

TRANSPORT SCOTLAND SUSTAINABILITY REPORT 2011



Chief Executive Statement

Welcome to our first Sustainability Report which provides a snapshot of Transport Scotland's operational carbon emissions during 2011. We have reduced our operational carbon emissions by 7% in 2011 which is good progress in a short space of time, with significant reductions from building energy and business travel.



Where practicable, we have followed the principles set out in the Scottish Government's Public Sector Sustainability Reporting guidance. We hope the design and commentary within our Sustainability Report provides a clear but concise indication of our approach to corporate responsibility in mitigating our operational carbon emissions.

Finally, I must draw attention to the contribution of our Green16 team, who have volunteered to champion low carbon behaviours within the Agency.

Performance Summary (Calendar Year 2011)										
Element		Metric	Baseline in 2010	Actual in 2011	Target for 2011	FTE Actual in (2010) and 2011 ²	Actual in 2011	Targeted reduction for 2011	Indicator	Finance ³
Energy (Scope 1&2 GHG emissions)	Electricity	kg/ CO2e	332,580	320,253	315,951	(1,026) 965	- 4%	- 5%	V	- £109,665
	Gas	kg/ CO2e	249,037	183,792	236,585	(769) 554	- 27%	- 5%	Ψ	
Travel (Scope 3 GHG emissions)	Business Travel	kg/ CO2e	193,563	160,735	164,141	(606) 536	- 17%	- 15%	V	£282,530
	Commute Travel ⁴	kg/ CO2e	424,602	438,468	405,495	(1,311) 1,321	+ 3%	- 4.5%	^	N/A
Waste	Waste	kg/ CO2e	6,468	11,339	6,198	(20) 35	+ 76%	- 4.2%	^	£21,450

⁴ See the notes section for clarity on the calculation, and interpretation, of the commute travel data.

¹ kg/CO2e figures are based on the DEFRA 2011 GHG conversion factors (our CMP 2011 used the 2009 GHG conversion factors)
² Full-time equivalent figures are shown as kg/CO2e per person. Staff headcount for Transport Scotland across our estate was 404 in 2010 and 412 in 2011. The FTE data for travel is based on the headcount across our estate whilst the FTE data for energy and waste covers only staff based in Buchanan House. With approximately 80 staff based in Victoria Quay, the energy and waste FTE data is based on

headcounts of 324 and 332 for 2010 and 2011 respectively.

³ Financial information is inclusive of VAT except for business travel which is zero-rated. Our energy finance figure represents the total cost of 'utilities' including gas, electricity and water from Buchanan House. Our waste finance figure represents the total service charge for the floor area occupied by Transport Scotland at Buchanan House, which includes waste management, pest control and window cleaning.

Introduction

Our first Carbon Management Plan (CMP) was completed in June 2011 under the direction of the Carbon Trust's carbon management programme. We set an ambitious absolute target to reduce our operational carbon footprint by 16% by the end of December 2013 against a 2010 baseline, using the Carbon Trust's Carbon Management Project Register tool. The CMP 2011 defined the scope of operational emissions as electricity and natural gas consumption at our Buchanan House office (a leased office in Glasgow city centre), all business travel, all commuter travel and waste production at Buchanan House.

Our CMP 2011 scope represents the accounting boundary for our first Sustainability Reporting, with additional detail being provided on water consumption, biodiversity and sustainable procurement. Subsequent Sustainability Reports from Transport Scotland will, in all likelihood, go beyond our CMP scope to provide commentary on sustainability performance for operations within our budgetary control, such as outsourced contracts or Scope 2 network energy consumption.

To facilitate transparency and accountability, the financial and non-financial information in this report follows the recommendations in the Public Sector Sustainability Reporting Guidance⁵. A consistent table design allows for comparison of benchmark/baseline and yearly targets against actual performance whilst metrics are also provided in both absolute and full time equivalent formats. Colour coded arrows highlight whether operational emissions have increased or deceased between 2010 and 2011. An overview of forward plans for 2012 has also been provided. Given the alignment to our CMP 2011, our Sustainability Report is based on the calendar year rather than the financial year.

We have sought to provide a snapshot of pre-existing and early CMP mitigation activities that have been led by our Green16 team. Further detail on our CMP 2011 actions across our operational emissions will be communicated via our website.

⁵ http://www.scotland.gov.uk/Publications/2012/01/05153413/0

Energy	Metric	Baseline in 2010	Actual in 2011	Target for 2011	Actual in 2011	Targeted reduction for 2011	Indicator
Electricity (PU)	kg/ CO2e	332,580	320,253	315,951	- 4%	- 5%	<u>J</u>
Electricity (BH)	kWh	608,374	585,826	577,955	- 470	- 3 /6	•
Gas (BH) ⁶	kg/ CO2e	249,037	183,792	236,585	- 27%	- 5%	<u>J</u>
Gas (DII)	kWh	1,353,754	999,088	1,286,066	- 21 70	- 3 /6	~

Our CMP 2011 set a target to reduce both gas and electricity emissions from Buchanan House (BH) by 14.3% from the 2010 baseline by December 2013. Performance in 2011 suggests that we are on-track to achieve the gas target with steady progress made in year 1 on our electricity target.

PERFORMANCE IN THE REPORTED YEAR - CARBON MANAGEMENT PLAN ACTIONS IN 2011

Significant efforts have been taken by DTZ to reduce carbon emissions at Buchanan House on behalf of all their tenants. With the cold winter weather of 2010 perhaps skewing the 2010 gas baseline, a reduction in gas consumption for heating during 2011 might have been expected, but a 27% reduction is unlikely to be attributed solely to atmospheric changes. Early CMP actions undertaken by Transport Scotland in 2011 included staff awareness campaigns to turn off meeting room lights, motion sensors on drink chiller cabinets, alteration of Passive InfraRed (PIR) sensor settings to reduce the time taken to automatically turn off office lights, introduction of multi-functional devices to replace desk printers and changing the specification of office ceiling lamp fittings from 24W to 14W bulbs with no detectable reduction in lighting lumen level or staff comfort. The reduction in energy emissions during 2011 would equate to an approximate saving of £13,300.

FORWARD PLANS - CARBON MANAGEMENT PLAN ACTIONS IN 2012

Implementation of thermal comfort guidance for our offices will seek to reduce both gas consumption (from office heating) and electricity consumption (from office cooling). A review of the Buchanan House office ceiling lighting controls will be undertaken to determine whether manual light switches can operate in conjunction with the PIR sensors to reduce the time that office lights are on during the day. Low carbon behaviour training sessions will be delivered by the Carbon Trust and offered to all Transport Scotland staff.

⁶ As a single gas meter exists for Buchanan House, a proxy floor area calculation of c.30% is used to estimate our own gas consumption as a proportion of the overall building gas consumption.

Business Travel	Metric	Baseline in 2010	Actual in 2011	Target for 2011	Actual reduction in 2011	Targeted kg/ CO2e reduction for 2011	Indicator
Business travel	kg/ CO2e	193,563	160,735	164,141	- 17%	- 15%	
overall (Scope 3	Km	1,785,684	1,418,223	1,514,260			.
GHG emissions)	Km per FTE	4,420	3,442	3,748			
	kg/ CO2e	67,752	53,319	57,454	- 21%	- 15%	
Rail	Km	1,048,136	824,856	888,819			$lack \Psi$
	Km per FTE	2,594	2,002	2,128			
	kg/ CO2e	51,451	30,233	43,640	- 41%	- 15%	
Air	Km	394,064	230,667	334,166			V
	Km per FTE	975	560	827			
	kg/ CO2e	69,563	71,644	58,989	+ 3%	- 15%	
Hire Car	Km	316,649	331,403	268,518			^
	Km per FTE	783	804	652			
	kg/ CO2e	2,787	2,956	2,363	+ 6%	- 15%	
Taxi	Km	13,140	13,935	11,142			^
	Km per FTE	33	34	28			
	kg/ CO2e	2,010	2,583	1,704	+ 22%	- 15%	
Bus	Km	13,511	17,362	11,457			^
	Km per FTE	33	42	24			
Commute Travel	Metric	Baseline in 2010	Estimated for 2011	Target for 2011	Estimated for 2011	Targeted reduction for 2011	Indicator
Commute travel	kg/ CO2e	424,602	438,468	405,495	+ 3%	4.50/	<u> </u>
(Scope 3 GHG emissions)	Km ³	4,615,255	4,765,971	3,913,736	+ 3%	- 4.5%	^

Our CMP 2011 set a target to reduce business travel by 39% from the 2010 baseline by December 2013. This target takes into account, and in fact strengthens, the targets published in our Travel Plan 2010/13. Commute data (e.g. the travel-to-work) was not collected in 2011. The data shown above in italics is an estimate only based on a sample of our staff in 2008; as such the figures are not representative of the total commute emissions for all our staff. The reader is directed to the Notes section for further details.

PERFORMANCE IN THE REPORTED YEAR - CARBON MANAGEMENT PLAN ACTIONS IN 2011

Operational emissions from business travel reduced by 17% in 2011. Significant emission reductions were achieved for rail and air travel but hire car, taxi and bus emissions increased. With the Scottish Government travel agent contract changing supplier in the last quarter of 2011, we have sought to ensure that, where practicable, all business travel journeys managed by the travel agent contract have been captured in this Report. Given that our CMP 2011 built upon the aspirations of our Travel Plan 2010/13, we have also reported on our progress against the targets originally published in the Travel Plan 2010/13.

The headline business travel target in our Travel Plan 2010/13 was to reduce our annual business travel emissions by 34,500 kg CO2e (or 15%) from a baseline of 223,337 kg CO2e in 2008. We have reduced our business travel emissions from 182,272 kg CO2e in 2010 to 161,874 kg CO2e in 2011 (a reduction of 20,908 kg CO2e between 2010 and 2011), thus achieving the headline Travel Plan 2010/13 business travel target.

Rail travel emissions from journeys across the UK reduced by 21% between 2010 and 2011 from 67,752 kg CO2e to 53,319 kg CO2e. A significant proportion of our rail journeys occur between Glasgow and Edinburgh. We have reduced the distances travelled on the Glasgow/Edinburgh route from 791,222 km to 331,616 km between 2010 and 2011, which represents a 58% reduction in distance travelled and equates to a carbon emission reduction from 51,145 kg CO2e in 2010 to 21,436 kg CO2e in 2011 for this route in particular. Our Travel Plan 2010/13 target T2 was to reduce business travel emissions resulting from travel between Glasgow and Edinburgh by 13% (or 6,000 kg CO2e) from a baseline of 45,608 kg CO2e in 2008. As such, target T2 has already been achieved.

Air travel emissions reduced by 41% between 2010 and 2011 from 51,451 kg CO2e to 30,233 kg CO2e. It is worth noting that the our Travel Plan 2010/13 target T3 was to reduce our air journey emissions, particularly between Scotland and London, by 20,000 kg CO2e from a baseline of 98,717 kg CO2e⁷ in 2008. This target was achieved by 2010, before the CMP 2011 was implemented. Domestic air travel emissions reduced by 49% between 2010 and 2011 from 31,207 kg CO2e to 16,030 kg CO2e. Short haul international flight emissions have also decreased by 74% between 2010 and 2011.

Bus travel emissions from our use of Lothian buses in Edinburgh have increased by 22%.

Hire car emissions have increased by 3% between 2010 and 2011 from 69,593 kg CO2e to 71,644 kg CO2e, which aligns with a general upward trend in distances travelled by hire car for business use since 2006. The original Travel Plan 2010/13 target T4 was to reduce our emissions from private and hire car use on business journeys by 6,000 kg CO2e from a baseline of 57,309 kg CO2e in 2008 (of which hire cars accounted for c.52,000 kg CO2e). Target T4 of the Travel Plan 2010/13 has not yet been achieved.

Use of teleconference and videoconference technology can offer an alternative to travelling e.g. the greenest mile is the mile not travelled. Transport Scotland has installed five videoconference units across our offices during 2010 and 2011. Staff at Buchanan House and the Traffic Scotland Control Centre collectively used the videoconference units 132 times in 2011, whilst 608 uses of our teleconference bat-phones in Buchanan House alone were recorded in 2011.

FORWARD PLANS - CARBON MANAGEMENT PLAN ACTIONS IN 2012

A business travel mission statement will be considered in 2012. Specifically, a hire car position statement will be developed to encourage the use of hire cars with the lowest possible emissions, in tandem with the consideration of long-term lower-carbon small hire cars for Buchanan House. Regular (and increased) use of teleconference and videoconference will be encouraged via staff training, promotional campaigns and possible creation of a videoconference-only room at Buchanan House. Liaison with the 2020 Climate Group during 2012 will focus on practical measures to reduce business travel.

On the topic of commute travel to work, we will undertake an online staff survey in 2012 in order to determine whether our commute travel carbon footprint has increased or decreased since 2008.

⁷ From our Travel Plan 2007/09 which is available at http://www.transportscotland.gov.uk/files/documents/reports/j9425.pdf

Waste	Metric Baseline in 2010 ⁸		Actual in 2011	Target for 2011	Actual in 2011	Targeted reduction for 2011	Indicator
Buchanan House	kg/ CO2e	6,468	11,399	6,198	+ 76%	- 4%	
Buchanan nouse	Tonnes	14	25.5	13			T
Breakdowr	Breakdown of metric data			Segregated paper in 2011	Segregated recyclate in 2011	Shredded paper in 2011	Total
	Number of bags		3,395	2,337	2,751	664	
Buchanan House	Average weight per bag (kg)		2.08	3.50	2.89	3.50	
	Total weight (kg)		7,062	8,180	7,950	2,324	25,515

Our CMP 2011 set a year-on-year emission reduction target of 4% in order to achieve a 12% reduction in office waste by 2013, from our baseline of 14 tonnes in 2010. Only office waste generated from Buchanan House was considered for this target (the target does not incorporate waste from any other offices or construction site). No recycling target was set within the CMP 2011. Office waste at Buchanan House is now captured in four distinct waste streams, as noted in the table above, with waste bin islands replacing individual desk bins in mid 2010. Clear posters on every bin communicate what waste can or cannot go into each bin.

PERFORMANCE IN THE REPORTED YEAR - CARBON MANAGEMENT PLAN ACTIONS IN 2011

Data collected in 2011 suggested that our waste generation by weight increased by 82% in 2011. However, a combination of improved data collection methods implemented in early 2011 (between Transport Scotland and our facilities management contractor) along with limitations in the original waste dataset (see footnote 8) would infer that our 2010 baseline was almost certainly an underestimation of how much waste we really produced at Buchanan House. Waste weights generated by Transport Scotland cannot be determined from the weight of FEL bins provided by the waste management contractor at Buchanan House as Transport Scotland share this office with other tenants who all collectively use the FEL bins. Based on typical recycling rates for Scottish transfer stations, 24.1 tonnes of the 25.5 tonnes of waste produced would have been recycled (e.g. 94.5% diversion from landfill) and 1.4 tonnes would have been sent to landfill. As noted above, we introduced multi-functional devices in early 2011, which subsequently led to a 44% reduction in the quantity of paper being used to print documents e.g. less printing equals less paper waste.

FORWARD PLANS - CARBON MANAGEMENT PLAN ACTIONS IN 2012

Maintaining and refining our waste data collection methods will be sought. Alteration in the layout of the recycling bins in comparison to the mixed waste bins may be considered. Communicating our waste performance - based on the data used to produce this Sustainability Report – to our staff will be supported with options to reduce waste.

⁸ CMP 2011 waste data for 2010 was restricted to mixed recyclate waste and segregated paper; general mixed waste data was not included in the 2010 baseline due to a lack of raw data. The 2011 data does now include general mixed waste along with segregated paper, shredded paper and segregated recyclate. Average weight of bags is calculated from a quarterly sample, where every bag collected on a specific day is weighed.

Water	Metric	Baseline in 2010	Estimated in 2011	Target for 2011	Actual in 2011	Targeted reduction 2011	Indicator
Buchanan House	m3	2,203	2,604	No Target	N/A	No Target	

Our CMP 2011 did not set a reduction target for water consumption. However, we estimate the level of water consumption at Buchanan House based on advice from DTZ, using a multiplier of 6.8m3 per FTE per year (see footnote 2 for FTE calculation).

FORWARD PLANS - CARBON MANAGEMENT PLAN ACTIONS IN 2012

We will obtain metered readings from DTZ and implement Carbon Trust waste audit recommendations for water savings via toilet/urinal flush controls.

Biodiversity

TARGETS AND COMMENTARY

Transport Scotland utilise leased office space within offices located in sites within city centres. The opportunity to directly impact biodiversity via our office environments is very limited. Albeit beyond the scope of our CMP 2011, Transport Scotland's Corporate Plan commits to maintaining and improving the biodiversity of Scotland's national transport networks for which we are responsible. In 2011 we initiated the refresh of our landscape design and management policy document, which will update our Cost Effective Landscape: Learning from Nature publication.

Sustainable Procurement

TARGETS AND COMMENTARY

Our approach to Sustainable Procurement has been driven by the goals of the Sustainable Procurement Action Plan. We have undertaken a desktop exercise to assess our performance against the Flexible Framework criteria. Several staff have also attended the Marrakech Task Force training on Sustainable Public Procurement, with the intention being to offer such training to all of our staff with delegated purchasing authority in 2012.

Notes and lessons learnt

General

- During the production of our first Sustainability Report, we obtained data particularly with respect to business travel – from our internal systems that was not accessible at the time of writing the CMP 2011. As such, the 2010 baseline year figures and interim year-on-year targets in our CMP 2011 have been revised with updated baseline figures and targets used in this Sustainability Report. This "rebaselining" approach is advocated by the Carbon Trust's Carbon Management Revisited Programme; indeed, Transport Scotland intend to participate in this programme in late 2012.
- One significant positive gain from writing this Report was that the internal quality assurance of, and the confidence in, our raw data was improved substantially. In some instances, the raw data provided by third parties with respect to distances travelled by rail or air in particular was inaccurate. One key lesson learnt during the production of this Sustainability Report has been to check the raw data provided by third parties in order to ensure is robustness, quality and completeness.
- Normalising reported performance is achieved by using our full time equivalent staff number

- rather than our total financial outturn. Normalised performance is shown in the Performance Summary table in this Report.
- Although not discussed in this Report, further detail on climate change adaptation, sustainable construction and governance processes that support management of sustainability performance will be available on our website.

Energy

- Only energy consumed at Buchanan House in Glasgow is reported here. Subsequent revision of our Carbon Management Plan in 2012 may consider widening the building energy footprint to include energy consumption from our use of shared office space at Victoria Quay in Edinburgh (the headquarters for the Scottish Government civil service) and also from the new Traffic Scotland Control Centre.
- Gas consumption at Buchanan House is estimated from the total building energy consumption, based on the floor area occupied by Transport Scotland versus the other building tenants.

Business Travel

- Medium and large hire car travel distance figures in the CMP 2011 were underestimates. Refined car hire data for 2010 is presented in this Report
- Flexi pass rail ticket distances between Glasgow and Edinburgh were not captured in the CMP 2011 because the data could not be sourced at the time of writing. Such data has subsequently been obtained and is incorporated into the figures shown in this Report; the rail baseline and targets have been revised accordingly.
- Reductions in rail journeys (for business) may be influenced by the cessation of the 5 year travel subsidy provided to Transport Scotland staff that relocated from Edinburgh to Glasgow in 2007.
 As a result, such journeys by staff which had previously been captured under business travel rail use may, in future, be captured under commuting travel to work. It is possible that an increase in bus commute to work (from Edinburgh to Glasgow especially) may be witnessed in subsequent years.
- Grey fleet data has not been included in either the 2010 baseline or 2011 business travel information. However, we will endeavour to include grey fleet data in future Sustainability Reports.
- Car hire emission figures were calculated on the presumption that all cars were petrol but of
 various engine sizes. At the time of calculation, we did not have an accurate breakdown of petrol
 versus diesel cars. Subsequently, we have identified that our petrol:diesel share for hire cars is
 approximately 50:50. With the DEFRA conversion factor for petrol cars being slightly bigger than
 for diesel cars, the carbon emission figures for hire cars published in this Report will be slightly
 higher than our true hire car emissions profile.

Commute Travel

- Commute data was collected in 2006 and 2008 via online survey's of Transport Scotland staff.
 The headline data was communicated in Section 2.1 and 2.2 of our Travel Plan 2010/13. Whilst
 the surveys achieved response rates of c.70%, such data should not have been considered
 representative of the total commute distance or emissions for all our staff.
- The 2010 and 2011 data show in the Performance Summary section of this Report is an estimate only, based on the FTE headcount percentage increase from 2010 to 2011. It must be stressed that, as noted above, the 2010 and 2011 estimates are based on a sampled data set from 2008 rather than an absolute data set from 2008. Commute data (e.g. the travel-to-work) was not collected in 2011.

Further copies of this document are available, on request, in audio and large print formats and in community languages (Urdu; Bengali; Gaelic; Hindi; Punjabi; Cantonese; Arabic; Polish).

এই ডকুমেন্ট-এর (দলিল) অতিরিক্ত কপি, অডিও এবং বড়ো ছাপার অক্ষর আকারে এবং সম্প্রদায়গুলোর ভাষায় অনুরোধের মাধ্যমে পাওয়া যাবে, অনুগ্রহ করে যোগাযোগ করুন:

Gheibhear lethbhreacan a bharrachd ann an cruth ris an èistear, ann an clò mòr agus ann an cànain coimhearsnachd. Cuir fios gu:

इस दस्तावेज/कागजात की और प्रतियाँ, माँगे जाने पर, ऑडियो टैप पर और बड़े अक्षरों में तथा कम्यूनिटी भाषाओं में मिल सकती हैं, कृपया संपर्क करें:

ਇਸ ਦਸਤਾਵੇਜ਼/ਕਾਗ਼ਜ਼ਾਤ ਦੀਆਂ ਹੋਰ ਕਾਪੀਆਂ, ਮੰਗੇ ਜਾਣ 'ਤੇ, ਆੱਡਿਓ ਟੇਪ ਉੱਪਰ ਅਤੇ ਵੱਡੇ ਅੱਖਰਾਂ ਵਿਚ ਅਤੇ ਕੰਮਿਉਨਿਟੀ ਭਾਸ਼ਾਵਾਂ ਦੇ ਵਿਚ ਮਿਲ ਸਕਦੀਆਂ ਹਨ, ਕ੍ਰਿਪਾ ਕਰਕੇ ਸੰਪਰਕ ਕਰੋ:

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Aby otrzymać niniejszy dokument w innej wersji językowej, na kasecie lub w wersji z powiększonym drukiem, prosimy o kontakt:

Transport Scotland, Buchanan House, 58 Port Dundas Road, Glasgow, G4 0HF 0141 272 7100 info@transportscotland.gsi.gov.uk www.transportscotland.gov.uk

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