



Climate Change Strategy

1. INTRODUCTION	1
1.1 CLIMATE CHANGE (SCOTLAND) ACT	1
1.2 REPORT ON PROPOSALS AND POLICIES (RPP)	2
1.3 PUBLIC BODIES' DUTY ON CLIMATE CHANGE	4
2. BASELINE CARBON EMISSIONS	5
3. MITIGATING EMISSIONS	6
3.1 INDICATORS	6
3.2 CURRENT ACTIONS	6
3.3 POTENTIAL INTERVENTIONS	8
4. ADAPTATION	9

1. Introduction

This document serves to evaluate the potential carbon emissions of SWestrans' services and attempts to plan a strategy to predict the potential impacts of Climate Change and how SWestrans can help influence Dumfries and Galloway to mitigate and adapt to these risks.

1.1 Climate Change (Scotland) Act

The Climate Change (Scotland) Act 2009¹ set ambitious targets to reduce carbon emissions by 42% by 2020 and 80% by 2050 (on 1990 levels).

Also in 2009, the Scottish Government published the Climate Change Delivery Plan², setting outcomes for each sector to enable them to meet the climate change targets.

The four outcomes that must be delivered to reduce emissions are:

- A largely decarbonised electricity generation sector by 2030, using renewable complemented by fossil fuels with Carbon Capture and Storage;
- Largely decarbonised heating for buildings by 2050, through reduced demand, energy efficiency, and renewable and low-carbon heating;
- Almost complete decarbonisation of road transport by 2050, through wholesale adoption of electric cars and vans; and
- A comprehensive approach to carbon in rural land use, incorporating: protection for Scotland's carbon rich soils; minimised emissions from agriculture; use of natural resources to generate renewable energy; and increased sequestration of carbon, for example, through woodland planting.

¹ <http://www.scotland.gov.uk/Topics/Environment/climatechange/howyoucanhelp/publicbodies/publicsector>

² <http://www.scotland.gov.uk/Publications/2009/06/18103720/0>

1.2 Report on Proposals and Policies (RPP)

The Low Carbon Scotland – Meeting the Emissions Reduction Targets 2010-2022³ publication is the first document to outline a range of proposals and policies that could help each sector reach its emission targets each year until 2022.

RPP1 includes:

- “policies”, considered to be a course of action which has been wholly or largely decided upon, often with committed funding and/or legislation and timescales; and
- “proposals”, considered to be a suggested course of action, either initiated by Scottish Ministers and set to become firm policies once development work is complete and/or financial resources allow, or suggested to Scottish Ministers as options to consider.

Table 1: RPP1 transport sector policies and proposals

Category	Measures included in RPP1
Policies	EU Policies <ul style="list-style-type: none"> • Mandatory targets for the emissions intensity of new cars and vans • Clean Vehicle Directive • Renewable Transport Fuel Obligation
	Scottish (and UK) policies <ul style="list-style-type: none"> • Provision of eco-driving advice and information, including for HGVs and freight van drivers, Freight Best Practice Programme • Financial support to low carbon vehicles and infrastructure • Plugged-in Places programme • Scottish Green Bus Fund and BSOG incentives • Intelligent Transport System Action Plan • Provision of travel planning advice, Smarter Choices, Smarter Places • Cycling Action Plan for Scotland • Support to car clubs • Freight grant schemes to transfer freight from road to rail or water

³ <http://www.scotland.gov.uk/Topics/Environment/climatechange/scotlands-action/lowcarbon/rpp>

	<ul style="list-style-type: none"> Edinburgh to Glasgow Rail Improvements programme (electrification), development of plans for improvements between Aberdeen and Inverness (included in BAU) Scottish Planning Policy
Proposals	<p>Driving more efficiently</p> <ul style="list-style-type: none"> Eco-driving for car drivers (extending the availability of eco-driving training, including within the public sector) Speed limit enforcement Low carbon vehicles and infrastructure Freight efficiencies (reduction of empty/partial load running) Van efficiencies Intelligent transport systems
	<p>Widening travel choices</p> <ul style="list-style-type: none"> Travel planning Cycling and walking infrastructure Car clubs Buses and taxis (low carbon buses, increasing bus use, improve efficiency of taxis and private hire cars) Freight modal shift (shift to rail and water, multi-modal hubs, use of planning system)
	<p>Reducing the need to travel</p> <ul style="list-style-type: none"> Community hubs
Shipping	<p>Policies</p> <ul style="list-style-type: none"> Ferries Review <p>Proposals</p> <ul style="list-style-type: none"> Maritime transport (vessel design, hybrid engines, alternative fuels)
Aviation	<p>EU policy</p> <ul style="list-style-type: none"> EU Emission Trading System, including aviation from 2012
Supporting measure	<ul style="list-style-type: none"> High speed rail (modal shift from air) Supportive planning process (National Planning Framework and Scottish Planning Policy)

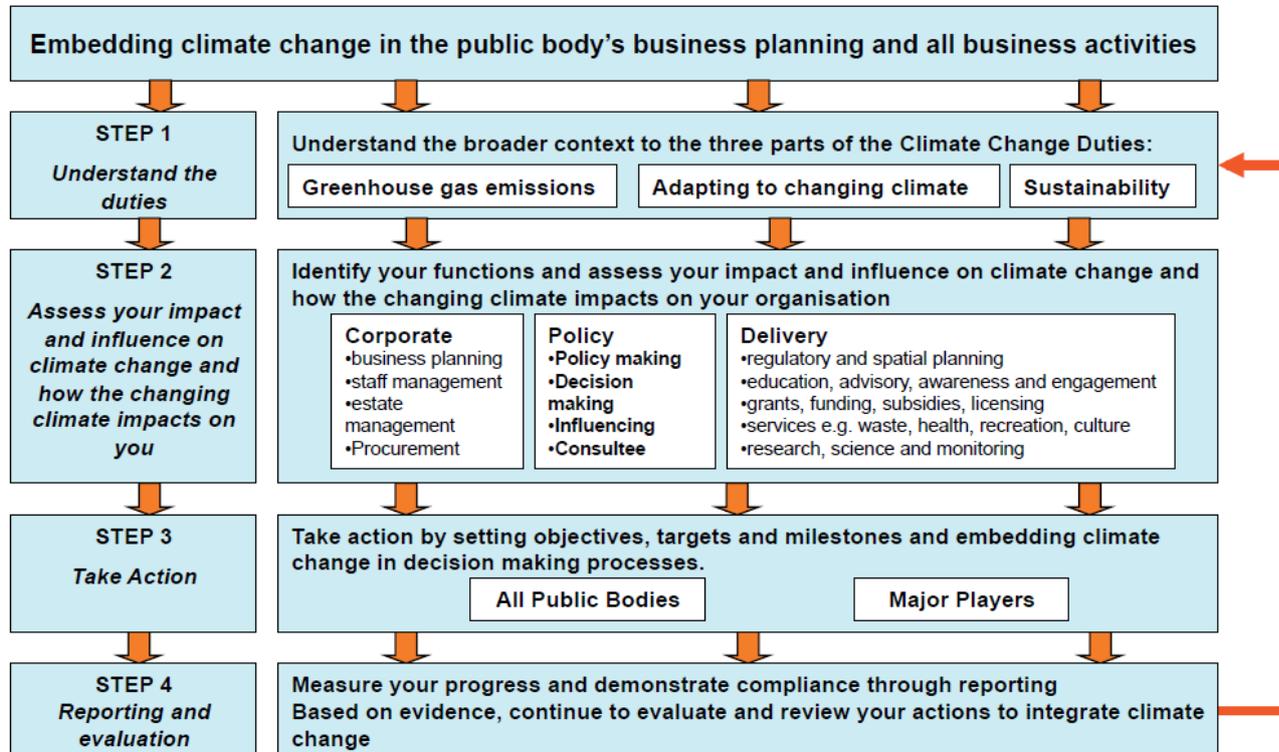
1.3 Public bodies' duty on climate change

Part 4 of the Climate Change (Scotland) Act 2009 also places duties on SWestrans as a public body to act:

- In the way best calculated to contribute to delivery of the Act's emission reduction targets;
- In the way best calculated to delivery any programme laid before the Scottish Parliament under section 53 (adaptation); and
- In a way that it considers most sustainable.⁴

Guidance published in 2011 then gave public bodies a step-by-step approach to understanding their duties. The four steps aim to mainstream climate change into policy and decision making, while monitoring SWestrans' impacts on climate change and setting a good standard to the rest of Scotland (Figure 1)

Figure 1: Step by step guide for public bodies on their climate change duties.⁵



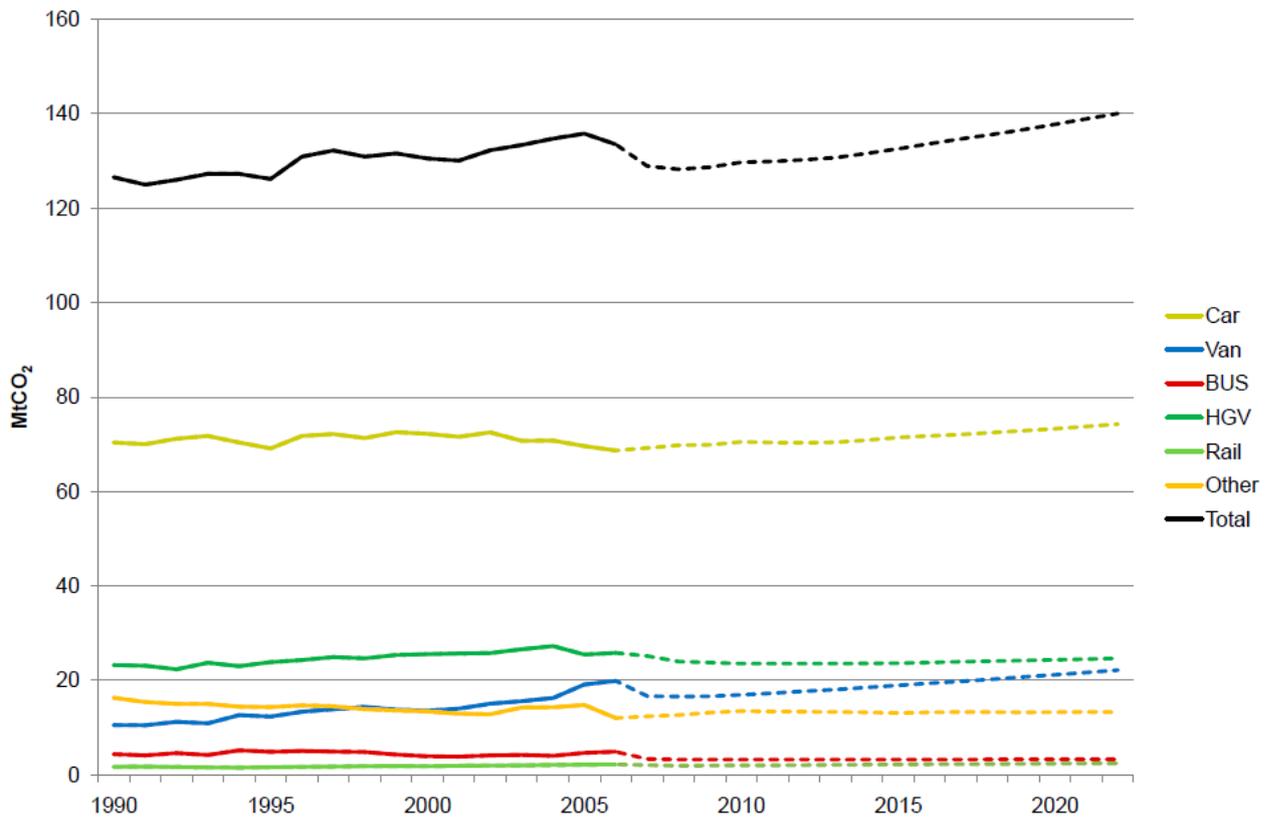
⁴ <http://www.scotland.gov.uk/Topics/Environment/climatechange/howyoucanhelp/publicbodies/publicsector>

⁵ <http://www.scotland.gov.uk/Publications/2011/02/04093254/0>

2. Baseline Carbon Emissions

The full extent of current and future carbon emissions by transport in Dumfries and Galloway can be estimated by completing a carbon assessment. Estimations for the projected carbon emissions in the “Do-Minimum” scenario for the whole of Scotland have been made by the Committee on Climate Change (Figure 2). The Do-Minimum scenario assumes that no further effort is taken to reduce carbon emissions other than those already in place.

Figure 2: Historic and reference projections of carbon dioxide emissions from each transport mode. 6



Source: DfT, NAEI.

Note: Reference projections are not calibrated to the NAEI.

3. Mitigating Emissions

Further action is needed to be taken other than the Do-Minimum scenario in order to reach the targets set by the Climate Change (Scotland) Act 2009. SWestrans' staff are employed through Dumfries and Galloway Council and so are subject to the Council's Carbon Management Plan⁷ in order to reduce emissions in the day-to-day business. However, through its projects and policies, SWestrans may be able to influence changes in behaviour across the region to reduce carbon emissions

3.1 Indicators

In order to monitor the performance of any interventions SWestrans undertake, a number of Key Indicators have been given by the Scotland Carbon Account for Transport:

- Vehicle kilometres travelled;
- Proportion of new vehicles that are alternatively fuelled;
- Modal share of public transport and active travel;
- Aviation passengers; and
- Waterborne freight lifted and moved in Scotland.

3.2 Current actions

As well as providing socially necessary public transport, SWestrans is heavily involved in projects to improve active and public transport as well as reduce car usage across Dumfries and Galloway.

Table 2 lists current SWestrans actions that are contributing to Climate Change mitigation.

⁷ <http://www.dumgal.gov.uk/index.aspx?articleid=9464>

⁸ <http://www.scotland.gov.uk/Publications/2010/03/11091112/0>

Table 2: SWestrans actions that potentially contribute to Climate Change mitigation.

Bus Measures	<p>Projects to make buses affordable and reliable.</p> <p>SWestrans subsidise most bus services across network.</p> <p>Spend to Save – purchasing buses to lease to operators to reduce contract costs.</p> <p>Bus Shelter Programme – Real Time Display, lighting and other bus shelter improvements across the region</p>
Rail Measures	Projects to improve rail accessibility and services
Cycling / Walking	<p>Improvements to existing cycle networks</p> <p>Improving connectivity between existing networks</p> <p>Additional cycling infrastructure (e.g. Southern Upland Cycle Way)</p>
Smarter Choices; Smarter Places	<p>The Go Smart Dumfries project was as successful bid to the Scottish Government's 'Smarter Choices; Smarter Places' initiative in 2009. The aim was to reduce car usage by 5% with 16 projects:</p> <ul style="list-style-type: none"> • Multi-modal transport interchanges • Park and choose • Parking Demand Measures • Bus Measures • Public Realm Enhancements • Green Commuter Routes • 20mph zones • Travel Information Strategy • Bus Network Improvements • Salary Sacrifice Schemes • Car Club • Tripshare • Hospital and The Crichton Travel Planning • Personalised Travel Planning • Bike2Go • Youth cycling development

3.3 Potential interventions

Some potential future interventions to attempt to reduce carbon emissions and meet the targets set by the Climate Change (Scotland) Act 2009 are listed in Table 3.

Table 3: Potential future inventions to reduce carbon emissions from transport

Driving Efficiently	<ul style="list-style-type: none"> • Promotion of Eco-driving for public transport, freight, and private car users; • Speed limit enforcement; • Urban network planning to reduce congestion.
Low carbon vehicles	<ul style="list-style-type: none"> • Alternative fuels; • Electric vehicles;
Promoting behavioural change	<ul style="list-style-type: none"> • Travel planning, personal, workplace and in schools; • Promotion of active travel, improving cycling and walking infrastructure; • Promotion of car clubs and liftshare initiatives; • Improving public attitudes towards public and active travel modes; • Regionwide roll-out of GoSmart Dumfries type projects
Reducing need to travel	<ul style="list-style-type: none"> • Increase usage of virtual meetings using video and teleconferencing; • Shortening trips by changing destinations.

As well as the potential interventions outlined in the Climate Change Delivery Plan, SWestrans will seek to integrate mitigation policies into day-to-day functions. Carbon Impact Assessment will be integrated within existing impact assessment protocols, and the performance management and RTS monitoring framework.

4. Adaptation

Climate adaptation is the process of assessing and preparing for the consequences and risks associated with Climate Change.

The potential risks to the transport sector were explored in the Climate Change Risk Assessment for Scotland⁹ as follows:

- Flooding – disrupting public transport and private transport, affecting the largely rural population in particular.
- Bridge Scour, associated with flooding. Can permanently damage bridges and be dangerous to transport.
- Landslips – can be dangerous to life and leave rural settlements isolated.
- Increased risk of extreme weather events, particularly rain and ice. Can disrupt road, rail and marine transport, and adversely affect road surface and pothole conditions.
- Coastal erosion can affect marine transport and any coastal roads.

In order to adapt to the climate change risks climate change risk assessments will need to be mainstreamed into project development with the aim to develop sustainable “climate resilient infrastructure”.

⁹ <http://www.adaptationscotland.org.uk/3/98/0/UK-Climate-Change-Risk-Assessment.aspx>