

Exeter
City Council

Air Quality Action Plan

Progress Report 2013

Executive Summary

The Environment Act 1995 requires local authorities to review air quality, and to assess this against national objectives. Where an exceedence of an objective is identified, the authority must declare an Air Quality Management Area (AQMA). A Further Assessment must then be undertaken to identify the sources of the pollution. This information is used to inform the production of an Air Quality Action Plan (AQAP), which must work towards achieving the objective level within the AQMA.

Exeter City Council declared an AQMA in 2007 because levels of nitrogen dioxide (NO₂) exceeded the annual average objective level at various locations. The AQMA covered all these locations and linked them together to form a single AQMA. In 2011 the AQMA order was amended to include exceedences of the hourly objective for NO₂ as well. It can be seen from Figure 1 that the area covers all of the main traffic routes in the city. Further Assessment studies showed that the high NO₂ concentrations are caused by traffic emissions along congested routes.

The first Exeter AQAP covered the period 2008-2011. Because the source of the NO₂ emissions is traffic on the local road network it drew heavily from the Devon County Council (DCC) Second Local Transport Plan (LTP2, 2006-2011). Air quality was one of the four national shared priorities within the LTP2 and progress against Action Plan targets was generally good but despite this there was no clear trend of reducing NO₂ concentrations over the plan period.

With the replacement of LTP2 in 2011, the AQAP also required updating. The second Exeter AQAP, published in 2012 reflects the changed priorities in LTP3 along with changes in national, regional and local policy that have occurred since 2008. The measures are proportionate to the funding and resources within LTP3 and from partners. Another key change since the first AQAP is the significant upward pressures on NO₂ emissions which will result from the proposed development in the greater Exeter area. In recognition of this contemporary context, the AQAP2 sets four key objectives, which are listed below.

Action Plan Aims:

1. To describe the impact of predicted growth and existing plans on NO₂ concentrations within the AQMA.
2. To identify where further improvements are required, how these could be achieved and where multiple benefits can be realised.
3. To provide a process for assessing the air quality aspect of the sustainability of future plans and policies.
4. To provide tools to engage local communities in air quality issues alongside wider sustainability issues.

The AQAP2 explains what actions the City Council will take with partners to meet these aims as part of delivering sustainable development. It identifies that current plans and policies should have a low positive impact on air quality, although it is accepted that there is some uncertainty associated with this. This is a modest predicted change, but should be set against the background of significant development in the city and therefore significant upward pressure on emissions.

The AQAP also proposes three areas of further work. These are the development of a Low Emissions Strategy and feasibility study for a Low Emissions Zone, the development of closer links between air quality and climate change work, and the need to increase understanding of the health impacts of poor air quality. Programs of work in these areas will be developed and implemented in coming years. They will connect air quality to two key national and local policy imperatives; the low carbon agenda and the Health and Wellbeing Board at the upper tier local authority level (DCC).

The AQAP2 also introduces a methodology for transport and forward planners to understand the impacts of development and mitigation measures on air quality and to assess these in a simple and repeatable fashion. A commitment is also made to improve engagement with communities on air quality issues, and understanding amongst the local population. Future development of the AQAP may be driven (or otherwise) by these planners and by communities and it is important that both groups are supported so that they understand the need for reductions in emissions and how to evaluate proposals.

Because of uncertainty over funding, delivery of development, policy context and future legislation the AQAP2 contains relatively little detail on specific measures which will implement the actions described above. Instead the annual Action Plan Progress Reports (AQAP PRs) will contain detailed information on the recent progress and intended direction of particular measures. This annual reporting mechanism allows for the program to be updated regularly, as DCC and other partners update their schemes. This is seen as the most efficient way of ensuring that the AQAP remains relevant.

This document is the second of these AQAP PRs. It discusses each of the measures in turn, explaining what they involve, how they will be implemented and by whom. No target or trajectory for air quality improvements is set in the AQAP2 or here. This is because the impact of many of the measures either has not or cannot be accurately quantified at this time. Instead, each annual Action Plan Progress Report reports on the actual air quality change over the previous year, as well as a series of other key indicators such as the use of sustainable travel modes, car use, completion of developments etc.

This report shows that progress with implementation of the AQAP is generally good, although maternity leave of a key member of staff has delayed some measures slightly. Progress on air quality work in 2014 is expected to be good. The latest (2013) monitoring data shows that there are no exceedences of the objective levels outside the AQMA. There is some evidence for a reduction in NO₂ concentrations since 2010, which means that fewer monitoring locations inside the AQMA are exceeding the objective. However it is not clear whether this is the start of a long-term trend or the result of inter-annual variability in weather conditions etc. During the last ten years peak time traffic levels have also decreased but it is not possible to categorically link cause and effect between this and any air quality change. This situation will be kept under review in future years.

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1.0 Introduction

Local Air Quality Management

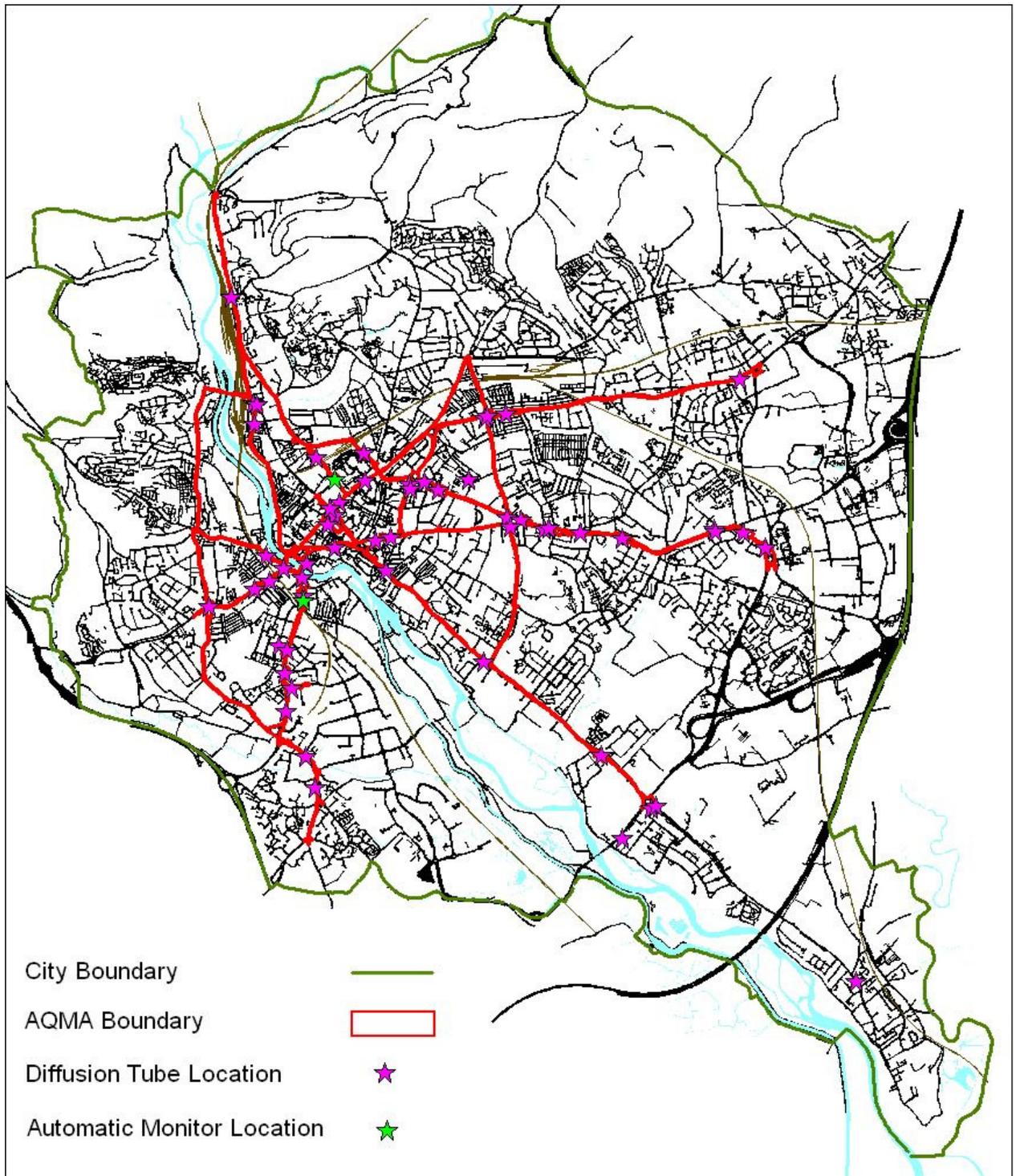
- 1.1 The Environment Act 1995 requires local authorities to review air quality, and to assess this against national objectives. Where an exceedence of an objective is identified, the authority must declare an Air Quality Management Area (AQMA). A Further Assessment must then be undertaken to identify the sources of the pollution. This information is used to inform the production of an Air Quality Action Plan (AQAP), which must work towards achieving the objective level within the AQMA.

Exeter Air Quality Management Area

- 1.2 Exeter City Council declared an AQMA in 2007 because levels of nitrogen dioxide (NO₂) exceeded the annual average objective level at various locations. The AQMA covered all these locations and linked them together to form a single AQMA. It can be seen from Figure 1 that the area covers all of the main traffic routes in the city. This boundary was determined using the NO₂ concentration data, which are highest beside busy roads. This observation was confirmed by Further Assessment studies which showed that the high NO₂ concentrations are caused by traffic emissions along congested routes.
- 1.3 Joining all the individual areas of NO₂ exceedence into a single AQMA had three major advantages. Firstly, a single, integrated Action Plan could be produced for the whole city. Secondly, any areas where concentrations were close to the objective were included, so air quality improvements could be made before an exceedence occurs. Finally, it ensured that the impact of the AQAP on all roads was considered, which should prevent any measure having a significant negative impact on adjoining roads.
- 1.4 In April 2011 the AQMA order was amended to include exceedence of the short-term objective for NO₂ as well as the annual average objective. This occurred at a few locations within the existing area because of localised high traffic emissions. Exeter City Council's two Further Assessment Reports provide greater information on the local scale of the exceedences, specific sources of emissions and the type of improvements needed in order to meet the objective level. There are large-scale maps of each part of the area in the 2014 Air Quality Progress Report. This, and Exeter City Council's other air quality reports are available at:

<http://www.exeter.gov.uk/index.aspx?articleid=4292&listid=4261>

Figure 1 The Exeter AQMA



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Air Quality Action Planning in Exeter 2008-2011

- 1.5 The first Exeter AQAP covered the period 2008-2011. Because the source of the NO₂ emissions is traffic on the local road network it drew heavily from the Devon County Council (DCC) Second Local Transport Plan (LTP2, 2006-2011). Air quality was one of the four national shared priorities within the LTP2 and progress against Action Plan targets was generally good. Successes include:
- Consistently decreasing traffic levels on the majority of Exeter's key routes over the last five years;
 - Modal shift to sustainable modes including a 31% increase in cycle, 15% increase in bus, 75% increase in Park and Ride and 57% increase in train trips. (Devon County Council 2011)

Despite these changes, there was no clear trend of reducing NO₂ concentrations over the plan period. Reductions can be seen at most monitoring sites since 2010, however it is not possible to tell whether these are the start of a long-term trend, possibly resulting from measures in the LTP2, or examples of normal inter-annual variability. The data is discussed in more detail in a later section and will need to be kept under review in future years.

The Second Exeter AQAP

- 1.6 With the replacement of LTP2, the AQAP also required updating. The second Exeter Air Quality Action Plan (AQAP2) reflects the changed priorities in LTP3 along with changes in national, regional and local policy that have occurred since 2008. The measures are proportionate to the funding and resources within LTP3 and from partners. Another key change since the first AQAP is the significant upward pressures on NO₂ emissions which will result from the proposed development in the greater Exeter area. In recognition of this contemporary context, the AQAP2 sets four key objectives, which are listed below.

Action Plan Aims:

1. To describe the impact of predicted growth and existing plans on NO₂ concentrations within the AQMA.
2. To identify where further improvements are required, how these could be achieved and where multiple benefits can be realised.
3. To provide a process for assessing the air quality aspect of the sustainability of future plans and policies.
4. To provide tools to engage local communities in air quality issues alongside wider sustainability issues.

- 1.7 The AQAP2 explains what actions the City Council will take with partners to meet these aims as part of delivering sustainable development. It identifies that current plans and policies should have a low positive impact on air quality, although it is accepted that there is some uncertainty associated with this. This is a modest predicted change, but should be set against the background of significant development in the city and therefore significant upward pressure on emissions. The summary table from the AQAP2 is included as Table 1 below.

- 1.8 The AQAP also proposes three areas of further work. These are the development of a Low Emissions Strategy and feasibility study for a Low Emissions Zone, the development of closer links between air quality and climate change work, and the need to increase understanding of the health impacts of poor air quality. Programs of work in these areas will be included in the annual Action Plan Progress Reports. They will connect air quality to two key national and local policy imperatives; the low carbon agenda and the Health and Wellbeing Boards at the upper tier local authority level (DCC).
- 1.9 The AQAP also introduces a methodology for transport and forward planners to understand the impacts of development and mitigation measures on air quality and to assess these in a simple and repeatable fashion. A commitment is also made to improve engagement with communities on air quality issues, and understanding amongst the local population. Future development of the AQAP may be driven (or otherwise) by these planners and by communities, rather than by the Environment Directorate and it is important that both groups are supported so that they understand the need for reductions in emissions and how to evaluate proposals.
- 1.10 Because of uncertainty over funding, delivery of development, policy context and future legislation the AQAP2 contains relatively little detail on specific measures which will implement the actions summarised in Table 1 and above. Instead the annual Action Plan Progress Reports (AQAP PRs) will contain detailed information on the recent progress and intended direction of particular measures. This annual reporting mechanism allows for the program to be updated regularly, as DCC and other partners update their schemes. This is seen as the most efficient way of ensuring that the AQAP remains relevant. This document is the second of these AQAP PRs.

Table 1 Summary of Measures from AQAP2

Action	Plans and supporting documents																AQ Impact	Other Benefits	Funding							
	Exeter Vision	City Centre Vision	Env. Strat.	Air Quality Strat.	Climate Change	Core Strategy	Local Plan	Resi. Design Guide	Masterplans	Car Clubs SPG	Sust. Transport	City Centre Study	Infr. Delivery P	Plann. Oblig. SPD	CIL	LTP3			Cycling Strat.	Bus Growth Strat.	Walking Strat.	ECC existing	Dev. Cont./CIL	LTP funding (DCC)	Grant funding	
ECC own emissions	✓		✓	✓	✓															Low +ve - AQAP	Carbon	✓				
Publicity, awareness raising and events	✓		✓	✓	✓										✓	✓				Low +ve with high uncertainty - LTP3	Carbon, Health	✓		✓	✓	
Increase walking and cycling	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓				Carbon, Health, Noise	✓	✓	✓	✓
Promote car clubs and car sharing	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓							Carbon, Noise Journey Time	✓	✓	✓	✓
Integrating transport modes and travel planning	✓	✓	✓	✓	✓	✓	✓	✓			✓		✓	✓	✓	✓						Carbon, Health, Journey Time	✓	✓	✓	✓
Devon Metro	✓	✓	✓	✓	✓	✓	✓				✓		✓	✓	✓							Carbon, Journey Time	✓	✓	✓	✓
Increase bus use and reduce PSV emissions	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓					Carbon, Journey Time	✓	✓	✓	✓
Enhanced bus services	✓	✓	✓	✓	✓	✓	✓		✓		✓		✓	✓	✓		✓					Carbon, Journey Time	✓	✓	✓	✓
Park and Ride	✓	✓	✓	✓	✓	✓	✓		✓		✓		✓	✓	✓		✓					Carbon, Journey Time	✓	✓	✓	✓
Improvements to road network and traffic management	✓	✓	✓	✓	✓	✓			✓		✓		✓	✓	✓							Carbon, Journey Time	✓	✓	✓	✓
Parking control and demand management	✓		✓	✓	✓	✓					✓				✓							Carbon	✓		✓	
Electric vehicles	✓	✓	✓	✓	✓	✓					✓				✓							Carbon, Noise	✓	✓	✓	✓
Freight transport	✓			✓											✓							Carbon			✓	✓

2.0 Developments since the AQAP2 was Published

National and Policy Changes

- 2.1 Since the AQAP2 was published, DEFRA have consulted on changes to the Local Air Quality Management process, including the need to declare AQMAs and publish an AQAP. No final proposals have yet been published, but Exeter City Council will respond to any future changes as they arise.
- 2.2 In the last year, Exeter has published for consultation a Development Delivery Development Plan Document (DPD). This contains 'development management' policies that will be used to determine whether planning applications submitted to the Council should be granted planning permission. Air quality officers from Environmental Health have been involved in drafting the policies within this important document, to ensure that they do not conflict with the aims of the AQAP2.
- 2.3 In April 2013, the Health and Wellbeing Board for Devon came into being. The intention of this board is to allow leaders from the health and care system to meet and work together to improve the health and wellbeing and reduce local health inequalities. Exeter City Council is working actively with the Devon Board to investigate whether specific action is required and can be taken to reduce health impacts of poor air quality. Further information on this work is reported in later sections of this document.
- 2.4 Public Health England has released estimates of the increased health risk to the population, associated with current levels of PM_{2.5} pollution (PHE 2014). These represent risks to the local population as a whole, based on modelling of anthropogenic pollution levels and epidemiological evidence. Their estimates for Exeter are as follows:
 - Mean anthropogenic concentration of PM_{2.5} is 7.4 $\mu\text{g}/\text{m}^3$;
 - The proportion of deaths estimated as due to long-term exposure to such pollution (the 'attributable fraction') is 4.2%;
 - There are 42 'attributable deaths' in the city. This estimates the equivalent effect on mortality risks, but air pollution is likely to contribute a small amount to the deaths of a larger number of exposed individuals rather than being solely responsible for this number; and
 - 438 associated life years are lost due to the increased mortality risk attributable to long-term PM_{2.5} exposure.

Changes in NO₂ Concentrations in Exeter

- 2.5 The 2014 Progress Report found that there were no exceedences of the objective levels outside the AQMA in 2013. There is some evidence for a reduction in NO₂ concentrations since 2010 (Figure 2), which means that fewer monitoring locations inside the AQMA are exceeding the objective. However it is not clear whether this does form the start of a long-term trend or the result of inter-annual variability in

weather conditions etc. During the last ten years peak time traffic levels have also decreased (Figure 2) but it is not possible to categorically link cause and effect between this and any air quality change. This situation will be kept under review in future years. (It has not been possible to obtain updated traffic data from DCC for 2013).

Local Development

- 2.6 This section of the Progress Report provides an update on the scale of development within the city in the previous year. This is important because it sets the context in which the AQAP2 must work, a context of upward pressure on emissions as a result of new development.
- 2.7 Figure 3 shows the predicted growth in population and dwellings within Exeter itself. (It does not include the significant growth in the greater Exeter area that is outside the City Council area). In the past year, 469 completions have been recorded by the City's Development Directorate, mainly in the Newcourt, Hill Barton and Harrington Lane areas where large residential developments have commenced in the last 12 months. The Council does not currently expect completions to vary significantly from the predicted rate of growth in dwellings shown in Figure 3.

Figure 2 Trends in Nitrogen Dioxide Concentrations and Peak Time Traffic Levels in Exeter

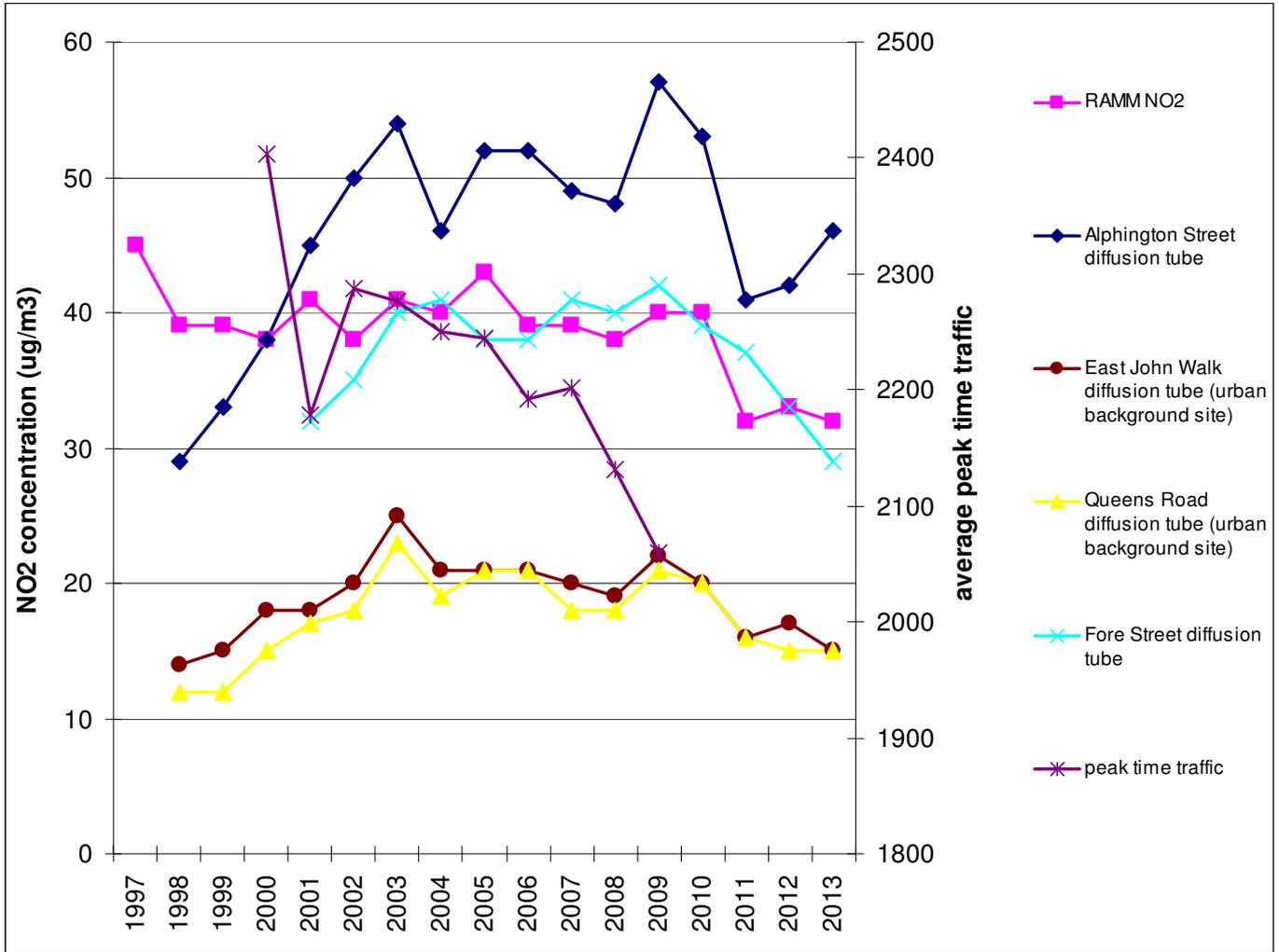


Figure 3 Actual and Predicted Trends in Population and Number of Dwellings in Exeter



3.0 Air Quality Action Plan Measures, Progress and Targets

- 3.1 As described above, the AQAP2 only summarised planned measures to improve air quality. This section of the Progress Report discusses each of the measures in turn, explaining what they involve, how they will be implemented and by whom. This information will be updated annually as plans are developed.
- 3.2 The more strategic items from the AQAP2 (the Low Emissions Strategy, connection to health and climate change policy, community engagement and the assessment of future plans) are shown first. The measures that are summarised in Table 1, which arise from existing policy and strategies, are shown after. This is because some actions to implement the Table 1 measures will be affected by progress with the LES etc.
- 3.3 Each measure shows the proposed actions involved in the planning and implementation phases. Colour shading indicates whether these actions are on target. Green colouring shows that the action has been completed as expected. Orange colouring shows that the action is on target for completion as expected. A red box shows a delay or change in the action. Green text shows a new action, added in the year since the last Progress Report.
- 3.4 Where measures or actions develop during the Action Plan period, these changes will be highlighted in future Action Plan Progress Reports.
- 3.5 No target or trajectory for air quality improvements is set in the AQAP2 or here. This is because the impact of many of the measures either has not or cannot be accurately quantified at this time. Instead, Action Plan Progress Reports report the actual air quality change, as well as a series of other key indicators such as the use of sustainable travel modes, car use, completion of developments etc. These are shown in the relevant measures below.
- 3.6 Early in 2013, the member of staff responsible for air quality reporting and policy took maternity leave unexpectedly early. As a result, no handover of this work was possible and this has resulted in delays in the implementation of some measures. These are discussed in the relevant sections below. Progress with implementation of the AQAP2 will resume as expected in 2014.

3.6 Low Emission Strategy (LES) Measure

Summary aims of Measure	<ol style="list-style-type: none"> 1. To integrate low emission strategies into mainstream policy development for transport and planning within Exeter and the greater Exeter area. 2. To reduce emissions from the Council owned fleet and grey fleet, including by increased uptake of low emission vehicles. 3. To work with partners in the private and public sectors to increase the uptake of sustainable transport choices, including low emission vehicles within the greater Exeter area. 	
Management of Measure, Responsibilities and Lead Authority	<p>The project will be managed by a management team reporting to the Chief Executive and including staff from Exeter City Council and Devon County Council (DCC). The project will be led by a contractor, who will also undertake specialised tasks such as air quality modelling or researching HGV delivery patterns and servicing needs. A steering group will be established to deliver the project, with separate stakeholder groups covering specific issues. It is anticipated that partners in these groups will include the public and private sectors, and be chosen to achieve links to areas of existing work, including:</p> <ul style="list-style-type: none"> ○ DCC's sustainable travel team; ○ ECC's Contracts Department and procurement officers; ○ the Low Carbon Task Force (acting to reduce emissions associated with new development to the East of Exeter); ○ ECC Forward Planning and Development Control; ○ the Health and Wellbeing Board; ○ ECC existing environmental education work, such as the Green Team, and Environmental Health's connections with Exeter College. 	
Funding	The project is being funded by DEFRA grant. ECC and DCC will contribute staff time to the project.	
Planning Stages	<p>ECC to tender and appoint a contractor.</p> <p>The successful contractor will develop their tender application into a detailed project plan, to include work packages, objectives and milestones. There will be a formal launch of the project, including a press release and call for interested parties.</p>	<p style="background-color: #90EE90;">complete</p> <p style="background-color: #FF0000;">2013 Because of delays in the tender process, the project commenced in 2014</p>
Implementation Stages	Develop an evidence base of detailed local vehicle flows from traffic count and micro-simulation models and local fleet composition from ANPR data. From this, the project team will compile an emissions inventory (NO _x , PM, carbon and noise) for road links across the city, (including ECC owned fleet and grey fleet).	<p style="background-color: #FFA500;">Completion date agreed with contractor of Dec. '14 (only 1 month after</p>

	<p>Understand how emissions and exposure will be affected by planned development and transport policy, including the impact of key schemes such as Devon Metro. This stage would develop the baseline emissions inventory to predict emissions inventories for a range of future years (eg 2015, 2020 and 2025).</p>	<p>original proposed completion date because project duration reduced to 12 months)</p>
<p>Identify realistic options to reduce emissions whilst maintaining sustainable economic development in collaboration with local business stakeholders. This stage will calculate the potential emission reduction across the city inventory area and estimate costs of implementation.</p>		
<p>This stage will see the production of a Low Emission Strategy for the Exeter. It will also identify methods of funding and delivery, creating an Implementation Plan for the LES.</p>		
<p>Understanding how to engage with local communities in making sustainable transport decisions, including a review of case studies, developing a local best practice guide, creating partnerships and developing links with community and business groups.</p>		
<p>Knowledge transfer and information dissemination will take place during and after the project, by a variety of media and forums.</p>		
<p>Impact on Air Quality and Success of Measure</p>	<p>Ultimately, the success of the project will be measured in the successful, ongoing use of its outputs, both by ECC and DCC, but also by other Local Authorities, community groups etc. The introduction of evidence-based measures to reduce emissions will ultimately be the indicator of the success of this study.</p> <p>In the interim, success will be measured against the project objectives. Where these involve the production of evidence, best practice reviews, reports etc then success will be easy to identify. Where the objectives involve stakeholder engagement, success is harder to define. However targets will be set for the number of businesses that will be contacted and engaged with, where appropriate.</p>	

3.7 Health Impact Mitigation Measure

Summary aims of Measure	<p>1. To increase understanding of the health impacts of the exceedences of the NO₂ objective within Exeter and particularly the impact on health inequalities.</p> <p>2. To identify options to mitigate health impacts.</p>	
Management of Measure, Responsibilities and Lead Authority	Implementation of this measure will be by DCC, ECC and health professionals, particularly those from Public Health and the Health and Wellbeing Board. ECC will be the lead authority unless it appears during the project that an alternative lead would be more appropriate.	
Funding	This measure will be funded from within existing resources at ECC and DCC, although grant funding could be considered for specific projects at a later stage.	
Planning Stages	Identify and build partnerships with Health Protection at DCC. Share information about air quality and health inequalities.	2012 and ongoing
	Contribute to the draft Joint Health and Wellbeing Strategy .	2013 and ongoing involvement in annual reviews as relevant
Implementation Stages	Identify methods and evidence which can be used to quantify the costs and impact of air quality on health in Exeter. Use the recent Public Health England data to start this process.	2015
	Investigate options for mitigation of health impacts at the receptor.	2015
Impact on Air Quality and Success of Measure	<p>This measure would not reduce NO₂ concentrations within the AQMA, but it would aim to address any human impact of the exceedences. It may also have an indirect effect on actual concentrations if research shows that the cost of reducing emissions is lower than the health costs of the status quo.</p> <p>Successful implementation of the measure would be the development and implementation of a work program in collaboration with health professionals.</p>	

3.8 Connections to Climate Change Policy Measure

Summary aims of Measure	<p>1. To raise awareness of air quality amongst those involved in climate change work locally.</p> <p>2. To recognise schemes which will have mutual air quality and carbon benefits and promote these, over measures which will achieve only one objective.</p>	
Management of Measure, Responsibilities and Lead Authority	<p>This measure will be lead by ECC through the Climate Change Steering Group, which consists of ECC officers from Environmental Health, Contracts and Economy and Development. External partners will include the Low Carbon Task Force, which aims to reduce emissions from the development to the east of Exeter, DCC and neighbouring district councils.</p>	
Funding	<p>This measure will be funded from within existing resources at ECC, although grant funding could be considered for specific projects at a later stage.</p>	
Planning Stages	<p>Identify and build partnerships with staff involved in climate change work at ECC and DCC. Share information about air quality.</p>	2012 and ongoing
	<p>Produce initial report to the Climate Change Strategy Board (now the Steering Group)</p>	complete
	<p>Contribute to development of the Group's Work Plans and Action Streams.</p>	2014
Implementation Stages	<p>Produce and disseminate accessible local information on the connections between air quality and climate change. This work has been delayed as a result of maternity leave of a key member of staff.</p>	2013, now 2014
	<p>Engage in joint projects with climate change practitioners as agreed with the Climate Change Steering Group.</p>	TBC
Impact on Air Quality and Success of Measure	<p>The impact of this measure on air quality is unpredictable. If successful, it will increase the profile and improve the delivery of measures that will have air quality benefits.</p> <p>Successful implementation of the measure would be the development and implementation of a work program in collaboration with climate change professionals.</p>	

3.9 Evaluating the Impact of Future Programs on Air Quality Measure

Summary aims of Measure	<p>1. To provide a robust, transparent and repeatable methodology by which the air quality impact of future schemes, policies and programs can be assessed.</p> <p>2. To ensure that air quality costs impacts are given due weight in decision making processes.</p>	
Management of Measure, Responsibilities and Lead Authority	By its nature, this measure will involve action by all those bringing forward plans, policies and development within Exeter. ECC Environmental Health will lead the implementation of the measure, and will develop the methodology in consultation with users.	
Funding	This measure will be funded within ECC existing resources.	
Planning Stages	To identify provisional methodology and spreadsheet, modelling tools etc.	complete
	To test provisional methodology with colleagues within ECC and DCC and develop as required. Updated guidance from DEFRA on cost accounting for air quality, and emerging guidance from other Local Authorities has been reviewed, and the methodology will be amended as required.	2013 as a result of maternity leave, this will now be undertaken in 2014
	To publicise methodology amongst relevant professionals and explain how and when it should be used. (It is expected that the LES project will raise awareness of air quality and assist in this process).	2014 as a result of delays above, this is now not likely to take place until 2015
Implementation Stage	Because of the delays caused by the maternity leave of a key member of staff, there are no assessments to discuss yet which have used this methodology. This section will be used in subsequent Progress Reports to update on use of the methodology and any changes which have been made to it.	N/A
Impact on Air Quality and Success of Measure	<p>The impact of this measure on air quality is unpredictable. If successful, it will improve the decision making process and ensure that air quality costs and benefits are given greater weight.</p> <p>Successful implementation will be measured by the use of the methodology internally within ECC, by partners at DCC and by external bodies and developers.</p>	

3.10 Community Engagement Measure

Summary aims of Measure	<p>1. To give communities access to relevant information to understand their local air quality and its impact.</p> <p>2. To engage in the neighborhood planning process so that communities can include policies relevant to air quality if they wish to.</p>	
Management of Measure, Responsibilities and Lead Authority	<p>This measure will be led by ECC Environmental Health, but will involve working with other colleagues from ECC, particularly Forward Planning and the Policy Unit. Health Professionals may also be involved in providing relevant information on impacts of air quality.</p>	
Funding	<p>This measure will be funded from within existing resources at ECC, although grant funding could be considered for specific projects at a later stage.</p>	
Planning Stages	<p>Identify groups and individuals who will be partners in this work, for example community groups involved in neighbourhood planning.</p>	<p>2013 as a result of maternity leave, this will now be undertaken in 2014</p>
	<p>The LES, Health Impact Mitigation, Connections to Climate Change Policy and Evaluating the Impact of Future Programs on Air Quality Measures will provide information to feed into this measure.</p>	<p>As above for each action</p>
Implementation Stages	<p>Provide comments to the St James Neighbourhood Planning group on air quality.</p>	<p>complete</p>
	<p>Review and update the City Council's air quality website information to ensure that it is accessible and provides relevant information for residents.</p>	<p>2013 as a result of maternity leave, this will now be undertaken in 2014</p>
	<p>Provide simple descriptions of the health impacts of measured levels.</p>	<p>2013 as above, this will now be undertaken in 2014</p>
	<p>Provide accessible information to explain how air quality fits within the wider sustainability agenda.</p>	<p>2013 as above, this will now be undertaken in 2014</p>
	<p>Investigate use of other media to provide current neighbourhood-specific air pollution levels. Regional air quality forecasts are now published</p>	<p>2014</p>

	via an Environment Directorate Twitter account when appropriate.	
	Provide advice to other neighbourhood planning groups as they emerge.	Ongoing
Impact on Air Quality and Success of Measure	<p>The impact of this measure on air quality is unpredictable. If successful, it will empower communities to make decisions on matters involving air quality, (or to decide that air quality is a low priority locally).</p> <p>One measure of successful implementation would be the inclusion of policies referring to air quality in neighbourhood plans.</p>	

3.11 ECC's Own Emissions Measure

Summary aims of Measure	<ol style="list-style-type: none"> 1. To quantify emissions from Council fleet and activities. 2. To identify the costs and benefits of measures to reduce emissions. 3. To include measures within the LES Implementation Plan which reduce emissions from Council fleet and activities. 	
Management of Measure, Responsibilities and Lead Authority	This measure will be mainly be led by the LES project team, although some actions proposed by other existing Plans and Strategies will also be implemented. It will involve partnership working with staff at ECC.	
Funding	This measure will be funded as part of the LES project and through existing ECC resources.	
Planning Stages	ECC to tender and appoint a contractor for the LES project	Complete
	The successful contractor will develop a detailed project plan for the LES.	2013, now 2014
Implementation Stages	Fleet review undertaken by Energy Saving Trust	Complete
	Additional cycle parking provided at Civic Centre in former staff carpark area.	Complete
	Rationalisation of refuse vehicle rounds in order to reduce mileage travelled.	Complete
	Renew electric pool bike fleet and improve the booking system.	Complete, but bike may be disposed of due to lack of use
	Arrange for cycle training to be available to staff in partnership with DCC.	Complete and continuing
	High density cycle parking to be provided in main store.	2014
	Implementation of the LES project , including review of the following actions proposed by existing plans and strategies: <ul style="list-style-type: none"> ○ Vehicle replacement policy which ensures that electric vehicles are considered and vehicles meeting newest Euro standard are purchased. ○ Effectiveness of fleet management software for tracking mileage and its potential use as a tool to reduce emissions. ○ Eco-Driver training for staff. ○ The Green Travel Plan and methods to encourage staff to choose sustainable transport options. ○ The use of engine management control devices 	As above for LES project Measure

	<p>for refuse vehicles to reduce emissions.</p> <ul style="list-style-type: none"> ○ The use of electric powered refuse vehicle bin lifters. 	
<p>Impact on Air Quality and Success of Measure</p>	<p>The contribution of ECC business to total emissions in Exeter is not known, so the potential for reductions in emissions that are significant at the city scale is currently unclear. However even if this cannot be achieved, ECC should provide leadership in the community by implementing low emissions policies.</p> <p>Success with this measure would be engagement with staff and management at ECC to plan and implement a Low Emissions Strategy, including quantified targets for emissions reduction.</p>	

3.12 Publicity, Awareness Raising and Events Measure

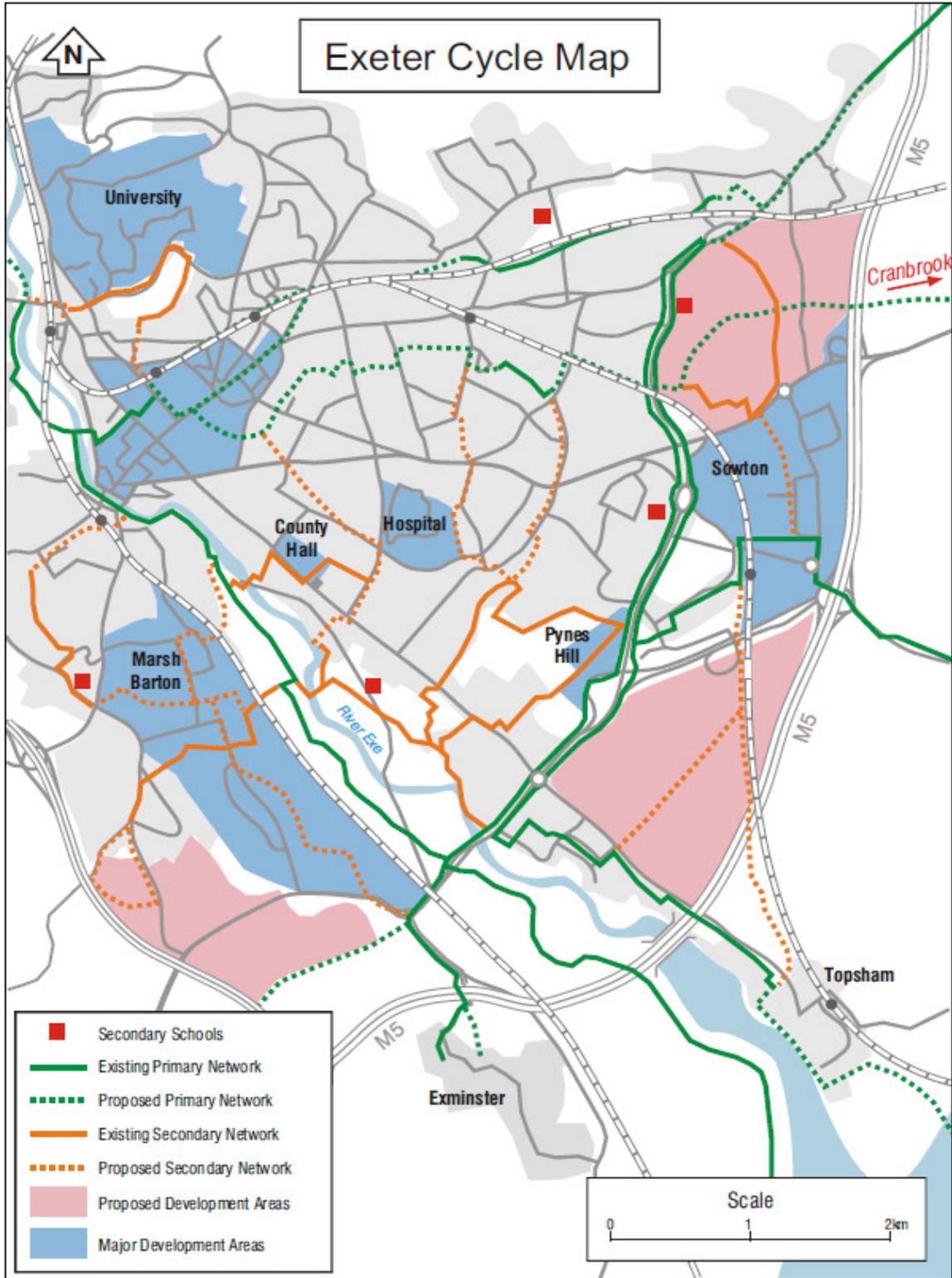
Summary aims of Measure	<ol style="list-style-type: none"> 1. To raise awareness and provide information to businesses and the community. 2. To promote healthier and sustainable travel options using a variety of methods and media. 3. To link with actions from other measures in advertising new, sustainable travel options as these develop. 	
Management of Measure, Responsibilities and Lead Authority	This measure will require partnership working with employers, schools, colleges, university and business as well as media organisations and volunteers. Actions will mainly be implemented by DCC's Sustainable Transport Team, ECC Environmental Health and the Transport and Special Projects Officer. DCC is the lead authority for this measure.	
Funding	This measure will be funded from within existing resources at ECC and DCC (including grant funding already obtained). Additional grant funding could be considered for specific projects at a later stage.	
Planning Stages	Draw on the experiences of the successful TravelSmart program which provided personalised travel planning to over 20,000 households in the greater Exeter area.	Complete
	Investigate connections to other policy areas such as health promotion (increased activity levels).	2013, now 2014 because of maternity leave
	Make contact with Exeter College and investigate opportunities to provide environmental education , particularly as part of vocational courses.	2013, as above now 2014
Implementation Stages	Obtain commitment and funding to continue support of the CarShare Devon website.	Complete
	Implement planned program of cycle training as well as tolerance campaigns for all road users.	Ongoing
	Advertise new routes, links and transport interchanges as these become available through development.	Ongoing
	Provide free Travel Devon roadshows .	Ongoing
	Provide grants to support sustainable travel facilities and initiatives through Travel Devon project.	Ongoing
Impact on Air Quality and Success of Measure	<p>The impact of this measure on air quality is unpredictable. If successful, it will improve the uptake of sustainable transport choices in Exeter.</p> <p>Successful implementation would an improvement in the number of trips made by sustainable transport modes. Targets for this are included in later measures where available.</p>	

3.13 Increase Cycling Trips Measure

Summary aims of Measure	<ol style="list-style-type: none"> 1. To increase the percentage of trips made within Exeter by bicycle. 2. To development further the cycle network in the city, particularly routes which link key residential and employment areas, including new development. 3. Aims of the Exeter Cycle Strategy: <ul style="list-style-type: none"> ○ 20% of journeys to work by bicycle (currently 10%); ○ 20% of primary school journeys by bicycle (currently 15%); ○ 30% of secondary school journeys by bicycle (currently 22%); 	
Management of Measure, Responsibilities and Lead Authority	Implementation will be by Devon County Council, Exeter City Council, Developers, Cycling England and Sustrans. The lead authority for this measure is Devon County Council.	
Funding	This measure will be funded by developer contributions, the Local Transport Plan and potentially future grant funding.	
Planning Stages	Build on the success of the Cycle Exeter and Cycle Devon schemes , which significantly raised the profile of cycling in the region and increased the number of trips made by bicycle.	Complete
	Plan future developments to the cycle network (Figure 4).	Complete
	Provide policy basis to require developers to contribute towards cycling schemes and to provide cycle parking etc in Sustainable Transport SPD	Complete
Implementation Stages	Pedestrian and cycle crossing of M5 at Science Park.	Complete
	Complete remainder of the Exe Estuary cycle route (eastern side completed in 2013).	2014
	Design options for improved pedestrian and cycle accessibility at Countess Wear .	2014
	Preliminary design of pedestrian and cycle crossing of railway at Exhibition Way/Chancel Lane .	2016
	Complete the targeted expansion of the cycle network to provide high quality, segregated routes and improved interchanges (Figure 4).	2026
	Provide cycle training for communities and user groups.	Ongoing
	Provide secure cycle parking as part of development and at schools etc	Ongoing
	Run tolerance campaigns for all road users. Market the cycle network, provide information and promote travel plans.	Ongoing

<p>Impact on Air Quality and Success of Measure</p>	<p>This measure aims to improve the uptake of sustainable transport choices in Exeter. A target is to double the number of cycle trips in Exeter from a 2005 baseline by 2016. Census data shows that the number of people cycling to work in Exeter increased by 54% between 2001 and 2011. The overall trip figure is likely to be higher due to increases in leisure cycling and cycling to school; End of Project data for the Cycle Exeter project shows a 40% increase in daily trips between 2005 and 2009. Although further census data will not be available until after 2021, it should be possible to ascertain from cycle counters and other data sources held by DCC whether this trend has been continuing.</p>
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Figure 4 Existing and Proposed Cycle Routes



3.14 Increase Walking Trips Measure

Summary aims of Measure	<p>1. To increase walking by the development of further targeted routes between key residential and employment areas.</p> <p>2. To promote walking as a way to stay active and healthy.</p>	
Management of Measure, Responsibilities and Lead Authority	Implementation will be by Devon County Council, Exeter City Council, Developers, Sustrans and Health Professionals. The lead authority for this measure is Devon County Council.	
Funding	This measure will be funded by developer contributions, the Local Transport Plan and potentially future grant funding.	
Planning Stages	Plan future developments to the walking network as part of Walking Strategy .	Complete
	Provide policy basis to require developers to contribute towards walking schemes etc in Sustainable Transport SPD.	Complete
Implementation Stages	Pedestrian and cycle crossing of M5 at Science Park	Complete
	London Inn Square public realm works completed.	Complete
	Preliminary design of further Sidwell Street public realm enhancements.	Complete
	Design options for improved pedestrian and cycle accessibility at Countess Wear .	2014
	Preliminary design of pedestrian and cycle crossing of railway at Exhibition Way/Chancel Lane .	2016
	Traffic management to reduce through traffic and further develop the extent and quality of pedestrianisation in the city centre. Significant elements now complete in the Sidwell Street area.	2016
	Improved signing, forecourt improvements, improved lighting and public realm works on route from Exeter St Davids Station to City Centre . Pedestrianisation of Central Station forecourt now complete.	2016
	Establish a definitive route for enhancement, public realm works and signage between the Quay and City Centre .	2016
	At grade crossings, improvements to subways, footway widening and signage on route between St Thomas and City Centre . Improvements to Cowick St now largely complete.	2016
	Footway widening and shared space improvement between St Leonards and City Centre .	2016
Improved signing, train information provision on Sidwell Street, improved footway width and localised public realm enhancement between St.	2016	

	James Park and Sidwell Street.	
	Improved signing, improved footways and calmed traffic between Central Station and Bus Station.	2016
	Complete the planned network of high quality, segregated routes and interchanges.	2026
	Use the pedestrian network signing to increase the number of short trips made on foot.	2026
	Run tolerance campaigns for all road users.	Ongoing
	Market the walking network, provide information and promote travel plans.	Ongoing
Impact on Air Quality and Success of Measure	This measure aims to improve the uptake of sustainable transport choices in Exeter. The Walking Strategy does not contain any targets for number of trips and this is currently only measured in the census. The 2011 census reported that 22.9% of journeys to work by Exeter residents were on foot. The City Council will lobby DCC to undertake more regular walking audits if budgets are available, and progress with this will be reported in future Action Plan Progress Reports.	

3.15 Promote Car Clubs and Car Sharing Measure

Summary aims of Measure	<p>1. To reduce single car occupancy trips and trips by private car by promoting car sharing and car clubs.</p> <p>2. To ensure that developers contribute towards car clubs and/or provide car club facilities.</p>	
Management of Measure, Responsibilities and Lead Authority	Implementation will be by Devon County Council, Exeter City Council, Developers, CarShare Devon and car clubs. The lead authority for delivery of the first aim is DCC, and for the second aim is ECC.	
Funding	This measure will be funded by developer contributions, car club membership fees and DCC resources.	
Planning Stages	Provide policy basis to require developers to contribute towards car club schemes in Sustainable Transport SPD.	Complete
Implementation Stages	Obtain commitment and funding to continue support of the CarShare Devon website.	Complete
	Support and promote Car Clubs	Ongoing
	Obtain funds from developers to expand the Car Club networks.	Ongoing
Impact on Air Quality and Success of Measure	<p>The impact of this measure on emissions is unpredictable because it aims to displace single car occupancy journeys with car share trips.</p> <p>Successful implementation would be the growth in car club membership and use. No targets have currently been set because it depends to some extent on the rate of completion of development, but this situation will be kept under review. There are now seven vehicles based in Exeter, the latest addition being at Central Station, with further vehicles at Hill Barton (Rougemont Park) and Newcourt (Greenacres) expected in 2014.</p>	

3.16 Integrating Transport Modes and Travel Planning Measure

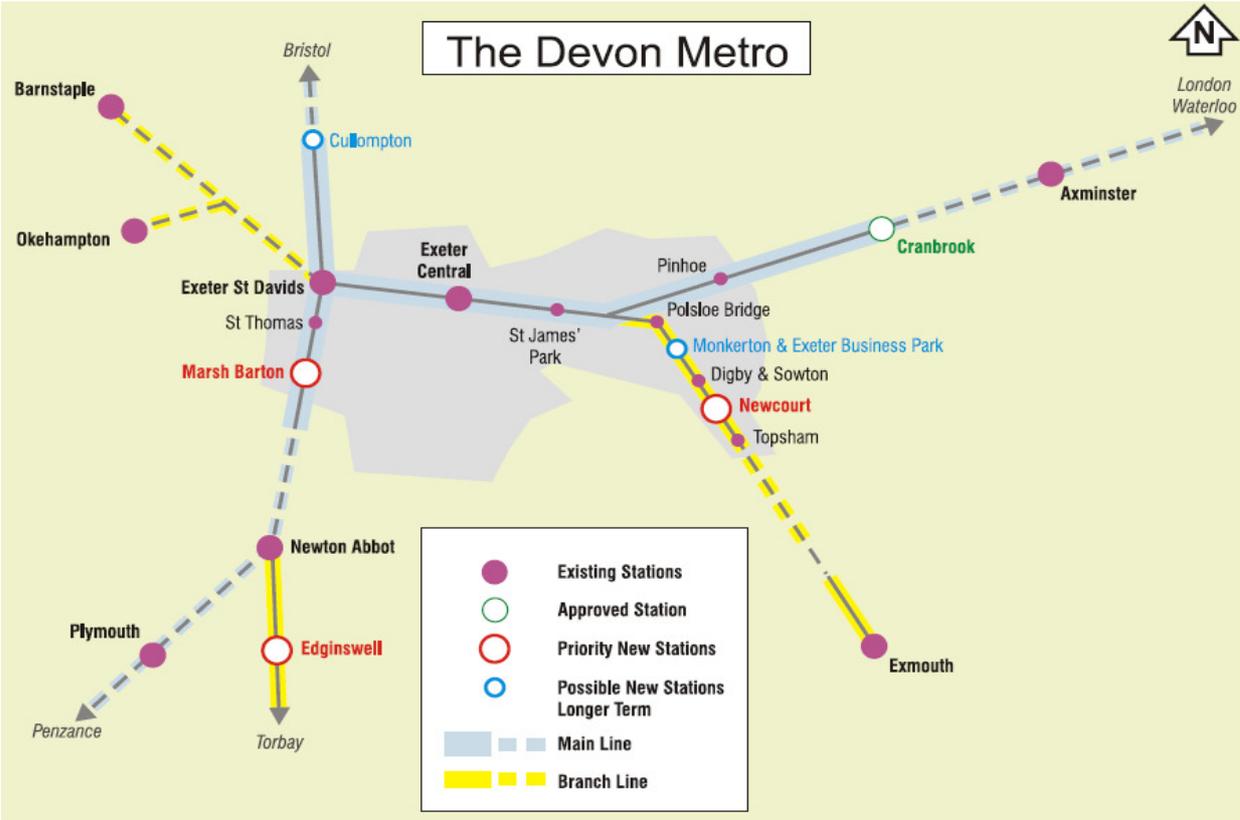
Summary aims of Measure	<p>1. To encourage sustainable travel by travel planning and better integration of travel modes.</p> <p>2. To work with key partners such as schools, employers, retail, Exeter College and Exeter University to develop travel plans.</p>	
Management of Measure, Responsibilities and Lead Authority	<p>Implementation will be by Devon County Council, Exeter City Council, Developers, Bus Operators (principally Stagecoach South West), Network Rail and train operators and Sustrans. The lead authority for this measure will be Devon County Council.</p>	
Funding	<p>This measure will be funded from within existing resources at ECC and DCC (including grant funding already obtained). Additional grant funding could be considered for specific projects at a later stage. Developer contributions will also be obtained where relevant.</p>	
Planning Stages	Develop unified vision for integrated and sustainable transport in the city in LTP3.	Complete
	Provide policy basis to require developers to contribute towards travel planning in Sustainable Transport SPD.	Complete
Implementation Stages	Install Brompton Dock at Exeter St Davids	Complete
	Bike hub at Exeter Central forecourt	Complete
	Integrate the Devon Metro with the core bus service and improve timetable integration, fares and information.	2026
	Improve modal interchange facilities at Exeter Central and link to the Bus Station. <i>Pedestrianisation of forecourt now complete, including new bus shelter plus bays for drop-off, taxi and car club vehicle.</i>	2026
	Provide free Travel Devon roadshows.	Ongoing
	Provide grants and support for travel planning through Travel Devon project.	Ongoing
Impact on Air Quality and Success of Measure	<p>The impact of this measure on air quality is difficult to quantify. If successful, it will improve the uptake of sustainable transport choices in Exeter.</p>	
	<p>Successful implementation would be an improvement in the number of trips made by sustainable transport modes. Targets for this are included in later measures where available, although it is proving impossible to obtain complete data due to confidentiality where commercial bus operators are concerned.</p>	

3.17 Devon Metro Measure

Summary aims of Measure	<ol style="list-style-type: none"> 1. To build on the Exeter rail network by providing efficient sustainable connections across the city to major employment, retail and leisure sites. 2. To improve rail connections from surrounding towns into Exeter. 3. To obtain sustained investment to fund new stations and track capacity. 	
Management of Measure, Responsibilities and Lead Authority	Implementation will be by Devon County Council, Exeter City Council, Network Rail and train operators, Developers and the Exe-Rail Partnership. Devon County Council is the lead authority for this measure.	
Funding	Funding will be from developer contributions, rail companies, ECC, DCC and future grant or specific project funding.	
Planning Stages	Develop conceptual plan of the network changes required (Figure 5)	Complete
	<p>Conduct feasibility studies:</p> <p>These show that in order to accommodate a new station at Newcourt changes to the current timetabling may be required, and there may be operational constraints (Devon Metro – station feasibility Newcourt Station report).</p> <p>Increasing rail service frequency could increase patronage at existing and new stations on the Exmouth line by 37% and on the Torbay and Axminster lines by 50%.</p> <p>Infrastructure improvements would be required to accommodate increases on the Exmouth and Axminster lines, and new stock would be required on all the routes. These upgrades have been itemised and costed, as have the economic benefits of the scheme. This exercise has shown Benefit to Cost ratios for the new stations within Exeter of between 4 and 8. Assessment of rate of return in fare income shows that all three new stations (Monkerton, Newcourt and Marsh Barton) have more than adequate rate of return to justify the investment (Devon Metro Appraisal Report).</p>	Complete
	Undertake feasibility study into preferred options for 2 nd passing loop on Waterloo line.	2013, DCC undertaking this work
	Engage and win support from Department of Transport, Network Rail and the train providers for expansions to network and services.	2016
Implementation Stages	Public realm improvements to enhance the passenger experience at Central Station	Complete

	Provide Cranbrook Station .	2016. Now expected to open December 2014.
	Public realm improvements to enhance the passenger experience at St David's Station	2016
	Introduce smart ticketing	2016
	Integrate with the core bus service	2016
	Provide new stations at Newcourt and Marsh Barton .	estimated 2016. Newcourt now expected to open December 2014.
	Improve rail frequency to Cranbrook, Honiton, Axminster and Exmouth.	2026
	Increase St James Park platform to accommodate 4 car train length.	2026
	Provide new station at Monkerton/Hill Barton .	2031
	Support the electrification of the mainline rail connection to London and the rest of the UK.	Ongoing
	Improve the comfort, journey reliability and cost of travel by lobbying the train operators, Network Rail and DfT.	Ongoing
Impact on Air Quality and Success of Measure	<p>This measure has the potential to have a significant impact on air quality, if it captures journeys which would otherwise have been made by car. Given the current uncertainty over timing of delivery of each element of the scheme it is not possible to quantify predictions of impact at this stage, although delivery of the new stations is progressing well, with Cranbrook and Newcourt due to open in 2014.</p> <p>Successful implementation would be the completion of the infrastructure and upgrading works and an increase in service frequency and passenger numbers. These will be reported on in future Action Plan Progress Reports.</p>	

Figure 5 The Proposed Devon Metro Network



3.18 Increase Bus Use and Reduce Public Service Vehicle (PSV) Emissions Measure

Summary aims of Measure	<p>1. To maintain and develop a high quality bus network, including additional priority measures and improved interchanges with other transport modes.</p> <p>2. To implement significant improvements for the bus user, including real-time information and smart-card technology.</p>	
Management of Measure, Responsibilities and Lead Authority	Implementation will be by Devon County Council, Exeter City Council, Developers and Bus Operators (principally Stagecoach South West). The lead authority is Devon County Council.	
Funding	This measure will be funded by DCC, developer contributions and Bus Operators. Work on PSV emissions will be undertaken as part of the LES project.	
Planning Stages	Provide policy basis to require developers to contribute towards bus improvements in Development Delivery DPD.	complete
	ECC to tender and appoint a contractor for the LES project	complete
	The successful contractor will develop a detailed project plan for the LES.	2013, now 2014
	Preliminary design of Exe Bridges and Fore Street bus improvements.	2014
	Investigate bus priority options and means to reduce congestion at Pinhoe Road / Mount Pleasant Road / Union Road .	2014
	Investigate bus only link at end of Legion Way into Grace Road	2014
	Preliminary design of Topsham Road bus priority measures.	2021
Implementation Stages	Implementation of the LES project , including investigation of options to reduce PSV emissions such as the use of hybrid buses and other technologies. Creation of an Implementation Plan for changes.	As above for LES project Measure
	London Inn Square public realm works and bus priority improvements.	complete
	Introduce smartcard technology .	2016
	Provide real time passenger information at bus stops and through smartphones. (This is now likely to be delivered principally through the latter).	2016
	Deliver additional buses to serve new development SW of Exeter and extend local bus routes. Additional service now operating to Exminster via Marsh Barton.	2016
Deliver additional buses to serve new development at Monkerton/Pinhoe and extend	2016	

	local bus routes.	
	Redevelop the bus station to provide a high quality, effective transport interchange. (Preliminary design is underway)	2021
	Design and implement Monkerton bus priority measures.	2021
	Continue to investigate and implement further enhanced bus priority schemes and new bus routes as required.	Ongoing
	Continue to improve bus journey times , with particular emphasis on the city centre.	Ongoing
Impact on Air Quality and Success of Measure	<p>There is the potential for this measure to increase emissions if the number of buses on the roads increases without any improvement in emissions technology or a corresponding significant reduction in car journeys.</p> <p>Success with this measure would be the increase in passenger numbers, coupled with a Low Emissions Strategy for PSVs. There is no target for the increase in passenger numbers because this will depend on the rate of completions of development on some routes. Complete bus patronage statistics are difficult to obtain due to commercial confidentiality; however there is a continuing trend towards larger vehicles with no corresponding reduction in frequency, which indicates increasing demand.</p>	

3.19 Enhanced Public Transport link to Cranbrook and SkyPark Measure

Summary aims of Measure	<p>1. To provide a range of travel choices, including significant new bus priority routes, to achieve competitive journey times between residential and employment areas along this corridor and connecting to Marsh Barton.</p> <p>2. To provide a high quality bus service as part of an upgraded, branded network serving the whole city.</p>	
Management of Measure, Responsibilities and Lead Authority	Implementation will be by Devon County Council, Exeter City Council, Developers and Bus Operators (principally Stagecoach South West). Devon County Council will be the lead authority for this measure.	
Funding	This measure will be funded by DCC, developer contributions and Bus Operators.	
Planning Stages	Conduct options appraisal report into the provision of a new public transport service. This identified that a dedicated service which maximises the number of stops and service frequency would achieve the best effect, even if new trips are shared between this service and the railway. It is predicted that by 2031, the proportion of commuter trips to the city centre along this corridor made by private car will have reduced from approximately 2/3 to approximately 1/3 as a result of public transport enhancements. (Enhancing the Public Transport System in Exeter – Cranbrook to Marsh Barton Corridor Option Appraisal Report).	Complete
	Provide policy basis to require developers to contribute towards bus improvements to east of Exeter.	Complete
Implementation Stages	A regular bus service is now operating between Cranbrook and Exeter, with Stagecoach having introduced an “Exeter Plus” range of tickets extending to this and other new areas of development.	Complete
	Implementation of the LES project , including investigation of options to reduce PSV emissions. Creation of an Implementation Plan for changes.	As above for LES project Measure
	Introduce smartcard technology .	2016
	Provide real time passenger information at bus stops and through smartphones.	2016
	Redevelop the bus station to provide a high quality, effective transport interchange. (Preliminary design is underway)	2021
	Design and implement Monkerton bus priority measures.	2021
	Provide new highways link from Tithebarn Lane to	2021

	Cumberland Way and increase capacity of M5 bridge.	
	Deliver high quality bus connections in all parts of the new developments, with high service frequency.	2021
Impact on Air Quality and Success of Measure	<p>There is the potential for this measure to increase emissions if the number of buses on the roads increases without any improvement in emissions technology.</p> <p>Success with this measure would be the introduction of a new bus route, and increase in passenger numbers, coupled with a Low Emissions Strategy for PSVs. There is no target for the increase in passenger numbers because this will depend on the rate of completions of development. Bus patronage statistics will be reported in future Action Plan Progress Reports once further development at Cranbrook is complete (although complete patronage statistics are difficult to obtain due to commercial confidentiality).</p>	

3.20 Park and Ride Measure

Summary aims of Measure	<ol style="list-style-type: none"> 1. To build on the success of the existing Park and Ride sites by providing expanded and new sites, which capture traffic on the city's outskirts. 2. To implement significant improvements for the bus user, including real-time information and smart-card technology. 	
Management of Measure, Responsibilities and Lead Authority	Implementation will be by Devon County Council, Exeter City Council and Bus Operators (principally Stagecoach South West). The lead authority for this measure is Devon County Council.	
Funding	This measure will be funded by DCC.	
Planning Stages	<p>Conduct modelling to determine the likely impact of a new Park and Ride site at Ide. This shows that growth is expected to increase road demand on Alphington corridor by 23%. This is predicted to be offset by the new P&R, enabling an overall increase of almost 28% in people travelling to city centre along this corridor in the AM peak. The scheme also has predicted improvements in terms of increased traffic speeds along the corridor, which will help to reduce vehicle emissions per km travelled.</p> <p>The scheme is predicted to have a neutral to positive beneficial impact on air quality, but this should be viewed against a backdrop of also accommodating a significant increase in travel demand (Alphington Interchange P&R report).</p>	Complete
	<p>Investigate feasibility of schemes such as:</p> <ul style="list-style-type: none"> - A bus gate onto Marsh Green Road East to improve Matford Park and Ride service. - A bus gate onto Falcon Road to improve Sowton Park and Ride service. 	2014
Implementation Stages	Implementation of the LES project , including investigation of options to reduce PSV emissions. Creation of an Implementation Plan for changes.	As above for LES project Measure
	Obtain and implement Ide Park and Ride site planning consent.	2015
	Introduce smartcard technology .	2016
	Provide real time passenger information at bus stops and through smartphones; now likely to be principally through the latter.	2016
	Redevelop the bus station to provide a high quality, effective transport interchange. (Preliminary design is underway)	2021
	Expand Matford Park and Ride .	2021
Implement additional bus priority measures	2026	

	along Park and Ride routes as required	
	Develop new Park and Ride or modal interchange facility to the north west of the city .	2026
Impact on Air Quality and Success of Measure	<p>There is the potential for this measure to increase emissions if the number of buses on the roads increases without any improvement in emissions technology or a corresponding significant reduction in car journeys.</p> <p>Success with this measure would be the increase in passenger numbers, coupled with a Low Emissions Strategy for PSVs. There is no target for the increase in passenger numbers because this will depend on the successful completion of the new services for which target dates are shown above. Park and Ride patronage statistics will be reported in future Action Plan Progress Reports although complete patronage statistics are difficult to obtain due to commercial confidentiality</p>	

3.21 Improvements to the Road Network and Traffic Management Measure

Summary aims of Measure	<p>1. Proactive traffic management to manage peak pressures and reduce congestion, improve safety and enhance the performance of the network for all users.</p> <p>2. Targeted improvements to the road network to deliver the LTP3 and LDF.</p>	
Management of Measure, Responsibilities and Lead Authority	Implementation will be by Devon County Council, Exeter City Council and Developers. The lead authority is Devon County Council.	
Funding	The measure will be funded by DCC LTP funds and by developer contributions.	
Planning Stages	Develop understanding of the network changes required .	Complete
	Investigate options for bus priority and to reduce congestion at Pinhoe Road / Mount Pleasant Road / Union Road .	2014
	Investigate improvements at Buddle Lane junction and the car park junction on Cowick Street corridor. Limited improvements to Cowick Street now complete .	2014
	Investigate options to reduce congestion at Pinhoe double mini roundabouts . Improvements likely to be brought forward to enable new development .	2016
Implementation Stages	Grace Road link between Alphington Cross and Marsh Barton	Complete
	London Inn Square public realm works and bus priority improvements.	Complete
	York Road works to improve traffic flows.	Complete
	Deliver highway improvement works on Alphington corridor	2016
	Improve efficiency of ring road at Alphington Cross	2016
	Design and provide new highway link between Harrington Lane and Exhibition Way to manage traffic from new development.	2016
	Design and deliver new highway link between Tithebarn Lane and Cumberland Way and increased capacity of M5 bridge.	2016
	Implement the use of real time technology to inform travellers of delays and alternative routes.	2016
	Use traffic management measures in the city centre to reduce through traffic and congestion and to improve the pedestrian experience.	2021
	Increase capacity of ring road at Bridge Road .	2021
Develop traffic signal strategy to manage traffic on key corridors.	2021	

	Deliver bus priority routes where further need is identified.	2026
	Use technology to collect and analyse data on the network and target interventions to areas of greatest need.	Ongoing
Impact on Air Quality and Success of Measure	<p>This measure aims to reduce congestion, especially associated with new development. An increase in speed (at urban traffic speeds) will tend to reduce emissions, but the impact of this measure has not been quantified at this stage. The future years emissions inventory which will be produced as part of the LES project will give an indication of the impact of the proposed schemes, and where further measures may be required.</p> <p>Success with this measure would be for congestion not to worsen despite the development planned for the Exeter area. Data from DCC (if available) will be used to assess this in future years.</p>	

3.22 Parking Control and Demand Management Measure

Summary aims of Measure	<p>1. To address the absence of a local pricing facility for road use which means that there is little incentive for car drivers to switch modes. (This is especially the case for commuters since many businesses offer free parking for staff).</p> <p>2. To consider the use of workplace car parking charges in order to encourage modal shift and generate additional income for reinvestment in the transport network.</p>	
Management of Measure, Responsibilities and Lead Authority	Implementation will be by Devon County Council, Exeter City Council and Developers. The lead authorities for this measure are Exeter City Council and Devon County Council.	
Funding	This measure will be funded by DCC and ECC budgets and by road users, parking space providers etc.	
Planning Stages	Consider workplace car parking charges in the city centre and major employment areas.	2026
Implementation Stages	Rationalise city centre parking signage to reduce congestion caused by cars queuing for parking. <i>Car park status also now reported in real time using dedicated Twitter account.</i>	2013
	Introduce workplace charging as part of travel plans at the Science Park and SkyPark .	2026
	Provide some new parking in the city centre as part of development, but fewer long-stay spaces. Review of car parks currently under way.	Ongoing
Impact on Air Quality and Success of Measure	This measure aims to reduce car use, especially associated with business travel but its impact on air quality is impossible to quantify.	

3.23 Support the Uptake of Electric and Low Emission Vehicles Measure

Summary aims of Measure	<ol style="list-style-type: none"> 1. To identify the costs and benefits of different low emission technologies. 2. To include measures within the LES Implementation Plan which encourage uptake of low emissions vehicles. 3. Provide infrastructure facilities for low emission vehicles (e.g. charging points) at key locations and expand this network as required by take-up of this technology. 	
Management of Measure, Responsibilities and Lead Authority	This measure will be mainly be led by the LES project team, with subsequent implementation by Exeter City Council, Devon County Council and developers. The lead authority is Exeter City Council.	
Funding	This measure will be funded as part of the LES project and by developer contributions.	
Planning Stages	ECC to tender and appoint a contractor for the LES project	Complete
	The successful contractor will develop a detailed project plan for the LES.	2013, now 2014
	Provide policy basis to require developers to provide charging points and the ability to retro-fit of these in Sustainable Transport SPD.	Complete
	Adopt an Electric Vehicle Strategy across the Exeter and Heart of Devon Growth Point area	2014
Implementation Stages	Pilot a network of charging points in accessible locations, such as Park and Ride sites.	Complete
	Implementation of the LES project , including review of low emission technologies and development of an Implementation Plan for the LES.	As above for LES project Measure
	Require developers to install charging facilities etc.	Ongoing
Impact on Air Quality and Success of Measure	<p>This measure will reduce emissions per vehicle and, provided that there is no significant increase in vehicle numbers, should result in an improvement in air quality.</p> <p>Success would be the implementation of actions to increase low emissions vehicle uptake across Exeter, particularly in new residential development.</p>	

3.24 Reduce Emissions from Freight Transport Measure

Summary aims of Measure	<ol style="list-style-type: none"> 1. To quantify emissions from good vehicles. 2. To identify the costs and benefits of measures to reduce emissions. 3. To include measures within the LES Implementation Plan which reduce emissions from HGV fleet and servicing activities. 	
Management of Measure, Responsibilities and Lead Authority	This measure will be mainly be led by the LES project team, although some actions proposed by other existing Plans and Strategies will also be implemented. It will involve partnership working with DCC, businesses and the freight and logistics industry.	
Funding	This measure will be funded as part of the LES project and through existing ECC and DCC resources. Investment by business will also be required.	
Planning Stages	Quantify the air quality benefit of an HGV routing strategy for the Heavitree corridor in order to inform decision making by transport planners (Exeter University 2009).	Complete
	ECC to tender and appoint a contractor for the LES project	Complete
	The successful contractor will develop a detailed project plan for the LES.	2013, now 2014
Implementation Stages	<p>Implementation of the LES project, including review of the following actions proposed by existing plans and strategies:</p> <ul style="list-style-type: none"> ○ Increase priority measures for HGVs on radial routes to reduce emissions and improve signage. ○ Investigate the possibility of freight consolidation centres outside the city. ○ Work with freight operators and business on HGV traffic management communication strategy. ○ Review the effectiveness of the Eco-Stars scheme for freight operators in neighbouring Mid Devon and determine whether it could be usefully expanded to cover Exeter. 	As above for LES project measure
Impact on Air Quality and Success of Measure	<p>This measure will reduce emissions per vehicle and, provided that there is no significant increase in vehicle numbers, should result in an improvement in air quality.</p> <p>Success would be the implementation of actions to increase low emissions vehicle uptake across Exeter, particularly in business and freight operators.</p>	

4.0 Conclusions

- 4.1 This second Air Quality Action Plan Progress report provides additional detail and updates on the actions which will be implemented in order to work towards achieving the objective level for NO₂. It shows the work that is currently underway in this respect, and where targets have been met or missed. Progress is generally good, although there have been delays in commencement of the LES project and some ECC measures as a result of the maternity leave of a key member of staff. Air Quality work is expected to progress well in 2014 however.
- 4.2 Housing completions in the city are being reported at approximately the expected levels (469 in 2013). Despite this level of growth, NO₂ concentrations have not shown any increase in the past year. It has not been possible to obtain traffic data for the corresponding period, but this will be reported again in future years.

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