



**Environment Agency 2014 to 2015  
EU Eco-Management and Audit  
Scheme annual environmental  
statement**

This document is out of date and has been withdrawn (21/10/2016).

**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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# Foreword

Although we did not experience the extreme weather events of the previous winter, 2014 to 2015 was challenging for us in other ways. We completed a major change programme, moving to a national and area structure, whilst reducing the overall number of people in the Agency.

March 2015 was an important milestone as it marked the end of our Internal Environmental Management plan. This plan covered 7 years of my period as Chief Executive of the Environment Agency. During this time we have made significant progress. We have reduced carbon dioxide emissions from our operations by 40%; we have reduced the amount of water consumed in our offices by 39%; we have diverted nearly all of our office waste from landfill and reduced the total amount of waste we produce by half. We have also reduced vehicle mileage by 37%, and the average carbon intensity of the fleet has reduced from 112 grams carbon dioxide per kilometre (in 2013 to 2014) to 108 grams.

As an environmental regulator it is essential that we comply with legislation. In addition to EMAS (EU Eco-Management and Audit Scheme), we are certified to the international quality management standard, ISO9001 and the international environmental management standard, ISO14001 and we seek to reduce our negative environmental impacts and improve our performance wherever we can.

This EMAS statement sets out how we have addressed our impacts and what we have achieved. These achievements reflect the dedication and application of all the people who work in the Environment Agency – together we have achieved this. In many areas of work we have been able to be more effective in our use of resources and saved money that we were then able to reinvest in outcomes for people and the environment. Work in this area has been recognised externally over the years through the awards we have won.

Paul Leinster

Chief Executive

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# Introduction

This document provides a summary of our environmental performance between April 2014 and March 2015.

This reporting year (April 2014 to March 2015) the Environment Agency has changed the scope of this statement and is reporting<sup>1</sup> only on the direct organisational environmental aspects associated with the Agency. We will no longer include the indirect significant aspects and impacts associated with the regulatory and advisory roles. We do not include impacts from outsourced suppliers in our baseline or actual performance figures.

We refer to [other key documents](#) in this statement as they provide more detail about our targets, activities and performance.

## About the Environment Agency

The Environment Agency is the leading public body for protecting and improving the environment in England. Our vision is to create a better place for people and wildlife. We have 3 main business areas:

- flood and coastal risk management
- water, land and biodiversity
- regulated business

Acting to reduce climate change and helping people and wildlife adapt to its consequences are at the heart of everything we do. We cannot do this alone. We work closely with a wide range of partners including government, businesses, local councils, other agencies, suppliers, charities and communities to improve the environment and encourage sustainable development.

In 2014 to 2015 we had an average of 10,356 full time equivalent employees (FTEs). Our annual expenditure for the financial year ending 31 March 2015 was £1.3 billion. The Department for Environment, Food and Rural Affairs (Defra) is our sponsor government department and provides most of our funding.

## Our role

The Environment Agency works to create a better place for people and wildlife. We have three main roles:

### Environmental regulator

Much of the environmental legislation that applies in the UK is domestic implementation of European directives. In many cases the legislation requires us to use permits, authorisations and consents to set the conditions operators must comply with so that their activities do not adversely impact on people and the environment. The businesses we regulate include

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<sup>1</sup> Where discrepancies are detected, they are not corrected in the current reporting year; they are corrected in the following year's data set. This only occurs where we have already reported for the previous year; otherwise the data is corrected as and when it's found.

power stations, nuclear installations, the chemicals industry, the onshore oil and gas industry, food and drink manufacturers, metal processing industries, water companies, farms and waste management sites. We regulate water abstraction for drinking water, irrigation and industry. We also regulate commercial fisheries and license anglers and boat users. We target the activities that pose the greatest threat to the environment, using a risk-based approach that means we focus our resources where they have the biggest impact.

### Environmental operator

The Environment Agency plays a central role in flood and coastal risk management. We have a strategic overview role for managing flood risk from all sources; including rivers, the sea, groundwater, reservoirs and surface water. We support and work in partnership with local councils, who are responsible for managing flood risk from surface water and smaller local watercourses. We engage openly with local communities to improve understanding of the risks from flooding and coastal erosion, provide flood warnings, and help develop and promote solutions that make them more resilient to flood events. Working alongside internal drainage boards and local councils, we commission the design and construction of flood risk management structures and maintain and operate them. We also work with others to develop solutions using natural processes. When a flood happens, we work with the emergency services and local authorities to minimise the harm to people and property.

We seek to ensure there is enough water for people, businesses, agriculture and the environment. We plan decades ahead so that society can respond to the changing pressures on water availability. We oversee the way that water companies plan so that supplies are secure and companies' environmental impacts are minimised. We work with water companies and other sectors to ensure that effective plans are in place to manage security of water supply and environmental impacts during droughts. We work also to protect and improve the environment. We create and improve habitats for fish and other water-based wildlife, and support species at risk. We work with others to provide angling and navigation facilities.

### Environmental adviser

It is our job to be an independent adviser on environmental matters, both within government and more widely. We advise policy makers in government when they are developing legislation and policy on environmental matters. At a local level we advise throughout the spatial planning process on environmental issues and we are a statutory consultee for land use planning. We advise local councils on planning to prevent inappropriate new development in flood plains.

## Our environmental policy

We aim to minimise the environmental impact of our actions and undertake our activities in a sustainable way. We seek to use best environmental practice in everything we do and use our environmental management system to pursue outcomes. A copy of our published quality and environmental statement is included [later in this document](#) and is available on [GOV.UK](#).

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 with those who work on behalf of us, those we purchase goods, works 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.
- Reduce the impact of our business travel through a clear travel hierarchy and the use of challenging corporate targets.
- Use renewable energy schemes where feasible, to minimise the release of greenhouse gases.
- Minimise the use of hazardous materials, waste generated and prevent pollution.
- Work with our suppliers and contractors to ensure that goods, works and services we buy support our environmental policy and improve their own environmental performance.
- Work with our supply chain to ensure that we use sustainable materials.
- 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 improving our environmental performance on an ongoing basis to prevent pollution and comply with legal and other requirements.

Our environmental policy is embedded within our corporate plan. The corporate plan describes our strategic direction, specific plans and targets.

## Our corporate plan

In 2014 we updated our [corporate plan for 2014 to 2016](#), responding to environmental challenges and in line with new government priorities. The plan ensures that our organisation is fit for the future. It recognises how important it is that we continue to work with our partners to create better local environments that improve people's lives and support sustainable growth. The plan sets out our priorities for the next year, reflecting our expected funding position to the end of March 2016, and it also recognises longer-term objectives.

The plan is based on the following priority areas:

- a changing climate
- increasing the resilience of people, properties and businesses to the risks of flooding and coastal erosion
- protecting and improving water, land and biodiversity
- being an efficient and effective regulator to protect people and the environment and support sustainable growth
- working together and with others to create better places
- ensuring that we are fit for the future

Our corporate scorecard shows our progress against the objectives. You can see our corporate plan and corporate plan measures and targets on [GOV.UK](http://GOV.UK).

## Quality and environmental management system

Our quality and environmental management system provides the framework for our work whilst taking into consideration our own environmental performance. It helps us to:

- translate our plans into instructions that guide our day-to-day working practice
- communicate with our customers, stakeholders and staff
- monitor and improve our effectiveness as an organisation

Our quality and environmental management system has been certified to the international quality and environmental management system standards ISO9001 and ISO14001 since 2002 and EMAS regulation since 2005.

Our environmental management system (EMS) enables us to protect the environment, reduce the risk of our activities and improve our environmental performance. We achieve this by identifying where our activities could potentially adversely impact on the environment and taking action to reduce the probability, manage any impacts and ensure we are compliant with environmental legislation. Our EMS includes:

- the use of key performance indicators (KPIs)
- the procurement of sustainable contracts
- operational controls that are built into the way we work
- the encouragement of innovation
- local involvement and ownership by our people
- making sure that our people have the skills to do what is needed
- learning from our experience
- reviewing and reporting on our performance
- leading by example

## Impacts and significant aspects

We manage and operate around two hundred offices, depots and major sites across England. We run a fleet of vehicles and machinery, essential for carrying out our day to day work. We also operate in sensitive environmental locations as we work to protect the environment and create a better place.

Reducing the environmental impacts of our sites, activities and our travel are high priorities for us. Our Internal Environmental Management team support work across the Agency to help us reduce the impact our work has on the environment. We manage significant environmental impacts through our assets and legal registers (the legal register covers legislation applicable to us). We set ourselves environmental footprint reduction targets (such as carbon, water, waste) and report on our performance against them; this is outlined later in this statement. We currently report on water use at our Key Performance Indicator (KPI) sites and waste produced from our offices. We will expand this in future to include water used and waste produced at our non-KPI sites. Relevant functions across the organisation have environmental improvement and risk management embedded into the

way they work, ensuring we minimise environmental damage and enhance benefits. Our purchasing, travel, energy use and our construction and maintenance activities have the potential to create significant adverse environmental impacts. We regularly review 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% of our total environmental impacts come from the goods, works and services we purchase from our suppliers. The majority of our organisational spend is on services and projects, making our direct purchase of materials a small proportion of the, approximately, £620 million we spent in 2014 to 2015. Our purchasing decisions and the influence we have on our supply chain contributes to the achievement of sustainable development goals such as stimulating the economy, reduced energy consumption, reduced carbon dioxide emissions, waste minimisation, fair and ethical trade and social justice.

To reduce our environmental impact, we focus our efforts on our highest risk categories by spend and sustainability risk. The sustainability risk is based on environmental, social, commercial and business considerations.

### **Reducing the impact of our travel**

This year (2014 to 2015) we travelled a total of 84.8 million kilometres. 36% of our travel was by rail. However, the nature of our flood risk management and regulatory work makes it necessary to travel by road as well. We continue to reduce the carbon intensity of our vehicle fleet. This year, the vehicles that we leased for our car fleet had average emissions of 108 grams of carbon dioxide per kilometre driven. This is an improvement from the previous year (2013 to 2014), when our average was 112 grams of carbon dioxide per kilometre.

Our carbon dioxide emissions from travel have reduced by 35% compared to our 2006 to 2007 baseline. We continue to encourage our staff to avoid travel whenever possible by using telephone and video conferencing. Where travel is unavoidable, staff are encouraged to choose the lowest carbon means of transport, which may be public transport or an ultra low emission pool car.

### **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 is dependent 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 use.

### **Construction activities**

We are a major public sector construction client and we recognise the potential 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.

# Our internal performance

## Environmental performance achievements

2015 marks the end of our 7-year internal environmental management strategy. We have performed well against our strategic targets; delivering significant environmental benefit and financial savings. We include environmental performance measures in our corporate reporting. The table below sets out our ambition and what we achieved over the last 7 years. Our new targets are set out [later in the document](#).

| Measure                      | Target reduction from baseline | Actual reduction by March 2015 |
|------------------------------|--------------------------------|--------------------------------|
| <b>Carbon emissions</b>      | 33%                            | 40%                            |
| <b>Mileage</b>               | 25%                            | 37%                            |
| <b>Mains water</b>           | 25%                            | 39%                            |
| <b>Total office waste</b>    | 20%                            | 50%                            |
| <b>Residual office waste</b> | 100%                           | 96%                            |

## Energy efficiency

We made a commitment to reduce our overall carbon emissions by 33% to 40,000 tonnes by March 2015 (from our baseline year of 2006 to 2007). The following tables explain our performance against this target.



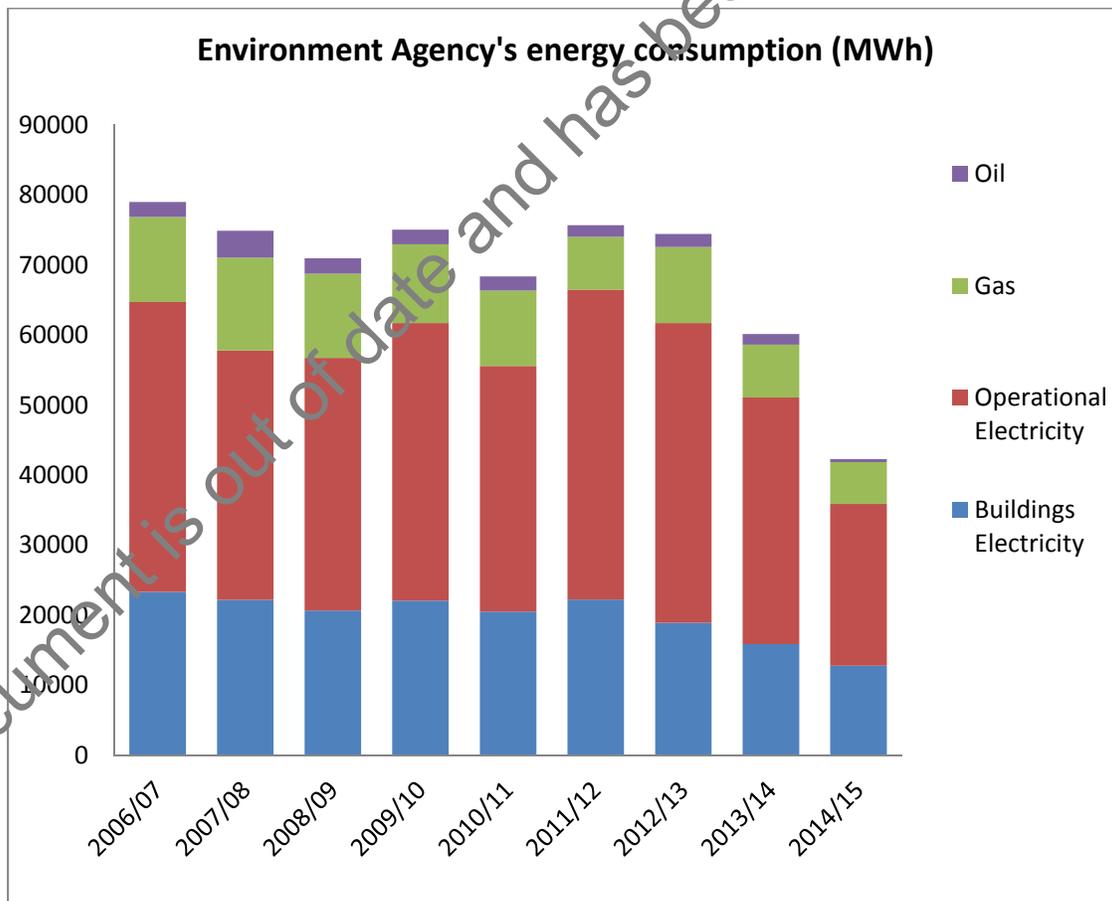
### Buildings energy efficiency

We have achieved a 52% reduction in emissions from energy use in our buildings since our baseline year. The table and chart below show a breakdown of our energy consumption by type.

| We will reduce our energy use target  | Performance  | Status          |
|---|--|-----------------|
| <b>We will reduce carbon emissions from our buildings by 33% from the baseline year 2006 to 2007.</b> | We have achieved a 52% reduction in emissions from our buildings energy use since our baseline year. | Target achieved |

### Total energy use

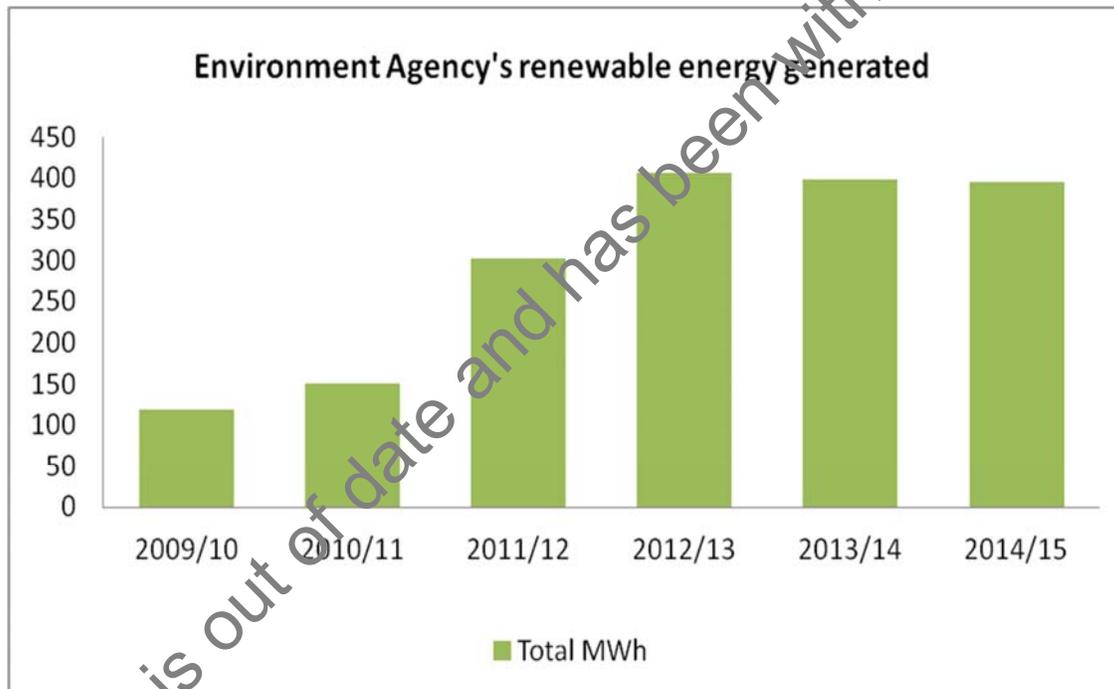
| Energy breakdown  | Total amount consumed Megawatts (MWh) from April 2014 to March 2015 | Annual consumption per member of staff (MWh/FTE) |
|---|---|--|
| <b>Buildings electricity</b>                                  | 12,744.52   | 1.23   |
| <b>Operational electricity (including from pumping water)</b> | 22,826.42   | 2.20   |
| <b>Gas</b>  | 5,966.26  | 0.58   |
| <b>Heating oil</b>  | 823.99  | 0.079  |
| <b>Operational gasoil</b>                                     | 809.18  | 0.078  |
| <b>Total consumption</b>                                      | 43,170.37   | 4.16   |
| <b>Total renewable energy</b>                                 | 395.05  | 0.039  |



Our electricity carbon data is based upon kilowatt hour (KWh) usage data taken from our energy bills which are provided by our suppliers. In 2014 to 2015 both British Gas Business and EDF changed their billing system which has caused a number of issues with both the quality of, and the receipt of, billing data. Whilst we were able to verify the data from EDF, due to ongoing severe billing system issues within British Gas we have been unable to verify whether the data we have been given by them is 100% accurate or complete. Work with our supplier to resolve this issue is on-going. As of December 2015 we are unable to amend and confirm the 2014 to 2015 electricity data so we will include adjustments in the 2015 to 2016 EMAS statement if needed.

### Renewable energy and energy efficiency

At a number of our sites we produce renewable energy from different sources including photo-voltaics, biomass, solar thermal and ground source heat pumps. Renewable energy accounts for 0.915% of our overall energy consumption. The chart below shows how much renewable energy we have generated.



In order to reduce our energy use we have undertaken several projects. Some examples of these are set out below.

### Northampton Marina



At Northampton Marina, the introduction of energy-efficient LED lighting took just three days to install and will ultimately save around 300 tonnes of carbon dioxide. The site, which we own, is already helping to create a better place by offering a stopping-off point for boaters from across the country. Hundreds use it every year before sailing on to explore the regions' waterways. Project Manager Adam Robinson says "The initial cost of the change was around £6,000 but that will be paid off in just three years, as it is more energy efficient. With the lights expected to last until 2048, it means we'll get 31 years' free use from them. Over that period the investment, which came from the government's Carbon Reduction Fund,

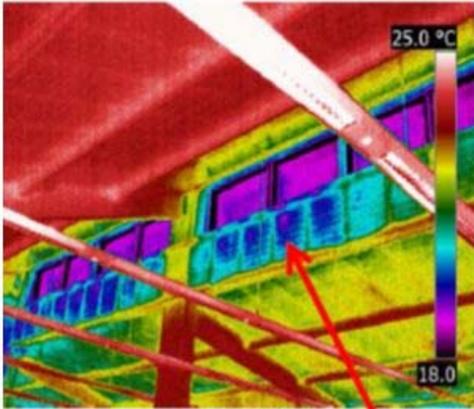
will result in a 306-tonne drop in our carbon footprint and a £60,000 saving on energy bills."

### Ghyll Mount

In January 2014, we conducted a thermal imaging survey of our Penrith office, Ghyll Mount. This survey identified several areas of the building which were showing significant heat loss, resulting in energy wastage. The key areas of concern were:

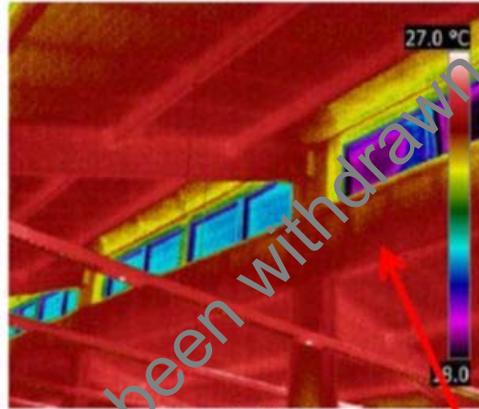
- cold air entering and warm air leaking through the roof edge
- cold air entering from gaps around window frames
- air entering into upper roof area

To address these concerns we had these areas sealed. A second thermal imaging survey of the problem areas was undertaken in January 2015. It shows significant improvement including major reductions in air leakage and major reductions in cold air entering into the building from the roof line area. You can see the difference in the photographs below.



January 2014

The above image is from the original survey where air leakages within the internal fabric can be seen as the dark colours.



January 2015

The above image is from the 2015 survey following the sealing of the gaps in the roofline which has resulted in the elimination of cold air entering this area.

## Greenhouse gas emissions

The following table sets out emissions of greenhouse gases arising from our buildings, operational activities and travel.

Our target was to reduce our overall carbon dioxide emissions by 33% by March 2015 from our baseline year of 2006 to 2007.

Our business Key Performance Indicator (KPI) detailed in the following table captures all of our carbon dioxide emissions from all direct sources.

During 2014 to 2015, our carbon dioxide emissions were made up of 34% (11,799.82 tonnes) from our pumping operations, 19% (6,624.00 tonnes) from our buildings, 4% (1,515.43 tonnes) from our national laboratories, 31% (10,888.43 tonnes) from our travel and the remaining 12% (4,374.26 tonnes) from other sources.



| Emissions breakdown                     |                               |  |
|---|-------------------------------|--|
| Type of emissions                       | Total amount emitted (tonnes) | Annual emissions per member of staff (tonnes CO <sub>2</sub> e /FTE) |
| Carbon dioxide (CO <sub>2</sub> )       | 35,201.95                     | 3.399 <sup>2</sup>   |
| Methane (CH <sub>4</sub> )              | Not significant <sup>3</sup>  | -  |
| Nitrous oxide (N <sub>2</sub> O)        | 69.95 <sup>4</sup>            | 0.01   |
| Hydrofluorocarbons (HFCs)               | Not significant <sup>5</sup>  | -  |
| Perfluorocarbons (PFCs)                 | -                             | -  |
| Sulphur hexafluoride (SF <sub>6</sub> ) | Not significant <sup>6</sup>  | -  |
| <b>Total greenhouse gas</b>             | <b>35,684</b>                 | <b>3.445</b>   |
| Sulphur dioxide (SO <sub>2</sub> )      | Not significant <sup>7</sup>  | -  |
| Nitrogen oxides (NOx)                   | Not significant <sup>8</sup>  | -  |
| Particulate matter (PM)                 | Not significant <sup>9</sup>  | -  |

(2) Carbon dioxide per FTE whilst included as required is not reflective of our performance. Our CO<sub>2</sub> emissions are highly influenced by our operational pumping activities and this, in turn, is directly affected by the weather, rather than the number of FTE we have.

(3) Methane – The Environment Agency currently own 3 closed landfill sites, with a relatively low estimated impact (CO<sub>2</sub> equivalent) of 6 tonnes per year. As this represents 0.01% of our total emissions, we have deemed it to be insignificant.

(4) Nitrous oxide (N<sub>2</sub>O) from 2014 to 15 fuel usage data was 69.95 tonnes of CO<sub>2</sub> equivalent. This equates to 1.7% of our total emissions.

(5) Hydrofluorocarbons (HFCs) - We capture this data on a quarterly basis. We calculated this to be 16 tonnes of CO<sub>2</sub> equivalent (0.03% of our total emissions) and hence we have deemed it to be insignificant.

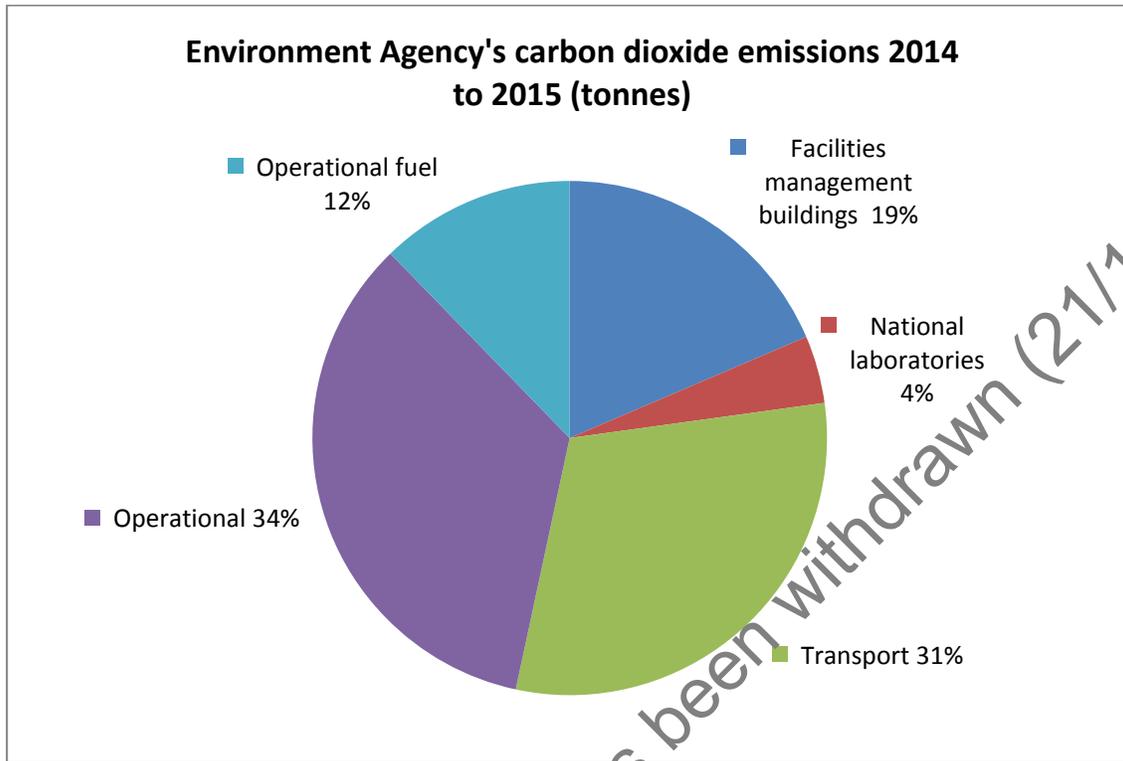
(6) Sulphur hexafluoride (SF<sub>6</sub>) - We have one electrical switch at Chapel St Leonard's (Old) Pumping Station in Lincolnshire. We capture the data on SF<sub>6</sub>, on an annual basis and deemed it to be insignificant with just 592 grams.

(7) Sulphur dioxide (SO<sub>2</sub>) – We have calculated the SO<sub>2</sub> 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<sub>2</sub> by molecular weight. We have calculated this to be 5.0 tonnes of sulphur dioxide and have deemed it to be insignificant.

(8) Nitrogen oxides (NOx) - We calculated the nitrogen oxide from our fuel usage to be 9.28 tonnes hence deemed it to be insignificant.

(9) Particulate matter (PM) - We have calculated the particulate matter emissions from our fleet to be 0.97 tonnes hence deemed it to be insignificant.

**Environment Agency's carbon dioxide emissions 2014 to 2015 (35k tonnes):**

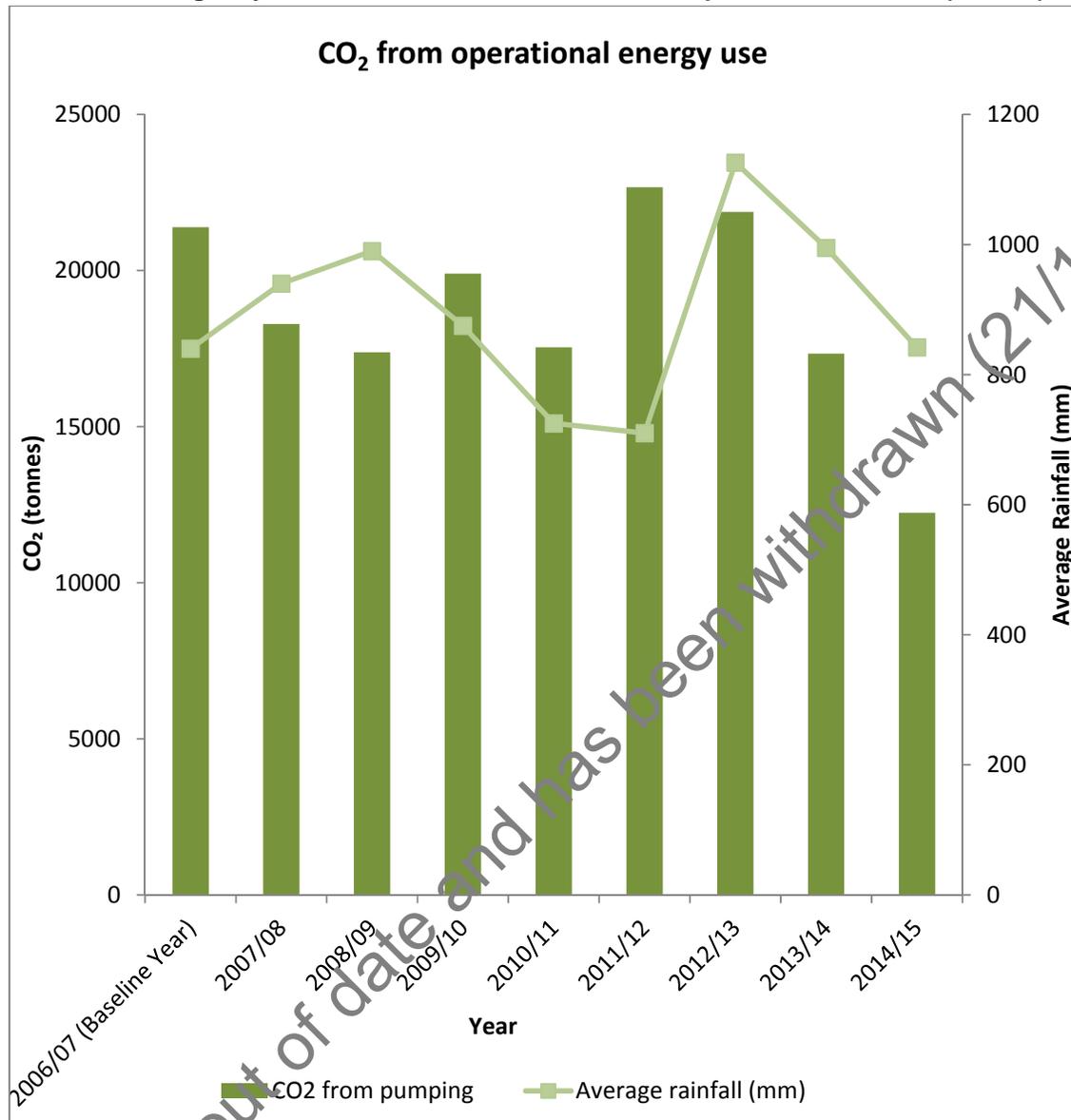


Our operational emissions in the chart above are from all of our electric pumps used to move water for flooding or drought. Our operational fuel is fuel used in our machinery and plant such as excavators and dump trucks.

| We reduce our carbon dioxide emissions <sup>10</sup> target  | Performance  | Status          |
|--|--|-----------------|
| <b>We will reduce our carbon dioxide emissions by 33% by the end of March 2015 from the baseline year (2006 to 2007)</b> | We achieved a 40% reduction in carbon dioxide compared to emissions from our baseline year of 2006 to 2007 | Target achieved |

(10) In line with Defra's recommended approach, we use the latest (April 2014) Defra conversion factor to calculate our CO<sub>2</sub> emissions and apply the same to our baseline,

**Environment Agency's carbon dioxide emissions from operational sources (tonnes):**



The information below shows some of the actions that have been undertaken to enable us to deliver such good performance in reducing carbon dioxide emissions.

**Carbon reduction programme**

We have continued to implement our carbon saving investment programme to reduce carbon and save money by using ideas put forward by our staff. For example, instead of driving to inspect our operational assets we've installed webcams to monitor them remotely. This has saved us time and fuel. We estimate that this project alone will save us approximately £300,000 each year, as well as bringing health, safety and wellbeing benefits for our staff. By upgrading our lighting with efficient LEDs we have provided a better working environment used less energy and reduced waste as the lights last for 50,000 hours. This element of our investment programme will deliver carbon reductions of around 1,600 tonnes per year.



### **Bradney biomass boiler**

A new biomass boiler was installed at Bradney Depot, near Bridgwater to replace the old existing oil fired heating system. Biomass boilers operate in a similar way to conventional boilers. The biomass (wood chip or pellets) fuel is burnt in a combustion chamber and the heat is used to make hot water. The hot water is then used to heat the building as it is pumped through the normal hot water heating system. Biomass fuel is very nearly carbon neutral. Wood pellets are produced from sustainably managed woodland within the UK or from compressed sawdust (produced as a waste product from sawmills). Only the transportation of the fuel creates a carbon

impact. A picture of our wood pellet store can be seen in the photo

The old oil fired boiler was over 15 years old and used over 5,000 litres of oil per year at a cost of £3,072. By installing the biomass boiler we are saving over 13 tonnes of carbon dioxide emissions and £919 in fuel costs every year. We create an annual income stream (linked to inflation and fixed for 20 years) through the Renewable Heat Incentive of £3,441 so total net annual financial benefit of the new biomass boiler will be £4,360 per year.

### **Ultra-low emission vehicles**

We are committed to lowering the carbon footprint of our fleet and are implementing a programme to use Ultra Low Emission Vehicles (ULEV). ULEV are classed as vehicles that emit less than 75 grams of carbon dioxide for every kilometre, and the models we've chosen emit less than 50 grams of carbon dioxide per kilometre. We have already made a substantial investment in electric and hybrid vehicles and we are enhancing our electric vehicle charge point infrastructure to support the use of more ULEVs. 22 sites have been surveyed for potential installation of fast charging points.

### **Replacing our assets**

During 2014 to 2015 we carried out a programme to update 580 commercial vehicles, plant, excavators and boats worth £16 million. This has helped us reduce health and safety risks, environmental aspects and running costs.

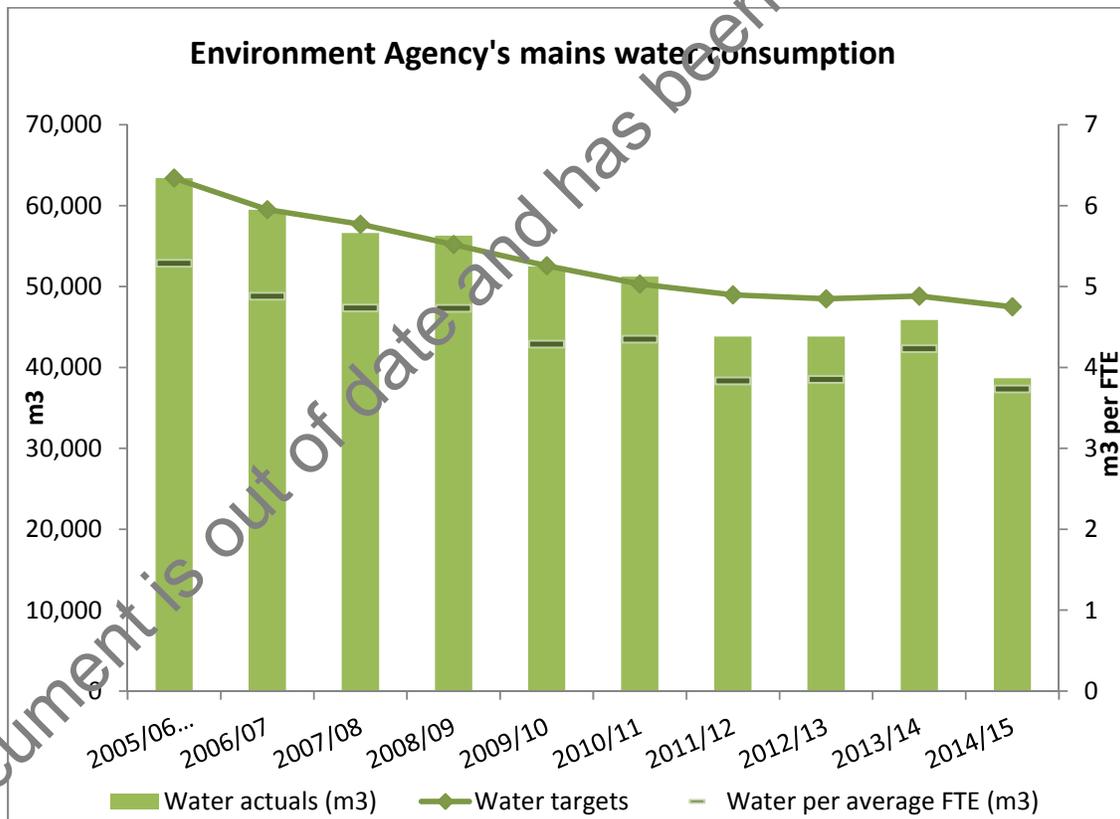
## Water

We capture all of our water use at our KPI sites that were reported in our baseline year (2005 to 2006). We had a target to reduce our mains water consumption by 25% by March 2015 from the baseline year.



The table below shows our corporate performance on mains water use. During 2014 to 2015, we consumed 38664 m<sup>3</sup> of mains water in our Key Performance Indicator (KPI) sites.

| We use less water target   | Performance  | Status          |
|--|--|-----------------|
| <b>We will reduce mains water use by 25% by March 2015 from the baseline year (2005 to 2006)</b> | We achieved a 39% reduction in mains water use compared to that used during our baseline year of 2005 to 2006. | Target achieved |



To achieve this reduction, we continue to:

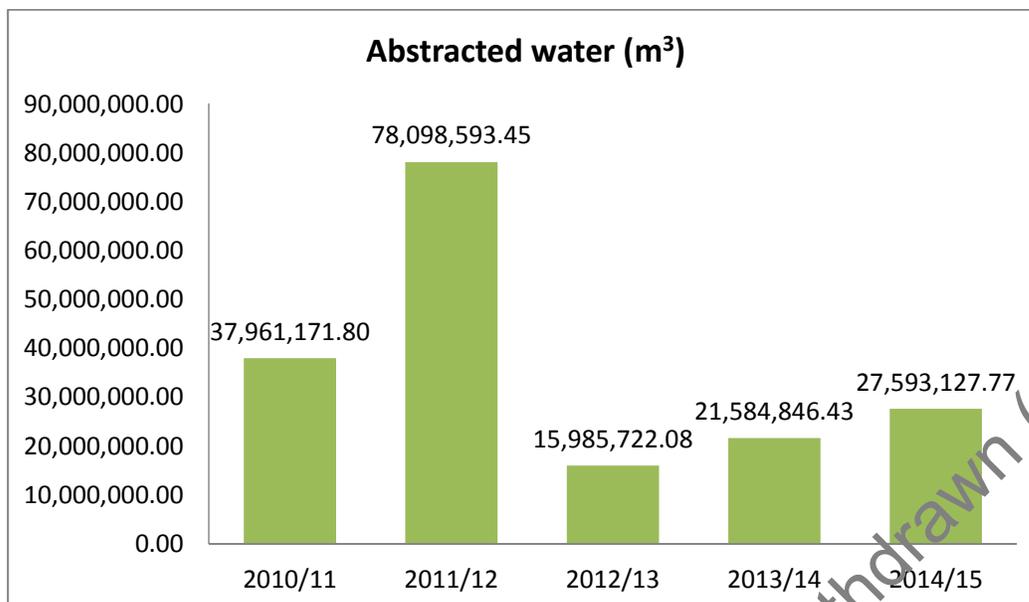
- have water meters in our offices and depot sites and set water reduction targets
- use rainwater harvesting, low flush toilets, waterless urinals, low flow showers and infra-red activated spray taps in our offices
- install further leak detection equipment at some of our sites
- install vehicle washing equipment at our depots with water recycling capability
- take environmental performance into account in the design of new office buildings

The reduction in our water use in our buildings is well within the recognised best practice benchmark of 4m<sup>3</sup> per FTE and currently stands at approximately 3.76m<sup>3</sup> per FTE. The monitoring of our water consumption is important to us. We have been upgrading our reporting and improving our databases to reflect this.

We collect water data for all our KPI sites and a number of additional sites where we are able. The non KPI data is not currently reported in this target but will be used to inform a baseline when we move to reporting all water usage in 2016 to 2017 (where it is practical to do so). Due largely to historical ownership reasons a number of our sites across the country do not have, or are not suitable to have, water meters installed. Similarly a number of sites are too small with few or no FTE and it would not make business sense to install a water meter. In these instances we are investigating the feasibility of installing leak detection units. We are continuing with our programme of investment into water meter installation across all our sites where it is practical and feasible to do so and aim to have this work completed by April 2016. This is dependent on various factors including external partners being able to deliver.

### **Abstracted water**

We record the amount of water we abstract from our permitted sites (just under 27.6 million cubic metres in 2014 to 2015) as well as the amount of mains water we consume. An example of how we use abstracted water is in operating our fish farms. Our fish farms support the recovery of fish populations by producing fish for stocking rivers. This may follow pollution events or other impacts (such as reservoirs) on the natural environment of a river where fish would naturally colonise. This stocking work supports our statutory duty to 'maintain, improve and develop' fisheries.



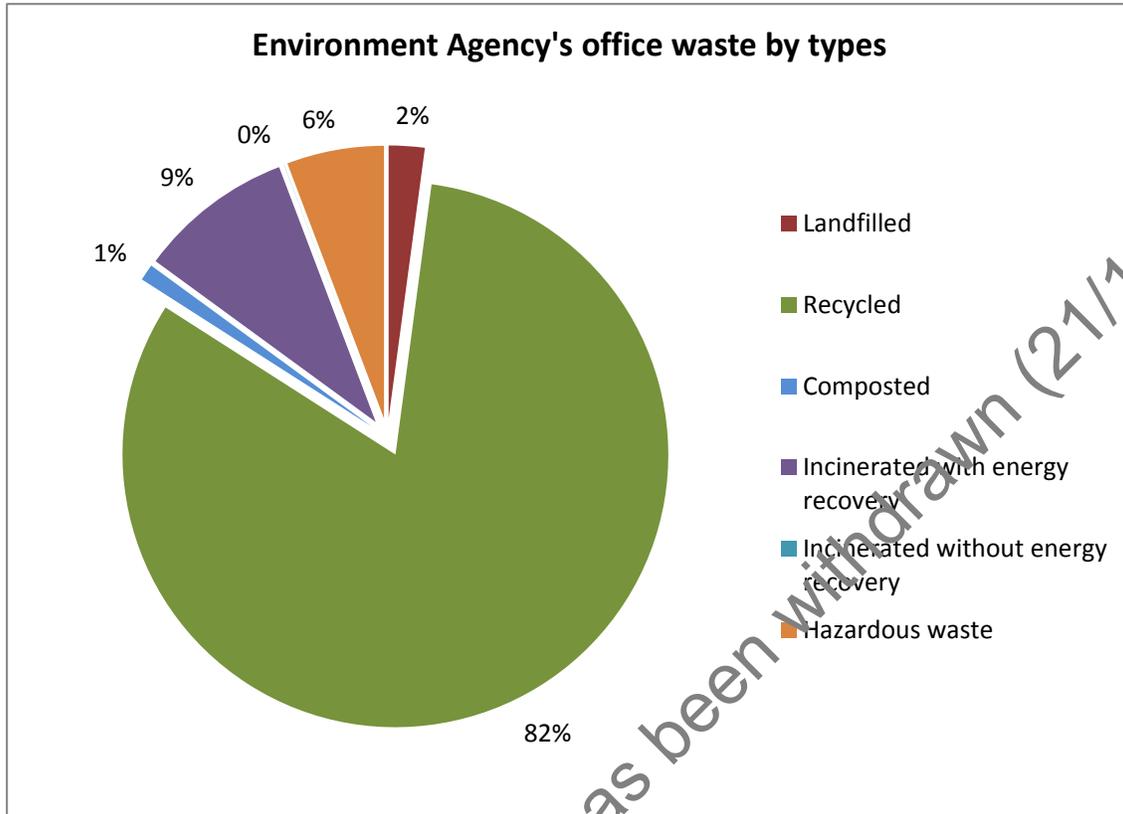
## Waste

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

The table below shows the amount of waste generated at our Key Performance Indicator (KPI) sites by type.

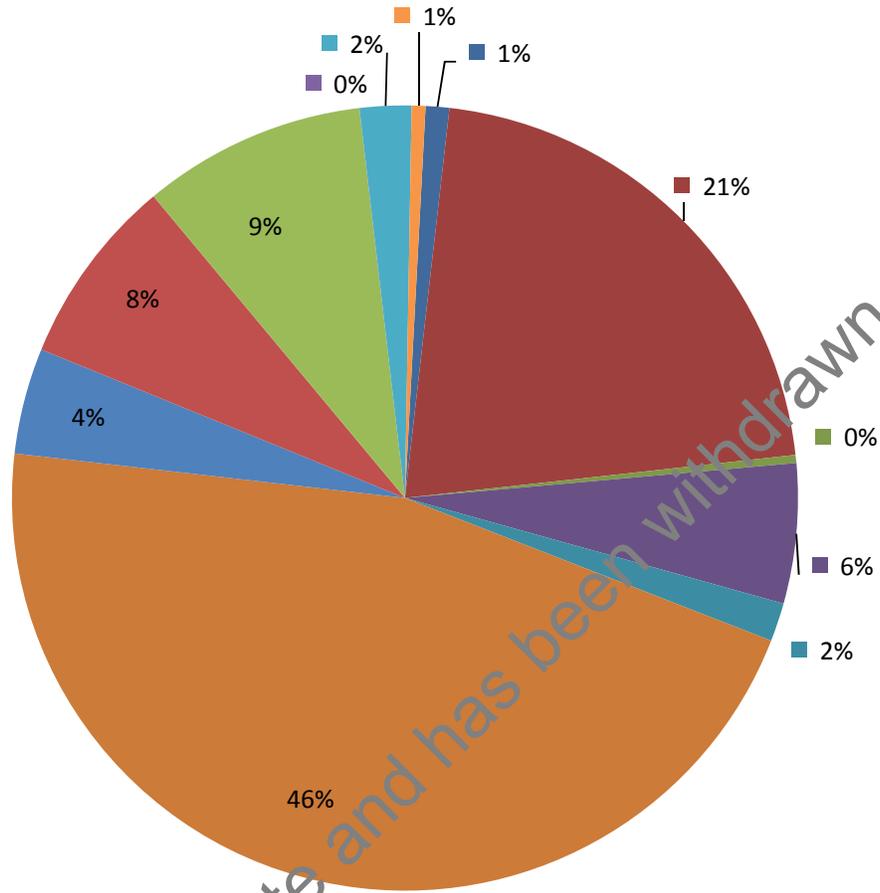


| Waste breakdown                       | Total amount (tonnes) |
|---------------------------------------|-----------------------|
| Landfill                              | 8.05                  |
| Reused                                | -                     |
| Recycled                              | 310.13                |
| Composted                             | 3.70                  |
| Incinerated (with energy recovery)    | 34.91                 |
| Incinerated (without energy recovery) | 0.04                  |
| Hazardous waste                       | 22.18                 |
| <b>Total</b>                          | <b>379.01</b>         |



We had two targets, one to divert all our office waste from landfill by March 2015 (baseline 2005 to 2006) and another to reduce our total office waste by 20% by March 2015 from the baseline year 2008 to 2009. These targeted a reduction in the production of our office waste at source and a reduction in the amount of remaining waste being sent to landfill. Currently these targets include waste from our KPI sites but do not include our laboratory or operational waste. We have started to record waste produced from our laboratories and this will be included next year. We are also setting up a system to record our operational waste so that we can include this figure within our future targets.

### Environment Agency's waste by streams



- Compostable Waste exc Operational and garden waste
- Food waste
- Glass
- Hazardous waste
- Metal packaging
- Paper
- Plastics (inc milk bottles)
- Recycled MRF
- Residual incineration with energy recovery
- Residual incineration without energy recovery
- Landfilled
- Toner cartridges

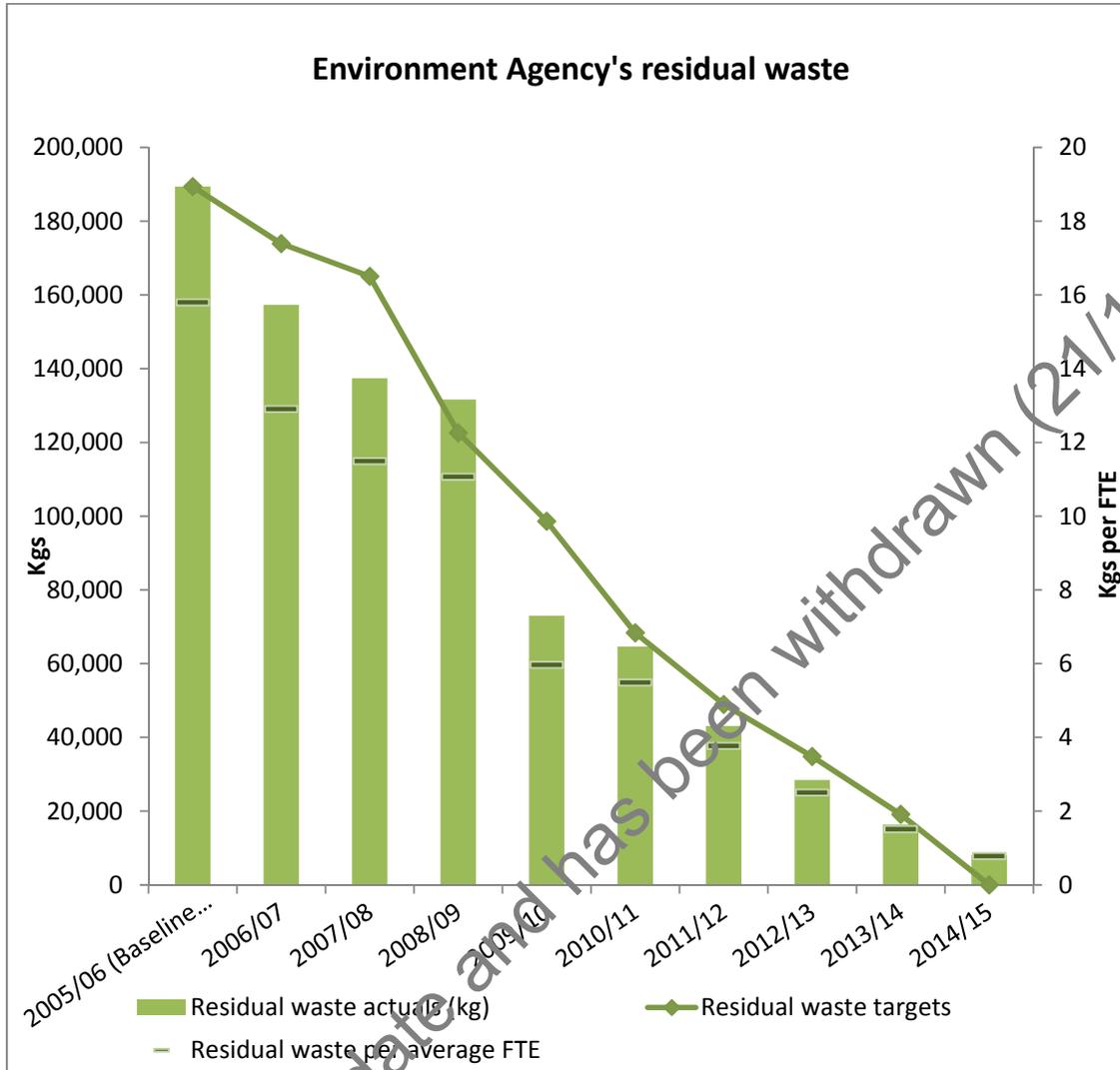
This document is out of date and has been withdrawn (21/10/2016).

The table below describes the type of waste the Environment Agency generates and how it is defined. We do not include our IT waste in this KPI reporting. All of our IT wastes are dealt with by our IT provider Capgemini.

| Type of waste  | Definition  |
|--|---|
| <b>Residual incineration with energy recovery</b>    | Total amount of residual waste sent to incinerator plant with energy recovery                                       |
| <b>Residual incineration without energy recovery</b> | Total amount of residual waste sent to incinerator plant without energy recovery                                    |
| <b>Paper</b>   | Total amount of paper waste produced on site  |
| <b>Metal packaging</b>                               | Total amount of metal waste produced on site  |
| <b>Plastics (including milk bottles)</b>             | Total amount of plastic waste produced on site  |
| <b>Glass</b>   | Total amount of glass waste produced on site  |
| <b>Toner cartridges</b>                              | Total amount of toner cartridges waste produced on site   |
| <b>Electrical equipment</b>                          | Total amount of waste paper produced on site  |
| <b>Food waste</b>                                    | Total amount of waste removed by PDM (PDM waste)  |
| <b>Compostable waste</b>                             | Total amount of waste that was composted on site  |
| <b>Hazardous waste</b>                               | Total amount of hazardous waste (fluorescent tubes, batteries, any hazardous electrical equipment) produced on site |

The following table shows how we track our office waste to landfill performance.

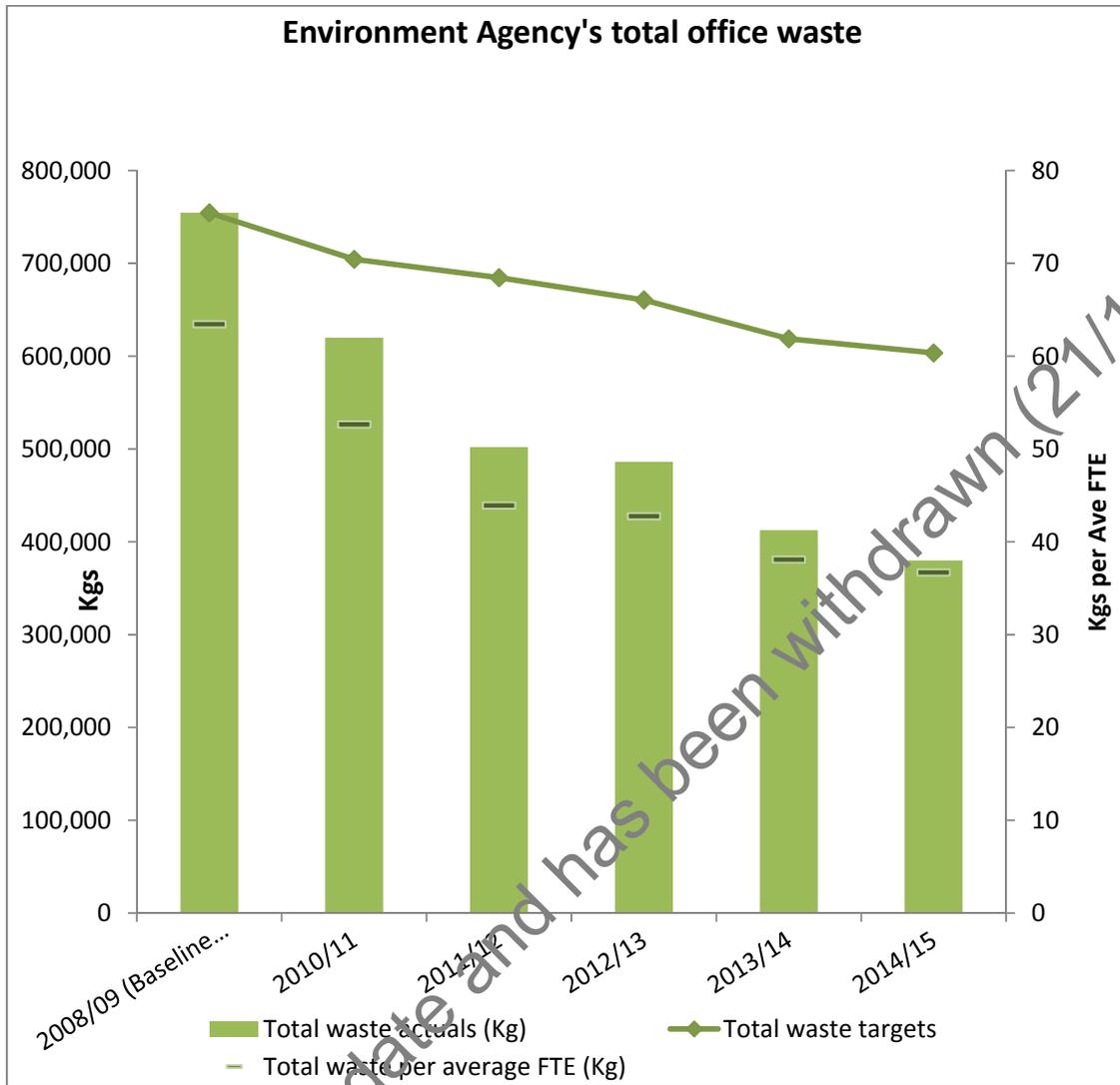
| We send less waste to landfill target                                       | Performance   | Status              |
|---|---|---------------------|
| <b>We will divert 100% of our office waste from landfill by March 2015.</b> | In 2014 to 2015, the final year of the strategy, we only sent 2% of our office waste to landfill. However, overall we have diverted 96% of all our office waste from landfill when compared to our baseline year of 2005 to 2006. | Target not achieved |



Despite making good progress, we missed our waste to landfill target by 4%. We diverted 96% of our waste from landfill compared to our target of 100%.

For a number of sites, our existing supplier of waste management services has been unable to provide us with a zero waste to landfill service and we have not yet managed to move all of these sites to new suppliers. There are also some sites where joint occupancy and landlord issues have prevented us from implementing a zero waste to landfill solution. We continue to work with our existing suppliers and landlords on a site by site basis to find solutions.

| We manage our waste more effectively target   | Performance   | Status          |
|---|---|-----------------|
| <b>We will reduce our total office waste by 20% by March 2015 from the baseline year (2008 to 2009)</b> | We have exceeded our 2015 target and achieved a 50% reduction in the total office waste we produce from our baseline. | Target achieved |



We have taken action to further improve our waste performance. Actions have included a bin dig at our head office, Horizon House in Bristol, where volunteers went through the contents of various recycled and landfill waste bins to see what they contained. We found some waste in the wrong type of bins, for example the landfill bins contained waste that could have been recycled. Involving local staff in this activity and communicating the results afterwards, helped raise awareness of and improve waste segregation.

#### Paper use

Paper recycling makes up a significant portion of our waste. We have worked with our Information and Technology team to help reduce the amount of paper we print. We have put in place secure printing this year. This means that our staff must put in a code to get their printing. This reduces the amount of printing which may have been printed in error, not collected and also gives greater flexibility in where to print. The system also allows for deleting jobs prior to printing if mistakes were made.

# Biodiversity

## Our land and property

The Environment Agency owns and manages a property portfolio comprising of corporate, residential and functional assets. Functional assets include sluices, weirs and flood banks. Corporate assets are 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.

We own and lease 225,451,871 m<sup>2</sup> of land in total. The main use for our land is flood risk management; for example flood relief channels and banks, sluices and weirs. The increase in land from the 2013 to 2014 reporting year can be attributed to three key factors:

- The purchase of 4 large areas of land for habitat creation in the Anglian region
- The purchase of 2 large areas of farmland for flood defence purposes in the Midlands region
- Two large areas of freehold land purchased for flood defence purposes in the Thames region<sup>11</sup>

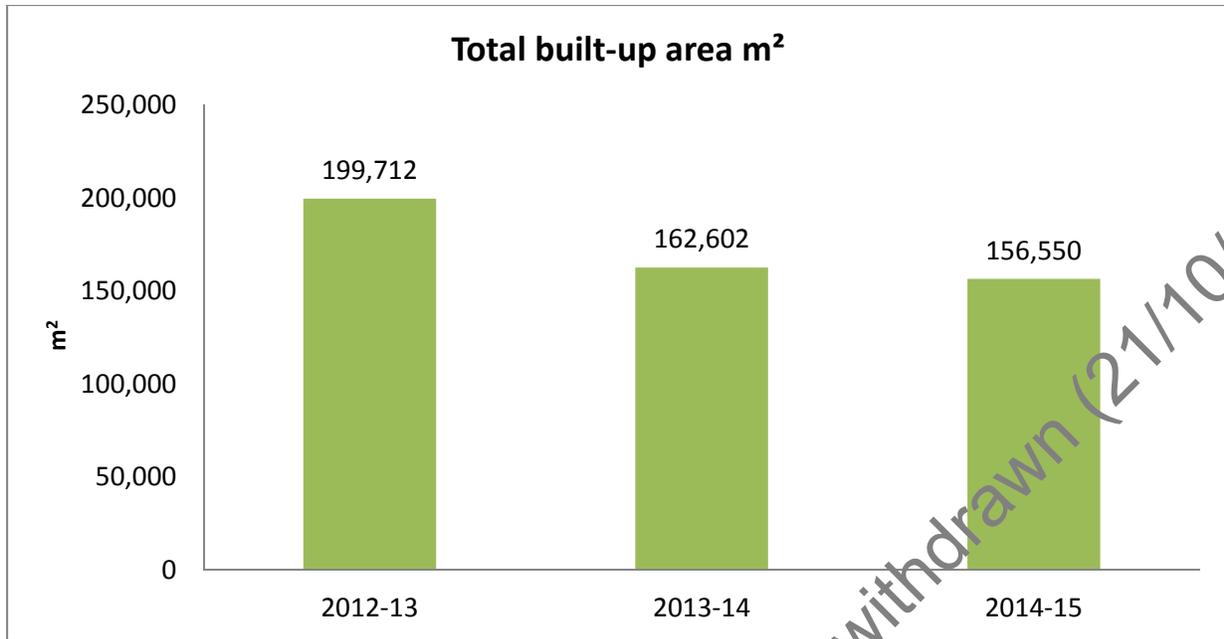
This information is taken from our Estateman database which is our primary source of property and land information. Figures are correct as of 31 March 2015. A breakdown between freehold and leasehold land is below.

| Type      | Amount of built up area (m <sup>2</sup> ) <sup>12</sup> | Amount of built up area per member of staff (m <sup>2</sup> /FTE) <sup>13</sup> |
|-----------|---|---|
| Freehold  | 88,088  | 8.50  |
| Leasehold | 68,462  | 6.61  |
| Total     | 156,550   | 15.11   |

(11) The two large areas of freehold land purchased for flood defence purposes in Thames region had an incorrect tenure type assigned to them in our database at the time of the 2013 to 2014 return. This meant they weren't reported on in 2013 to 2014, but did contribute to the 2014 to 2015 figures.

(12) We have taken 'built-up' estate to mean our current corporate estate - our offices, depots, laboratories, hatcheries and storage compounds - as these are typically located in built-up areas. Residential properties have been excluded from this figure as we do not currently hold space data on these assets.

13) Average FTE figure of 10,356 provided by HR transformation team



The reason for the reduction in built up areas is set out in the table below:

| Financial year period   | Area reduction m <sup>2</sup> | Reason for reduction  |
|-------------------------|-------------------------------|---|
| 2012- 2013 to 2013-2014 | 37,108                        | Disposal of 13 corporate sites. Also change in measurement parameters. <sup>14</sup>                          |
| 2013- 2014 to 2014-2015 | 6,052                         | Disposal of 7 corporate sites. Plus a reduction in space occupied by Environment Agency at a further 4 sites. |

### Creating new inter-tidal habitats

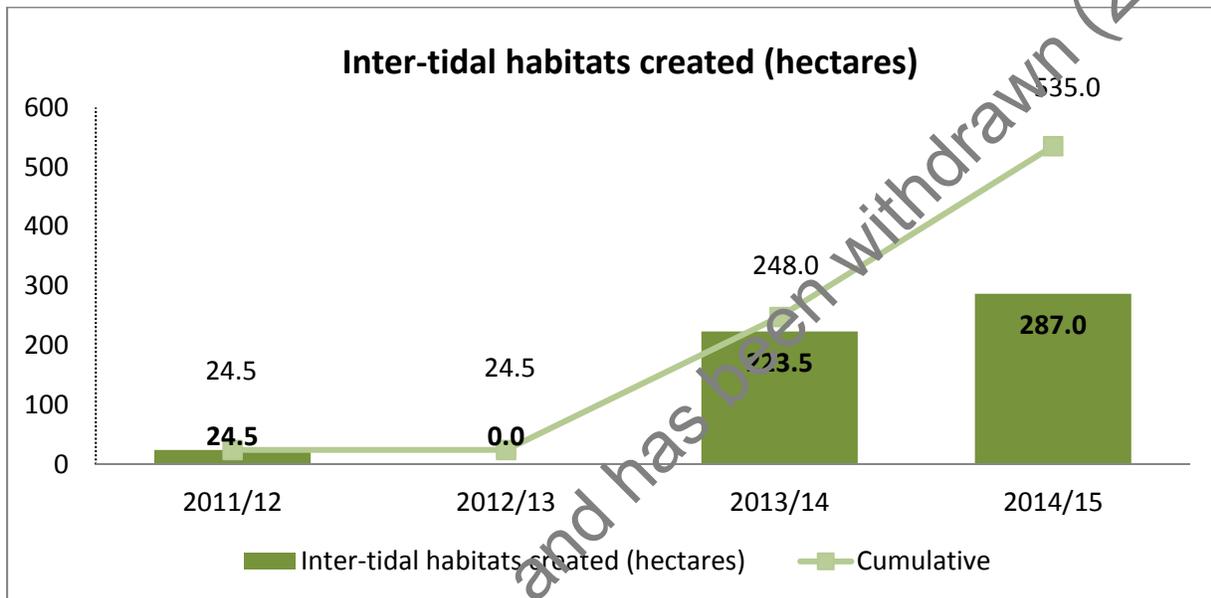
In 2014 to 2015 we have delivered 287ha of new inter-tidal habitat. The major project contributing to this delivery is Steart Managed Realignment (237ha) in Somerset.

The Donna Nook project in Lincolnshire (108ha) is currently seeking planning permission and is not due to complete until the next spending review. However, the project has delivered 27ha of inter-tidal habitat.

(14) For 2012 to 2013, we reported Gross Internal Area figures for corporate properties, which are larger than the associated Net Internal Areas (NIA) for our buildings. The reason for the change is that NIA figures are more readily available for our buildings. The change to NIA reporting resulted in a space reduction for 107 sites in 2013-14.

Since 2011 to 2012 we created 535ha of intertidal habitat, against a forecast of 400ha.

| We create new areas of inter-tidal habitat   | Target            | Status          |
|--|-------------------|-----------------|
| <p><b>From 2011 to 2015 we have created 535ha of inter-tidal habitat. The major schemes were:</b></p> <ul style="list-style-type: none"> <li>• <b>Stearr Managed Realignment (237ha)</b></li> <li>• <b>Medmerry (183ha)</b></li> </ul> | 400 hectares (ha) | Target exceeded |



The bold figures in the graph above show the number of hectares of inter-tidal habitat that was created in that year. The other figure is the cumulative amount, year on year

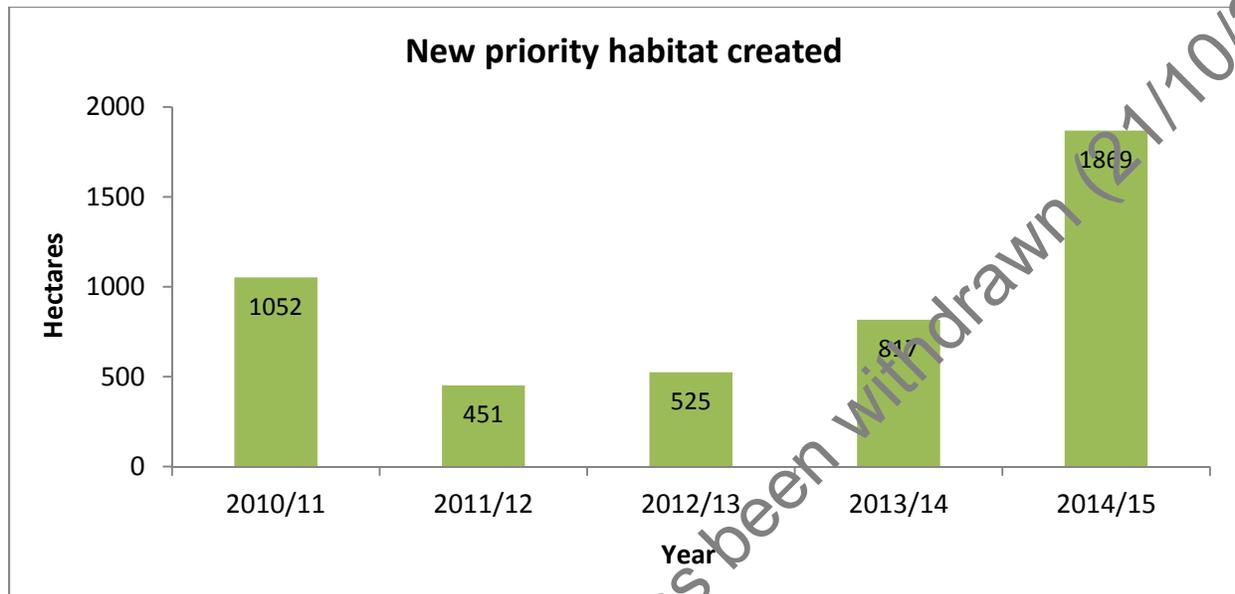


#### New bat habitat

In June 2006 bat boxes were installed inside an empty underground reservoir in Brampton, Cumbria, an Environment Agency managed site. The boxes have been regularly monitored and in February 2015 six brown long-eared bats were found to have taken up residence.

### New priority habitat

In 2014 to 2015 we created a record 1,869 hectares of new priority habitat, 643 hectares of which were created as an integral part of our work to reduce flood risk. Other significant benefits from this habitat creation included increased carbon storage, improved water quality, health and wellbeing benefits for local communities and enhanced biodiversity.



### Sites of Special Scientific Interest (SSSI)

We are one of several government bodies responsible for implementing the Habitats Directive in England. 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 risk management projects that protect and improve 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.

| We improve water-dependent SSSI habitats through our flood and coastal risk management work  | Target   | Status          |
|--|--|-----------------|
| <b>In 2014 to 2015, 3,280ha of water dependent habitat have been improved, this makes a total of 8,510ha from a baseline year of 2011 to 2012. The start of the government spending review period.</b> | Improve the condition of 4,900 hectares of water-dependant SSSI habitats from 2011 to 2015 | Target exceeded |

## Material efficiency

Much of our potential environmental impact comes from the goods and services we buy. We do not purchase many materials directly, so we focus on influencing our supply chain. We encourage them to contribute to sustainable development goals including sustainable economic growth, energy consumption reduction, carbon dioxide emission reduction, waste minimisation and we ask them to consider whole life costs.

Our highest risk categories from a sustainability perspective are construction and maintenance, information technology, fleet and facilities management. For high risk purchases (except construction) we use a tool to assess the commercial risk, sustainability risk and opportunities. The actions to manage this are recorded in our contracts.

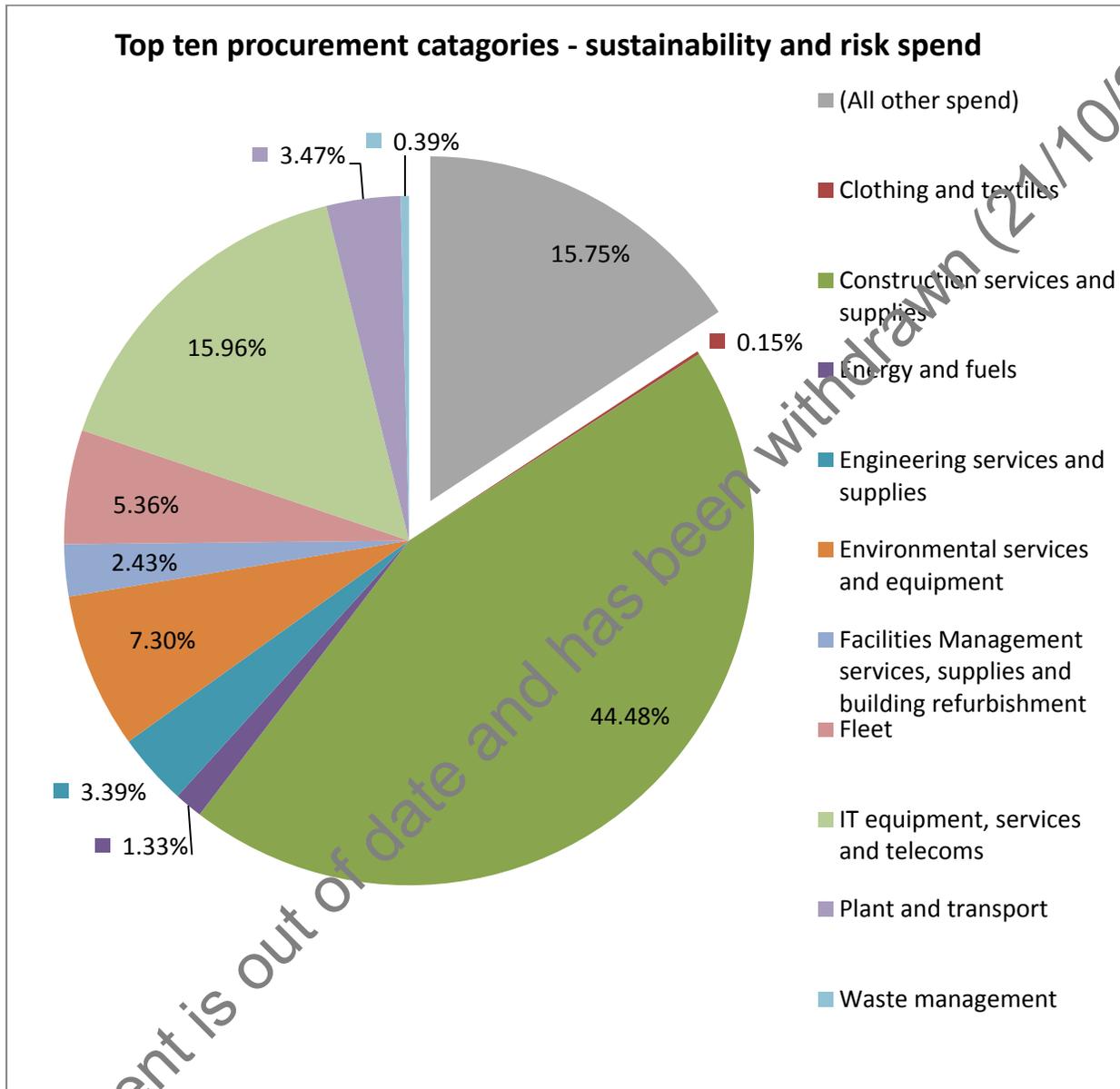
### Construction

We have a Sustainable Engineering procurement strategy; this reinforces that construction has the highest potential sustainability risk impact in relation to our supply chain activities. In July 2013 we launched our Water and Environment Management (WEM) Framework to support delivery of the Flood and Coastal Erosion Risk Management capital programme. Local councils and lead local flood authorities can also use this framework. The WEM Framework drives value for money and has given us greater control over the sustainability of the materials our contractors purchase on our behalf, as well as obliging contractors to work towards meaningful sustainability targets. During 2014 to 2015 we worked closely with our major construction contractors to identify target areas to reduce sustainability impacts in the supply chain. An extract showing the requirements included in the framework relating to material efficiency is shown below.

- Be efficient through design and in early supplier engagement; such that we make best use of available materials. Minimise the volume of materials required, minimise wasted materials (for example adopt a zero waste principle as far as practicable) and design for passive/efficient operation.
- Use tools during design to help maximise resource efficiency for example 'WRAP Designing out Waste Tool for Civils Projects'15 and the Environment Agency Construction Carbon Calculator.
- Seek to avoid using virgin, finite resources as far as practicable, and look to use materials and products that are from recycled or renewable sources.
- Seek to use materials that can be sourced locally and reduce carbon impact of transportation.
- Encourage innovation in order to deliver resource efficient, cost-effective and low carbon dioxide emission solutions, taking advantage of opportunities for standardisation, prefabrication and off-site manufacture.

### Top ten sustainable procurement risk categories

We have identified our top ten sustainable procurement risk categories and the percentage of 2014 to 2015 spend in the pie chart below, which helps us to know where to focus our efforts.



### Procurement by our contractors

Following the implementation of the WEM Framework we worked with many of our biggest contractors to ensure they purchase more sustainable materials, reducing the impact of our construction work. Contractors are required to use tools during design such as the Carbon Calculator to help maximise resource efficiency, use materials from recycled and renewable sources ahead of virgin materials and source materials locally wherever possible.

Steel sheet piles are currently the only material we purchase on behalf of our contractors. The piles are manufactured using 100% scrap steel in the process. Many of our major and minor

works contractors are now required to use our Framework for the Supply of Temperate and Tropical Hardwood to make tropical hardwood purchases made on our behalf. In doing so we can be confident that the timber procured for our projects is from legal and sustainable sources. This framework also enables access to lesser used species of tropical hardwood to help reduce over reliance on certain species and further support globally sustainable forestry. Recycled timber is also available for use by our staff and our contractors.

Over the next 5 years we will map our supply chain to understand how issues such as climate change risk and resource scarcity could have a significant impact on our business activity and how we can adapt. We will also focus on sustainable design and continuing to reduce our impacts, whilst securing the long term supply of sustainable materials.

Separate to our major civil engineering projects we undertake routine operational work. Some materials will be purchased directly as part of this, such as aggregates and timber.

### Direct materials procurement

The following table<sup>16</sup> outlines our most significant direct materials procurement.

| Material <sup>17</sup>              | Value (£'000) | Annual consumption (tonnes) |
|-------------------------------------|---------------|-----------------------------|
| Steel sheet pile <sup>18</sup>      | 5,536,724.53  | 6,885                       |
| Aggregates <sup>19</sup><br>Primary | 1,271,618     | Unavailable <sup>20</sup>   |
| Aggregates<br>Secondary             | 425,388.38    | Unavailable <sup>21</sup>   |
| Timber <sup>22</sup>                | 198,433       | Unavailable                 |

The annual consumption of these materials is dependent on the level of project activity and this varies from year to year. There is very little correlation between the number of staff and consumption of these materials. Shingle has not been recorded in the table above as spend in 2014 to 2015 totalled less than £2,000. The direct spend through the Temperate and Tropical Hardwood Timber Framework during the same period was less than £11,000 and therefore tonnage data has only been included for indirect spend as detailed below.

(16) This table shows information for the key materials purchased directly through our purchase order system.

(17) We do not hold stocks of these materials, therefore purchase is assumed to be consumption

(18) 94% of our steel sheet piles are manufactured using the electric arc furnace which uses 100% scrap steel in the process. The remaining 6% was manufactured using the blast furnace which uses 20% of recycled steel in the process.

(19) The majority of our aggregate and timber purchases are through one off purchases from local suppliers to reduce the carbon impact of delivery and encourage local sourcing to support the local economy. We currently do not have a national framework in place and therefore we are unable to obtain tonnage data.

(20) As per footnote 16

(21) As per footnote 16

(22) As per footnote 16. All timber purchased is from legal and sustainable sources.

### Indirect materials procurement for major projects

As we do not have direct control of the materials purchased on our behalf by our contractors, we influence them as previously described. We have key requirements and targets in place to monitor material used for large construction projects. The data below represents tonnes of primary and secondary aggregates and timber purchased indirectly across our large projects in 2014 to 2015. Overall we use 75% primary aggregates and 25% secondary aggregates. We are working hard to improve the return rate and quality of the data we collect, which will enable us to better manage materials use in our supply chain. We plan to move to a position in the next 5 years where we can report on our total material use for construction.

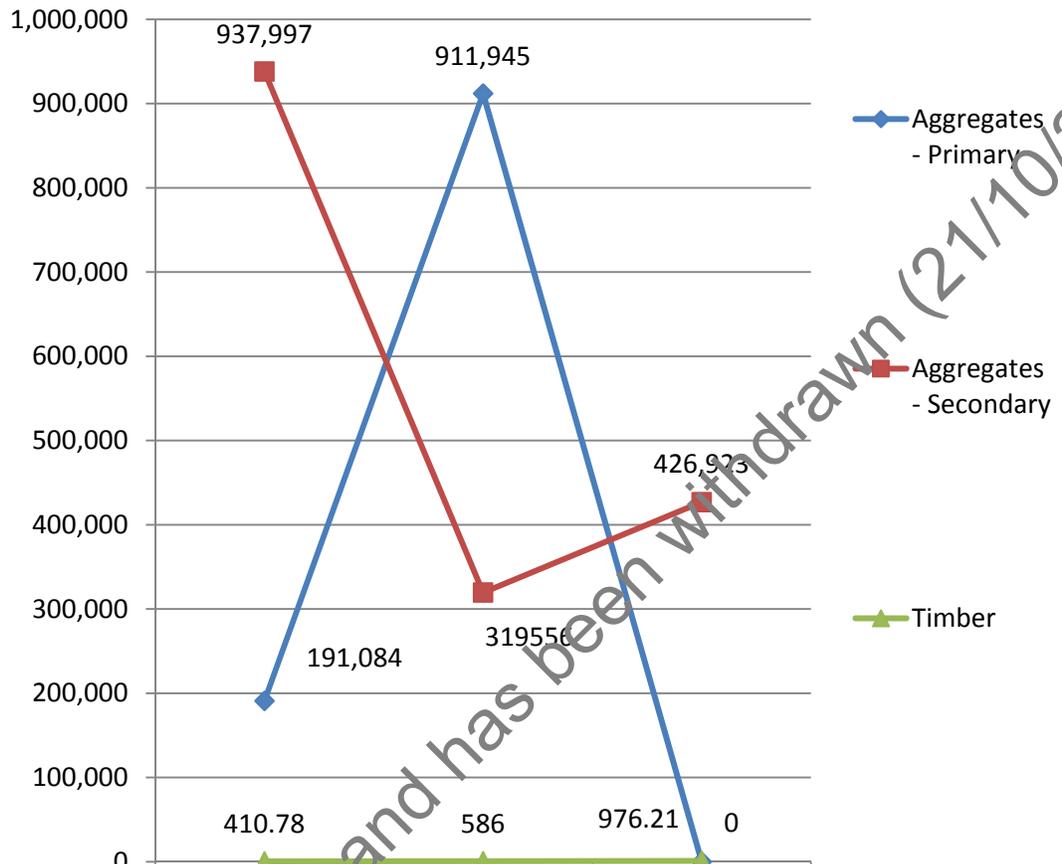
The following table<sup>23</sup> outlines our most significant indirect material purchases made through large construction projects in our national capital programme. This table excludes steel piles which are captured under the table for direct purchases of materials above.

| Material             | Annual consumption (tonnes) |
|----------------------|-----------------------------|
| Primary aggregates   | 699,768                     |
| Secondary aggregates | 426,923                     |
| Timber <sup>24</sup> | 976.21                      |

(23) This data is for National Capital Programme Management Service (ncpms) projects only. Performance is based on information available at the time of asking, the return rate on data this year has been low in comparison with previous years, following a recent change to the reporting process.

(24) Timber purchased is from legal and sustainable sources.

### Annual material consumption



|                        | 2012/13 | 2013/14 | 2014/15 |
|------------------------|---------|---------|---------|
| Aggregates - Primary   | 191,084 | 911,945 | 0       |
| Aggregates - Secondary | 937,997 | 319,556 | 426,923 |
| Timber                 | 410.78  | 586     | 976.21  |

This document is out of date and has been withdrawn (21/10/2016).

## Materials targets for our National Capital Project Management Service (ncpms)

Our ncpms department delivers large construction projects in our capital programme.

| <sup>25</sup> Corporate target                          | 2014 to 2015 performance | Comments on performance  |
|---|--------------------------|--|
| <b>81% of aggregates from a secondary sources</b>       | 38%                      | The poor performance against this aggregate target was due to technical issues with the construction builds. We are working to improve this performance. |
| <b>99% of timber from legal and sustainable sources</b> | 100%                     | All timber is from legal and sustainable sources   |

There are a variety of risks and opportunities to manage when purchasing construction materials. For each project we assess the outcome we need and how best to achieve it. It is mandatory for high value projects to use the construction Carbon Calculator to compare the embodied carbon impacts of different materials. We use this alongside our sustainable procurement approach.

Our web pages give many examples of how using the [Carbon Calculator tool](#) influenced decisions on key materials and the outcomes achieved.

### Case study example of material efficiency in practice

Under the WEM Framework we actively seek to improve material efficiency, an example is included in the case study below.

#### Broomhill Sands

This project which includes beach recharge works has to date screened and transported around 29,613m<sup>3</sup> of 70,000m<sup>3</sup> of beach shingle within the site. The project forecasts removal of 23,500 tonnes of intertidal marine clay off site. This will be reused as infill to a quarry for a housing development scheme in Kent, saving £2.64m disposal costs. The project team consisted of Environment Agency, CH2M Hill, Team Van Oord, EC Harris and Mott MacDonald.

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(25) This data is for ncpms projects only. Performance is based on information available at the time of asking, the return rate on data this year has been low in comparison with previous years, following a recent change to the reporting process.

### Additional achievements and key areas of work

- The Environment Agency won the Sustainable Business of the Year Awards in 2014 at the Environment and Energy Award. We were recognised for integrating sustainability 'across the board' including our operational activities, procurement and supply chain management.
- We have been recognised by WWF (World Wildlife Fund) in a recent [report](#) analysing central Government's compliance with UK Timber Procurement Policy as an example of best practice.
- In the future we will continue to drive sustainable benefits through our supply chain. We have used a multi-stakeholder approach to determine priority areas which will help us to deliver sustainable solutions whilst delivering value for money.
- We are undertaking work with our suppliers and a partner organisation to quantify the environmental impacts of our purchases. This will help us to understand further the risks associated with our supply chain. We will use the findings to help provide a baseline for our supply chain impact so that we can measure improvement annually.
- We are also analysing our suppliers' commitment and contribution to driving more sustainable business practices. The results of this work will help highlight key areas of focus for the Supplier Development Sustainability Programme.
- We have been consulted on and contributed to the development of the International Guidance Standard for Sustainable Procurement.

This document is out of date and has been withdrawn (24/10/2016).

# Legal compliance

## Managing our legal environmental compliance

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 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 across our Areas on an annual basis and enables us to focus resources on underperforming sites. We actively identify and seek to reduce our environmental impacts and comply with environmental legislation. 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

## Environmental non-compliances

In 2014 to 2015 we had no serious non-compliances against our own environmental permits. Non compliances are where we have breached conditions of an environmental permit.

We use the Compliance Classification Scheme (CCS) methodology to identify and record non compliances. In this way, we apply the same standards to ourselves as we apply to those that we regulate.

## Environmental incidents

In 2014 to 2015 we, or contractors working on our behalf, had two Category 1 (the most serious) and five Category 2 (significant) incidents.

Category 1 incidents have more negative environmental impact than Category 2 and 3 incidents. Category 3 incidents have a minor environmental impact and near misses have no environmental impact but remain important for learning purposes. We use the Environment Agency's common incident classification scheme (CICS) to categorise our incidents in the same way that we categorise those external environmental incidents reported to us.

Our two category 1 incidents involved damage to aquatic wildlife, the first one where a weir gate failed and could not be closed so a reservoir drained down, the second one was where we unexpectedly found river lamprey on river banks that had been exposed during a water lowering exercise.

We continue to promote the reporting of incidents and near misses so that we can understand what types of incident or near miss we have and focus our efforts. We review and learn from them and promote an open and honest learning culture.

| Performance trend – number of internal environmental incidents |              |                  |            |              |                  |            |
|--|--------------|------------------|------------|--------------|------------------|------------|
| Type of Incident <sup>13</sup>                                 | 2013 to 2014 |                  |            | 2014 to 2015 |                  |            |
|  | Our own      | Our contractor's | Total      | Our own      | Our contractor's | Total      |
| Category 1   | 0            | 0                | 0          | 2            | 0                | 2          |
| Category 2   | 4            | 3                | 7          | 3            | 2                | 5          |
| Category 3   | 28           | 19               | 47         | 24           | 33               | 57         |
| Near miss  | 26           | 48               | 74         | 27           | 49               | 76         |
| Not classified   |              |                  | 0          |              |                  | 0          |
| <b>Total</b>   | <b>58</b>    | <b>70</b>        | <b>128</b> | <b>56</b>    | <b>84</b>        | <b>140</b> |

# Employee engagement

Below, we have listed examples of initiatives which demonstrate how people in the Environment Agency have been engaged and implemented projects to improve our internal environmental performance.

## The right people working together

Across the organisation we have various networks of people that work together to make changes locally. These range from site based Green Groups that arrange bin digs or paper reduction campaigns through to structured Area based groups led by a member of the local management team. These groups work together to achieve environmental outcomes.

## Using the right communications for the audience

We communicate about improving our internal environmental performance with people in various ways. For example we use our intranet site to tell office based people about environmental performance issues. We also use email bulletins and newsletters to reach specific groups of people. Field team leaders use specialised toolbox talks and face to face discussions to engage their people and ask for their feedback.

### Our 'green issues' intranet page

On the front page of our organisation wide intranet pages we have a dedicated page titled 'Green Issues' which is updated every 1 to 2 weeks. This page allows people across the organisation to share environmental information. For example information shared on our new ULEV (ultra low emission vehicles) programme has been viewed over 2,000 times since the page went live.

## Providing the resource to make changes

Our Carbon Reduction Fund (CRF) continues to promote and fund delivery of ideas from across the organisation. The fund helps us to minimise our carbon dioxide footprint and sets a good example to others. We aim to:

- reduce our own carbon emissions by investing in carbon reducing projects
- engage our staff in reducing our own carbon footprint
- stimulate the development of technologies which can support carbon reduction.



### **Icen House**

Icen House in Ipswich is our best performing office for the efficient use of energy. It achieved this through good management and by introducing some energy saving and sustainable projects including:

- biomass boiler
- rainwater harvesting
- solar panels
- solar tube lighting

### **Recognising our efforts**

We recognise the effort our staff make in a number of ways including the promotion of their achievements and manager recognition.

The laboratory at Starcross, near Exeter, analyses all of our water quality samples. These samples are typically taken from rivers, lakes or coastal water around the country. Over the past 2 years, 4 key projects have been implemented at the laboratory to improve environmental performance, saving us 250 tonnes of carbon and £60,000 per year:

- Solar panels were installed on the roof. These generate enough electricity to run approximately 10 medium sized homes and save over 15 tonnes of CO<sub>2</sub> per year.
- Four oil fired boilers, which were inefficient to run and prone to breakdowns were replaced with a biomass boiler and 2 highly efficient oil boilers. An immersion heater was installed in the hot water cylinder. It provides hot water during the summer months, and enables the shutdown of the biomass boiler during this time.
- Replaced hundreds of old fluorescent tube lighting with much more energy efficient LED lighting.
- Extract ventilation systems were installed to ovens associated with various analytical instruments. These ovens produce heat (up to 300°C) from a vent at the back of the oven. The ventilation system enables the hot air to be extracted, reducing the load on the air conditioning units.



The efforts of the Starcross team have been promoted across the organisation with the production of a video showcasing their achievements. Above is a photo of some of the staff involved used to promote good practice.

### Field Service Awards

Every year our field teams have an opportunity to showcase their good work in the Field Service Awards. The Homersfield Sluice Removal project for 2014 to 2015 won the 'Excellence in the Environment Award'

### North Suffolk field team and Suffolk asset performance team: Homersfield sluice removal project

The Environment Agency manages flood risk on the River Waveney, along the border of Norfolk and Suffolk. One of our initiatives was to remove a redundant sluice which was having a detrimental effect on the local wildlife, fish and waterways. By removing the sluice we:

- Opened up a barrier that restricted the movement of fish in the river.
- Were able to improve the natural habitat by removing a large amount of weed which was restricting oxygenation of the water.
- We produced an environmental plan for this project which emphasised and reiterated our commitment to protect and improve the environment for wildlife and people during our removal work. The plan included:
  - Ensuring that we protected the water voles by changing the conditions near the sluice so that they would migrate to other areas whilst we removed the sluice.

- We constructed a 'silt curtain' to prevent the disturbed silt from moving downstream and lowering oxygen levels in the water, which would have distressed or even killed fish.
- We monitored oxygen levels at all times and carried out our work at a pace which ensured that oxygen levels remained at a healthy level.

After the work had been completed, we asked for community volunteers to plant 75 native riverbank trees. These trees provided shade to the watercourse, keeping the river cool and creating new habitats for wildlife. Local groups supported this work, including the River Waveney Trust. This increased the local buy-in and ownership of the project. The scheme has also attracted interest from the River Restoration Centre which produced a positive article in their monthly newsletter.

#### **Field service award judge's comments**

This nomination really stood out for us. In particular, the team delivering the project went over and above what would have been the normal expectation. They adopted innovative approaches and by working closely with others managed to achieve multiple outcomes. The story that has been told was very compelling and was a clear demonstration of the brilliant work that our colleagues produce. The winning team should be justifiably proud of their project and this award for Excellence in the Environment.

#### **Celebrating our success at the end of our current environmental strategy**

Our current environmental strategy came to an end in March 2015 having achieved some great environmental improvements. We celebrated this with an internal event where we reflected on our achievements and recognised certain people that have been vital in delivering these.

#### **External recognition of our achievements**

##### **We won:**

- 'Sustainable Business of the Year' 2014 in the Sustainability Live Awards.
- 'Best Public Service Recycler of the Year' at the National Recycling Awards 2014.
- Fleet News 'Green Fleet of the Year 2015', and were highly commended for the overall 'Fleet of the Year award' at the Fleet News Awards 2015.
- English entry into the European Eco Management and Audit Scheme (EMAS) Awards. This focuses on eco-innovation and also considers the whole organisation's approach to sustainability.

##### **We were shortlisted for:**

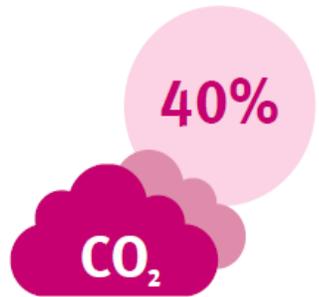
- The Waste and Resource Management category at the Sustainability Leaders Awards 2014.
- The 'Most Sustainable Public Sector Organisation' at the Public Sector Sustainability Awards 2014. We were runner up in this section.
- the 'Green IT Project of the Year' as part of the Business Green Leaders Awards 2015.

# Internal Environmental Management

## Our successes 2006-2015



We have worked together over the past 9 years to minimise the environmental impact from our work, strive to use best practice and to manage our procurement and construction in a sustainable and responsible way. Our hard work has resulted in fantastic achievements including:



drop in CO<sub>2</sub> emissions



decrease in mains water use



less of the waste produced



cut in amount of waste we send to landfill



business mileage reduction



improved staff ownership and environmental risk reduction



spent with small and medium enterprise suppliers in 2014-2015



of timber procured was legally and sustainably sourced in 2013-2014

The above performance for water use applies to our Key Performance Indicator sites. For waste produced, performance applies to our offices.

This document is out of date and has been withdrawn (21/10/2016).

# Internal Environment Management future targets

Our future targets that build on our previous success but stretch our performance

## Compliance

| Measure  | Scope  | 2020 target |
|--|--|-------------|
| <b>All “environmental actions” are completed in time</b> | Actions from: <ul style="list-style-type: none"> <li>- Safeguard (actions from environmental learning or required to demonstrate compliance with Environmental Management System)</li> <li>- Incident and near miss reviews</li> <li>- Site Environment Management Audits (SEMA)</li> <li>- External audits</li> </ul> | 100%        |

## Footprint - corporate

| Measure                     | Scope  | 2020 target                              |
|-----------------------------|--|--|
| <b>Total carbon dioxide</b> | All sources – buildings, travel, pumping, operational fuel   | 45%                                      |
| <b>Total water use</b>      | Offices, depots, laboratories  | 10%                                      |
| <b>Total waste</b>          | Offices, depots, laboratories and operational waste but not construction waste which is in the measure below | Recover, reuse or recycle, more than 90% |

## Footprint - buildings

| Measure                      | Scope   | 2020 target  |
|------------------------------|---|--|
| <b>Carbon from buildings</b> | All offices and depots across the estate. Note this excludes pumping stations | 60%  |
| <b>Water from buildings</b>  | All offices   | 3.5m <sup>3</sup> / FTE                                  |
| <b>Waste from buildings</b>  | All offices   | 25 kg / FTE, and recover, reuse or recycle more than 97% |
| <b>Office paper</b>          | All paper printed from our multifunctional devices (MFDs)                     | 1500 sheet / FTE   |

## Footprint - travel

| Measure                  | Scope   | 2020 target                      |
|--------------------------|---|----------------------------------|
| <b>Total travel</b>      | All modes of travel included.                                   | 30% reduction                    |
| <b>Fleet composition</b> | Average score of vehicles on our lease list and badged vehicles | Lease 80 g/km<br>Badged 195 g/km |

### Footprint - construction

| Measure                                   | Scope  | 2020 target   |
|---|--|---|
| <b>Construction waste</b>                 | Waste produced from construction on Environment Agency projects                          | Recover, re-use or recycle more than 95% of waste from our projects |
| <b>Recycled aggregate</b>                 | Aggregate used in construction on all Environment Agency projects                        | 85% for all construction projects                                   |
| <b>Timber use – legal and sustainable</b> | All timber purchased by the Environment Agency and on our behalf for use in our projects | All timber including Ops projects to be legal and sustainable.      |

This document is out of date and has been withdrawn (21/10/2016).

# Environment Agency quality and environmental statement

## Our commitment to quality

We are committed to improving our service on a continuous basis and will review, maintain and improve our services as required. We focus on quality and utilise a range of continuous improvement practices and focusing on quality. We:

- engage and communicate with stakeholders and customers to ensure we meet their needs
- set and review our progress against quality objectives outlined in our corporate plan
- translate our plans into instructions that guide our working practice
- communicate and highlight our objectives, plans and policies to our customers, stakeholders and staff
- monitor, review and improve as required:
  - our effectiveness as an organisation, ensuring we prepare for and conform to regulations which affect us
  - the way we work to protect people and the environment, and support sustainable growth

Ensure we:

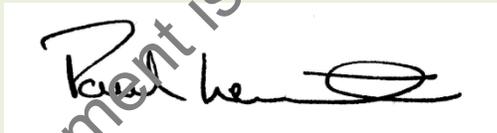
- carry out our activities in a cost effective, timely and customer focused manner
- continue to develop a skilled, diverse and flexible workforce able to adapt to the changes ahead
- have a robust Quality Management System which is reviewed on a continuous basis to maintain and improve as required our processes, guidance and the quality of our service

## Our commitment to the environment

We are committed to improving our environmental performance on a continuous basis, to prevent pollution, reduce our overall impact and comply with legal and other requirements. We monitor and assess on a regular basis our environmental performance.

Our environmental objectives and targets are embedded within our Corporate Plan. We minimise negative environmental impacts and seek to maximise environmental benefits. We report on our progress against our objectives and targets. We actively seek to:

- reduce our carbon dioxide emissions, including those from our operations
- reduce energy and resource consumption, using sustainable resources and renewable energy where practical
- minimise the use of hazardous materials
- minimise waste generated and apply the waste hierarchy to office and operational waste communicate environmental best practice to staff, implementing it in what we do
- communicate environmental good practice to staff
- implement environmental good practice across all of our activities
- influence and encourage our contractors to:
  - prevent pollution
  - minimise their environmental impacts
  - use sustainable materials
  - improve their environmental performance



**Dr Paul Leinster CBE, Chief Executive**

**19 December 2014**

# Validation

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:

SGS United Kingdom Limited

UK-V-0007

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# Related publications

The following related publications are key corporate documents. They can be provided in hardcopy if required.

## [Corporate plan \(2014 to 2016\)](#)

The Environment Agency's corporate plan and summary explains our roles, priorities and funding for 2014 to 2016. It sets out our aims and performance measures for our organisation and describes how we will work with our partners to create a better place for people and wildlife.

## [Annual report and accounts \(2014-2015\)](#)

A report on how we met our targets and addressed key issues facing the environment.

## [EMAS statement \(2013 to 2014\)](#)

Our annual environmental statement for the last financial year.

For any queries relating to this statement please email [gms@environment-agency.gov.uk](mailto:gms@environment-agency.gov.uk)

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**incident hotline 0800 807060** (24 hours)

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