EMAS (EU Eco-Management and Audit Scheme) environmental statement 2011-12

We are the Environment Agency. We protect and improve the environment and make it **a better place** for people and wildlife.

We operate at the place where environmental change has its greatest impact on people's lives. We reduce the risks to people and properties from flooding; make sure there is enough water for people and wildlife; protect and improve air, land and water quality and apply the environmental standards within which industry can operate.

Acting to reduce climate change and helping people and wildlife adapt to its consequences are at the heart of all that we do.

We cannot do this alone. We work closely with a wide range of partners including government, business, local authorities, other agencies, civil society groups and the communities we serve.

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Environment Agency
Horizon house, Deanery Road
Bristol BS1 5AH
Email: enquiries@environment-agency.gov.uk
www.environment-agency.gov.uk

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Email: enquiries@environment-agency.gov.uk.

Foreword

The Environment Agency works at the place where environmental change has its greatest impact on people's lives, and we have a strong track record of protecting and improving the environment. We reduce the risks to people and properties from flooding; manage water resources for people, businesses and the environment; address pressures on biodiversity and apply the standards within which industry can operate.

This year the impact of two exceptionally dry winters and in East Anglia the driest six months since records began in 1921, provided an additional challenge. We have had to rescue fish from dried-up rivers even during the winter months. And in some parts of the country, the driest months for decades were followed by the wettest.

On 1 October 2011, we took on a new role to help organisations in England prepare, plan and adapt to the impacts of a changing climate. We have been working with key business sectors, local authorities, utilities companies and other partners to develop advice and guidance, and to help improve resilience for future challenges.

This year has seen the transition to a new approach to funding flood and coastal resilience schemes. The partnership funding approach will allow us to work more closely with local communities and encourage more innovative flood defence schemes.
In November 2011, Welsh Government announced that it intended to create a Single Environmental Body for Wales, bringing together the work of Environment Agency Wales, Countryside Council for Wales and Forestry Commission Wales. We are working closely with Welsh Government to enable the new body to be up and running by 1 April 2013.

We continue to work closely with the Department for Environment, Food and Rural Affairs (Defra) to respond to the government's Red Tape Challenge and to identify opportunities to make it easier for businesses to comply with legislation whilst still protecting people and the environment.

We are continuing to improve how we engage with other environmental bodies, and with local government. This year we have embedded our 'Single Voice' approach with Natural England and the Forestry Commission, to ensure that we give consistent advice and information to local authorities.

We have also established a catchment-based approach in England, working with partners to help achieve healthier, more resilient rivers. The programme looks at all the impacts on water quality within 25 pilot river catchments, including point-source pollution and diffuse pollution from agriculture, highways, urban run-off and misconnections. We are supporting projects with local community groups, non-governmental organisations, farmers, local authorities and other organisations to improve water quality.

We are committed to improving our environmental performance. This environmental statement describes how much we have achieved over the last year, in challenging economic circumstances and major change programmes, and how we continue to identify, manage and reduce any environmental impacts associated with our activities. We always try to remember that it's people and the environment that matter most.

Dr Paul Leinster CBE, Chief Executive

Contents

1 Introduction

This document provides a summary of our environmental performance between April 2011 and March 2012.

It is one of our key corporate documents (refer to related publications for details of the other documents). We refer to these other documents in this statement as they provide more detail about our targets, activities and performance.

1.1 About us

The Environment Agency is the leading public body for protecting and improving the environment in England and Wales. Our vision is to create a better place for people and wildlife. We reduce the risks to people and properties from flooding; make sure there is enough water for people and wildlife; protect and improve air, land and water quality and apply the environmental standards within which industry can operate. Acting to reduce climate change and helping people and wildlife adapt to its consequences are at the heart of all that we do.

We cannot do this alone. We work closely with a wide range of partners including government, business, local authorities, other agencies, civil society groups and the communities we serve.

We are responsible to the Department for Environment, Food and Rural Affairs (Defra) in England and the Department for Environment and Sustainable Development of Welsh Government in Wales.

During 2011-2012 we employed an average of 11,432 full time equivalent (FTE) staff. Our annual budget in 2011-2012 was over £1.1 billion. Of our total funding, £750 million (63 per cent) came in the form of grant-in-aid from Defra and Welsh Government: £700 million came from Defra to fund our work in England and £50 million came from Welsh Government to fund our work in Wales.

We have teams based in England and Wales. Staff in our local offices work closely with other organisations including local authorities, and with communities to improve the local environment and promote sustainable development. Similarly, Environment Agency Wales works closely with other organisations in Wales.

1.2 Our role

The Environment Agency works to create better places for people and wildlife.

We have three main roles:

- We are an **environmental regulator** – we take a risk-based approach and target our effort to maintain and improve environmental standards and to minimise unnecessary burdens on businesses.
- We are an **environmental operator** – we are a national organisation that operates locally. We work with people and communities across England and Wales to protect and improve the environment in an integrated way. We provide a vital incident response capability.
- We are an **environmental adviser and champion for the** environment – we compile and assess the best available evidence and use this to report on the

state of the environment. We use our own monitoring information and that of others to inform this activity. We provide technical information and advice to national and local governments to support their roles in policy and decision-making.

We help prevent hundreds of millions of pounds worth of damage from flooding. Our work supports a greener economy through protecting and improving the natural environment for beneficial uses, working with businesses to reduce waste and save money, and helping to ensure that the UK economy is ready to adapt to climate change. We facilitate, as appropriate, the development of low carbon sources of energy ensuring people and the environment are properly protected.

1.3 Environmental policy

In undertaking our work, we ensure that we minimise the environmental impacts of our actions, and that our activities are undertaken in as sustainable a way as possible. We therefore seek to use best environmental practice in everything we do and we use our environmental management system to pursue outcomes.

We seek to ensure that we consider the wider sustainability issues of our activities, the effects they have on communities and that our staff are properly trained and are representative of the communities in which we work. Whenever possible, in accordance with our need to provide value for money, social benefits will be provided to local communities through our work. This includes aspects related directly to our work such as flood and coastal erosion risk management, water resources, pollution prevention, navigation and fisheries.

We also promote sustainability through our interactions and relationships with those who work on behalf of us, those we purchase goods and services from, and those who we advise and come into contact with through our work.

We actively seek to:

- reduce energy and resource consumption through reduction methods consistent with best practice;
- reduce the impact of our business travel by the application of a clear travel hierarchy and the use of clear and challenging corporate targets;
- use renewable energy schemes where feasible, to minimise the release of greenhouse gases;
- minimise the use of hazardous materials and waste generated, and prevent pollution, including close working with our construction partners to minimise their impacts;
- influence our suppliers and contractors to ensure that goods and services we buy support our environmental policy and, in turn, encourage suppliers and contractors to improve their own environmental performance; and
- monitor and report on our environmental impacts and related expenditure in the Annual Report and Accounts, including a report on our sustainability performance.

We are committed to continually improving our environmental performance to prevent pollution and comply with legal and other requirements.

Our environmental policy is embedded within our strategy and corporate plan. These documents describe our long term goal, strategic direction, specific plans and targets.

1.4 Our priorities

Our corporate plan, *Creating a Better Place 2011-2015*, outlines our vision of a better place for people and wildlife and what we will do to achieve this. It demonstrates our commitment to sustainable development and adapting to climate change. The corporate plan sets out our aims in five main areas:

- Act to reduce climate change and its consequences.
- Protect and improve water, land and air.
- Work with people and communities to create better places.
- Work with businesses and other organisations to use resources wisely.
- Be the best we can.

The beneficial environmental impact of our work is described in more detail under these five themes in Section 2 - Our core environmental services.

1.5 Reducing our adverse environmental impacts

We manage and operate over two hundred and sixty offices, depots and major sites across England and Wales. We run a fleet of vehicles and machinery, essential for carrying out our day to day work.

Reducing the environmental impacts of these sites and our travel is a high priority for us. We have a commitment to reduce our carbon emissions by 45,000 tonnes by 2015. Our Internal Environmental Management team undertakes and supports work across the Environment Agency to help us reduce the impact our work has on the environment. We manage our significant environmental impacts through our aspects register and our legal register, which covers that legislation applicable to us.

We have now moved into our new national office in the centre of Bristol. Horizon House won the 2010 Best BREEAM (Building Research Establishment Environmental Assessment Method) Office Award and an excellent rating for its environmental credentials. The move was delivered to time and budget and has resulted in annual operational cost savings.

We manage our key activities that have the potential to create significant adverse environmental impacts, in particular our purchasing, travel, energy use, and our construction activities. We have assessed the potential scale of impact of each, based on whether there is environmental legislation relating to the activity, the potential size of environmental impact resulting from the activity, the likelihood of occurrence of environmental impact resulting from the activity, and the level of concern about this activity voiced by interested parties.

Our purchasing

We estimate that around 70 per cent of our total environmental impacts come from the goods and services we purchase. We spend around £500 million with our suppliers and so have considerable opportunity to encourage more sustainable practices from them. By thinking carefully about the goods, services, works and utilities we buy, and who we buy them from, our purchasing decisions contribute to the achievement of sustainable development goals such as reduced energy consumption, reduced carbon dioxide emissions, waste minimisation, fair and ethical trade and social justice.

We have produced a series of tools to support our sustainable procurement activities, including a sustainable procurement guide and risk assessments. We are happy to

share these with all organisations and have made them available on our website. As part of our ongoing work to reduce the impacts of our timber purchasing, we have identified a range of lesser known tropical hardwood species that are suitable for use in marine and freshwater construction projects.

Reducing the impact of our travel

We use a travel hierarchy to help us reduce the amount of travel by our staff. This requires staff to consider alternatives to travel, for example holding a meeting by telephone or online. Where travel is unavoidable, we encourage our staff to travel in a way that minimises their impact on the environment, using public transport rather than cars whenever possible. Our fleet contract also helps minimise the footprints of the miles we do drive, by providing vehicles with low emissions per mile.

Our energy use

Our energy use relates to buildings, where we have reduced usage over a number of years, and to the use of pumps for floods and water shortages. Pumping water dominates our energy use and is dependant on weather conditions. We can be required to pump water for long periods of time and have a number of projects in hand to reduce energy used.

Construction activities

We are a major public sector construction client and we recognise the potentially detrimental impact of our construction work upon the environment. This includes impacts associated with extracting, processing, producing and transporting the raw materials used and disposing of waste materials generated. Potential impacts on the local environment include water pollution, noise, dust, damage to wildlife and plants, visual and transport issues. Construction work also requires the use of natural resources and energy.

1.6 Our management system

Our management system provides the framework for our work. It helps us to:

- translate our plans into instructions and guidance;
- communicate with our customers, stakeholders and staff;
- monitor and improve our effectiveness as an organisation.

Our management system is certified to international quality and environmental management system standards ISO9001 and ISO14001. We were first certified in April 2002. We are also registered to EMAS – the voluntary European Eco-Management and Audit Scheme regulation. We were first registered to EMAS in April 2005.

2 Our core environmental services

2.1 Act to reduce climate change and its consequences

Reducing carbon emissions and adapting to climate change

Climate change is one of the most significant challenges facing the world. Reducing carbon emissions and adapting to climate change is central to all of our work.

In October 2011, we took on a new responsibility to help businesses and the public sector in England adapt to a changing climate. We worked closely with Defra to find out what services customers wanted, both for this new role and more broadly what they wanted to see under the government's National Adaptation Programme. We held stakeholder workshops, carried out market research, and worked with key business sectors, local authorities and government. As a result of this engagement, we have developed the Climate Ready support service that provides online guidance as well as tailored support to seven theme areas: business and services, built environment, infrastructure, health and wellbeing, local government, natural environment, and agriculture and forestry.

The new Climate Ready support service was launched on 1 April 2012 and replaces the service formerly provided by the UK Climate Impacts Programme (UK CIP). This vital advisory role enables us to build on our existing work to help the economy withstand the impacts of climate change.

Our commitment to reducing carbon emissions, a major contributor to climate change, is reflected by our own achievement of reducing our carbon dioxide footprint by 15 per cent from the baseline year 2006-2007. Our new national office, Horizon House, has contributed to this reduction. The office features a natural ventilation system, intelligent lighting, rainwater harvesting and ground source heat pumps. In September 2011, as part of Bristol's Doors Open Day, we opened the building to the public to share our experiences and inspire other organisations to reduce their impact on the environment. See section 3 for more information on how we are reducing our environmental impact.

This was the first compliance year for the Carbon Reduction Commitment (CRC) Energy Efficiency Scheme, requiring participants to report on their performance. In November 2011, we published the first ever CRC Energy Efficiency Scheme performance league table, which shows the reported emissions for 2,104 participants. . We ranked 275th in the league table which equates to the top 15%.This year the league table recognises organisations which have taken early action to improve their energy efficiency. We are working with the Department of Energy and Climate Change (DECC) to simplify and improve the scheme.

Supporting low-carbon technology

Our nuclear team has been working with the Office for Nuclear Regulation on the review of designs for new power stations. In December 2011, following four years of assessment work, we issued interim design assessments for two new nuclear reactor designs. A number of technical issues remain, and we will only consider giving final

acceptance for the designs when we are satisfied that these issues have been addressed.

2.2 Protect and improve water, land and air

Managing water resources

Following two exceptionally dry winters, by the beginning of April 2012 seven water companies had restrictions in place on public water use in the south east and eastern England, and many other areas were at risk of environmental stress. Over the last 12 months we have played a lead role in co-ordinating and managing this situation to balance the water needs of people, farmers, businesses and the environment. In doing this we have advised and supported government, water companies, farmers, businesses and environmental organisations.

In March 2012, at the request of the Secretary of State for Environment, Food and Rural Affairs, we set up a national drought group to provide a high-level steer on water management across all the main sectors of water use. The group includes representatives from Defra, other government departments, water companies, Natural England and other organisations.

We have worked with farmers to extend their abstraction licences to allow them to abstract water to fill storage reservoirs at times of higher river flows. We have also been monitoring the environmental impacts of the dry weather, and helping to raise public awareness and reduce water consumption through our media messages.

We developed an evidence case to support the government's White Paper, *Water for Life*. We published two reports known as the Case for Change, which showed the potential impacts of climate change and population growth on water supply and demand. We also worked with Ofwat on an assessment of the current regulatory regime. We continue to work closely with government to deliver the commitments in the White Paper, particularly those relating to protecting the water environment and abstraction reform.

Improving and protecting inland and coastal waters

Improving the quality of bathing waters

In 2011, 98 per cent of bathing waters met the minimum standards of the European Bathing Waters Directive.

The table below shows that 91 per cent of bathing waters met tougher UK guideline standards under the revised Bathing Water Directive (rBWD), which require lower concentrations of bacteria. We continue to work with local authorities, water companies, farmers and beach users to further improve the quality of bathing waters.

Measure – We take action to ensure that bathing waters in England and Wales meet the standards required under European law			
2011-12 target	**Comments on our performance**	**Status**	**2012-13 target**
Target was 88% of bathing waters	For 2011, 91% (447 of the 491 bathing waters that have predicted	Target achieved	88%

Measure – We take action to ensure that bathing waters in England and Wales meet the standards required under European law			
2011-12 target	**Comments on our performance**	**Status**	**2012-13 target**
meet standards required under European law	rBWD results) achieved at least the 'Sufficient' classification. This is above the target of 88% for 2011/12. The rBWD is based on 4 years' data, so results here have been calculated using data from 2008 - 2011. The method is predictive and does not guarantee a pass/fail for the rBWD, but it does give an estimate of likely performance.		

Performance trend (This measure has changed since 2010/11 to be in line with the new corporate plan)		
2009-10	**2010-11**	**2011-12**
82%	90%	91%

From 2012 we will monitor bathing water to the standards required by the revised Bathing Waters Directive (rBWD). The revised Directive will use monitoring data over four years, to classify each bathing water area as excellent, good, sufficient or poor. Our readings from 2012 will therefore contribute to the first official classification in 2015.

Based on our monitoring for the 2011 bathing waters season, we predict that 91 per cent of bathing waters will achieve at least the sufficient classification in 2015 under the revised Directive.

Creating healthier river catchments

To help achieve healthier, more resilient rivers and water habitats we have set up a catchment pilot programme in England. We have worked with partners to select ten varied catchments to focus on, each including rivers that are currently not meeting good status under the Water Framework Directive.

The programme is testing new and better ways of getting people and organisations involved in improving rivers. We are learning a great deal from working with our partners, and through using evidence and action planning. We are establishing new relationships as a foundation for joint decision-making about the future management of land and water in catchments.

One of our catchment pilots is in the Adur and Ouse catchment in Sussex. Here we have already forged strong partnerships with the Rivers Trust, the National Trust, Sussex Wildlife Trust and the Woodland Trust, as well as with the local authorities, key landowners and local businesses. We have prepared plans for work to begin on four sites in 2012.

Defra has also asked us to administer the Catchment Restoration Fund, through which we will allocate up to £10 million per year to charities for projects to improve water quality.

Defra allocated an extra £9 million of grant-in-aid funding this year to help achieve good status for waters under the Water Framework Directive. This is the first of four years of a funding package which is also allocated to Natural England, the Coal Authority and non-governmental organisations. Over the project's four years we estimate that the funding will improve some 6,800km of rivers and up to 10 hectares of lakes. It will also result in around 50 water bodies achieving good status under the Water Framework Directive by 2015. Projects will include improving wildlife habitats, reducing run-off from roads and farmland, and removing barriers that prevent fish swimming freely along rivers.

Reducing water pollution

In March 2012 we published a report evaluating the impacts of abandoned metal mines on the environment in England and Wales. Although most of these mines were abandoned many decades ago they can still cause pollution, as water draining from the mines often contains high concentrations of heavy metals. The study, conducted in partnership with Defra and Welsh Government, found that almost seven per cent of rivers are affected by pollution from abandoned metal mines. Defra awarded us £10.5 million over the next four years to work in partnership with the Coal Authority to investigate how we can reduce pollution from abandoned mines.

Reducing pollution incidents

There were 538 category 1 and 2 pollution incidents in 2011-12, a 5 per cent reduction since this time last year, reflecting our work with a range of partners and stakeholders. Of these incidents 25 per cent were from waste management sites, 22 per cent from water industry sites and 12 per cent from agriculture sites. South West and South East saw the highest number of pollution incidents through the year. We are investigating the data further to help us better understand the causes and to identify appropriate actions and interventions to drive further reductions.

Measure – We reduce the number of serious and significant pollution incidents			
2011-12 target	**Our performance**	**Status**	**2012-13 target**
No more than 540 category 1 or 2 incidents.	538 category 1 and 2 pollution incidents in the last year, which is a 5% reduction since this time last year.	Target achieved	No more than 532 incidents.

Performance trend		
2009-10	**2010-11**	**2011-12**
654 incidents	567 incidents	538 incidents

Minimising environmental impacts from farming

This year we have worked with Defra to streamline the many initiatives, advice services, regulatory approaches and incentive schemes on diffuse pollution of water from agriculture. Diffuse pollution comes from multiple sources, such as run-off contaminated with pesticides, manufactured fertilisers, slurry and manure. We will now be able to give more consistent information, making it easier for farmers to manage nutrients better and reduce adverse impacts on water quality.

To help address diffuse agricultural pollution we have also increased the time our staff spend gathering evidence of pollution and other issues in high-risk catchments. This helps us target actions in the areas that need them most.

Improving habitats and enhancing biodiversity

In 2011-12, we created 479 hectares of UK Biodiversity Action Plan (BAP) habitat, improved 297 kilometres of river habitats, and improved fish and eel passages at 123 sites in England and Wales.

The government's Natural Environment White Paper in June 2011 committed to establishing 12 Nature Improvement Areas (NIAs). Defra ran a competition to select the NIAs, which were proposed by local partnership groups. We played a major role in the competition assessment process and were represented on the national judging panel. We are also following up with Natural England and the Forestry Commission projects which were not selected as NIAs that support the Water Framework Directive measures or reduce flood risk in an area.

This year we have established the England and Wales Fisheries Group which represents anglers and others with an interest in our fisheries work. The group has played a key role in setting up a joint National Angling Participation Action Plan to transfer more angling promotion and participation work to the voluntary sector. It has also given valuable advice on local arrangements to help us engage with the angling sector.

Regulating businesses fairly

We have worked closely with Defra on a number of initiatives aimed at improving the effectiveness of regulation, including reducing regulatory burdens so that regulated businesses find it easier to comply and hence better manage their impacts on the environment. This includes responding to the Cabinet Office's Red Tape Challenge to gather ideas on how environmental legislation could be improved and simplified legislation without increasing risks to people and the environment. Government has accepted many of our recommendations in its response to the independent Farming Task Force Report, published May 2011. We are also working closely with government and other Arms Length Bodies to deliver the recommendations from the Penfold Review of non-planning consents, and have published draft guidance to help developers understand the options available to them when submitting planning and environmental permitting applications.

This has been the first full year that we have been able to use civil sanctions to help enforce environmental regulations. Civil sanctions provide a new means of applying more appropriate sanctions for non-compliance with environmental legislation. Local communities will benefit from direct environmental improvements rather than seeing lengthy and costly legal cases. During 2011-2012, businesses agreed to pay over £850,000 to environmental charities or projects as a result of this new approach, mostly

as a result of packaging waste offences. The benefits to the environment are already evident: civil sanctions have been used to develop environmental education in the Norfolk Broads and restore the unique habitat of Upton Heath in Dorset following fire damage.

We have worked closely with DECC to simplify and consolidate thirteen different sets of existing European Union Emissions Trading System (EU ETS) regulations into a single set of regulations. The updated regulations will introduce an opt-out scheme for eligible small emitters and hospitals, to reduce the disproportionate regulatory burden on these installations. We will also move to using civil sanctions to regulate the EU ETS, giving us more discretion in applying penalties, increasing efficiency, and ensuring consistency with the way government deals with appeals.

2.3 Work with people and communities to create better places

Managing the risk of flooding

This year, flood and coastal management work improved flood protection to 43,300 households. This includes both the contribution from our own work, and work carried out by local authorities and Internal Drainage Boards, to whom we provide grant funding. Of the households protected, 15,650 were in the highest-risk categories, and 1,195 of these were in areas of significant economic deprivation. In addition we have protected 550 households against loss in 20 years from coastal erosion.

Together with our partners, we manage over 27,000 miles of flood defences, including structures, sea walls and flood banks. Over the last year, almost 99 per cent of our flood defence assets were in the required condition or better. In November 2011, we published a maintenance protocol which explains our approach to managing flood and coastal risk management assets in England. It explains how we are taking a risk-based approach to increase efficiency and describes our process for consulting and taking decisions on the future of those assets which no longer justify any expenditure.

At the end of Quarter 4 the Environment Agency, local authority and Internal Drainage Board major capital works had moved 16,000 households in England from 'very significant' or 'significant' to 'moderate' or 'lower' flood probability categories.

Measure – We improve protection from flooding for more households			
2011-12 target	**Comments on our performance**	**Status**	**2012-13 target**
To ensure a cumulative total of 147,750 households (over the 2011-12 to 2014-15 Comprehensive Spending Review (CSR) period) are moved to a 'lower flood probability' category. This	The quarterly and annual targets are maintained in line with our latest forecasts for delivering the capital programme. The focus remains on achieving the Spending Review (2014-15) target of 147,750 (145,000 in England).	Target achieved	To ensure a cumulative total of 147,750 households (over the 2011-12 to 2014-15 CSR period) are moved to a 'lower flood probability' category. This figure includes 2,250

Measure – We improve protection from flooding for more households			
2011-12 target	**Comments on our performance**	**Status**	**2012-13 target**
figure includes 2,250 households in Wales. The 'in-year' target for 2011-12 was 24,350.			households in Wales. The 'in-year' target for 2012-13 is 38,400.

Performance trend (In year totals – not cumulative)		
2009-10	**2010-11**	**2011-12**
68,554	79,000	43,000

Together with our partners, we manage over 27,000 miles of flood defences, including structures, sea walls and flood banks. Over the last year, almost 99 per cent of our flood defence assets were in the required condition or better.

Measure – We maintain our flood and coastal risk management assets at or above the required condition			
2011-12 target	**Comments on our performance**	**Status**	**2012-13 target**
97% of our FCRM assets are at or above the required condition	We have achieved our target for 2011-12. Almost 99% of Environment Agency flood and coastal risk management assets in high consequence systems are at or above the required condition, against a target of 97%.	Target achieved	Measure being replaced in 2012-13 by "We increase the number of households benefiting from flood risk management assets and channels that are at their required condition."

Performance trend		
2009-10	**2010-11**	**2011-12**
98%	98%	99%

In November 2011, we published a maintenance protocol which explains our approach to managing flood and coastal risk management assets in England. It explains how we are taking a risk-based approach to increase efficiency and describes our process for consulting and taking decisions on stopping maintenance of assets which no longer justify expenditure.

Supporting national and local flood risk arrangements

In May 2011 we published with Defra a new national strategy for flood and coastal erosion risk management in England. Parliament approved the strategy in July 2011. The strategy recommends a number of approaches that will help communities, the public sector and other organisations to work together to manage flood and coastal erosion risk and improve the environment. It encourages local communities to be involved in decision-making. We supported Welsh Government in developing a national flood and coastal erosion risk management strategy for Wales.

Lead local flood authorities (LLFAs) are responsible for local sources of flood risk. In the last year we have worked with LLFAs to help strengthen their understanding and knowledge of the responsibilities they have to meet under the Flood and Water Management Act. We held a series of training workshops, which 370 delegates attended from 165 LLFAs.

We started working with eleven LLFAs to consider how we could improve surface water flood mapping. This work will continue during 2012-2013 and will focus on cost-effective changes that will help LLFAs to meet the requirements of the Flood Risk Regulations.

Funding for flood and coastal erosion schemes

We have successfully implemented the first year of Defra's new flood and coastal resilience partnership funding policy. The new approach encourages additional funding for flood defence and coastal erosion schemes from external sources, such as councils and businesses. During the year, there have been some notable examples that have attracted external funding such as Warrington, Morpeth, and Sandwich. Over £72 million of contributions have already been identified to add to the £2.17 billion flood defence grant-in-aid allocated by Defra in the spending period to 2015.

Improving our flood warning and forecasting

We continue to invest in and extend our flood warning services to ensure that we can warn people at risk of flooding of a potential flood event. In March 2011 there were around 1.8 million properties in the highest risk areas in England and Wales. During 2011-2012 we added close to 80,000 properties to our flood warning system. Now over 1.1 million properties, 60 per cent of those in the highest flood risk areas, can receive our direct flood warnings.

Measure – More households and businesses at high risk of flooding can receive direct warnings			
2011-12 target	**Comments on our performance**	**Status**	**2012-13 target**
58% of properties in the highest flood risk areas can receive direct warnings	At the end of 2011/12, 59.7% (England) and 60.1% (England and Wales) properties in the highest risk flood risk areas can now receive our direct warnings, against a target for 2011/12 of 58%.	Target achieved	62% in 2011/12 (Rising to 66% by 2014/15)

Performance trend		
2009-10	**2010-11**	**2011-12**
47%	57%	60%

We have extended our service to include groundwater flood alerts and warnings in areas of England that have experienced flooding from groundwater in the past. Groundwater information is now included in the daily Flood Guidance Statement supplied by the Flood Forecasting Centre.

In October 2011, we launched a web-based, targeted flood warning service for Civil Contingencies Act category 1 and 2 responders, such as the police, fire and ambulance services, utilities providers and transport operators. Customers can now provide information about their property, sites and vehicles, so they only view the flood warnings that are relevant to them. The service helps customers to improve their flood response plans and better protect staff and crucial assets.

To help people in coastal areas at risk of flooding and erosion, we have published interactive risk maps in agreement with coastal local authorities showing the coastal erosion expected over the next 20 years. The maps, for the lengths of coast where the information is available, are in the *What's in your backyard? s*ection of our website, along with details of the shoreline management plans and existing coastal defences. The information will help people and communities understand the risk they face and what they can do in response to it. We worked with local authorities, Defra, Welsh Government and the Department for Communities and Local Government (CLG) to assess coastal erosion and landslide risks in a consistent way across England and Wales.

We have also completed a three-year long project to upgrade the national network of tidal level gauges. This improved tidal data allows us to forecast floods more accurately and warn coastal communities at risk of flooding.

We continue to improve our forecasting service and in April 2011, we launched a joint project with the Met Office to upgrade and extend the coverage of our national weather radar network across England. The improved network will give us more accurate and reliable rainfall measurements, and it will extend high quality radar coverage to include East Anglia for the first time. The project will be complete by the end of 2014, and will improve the quality and resilience of data collection services for our flood forecasting and warning services. More reliable radar data will help us forecast the scale and impacts of flood events more accurately, and provide a better warning service.

Providing environmental benefits through our flood and coastal risk management programme

When we build new flood defence schemes we aim to work with nature, for example by improving biodiversity or creating new habitats. This year, our flood alleviation scheme in Stainforth and Fishlake, Doncaster won a Gold Green Apple award for environmental best practice and enhancements to the built environment and architectural heritage. We worked with partners to complete the scheme, which has protected 1,900 properties from flooding and created 70 hectares of Biodiversity Action Plan (BAP) habitat. It is now one of the largest new freshwater habitat sites in the UK, providing a mixture of wetland grazing marsh, reed beds, nesting areas for protected bird species and fish refuge ponds.

In 2011-2012, we created more than 24.5 hectares of new intertidal Biodiversity Action Plan habitat through our flood and coastal risk management work. We are on track to achieve the Spending Review 2010 target of 400 hectares by 31 March 2015.

Measure – We create new areas of habitat			
2011-12 target	**Comments on our performance**	**Status**	**2012-13 target**
24.5 hectares (ha)	We have met our end of year forecast of 24.5 hectares (ha). No new intertidal habitat was created in Quarter 4 of 2011/12.	Target achieved	50 hectares (ha)

Performance trend		
2009-10	**2010-11**	**2011-12**
500 hectares	487 hectares	24.5 hectares

We have worked in partnership with the Universities of Exeter and Plymouth, and an environmental consultant to produce guidance on enhancing the ecological value of coastal defence structures. By considering the materials we use we can achieve benefits for biodiversity and conservation and improve our coastal structures. Creating these habitats also makes coastal defences more attractive, helping us meet legislative requirements and gain support for new schemes from local communities.

Reducing environmental impacts of new and existing developments

We advised the DCLG on their recently published National Planning Policy Framework (NPPF) ensuring it had clear messages on priority environmental outcomes. Whilst the guidance is now much shorter, environmental considerations will be taken into account and we are still a statutory consultee in the planning process. We will continue to respond on environmental matters where we are best placed to advise local planning authorities, taking a 'yes if' approach wherever possible. We secured government support for essential environmental guidance applicable to the NPPF, for example in relation to flood and coastal risk management, Water Framework Directive, climate change adaptation, groundwater and contaminated land.

We have worked with the Olympic Delivery Agency (ODA), the London Organising Committee of the Olympic and Paralympic Games (LOCOG), British Waterways, the Lee Valley Regional Park Authority and Thames Water to regenerate the Lower Lee Valley. Key to the legacy has been creating a new place in London that people will want to visit and spend time, once the Olympic events have been completed. Our work in the Lower Lee Valley has reduced flood risk for 4,000 homes. Work on the Olympic site dealt with historic pollution of over 280 hectares of brown field land in East London, and removed tyres, shopping trolleys and vehicles from the River Lee.

Maintaining our navigation assets

In 2011-2012 82 per cent of our navigation assets were at or above the required condition, achieving our current target. We have since changed the way we record these condition assessments. We report on more individual structures, rather than

grouping several structures as one asset. This change has greatly increased the number of our navigation assets at or above the required condition in 2011-2012 to 87 per cent.

This year we introduced more than 80 volunteers to work alongside our staff on the Thames waterway. This was a great success and we will extend our volunteer resource across our waterways in the next few years, contributing to the government's Big Society objectives.

2.4 Work with businesses and other organisations to use resources wisely

Advising on waste policy review

We worked closely with Defra to provide evidence for the government's waste policy review, which was launched in June 2011. The review focused on commercial and household wastes and encouraged us to continue the good work we have done over the last few years, in particular on our approach to waste crime and risk-based regulation. It advocated moving the focus towards businesses that are deliberately non-compliant and reducing regulatory burdens for good performers.

The review also highlighted the importance of integrated regulatory approaches from government, in areas where currently more than one regulation may apply. For example, businesses that deal with packaging waste, waste electrical and electronic equipment or biowaste have to comply with more than one set of regulations in order to recycle, reuse or dispose of their waste correctly. We will play a significant role in ensuring these approaches are streamlined and properly managed.

A key development in the waste policy review was the inclusion of voluntary responsibility deals for the waste management industry. The responsibility deals will encourage waste management businesses to help small and medium-sized businesses to reduce their waste, and recycle wherever possible.

Cracking down on illegal waste sites

Illegal waste sites can pose a real threat to people and the environment, contaminating land and rivers with oil and chemicals. We work hard to close these sites down but new ones open and we have struggled to get the total number below 600. In 2011-2012 we stopped 736 illegal waste sites, whilst a further 609 were identified.

We assess the risk that an illegal waste site poses based on several criteria including: risk to the environment; risk to human health; connection to organised crime (where they are known to be involved in more than one illegal waste site) and give each site a score based on these criteria. The higher the score the higher the risk the site poses.

At the end of Q4 2011-2012 we were aware of 211 high risk sites with a risk score of 32,270. We have reduced the number of sites by 21 and the risk score has been reduced by 3,530 over the previous 12 months. We stopped 241 high risk sites during the year.

Measure – We reduce the overall risk score presented by illegal sites, targeting our efforts on the highest risk sites			
2011-2012 target	**Our performance**	**Status**	**2012-2013 target**
Total high risk site risk score of 32,220.	We have reduced the risk scores of high risk illegal waste sites by 10%. We have reduced the number of sites by 21 and the risk score has been reduced by 3,530.	Target achieved	6% reduction in the number of illegal waste sites

Performance trend		
2009-2010	**2010-2011**	**2011-2012**
Risk score 84,380. Note this was reported as 74,003. A new method of working out risk scores has resulted in the change.	Risk score 75,945 for all illegal waste sites.	Risk score 32,220 for high risk sites only

In December 2011 we created a specialist illegal waste site taskforce to tackle the problem. The new taskforce includes former police detectives and will work with partners, including local authorities and the police, to gather intelligence and act quickly to close sites and disrupt illegal activity so that it does not return. We will report on the impact of this new approach in the future, but the initial results have been promising.

Focusing on a sector approach

Through the future approach to regulation programme we have developed sector intervention plans for 14 business sectors, including agriculture, food and drink, and chemicals. These plans provide long term certainty for business by setting out the environmental outcomes we expect the sector to deliver over the next five years. They also describe the ways in which we will work with businesses to achieve the outcomes.

For five sectors, we have introduced sector-focused officers who will concentrate on working with their specific sectors and understanding the businesses. Through this approach we will deliver the optimum outcomes for the environment while minimising costs to business and providing an excellent customer service.

Minimising waste disposal

Since 2007 it has been government policy that low level radioactive waste (LLW) from decommissioning and other nuclear sites can be sent to landfill sites. In April 2011, after five years of work with the nuclear and waste industries, we issued a permit for the disposal of LLW to a landfill in Cumbria, and subsequently, in May 2011, to a landfill in Northamptonshire. The first consignment of LLW from the nuclear industry was landfilled in March 2012.

This helps preserve the limited capacity in the LLW Repository (LLWR) at Drigg, west Cumbria, for higher activity wastes which actually require the level of environmental protection that it provides. During 2011 we also started our review of the Environmental Safety Case for the LLWR.

We have worked with the nuclear industry to improve the rates of recycling and reuse of LLW, and in 2011 78 per cent of the sector's LLW was recycled or reused.

We are working with the Waste and Resources Action Programme (WRAP) through the EU Life funded European Pathway to Zero Waste (EPOW) programme to demonstrate the economic and environmental benefits of resource efficiency. In the past year EPOW has shown over 100 businesses how to benefit from using quality recycled materials instead of virgin raw materials. We have also used electronic and social media techniques to help a range of small business sectors find information and advice on reducing, reusing and recycling waste. The programme continues until the end of 2013.

2.5 Be the best we can

Delivering a first class customer service

We use a continuous improvement approach across the organisation to help us improve customer service and deliver better value for money. This is in line with government's Continuous Improvement Strategy to reform public services.

We have a strong track record in improving how we work and achieving efficiencies over recent years using this approach. Since 2008-2009 we have achieved:

- a 60 per cent reduction in response time for email enquiries from customers to the National Customer Contact Centre;
- an 87 per cent reduction in the time taken to process Standard Rules Permit applications in our National Permitting Service.

Our National Customer Contact Centre is one of our frontline services that make it easier for our customers to do the right thing for the environment. In 2011-2012 the centre received over half a million phone calls and replied to over 48,000 email enquiries. We received 357 commendations from customers who had experienced an exceptional service.

Our website, social media and other digital channels provide vital information and help customers protect the environment. They are also an important route for customer feedback and information. We have undertaken a comprehensive review of our website and are using this information to target improvements in 2012-2013.

We continue to extend the reach of our services and information by increasing use of social media and tools. In March 2012, we launched our new flood warning widget, computer code that web developers can download and add to their web pages to show a live summary of flood alerts and flood warnings in force. This will help our information to be available where people want it, such as on local authority and water company websites.

Ensuring our work is sustainable

Sustainable development lies at the heart of what we do. We aim to carry out our activities as sustainably as possible, minimising the impacts on people and the environment associated with them and taking any opportunities to enhance the natural environment.

In February 2011, the government committed to a series of broad environmental aims through its Greening Government Commitments report. The commitments include:

- reducing greenhouse gas emissions;
- reducing waste and water consumption;
- ensuring that government buys sustainable and efficient products and services.

We support these commitments. We have worked closely with HM Treasury and other government departments and agencies to develop public sector environmental reporting guidance. Our guidance is also based on the integrated reporting framework developed by The Prince of Wales' Accounting for Sustainability Project.

We include many key environmental performance measures in our corporate reporting cycle and regularly report our progress on them to our Board and directors. This ensures that they are given the same priority as other performance measures within the organisation.

Reducing our carbon footprint

Our construction activities include construction of coastal and river flood defences, river catchment management schemes, and the creation and restoration of wildlife habitats. These are our activities which pose the greatest risk to the environment, and yet at the same time offer the greatest opportunity for environmental improvements. This year we developed a carbon calculator for construction activities, which highlights where big carbon savings can be made. The calculator is designed for all construction businesses and we use the carbon calculator in our own projects.

In the first CRC Energy Efficiency Scheme performance league table, as an organisation we came 275th out of 2,104 participants. We are making great efforts to reduce energy use further across our estate of over 260 offices, depots and major sites, supported by our internal environmental management and facilities teams. However our total energy consumption will always be affected by weather conditions, with additional pumping needed in either particularly dry or wet weather.

At the Thames Barrier we installed new energy-efficient heating and ventilation systems, along with a back-up power generator and new lifts which are 30 per cent more efficient than the old equipment. This has reduced the carbon footprint of the Thames Barrier by around 75 per cent, and will save us approximately £25,000 in operating costs per year.

Using sustainable services and promoting social responsibility

Around 70 per cent of our total environmental impact comes from the goods and services we purchase. Over the last year we have worked closely with our suppliers to encourage innovation and reduce the impacts of our procurement activities.

Our sustainable procurement practices support the delivery of our Internal Environmental Management plan, our ISO 14001 certification, and our Eco-Management and Audit Scheme (EMAS) registered environmental management system. We believe that sustainability is essential throughout the procurement cycle, from identifying the need for goods or services through to managing contracts. All our suppliers are made aware of this at an early stage.

We have also provided wider social benefits by thinking carefully about the goods, services, works and utilities that we buy. This year, we joined forces with Blue Sky, a social enterprise organisation which provides opportunities for ex-offenders to re-enter the workforce. Through low-risk improvement work on our environmental assets, such as installing new footpaths and fences, and clearing vegetation, ex-offenders were able to demonstrate their skills and work towards gaining employment in future. Blue Sky estimates that participation in the scheme could reduce the probability of re-offending by up to 50 per cent.

The 12-month scheme had far-reaching effects – it enabled us to engage with hard-to-reach communities, carry out asset improvement works, and provided employment opportunities for ex-offenders.

Our staff continue to support the work of WaterAid, raising nearly £2.5 million since 2006. Last year alone, staff donated £246,000, with the ‘give an hour’ campaign bringing an additional £3,500 from staff's new or increased donations. This has helped WaterAid to bring health benefits, education and livelihoods to over 14 million people since the charity was established in 1981.

3 Our internal footprint

We have a commitment to reduce our carbon emissions by 33 per cent to 45,000 tonnes by 2015 from the baseline 2005-2006. We employed an average of 11,432 full time equivalent (FTE) staff during 2011-12.

The following tables explain our performance in managing our environmental impacts.

3.1 Energy efficiency

Energy breakdown			
Source	**Total amount used (MWh)**	**Annual consumption per member of staff (MWh/FTE)**	**Amount of renewable generated (MWh)**
Buildings (KPI)			
Electricity	21,503.5	-	-
Gas	9,484.6	-	-
Oil	1,655.2	-	-
Total energy KPI	**32,643.3**	**2.9**	**-**
Other operational[1][2]	**63,006.4**	**Not applicable**	**-**
Renewable Energy	**-**	**-**	**301.9**

In our buildings energy key performance indicator (KPI), we capture all of our energy use at sites that were reported in our baseline year (2005-06)[3]. Those sites not captured in the KPI are recorded and reported in our total carbon dioxide measure.

We generated around 301.9MWh of renewable energy on our sites in 2011-2012. This equates to 0.9 per cent of our buildings energy use. The table below shows how we track our performance on energy efficiency.

[1] Other operational energy includes electricity at our pumping stations and depots.
[2] The data in "other operational energy" is based on Energy Company billing data. At present this contains estimates and rebates so we have not aggregated it with our buildings KPI which is based entirely on accurate meter readings. We have rolled out Automatic Meter Reading (AMR) to 657 sites covering much of our consumption. This is increasing the accuracy of our bills and, reducing staff time in taking meter readings. This technology will also allow us to monitor energy use in almost real time, on line.

Aim – We use less energy			
2011-2012 target	**Our performance**	**Status**	**2014-2015 target**
We will reduce energy use at our buildings by 22% by March 2012 from the baseline year 2005-06	Our performance was good at 96% of the profiled target buildings energy consumption. We have achieved a 25% reduction in energy use in our buildings from our baseline year.	Target achieved	We will reduce energy use in our buildings by 33% by March 2015 from baseline year.

Performance trend – Buildings energy consumption (MWh)			
Year	**2009-2010**	**2010-2011**	**2011-2012**
Total Consumption (MWh)	38,167.9	37,236.3	32,643.3
KWh per FTE	3.1	3.2	2.9

3.2 Material efficiency

We embed sustainability within our everyday procurement activities. We carry out sustainability risk assessments for every medium and high risk contract over £25,000. We identify both commercial and sustainability risk and this is where we focus our efforts.

We use a prioritisation tool[4] to identify our top ten sustainability risk categories in our procurement activity. This methodology mainly looks at wider sustainability issues but does include an assessment of material impact.

Top ten sustainable risk categories

We have identified our top ten sustainable procurement risk categories as:

- civil engineering, including associated products and landscaping;
- building refurbishment and maintenance, including associated products and services;
- textiles (for example clothing, personal protective equipment, furniture coverings);
- information technology and office equipment, including computers and printers;
- communications equipment and services (such as telephones, mobile phones, telemetry, hosting services);
- waste, including hazardous waste;
- transport and travel;

[4] A standard methodology from the Sustainable Procurement Task Force report "Procuring the Future".

- plant, including boats;
- hospitality, including hotels, conferences and catering;
- design and print services.

Our management information on our expenditure by category shows that our major civil engineering (the construction and maintenance of flood and coastal risk management assets) and information technology account for our most significant activity and impacts in these priority sustainability risk categories. However, in these and many other categories we procure a service rather than actual materials.

Materials are used in our major civil engineering activity, but these are procured by our contractors in their own supply chains. We do not have direct control over the purchase of these materials, but we work with our contractors to carry out sustainability risk assessments to reduce the impacts on our project activity. Steel sheet piles are the only material we purchase on behalf of our contractors and in doing so we reduce the sustainability impact through the purchase of piles manufactured from scrap steel.

Direct materials procurement

The following table outlines our most significant direct materials procurement. We do not hold stocks of these materials and therefore purchase can be assumed to be consumption.

Material	Value (£)	Annual consumption[5] (tonnes)	Annual consumption per member of staff (tonnes/FTE)
Steel sheet piles[6]	£9226,745.11	10,609	0.4[7]

Performance trend - Annual consumption		
2009-10	**2010-11**	**2011-12**
2,594	3,885	10,609[8]

3.3 Water

In our mains water key performance indicator (KPI), we capture all of our water use at sites that were reported in our baseline year (2005-06)[9].

[5] Our annual consumption of steel sheet piles does not relate to any target as the annual consumption relates to the number, size and type of construction projects undertaken during that year.
[6] All of our steel sheet piles are manufactured from recycled steel.
[7] The annual consumption is dependent on project activity undertaken which varies from year to year and therefore a linkage to FTE across the whole organisation provides little meaningful information.
[8] The annual consumption is significantly higher in 2011-12 due to the size of the projects that were undertaken that year, which included a sea flood defence at Rye Harbour.

This year we were able to record the amount of water we abstract from our permitted sites as well as the amount of mains water we consumed. The table below shows how we track our corporate performance on mains water use

Water breakdown		
Type	**Total amount used (cubic metres)**	**Annual consumption per member of staff (m3/FTE)**
Total mains water (KPI)	48,162	4.2
Total abstracted water	78,098,593	N/A[10]

Aim – We use less water			
2011-12 target	**Our performance**	**Status**	**2014-2015 target**
We will reduce mains water use by 22% by March 2012 from the baseline year (2005/06)	Our performance was good at 90% of the mains water target allocated for the year. We have exceeded our 2015 target and achieved 29% reduction from our baseline year.	Target achieved	We will reduce water use by 25% by March 2015 from the baseline year.

Performance trend – Mains water consumption (m3)			
Year	**2009-2010**	**2010-2011**	**2011-2012**
Total consumption (m3)	57,243	55,960	48,162
Consumption per FTE (m3)	4.7	4.8	4.2

3.4 Waste

We divert as much of our waste from landfill as we can. We use the waste hierarchy approach to manage the waste we do produce.

Waste breakdown	
Waste stream	**Total amount (tonnes)**
Landfill	48.4

[10] The amount of abstracted water per FTE is not reflective of our performance. The amount of water we abstract is influenced by our operational activities rather than the amount of FTE we have.

Reused	3.0
Recycled	390.2
Composted	17.9
Incinerated (with energy recovery)	85.9
Incinerated (without energy recovery)	4.5
Hazardous waste	3.0
Total	**552.9**

All sites included in the office residual waste baseline (2005-06) are tracked through our waste to landfill KPI. The following table shows how we track our performance in landfill waste.

Aim – We send less waste to landfill			
2011-2012 target	**Our performance**	**Status**	**2014-2015 target**
We will send 73% less office waste to landfill by March 2012 than we did in the baseline year (2005-06).	Our performance was good at 87% against the annual target. We sent 77% less office waste to landfill than we did in our baseline year.	Target achieved	We will send zero office waste to landfill by March 2015.

Performance trend – Office residual waste (Kgs)			
Year	**2009-2010**	**2010-2011**	**2011-2012**
Total residual office waste (Kgs)	80,727	70,442	48,383
Residual office waste per FTE (Kgs)	6.6	5.9	4.2

Aim – We manage our waste more effectively			
2011-2012 target	**Our performance**	**Status**	**2014-2015 target**
We will reduce our total office waste by 10% by March 2012 from the baseline year (2008/09)	Our performance was good at 75% against the annual target. We have bettered our 2015 target and achieved a 32% reduction in the total office waste we produce from our baseline.	Target achieved	We will reduce our total office waste by 20% by March 2015 from the baseline year

Performance trend – Total office waste (Kgs)			
Year	**2008-2009**	**2010-2011**	**2011-2012**
Total residual office waste (Kgs)	816,828	673,152	552,855
Residual office waste per FTE (Kgs)	68. 7	57.2	48.4

3.5 Biodiversity

The Environment Agency owns and manages a property portfolio which allows it to perform its statutory role of environmental regulator.

In summary our property portfolio comprises corporate, residential and functional assets.

The functional assets are those assets which have an operational function such as sluices, weirs and flood banks.

The corporate assets are our business property centres comprising mainly offices, depots and laboratories. We also have some residential properties that are attached to our depots, offices or structures such as locks and weirs

The summary information below is taken from our Estateman database which is our primary source of property and land information. Figures are best available information as of 31 March 2012.

We own and lease in total 263,349,042.32 m² of land. 0.09 per cent of our overall landholding comprises our corporate estate. This includes administrative sites (offices, depots, residential properties) that we own or lease.

A breakdown between freehold and leasehold as at March 2012 is as follows:

Type	**Amount of built-up area (m2)**	**Amount of built-up area per member of staff (m2/FTE)**
Freehold	122,856	10.7
Leasehold	108,577	9.5
Total	**231,433**	**20.2**

We work to minimise the effects that the activities we regulate and our own construction work have on the environment.

We are one of several government bodies responsible for implementing the Habitats Directive in England and Wales. We are required to ensure that none of our activities, or the activities that we regulate, pose an unacceptable risk to specially designated areas. We seek opportunities to work in partnership with other organisations to develop flood defence projects that improve and enhance biodiversity.

We track the improvements we make to water dependent Sites of Special Scientific Interest (SSSI) habitats whilst carrying out flood and coastal risk management work as shown below.

Measure – We improve water-dependent SSSI habitats through our flood and coastal risk management work (KPI 764)			
2011-2012 target	**Our performance**	**Status**	**2012-2013 target**
Improve the condition of 4,900 hectares of water-dependant SSSI habitats over the 2011-2012 to 2014-2015 SR period. (The 'forecast' for 2011-12 was 4,419 hectares')	A total of 4,379 hectares of water dependant habitat have been created or improved, 25 hectares of intertidal habitat have been created, and 8.7km of protected rivers have been improved. The substantial creation of water dependant habitat is mainly due to the Somerset Levels and Moors WLMPs (4,116 Ha).	Target achieved	Improve the condition of 4,900 hectares of water-dependant SSSI habitats over the 2011-2012 to 2014-2015 SR period. (The 'forecast' for 2012-2013 is 100 hectares')

Performance trend – Amount of improved SSSI on our own land (hectares).		
2009-2010	**2010-2011**	**2011-2012**
4,678 hectares	5,052 hectares	4,379 hectares

3.6 Emissions

Emissions breakdown		
Type of emissions	**Total amount emitted (tonnes)**	**Annual consumption per member of staff (tonnes CO2e/FTE)**
Carbon dioxide (CO_2)	56,360	4.9[11]
Methane (CH4)	Not significant[12]	-
Nitrous oxide (N_2O)	516.4[13]	0.1
Hydrofluorocarbons (HFCs)	Not significant [14]	-

[11] Carbon dioxide per FTE whilst included as required, is not reflective of our performance. Our CO_2 emissions are highly influenced by our operational pumping activities and this, in turn, is directly affected by the weather, rather than the amount of FTE we have.
[12] Methane – The Environment Agency currently own 3 closed landfill sites, with a relatively low estimated impact (CO_2 equiv) of 6 tonnes per annum. As this represents 0.01% of our total emissions, we have deemed it to be insignificant.
[13] Nitrous Oxide (N_2O) – We calculated the N_2O from 2011-12 buildings oil and mobile plant fuel usage data which was 516 tonnes of CO_2 equivalent. This equates to 1.0% of our total emission.

Perfluorocarbons (PFCs)	-	-
Sulphur hexafluoride (SF_6)	Not significant [15]	-
Total greenhouse gas	56,876	4.9
Sulphur dioxide (SO_2)	Not significant [16]	-
Nitrogen oxides (NOx)	Not significant[17]	-
Particulate matter (PM)	Not significant[18]	-

Our business KPI detailed in the following table captures all of our carbon dioxide emissions from all direct sources.

Aim – We reduce our carbon dioxide emissions[19]			
2011-2012 target	**Our performance**	**Status**	**2014-2015 target**
We will reduce our carbon dioxide emissions by 21% by the end of March 2012 from the baseline year (2006-07)	We were slightly over our profiled annual target mainly due to increased operational pumping as a result of the drought. We achieved a 15% reduction in Carbon Dioxide from the baseline, against our 33% five year target.	Just over target	We will reduce our carbon dioxide emissions by 33% by the end of March 2015 from the baseline year.

Performance trend – carbon dioxide emissions (tonnes)		
2009-2010	**2010-2011**	**2011-2012**
61,271	55,758	56,360

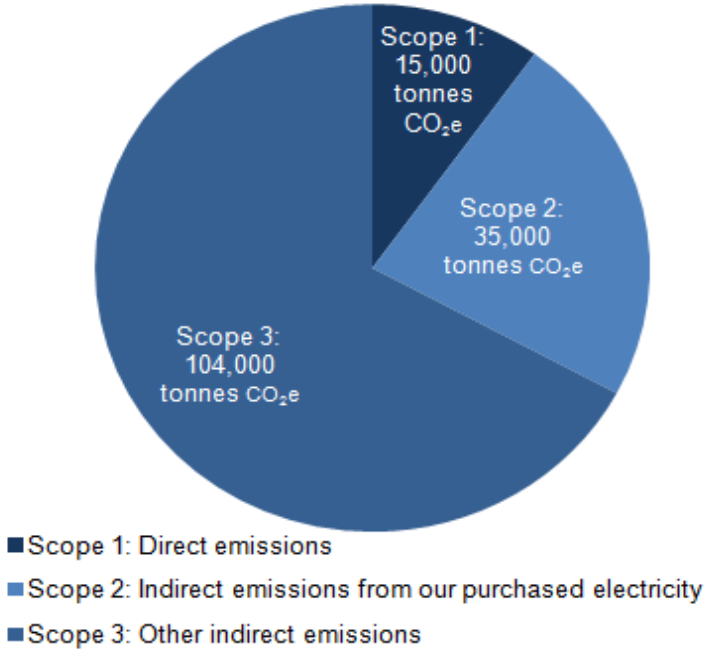
[14] Hydrofluorocarbons (HFCs) - We capture this data on a quarterly basis. We calculated this to be 81 tonnes of CO_2 equivalent (0.1% of our total emissions) and hence we have deemed it to be insignificant.
[15] Sulphur hexafluoride (SF_6) - We have one electrical switch in Anglian Region - Chapel St Leonard's (Old) Pumping Station in Lincolnshire. We capture the data on SF_6, on an annual basis and deemed it to be insignificant with just 592 grams.
[16] Sulphur dioxide (SO_2) – We have calculated the SO_2 from the oil we burn and diesel from our fleet vehicles. We calculated the litres used and applied the maximum permissible sulphur content under the Sulphur Content of Liquid Fuels Directive. This allowed us to calculate the total amount of sulphur and thus the total amount of SO_2 by molecular weight. We have calculated this to be 6 tonnes of sulphur dioxide and have deemed it to be insignificant.
[17] Nitrogen Oxides (NOx) - We calculated the Nitrogen oxide form our Fleet to be 13.01 tonnes hence deemed it to be insignificant.
[18] Particulate matter (PM) – We have calculated the particulate matter emissions from our Fleet to be 1.74 tonnes hence deemed it to be insignificant.
[19] We use the latest DEFRA conversion factor to calculate our CO2 emissions and also use the same for the baselines to have like with like comparison.

Figure 1 illustrates our greenhouse gas (GHG) emissions for 2011-2012 using the emissions scopes defined by the GHG Protocol and in tonnes of carbon dioxide equivalent (tCO2e). This defines three different scopes of emissions:

- Scope 1 - direct emissions.
- Scope 2 - indirect emissions from electricity consumption.
- Scope 3 - other indirect emissions, including business travel and supply chain.

In order to provide as complete a picture as possible, we have, for the first time, included emissions from construction activities carried out on our behalf. In future years we hope to be able to include more of our supply chain impacts. The graph highlights an issue that many organisations will face: a large proportion of GHG emissions are embedded within the supply chain.

Figure 1.
Greenhouse gas emissions



4 Legal compliance

4.1 Managing our legal environmental compliance

Some of the environmental legal obligations associated with the work carried out at our sites include:

- protection of sensitive habitats and species;
- Duty of Care responsibilities for the waste we produce;
- other waste management such as handling and managing of waste materials dredged from rivers;
- storing hazardous substances, for example diesel, heating oil and chemicals;
- pollution prevention, including statutory nuisances of odour, dust, noise and vibration;
- discharges to and abstractions of water.

One of the key tools that we use to meet our obligations and check our compliance with environmental legislation is our programme of internal Site Environmental Management Audits (SEMAs). The programme is conducted regionally on an annual basis.

We actively identify and seek to reduce our environmental impacts, including compliance with environmental legislation, within the Environment Agency's management system. We maintain a national register of internal non-compliances, incidents and high risk site actions. We are able to identify trends, capture the highest risks, how to reduce them and share lessons learnt across the organisation.

We verify our legal compliance as part of a planned programme. This includes:

- regular legal updates on changed legislation;
- reviews of existing permits and licences;
- risk based audits of our highest risk activities.

4.2 Environmental non-compliances

In 2011-12 we had no serious non-compliances (Categories 1 and 2) and nine minor issues of non-compliances identified at three of our sites. Five of them were classified as Category 3 and four as Category 4. These non-compliances had no adverse impact on the environment, and we used the Compliance Classification Scheme (CCS) methodology to identify and record them. In this way, we apply the same standards to ourselves as we apply to those that we regulate.

4.3 Environmental incidents

In 2011-12 we, or contractors working on our behalf, have caused zero Category 1 (the most serious) and seven Category 2 (significant) incidents. This is in the context of our management of over 27,000 miles of flood defences and other assets.

Performance trend – number of internal environmental incidents		
2009-2010	**2010-2011**	**2011-2012**
0 category 1 5 category 2	2 category 1 2 category 2	0 category 1 7 category 2

Environmental Incidents			
Type of Incident[20]	**2009-2010**	**2010-2011**	**2011-2012**
Category 1	0	2	0
Category 2	5	2	7
Category 3	58	45	63
Near Miss	47	60	57
Not classified	0	0	0
Total	**110**	**109**	**127**

[20] Category 1: major, serious, persistent and/or extensive impact or effect on the environment (air, land and/or water), people and/or property;
Category 2: significant impact or effect on the environment, people and/or property;
Category 3: minor or minimal impact or effect on the environment, people and/or property

Related publications

The following related publications are key corporate documents. They are all available from our website and can be provided in hardcopy if required.

Our corporate publications catalogue can be found here:
http://publications.environment-agency.gov.uk/epages/eapublications.storefront?lang=_e

An environmental vision
Our vision was published in 2000 and outlines our 20-year aspiration for the environment in England and Wales.

Product code GEHO0301ENVI-E-P

Creating a better place (2010 – 2015)
Our new corporate strategy and supporting strategies came into force from April 2010. Our corporate strategy sets out our aims. It describes how we work with others to tackle society's environmental challenges.

Corporate strategy product code GEHO1109BQXE-E-E
Supporting strategies product code GEHO1109BQXG-E-P

Corporate plan update (2012-13)
Our corporate plan is published annually. It contains the high level objectives, key performance targets and financial resources to achieve the outcomes in our strategy.

Product code GEHO0412BWHZ-E-E

Corporate plan (2011-15)
Our new corporate plan comes into force from April 2010.

Product code GEHO0211BTKV-E-E

Annual report and accounts (2010-11)
This document reports on how we have met our targets and addressed key issues facing the environment.

Product code GEHO0711BTZD-E-E

Working together for a better environment (2010-15)
Our corporate plan for Wales. It reflects the specific priorities of the Welsh Government and our work in Wales.

Sustainable procurement
This page explains our approach to sustainable procurement.

Annual environmental statement
This report, and those from previous years, can also be accessed via our online publications catalogue by searching on the keyword 'EMAS'.

Our contact for any queries relating to this statement is Keren Rice.

Validation details

SGS is the company we use to verify our integrated quality and environmental management system, and to provide the Environmental Verifier's Declaration that we meet the requirements of the regulation.

"Further to consideration of the documentation, data and information resulting from the organisation's internal procedures examined on a sampling basis during the verification process, it is evident that the environmental policy, program, management system, review (or audit procedure) and environmental statement meet the requirements of Regulation 1221/2009 (The EMAS Regulation)".

Signed: Amanda Thorpe

Date: 22 August 2012

SGS United Kingdom Limited

UK-V-0007

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