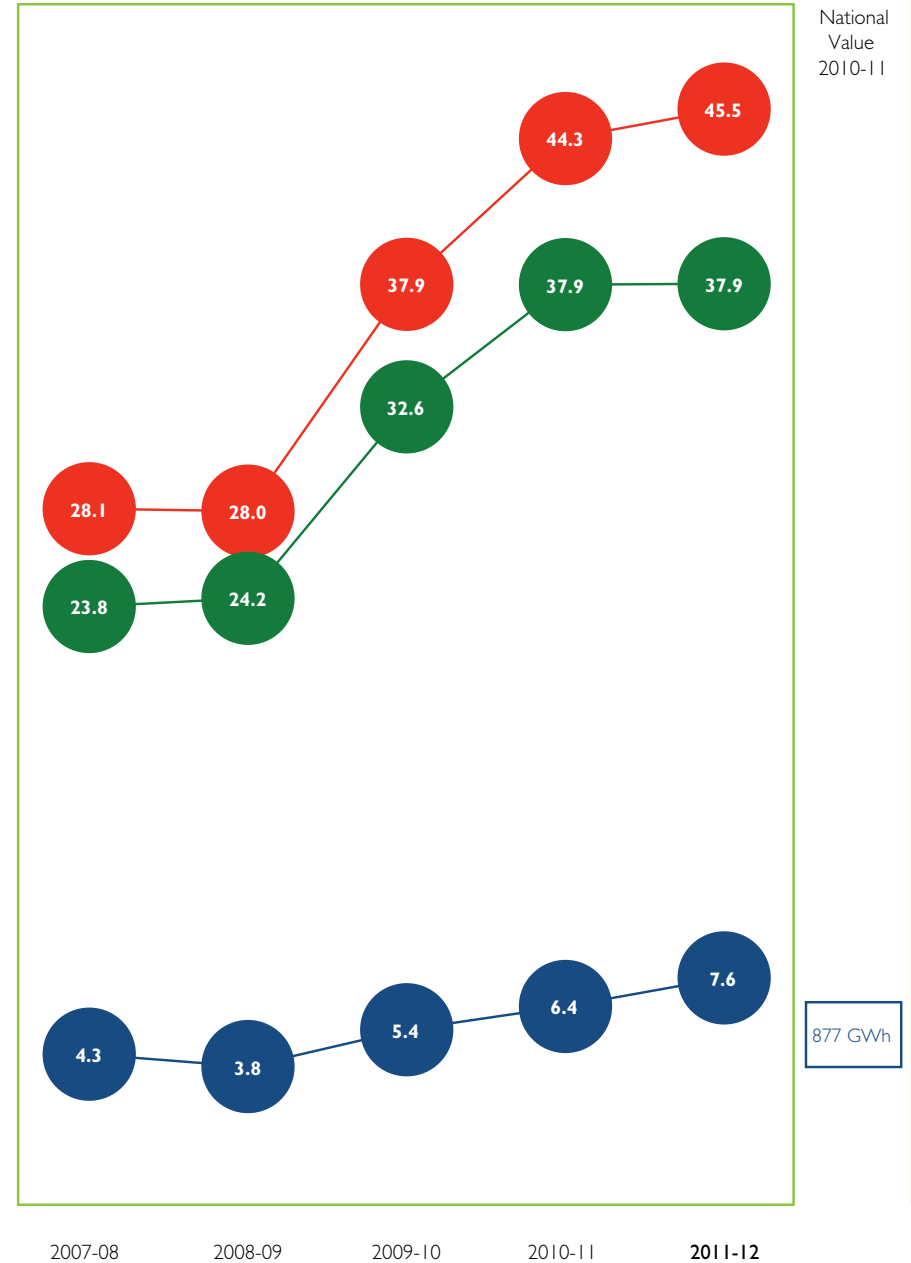


Renewable energy generation

This year has seen the amount of self generated renewable energy increase by a further 1.3GWh. This builds on the 6GWh rise seen last year as a result of the increased biogas production and capture achieved through advanced digestion at our largest sewage treatment works in Bristol. This site now produces enough energy to meet its total energy needs. Across the business we now generate 19% of our total energy demand which is up from 17% last year. During 2011-12 we installed our first micro hydro renewable turbine which has generated 15MWh to date and is forecast to generate around 40MWh over the next year.

We continue to focus on increasing renewable power generation which is essential for reducing our contribution to climate change.

- Total renewable energy generated (GWh)
- Renewable energy generated and used (GWh)
- Renewable energy generated and exported (GWh)





Sustainability indicators 2012

Greenhouse gases

The principal greenhouse gases that we emit are carbon dioxide (from energy and transport), plus nitrous oxide and methane (from sewage treatment and sludge reuse).

We have an ambitious long-term goal of carbon neutrality. However, increasing treatment standards requiring more energy intensive methods continue to be a major challenge as they typically push energy consumption upwards. To help address this we have an annually reviewed carbon management strategy in place, including energy avoidance, efficiency projects and renewable energy.

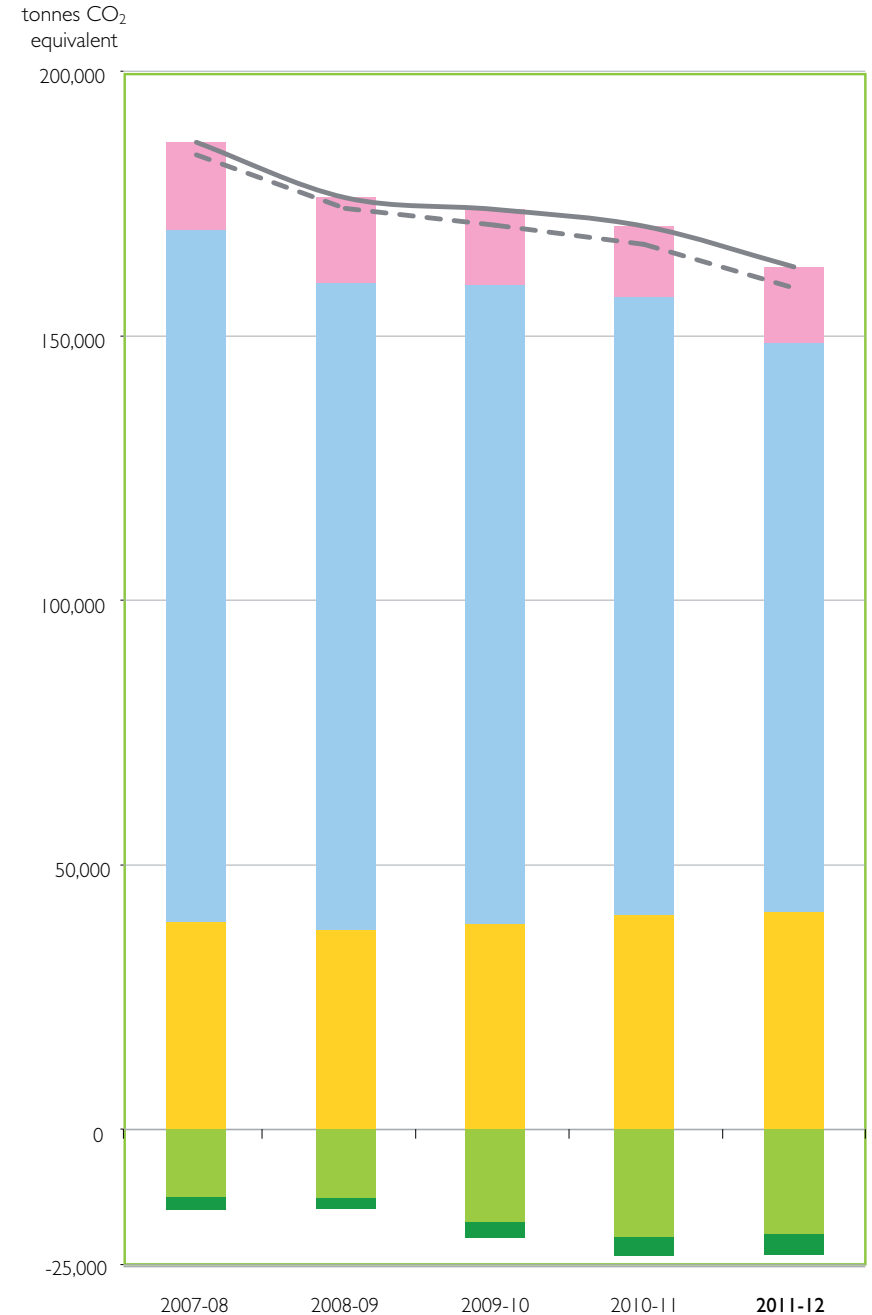
Our emissions for 2011-12 are categorised as follows:

- Scope 1 – emissions produced directly from activities on our sites (eg, on-site fuel use)
- Scope 2 – emissions relating to purchased grid electricity
- Scope 3 – third-party emissions associated with our activities, eg, personal vehicles for business travel and outsourced fuel use and transport.

In line with Defra's definitions our gross emissions do not include the self-generated renewable electricity that we produce and use. The net emissions subtract the electricity that we produce and export from the gross value.

This year we have also been able to estimate the indirect emissions associated with chemical manufacturing and the extraction and transport of the raw materials used in the process. So far these emissions amount to around 7ktCO₂e. However, at this stage they are not fully comprehensive and exclude emissions from the transport of the chemicals to our sites.

We are in the second year of the UK government's Carbon Reduction Commitment Energy Efficiency Scheme (CRC). This acts as a levy on energy use, where participating organisations pay £12 for every associated tonne of carbon dioxide emitted. In July we submitted our annual report to the scheme regulator and made the first payment under the scheme for our 2011-12 emissions, with an associated annual cost to us of £1.47m.



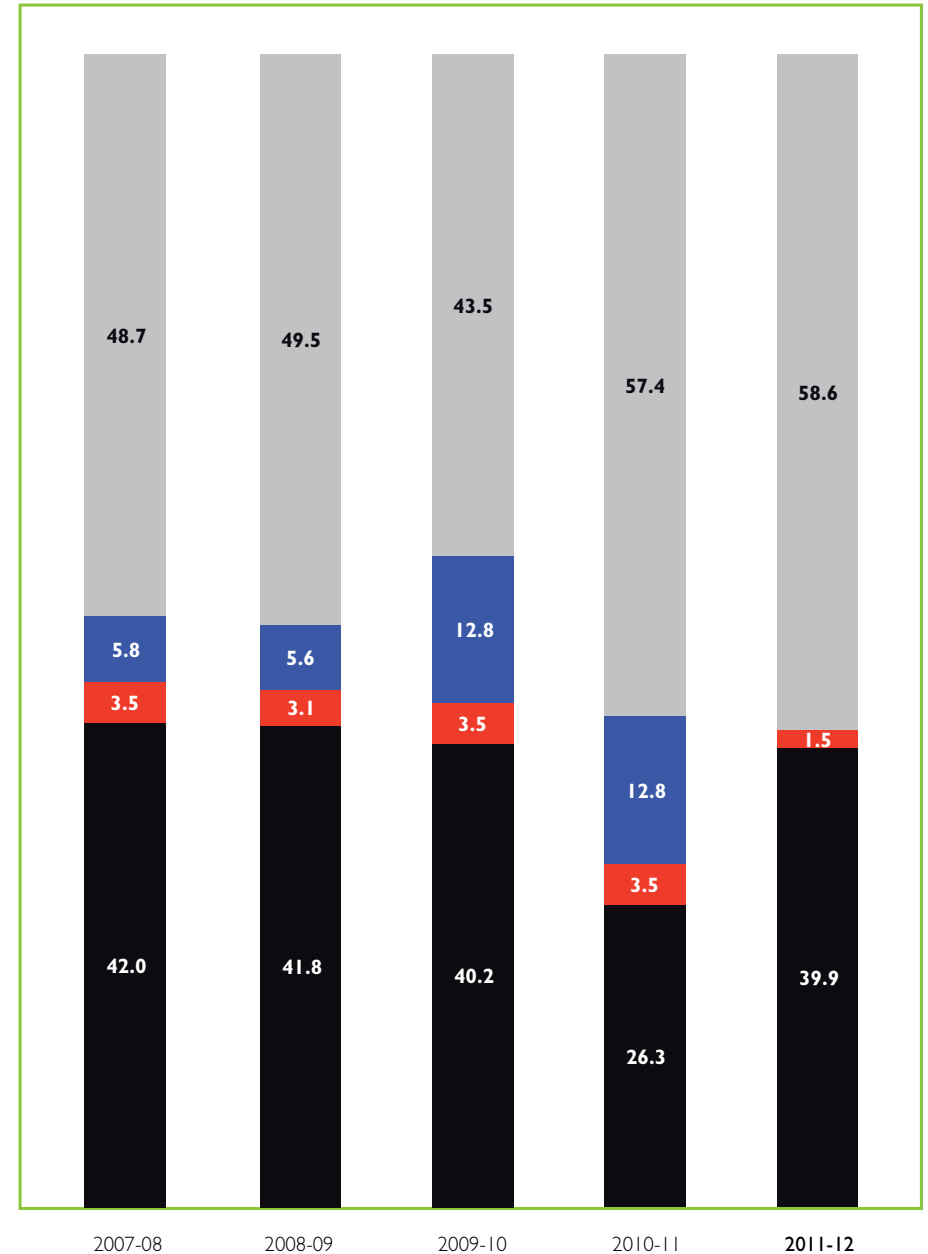
SSSI condition

Some of the land we own is located in a number of environmentally sensitive areas, such as Sites of Special Scientific interest (SSSI). SSSIs are those designated as the best areas in England for wildlife and or geology. Their condition is classified by Natural England (who continuously assess this data) as favourable, unfavourable (recovering, stable or declining), or destroyed.

SSSI land in favourable condition is defined by Natural England as land which is being adequately conserved and is meeting its conservation objectives. Unfavourable recovering sites are defined as not yet fully conserved but have all the necessary management measures in place.

We were pleased to exceed the national target of 95% for the condition of SSSIs, with 98.5% of our SSSI landholdings achieving favourable or recovering condition.

- SSSIs in favourable condition (%)
- Unfavourable declining (%)
- Unfavourable stable (%)
- Unfavourable recovering (%)





Sustainability indicators 2012

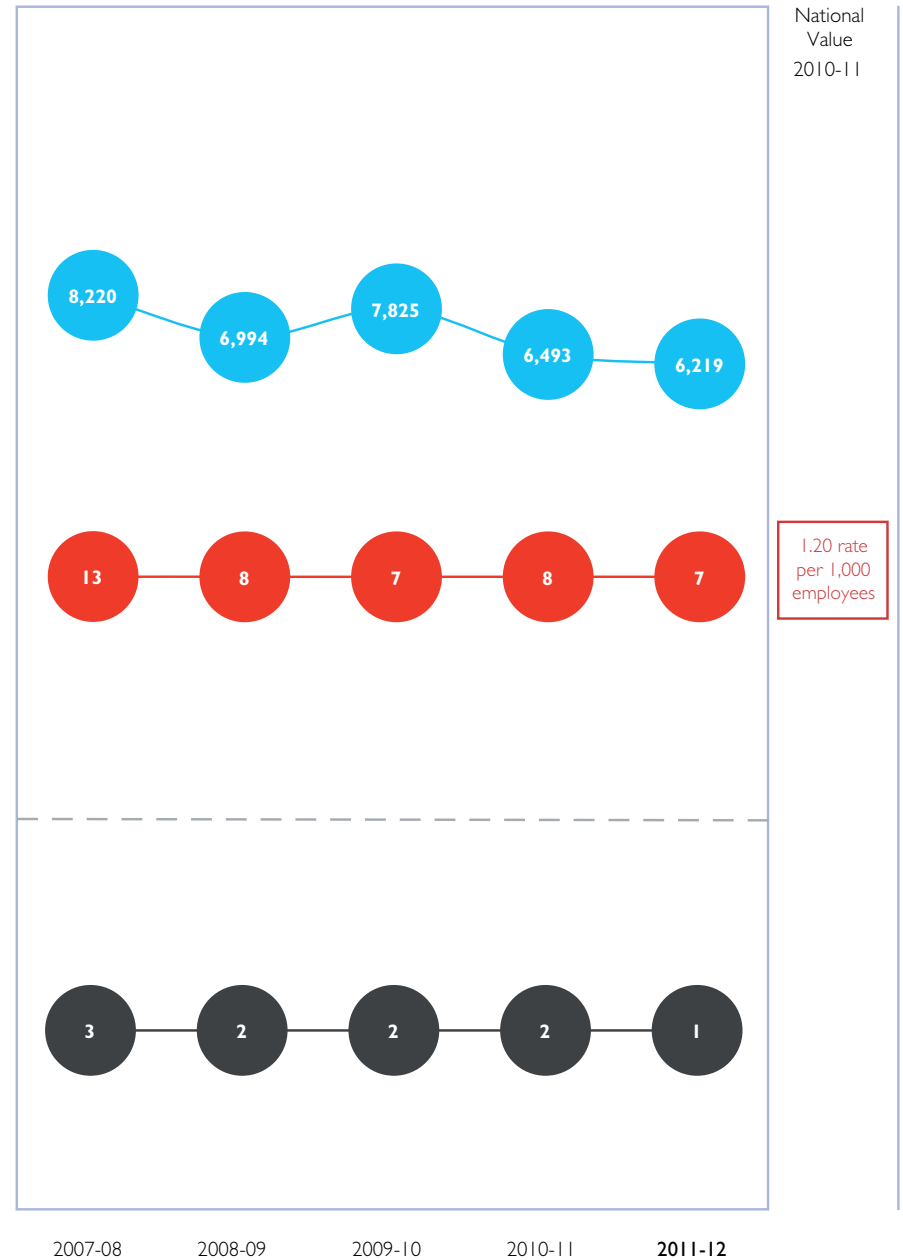
Health and safety

There are many potentially dangerous working environments in the water industry and we remain committed to achieving the highest possible health and safety standards. Provisions include a team of health and safety professionals, comprehensive training, equipment and information for employees. We also continue to review our health and safety policy, arrangements and safety documentation to ensure they follow best practice.

Accident investigation allows the sharing of lessons learnt and the implementation of innovative control mechanisms.

Staff are supported by a dedicated occupational health service that provides health surveillance and screening and access to appropriate medical intervention and an early return to health.

- Total days lost (rate per 1,000 employees)
- RIDDOR incidents (rate per 1,000 employees)
- Major/fatal accidents (rate per 1,000 employees)

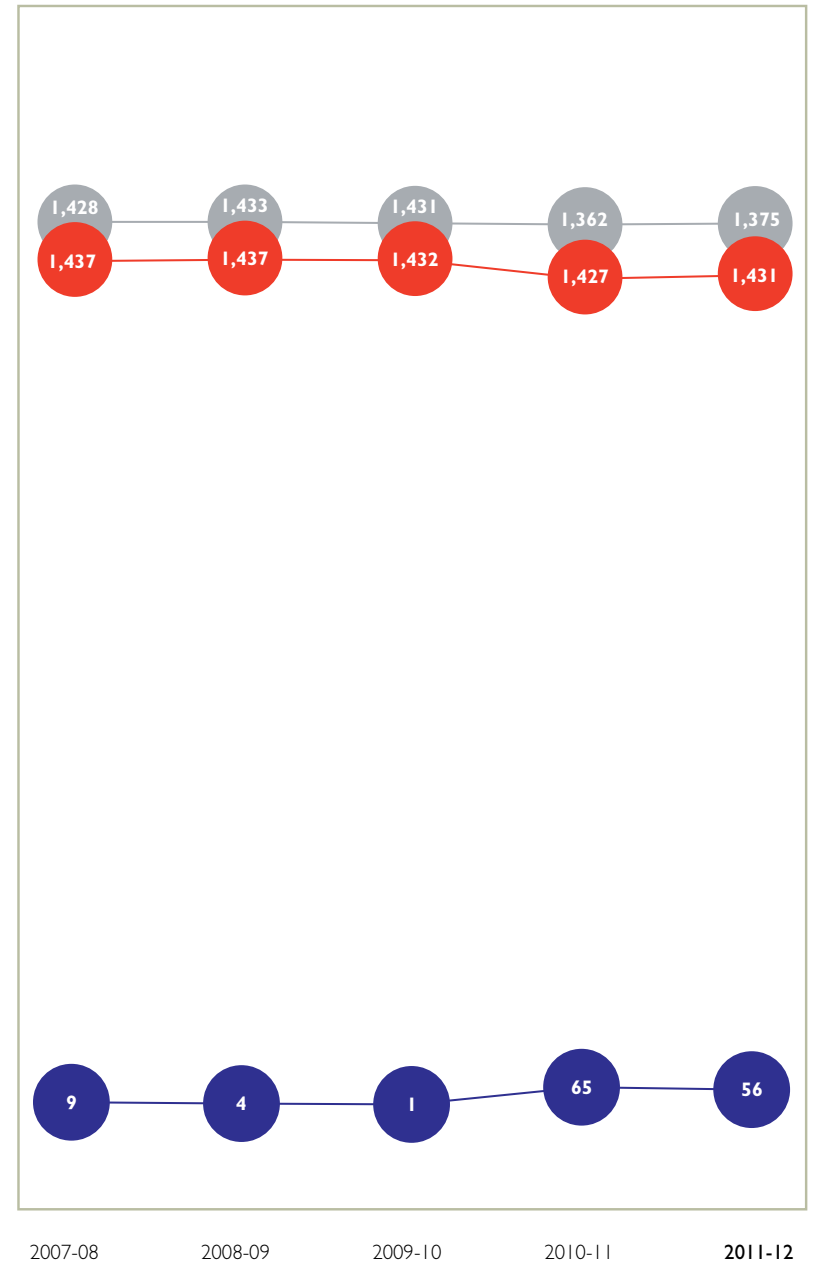
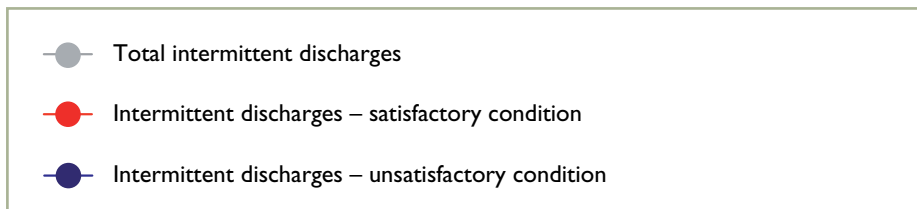


Intermittent discharges

Intermittent discharges are points in the sewerage network where sewage can occasionally enter a watercourse. When flows entering the sewer exceed its capacity, the excess flow is allowed to spill out. This occurs very infrequently and only during high flows, usually seen during heavy rainfall. The high rainfall means that the sewage that spills into the watercourse is much diluted.

However, we are continually working to understand these overflows and how we can reduce the frequency of spills, or improve the quality of the discharges. Modelling and sampling work, particularly in areas where intermittent discharges may impact on bathing water quality, is still ongoing and is helping to identify areas that we can improve.

Improvements to intermittent discharges can be made in many ways, including installing screens to stop debris entering the watercourse, raising the height of the overflow within the pipe, upgrading the pumping stations and sewers or adding storage tanks to reduce volume and frequency of spills.



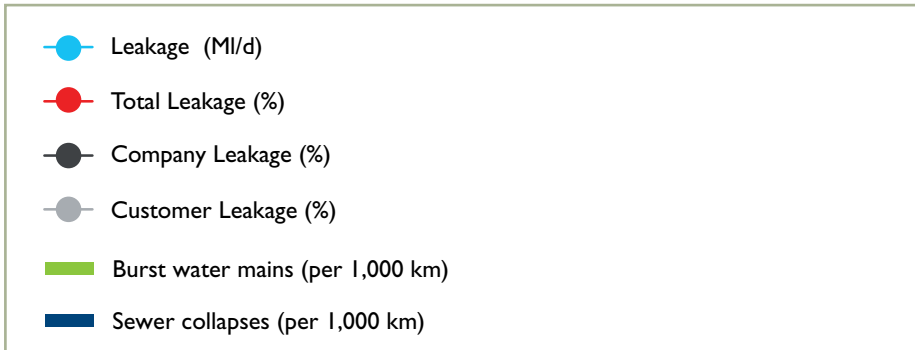


Sustainability indicators 2012

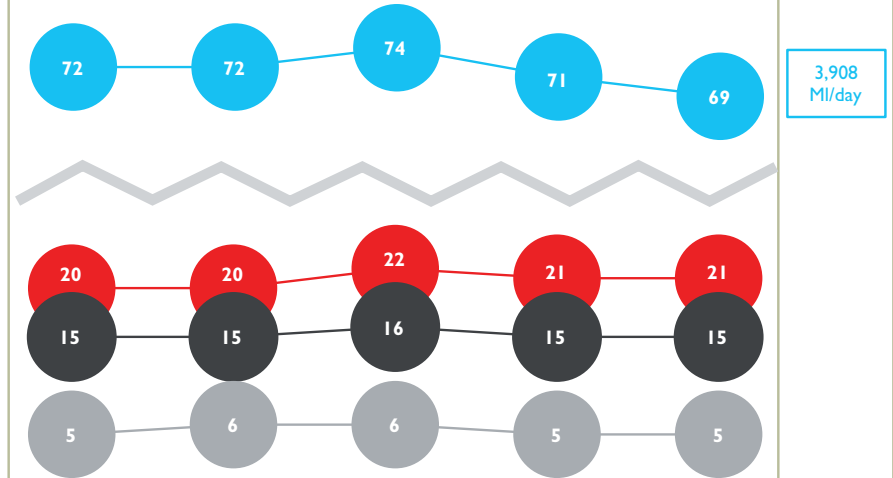
Leakage, mains bursts and sewer collapses

Despite the dry winter in 2011-12 we beat our leakage target and fixed more than 12,000 leaks. We cut leakage from 71ML/d to 69ML/d and met our target of 70ML/d.

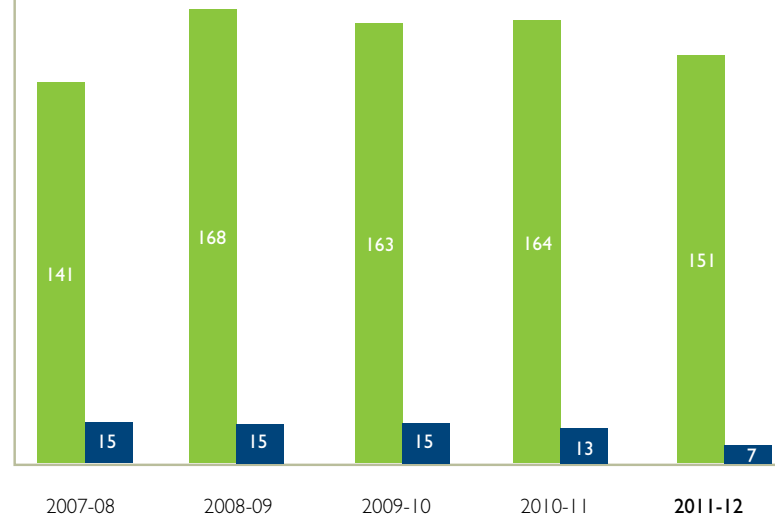
We recognise that with an extensive and ageing water supply and sewer network problems will occur. Water main bursts are caused when pipes fracture as a result of factors such as water pressure (particularly if the pipe has aged) and ground movements. The large majority of sewer collapses are in non-critical sewers and rising mains. Investment to improve the network infrastructure is helping to reduce the number of bursts and collapses.



Leakage volumes and types



Mains bursts and sewer collapses





Sustainability indicators 2012

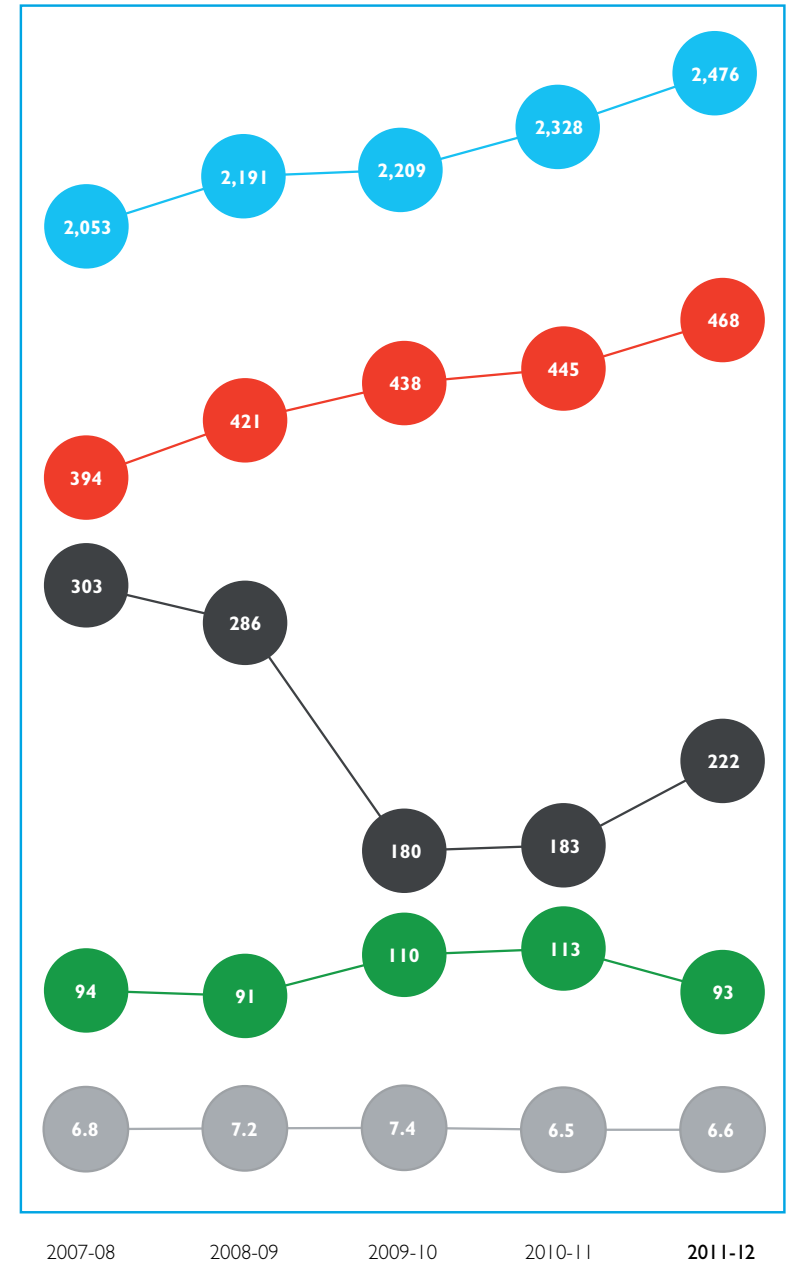
Key financials

Turnover increased by £22.6m this year to £467.5m largely as a result of a 2011-12 average price increase of 5.4% offset by a reduction from customers switching to meters.

Profit attributed to shareholders decreased this year by £20.2m to £93.2m and the return on Regulatory Capital Value (RCV) was 6.6% (post tax).

We continue to face rising operating costs due to market conditions for power, chemicals and wage inflation. We have sought to mitigate those increases by controlling the items we can influence.

- Regulatory asset base – average (£m)
- Turnover – regulated and non-regulated (£m)
- Investment towards sustainability (£m)
- Profit attributable to shareholders (£m)
- Return on capital (%)



Debt and interest

Interest charges represent our single largest expenditure due to the need to finance our large investment programme, which continues to increase net debt.

There was an increase in interest charges from £62.2m last year to £81.6m this year. This increase was primarily due to a higher inflation on index linked bonds.

The regulatory capital value increased by £147m from £2,396m to £2,543m this year and net debt increased by £87m from £1,540m to £1,626m, resulting in a debt to RCV ratio of 64%.

Further financial information can be found from page 50 of our 2012 annual review.

National Value
2010-11

