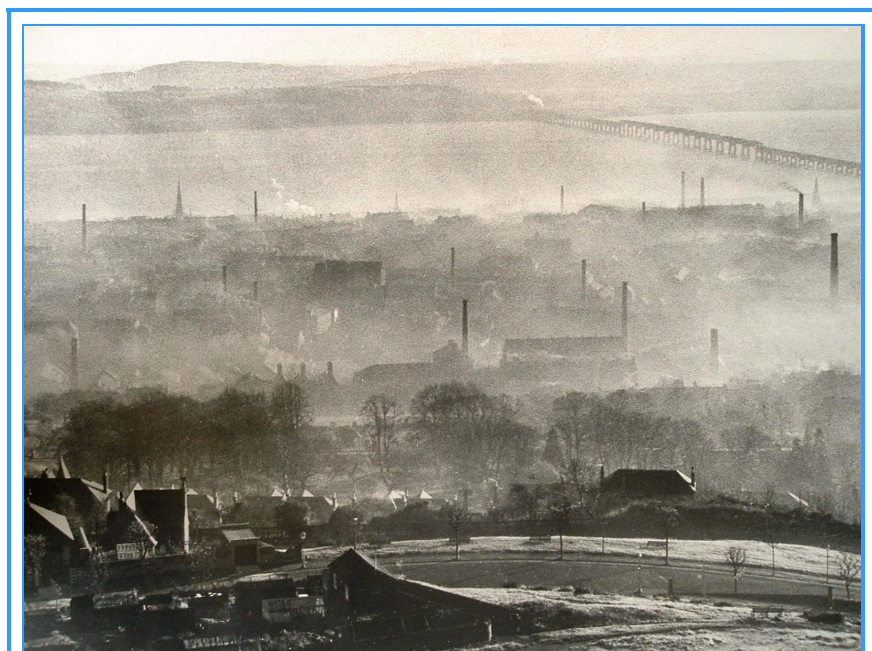


Dundee City Council
Air Quality Action Plan Progress Report
(January 2011 - December 2011)



April 2012

Dundee City Council

Air Quality Action Plan Annual Progress Report (January 2011 to December 2011)

Report No: AQAP PR01/2012

Referring to Action Plan: Dundee City Council Air Quality Action Plan for Nitrogen Dioxide (NO₂) and Fine Particulate Matter (PM₁₀) January 2011

Iris Coghill, Environmental Manager
Environment Department
Environmental Protection Division
1 Highland Chief Way
Claverhouse West Industrial Park
Dundee
DD4 8UA

Tel: 01382 436260

e-mail: iris.coghill@dundeecity.gov.uk

Table of Contents

1. Introduction
2. Table of Progress of Implementing Measures contained within Dundee City Council's Air Quality Action Plan.
3. Appendix 1: Dundee Travel Active Air Quality Campaign 2011 Executive Summary
4. Appendix 2: Scope for a Low Emission Charter for Dundee

Introduction

Part IV of the Environment Act 1995 places a statutory duty on Local Authorities to periodically review and assess air quality. This process, known as Local Air Quality Management (LAQM), involves the monitoring and the assessment of current and likely future air quality. Where any exceedences or potential exceedences of the air quality (AQ) objectives are identified, the Local Authority has a statutory duty to designate the area as an Air Quality Management Area (AQMA).

The AQ objectives applicable to LAQM in Scotland are set out in the Air Quality (Scotland) Regulations 2000 and the Air Quality (Scotland) (Amendment) Regulations 2002.

Following consultation, rather than several connecting AQMAs, an AQMA covering the whole area of Dundee City Council (DCC) was declared in July 2006 for the annual mean objective of Nitrogen Dioxide (NO₂). This was to enable wider consideration of air quality improvements in Dundee. The AQMA was varied on 25th October 2010 to include the annual mean objective of fine particulate matter – PM₁₀.

Where Local Authorities have designated an AQMA, they have a duty to produce an Action Plan. This plan must set out what measures the Authority intends to take in pursuit of the AQ Objectives.

Dundee City Council's Air Quality Action Plan (AQAP) was published in January 2011 and it focuses on the key identified pollutants and sources affecting air quality in the Council's administrative area – namely NO₂ and PM₁₀, with road traffic emissions identified as the main contributor. There are 32 measures within the Action Plan, which have been designed to help improve air quality through efforts to tackle traffic emissions, education and raising awareness.

Since the publication of the AQAP, there have not been any modifications to the scope of the plan or the boundaries of the AQMA.

This AQAP Progress Report has been prepared to fulfil the requirement on reporting on the implementation of the measures contained within the AQAP and to work towards achievement of the air quality objectives. This report covers the period January to December 2011.

The progress made on implementing the measures contained within DCC's AQAP 2011 is listed below using the table recommended in the Local Air Quality Management Technical Guidance TG (09), Chapter 4 Table 4.3. (As this is the first AQAP Progress Report, it is only the progress to date that has been reported – subsequent reports will differentiate progress to date and progress in the previous 12 months).

Some of the main action points are summarized below:

Traffic Measures

Measure 1 – Existing Road Infrastructure Improvements – reconfiguration of Union Street. The works were completed in December 2011.

A package of road measures to provide a multi-faceted approach to pollution sources in the North West Arterial corridor hotspot were identified and further road infrastructure improvements will be targeted in 2012.

Measure 3 – Smarter Choices/ Smarter Places: Dundee Travel Active Programme

A well-received and innovative social marketing campaign was implemented to encourage drivers to choose less polluting modes of travel – See Appendix 1

Measures 4, 6 and 8 – Reduction of Emissions

There has been development of a scope for a Low Emission Charter, with the aim of providing a strong basis for gaining stakeholder support for tackling pollutant concentrations within the City – See Appendix 2.

Policy and Partnership Working Measures

Measure 11 – to ensure effective co-ordination between climate change and air quality strategies and action plan measures.

It has been recognized that air quality and climate change are fundamentally inter-related and that DCC has a pivotal role in managing both air quality and the effects of climate change. DCC's Corporate Climate Change Board is committed to lead on the development of a Strategy to improve the co-ordination between air quality and climate change to ensure synergies are identified to bring forward win-win solutions to the benefit of the environment and demonstrate the financial and economic efficiencies of adopting mutually compatible outcomes.

Leading by Example

Measures 14 and 15 – and Traffic Measure 7 - in respect of Council Fleet.

As part of DCC's Corporate Improvement Programme, a move to a corporate fleet management system was introduced. The new Corporate Fleet Manager was appointed in December 2011. As a member of the Corporate Air Quality Steering Group he will lead on fleet management measures that will deliver improvements in emissions standards and fuel consumption for the corporate fleet.

Measure 16 - Review of DCC Staff Travel Plan

The outcome of a Corporate review into the current arrangements for the movement of staff across the city for work purposes and proposals for reducing costs was endorsed on the 12th September 2011. The measures within the Staff Travel Policy will lower costs and the environmental impacts, including pollutant concentrations from DCC staff travel.

Education and Community Initiatives

Measure 21 – School and Workplace Travel Plans

Work during 2011 has focused on reducing the impacts of school traffic on the North West arterial corridor/Locsee Road – See Appendix 1.

As this is the first year of the implementation of the measures within the AQAP, and with some measures being implemented in the last quarter of 2011, at this stage it is difficult to quantify the emission reductions achieved. Future AQAP Progress Reports will address this. However, all measures within the action plan, except Measure 9 – investigation of a Roadside Emission Testing scheme, have been progressed.

Summary from Action Plan								Progress Report January to December 2011															
TRAFFIC MEASURES																							
No	Measure	Focus	Lead Authority	Planning Phase	Implementatio n Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions													
1	Measure M1: Existing Road Infrastructure Improvements	<ul style="list-style-type: none">City Centre Improvements - Union St	<ul style="list-style-type: none">DCC City Development Department (Transportation Division)	For 2012 City Centre Improvements - Meadowside - identify and cost feasible solutions to air quality problems at this location Infrastructure Improvements - Lochee Road/Rankine Street junction - alteration of road layout	2012 + 2012	<ul style="list-style-type: none">Implementation of improvements	High	Union Street improvements completed December 2011. Two way traffic was maintained. Pavement widths were altered and the bus stops have been removed to reduce congestion and bus idling.	Medium Term Union Street improvements completed	The modelled results expected a reduction in concentration of 1 to 2 µg/m³. To continue real time monitoring in Union Street to measure improvements													
2	Measure M2: DCC will enhance the Urban Traffic Management and Control (UTMC) system to reduce congestion	<ul style="list-style-type: none">Real-time traffic monitoringImprove control regime to smooth out peak traffic	<ul style="list-style-type: none">DCC City Development Department (Transportation Division)		2011+	<ul style="list-style-type: none">10% reduction in congestion (journey times) in targeted areas during peak times before and after implementation of measure.Annual review of impact	Small	Scheme designed to expand UTMC to two congested junctions in Lochee Rd AQ hotspots. Programmed for installation by end March 2012	2012+ Ongoing														
Potential Air Quality Benefits Small 0 - 0.5 µg/m³ Medium 0.5 - 1.0 µg/m³ High greater than 1.0 µg/m³ n/a not applicable				Action Plan Measure Priority Level <table><tr><td>High</td><td></td></tr><tr><td>Medium</td><td></td></tr><tr><td>Low</td><td></td></tr></table>			High		Medium		Low		Timescale (Years from 2011) <table><tr><td>Short</td><td>1-2</td></tr><tr><td>Medium</td><td>3-5</td></tr><tr><td>Long</td><td>6+</td></tr></table>				Short	1-2	Medium	3-5	Long	6+	
High																							
Medium																							
Low																							
Short	1-2																						
Medium	3-5																						
Long	6+																						

No	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions
3	Measure M3: DCC to identify partnership and funding to continue benefits of Smarter Choices/Smarter Places: Dundee Travel Active Programme	<ul style="list-style-type: none"> ➤ Identify and implement wider partnership to continue programme ➤ Identify funding 	<ul style="list-style-type: none"> ▪ DCC City Development Department (Transportation Division) 		<p>2011+</p> <p>Behavioural Change Centre of Excellence will deliver its first project - a travel behavioural change programme - in Broughty Ferry in 2012</p> <p>In class workshops to be delivered in February/March 2012.</p> <p>BikeBoost programme to be delivered through major employers in 2012.</p>	<ul style="list-style-type: none"> ⊙ Increase % of people who walk and cycle to work in Dundee ⊙ Identify funding for education 	Small	<p>Social Marketing Campaign undertaken - focussing on the Lochee Road corridor (See Appendix 1)</p> <p>DCC initiated partnership with a local social enterprise to develop a Behavioural Change Centre of Excellence.</p> <p>Designed a programme of in-class workshops to promote sustainable and active travel in 11 primary schools..</p> <p>Established a new BikeBoost programme to promote cycling to work and other journeys.</p> <p>DCC is actively working to secure funds for future investment in Dundee Travel Active.</p>	<p>2012+ ongoing scaled down</p> <p>Lochee Road corridor campaign completed.</p>	See Appendix 1

No	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions
4	Measure M4: DCC will introduce measures to improve bus services and reduce emissions	<ul style="list-style-type: none"> ➤ Statutory Bus Quality Partnership ➤ Voluntary Bus Quality Partnership 	<ul style="list-style-type: none"> ▪ DCC City Development Department (Transportation Division) 		2011+	<ul style="list-style-type: none"> ⊙ Identification of new corridors that directly benefit air quality ⊙ Average age fleet and Euro category, fuel type 	<p>Medium</p> <p>Small</p>	Opportunities are being investigated as part of Air Quality Low Emission Charter (See Appendix 2)	<p>Medium Term</p> <p>2012+ (Short Term)</p>	

No	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions
		<p>► Fleet Renewal – Emissions Improvements</p>	<p>▪ DCC City Development Department (Transportation Division)</p>	<p>National Express Dundee to apply to Scottish Government's Green Bus Fund 2 and invest in hybrid engine technology</p> <p>Bus Service Operators Grant (BSOG) changes from April 2012 will reward use of cleaner fuels</p>	2011+	<p>⊙ Fleet age, Euro class, fuel type</p> <p>⊙ Lobby Scottish Government for fuel duty rebates for low carbon fleet</p>	Medium	<p>National Express Dundee introduced 15 new Euro V Vehicles during December 2011 for use on Services 22 (Ninewells Hospital - City Centre- Downfield- Craigowl View) and 28/29 (Douglas- Charleston- Douglas via City Centre).</p> <p>During 2010/11 Stagecoach invested in 20 new Euro V double-deckers on its major Service 73 corridor (Ninewells-City Centre-Broughty Ferry-Carnoustie-Arbroath) and Service 20 (Dundee-Forfar). 4 new Euro V coaches also have also been introduced in new route (Dundee-Arbroath-Montrose-Aberdeen)</p>	2012+	

No	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions
		<ul style="list-style-type: none"> ➤ Tackling Idling Bus Emissions 	<ul style="list-style-type: none"> ▪ DCC City Development Department (Transportation Division) 		2011+	<ul style="list-style-type: none"> ⊙ Traffic Regulation Conditions within the city centre ⊙ 'No-idling' signage on bus routes ⊙ Driver Training/ Awareness Raising 	Small	<p>Opportunities are being investigated as part of Air Quality Low Emission Charter (See Appendix 2)</p> <p>National Express Dundee and Stagecoach have invested in in-vehicle monitoring systems</p>	2012+	
		<ul style="list-style-type: none"> ➤ Low Emission Zones (LEZ) for buses 	<ul style="list-style-type: none"> ▪ DCC City Development Department (Transportation Division) 			<ul style="list-style-type: none"> ⊙ Investigate the Traffic Regulation Conditions for LEZ in City Centre ⊙ Route choice for clean buses see Park & Ride facilities 	High	<p>Opportunities are being investigated as part of Air Quality Low Emission Charter. (See Appendix 2)</p>	Med Term 2015-2016+	
5	Measure M5: DCC will explore provision of Park and Ride facilities	<ul style="list-style-type: none"> ➤ Provision of Park and Ride (P&R) facilities 	<ul style="list-style-type: none"> ▪ DCC City Development Department (Transportation Division) ▪ Tayside and Central Scotland Transport Partnership (TACTRAN) 			<ul style="list-style-type: none"> ⊙ Report on identification and prioritisation of P&R facilities ⊙ Implementation of scheme ⊙ Passenger numbers 	Medium	<p>Site at Wright Avenue selected as preferred location for P&R at Dundee West and at site on south side of Tay Road Bridge identified for Dundee South, awaiting NE Local Plan inquiry</p>	Med Term 2014+	

6	Measure M6: DCC will introduce measures to reduce emissions from Heavy Goods Vehicles	<ul style="list-style-type: none"> ➤ Perth & Dundee Retail Freight Consolidation Centre 	<ul style="list-style-type: none"> ▪ DCC City Development Department Transportation Division) ▪ TACTRAN 		2011+	<ul style="list-style-type: none"> ⊙ Implementation of scheme ⊙ Vehicle fleet in the AQMA ⊙ Study for the alternate system of retail freight 	Small	<p>Opportunities are being investigated as part of Air Quality Low Emission Charter</p> <p>(See Appendix 2)</p>	2012+	
		<ul style="list-style-type: none"> ➤ Freight Quality Partnership (FQP) 	<ul style="list-style-type: none"> ▪ DCC City Development (Transportation Division, Planning Division) 			<ul style="list-style-type: none"> ⊙ Implementation of partnership ⊙ Changes in hourly profile of HGVs in AQMA 	Small	Dundee is included as part of TACTRAN's Regional FQP	Long term	

No	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions
7	Measure M7: DCC will seek improvements in emissions standards, including NO ₂ and PM ₁₀ for the council fleet and public service vehicles	<ul style="list-style-type: none"> ➤ Development of Green Procurement Strategy ➤ To set target for Euro category/fuel type 	<ul style="list-style-type: none"> ▪ DCC Corporate Fleet Manager ▪ DCC Environment Department 		2011+	<ul style="list-style-type: none"> ⊙ Approval of Strategy ⊙ Average age fleet and Euro category, fuel type 	Small	<ul style="list-style-type: none"> ⊙ New Corporate Fleet Manager appointed December 2011 ⊙ New Fleet Section will develop a reporting procedure to compare replacement vehicles in relation to emission improvements ⊙ New Fleet Section will create a replacement plan for all vehicles to maintain fleet age profile. ⊙ Current make up of the waste collection fleet is 12 x Euro 3, 17 x Euro 4 and 23 x Euro 5. Fleet is continually moving towards newest Euro Category <p>See Measure 14</p>	2012+	

No	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions
8	Measure M8: DCC in consultation with the Taxi Liaison Group will explore means of reducing emissions from taxis and private car hire vehicles in AQMA	<ul style="list-style-type: none"> ➤ Enforce No idling for taxis ➤ Increase cleaner taxis 	<ul style="list-style-type: none"> ▪ DCC Support Services ▪ DCC City Development Department ▪ Tayside Police 		2011+	<ul style="list-style-type: none"> ⊙ Traffic Regulation Conditions for 'No Idling' of taxis ⊙ Explore the potential of introducing Licensing Conditions for minimum taxi Euro category for certain classes of vehicles ⊙ Provide 'No Idling' street signage ⊙ Monitoring for idling in place 	Medium	<p>Opportunities are being investigated as part of Air Quality Low Emission Charter.</p> <p>(See Appendix 2)</p> <p>Education Transport contracts to be let with condition that all vehicles must be euro 4 compliant</p>	2012+	
9	Measure M9: DCC will investigate to initiate a Roadside Emission Testing (RET) scheme inside the AQMA and routes leading to AQMA	<ul style="list-style-type: none"> ➤ To investigate into the establishment of a programme of RET in the AQMA 	<ul style="list-style-type: none"> ▪ VOSA ▪ Tayside Police ▪ DCC Environment Department. 	2013	2013+	<ul style="list-style-type: none"> ⊙ Approval/non-approval of RET scheme ⊙ Traffic Regulation Conditions if necessary. 	Small	No progress to date.	2013+	

POLICY AND PARTNERSHIP WORKING MEASURES

No	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions
10	Measure M10: DCC will ensure local air quality is fully integrated into the Local Development Plan (LDP) process and development scenarios are appropriately assessed with respect to the potential impacts on air quality	<ul style="list-style-type: none"> ➤ Provide AQ policy within Local Development Plan with commitment to improve air quality ➤ Produce air quality Supplementary Planning Guidance (SPG) 	<ul style="list-style-type: none"> ▪ DCC City Development (Planning Division) ▪ DCC Environment Department. 		2011+	<ul style="list-style-type: none"> ⊙ Adoption of Local Development Plan ⊙ Adoption of Air Quality SPG 	Small	<p>Main Issues Report Consultation exercise completed 2/12/2011. Proposed Plan by late autumn 2012.</p> <p>Method of integrating AQ into SPG being considered</p>	2013 +	Mitigation measures introduced as appropriate.
11	Measure M11: DCC will ensure effective co-ordination between climate change and air quality strategies and action plan measures	<ul style="list-style-type: none"> ➤ Strategy to be developed to improve co-ordination between climate change and air quality strategies and action plan measures 	<ul style="list-style-type: none"> ▪ DCC Corporate Planning Department ▪ DCC City Development - (Property Division) ▪ DCC Environment Department. 		2011+	<ul style="list-style-type: none"> ⊙ Implementation of co-ordination strategy ⊙ Reciprocal attendance of air quality and climate change working groups/steering committees 	Small	Currently being developed.	2012+	
12	Measure M12: DCC will continue its active involvement and support of TACTRAN	<ul style="list-style-type: none"> ➤ Regularly attend meetings ➤ Provide feedback ➤ Provide necessary support 	<ul style="list-style-type: none"> ▪ DCC City Development Department. (Transport Division) 			<ul style="list-style-type: none"> ⊙ Number of TACTRAN policies and proposals implemented 	n/a	DCC will continue to support TACTRAN and focus on implementation of Regional Transport Strategy	Ongoing	

LEADING BY EXAMPLE MEASURES

No	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions
13	Measure M13: DCC will promote the uptake and use of cleaner and/or alternative fuels where possible for transport DCC will explore the development of electric charging point infrastructure	<ul style="list-style-type: none"> ➤ Determine strategy/advise note and annually review content ➤ Install Electric Charging Facilities in Car Parks 	<ul style="list-style-type: none"> ▪ DCC City Development Department (Transportation Division) 		2011+	<ul style="list-style-type: none"> ⊙ List of any promotion campaigns planned/implemented ⊙ Number/proportion of cleaner vehicles within fleets or clean fuels infrastructure in each financial year ⊙ Number of electric charging points installed 	Small	See Measures 7 and 14 Electric vehicle charging station infrastructure for council vehicles is to be implemented by end June 2012 Electric Charging points to be installed in underground car park (below city square)	2012+ ongoing	
14	Measure M14: DCC will establish and implement a rolling programme for replacing older more polluting vehicles with newer cleaner vehicles, which comply with the prevailing EURO standard	<ul style="list-style-type: none"> ➤ Development of Green Procurement Strategy 	<ul style="list-style-type: none"> ▪ DCC Corporate Fleet Manager 		2011+	<ul style="list-style-type: none"> ⊙ Number/ proportion of new/improved vehicles within fleets in each financial year 	Small	<ul style="list-style-type: none"> ⊙ New Corporate Fleet Manager appointed December 2011. ⊙ Procurement of vehicles is through Scotland Excel Framework which gives consideration to Green Credentials. 2011 saw the introduction of 6 electric vehicles with a further 6 to follow by end March 2012 See Measure 7	2012+	

No	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions
15	Measure M15: DCC will improve the Council's vehicle fuel consumption efficiency by better management of fleet activities	<ul style="list-style-type: none"> ➤ Develop fleet management plan to improve fuel efficiency. ➤ Investigate fleet activities in relation to pollution hotspots e.g. waste management fleet routes 	<ul style="list-style-type: none"> ▪ DCC Corporate Fleet Manager ▪ DCC Environment Department 		2011+	<ul style="list-style-type: none"> ⊙ Implementation of smarter driver programme ⊙ Preparation/ Implementation of Fleet management plan ⊙ 10% reduction by 2013 for staff business travel and Corporate Fleet 	Small	<ul style="list-style-type: none"> ⊙ New Fleet Section still under development. ⊙ Environment Department LGV drivers have undertaken SAFED (Safe & Fuel Efficient Driving) as part of their decision driving training and there is a proposal to roll this out across all council drivers. ⊙ New computerised Fleet Management Systems to be introduced will help monitor fuel use across the council. Fuel saving measures are being trialled in vehicles at the moment including Throttle Intervention Systems and Gear Box Prognostics 	2012+	

No	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions
16	Measure M16: DCC will promote options for better travel planning amongst Dundee City Council employees	<ul style="list-style-type: none"> ➤ Review DCC Travel Plan ➤ DCC to investigate use of annual survey on how/what modes of transport employees use to travel to work 	<ul style="list-style-type: none"> ▪ DCC City Development (Transportation Division) 		2011+	<ul style="list-style-type: none"> ⊙ Implementation of DCC Travel Plan & review of progress with targets ⊙ 10% reduction by 2013 in staff business travel ⊙ % DCC employees walking/cycling to work 	Small	<p>Staff Travel Policy adopted Autumn 2011. This includes CO₂ usages for lease vehicles</p> <p>DCC senior managers will effectively implement staff travel policy</p>	2012+	
17	Measure M17: DCC will continue to promote and encourage their employees to consider the use of bicycles in their daily duties by providing cycle usage mileage	<ul style="list-style-type: none"> ➤ Continue to investigate and develop the use of various incentive schemes ➤ Develop cycling strategies ➤ DCC to investigate use of annual survey on how/what modes of transport employees use to travel to work 	<ul style="list-style-type: none"> ▪ DCC City Development (Transportation Division) 		2011+	<ul style="list-style-type: none"> ⊙ % DCC employees walking/cycling to work ⊙ Incorporate cycling measures within DCC Travel Plan in line with the new DCC Cycling Strategy to be developed 	Small	<p>Get Cycling engaged to deliver cycling initiatives at DCC and other major employers in Dundee.</p> <p>Improved cycling facilities provided at Dundee House (Dundee City Council Headquarters) and other Council properties.</p>	2012+	

No	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions
18	Measure M18: DCC will assess the Council's energy needs, make recommendations and implement reductions of carbon emissions which result in corresponding reductions of NO ₂ and PM ₁₀ .	<ul style="list-style-type: none"> ➤ DCC to implement annual energy reduction action plan 	<ul style="list-style-type: none"> ▪ DCC City Development (Property Division) 			⊙ 10% reduction by 2013	Small	The Climate Change Board continues to implement the Council's Carbon Management Plan and current energy management projects. However, while there are a number of initiatives that when fully implemented should realise reductions in our CO ₂ emission, the current performance is not consistently improving. The agreed procedural arrangements to enable the Council to comply with the new mandatory UK-wide Carbon Reduction Commitment - Energy Efficiency Scheme have been implemented and the Councils reported Total Footprint Emissions for property are 38,471 tonnes of CO ₂ .	Ongoing	

EDUCATION AND COMMUNITY INITIATIVES MEASURES

No	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions
19	Measure M19: DCC to promote and support localised energy generation that doesn't compromise Air Quality in private households	<ul style="list-style-type: none"> ➤ Determine strategy/advise note and annually review content 	<ul style="list-style-type: none"> ▪ DCC Housing Department ▪ Solar Cities 		2011+	<ul style="list-style-type: none"> ⊙ List of any promotion campaigns planned/ implemented 	Small	<p>Solar PV – Annual 25,055kg CO₂ (nominated installers calculated figures)</p> <p>Solar thermal – Annual 197 kg CO₂ (nominated installers calculated figures)</p> <p>The above figures are all annual savings as not all installation dates have been collected yet to allow calculation of the actual amount saved within the project period.</p> <p>Participant in Maryfield and Coldside areas CO₂ reduction Groups pending start date = 59 Groups working with = 23 Groups Complete = 2 Total number of people engaged = 853</p>	2012+	

No	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions
20	Measure M20: DCC will provide the public with relevant air quality information.	<ul style="list-style-type: none"> ➤ Investigating the potential for uptake of an air pollution information system, such as Air Alert ➤ Improvements to AQ website information ➤ Make up to date air quality information available to the public through Councils digital website 	<ul style="list-style-type: none"> ▪ DCC Environment Department ▪ DCC City Development (Transportation Division) 	2012	2013	<ul style="list-style-type: none"> ⊙ Investigate funding sources ⊙ Implement Air Alert or similar service ⊙ Improved rating of website in peer review ⊙ Make AQ information available through Council's website ⊙ Real Time Travel Information 	Small	<p>Possible funding to improve air quality pages on the Council Website has been identified.</p> <p>The Scottish Government will be taking forward their "Know & Respond" service linked to the new air quality index in 2012. This allows people with respiratory conditions to be alerted when moderate and high pollution levels are forecast. The Council intend to provide a link and information about this service on the web-site when available.</p> <p>No Progress</p> <p>Real-time pollutant monitoring concentrations are available from the Scottish Air Quality Website (www.scottishairquality.co.uk). The Council intend to provide a link on the web-site to this service.</p> <p>No progress on provision of real-time information on pollution levels to assist traffic management through pollution hotspots.</p>	2012+	

No	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions
21	Measure M21: DCC will continue its work to increase uptake and implementation of School and Workplace Travel Plans, particularly where likely to impact on the AQMA	<ul style="list-style-type: none"> ➤ DCC to ensure all relevant commercial planning applications have travel plan conditions applied in accordance with current best practice. ➤ DCC to produce Travel Plan Strategy which: ➤ Details procedure for tracking & possible requirement for enforcement of planning conditions requiring travel plans ➤ Details procedure for Travel Plan Information storage at DCC 	<ul style="list-style-type: none"> ▪ DCC City Development Department, (Planning Division, Transportation Division) ▪ DCC Education Department 		2011+	<ul style="list-style-type: none"> ⊙ Develop Business Case for Travel Co-ordinator & identify potential funding streams ⊙ Number of new travel plans (need to show in terms of walking cycling - % of journeys saved) ⊙ Identify & report on any Air Quality related Travel Plan targets from travel plan strategy and any relevant Travel Planning Team targets ⊙ Promotion of Travel Plan initiatives e.g. Sustrans' Travel Smart ⊙ Implement & regularly review Travel Plan Strategy 	Small	<p>Work in 2011 has focussed on reducing the impacts of school traffic on the Lochee Road hotspots. (See Appendix 1)</p> <p>Further work to promote sustainable travel in primary schools across Dundee is scheduled for 2012.</p> <p>DCC is working to create a full-time temporary travel planning officer post.</p> <p>Planning applications for significant developments are required to submit travel plans. The submission of travel plans is actively pursued and are approved, if appropriate.</p>	2012+	

No	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions
22	Measure M22: DCC will continue working in partnerships with TACTRAN and local active travel networks to ensure that walking and cycling initiatives are promoted and supported in Dundee	<ul style="list-style-type: none"> ➤ Identify walking & cycling schemes (such as Park & Cycle) ➤ Identify walking & cycling promotional opportunities around Dundee City 	▪ DCC City Development (Transportation Division)		2011+	<ul style="list-style-type: none"> ⊙ Number of walking and/or cycling initiatives in operation ⊙ Establish the use of cycle monitoring counts at key points on cycle routes 	Small	<p>Get Cycling engaged to undertake promotion of cycling</p> <p>Positive Steps to take forward Dundee Travel Active Personal Travel Plans in Broughty Ferry</p>	2012+	
23	Measure M23: DCC will continue to work with transport providers to support and promote increased uptake of public transport modes	<ul style="list-style-type: none"> ➤ Promote schemes such as the SQUID card including Dundee and surrounding towns ➤ Introduce smart and integrated ticketing 	▪ DCC City Development (Transportation Division)		2011+	<ul style="list-style-type: none"> ⊙ % uptake schemes ⊙ Passenger numbers 	Small	The development of Smart Card based integrated ticketing (National Entitlement Card) is being undertaken by DCC, National Express and Transport Scotland. Initial products are expected to appear from Autumn 2012	2012+	
24	Measure M24: DCC will continue to work in partnership with other organisations to promote and implement energy efficiency measures in Dundee	<ul style="list-style-type: none"> ➤ To implement an Annual Action Plan of energy efficiency measures. 	▪ DCC City Development (Property Division)		2011+	<ul style="list-style-type: none"> ⊙ Implementation of Annual Energy Efficiency Action Plan ⊙ Report reductions in energy use 	Small	The Climate Change Board are considering the re-introduction of the Carbon Management Action Plan.	2012+	

MEASURES SECURING AIR QUALITY BENEFITS THROUGH STATUTORY FUNCTIONS

No	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions
25	Measure M25: DCC Environment Department will comment upon planning applications to ensure that all relevant air quality issues are highlighted and mitigation measures are considered wherever possible	➤ The Environment Department (Environmental Protection Division) will continue to work with City Development (Planning Division) as Statutory Consultees	<ul style="list-style-type: none"> ▪ DCC City Development Department (Planning Division) ▪ DCC Environment Department 	New database monitoring system required to facilitate retrieval of data	2012	<ul style="list-style-type: none"> ⊙ Total number of planning applications consultations responded to in each calendar year (changed from financial year) ⊙ Percentage of the total planning applications responded to with air quality conditions/ assessments 	Small	<p>Environment Department Officers check weekly planning lists and comment on all applications which may adversely impact on local air quality.</p> <ul style="list-style-type: none"> • 19 planning applications responded to. • 16% had air quality conditions/ assessments (this included smoke control area informatives) 	n/a	Mitigation measures to be conditioned as appropriate.
26	Measure M26: DCC will enforce statutory legislation to control smoke, dust, fumes or gas emissions from commercial and domestic premises which are causing a nuisance or are prejudicial to health	➤ DCC will continue to monitor and enforce statutory legislation in this area	▪ DCC Environment Department.			<ul style="list-style-type: none"> ⊙ Number of relevant complaints in each financial year ⊙ % resolved 	Small	<p>For period in 2010-11 financial year (01/01/11 - 31/03/11) a total of 15* relevant complaints were investigated of which 93% were resolved.</p> <p>For period in 2011-12 financial year (01/04/11 - 31/12/11), a total of 26** relevant complaints were investigated of which 69% had been resolved by 31/12/2011.</p>	n/a	

Measure 26

* Of the 15 complaints, 5 involved smoke from the chimney of a domestic property, 1 related to domestic bonfire smoke, 3 involved smoke from commercial / agricultural / construction bonfires, 5 involved construction / demolition dust and 1 involved emissions from an industrial premises.

** Of the 26 complaints, 10 involved smoke from the chimney of a domestic property, 10 involved smoke from a domestic bonfire, 4 involved smoke from commercial / agricultural / construction bonfires, and 2 involved construction / demolition site dust.

Note: In future targets/indicators will be per calendar year.

No	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions
27	Measure M27: DCC will enforce relevant legislation to reduce the burning of commercial and domestic waste	<ul style="list-style-type: none"> ➤ DCC will continue to monitor and enforce legislation in this area 	<ul style="list-style-type: none"> ▪ DCC Environment Department 			<ul style="list-style-type: none"> ⊙ Number of relevant complaints ⊙ % resolved 	Small	<p>1 complaint of the burning of commercial waste was investigated under the Environmental Protection Act 1990 (EPA) Section 33 requirements which was resolved.</p> <p>7 complaints of smoke from commercial bonfires were investigated under EPA Section 79 and Clean Air Act legislation.</p> <p>11 complaints of smoke from the burning of domestic waste (domestic bonfires) were investigated under EPA Section 79 and Clean Air Act legislation in 2011 of which 94% of these complaints had been resolved by 31/12/2011</p>	n/a	

No	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions
28	Measure M28: DCC will promote composting in a bid to reduce pollution from domestic bonfires	<ul style="list-style-type: none"> ➤ Reintroduce discount/promotion campaign for compost bins 	<ul style="list-style-type: none"> ▪ DCC Environment Department 		2011+	<ul style="list-style-type: none"> ⊙ % uptake composting bins 	Small	<p>The existing Waste Resources Action Programme (WRAP) subsidised discount compost bins ended due to funding cuts in March 2011 with a total of 5243 discounted bins being sold in the DCC area in the period between 2006 and end 2010 representing 2% of the total discounted bins for Scotland. The promotion of home composting continues under the Zero Waste Scotland campaign banner with a Recycling Projects Officer employed in the Environment Department</p> <p>Composting is undertaken at the Environment Department's green waste processing facility at Riverside Drive. 37,526 brown bins for garden waste have been issued.</p>	2012+	

LOCAL AIR QUALITY MANAGEMENT MEASURES

No	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions
29	Measure M29: DCC will continue to monitor a range of air pollutants throughout Dundee and make the monitoring information freely available to the public in an easily understandable form	<ul style="list-style-type: none"> ➤ Continued support for Dundee Air Quality Monitoring Network 	<ul style="list-style-type: none"> ▪ DCC Environment Department. 			<ul style="list-style-type: none"> ⊙ Number of monitoring sites ⊙ Identification of sites in new hotspots ⊙ Monitoring data via DCC website 	n/a	<p>The Council currently have one real-time background monitoring site (Mains Loan), and real-time monitors located in the following seven hotspot locations: Victoria Road, Meadowside, Logie Street, Lochee Road, Seagate, Union St and Whitehall St.</p> <p>One new real-time monitoring site added in 2011 for PM₁₀ and NO₂ in hotspot area (Meadowside).</p> <p>2 additional PM₁₀ "reference equivalent" analysers installed at hotspot locations in Lochee Road and Seagate in 2011.</p> <p>New NO_x analyser installed at background location in 2011.</p> <p>Currently 98 NO₂ diffusion tube sites across the city. Located at busy roads and junctions and a number of background locations. 14 new diffusion tube locations added in 2011.</p> <p>One potential new hotspot identified for NO₂ in Strathmore Avenue based on 2009 data. Additional tubes deployed in the area in 2011.</p> <p>Ratified data for 2011 required before any new hot-spots can be determined</p> <p>See Measure 20</p>	n/a	

No	Measure	Focus	Lead Authority	Planning Phase	Implementation Phase	Targets/ Indicators	Target Annual Emission Reduction in the AQMA	Progress to Date	Estimated Completion Date	Comments relating to emission reductions
30	Measure M30: DCC will ensure that all air quality monitoring data reported to the public is both accurate and precise by implementing quality control measures	<ul style="list-style-type: none"> ➤ Regular calibrations and filter changing of continuous monitoring equipment in DCC's air quality stations ➤ At least annual audit of air quality stations' equipment ➤ Appropriate use and care of NO₂ diffusion tubes regularly deployed around the City Council area. 	<ul style="list-style-type: none"> ▪ DCC Environment Department/ Tayside Scientific Services 			<ul style="list-style-type: none"> ⊙ QA/QC measures adopted ⊙ Auditing reports 	n/a	<p>External consultant undertake calibrations and filter changing of the continuous monitoring equipment in the air quality monitoring stations.</p> <p>Osiris meters - indicative PM₁₀ meters - filter change undertaken on quarterly basis and annual calibration.</p> <p>Audits of continuous monitoring stations' equipment undertaken by external consultants and auditing reports received.</p> <p>Public Analyst participates in Workplace Analysis Scheme for Proficiency (WASP) Scheme and field inter-comparison study.</p>	n/a	
31	Measure M31: DCC will establish additional monitoring sites across the City in locations where poor air quality is suspected	<ul style="list-style-type: none"> ➤ DCC will continue to carry out and report on their statutory duties under the Review & Assessment process for LAQM 	<ul style="list-style-type: none"> ▪ DCC Environment Department 			<ul style="list-style-type: none"> ⊙ Poor air quality sites identified monitored and dealt with as through the process of Review & Assessment ⊙ Additional monitoring sites established as and when required 	n/a	<p>See Measure 29</p> <p>See Measure 29</p>	n/a	
32	Measure M32: DCC will implement road traffic counts to inform the review and assessment process.	<ul style="list-style-type: none"> ➤ Undertake classified traffic counts 	<ul style="list-style-type: none"> ▪ DCC Environment Department 			<ul style="list-style-type: none"> ⊙ Classified traffic counts undertaken 	n/a	Classified Traffic Counts Undertaken at 18 junctions in 2011.	Ongoing	

Appendix 1

DUNDEE AIR QUALITY CAMPAIGN 2011



EXECUTIVE SUMMARY

20 December 2011



Executive Summary

Introduction

In September 2011, JMP led a major social marketing campaign on behalf of Dundee City Council to raise awareness of sustainable and active travel modes. Funded by the Scottish Government's Local Air Quality Management grant, the campaign's objective was to change motorists' travel behaviour towards less polluting modes.

Its focus was on the Lochee Road corridor, which has two of Dundee's hotspot locations. The campaign supported a range of traffic infrastructure and signal changes.

Campaign design

The campaign was run under the Dundee Travel Active brand which, thanks to other Scottish Government funding, has been developed by the Council since 2009 as the identified source of reliable advice on healthy and sustainable travel choices.



The campaign design was cognisant of a number of challenges in achieving behavioural change in such locations. In particular, it had to appeal both to local people (who frequently make journeys through the hotspot locations) and other motorists passing through the areas (that have a wide variety of trip ends and so are difficult to target using individualised marketing approaches).


It was recognised from the outset that environmental messages are a poor motivation of change for many people.

Drivers were therefore encouraged to change behaviour by promotion of the potential for cost saving with supportive pro-environmental messages and practical eco-driving tips.

JMP therefore developed three lead messages for the campaign:

- "Petrol 15% off" to promote the potential for fuel cost savings for drivers by using eco-driving techniques;
- "Petrol 30% off" to promote the cost saving of undertaking a typical urban journey in Dundee by bus instead of by car; and
- "Petrol 100% off" to promote walking and cycling.

I'm saving **15%** on my petrol costs
Drive slower, drive smoother



Messages were delivered through both individualised approaches (predominantly to target local people) and mass media (for people passing through the area from elsewhere).

Mass marketing approaches

The mass media campaign included use of:

- Billboards at relevant sites (as pictured);
- A four-week campaign on Wave102 radio (targeting morning and evening peak periods);
- Events and press releases alongside paid-for articles to receive local print media coverage; and
- Organisation of specific events at key locations to raise awareness and provide advice (as pictured).



Individualised marketing approaches

The individualised campaign included:

- Personalised travel planning advice to residents closest to the hotspot locations;
- A project website, which provided links to existing web-based resources; and
- An intensive programme of activity within three local primary schools (Ancrum Road, St Mary's and Blackness).



The schools engagement included:

- In-class workshop sessions on air pollution and alternative travel options for all P4-7 pupils (pictured);
- All-school assemblies given by the P6/7 classes;
- Walk to school weeks which parents and pupils were challenged to join in with; and
- P7 pupils acting as 'air quality detectives', standing near school gates at collection time to highlight the campaign to parents (pictured).

Campaign supporters

Active support was shown for the campaign by businesses with an interest in travel, including Energy Saving Trust, Michelin, Stagecoach and National Express Dundee.

JMP is particularly grateful to the staff of those organisations that provided assistance with development or implementation of the campaign.

Campaign outcomes

Given the recent completion of the campaign, full evaluation data is not yet available; this will await air quality monitoring data. However, we know that around 13,000 car drivers per day passed the billboards, the radio station used has around 32,000 regular local listeners and that nearly 100 people received personal eco-driving advice.

More than 400 primary school children engaged in in-class workshop sessions and a similar number in assemblies. The proportion of children walking to school is estimated to have increased by 11%. Feedback from pupils and staff was universally positive, in particular with the children responding well to the cost-saving potential of alternative travel choices and the start of opportunities for them to travel independently by active modes.



Summary

The campaign has helped to raise awareness in Dundee of savings that can be achieved through driving more efficiently or by using active and sustainable modes.

Additionally, the campaign will have helped to further engender an awareness of the Dundee Travel Active brand and its objectives, contributing to Dundee City Council's aspirations to build upon the success of the programme to date.

Appendix 2



A Low Emission Charter for Dundee: scope

What would a “Low Emission Charter for Dundee” be?

A summary of the nature and source of air quality problems in Dundee, how those problems can be mitigated and a statement of the actions that stakeholders commit to undertake to achieve this mitigation.

The Charter should be adopted by all those stakeholders so, crucially, must have their full support as a set of realistic and implementable actions.

What form would the Charter take?

A short document (which may be accompanied by technical appendices if appropriate), which is sufficiently detailed to enable stakeholders to understand their responsibilities but which is non-technical and suitable for widespread publication.

What will make the Charter successful?

The Charter can only be successful in achieving desired actions if actions which will result which are over and above business as usual activity. As such, it will be essential that:

- all stakeholders can work towards a common objective;
- that financial or other costs incurred are seen to be shared equitably;

- that all stakeholders identify that they will receive benefits to them in excess of the costs they will incur; and
- as facilitators of the process and as representatives of the main beneficiaries of improved air quality (the people of Dundee), Dundee City Council is willing to offer some attractive investment to organisations that sign up to the Charter to help them meet their goals.

Who should adopt the Charter?

Those stakeholders that are most responsible for air quality problems, that represent the people affected, or can contribute to their resolution, including:

- Dundee City Council (potentially various departments);
- DCHP/NHST;
- LCPPs;
- The main bus operators;
- Taxi operators;
- Road haulage operators;
- City centre retailers;
- Promoters of economic development;
- Transport Scotland;
- Tactran; and
- Major employers or other significant traffic-demand generators.

Recommended process

The Charter will be developed most effectively if these tasks are undertaken, in order:

1. All stakeholders are engaged initially on a one-to-one basis, to tease out main issues;
2. The required reduction in emissions is assessed, and ways to achieve these reductions identified (see appendix for suggested approach to this assessment);
3. Stakeholders are brought together to identify areas of common interest and potential conflict;
4. A draft of the Charter is prepared, then circulated for comment;
5. Stakeholders are brought back together for discussion of the draft (though this may be unnecessary if the draft is uncontroversial)
6. The finalised draft is publicised.

Appendix: further assessment work methodology

From discussions with key stakeholders to date, it is apparent that there is lack of understanding about the scale of emissions improvements which would be realised as a result of any individual, or cumulative investment, or indeed whether these would be sufficient to meet statutory requirements for air quality such as the objectives set out in the National Air Quality Strategy (NAQS) and associated regulations.

We have therefore previously recommended (and DCC have accepted) that our work should focus on forecasting the effects on emissions of NO_x and PM₁₀ of a range of improvements with 'business as usual' and 'do-something' scenarios. This will then determine how many of the potentially deliverable investment are necessary in order to achieve emissions reduction of the order required to meet the NAQS objectives, or whether there are no foreseen changes capable of solving extant air quality problems in Dundee.

This note sets out, for comment, the proposed approach to completing that assessment work.

Locations to be assessed

We propose to undertake the assessment work at three locations which have poor air quality and which are representative of the types of streets across the city (hence providing broadly transferable findings to other locations). Our recommended sites for investigation are:

- Dock Street: characterised by high volumes of general and trunk road traffic, this location was identified in modelling work undertaken for the AQAP as having the highest levels of both NO_x and PM₁₀;
- Lochee Road: as a typical suburban radial route within Dundee, but that has poor and worsening (according to the 2011 Air Quality Progress Report) pollution levels; and
- Meadowside: a city centre street with a high flow of buses.

Assessment of specific investments

From discussions with stakeholders, we have identified a range of investments that partners are intending or may be able to deliver which could have an impact on emissions of pollutants at the sites identified for investigation. These will be included within the assessment work and are listed below, alongside a proposed assessment methodology:

- Improvements to engine technology in the heavy vehicle fleet: To forecast the effects of changes in bus and road haulage engine technology, we will use Defra's Emission Factor Toolkit (EFT) Version 4.2.2, using data inputs from a range of sources (traffic flows, vehicle classifications, traffic speeds and Euro composition);

- Improvements to engine technology in the light vehicle fleet: We will use forecasts contained within the EFT;
- Eco-driver training for bus drivers: To estimate the effects of eco-driver training programmes, we will make assumptions on the estimated reduction in emissions as a result of industry-reported savings in fuel consumption. Note that we do not intend to model effects of eco-driver training for car/van or lorry drivers, as we do not have confidence that such training is comprehensively deliverable;
- Changes to bus propulsion technologies: We will identify the emissions benefits possible from hydrogen (assumed to be zero emissions of NO_x and PM₁₀ at point of use) and diesel-hybrid powered (based on emissions from newly-available fleet) buses;
- Reduction in bus dwell times: We will estimate the potential for reduction in bus dwell times as a result of an increase in off-bus ticketing initiatives;
- Changes to lorry delivery schedules: We will estimate the impacts of changes to delivery schedules and of a freight consolidation centre;

- Social marketing: We will predict the effects of public-focused social marketing campaigns to promote sustainable travel;
- Central Waterfront development: We will predict the effects of the Central Waterfront development on air quality on Dock Street, drawing on previously-modelled data of traffic flow changes;
- UTMC: We will assess the likely benefits of UTMC improvements to air pollution on Lochee Road.

We will forecast the effects of each of these improvements individually, then the cumulative effects of packages the improvements.

Note that we do not intend to assess the emissions impacts of the following:

- Changes to traffic management/flow: As we can foresee no options for such changes that would not simply move air pollution problems elsewhere or create otherwise undesirable consequences;
- Bus priority using roadspace reallocation: As we do not foresee implementable solutions at the study locations.

Baseline and forecast years

We propose to use 2007 as the baseline year for the assessment; it is 2007 data from modelled receptor locations that have been used to inform the AQAP. We proposed to use forecasts reductions in NO_x and PM₁₀ forecasts taken from tables 4 and 5 of the AQAP as the basis for whether or not modelled scenarios will enable DCC to meet AQ objectives.

We propose to use 2015 as the future year forecast; after 2015, bus operators are required to upgrade their fleet to meet DDA requirements. Bus operators have reasonable confidence in their anticipated fleet composition in 2015, but little confidence beyond that time.