CARBON MANAGEMENT PLAN

Version 2

CONTENTS

FOREWORD from the project sponsor

As an agency of the Scottish Government, Transport Scotland's guiding principle on climate change is to ensure that at every level, at every stage and in every transport project, climate change mitigation and adaptation considerations are embedded in all our activities. This ethos is equally true for our office-based operations.

In late 2011 we participated in the Carbon Trust's carbon management programme to produce our first Carbon Management Plan (CMP). In late 2012 we agreed to participate in the Carbon Trusts carbon management revisited programme, which has resulted in the production of this CMP version 2.0. We have rebaselined, obtained new datasets and identified new projects to reduce our operational emissions. We hope that our CMP acts as a clear statement of intent concerning our operational emissions and offers a structured route-map for future action on climate change mitigation associated with our, commuter travel, office energy consumption, office waste and especially our business travel.

The CMP v2.0 cover all of our main offices including Buchanan House, Victoria Quay and the Traffic Control Centre. The CMP supersedes our Travel Plan 2010-13.
With the leadership of our Green Network, we have made good progress over the last 3 years and are quite proud of the real carbon reductions that have been achieved so far. Nevertheless, every Transport Scotland staff member has a responsibility to make practical efforts to reduce carbon emissions from their activities whilst travelling to work, travelling for work or working within our offices.

Andrew Maclaren
Head of Business Improvement & Corporate Services, Transport Scotland.

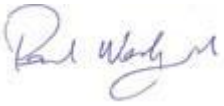
FOREWORD from the Carbon Trust

Cutting carbon emissions as part of the fight against climate change should be a key priority for all public bodies - it's all about getting your own house in order and leading by example. The Scottish Government, with the support of the Carbon Trust, has encouraged over 150 Scottish public sector organisations – including Transport Scotland in 2011 - to develop a Carbon Management Plan in line with world-leading Scottish and UK Climate Change legislation.

Developing, monitoring and implementing an organisational Carbon Management Plan assists organisations to save money from energy bills and other operational costs; money which can then be used in other important areas, whilst making a positive contribution to the environment by lowering their carbon emissions.

During 2012/13, Transport Scotland took part in the Carbon Trust's *Revisited* programme with the aim of reviewing and refreshing their existing Carbon Management Plan, to continue in driving down Transport Scotland's operational carbon emissions.

This updated Carbon Management Plan commits Transport Scotland to a target of reducing its operational CO_2 emissions by 16% by the end of 2015/16. The Carbon Trust is proud to support Transport Scotland in the on-going development and implementation of its Carbon Management Plan



Paul Wedgwood
Manager, Carbon Trust in Scotland

1. Executive Summary

Transport Scotland is an agency of the Scottish Government responsible, on behalf of Scottish Ministers, for delivering a safe, efficient, cost-effective and sustainable national transport system for the benefit of the people of Scotland. This plays a key role in helping to achieve the Scottish Government's Purpose of increasing sustainable economic growth with opportunities for all of Scotland to flourish.

Transport Scotland's first Carbon Management Plan (CMP) was produced in 2011 and was incorporated into the Transport Scotland Corporate Business Plan 2012/15. Early diagnostic analysis undertaken during the Carbon Trust's Carbon Management Revisited programme in late 2012 identified areas for CMP improvement such as strengthening the carbon footprint baseline and revising data-capture procedures.

The CMP is Transport Scotland's mechanism for delivering the public bodies duties of the Climate Change (Scotland) Act with respect to operations at our offices. As such, the operational boundary/scope of this CMP v2 covers activities at Buchanan House, Atlantic Quay, Victoria Quay and the Traffic Scotland traffic control centre. Our operational carbon footprint scope encompasses specific strategic themes: (1) reduction of, and modal shift across, our business and commuter travel (2) reduction of our electricity and gas consumption (3) reduction of waste and increase in waste segregation and recycling and (4) delivery of training and regular communication to facilitate staff behaviour change. Homeworking, materials and network energy are currently excluded from this CMP v2 scope.

Our low carbon organisational vision is to achieve year-on-year operational emission reductions, to encourage and facilitate staff behavioural change and for our environmental management approach across the CMP v2 scope to be award winning. The key CMP v2 objective must be to enable and facilitate an efficient workplace in terms of workforce time, money and energy consumption along with supporting workplace wellbeing.

Transport Scotland has committed to an absolute reduction of our operational carbon footprint by 16% by the end of 2015/16 from a baseline of 1,363 tonnes of carbon dioxide equivalent (tCO_2e) in 2010/11. An operational emission figure of 2.83 tCO_2e per full-time equivalent staff will also be targeted for 2015/16.
We have utilised the Carbon Trust Carbon Management Project Register (CMPR) as a guide tool to identify a series of carbon reduction projects that collectively would contribute to the achievement of the absolute target stated above. Funding of c.£10,000 per year has been allocated by the Project Sponsor to aid delivery of planned projects which require a capital outlay; the projects are a mixture of policy/procedure improvements and alterations to hardware/controls.

The Green Network is chaired by the CMP Project Sponsor (Andrew Maclaren, Head of BICS) with periodic reporting into the Transport Scotland senior management team. A Standard Operating Procedure outlines how staff in BICS and the Environment & Sustainability Branch will have responsibility for managing data collection, tracking, interpretation and progress (sustainability) report production along with general updates to the Green Network.

2. Background

2.1. Introduction

Transport Scotland participated in the Carbon Trust's Carbon Management Programme in 2010 with the output being our first Carbon Management Plan (CMP). A review of CMP v1 is provided in Section 2.3. Diagnostic analysis undertaken at the start of the Carbon Management Revisited 2012/13 programme (via the Carbon Trust) highlighted positive progress during this timeframe but also identified key areas for improvement, namely strengthening the original carbon footprint baseline, revising the target timeline, improving data-capture procedures (particularly to capturing data from a variety of sources) and stakeholder engagement. The CMP Version 2.0 aims to address these points and should provide a structured route-map for future action on mitigation of our operational carbon emissions[1].

2.2. Background to Transport Scotland

Transport Scotland is an agency of the Scottish Government responsible, on behalf of Scottish Ministers, for delivering a safe, efficient, cost-effective and sustainable national transport system for the benefit of the people of Scotland. This plays a key role in helping to achieve the Scottish Government's Purpose of increasing sustainable economic growth with opportunities for all of Scotland to flourish. Our remit also covers sustainable transport, which is encapsulated by our Corporate Plan 2012/15 delivery priority for "low carbon technology and infrastructure, reduced emissions". Footnote 10 outlines are transport policy focus to promote and invest in green travel initiatives.

Our Annual Business Plan 2013/14 provides furher details about our role, and task 29.11 commits to the implementation of a CMP that supports the reduction of emissions that are directly in our sphere of influence.

Transport Scotland operate from a mixture of leased and owned property at Buchanan House, Victoria Quay, Atlantic Quay and the new Traffic Scotland Traffic control centre.

2.3. Review of Transport Scotland's CMP v1

Our Travel Plans for 2008/10 and 2010/13 were our first statements of intent concerning our operational carbon emissions prior to participation in the Carbon Management Programme in 2011. Our first Carbon Management Plan (May 2011) – described hereafter as CMP v1 - set a reduction target of 16% by 2013 based on a 2010 baseline (calendar year) carbon footprint of 1,070 tCO_2e; this equated to an overall reduction of 171 tCO_2e across the 3 year period to end 2013. The 2010 footprint included emissions from electricity and gas at Buchanan House in tandem with business and commute transport and office waste for all our offices.

The CMP v1 was overseen by our voluntary Green Network (see Section 7.3). In preparing our Sustainability Report 2011 - which summarised progress of the CMP v1 - we adjusted the baseline to take account of new data that was becoming apparent at the start of the Revisited Programme.

[1] See Section 4.1 for a definition of 'operational carbon emissions' with respect to Scope 1, 2 and 3 emissions.

In common with our peers across Scotland, the complexities associated with delivering a comprehensive carbon management programme became apparent in the first year of our CMP v1 (during 2011). With hindsight, the reduction target by the end of 2013 was too ambitious and not realistic[2].

We noted in our CMP v1 that the baseline data was incomplete, where Flexipass train journeys and business travel expenses were not included. We gained experience during late 2011 and 2012 in accessing data that was both more wide ranging and more accurate; this aspect was one reason for an early refresh of the CMP. As a result of the Revisited Programme, we have revised the baseline and targets against financial years, in keeping with Sustainability Reporting guidance. The headlines changes in data can be seen in Table 1. The revised baseline footprint and targets are detailed in Section 4.2 and 3.4 respectively.

Status	Year	Carbon Footprint (tCO_2e)
Carbon Management Plan v1 (calendar year)	2010	1,070
Target based on 16% reduction (calendar year)	End of 2013	899
Revised baseline footprint of CMP v2 (financial year)	2010/11	1,363*
Targeted footprint within this CMP v2, based on a 16% reduction of the 2010/11 baseline	2015/16	1,145

Table 1: Comparison of CMP v1 and CMP v2 carbon footprints and targets in tCO_2e. * indicates that a further breakdown of the revised baseline footprint of CMP v2 can be found in Table 6.

[2] Calculating the CMP v1 reduction target relied on over-complicated and error-prone RAP and CMPR tools; these tools also contained guide percentage reduction predictions from a selection of estate-based projects which were simply not realistic or applicable to the estate occupied by Transport Scotland.

3. Carbon management strategy

3.1. Legislative Context for Carbon Management

The Climate Change (Scotland) Act 2009 has set challenging national carbon reduction targets of a 42% reduction by 2020 and 80% by 2050 compared to 1990 levels. The Act has also placed a statutory duty (known as the public bodies duties) on public sector bodies like Transport Scotland to act:

- In the way best calculated to contribute to the delivery of the targets
- In the way best calculated to help deliver any programme laid before the Scottish Parliament
- In a way that is considered most sustainable.

3.2. CMP Vision

As an agency of the Scottish Government, Transport Scotland low carbon vision is founded upon the Scottish Government's Greener Strategic Objective and the National Outcome for environmental impact. Transport Scotland's guiding principle on climate change is to ensure that at every level, at every stage and in every transport project, climate change mitigation and adaptation considerations are embedded in all our activities. We will endeavour to demonstrate the principles of a low carbon organisation via the low carbon vision outlined in Table 2.

Vision	Delivery mechanism and timescale
We will target year-on-year operational emission reductions associated with our business travel, commute travel, energy consumption and waste production	The CMP v2 will cover the period until 2015/16 with a review in conjunction with the corporate business plan period after 2014/15 to set further targets to 2020
Minimising carbon emissions will influence decision making by senior managers in Transport Scotland with respect to operations at our offices.	Minimising carbon emissions will be a guiding principle of the Green Network from April 2013. The CMP will be a component part of the TS climate change action plan.
Our approach to environmental management specifically within Transport Scotland's leased and owned office space at Buchanan House and the Traffic Control Centre will be award winning	Transport Scotland will seek to enter a national environmental award in 2014.
Process and procedural change is not enough; Rather, behavioural change through staff collaboration will provide the focal point of operational carbon reduction.	Training, engagement, competition and communication across our Directorates will utilise new and existing tools between 2013 and 2016.

Table 2: Transport Scotland's Vision and mechanism for its delivery

3.3. Strategic Themes

Realising our vision will require practical delivery and change across the following strategic themes:

- Reduction of, and modal shift across, our business and commuter travel; these travel-related issues will be the principle focus of the CMP v2 between 2013/14 and 2015/16.
- Reduction of our electricity consumption, particularly through the internal lighting of Buchanan House and the Traffic Control Centre.
- Reduction of our natural gas consumption, particularly through office thermal comfort.
- Reduction of waste produced and an increase in waste segregation and recycling .
- Delivery of training and regular communication to facilitate staff behaviour change
- Quarterly monitoring and review/revision of data, targets and project delivery.

3.4. Targets

Transport Scotland will reduce our operational carbon footprint by 16% by the end of 2015/16. The baseline year is 2010/11. The carbon footprint encompasses building energy consumption, travel[3] for both business and commute and office waste.

Following the CMP v1, we have retained an overall 16% absolute target which we believe is still challenging but realistic[4]. The overall 16% absolute target can be broken down into a series of topic-specific targets, based on the data presented in Table 6 and Table 9:

- We will reduce business travel emissions by 19.4% from the 2010/11 baseline by 2015/16
- We will aim to reduce commute travel emissions by 7.8% from the 2012/13 baseline by 2015/16
- We will reduce office energy emissions by 6.1% from the 2010/11 baseline by 2015/16[5]
- We will reduce office waste emissions by 25% from the 2010/11 baseline by 2015/16

[3] Transport Scotland's Travel Plan was published in 2006 and then revised in 2010. The Travel Plan 10/13 targets have now been superseded by revised targets within this CMP v2. Our Sustainability Report 2011 provides a detailed summary of our progress against the Travel Plan 10/13 targets.

[4] With the baseline emissions increasing by 27% as new data sources were identified (see Table 1), the 16% absolute target from CMP v1 has been retained for CMP v2 but the delivery date has been revised to the end of 2015/16. Projects identified within the CMPR tool during the Revisited Programme suggest that a reduction target beyond 16% would be unrealistic, particularly given the limited ability to influence/reduce office based utility emissions. A targeted yearly reduction of 3.2% per year until 2015/16 is comparable to other major players in the public sector e.g. SNH, SportScotland,

[5] Reducing our gas consumption (for heating Buchanan House) will require cooperation from the other tenants of Buchanan House; given that the gas consumption is only estimated based on the entire office consumption. Transport Scotland's efforts to reduce our gas consumption at Buchanan House could be offset by other tenants increasing their consumption.

Based on a revised 2010/11 baseline footprint of 1,363 tCO_2e, a 16% reduction would result in a 2015/16 footprint of 1,145 tCO_2e, equating to a target reduction of 218 tCO_2e. The 16% targeted reduction would be achieved by 50%:50% split between projects listed in Section 5.1 and 5.2 and grid factor emission reductions, as discussed in Section 4.5. The projects listed in Section 5 could achieve approximately 114 tCO_2e of the 218 tCO_2e targeted reduction.

3.5. Objectives

Two objectives have been identified for the CMP v2 for achievement during 2013/14 to 2015/16:

- To enable and facilitate efficient workplaces which can be demonstrated through the efficient use of workforce time, money and energy along with supporting workplace wellbeing.
- To demonstrate practical implementation of the public bodies duties.

3.6. Normalised indicator

Section 3.4 details an absolute reduction target. We will also monitor our operational carbon reduction performance against a normalised indicator, namely tonnes of CO_2e per full time equivalent person (FTE)[6]. The normalised indicator will be based on the full time and agency staff who were permanently based at our offices. The staff headcount for Transport Scotland in 2010/11 was an average of 404 people across the 12 month period. As such, with the baseline in 2010/11 being 1,363 tCO_2e, the FTE operational carbon emission figure was 3.37 tCO_2e per FTE in 2010/11. Therefore, an operational emission figure of 2.83 per FTE will be targeted for 2015/16.

[6] Full time equivalent persons equates to full time and agency staff who were permanently based at our offices

4. Emissions scope, baseline and factors

4.1. Boundaries and Scope

Carbon footprints are generally defined in relation to two boundaries: the organisational boundary and the operational boundary.

The **organisational boundary** sets out which assets are to be included in a carbon footprint, as detailed in Figure 1, where the focus is on office-based operational emissions. The emissions associated with the construction, maintenance and operation of transport networks are currently outwith the scope of the CMP v2.

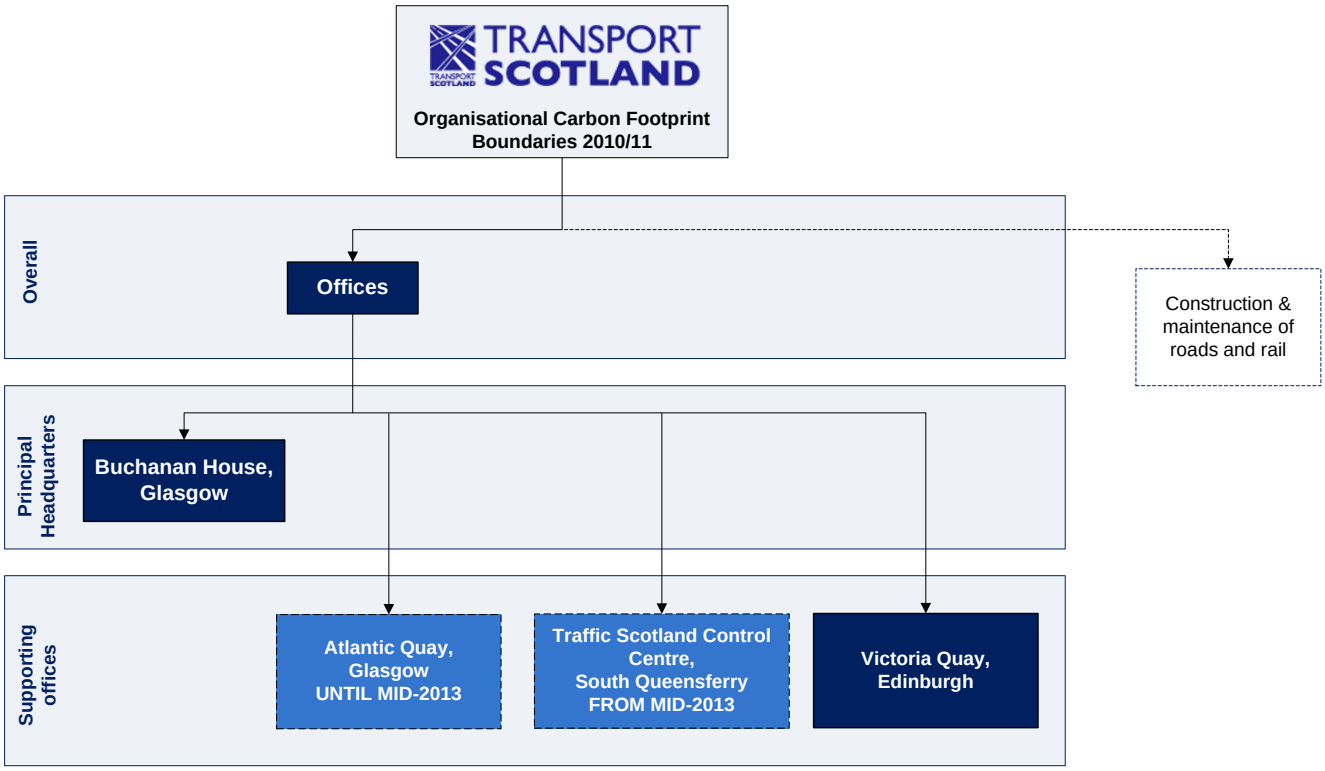


Figure 1: Organisational boundary for Transport Scotland's carbon footprint 2010/11. A small number of Transport Scotland staff are also based at Pentland House in Edinburgh.

The **operational boundary** essentially sets out the emission sources included in the footprint. Following the WRI Guidance for Public Sector Organisations and the Greenhouse Gas (GHG) Protocol[7], we have included Scope 1 and Scope 2 emissions. Scope 3 emissions (e.g. waste, water, commute and business travel) are considered discretionary by the GHG Protocol but we have included a selection of Scope 3 emissions in this CMP v2. The operational boundary for this CMP v2 is detailed in Figure 2. Whilst every effort has been made to aggregate full data sets for each scope, some data gaps have been identified. Figure 2 indicates the level of completeness of data sets by operational sub-category using a

[7] Table 5.3 in the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standards provides a useful summary of Scope 3 emissions. http://www.ghgprotocol.org/files/ghgp/public/Corporate%20Value%20Chain%20%28Scope%203%29%20Accounting%20and%20Reporting%20Standard.pdf

'traffic lights' colour coding with red indicating no data, amber some data and green complete data sets.

The scope of the operational boundary emission sources **included** within this CMP v2 cover:

- All utility emissions associated with Transport Scotland's operations at the offices at Buchanan House and Atlantic Quay in Glasgow, Victoria Quay in Edinburgh and the new traffic control centre in South Queensferry. Pentland House emissions for the 4 to 5 people will be sourced in due course.
- All business travel, encompassing car hire, grey fleet, pool cars, taxi journeys, bus and coach journeys, domestic and international air and rail travel within the UK.
- All commuter travel by staff to our offices. It is worth noting that the inclusion of commuter travel within the CMP is quite unusual; very few public sector organisations who have produced Carbon Management Plans via the Carbon Management Programme have included this emission source within their scope. This explains the relatively high carbon footprint for 'travel' in Section 4.2.
- Waste produced in Transport Scotland offices
- Water usage in Transport Scotland offices

The emission sources which are currently **excluded** from the scope of this CMP v2 are listed below (we acknowledge that the first two bullet points should be considered for subsequent revisions of the CMP as the CMP scope alters):

- Homeworking[8]
- Energy consumed on transport networks[9]
- Temporary site operations associated with construction and maintenance operations contracted by Transport Scotland
- Embodied carbon associated with materials procured by Transport Scotland.
- Scottish transport vehicle emissions[10] - Transport Scotland's Policy Directorate coordinate our approach to promoting and investing in green travel initiatives.

[8] Scope 3 indirect emission from upstream 'Fuel- and energy-related activities' such as homeworking are not typically incorporated into public body carbon management plans and corporate carbon accounting (in Scotland, only SNH have committed to a pilot of homeworking carbon impacts compared to office working). However, we note that private sector employers have started to measure homeworking in their carbon accounting via non-taxable allowance payments claimed by homeworkers. We also note that homeworking is promoted in Section 5.3, so incorporation of these Scope 3 emissions into future revisions of the CMP would seem plausible once homeworking is established within Transport Scotland.

[9] Whilst the CMP v2 scope focuses on office-base operational emissions, it is probable that Scope 2 purchased electricity would be included in a future CMP should the scope widen beyond office-based emissions. Scope 2 purchases energy is defined as electricity that is purchased or otherwise brought into the organizational boundary of the company. Furthermore, the CMP scope may be revised in due course to accommodate the metered carbon emissions from the trunk road network which fall under the CRC Energy Efficiency Scheme (CRC EES). CRC EES currently results in additional costs to Transport Scotland (c.£3000 in 2012).

[10] Such emissions are recorded in the Carbon Account for Transport with transportation emission reduction options outlined in the Scottish Government publication 'Low Carbon Scotland: Meeting our Emissions Reduction Targets 2013-2027 - The Draft Second Report on Proposals and Policies'.

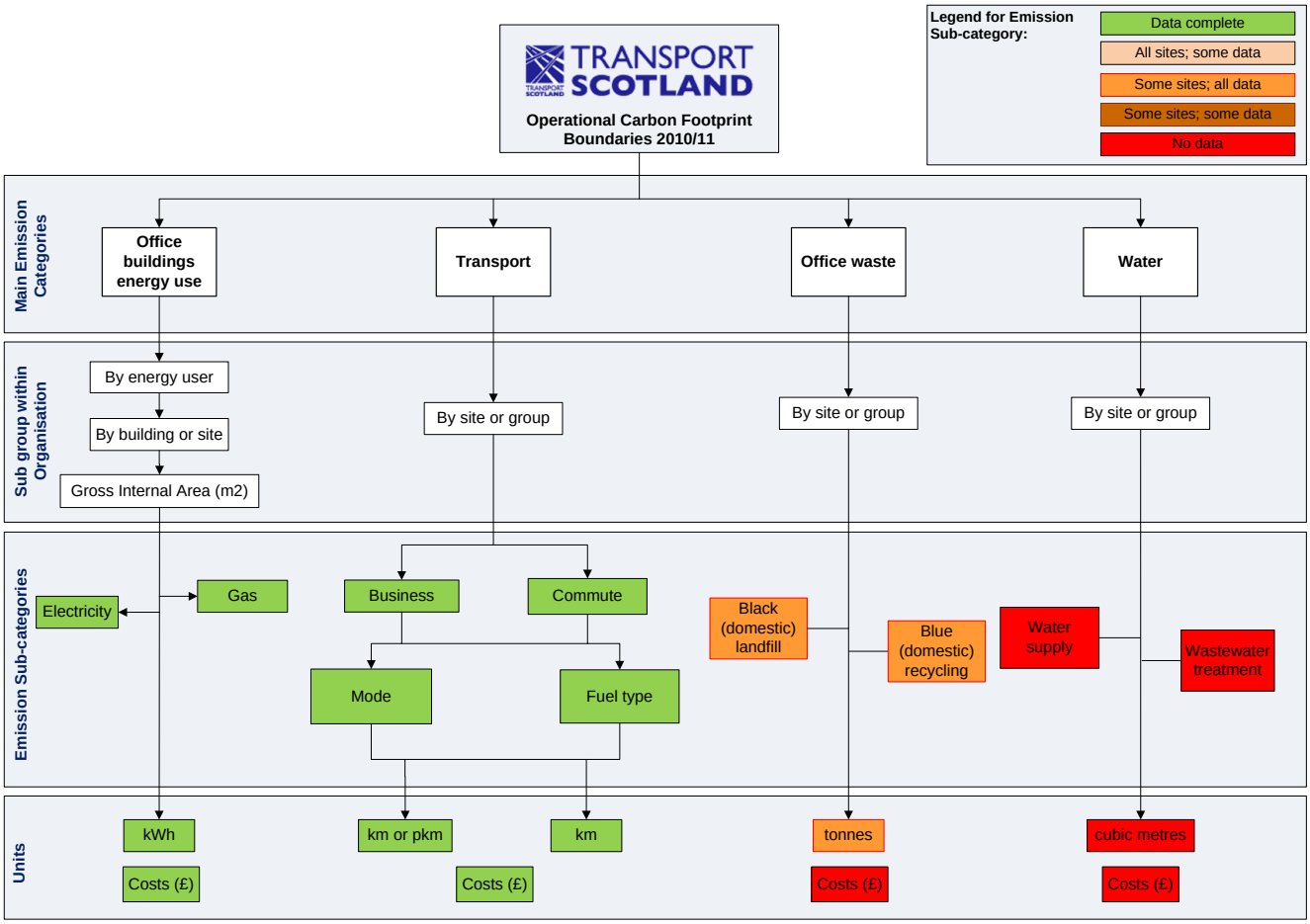


Figure 2: Operational boundary for Transport Scotland's operational carbon footprint 2010/11[11]

4.2. Baseline

Based on the scope outlined above, Transport Scotland's total carbon footprint, or carbon footprint baseline, for 2010/11 was 1,363 tonnes of carbon dioxide equivalent (tCO_2e; see Table 3 for tCO_2e and cost). Data obtained from a number of sources indicates that the percentage breakdown of baseline emissions for Transport Scotland was split 59% to 40% between building and travel emissions respectively, as shown in Table 3. The unusually high travel percentile in the baseline occurs as a result of the commute travel inclusion.

[11] The context of the operational emissions was outlined in CMP v1 Section 2.1. The operational emissions from our office based activates, even combined with our project based [embodied carbon] emissions, are small when compared to Scotland's transport emissions.

Category	Total	Building: Electricity	Building: Gas	Travel: Business and Commute	Waste
Baseline 2010/11	1,363 tCO_2e	523 tCO_2e	293 tCO_2e	546 tCO_2e	1.88 tCO_2e
Percentage	100%	38%	21%	40%	0.14%
Baseline Cost (£)	£560,113	£120,515	£47,422	£391,951*	£477

Table 3: Transport Scotland's operational carbon emissions and associated estimated costs for 2010/11. The commute travel calculations are based on a survey of staff in 2008 with data adjusted to determine a realistic commute travel calculation for a headcount of 404 staff. * Note that travel baseline cost only relates to business travel; it does not include commute travel costs. Data is rounded up to the nearest tonne or percentile.

Table 3 highlights that the greatest contributors to Transport Scotland's carbon footprint are transport which accounts for 40% of the footprint and electricity which contributes 38% of the total footprint. Emissions from gas consumption account for 21% of the total footprint, whilst waste contributes less than 1%.

Expressing emissions on a cost basis increases the relative importance of travel, which accounts for 76% of the cost of carbon emissions but only 40% of the carbon footprint. In contrast, the relative importance of electricity consumption decreases, comprising 38% of the total emissions but only 19% of the emission costs; similarly gas consumption contributes 21% of the total emissions but only 5% of total costs. Therefore, in the context of current costs, reducing emissions from travel will offer a duel win in terms of carbon and finance.

4.3. Baseline Data Collection: Processes and Challenges

To calculate the total carbon footprint for 2010/11, data for the financial year April 2010 to March 2011 was inputted into the Carbon Trust's Baseline Toolkit. The data sources used in the calculation of the carbon footprint – using the Carbon Trust's Baseline Toolkit - are detailed in Table 4 below.

Category	Subcategory	Main source(s)	Supplementary source(s)
Building Energy	Electricity	DTZ	TS and SG FM contractors
	Natural gas	DTZ	TS and SG FM contractors
Travel	Business	Expotel	TS Finance
	Commute	Annual TS staff commute survey	N/A
Waste	Office	DTZ	N/A

Table 4: Data sources for Transport Scotland's carbon footprint 2010/11

The ability to collect, collate, analyse and interpret full and accurate data sets is essential and is resource intensive. The data must be checked for accuracy and cleaned where errors are identified. Errors occur typically in the form of incorrect imputation of raw data into Excel by the data providers. The data outlined in Table 4is collected via the TS Environment & Sustainability Branch and BICS Directorate on a monthly or quarterly basis, depending on the data sets. Data is stored in the Green Network folder of ERDM. The process of data collection and collation has been outlined in a Standard Operating Procedure.

4.4. Emission factor sources

Data on energy use, travel and transport, water supply, wastewater treatment and waste to landfill have been converted into carbon emissions using recognised GHG Protocol consistent emission factors provided by Defra in the May 2012 Guidelines to Defra/DECC's Greenhouse Gas Conversion Factors for Company Reporting. These are summarised in Table 5 of Appendix 1. Emission factors, particularly the factor for electricity, change over time; as such, use of the most current emission factors will impact on the carbon footprint calculations.

4.5. Business As Usual (BAU) and grid factors

Business as Usual (BAU) is an indication of the likely outcome in terms of projected emissions and projected financial costs if no mitigation action is undertaken. The BAU is the red line in Figure 3 and 4. The "gap" between the future BAU emissions (red line) and the targeted emissions (blue line) is known as the emission/financial Value at Stake (VAS) e.g. the gap between the blue and red lines in Figures 3 and 4 would result from the implementation of the carbon management projects listed in Section 5. Appendix 2 provides more background on the BAU.

In our CMP v1, a figure of 0.7% annual increase in emissions had been used following the recommendation of the Carbon Trust. However, this figure did not take into account (i) specific growth variables that any organisation would be expected to encounter or (ii) grid factor forecast corrections over time. Therefore, Carbon Trust recommended the tracking of

carbon emissions against variations in grid factor emissions. A fuller explanation of grid factor emissions is provided in Appendix 2.

BAU predictions for carbon emissions are outlined in Figure 3 with Table 6 providing the raw data. The BAU scenario modelled within this CMP v2 utilises a 'pessimistic' scenario to calculate the "grid emission factor". This scenario suggests that the UK grid mix will lead to a gradual reduction in kg CO_2e per kWh from electricity over time. This means that even if Transport Scotland did nothing to reduce electricity consumption from our operations, our electricity-based carbon emissions would still reduce due to the grid factor correction principle. It should also be noted that the BAU is based on the *predicted* energy use of the new unit at South Queensferry and these may in reality be higher than anticipated. Table 6

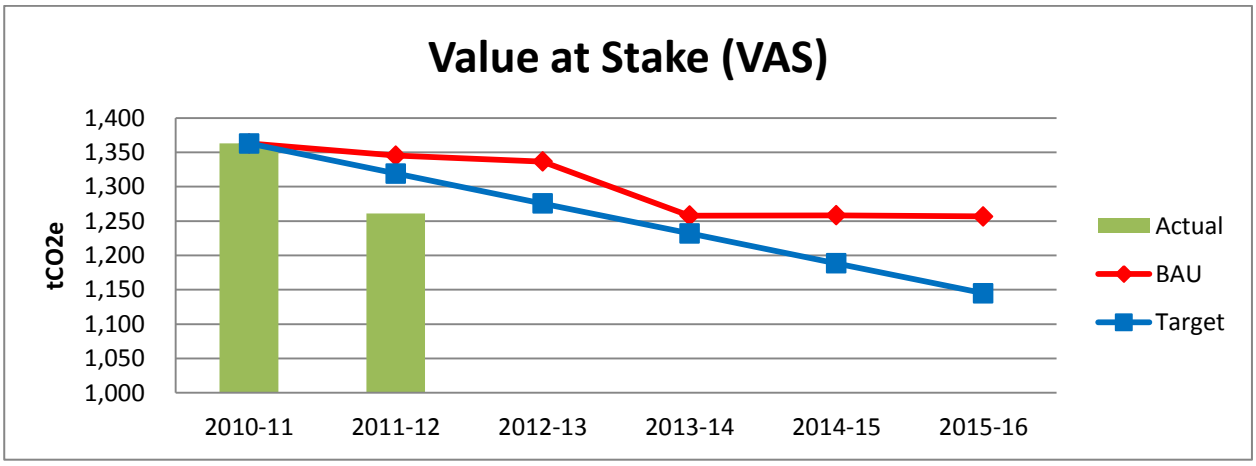


Figure 3: Value at Stake trend showing carbon emissions against the BAU and CMP v2 target (please note Y-axis does not start at zero). Explanation for the red BAU downward trend is given in Appendix 2. Note that BAU trend flatlines from 2013-14 as a result of IAG future forecast predictions for electricity grid factor emissions.

Source Category	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16
Electricity (grid)	523	482	*505*	*466*	*466*	*465*
Gas	293	241	*293*	*253**	*253*	*253*
Business travel	186	165	*165*	*165*	*165*	*165*
Commute travel	359**	372	*372*	*372*	*372*	*372*
Waste	1.88	2.32	*2.32*	*2.32*	*2.32*	*2.32*
TOTAL	**1,363**	**1,345**	**1,337**	**1,258**	**1,258**	**1,257**

Table 6: Annual BAU carbon emissions in tCO2e for Transport Scotland with figures showing carbon emissions that would be expected if we did not mitigate our carbon emissions e.g. if we implemented no carbon reduction projects. Actual emissions are shown for 2010/11 and 1/12, predicted for 12/13, 13/14, 14/15 and 15/16 as shown in italics. Note that the * indicates that Traffic Control Centre at South Queensferry comes online in mid 2013. ** Note that the commute travel calculations are based on a survey of Transport Scotland staff in 2008 with data adjusted to determine a realistic commute travel calculation for a headcount of 404 staff in 2010/11.

The Value at Stake (VAS) for the cost of operational carbon from office utility consumption and business travel is shown in Figure 4, with Table 7 providing the raw data. Figure 4 does not include commute travel costs as the latter is the responsibility of individual employees. The majority of the BAU cost increase results from rising fuel price for various forms of business travel, based on an average fuel price increase of 6% increase per year[12].

[12] Based on 5 year average for petrol price increases between 2008/09 to 2012/13 on wwww.petrolprices.com

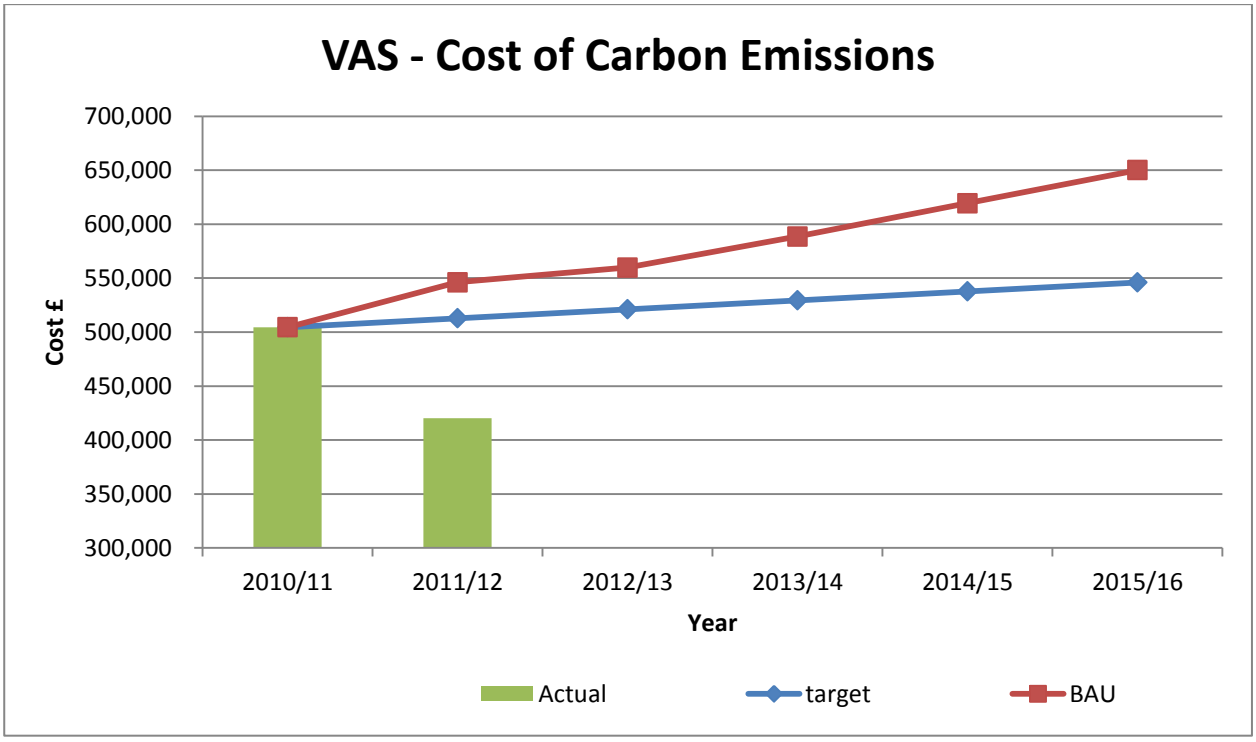


Figure 4: Value at Stake showing estimated cost of carbon emissions for office energy utilities and business travel only based on baseline data being indicative for the years up until 2015/16. The BAU data acknowledges that the fuel tariff utilised by Transport Scotland (at Buchanan House at least) is fixed as part of the building lease agreement. The BAU is generated from two sources (1) utility calculations are based on the pence per kWh for gas and electricity outlined in Appendix 3 and (2) business travel calculations are based on known fuel price increases of 10.28% and 2.66% in 2011/12 and 2012/13 respectively whilst future estimates rely on a fuel price increase of 6% per year from 2013/14. The target is calculated by using a continuation of the baseline year data up until 2015/16, in combination with the targeted reduction noted in Section 3.4. The BAU and target upward trend is due largely to the rise in fuel prices.

Source Category	Business as Usual (BAU)	Target	Value at Stake (VAS)
2010/11	£504,518	-	-
2011/12	£546,118	£512,819	£33,289
2012/13	£559,794	£521,140	£38,654
2013/14	£588,658	£529,452	£59,207
2014/15	£619,437	£537,763	£81,675
2015/16	£650,122	£546,074	£104,049

Table 7: Summary of Value at Stake carbon cost data. Note that financial values are calculated using fuel/unit prices paid in 2010/11 and applying DECC Updated Energy & Emissions Projections (October 2012) to project likely increases. VAS is the difference between the BAU and the target.

5. Carbon management projects and policies

5.1. Introduction

Achieving the CMP v2 objectives (as detailed in Section 3.4) requires the implementation of practical realistic carbon saving projects and policies[13]. To achieve our 2015/16 emission reduction target, we will need to achieve an absolute reduction of 218 tCO_2e against our 2010/11 baseline carbon footprint.

We acknowledge that the project must be regularly reviewed and flexible to adapt to emerging needs and opportunities for funding. Likewise, the projects must be supported by accurate data collection and be able to inform our stakeholders of CMP v2 progress via our Sustainability Report and Annual Account.

Projects can be categorised as (i) traditional energy saving (ii) process or procedure changes or (ii) behaviour related. A full list of projects is outlined in Section 5.3.

5.2. Existing Projects

Although Transport Scotland began our Carbon Management Programme in 2011, we have been implementing small scale energy saving measures across our estate since our formation. Our Sustainability Report 2011 provides a summary of progress for the CMP v1. Table 8 outlines a range of projects implemented prior to, and during CMP v1.

Projects	Annual tCO2e saving	Lifetime tCO2e savings
Thermal comfort in offices through altering heating set points - Production of a thermal comfort guidance note	13.1	240.6
Printer rationalisation: Monitoring of multi-functional devices (MFD)	1.6	8.0
Reprogrammed PIR sensors in Buchanan House	1.5	12.2
Equipment timer control for drink chillers	0.5	2.3
TOTAL	**16.7**	**263.1**

Table 8: Examples of projects implemented prior to, and during, CMP v1.

The carbon emission savings achieved by these schemes are reflected in the new baseline carbon footprint figures shown in Section 4.2

[13] Policies cover issues such as processes, procedures, guidance and management systems that aid policy and strategy

5.3. Planned Projects and policies

The planned projects and policies listed in Table 9 will be implemented between April 2013 and March 2016. Given the 'living' status of this document, revision, monitoring and review of the projects and policies will be aided by use of the Carbon Trust Carbon Management Project Register (CMPR) tool. The CMPR tool acts as a guide in order to estimate whether an absolute reduction target could realistically be met and how each project or policy might contribute to an absolute target based on a fuel (proxy) saving (as detailed further in Appendix 3).

By identifying the annual tCO2e saving for each project, Table 9 also helps to identify which projects could be prioritised to achieve the biggest carbon savings. Progression of the projects listed in Table 9 will keep us on track to achieve our targets. Combining the annual tCO2e in Table 8 and Table 9 yields a predicted carbon saving of 114 tCO2e. Combined with a predicted BAU emissions reduction of 106 tCO2 by 2015/16 as a result of the grid factor, this would equate to a potential absolute carbon reduction of 220 tCO2e by 2015/16, this meeting the target noted in Section 3.4.

For the planned projects, funding of c.£10,000 per year has been allocated by the Project Sponsor to aid delivery of projects which do require a capital outlay.

	Projects	Annual tCO2e saving	Lifetime tCO2e savings	Estimated % reduction in operational carbon emissions from baseline
Business travel	All B, C & SCS staff to have an Intercall Unified Meetings account for teleconferencing & all meeting rooms to be equipped with a batphone for teleconferencing	9.2	27.6	5% reduction in overall business travel
	Establish a VC only room	1.8	5.4	1% reduction in overall business travel
	Refresher training on Video-conferencing basics	2.0	4.0	1% reduction in overall business travel
	Unified Messenger (Webconferencing) software installed on all TS staff computers & provision of headsets to TS staff where required	9.2	27.6	5% reduction in overall business travel
	Use Band C diesel hire cars as a default where applicable	0.7	2.0	50% reduction in petrol hire cars
	Electric Cars replacing short journey hire cars	0.5	1.4	25% reduction of hire cars emissions (from Group 3 and 4 only)

	Fuel Efficient driver training for all applicable TS staff	0.7	3.7	1% reduction of hire car emissions
	All air travel to be signed off by Directors	1.8	5.4	5% reduction in air travel
	Director approval for flights combined with WWF challenge to reduce business flights by 20%	7.0	27.0	25% reduction in air travel
	Use rail travel for all England/Wales meetings where appropriate	1.4	4.1	5% reduction in air travel
	Use fleet/pool brompton bikes for inner city meeting business travel	0.4	1.1	1% reduction in taxi travel
	Develop inhouse - and encourage external - elearning modules to reduce staff travel to CPD training	0.6	3.2	1% reduction in train travel
	SG training to be delivered at TS offices to avoid staff travel to VQ/SH	0.7	3.3	1% reduction in train travel
Office energy	Ability to switch off lights in Buchanan House (manual switches or PIR covers)	14.0	162.9	5% reduction in electricity consumption (Buchanan House)
	Replacing downlighters with LEDs	2.8	42.4	1% reduction in electricity use
	Remove thermostats in Buchanan House stairwell radiators	2.2	33.2	1% reduction in gas use
	All computer and printer equipment to switch off at night rather than just on standby + ensure Nightwatchman is working on all computers	14.0	40.5	5% reduction in electricity use
Commute travel	Homeworking, remote working & flexible working to be adopted where practicable	20.0	60.0	5% reduction in commute travel
	Engage with Better Way to Work project in Glasgow to promote active travel to work	4.0	20.0	1% reduction in commute travel

	Incentive and recognition for staff who adopt active travel approach to their commute	4.0	20.0	1% reduction in commute travel
	Promote cycle to work & financial incentives to adopt public transport or active travel	-	-	1% reduction in commute travel
Office waste	Separate food waste for onsite composting at our offices	0.1	0.3	10% reduction in general waste
	Replace disposable handtowels in bathroom areas with hand-dryers	0.4	2	25% reduction in general waste
Office water	Install water hippo's in toilet cisterns to reduce water used to flush	-	-	1% reduction in water use
	Install flow regulator devices on wash hand basins	-	-	1% reduction in water use
	TOTAL	**97.5**	**497.1**	-

Table 9: Planned Projects during the CMP v2. To estimate 'fuel savings' within the CMPR tool, a series of percentage reduction targets were proposed for each project, either as a 1%, 5%,10%, 25% or 50% saving. To calculate the topic specific targets in Section 3.4, the following data is gleaned from Table 9 and used in conjunction with 2010/11 data from Table 6: Business travel annual tCO2e saving = 38.4 tCO2e; Commute travel annual annual tCO2e saving = 28 tCO2e. As noted in Section 4.5, approximately 50% of the targeted reduction would be achieved by mitigation projects (with the other 50% achieved through grid emission factors). This explains why the total figures in Table 8 and 9 represent approximately 50% of the targeted reduction stated in Section 3.4

6. carbon management plan financing

6.1. Cost and benefits/savings

The capital cost of financing the CMP v2 until 2015/16 has been estimated at just under £15,000, based on the projects listed in Section 5.3 (the majority of projects encompass changes to policy and strategy rather than purchase of hardware). Estimated capital costs and savings are shown in Table 10. Approximately £10,000 per year would be needed for the long term hire of electric cars but given that a budget has already been allocated to the hire of diesel hire cars, this specific project would be cost neutral (the cost of hiring an electric car per day is actually lower than an equivalent diesel car). The cumulative savings in costs associated with implementing the projects/activities identified in the CMPR has been estimated at just over £206,000 by 2015/16. The vast majority of the savings are based on the avoidance of business travel as a result of using virtual meeting technology.

	2011/12	2012/13	2013/14	2014/15	2015/16	TOTAL
Projects/Activities Capital Costs (£)	£5,600	-	£9,250			£14,850
Annual cost saving (£)	£3,000	-	£67,900	£67,900	£67,900	-
Cumulative cost saving (£)	£3,000	£3,000	£70,900	£138,800	£206,700	£206,700

Table 10: Estimated financial costs and savings of CMP v1 and v2 project implementation based on calculations from the Carbon Trust CMPR tool. The financial savings achieved in 2013/14 would be expected to be realised each year thereafter, compared to the expenditure that would be been expected had the mitigation projects not been implemented e.g. the financial savings in 2014/15 and 15/16 do not occur as a result of new projects implemented in these years.

6.2. Unquantifiable benefits

Unquantifiable benefits that could arise from implementing projects in the CMP v2 include:

- Route for staff engagement on climate change issues and clarity on processes which can aid in the reduction of our operational carbon footprint.
- Practical delivery of the climate change duties on public bodies
- Ability to align with the 2020 Group Transport Pledge and Scottish Government Low Carbon Behaviour Framework.
- To motivate and inspire our staff to build physical activity into their daily lives via the promotion of active travel. The aim should be to make the active option the easy option[14].

[14] Extracts from a blog by Dr David White, the Scottish Government's Physical Activity Champion in 2013 from Saltire Blog on the 27 March 2013.

7. Management and delivery of the CMP

7.1. Mandate

The mandate to deliver the projects listed in this CMP is founded upon the inclusion of the CMP in the Transport Scotland Corporate Business Plan 2012/15; this is a clear commitment at the highest level, reinforcing the need for action across Transport Scotland.

7.2. Governance

The governance structure for CMP v2 is relatively simple. A voluntary Green Network within Transport Scotland consists of permanent staff members who have volunteered their time. This team is chaired by a senior manager, (Andrew Maclaren, Head of BICS) with a deputy (Stephen Thomson, Head of Environment & Sustainability). Jointly, they will be responsible for overseeing the implementation of the CMP v2 and reporting to the Transport Scotland senior management team, which is chaired by the Transport Scotland Chief Executive.

7.3. Green Network

Responsibility and accountability for driving the operational and behavioural changes necessary to reduce our office-based emissions has been assigned to our Green Network. They have operated in a voluntary capacity since 2009 with the membership comprising a mix of project, policy and facilities staff across our Directorates. They meet on a quarterly basis to review the CMPR progress. All members of the Green Network are volunteers, albeit the governance noted above outlines a clear responsibility to the Chair and Deputy Chair of the Network. Roles and responsibilities are defined within a terms of reference.

A well maintained CMP requires resourcing and an allocation of time. Officials have been identified in BICS and the Environment & Sustainability Branch who have responsibility for managing data collection, tracking and interpretation (on a monthly and/or quarterly basis as appropriate) along with report production (on an annual basis) and general updates to the Green Network via the CMPR tool. Data management will follow a standardised and formalised process as outlined in Standard Operating Procedures (SOPs). Whilst the CMP management role is not the sole job function of these officials, the CMP activities do require a proportion of time allocation and as such is noted in the officials job description.

7.4. Succession Planning For Key Roles

The CMP Project Leader is one of four qualified ‘environmental practitioners’ within Transport Scotland. Three environmental practitioners contribute into the Green Network, so should the current Project Sponsor be unable to fulfil their duty, it is possible that the other environmental practitioner would take over this role. That said, the CMP deliverables have been set out in a manner that would allow staff at any grade to maintain the CMP in the short term.

7.5. Communication and Reporting

The following communication objectives have been set:

- To ensure there is an opportunity for all staff (e.g. those who do not volunteer within the Green Network) to contribute to the CMP projects through consultation, online surveys, competitions and feedback via existing communications tools such as the Staff Notice, the Chief Executive Bulletin and office notice boards plus social media communications and lunch-time seminar's.

- To provide our Senior Management Team with periodic updates

- To collaborate and share learning with the civil servants responsible for the implementation of the revised Scottish Government Carbon Management Plan.

- To communicate with the 2020 Climate Group, with a particular focus on demonstrating practical solutions to the Transport Pledge actions (to which Transport Scotland are signatories).

- To champion a low-carbon approach to operations across our offices within and beyond the agency by publicising successes on our website. The CMP v2 will be published online in PDF format to save on paper and distribution costs.

- Reporting our CMP project progress via an annual Sustainability Report, which will be published online.

7.6. Partnership Working Opportunities

Transport Scotland will explore opportunities for working in partnership with other organisations to deliver the carbon management plan in a timely and cost-effective way. Partnering opportunities include;

- Resource Efficient Scotland (Zero Waste Scotland, Energy Saving Trust and Carbon Trust)

- Better Way To Work

- Sestrans

- Other Government Agencies (via the Sustainability reporting advisory group)

- Travel Partners (including Arnold Clark and Expotel)

Appendix 1 Emission factors

Table 5 outlines the GHG Protocol consistent emission factors used in the CMP v2.

Category	Emission Factor (kg CO_2/unit)	Unit	Reference
Electricity (based on 5 year rolling average)	0.520	kWh	Defra / DECC May 2012 Table 3c (rolling grid average 2010); total direct GHGs
Natural Gas	0.185	kWh	Defra / DECC May 2012 1c (gross CV basis); total direct GHGs
Average car (unknown fuel)	0.195	km	Defra / DECC May 2012 Table 6b; total direct GHGs
Average diesel car	0.187	km	Defra / DECC May 2012 Table 6b; total direct GHGs
Average petrol car	0.202	km	Defra / DECC May 2012 Table 6b; total direct GHGs
Small petrol car, up to 1.4 litre engine	0.165	km	Defra / DECC May 2012 Table 6c; total direct GHGs
Medium petrol car, from 1.4 - 2.0 litres	0.208	km	Defra / DECC May 2012 Table 6c; total direct GHGs
Medium diesel car, from 1.7 to 2.0 litre	0.178	km	Defra / DECC May 2012 Table 6c; total direct GHGs
Large diesel car, over 2.0 litre	0.236	km	Defra / DECC May 2012 Table 6c; total

			direct GHGs
Medium petrol hybrid car	0.119	km	Defra / DECC May 2012 Table 6d; total direct GHGs
Average petrol motorbike (unknown engine size)	0.119	km	Defra / DECC May 2012 Table 6j; total direct GHGs
Bus - average local bus	0.112	passenger km	Defra / DECC May 2012 Table 6k; total direct GHGs
Ferry (Large RoPax) Foot passengers	0.019	passenger km	Defra / DECC May 2012 Table 6k; total direct GHGs
Rail - national rail	0.058	passenger km	Defra / DECC May 2012 Table 6k; total direct GHGs
Rail - underground	0.072	passenger km	Defra / DECC May 2012 Table 6k; total direct GHGs
Taxi (Black Cab)	0.236	passenger km	Defra / DECC May 2012 Table 6k; total direct GHGs
Air - domestic	0.167	passenger km	Defra / DECC May 2012 Table 6l; total direct GHGs
Air - long haul international, average	0.109	passenger km	Defra / DECC May 2012 Table 6l; total direct GHGs
Air - short haul international, average	0.095	passenger km	Defra / DECC May 2012 Table 6l; total direct GHGs
Cycle	0	km	-
Walk	0	km	-
Domestic waste landfill	290	tonne	Defra / DECC May 2012 Table 9d; total

			indirect GHGs, based on 'Mixed municipal waste'

Table 5: Conversion factors applied in Transport Scotland's carbon footprint for 2010/11; sourced from Defra in the May 2012 Guidelines to Defra/DECC's Greenhouse Gas Conversion Factors for Company Reporting

Appendix 2 Business as Usual (BAU)

Business as Usual (BAU) is the estimation of both projected emissions and projected financial costs if no action was undertaken e.g. normal execution of standard operations in comparison to a project which would introduce change. In the context of carbon management, BAU represents an estimate of what the overall carbon footprint of an organisation (based on the current footprint boundary) would likely be in future years if no mitigation action was undertaken.

Previous carbon management programmes have used a single annual percentage growth figure of 0.7% for the carbon footprint to represent BAU, usually indicating an underlying growth in energy consumption of organisations over time. However, as carbon management has become more sophisticated, organisations have become aware that this is not necessarily accurate.

This BAU scenario needs to take into account of the changing electricity grid factor (an external growth factor) that is likely to affect the carbon footprint over time. Electricity grid carbon factor is the factor applied to convert units of kWh of electricity consumed to a figure of carbon dioxide equivalents emitted. Grid factor changes year on year due to a variety of external factors outside of Transport Scotland's control including the relative price of different fuels for power generation. Over a longer period of time, the grid factor changes will be due to the UK's energy policy of decarbonisation - to reduce the carbon intensity of the grid - and the relative contribution of different fuels and sources of generation e.g. renewables. Although an overall carbon footprint is a single figure, in reality a series of complex underlying calculation will influence the outcome with different emission sources affected by these factors in different ways.

In order to accurately model the BAU for this CMP v2, the organisational operational carbon footprint classified down to the building/estate level and the fuel source was used in conjunction with a set of key BAU growth factors, as detailed below:

1) UK grid electricity emission factors (based on a combination of historic DECC figures[15] and future IAG forecast figures[16]; note that the future forecast suggests that a slight increase in carbon intensity of grid emissions may occur in 2013/14 and 2014/15)

2) The modelled changes incorporate an estate change where one new building - the South Queensferry Traffic Control Centre – will come online in mid 2013/14, with complete closure of the Atlantic Quay space in the same period. Energy use in the new building was based on actual predicted energy consumption bespoke for the building as provided from the design specification.

[15] Sourced from Table 3a in the 2012 Guidelines to Defra / DECC's GHG Conversion factors for Company reporting; https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69554/pb13773-ghg-conversion-factors-2012.pdf

[16] Sourced from: https://www.gov.uk/government/policies/using-evidence-and-analysis-to-inform-energy-and-climate-change-policies/supporting-pages/policy-appraisal. The IAG future forecast table refers to Table 1 in the 'supporting tables' hyperlink called "Tables 1-20: supporting the toolkit and the guidance".

Appendix 3 CMPR Tool

The Carbon Management Project Register (CMPR) Reporting tool (2011) is a spreadsheet that facilitates the recording of carbon reduction project data, calculation, and the analysis and reporting of progress against an organisation's carbon reduction target. The CMPR is designed to be populated initially with existing project register data and then used frequently to enter more projects, enter updates and retrieve reports. The key functions that CMPR provides includes:

- The ability to input Business as Usual (BAU) annual emissions for each year between the organisation's baseline year and 2020 so that any planned growth/decline in annual emissions can be plotted against reduction targets.
- The ability to input reduction targets in one of three ways (absolute, percentage before a target year, or annual percentage reduction with milestone year).
- A project list where the organisation's carbon reduction projects and related fuel saving and financial details can be collated and stored.
- Fields for data input such as project progress status, owner and free text to allow sorting and ranking of the project register
- Calculation of various project-related outputs including annual/llifetime CO_2e saving, payback periods, phased projects across number of years,
- A Marginal Abatement Cost Curve (MACC) which orders individual projects by their overall CO_2e savings and cost effectiveness of those savings.

The CMPR incorporates certain assumptions in calculating the potential benefits and savings:

- Utility/fuel cost annual growth rate = 0%; this is based on the flat rate price for energy consumption currently included in the lease conditions held by Transport Scotland for the Buchanan House premise.
- Discount Rate = 3.5% as recommended by the Carbon Trust
- BAU Growth rate = 0%
- Degradation rate = 0%
- The cost of electricity is based upon an estimated value of 9.11 pence per kWh in 2010/11; future costs based on DECC wholesale and retail price projections (central scenario)[17]
- The cost of natural gas is based upon an estimated value of 1.04 pence per kWh in 2010/11; Future costs based on DECC wholesale and retail price projections (central scenario)[18]

[17] DECC Updated Energy & Emissions Projections - October 2012
[18] DECC Updated Energy & Emissions Projections - October 2012

Appendix 4 RISK Register

Risk	L	I	R	Mitigating control
Lack of staff behaviour change or adoption to new technology	4	5	20	Incorporation of CMP.v2 deliverables into team briefings with on-going communication on operational carbon reduction options. Support with enforcement of business travel requirements, as outlined in future Position Paper statements.
Limitations associated with use of leased buildings versus building ownership	4	4	16	Regularly liaise with building landlord to ensure that identified projects can be delivered and seek advice on alternatives where projects may not be achievable.
Inability to influence staff commute travel patterns	5	3	15	Focus on increasing homeworking, remote working & flexible working patterns as noted in Section 5.3
Over ambitious predictions of carbon savings associated with projects listed in Section 5.3	3	5	15	Monitor project delivery to determine if targets are on track to be achieved. Revise or identify new projects as necessary.
Knowledge and experience lost if staff responsible for CMP leave Transport Scotland	2	5	10	3 month hand-over phase programmed for exiting staff in conjunction with Standard Operating Procedures written to explain each project noted in Section 5.3. All electronic correspondence and literature to be stored in Green Network ERDM file.
Lack of finance to deliver all projected listed in Section 5.3 (particularly retrofitting of lighting controls in leased building).	2	5	10	Liaise with Project Sponsor to ensure sufficient finance is available to deliver projects which have been identified and approved by the Green Network.
Staff headcount increases	2	4	8	Reporting of progress against targets noted in Section 3.4 to communicate the FTE progress as noted in Section 3.6

Legislation changes	1	5	5	Ensure that legal ramifications of regulatory changes are fed through early in any communication and are understood by all participants
Carbon Management Plan not embedded into Annual Business Plan	1	5	5	Ensure CMP is a core element of Annual Business Plans and is incorporated into staff objectives where appropriate to ensure management of the CMP actions.
Lack of (volunteering) resource into the Green Network	2	2	4	Liaise via Staff Notice and Chief Executive Bulletin with colleagues to raise awareness of the Green Network and offer incentives to volunteers.

Table 11: Risk register. L = Likelihood; I = Impact; R = Risk. L and I are scored 1 to 5, with 1 being low and 5 being high. R is a multiple of L and I.

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).

اس دستاویز کی مزید کاپیاں آڈیو کیسیٹ پر اور بڑے حروف کی چھپائی میں اور کمیونٹی کی زبانوں میں طلب کیے جانے پر دستیاب ہیں، برائے مہربانی اس پتہ پر رابطہ کریں:

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 दस्तावेज़/काग़ज़ात 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:

此文件有更多備份，如果需要，語音版本和大字體版本及少數種族語言版本也可提供，請聯絡：

يمكن أن تطلب النسخ الأخرى من هذا المستند كالتسجيل الصوتي والخط المكبر ونسخ بلغات أخرى، يرجى الإتصال على:

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

ISBN: 978-1-909948-03-7

Any enquiries regarding this document / publication should be sent to us at info@transportscotland.gsi.gov.uk

This document is also available on the Transport Scotland website: www.transportscotland.gov.uk

Published by Transport Scotland, September 2013

An agency of Buidheann le

The Scottish Government
Riaghaltas na h-Alba