

Section 6: Being more Sustainable

Our 2010-11 Sustainability Report

Our key role is to support the sustainability of the UK's economy by operating, maintaining and improving the strategic road network in England. We recognise that, in performing this role, we need to develop and implement more sustainable ways of carrying out our business.

The purpose of this section is to explain our performance in this area. The format conforms to new sustainability reporting requirements being piloted by HM Treasury for 2010-11 annual reports. Further details about our sustainability performance can be found in our annual progress reports against commitments in our annual Sustainable Development Action Plan (SDAP), which we publish on our website.

Summary of Performance

We have continued to make good progress in delivering our sustainability commitments. In 2010-11 we met all our Business Plan commitments to reduce our greenhouse gas emissions and to deliver actions against our Environmental Action Plan.

An overview of our performance in relation to HM Treasury measures is shown in the table below:

Details of performance metrics in these areas are shown in the table on pages 24 and 25.

Our 2010-11 SDAP contained 26 actions owned across the business, only two of which have not been completed. One of these is thought to be recoverable in 2011-12.

We also:

- supported the national noise action plans by reviewing and validating the priority noise locations on our network as identified in the draft noise action plans produced by Defra;
- supported the national air quality strategy by examining a selection of air quality exceedances on our network, and worked with

Sustainability Performance Overview	Performance 2010-11	
	Actual	Target
Greenhouse Gas Emissions (tCO ₂ e – Scopes 1,2 & 3 Business Travel)	127,310	137,000
Business Travel (tCO ₂ e)	1,200	1,820
Business Travel (£m)	£2.520m	£3.940m
Office Estates Waste (tonnes)	287	N/A
Office Estates Water consumption (M ³)	13,900	N/A

Recycling waste material – innovative use of tyre bales in the A421 scheme





stakeholders to identify potential ways to mitigate these problems;

- formalised our working relations with Natural England through a Memorandum of Understanding – supporting a more efficient approach to working together; and
- updated our environmental guidance to reflect changes in legislation and good practice, and to support more efficient approaches – this guidance is used when developing major projects or conducting road maintenance operations.

Greenhouse Gas Emissions

Over the year we have continued to implement measures to reduce our emissions on both the strategic road network and our office estates. This is also having a beneficial impact on our related energy and travel costs.

- We switched lighting off between the hours of midnight and 5am on a further eight carefully selected stretches of motorways during 2010-11, bringing the total to some

fourteen sections with a total length of 62 miles. In addition we have commenced permanent removal of road lighting where, under revised guidelines, we would not consider installing lighting.

- We published our Energy Strategy for Roadside Equipment to address issues associated with the supply of electricity to roadside equipment.
- We reduced energy consumption on our office estate by some 16% in 2009-10 against the 2008-09 baseline, and in 2010-11 we achieved a further saving of 7%. Savings were generated by measures such as relocating to more efficient office space, making more efficient use of the office space we already have, replacing essential lighting with more efficient models, and opening a reduced number of floors in most offices during the Christmas holidays.

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Innovative use of tyre bales in A421 scheme

The A421 scheme to build eight miles of new dual carriageway between the M1 and Bedford was opened in December 2010. Some 350,000 old tyres were used in bales to form an embankment to carry a section of realigned local road over soft ground at Brogborough Lake, a backfilled clay pit. This is the first time that

this approach has been used for a UK public road, making good use of old tyres which otherwise would have been sent for incineration.

The scheme will be completed during 2011 with the planting of some 210,000 trees to cover around 240 acres of new woodland and grassland.

The project team, which included the Highways Agency, contractor Balfour Beatty and designer URS/Scott Wilson, has won the Fleming Award for geotechnical excellence.

- We significantly decreased our business travel during 2010-11, making better use of electronic communications and conferencing facilities.

Continuous improvement to our carbon calculation framework, first introduced in 2008-09, has provided us with better data and more information about our carbon footprint. This includes emissions we directly control such as our offices and network energy consumption as well as those produced by our supply chain who carry out maintenance and construction work on our behalf. The increased confidence in supply chain data (the dominant component of the Agency's footprint overall) presents a huge opportunity for both raising awareness and future performance management.

Office Waste

This year we have been working to improve the process of collecting and measuring data on waste across our office estate. We now have accurate, established, processes in

Sustainability success at Considerate Constructors Awards



The Agency enjoyed success at the Considerate Constructors Awards ceremonies, picking up 16 awards in total with three major schemes winning gold. The Considerate Constructors Scheme is an independent, non-profit making organisation founded by the industry to improve the image of construction. The three Gold Award winners included:

A421 improvements:
 'Environmental Observation' cards encouraging active participation in improving the site's environmental performance issued to operatives.

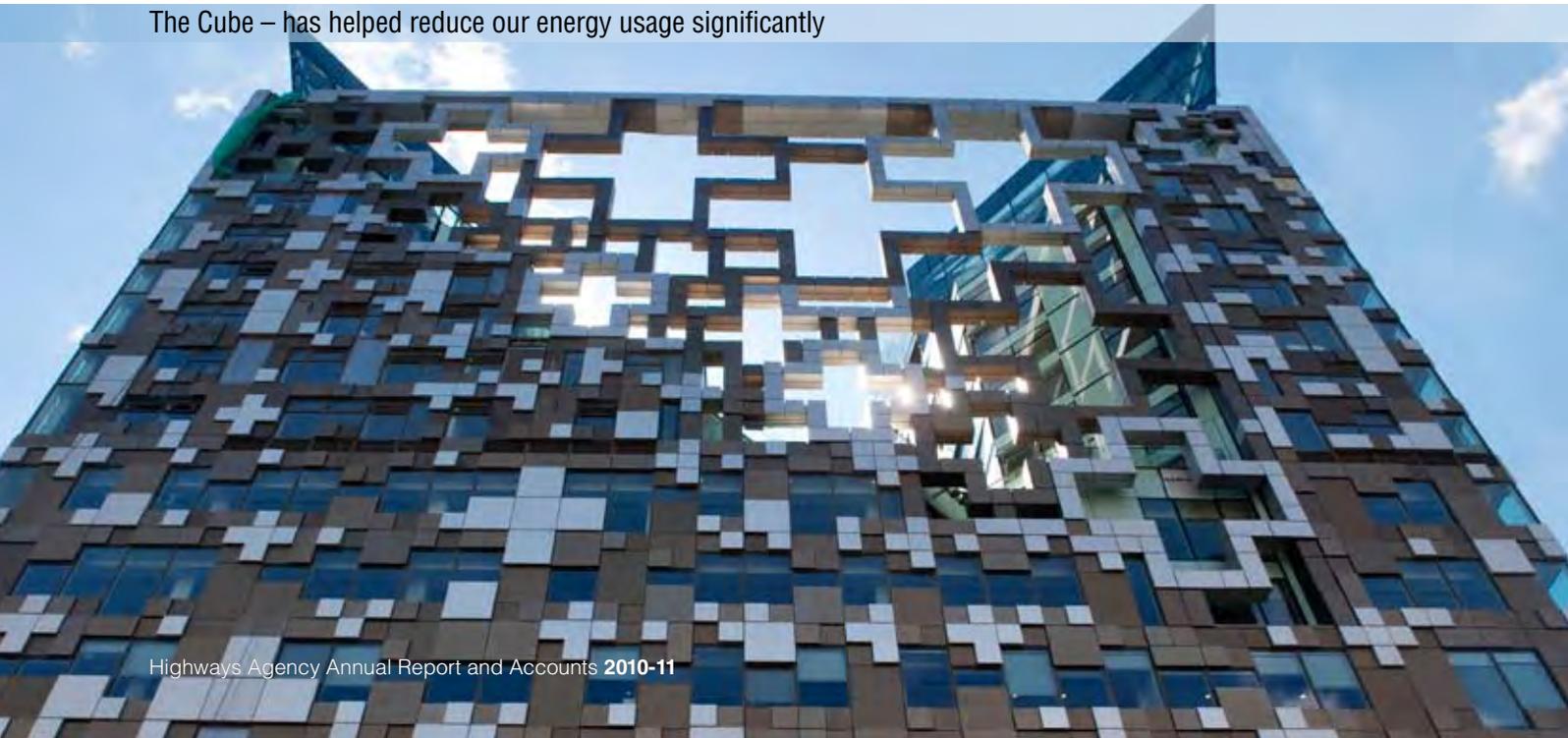


A34 Wolvercote Viaduct Replacement:
 Support for the neighbouring community included sponsorship for local causes, new fencing and raised flower beds for a school playground.

M27 Junction 3-4 widening:
 'Exceptional' communication with the local population.



The Cube – has helped reduce our energy usage significantly



place. We have provided clearer guidance, to colleagues and visitors, which helped us to increase our office recycling rate to 63% this year.

Biodiversity

During the year, as part of our existing Biodiversity Action Plan, we identified and treated locations on the network that protect and enhance plant and animal species and habitats. We also made significant progress in producing a new action plan.



We undertook appropriate management work to ensure we play our part in preserving biodiversity and geodiversity. In particular, we have made a significant contribution by

ensuring that our Sites of Special Scientific Interest (SSSIs) are now in favourable or recovering condition.

We regularly include mammal crossings during road constructions, helping wildlife to safely move underneath the carriageway and reducing the safety threat to animals and road users.

Adaptation to Climate Change

The Highways Agency was highlighted as having a key role to play in ensuring the UK's infrastructure is ready to adapt to the impacts of a changing climate. We volunteered to report under the Climate Change Act, and provided Defra with an interim bench marker report.

Our climate change risk assessment approach is about understanding the possible implications of climate change so we can plan for timely interventions to protect the highway asset and contribute to safe and reliable journeys.



Our Sustainable Development Action Plan (SDAP)

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Bat bridges – helping bats find their way across a new road



2010-11 Highways Agency Sustainability Report

	GREENHOUSE GAS (GHG) EMISSIONS (CO ₂ e tonnes)	2008-09	2009-10	2010-11	
Gross Emissions (tonne CO₂e)	Scope 1: Direct	10,000	7,000	7,110	Greenhouse Gas Emissions 2010-11
	Scope 2: Indirect emissions from network and estates electricity consumption	130,000	124,000	119,000	
	Scope 3 item: Business Travel	2,000	1,500	1,200	
	Scope 3 items: Suppliers' emissions	408,000	561,236*	505,700	
	Total	550,000	700,000	634,310	
Related Consumption Data	Estates (HA Offices and Regional Control Centres) Electricity (kWh)	3,108,225	2,616,372	3,543,898	Business Travel expenditure
	kWh Per head	1,782	1,383	1,774	
	Estates (HA Offices and Regional Control Centres) Gas (kWh)	1,968,312	1,646,612	1,512,680	
	kWh Per head	1,964	1,193	1,421	
	Private Car Fuel (Measured by Vehicle Mileage – Million road miles)	2.00	1.68	1.25	
	Hire Car Fuel (Measured by Vehicle Mileage – Million road miles)	2.12	1.75	1.25	
Financial Indicators	Total Energy Expenditure (roadside lighting and equipment, offices, RCCs and outstations)	Not Available		£20.300m	
	CRC Related Expenditure (Registration fee etc)	Not Applicable		£2,240	
	Expenditure on business travel	N/A	£4.150m	£2.520m	

PERFORMANCE COMMENTARY AND TARGETS

In 2010-11 the Agency met its Business Plan target to achieve a 3% reduction in carbon emissions from our direct energy and fuel usage, network energy and business travel when compared with 2008-09. Overall our gross emissions have reduced by 9% compared to 2009-10.

The dominant figure is Scope 3 supplier emissions in maintaining and improving the strategic road network. As levels of understanding and data availability increased through 2009-10, we saw an increase in the level of emissions being reported by suppliers. The footprint was further inflated in 2008-09 due to additional workload. We reduced our emissions due to our business travel by some 20% in 2010-11. The corresponding decrease in expenditure was some 39% and was largely due to travel policy changes in line with new spending controls.

* 2009-10 Scope 3 Supplier figure adjusted since publication of 2009-10 Annual Report to exclude employee commuting figures.

DIRECT IMPACTS

Scope 1 – This includes direct consumption of gas and, predominantly, fuel consumption by Agency-owned Traffic Officer patrol vehicles. The office gas usage for 2008-09 and 2009-10 relate to our offices at Leeds, Bedford, Exeter and Dorking. The 2010-11 figures include data for our Bristol office. Without this additional data, our offices achieved an 11% reduction in gas use in 2010-11 compared to 2009-10. Gas consumption data is not included for our Manchester office (we relocated to a new building in 2010-11 from one which had no gas supply - we have begun collecting data for next year's report), our London office (information only reported annually and not expected until later in 2011) and Birmingham (no gas supply).

Scope 2 – This covers electricity supplies to our buildings, our surplus property portfolio and the strategic road network (lighting, signs and signals). The office data for 2008-09 and 2009-10 relate to our offices in Leeds, Birmingham, Bedford, Exeter and Dorking. The 2010-11 figure has increased because we are now able to report data for our 3 remaining offices; Bristol, London (estimate) and Manchester (estimate). Without this additional data, our offices achieved a 7% reduction in 2010-11 compared to 2009-10. Where facilities are shared, agreements are in place to specify apportionment - usually based on occupied space. Our Network Energy Strategy is delivering energy reductions through efficiency programmes such as midnight switch off, lamp changes and changes to tunnel lighting and traffic signals.

Scope 3 Business Travel – Business travel undertaken by Highways Agency staff using 3rd party transport (including hire car use).

Scope 3 Suppliers Emissions – Supply-chain emissions (MAC, DBFO, Major Projects - 80%) and other transport i.e couriers, caterers, cleaners etc. This does not include any emissions related to embodied carbon for the Highways Agency administrative use of water. The supply chain emissions include energy & utilities, materials, transport and waste - embodied energy in materials purchased is the dominant emission source. Some suppliers have not included some information in reporting but this is not thought to be material and no estimate has been included to cover this missing data.

INDIRECT IMPACTS

Our work indirectly impacts on emissions made by road users and staff commuting - both of which fall outside of the accounting boundary of our footprint above. We undertake a considerably amount of work in encouraging road users to make better decisions about use of our network. Over the past year we have promoted active use of social media for journey planning and more effective use of variable message signs to influence and sometimes directly control (i.e. through speed/diversions) driver behaviour.

The Agency also influenced employee commuting by actively encouraging car sharing through Smart Travel and travel to work co-ordinators. Flexible and home working also contribute. It is estimated staff commuting generated 5,054 tonnes CO₂e in 2010-11. Due to the changes in the review of information, and recent office moves (Manchester & Birmingham), these emissions are not directly comparable to 2009-10 figures (6,264 tonnes CO₂e). However the Agency has made significant steps forward to reduce emissions through office locations, reduced parking, and other travel planning initiatives. 2010-11 employee commuting emissions for MACs, DBFOs and Major Projects was 12,688 tCO₂e.

WASTE		2008-09	2009-10	2010-11	Graphical Analysis
Non - Financial Indicators	Total Admin waste (tonnes)	183	189	287	
	Recycled waste (tonnes)	103	124	155	
	Kg per FTE	100	95	184	
	Percentage recycled	56%	66%	54%	

PERFORMANCE COMMENTARY AND TARGETS

The waste data for 2008-09 and 2009-10 relate to our offices in Leeds, Birmingham, Bedford, Exeter, Dorking and London. In the Bristol and Manchester office, the landlord is responsible for the building waste contracts. We were not able to obtain sufficient data to include in this year's annual report.

The 2010-11 figure includes the RCC's, which was included in prior years. We produced 287 tonnes of office (172 tonnes) and RCC (115 tonnes) waste during 2010-11 and recycled 155 tonnes or 54% of this. During 2010-11, the Agency moved offices in Birmingham and this relocation had a significant impact on the amount of waste we produced. Data collection methods to capture information about the Agency's construction waste are currently being considered for inclusion in future years.

FINITE RESOURCE CONSUMPTION: WATER		2008-09	2009-10	2010-11	Graphical Analysis
Non-Financial Indicators	Estates Water m ³	5,811	5,882	13,900	
	Estates Water tonnes (tonne CO ₂ e)	1.7	1.8	4.2	
	Per head m ³	5.8	5.4	13.1	

PERFORMANCE COMMENTARY AND TARGETS

The office water usage for 2008-09 and 2009-10 relates to offices in Leeds, Bedford (estimate based on information from our Landlord), Exeter and Dorking. The 2010-11 figure includes usage for our Bristol office and the RCC's, not included in previous years. When taken account of this additional data, we achieved a 17% reduction in water usage in 2010-11 when compared to 2008-09. In the Manchester, Birmingham and London offices the landlord is responsible for the water supply and we were not able to obtain Agency-specific data to include in this report.

DIRECT AND INDIRECT IMPACTS

The Highways Agency interacts with water in different ways – as a direct and indirect consumer, and through its highway drainage provisions. Water related to operational use including Major Projects has not been included. Currently focus has been on administrative function, however work will be underway on finite resource consumption such as metals and bitumen. Data on our National Traffic Control Centre and expenditure data for waste and water has not been included within this report but it is work in progress and we are looking to include it in future reports.

NOTES TO THE TABLE ABOVE:

Note 1: The above report has been prepared in accordance with guidelines laid down by HM Treasury in 'Public Sector Sustainability Reporting' published at www.financial-reporting.gov.uk.

Note 2: Defra conversion factors have been used to account for GHG Emissions. Scope 3 Supplier emissions calculations have also used the following; Environment Agency - Carbon Calculator for Construction Activities, Ofwat (2007) Security of Supply Report, Bath Inventory, Capita Symonds - Carbon Footprint of Motorway Electrical Equipment, Environment & Heritage Service - Municipal Waste Data Monitoring and Reporting, Department of Environment (1997). Energy Efficiency in Hotels, Defra / DECC National Energy Statistics and CIBSE (2004) - Guide G: Public Health Engineering.

Note 3: Electricity consumption figures for road lighting and roadside equipment is not included above due to the estimation methodology associated with unmetered supplies. Whilst this is used for carbon emissions to indicate the trend in performance, further work will be undertaken to ensure that consumption is robustly reflected in the report in future.

Note 4: At present estimation methodologies in relation to utilities is considered separately by different responsible unit. Consideration will be given over the coming year to developing a consistent cross-Agency methodology future reporting purposes.

Note 5: Financial information around the removal of waste and the consumption of water is not yet robust. Further work will be undertaken in the coming year to develop this information for inclusion in future reports.

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Section 6: Being more Sustainable - *continued*



Sustainable Procurement

The Agency's 2009 Procurement Strategy set out priorities for us and our supply chain partners on sustainable consumption and production, climate change, natural resources and sustainable communities.

We have taken practical steps with our suppliers to raise their awareness and ensure appropriate actions. Sustainability measures are now included in the pre-qualification stage of the procurement cycle via the Strategic Alignment Review Tool (StART). Contracts include requirements to monitor

sustainable development performance post-award by means of Sustainability Action Plans agreed between suppliers and the Agency. One procurement strategy priority is the participation of our key suppliers in the Carbon Disclosure Project for their corporate operations, and more than 70% of our suppliers have signed up to this so far.

Governance

We monitor our sustainability performance as part of our monthly performance management regime. Data is collected from internal estates, network managers and from our supply chain. Internal Audit undertake reviews of internal performance reporting information, and will also be focussing on energy data validation in support of our CRC Energy Efficiency Scheme reporting.

Sustainable use of waste materials from local sources in construction

