Air Quality Action Plan

March 2009
Revised March 2010

Teignbridge
DISTRICT COUNCIL
South Devon

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Table of Contents

Table of Contents cont.

Table of Contents cont.

EXECUTIVE SUMMARY

This Air Quality Action Plan (AQAP) is a statutory document, which is a requirement under Part IV of the Environment Act 1995. The requirement to produce this AQAP follows a process of review and assessment of the air quality within Teignbridge district, which concluded that the national UK air quality objectives would not be met for one pollutant, nitrogen dioxide. Four Air Quality Management Areas (AQMA) were declared in November 2005 in the towns of Newton Abbot, Kingskerswell, Teignmouth and Dawlish. This document is the Air Quality Action Plan for those AQMAs:

- Newton Abbot Town Centre;
- A380 through Kingskerswell
- Bitton Park Road, Teignmouth;
- Iddesleigh Terrace, Dawlish.

Action planning is the most important and significant part of the local air quality management (LAQM) process and provides a practical opportunity for local authorities to improve the local air quality where it has been established that the national Air Quality Objectives (NAQO) will not be met by national measures alone. Action plans also play a key role in helping the Government deliver the European Union limit values, which are legally binding.

Local authorities play an important and valuable role in improving air quality, helping to improve the health of their residents and protecting natural resources. It is currently estimated that

'Poor air quality reduces life expectancy in the UK by an average of 7-8 months, with equivalent health costs estimated to be up to £20 billion a year'
(Defra, 2007)[1]

The objective of the action planning process is to:

'take action to meet the air quality standards given in the Directives in a cost effective manner, taking account of existing local policy and acting to improve quality of life and the local economy'.

In order to achieve this objective, the Action Plan is underpinned by the following seven principles:

- Provide accurate and up to the data information on air pollution levels and road traffic in Teignbridge, both now and in the future;
- Ensure that all Council activity is integrated in considering the effect it has on air pollution;
- Take all reasonable steps to minimise the impact of Council activity on air pollution;
- Lead and help the community to accelerate the changes necessary to improve air quality;
- Work with stakeholders, in partnership, to achieve reductions in air pollution;
- Adopt a balanced and proportionate approach to improving air quality, including policy, practice, encouragement and enforcement;
- To work within the context of regional and national strategies.

Listed below are the main policies and measures outlined in the Teignbridge Air Quality Action Plan in pursuit of the air quality objectives laid down in the Air Quality (England) Regulations 2000 and Air Quality (England) (Amendment) Regulations 2002.

Measures already implemented

- Formation of Freight Quality Partnership - 6.1.1 [1]
- Production of drivers' maps for freight industry - 6.1.1 [1]
- Installation of information signs on main routes into Newton Abbot showing location of industrial estates - 6.1.1 [1]

[1] *http://www.defra.gov.uk/environment/quality/air/airquality/strategy/documents/air-qualitystrategy-vol1.pdf*

- Provision of information boards at entrances to Brunel Ind. estate, Newton Abbot and Broadmeadow Ind. estate, Teignmouth - 6.1.1 [1]
- Increased green time for traffic signals Bitton Park Road, Teignmouth - 6.1.13 [2]
- Teignbridge District Council fleet –purchase of Euro 5 refuse trucks - 6.1.5
- Teignbridge District Council -'Smarter driving course' – 6.1.6
- Installation of Variable Messaging Signs in Newton Abbot to inform drivers of availability of car parking spaces 6.1.16
- Improvements to Newton Abbot bus interchange - 7.13
- Decriminalised parking enforcement - 7.2
- Appointment of Traffic Manager to co-ordinate road works within the AQMAs - 7.3
- Installation of Automatic Number Plate Recognition Cameras - 7.4
- Re-routing of roads, such as Bradley Lane, as part of the redevelopment of Newton Abbot – 7.6 [1]
- Formation of bus quality partnership – 8.1
- Apply to Defra for funding for a car club in Newton Abbot - 8.6 [2]
- Install teleconferencing facilities at Teignbridge District Council - 8.6 [3]
- Installation of bicycle racks for members of the public at Teignbridge District Council offices – 8.6 [5]
- Provision of bicycles for Teignbridge staff to use for local meetings and lunch visits - 8.6 [5]
- Include the smoky vehicle hotline on Teignbridge District Council website – 11.2

Measures in progress or ongoing

- Feasibility study into a mini freight transfer depot for Newton Abbot - 6.1.2 [1]
- Delivery times outside peak hours - 6.1.4
- Teignbridge District Council – Fleet efficiency savings spreadsheet - 6.1.6
- Teignbridge District Council - refuse trucks avoid congested streets - 6.1.6
- Vehicle emissions testing in Highweek Street, Newton Abbot and Bitton Park Road, Teignmouth - 6.1.10
- 'Switch off your engine signs' to be installed in problem areas - 6.1.11
- Enforcement of idling emissions legislation within AQMAs - 6.1.11
- Teignbridge District Council to review its lease car scheme and car allowances in order to identify and implement reforms which encourage the use of the cleanest and most fuel efficient vehicles - 6.1.14
- South Devon Link Road, Kingskerswell - 7.1
- Consider installation of priority red route schemes on major roads. - 7.10
- Traveline - 8.4
- Devon wide concessionary fares scheme - 8.5
- Promotion and implementation of school travel plans - 8.6 [1]
- Promotion and continuation of the 'Walk this Way' initiative - 8.6 [4]
- Promotion and facilitation of the Newton Abbot to Kingsteignton cycling route - 8.6 [5]
- Promotion and facilitation of the National Cycle Network Route 2 Newton Abbot to Teignmouth - 8.6 [5]
- Promotion and facilitation of the Kingsteignton to Bovey Tracey cycling route - 8.6 [5]
- Promotion and continuation of the 'Cycle to your hearts content' partnership- 8.6 [5]
- Promotion of Teignbridge District Council's Cyclescheme for employees- 8.6 [5]
- Develop and implement travel plans with existing employers - 8.7 [1]
- Undertake regional scale dispersion modelling of the air quality impact of the strategic growth of Newton Abbot and surrounding area - 9.1 [1]
- Possible dispersion modelling of the air quality impact of strategic growth of Teignmouth And Dawlish - 9.1 [2]
- Promote mixed use developments - 9.2
- Planning obligations – Section 106 Agreements - 9.3
- Ensure applicants undertake air quality

assessments (AQA) of relevant new developments - 9.4

- Produce air quality spreadsheet guidance to developers on what should be included in an AQA - 9.4
- Consider the cumulative impact of new developments – 9.5
- Require submission of travel plans for new developments – 9.7
- Monitoring of Section 106 Agreements – 9.9
- Include bicycle facilities in new developments – 9.10
- Assess new developments for maximum parking standards – 9.11
- Include walking facilities in new developments – 9.12
- Building control standards – 9.14
- Feasability study into a road/rail freight interchange facility at Heathfield - 10.1 [1]
- Progress the proposal for a rail freight depot at Hackney sidings - 10.1 [2]
- Financially support additional local train services where justified - 10.2
- Promote rail travel – through provision of publicity and timetables and through support for the Devon and Cornwall Rail Partnership - 10.2
- Implementation of station access and improvements at Newton Abbot railway station - 10.2
- Investigate the feasability of the re-introduction of a passenger service to Heathfield - 10.2 [1]
- Devon County Council to provide road traffic count data annually in problem areas – 10.5
- Produce an Air Quality Strategy – 11.1
- Support national travel awareness events in Teignbridge – 11.3
- Upgrade and promote Teignbridge District Council air quality website – 11.4
- Work in partnership with NHS Devon to promote good health – 11.6
- Produce a variety of information media to raise public awareness of air quality issues – 11.7
- Continue to monitor levels of nitrogen dioxide (NO_2) and review sites annually for suitability – 12.1
- Continue to inspect permitted industrial processes – 12.3
- Improve home energy awareness and standards of home insulation and heating systems – 12.6
- Provide information to residents on environmental issues relating to bonfires to discourage inappropriate burning – 12.4

New measures

- Encourage Teignbridge suppliers to apply for the Defra 'Ecolabel' – 3.13
- Introduce a green procurement code - environmentally friendly purchasing – 3.13
- Incorporate sustainability considerations into tender evaluations – 3.13
- Promote and implement Motorvate scheme - 6.1.2 [2]
- Undertake freight study along Bitton Park Road, Teignmouth, subject to Defra grant funding - 6.1.2 [3]
- Teignbridge District Council - Energy Savings Trust green fleet review - 6.1.6
- Smarter driving for Teignbridge District Council employees – 6.1.6
- Hackney carriages – scoping study of tighter emission standards for vehicles – 6.1.7
- Introduce traffic light signal coordination (SCOOT) schemes within AQMAs – 6.1.13 [1]
- Air quality modelling of proposed traffic signalled scheme in Iddesleigh Terrace, Dawlish (subject to Defra funding) - 6.1.13 [3]
- Maintain links with the University of Birmingham in the development and demonstration of hydrogen fuelled cell vehicles - 6.1.15
- Air quality modelling of a proposed turning lane, Bitton Park Road, Teignmouth - 7.5 [2]

- Reallocation of road space for buses, pedestrians and cycles as part of the redevelopment of Newton Abbot - 7.5 [3]
- Consider installation of a mini roundabout at Shaldon Bridge junction, Teignmouth - 7.6 [2]
- Consider Park and Ride or Park and Change schemes - 7.8
- Bus emissions – emission scenario modelling to be undertaken within AQMAs (subject to Defra grant funding) - 8.2
- Consideration of implementation of bus emissions standards within AQMAs once scenario testing complete – 8.2
- Provision of real time information at bus stops – 8.3
- Local Development Framework needs to identify AQMAs – 9.1
- Produce Supplementary Planning Guidance on air quality – 9.6
- Monitor and enforce planning conditions – 9.8
- Promote and encourage renewable and low carbon energy generation in new developments – 9.13
- Encourage planting of more trees -9.16
- Provide an information service on high pollution days within the district. – 11.5

Measures not considered cost effective or feasible but will be subject to public consultation

- HGV ban in AQMAs – 6.1.3
- Introduce a Low Emission Zone in AQMAs – 6.1.8
- Introduce speed restrictions – 6.1.12
- Construction of bus and HGV priority lanes, A380 Kingskerswell refused by commitee – 7.5 [1]
- Introduction of High Occupancy Vehicle Lanes – 7.7
- Road user or congestion charging schemes within AQMAs – 7.9
- Implementation of Clear Zones within the AQMAs – 7.11
- Home Zones – 7.12
- Transportation of ball clay to Teignmouth Docks by rail – 10.3
- Consider use of inland waterways to transport ball clay to Teignmouth Docks – 10.4
- Compulsory purchase all properties within the AQMAs with relevant public exposure – 12.2

CHAPTER 1
INTRODUCTION AND AIMS OF THE ACTION PLAN

Clean air is essential for improving the quality of life and for improving people's health. The Environment Act 1995 requires the UK Government and the devolved administrations for Scotland and Wales to produce a national air quality strategy containing standards, objectives and measures for improving ambient air quality. The first strategy was adopted in 1997, with the most recent version published in 2007. The UK Government's and devolved administrations primary objective is

'to ensure that all citizens have access to outdoor air without significant risk to their health, where that is economically and technically feasible'. (Defra, 2007)[2]

The air quality strategy is based on standards from expert recommendations representing levels at which no significant health effects would be expected in the population. The objectives aim to move air quality as close to these standards as possible. A number of national and international measures have already been implemented for improving ambient air quality and the UK Government are considering the following:

- Incentivising the early uptake of new tighter European emissions standards (Euro-standards);
- Increasing the uptake of low emission vehicles;
- Reducing emissions from shipping.

Measures requiring additional development work include:

- A national road pricing scheme;
- Low emission zones;
- Retrofitting catalyst based diesel particulate filters to HGVs;
- Reducing emissions from small combustion plant.

The strategy also highlights the integral role that local authorities play in managing the air quality and achieving the Government's objectives through both Pollution Prevention and Control and local air quality management. The continued importance of councils' work in tackling air pollution was recently recognised in the Rogers Review[3]

1.1 The Rogers Review

The Rogers Review, published in March 2007, recommended six national enforcement priorities for local authority regulatory services, one of which was air quality. The reasoning for the recommendation of air quality to be included as a priority was given as follows:

'Air quality is a high national political priority and actions taken to improve it will also contribute to tackling climate change. Local authorities have a vital role to play in delivering better outcomes. Air quality is a national enforcement priority because it impacts on whole populations, particularly the elderly and those more susceptible to air pollution. It is politically important to emphasise the role that local authorities can play in reducing its impacts, and its trans-boundary nature means that local action contributes to national outcomes.' (Rogers, 2007)

1.2 Role of local authorities

Despite the national and international measures detailed in the UK air quality strategy, it is recognised that areas of poor air quality will remain and that these will be best dealt with using local measures implemented by local authorities and the local air quality management regime. Part IV of the Environment Act 1995 requires each local authority to review and assess, 'from

[2] *http://www.defra.gov.uk/environment/quality/air/airquality/strategy/documents/air-qualitystrategy-vol1.pdf*
[3] *http://archive.cabinetoffice.gov.uk/rogersreview/upload/assets/rogersreview/rogers_review_2007.pdf*

time to time', the current, and likely future air quality within their districts against health based objectives. The objectives are laid down in the Air Quality (England) Regulations 2000 as amended by the Air Quality (England) (Amendment) Regulations 2002 and are derived from European Directives.

If one of the prescribed objectives, set out in **Table 1**, is not likely to be met, local authorities have to designate those parts of their areas as Air Quality Management Areas (AQMAs).

Where local authorities have designated an AQMA, they have a statutory duty under section 84(2) of the 1995 Act to produce an Air Quality Action Plan. The plan must set out what measures the authority intends to introduce in pursuit of the air quality objectives. It should also contain timescales to indicate by when the measures will be implemented.

If a local authority fails to discharge a duty under the 1995 Act, the Secretary of State may give directions to the local authority requiring it to take such steps as may be specified in the directions. The Secretary of State will also publish any direction to the public and it is the duty of the local authority to comply with the direction.

1.2.1 Requirement for an Air Quality Action Plan for Teignbridge District Council

Teignbridge District Council has declared four AQMAs that came into operation on the 11th November 2005. These AQMAs were declared as a result of the air quality review and assessment process, concluding that the annual mean air quality objective for nitrogen dioxide, NO_2 would not be met at some residential properties. The review and assessment reports can be viewed at **http://www.teignbridge.gov.uk/index.aspx?articleid=1889.**

1.2.2 Guidance on Air Quality Action Plans

The latest Defra guidance on action plans detailed in LAQM.PG (09)[4] requires action plans to include the following:

- Quantification of the source contributions to the predicted exceedences of the objectives;
- Evidence that all available options have been considered on the grounds of cost-effectiveness and feasibility;
- How the local authority will use its powers to and work in conjunction with other organisations in pursuit of the air quality objectives;
- Clear timescales in which the authority and other organisations and agencies propose to implement the measures within the plan;
- Where possible, quantification of the expected impacts of the proposed measures and an indication as to whether the measures will be sufficient to meet the air quality objectives;
- How the local authority intends to monitor and evaluate the effectiveness of the plan.

[4] *http://www.defra.gov.uk/environment/quality/air/airquality/local/guidance/documents/laqm-policy-guidance-part4.pdf*

Pollutant	Air Quality Objective		Date to be achieved by and maintained thereafter
	Concentration	Measured as	
Benzene	16.25 µg/m^3 5 µg/m^3	running annual mean annual mean	31.12.2003 31.12.2010
1,3-Butadiene	2.25 µg/m^3	running annual mean	31.12.2010
Carbon monoxide	10.0 mg/m^3	maximum daily running 8-hour mean	31.12.2003
Lead	0.5 µg/m^3 0.25 µg/m^3	annual mean annual mean	31.12.2004 31.12.2008
Nitrogen dioxide	200 µg/m^3 not to be exceeded more than 18 times a year 40 µg/m^3	1 hour mean annual mean	31.12.2005 31.12.2005
Particles (PM_{10}) (gravimetric)	50 µg/m^3 not to be exceeded more than 35 times a year 40 µg/m^3	24 hour mean annual mean	31.12.2004 31.12.2004
Sulphur dioxide	350 µg/m^3 not to be exceeded more than 24 times a year. 125 µg/m^3 not to be exceeded more than 3 times a year. 266 µg/m^3 not to exceeded more than 35 times a year.	1 hour mean 24 hour mean 15 minute mean	31.12.2004 31.12.2004 31.12.2005

Table 1: UK Air quality standards and objectives

The majority of this action plan had been written before the new Defra policy guidance was issued; it therefore, has been based predominantly on Defra policy guidance LAQM.PG (03)[5]. In addition, The Environmental Protection UK (formerly NSCA) has published the following guidance; 'Air Quality: Planning for Action (2001)'[6], Air Quality Action Plans: Interim Guidance for Local Authorities'[7] and 'Development Control: Planning for Action (2006)'[8] .These guidance documents have also been taken into consideration in the development of this action plan.

[5] *http://www.airquality.co.uk/archive/laqm/documents/laqm-pg03.pdf*
[6] *http://www.environmental-protection.org.uk/assets/library/documents/AQActionPlansLAGuide.pdf*
[7] *http://www.environmental-protection.org.uk/assets/library/documents/AQActionPlansInterim.pdf*
[8] *http://www.environmental-protection.org.uk/assets/library/documents/Development_Control_planning_for_air_quality.pdf*

1.2.3 Development of the action plan

Teignbridge District Council set up a small working group which included transport planners from Devon County Council, as the source of the pollution had been identified as road traffic. Transport related schemes were discussed at these meetings and possible options proposed. Measures included in the Local Transport Plan aimed at relieving congestion and air quality were also drawn up.

A presentation to the Leader of Teignbridge District Council, a selection of Councillors and Service Leads, on the local air quality management process, the designation of the AQMAs and the action planning process was undertaken. Subsequently, specific measures were discussed with the relevant officers within the Council including planning, strategic planning, building control, housing, regeneration, procurement, energy efficiency, parking, and cleansing and market services. The Strategic Manager who has responsibility for the environment, goal 5 in the corporate plan, and who reports directly to the Chief Executive, has been fully involved in the development of this action plan. This is to ensure that air quality is dealt with consistently across the departments and to ensure a fully corporate approach.

Prior to the preparation of the draft air quality action plan, consultation was undertaken with the public through our annual customer's satisfaction survey in 2006. 6000 questionnaires were sent out to a random sample of residential dwellings within Teignbridge and 31% were returned. The survey results showed that 86% of the consultees were very or fairly concerned about air quality. Nearly 90% of respondents were concerned about traffic congestion. The public were also questioned about their primary mode of transport and their views on potential action plan measures. **Appendix 1** contains more detailed information. Other comments and suggestions from members of the public have also been included in this action plan.

There is a statutory requirement for local authorities to consult on the draft action plan. This has been undertaken and this document reflects the results of the consultation. Full details of which can be found in Appendix 2. Schedule 11 of the 1995 Act requires local authorities to consult:

- The Secretary of State;
- The Environment Agency;
- The Highways Authority;
- The County Council;
- The National Park Authority;
- Other public authorities as appropriate;
- Bodies representing local businesses and other organisations;

1.3 Teignbridge strategic growth and major schemes

Teignbridge has been identified as an area for major strategic growth and regeneration over the next 26 years. It is recognised that the development of Newton Abbot as a Sub-Regional Centre cannot be accommodated solely within the existing infrastructure or through enhancement of public transport and will need to take advantage of significant investment in new strategic highway infrastructure, potentially including a new railway crossing and improvements to key junctions on the current network. Regional scale air quality dispersion modelling and scenario testing of the different development options for the urban extension of Newton Abbot, to determine the impact of this, is planned for later in 2010.

Teignmouth and Dawlish may also be experience strategic growth and air quality modelling may be undertaken to determine the impact.

The air quality modelling results and traffic modelling that is being undertaken by Devon County Council, will be used as part of the evidence based decision process for the Local Development Framework. In addition, whether a major scheme which is the South Devon Link Road (Kingskerswell bypass) is constructed will be a key determinate of the future actions to improve air quality within Teignbridge and the AQMAs.

1.3.1 Newton Abbot strategic growth

The Secretary of State has indicated a requirement for Newton Abbot to accommodate strategic housing of 8,000 new dwellings and employment growth of about 7,600 new jobs up to 2026. As a result, Newton Abbot has been identified as a Strategically Significant Town (SSCT) within the draft Regional Spatial Strategy (RSS). In light of the new Coalition Government, changes maybe made to the SSCT and the RSS. This is one of 21 key places in the region with the potential to achieve further significant development sustainably.

Policy RTS2 of the draft RSS states that

'demand management measures should be introduced progressively at the SSCTs to reduce the growth or road traffic levels and congestion'.

Priority should also be given to those measures that that will have the greatest impact in relieving congestion at the most congested SSCTs. Consideration should be given to the following range of measures:

- Better walking and cycling measures;
- The promotion of more sustainable travel behaviour (e.g. 'Smarter Choices');
- Improved facilities for public transport;
- New and expanded park and ride;
- Improved management of road space including schemes to improve average bus speeds and high occupancy lanes;
- Parking strategies including charging regimes;
- Congestion charging/road pricing;

Teignbridge was also awarded Growth Point status in July 2008 by the Department for Communities and Local Government. The award of Growth Point Status means that Teignbridge Council, with its partners, can bid to Government for additional funding to support the growth and regeneration of Newton Abbot/ Kingsteignton.

Teignbridge has produced a programme of development, which has been used to bid for funding from Government. The funding will 'advance the delivery of new housing and employment complemented by an improved built environment, a shift towards sustainable transport, enhanced environmental assets and town centre renewal' (First Programme of Development, 2008)

In addition to delivering 8,000 new homes and 6,500 new jobs in the Newton Abbot Travel to Work Area the following infrastructure projects are proposed:

Community Infrastructure

- Delivery of 14-19 vocational college/skills centre;
- Delivery of a second children's centre;
- Sports pitch acquisition;
- Sports centre/village;
- New youth centre;
- New Newton Abbot Library.

Environmental Infrastructure

- Upgrading of recycling centres;
- Decoy Country Park education/visitor resource;
- Town Quay and Stover canal GI corridor.

Transport Infrastructure

- Construction of a widened bridge along Newton Road facilitating the introduction of a 400-metre long southbound bus lane;
- Creation of the Connect 2 cycle and walking route between Kingsteignton and Newton Abbot town centre, the rail station and suburban areas to the south of the town;
- A construction of a new relief road bypassing the existing northern section of Newton Road which will facilitate the effective functioning of the bus priority corridor, and improved walking and cycle provision along the current highway;
- Delivery of a Park and Change site adjacent to Newton Road;

- Improvements to Exeter Road and its junctions along with a new link to the above relief road bypassing the village centre.

An alterative site is also sought for a bus and coach station/public transport interchange as the existing interchange area is in an inhospitable location of the town centre and the current site is targeted for mixed-use regeneration.

Funding is also sought for a range of integrated measures to assist with the delivery of sustainable transport options, for example, parking strategy, smart ticketing and to help mitigate the traffic impacts of development.

This level of strategic growth and regeneration will have a major impact on the Newton Abbot AQMA and the results of the modelling will help to formulate ideas and options to reduce existing levels of vehicle emissions within the AQMA.

1.3.2 Teignmouth and Dawlish strategic growth

Planning policies affecting the development and use of land at Teignmouth and Dawlish will be reviewed through the preparation of the Teignbridge Local Development Framework. This will include the future scale and distribution of new development at these two coastal towns.

1.3.3 Proposed South Devon Link Road (Kingskerswell Bypass)

The proposed South Devon Link Road **(Figure 1)** has been planned since 1951 and would bypass the existing Kingskerswell A380 AQMA. Devon County Council (DCC) was granted conditional planning permission for the new dual lane carriageway to replace the A380 corridor between Penn Inn roundabout in Newton Abbot to Kerswell Gardens in Kingskerswell in August 2005. Planning consent was granted prior to detailed dispersion modelling being undertaken and the air quality impact was dealt with by way of a condition:

Prior to the commencement of development, air quality modelling work shall be conducted and submitted and approved in writing by the County Planning Authority. The modelling work shall demonstrate that the overall impact of the application hereby permitted will be beneficial to the prospective Kingskerswell Air Quality Management Area when compared to the air quality should the development not be commenced.

Reason: To avoid an unacceptable rise in nitrogen dioxide levels within the prospective Kingskerswell Air Quality Management Area.

The proposed scheme had also been recognised as a priority in the Regional Funding Allocation by the Regional Assembly.

Devon County Council's consultants have undertaken detailed dispersion modelling of

Figure 1: Proposed South Devon Link Road (Source: DCC)

the impact of the new road, since conditional planning permission was granted. However, upon submission of the bid to the Department for Transport (Dft), the Dft required further traffic modelling and forecasting to be undertaken as Government guidance had changed. Devon County Council's traffic consultants have now completed the additional modelling.

The air quality modelling has been re-run and will determine the actual reduction in nitrogen dioxide (NO_2) in µg/m^3 within the AQMA and existing 'hot-spot' areas (Aller Farmhouse and Jury's Corner). Teignbridge accepts that the by-pass is likely to improve the air quality within the AQMA but, it is necessary to determine the actual reduction in nitrogen dioxide (NO_2) in terms of µg/m^3 so that an assessment of compliance with the air quality objective can be carried out. The air quality assessment is currently being appraised.

A Public Inquiry took place in June 2009 to determine the future of the South Devon link road. The outcome of this Inquiry and the air quality modelling will determine the future actions required for the Kingskerswell AQMA.

1.4 Taking air quality improvements forward

Air quality management is a continuing and iterative process. As new information and study results become available and as implementation of the action plan begins, it will be necessary to review and amend the plan. The planned strategic growth for Newton Abbot, Teignmouth and Dawlish and the proposed South Devon link road will be a key determinate of the future actions to improve air quality.

CHAPTER 2
THE PROBLEM

To date around 230 local authorities in the UK have designated parts or the whole of their districts as AQMAs.[9] The majority of these have been declared for exceedences of nitrogen dioxide (NO_2) and fine particles (PM_{10}).

2.1 What is nitrogen dioxide (NO_2)?

The pollutant of concern in Teignbridge is NO_2. All combustion processes in air, such as road vehicles, produce nitrogen oxides (NO_x), which is the sum of nitric oxide (NO) and nitrogen dioxide (NO_2). The major proportion of emitted NO_x from vehicle exhausts is in the form of NO. Under the majority of atmospheric conditions, the dominant pathway by which NO is converted to NO_2 is via the reaction with ground level ozone (O_3):

$NO + O_3 \rightarrow NO_2 + O_2$

However, some NO_2 is directly emitted, approximately 5%, but the latest research has shown that the fraction of NO_x emitted as NO_2 (f-NO_2) is considerably in excess of this, with values in the range of 20-70% for Euro III diesel cars.[10] These trends have been observed at a number or urban roadside monitoring sites particularly in London. This is a vital issue for policy and is discussed in section 2.5.

[9] *http://www.airquality.co.uk/archive/laqm/laqm.php*
[10] *http://www.defra.gov.uk/environment/quality/air/airquality/publications/primaryno2-trends/index.htm*

2.2.1 Why is nitrogen dioxide of concern?

NO_2 is a brown gas and is associated with adverse effects on human health. The pollutant can have both short-term 'acute' effects and long term 'chronic' effects.

2.2.2 Short term effects of nitrogen dioxide

The short term 'acute' effects include irritation of the eyes, nose and throat and an increase of the symptoms of existing respiratory conditions such as asthma, bronchitis or emphysema. The Government and European Union have set a short term hourly objective because of the short term health impacts. This is 200 µg/m^3 not to be exceeded more than 18 times a year to be achieved by the 1st January 2010.

2.2.3 Long term effects of nitrogen dioxide

The long term 'chronic' effects of NO_2 are associated with a gradual deterioration in the health of people who are already suffering from lung diseases and an increased susceptibility to respiratory infections. The second objective that has been adopted by the Government is an annual mean concentration of 40 µg/m^3. This is also a European Union limit value.

2.2.4 Other effects of nitrogen dioxide

- NO_2 promotes the formation of ground level ozone, which affects human and ecosystem health and which is a greenhouse gas;
- Forms secondary particulate matter, nitrate, which affects health and causes cooling of the atmosphere;
- Contributes to acidification and eutrophication[11] of sensitive ecosystems.

2.3 Sources of air pollution

Oxides of nitrogen are mainly emitted from combustion processes and include:

- Localised points emissions - these are emissions from large industrial chimney stacks which can be quantified;
- Localised line sourced emissions - these are transport related emissions arising mainly from road transport;
- Localised area source emissions - these are emissions arising from domestic and commercial space heating and any other source of emissions which arise locally that cannot be easily justified.

2.4 Sources of air pollution within Teignbridge

In Teignbridge, road transport is the principal source and four AQMAs were declared in November 2005 for exceedences of the NO_2 annual mean air quality objective in the following areas:-

- Newton Abbot Town Centre
- A380 through Kingskerswell
- Bitton Park Road, Teignmouth
- Iddesleigh Terrace, Dawlish

Further AQMAs were declared in November 2009 which involved the extension of the boundary of the Newton Abbot Town Centre AQMA to include parts of Kingsteignton and Wolborough street in Newton Abbot. This draft action plan does not include these new areas.

[11]Eutrophication is the accumulation of excess nutrients, for example, nitrogen, in an ecosystem. This can result in loss of sensitive species of plants and animals.

2.4.1 Newton Abbot Town Centre AQMA

Newton Abbot is a market town in the south west of England with a population of 23,580 (2001 census). The streets are congested and narrow in places with residential properties within metres of the edge of the roads. There are a number of pollution 'hot-spot' areas within the town, including Queen Street, Highweek Street and East Street. The boundary of the Newton Abbot Town Centre AQMA is detailed in **Figure 2**.

To assist with the development of the action plan, the further assessment report[12] quantified the contribution from different sources within each of the AQMAs. This information has been summarised for each of the 'hot-spot' areas and is detailed in the pie charts (**Figures 4,5,7,8,10,11,14,15,18,19,22,23**).

[1]Queen Street, Newton Abbot

The two way section of Queen Street has a number of fast food takeaways and small shops with parking on both sides of the road. The traffic flow is interrupted regularly by vehicles parking. A 12 hour traffic count undertaken in 2006 by Devon County Council showed vehicle numbers of approximately 20,286.

Figure 3: Queen Street, Newton Abbot

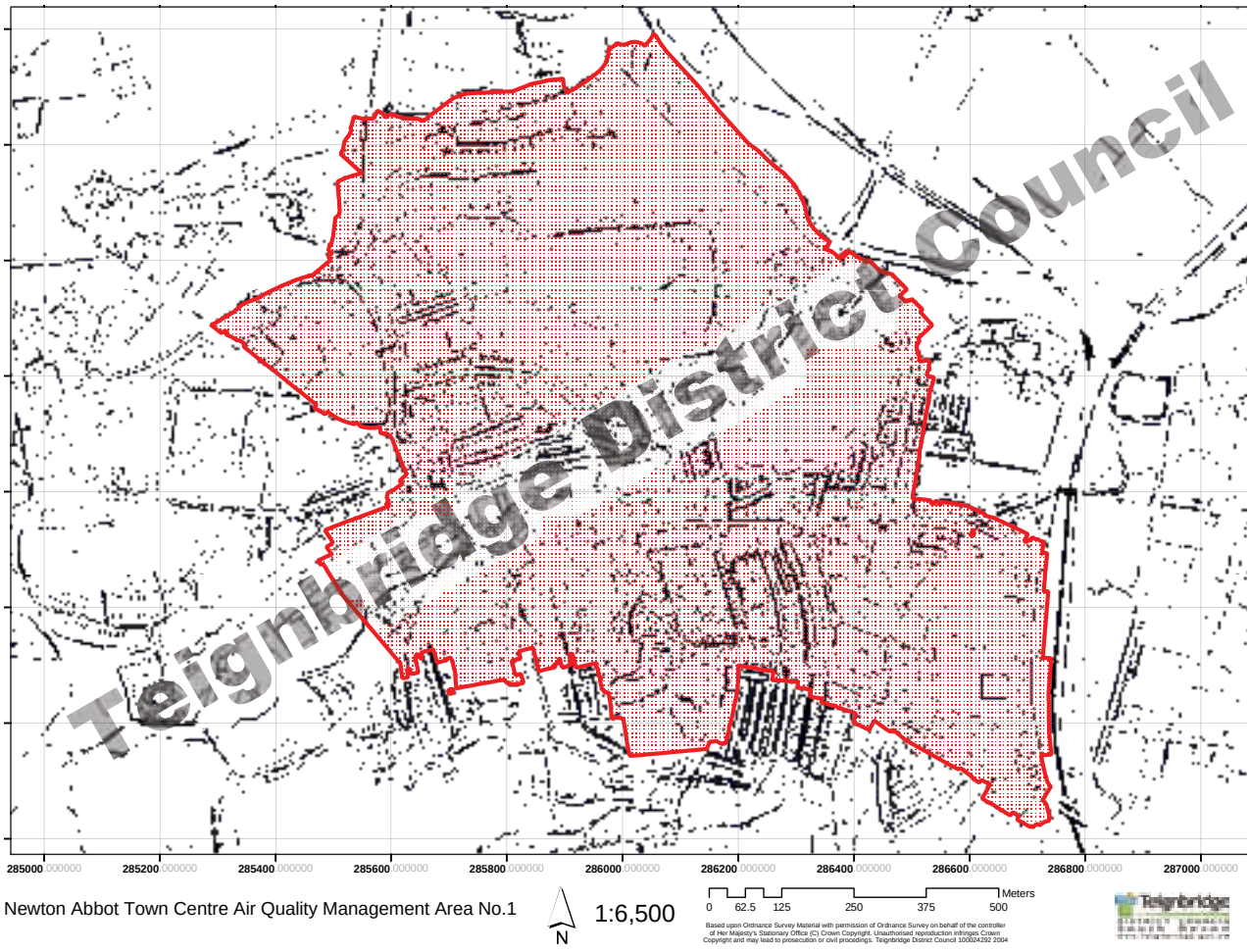

Figure 2: Newton Abbot Town Centre AQMA

[12] *http://www.teignbridge.gov.uk/CHttpHandler.ashx?id=10283&p=0.*

Figure 3a: Queen Street, Newton Abbot

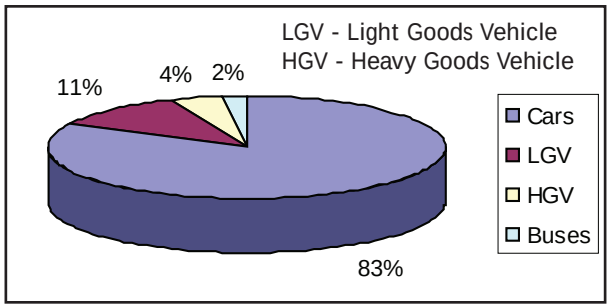

Figure 4: % of AADT[13] Queen Street Newton Abbot (Source: DCC road traffic data 2006)

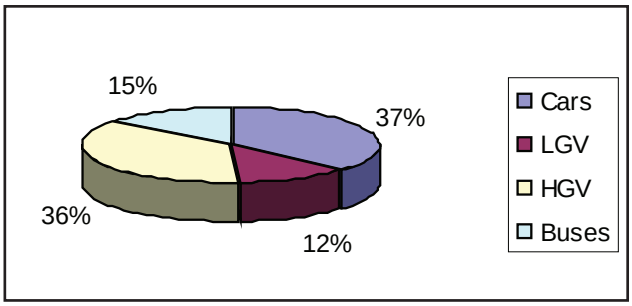

Figure 5: % Contribution to total NO_x emissions Queen Street Newton Abbot (Source: DCC traffic data 2006)

[2] Highweek Street, Newton Abbot

Highweek Street is in the centre of Newton Abbot and is at the junction of two main arterial routes into the town. The road is on a slight gradient with sheltered accommodation on both sides of the road. The AADT for 2007 was approximately 18,477 vehicles.

Figure 6: Highweek Street, Newton Abbot

[13] *AADT - Annual Average Daily Traffic*

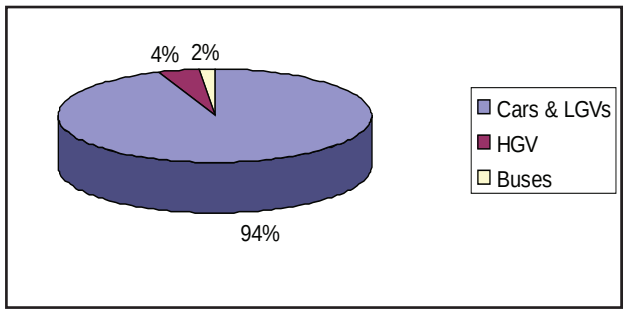

Figure 7: % contribution of AADT Highweek Street Newton Abbot (Source: DCC traffic data 2005)

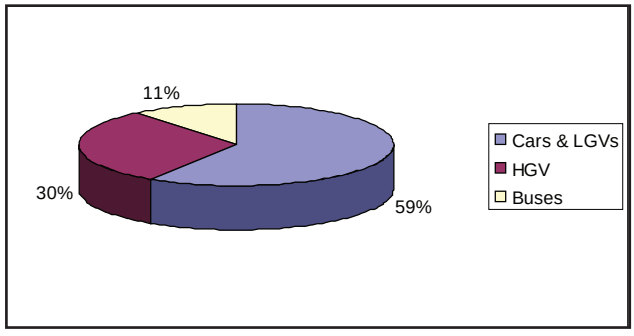

Figure 8: % contribution to total NO_x emissions from road traffic Highweek Street, Newton Abbot (Source: DCC traffic data 2005)

[3] East Street, Newton Abbot

East Street is a traditional street with sections of terraced housing situated close to the road and larger properties set back from the road. The road has a slight incline and experiences traffic flows of approximately 17,923 AADT (2007).

Figure 9: East Street, Newton Abbot

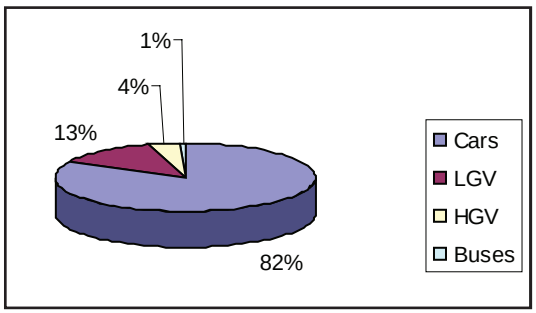

Figure 10: % contribution of AADT East Street Newton Abbot (Source: DCC traffic data 2007)

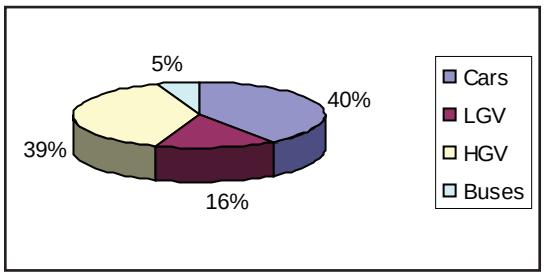

Figure 11: % contribution to total NO_x emissions from road traffic East Street, Newton Abbot (Source: DCC traffic data 2007)

2.4.2 Kingskerswell A380 AQMA

The A380 through Kingskerswell is the main route into Torbay and experiences traffic flows of approximately 33,814 AADT (2007). It is a congested route and experiences slow moving traffic particularly during the peak periods. The boundary of the Kingskerswell AQMA is detailed in **Figure 12**.

Figure 12: A380, Kingskerswell AQMA

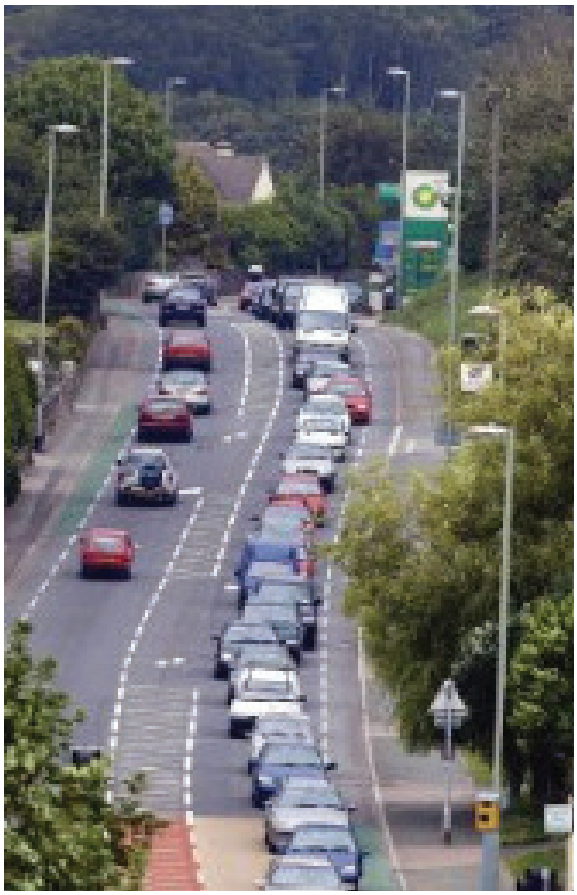

Figure 13: A380, Kingskerswell

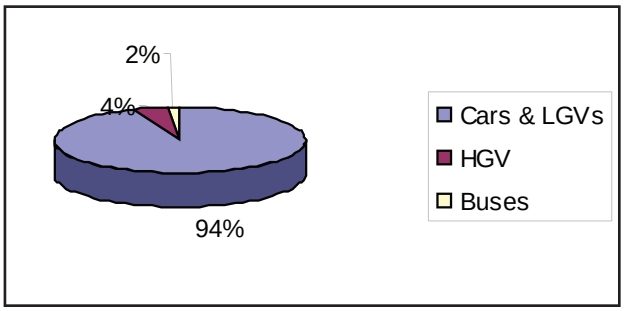

Figure 14: % of AADT Kingskerswell A380 (Source: DCC traffic data 2002-2005)

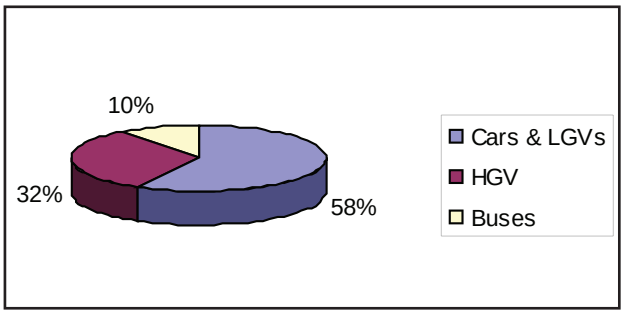

Figure 15: % contribution to total NO_x emissions from road traffic (Source: DCC traffic data 2002-2005)

2.4.3 Bitton Park Road, Teignmouth AQMA

Bitton Park Road is the primary route into Teignmouth from Newton Abbot. It is the main thoroughfare for HGV traffic into Teignmouth Docks which handles a broad range of imports and export cargo including bulked and bagged fertiliser, sugar beet, soya pellets, hipro soya and slag. Locally mined ball clay is Teignmouth's largest cargo and is exported to many European ports. The boundary of the AQMA is detailed in **Figure 16**.

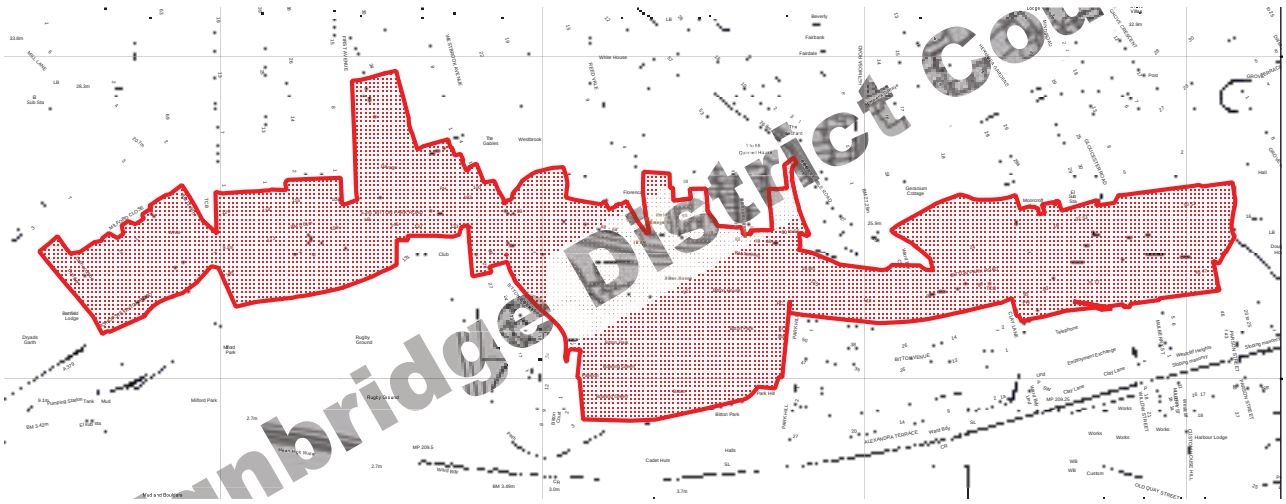

Figure 16: Bitton Park Road, Teignmouth AQMA

Figure 17: Bitton Park Road, Teignmouth

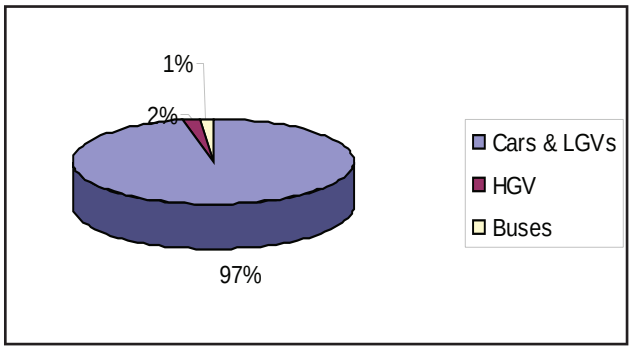

Figure 18 % of AADT Bitton Park Road, Teignmouth (Source: DCC traffic data 2000)

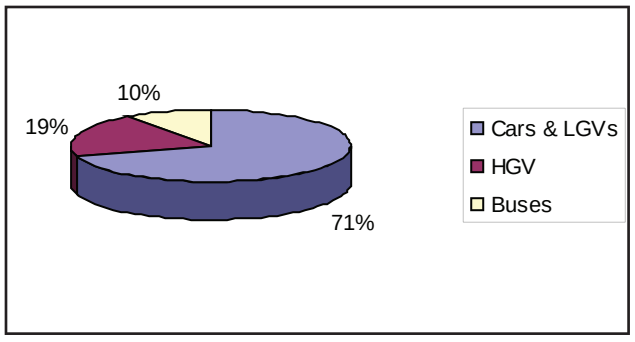

Figure 19: % contribution to total NO_x emissions from road traffic (Source: DCC traffic data 2000)

2.3.4 Iddesleigh Terrace, Dawlish AQMA

Iddesleigh Terrace is a small section of road within the resort of Dawlish. It is a winding road which climbs from west to east and forms a street canyon where the height of the buildings either side of the road are higher than the width of the road. The boundary of the AQMA is detailed in **Figure 20**.

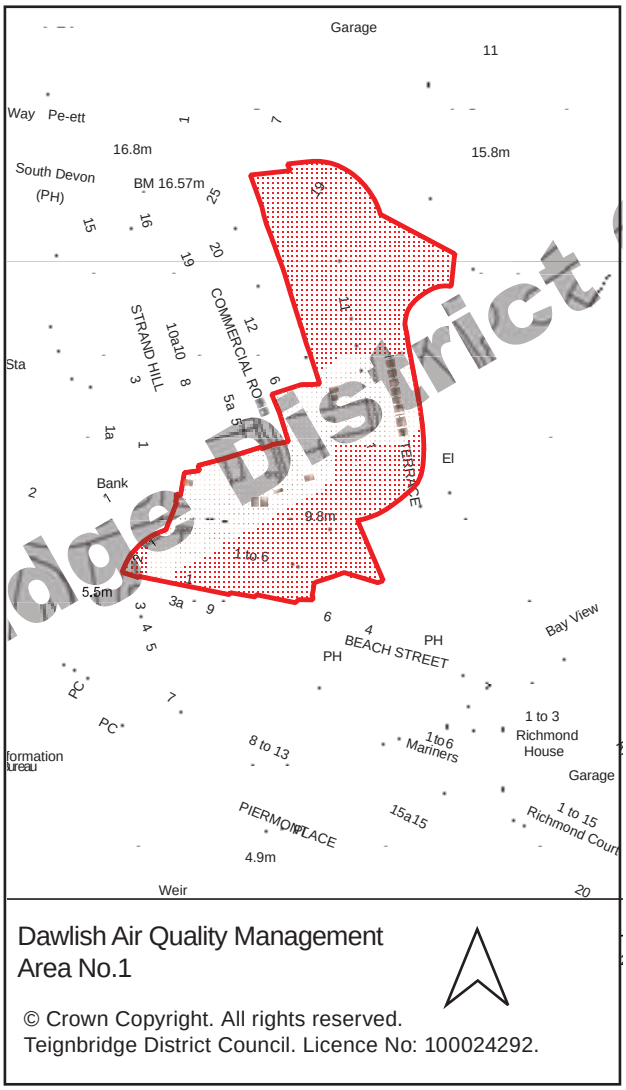

Figure 20: Iddesleigh Terrace, Dawlish AQMA

Figure 21: Iddesleigh Terrace, Dawlish (Source: DCC traffic data 2005)

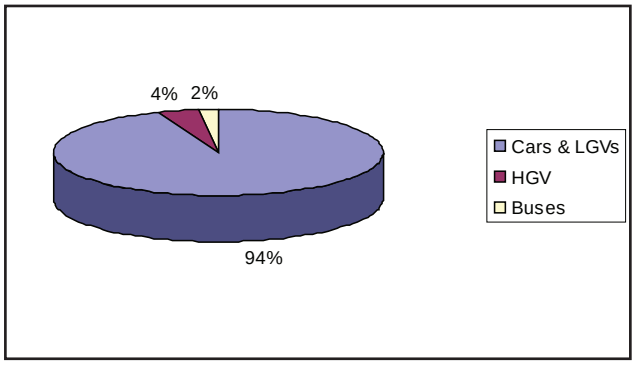

Figure 22: % of AADT Iddesleigh Terrace, Dawlish (Source: DCC traffic data 2005)

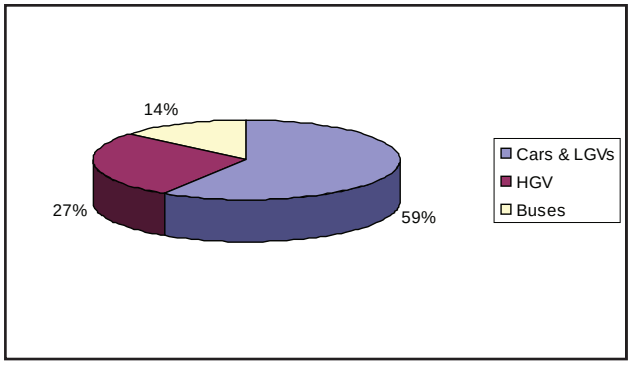

Figure 23: % contribution to total NO_x emissions from road traffic (Source: DCC traffic data 2005)

2.4 Source apportionment conclusions

The percentage emissions contribution to total NO_x for all the sites assessed within the Teignbridge District Council administrative area indicates that emissions from cars and LGVs form the greatest contribution (see pie charts). At all locations, HGVs are responsible for a substantial proportion of total emissions (19.4-39.0%). The source apportionment study, undertaken by consultants at the University of West of England, suggests that any actions relating to road traffic may have a greater influence on pollution levels if it is targeted at car, LGV and HGV vehicles. However when you consider the relative numbers involved cost-effective reductions may be accrued by focusing actions on HGVs (FA, 2006)[14]

Devon County Council was unable to provide more recent data on vehicle splits within each of the AQMAs. Traffic counts were commissioned for the Autumn 2009 in each of the 'hot-spot'. These are still in progress, so an update on source apportionment will be included in the 2011 action plan progress report.

[14] *http://www.teignbridge.gov.uk/CHttpHandler.ashx?id=10283&p=0*

2.5 Level of improvement required to achieve the objective

As we saw on 2.1 the majority of the NO_x emissions enter the atmosphere as NO and are converted to NO_2; however, a fraction of the NO_x is emitted directly to the atmosphere as NO_2. So at any point in time, the NO_2, that is present in the atmosphere may have been directly emitted, that is primary NO_2, and some may have formed in the atmosphere by chemical reaction, that is secondary NO_2. This means that NO_x and NO_2 are not linearly related.

2.5.1 Secondary NO_2

The NO emitted from motor vehicles reacts rapidly with ozone, (O_3), to form NO_2. In the presence of sunlight, NO_2 dissociates back to NO and O_3.The rate of reactions and dissociations are described as photostationary or as quasi-steady sate, whereby NO_2 is formed at the same rate as it is dissociated. At polluted sources close the road, NO is present in large amounts and the availability of O_3 can limit the quantity of NO_2 produced by this reaction.

However, NO_2 is emitted from both primary and secondary sources, and recent trends show increases in primary NO_2 [15]. This is due to a greater penetration of diesel cars into the vehicle fleet and the use of catalytically regenerative particle traps on some heavy duty vehicles. Furthermore, increases in background ozone concentrations, will lead to the production of more NO_2. An increase in 5% of primary emitted NO_2 will lead to increased NO_2 in ambient air, however cutting NO_x emissions when NO_2 formation is oxidant limited will have little effect on NO_2 concentrations.

This is a very important issue for policy because the source receptor relationships are dramatically different for primary and secondary pollutants. The implication is that major reductions in NO_x emissions will be required to obtain modest reductions in NO_2 and hence to achieve the objectives in the National Air Quality Strategy.

2.6 Level of improvement required

Before identifying the options available for improving air quality, it is necessary to determine the overall level of improvement required in order to achieve the annual mean objective for NO_2.

This has been achieved by identifying the location of the highest NO_2 concentration within each AQMA. The level of improvement required is the difference between the highest annual mean NO_2 concentration measured in 2008 and the annual mean objective for NO_2, 40µg/m^3. The annual mean NO_x concentration has been calculated using the NO_2 to NO_x tool[16] on the UK Air Quality Archive website.

Table 2 sets out the maximum monitored concentration within each of the AQMAs for 2008 within the AQMAs. The corresponding approximate reduction in NO_2 required in order to meet the annual mean objective of 40µg/m^3 is also given.

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[15] http://www.defra.gov.uk/environment/quality/air/quality/publications/primaryno2-trends/index.htm

[16] http://laburnum.aeat.co.uk/archive/laqm/tools.php

Worst- case receptor	Measured 2008 annual mean NO_2 concentration ($\mu g/m^3$)	Required reduction of total NO_2 annual mean concentration ($\mu g/m^3$)	2008 annual mean total NO_x concentration ($\mu g/m^3$)	Required reduction of NO_x road traffic component only (%)
AQMA 1 (108-110 Queen St, Newton Abbot)	51.3	11.3	128.3	39.5
AQMA 1 (Bradley Court, Highweek Street, Newton Abbot)	50.1	10.1	127.3	35.1
AQMA 1 (85 East Street, Newton Abbot)	45.9	5.9	105.8	24.2
AQMA 2 (Westhill House, Torquay Rd, Kingskerswell)	47	7.0	118.5	25.4
AQMA 3 (Reed Vale Lodge, Bitton Park Road, Teignmouth)	59.4	19.4	174.7	52.7
AQMA 4 (Whitecourt, Iddesleigh Terrace, Dawlish)	43.1	3.1	104.1	12.4
AQMA 1 proposed extension (Wolborough Street, Newton Abbot)	61.1	21.1	181.1	56
AQMA 1 proposed extension (Newton Road, Kingsteignton)	41.2	1.2	93.3	5.3

Table 2: Improvement of annual mean NO_2 required at the worst case receptors - 2008 data

The percentage improvement from road traffic emissions has been calculated using the method set out in box 7.2 of Defra's updated technical guidance: LAQM.TG (09).[17]

The methodology for calculating the percentage improvement required does present a somewhat simplistic result. The greatest reduction in roadside NO_x emissions is required at Reed Vale Lodge and adjacent properties within the Bitton Park Road, Teignmouth AQMA. The smallest reduction is required at Whitecourt Iddesleigh Terrace within the Dawlish AQMA.

[17] *http://www.defra.gov.uk/environment/quality/air/airquality/local/guidance/pdf/tech-guidance-laqm -tg-09.pdf*

2.7 Projected 2010 annual mean NO_2 concentrations

An assessment of the projected annual mean NO_2 concentrations has also been undertaken for 2010. This is the year that the European Union (EU) limit values for NO_2 become live and the UK Government has a duty to meet them. This has been calculated using the guidance contained within Box 2.1 of the Defra technical guidance LAQM.TG (09) and the results are contained within **Table 3**.

Worst- case receptor	Measured 2008 annual mean NO2 concentration (µg/m³)	Projected 2010 annual mean
AQMA 1 (Queen St, Newton Abbot)	51.3	47.2
AQMA 1 (Highweek Street, Newton Abbot)	50.1	46.1
AQMA 1 (East Street, Newton Abbot)	45.9	42.2
AQMA 2 (Westhill House, Torquay Rd, Kingskerswell)	47.2	43.4
AQMA 3 (Reed Vale Lodge, Bitton Park Road, Teignmouth)	59.4	54.7
AQMA 4 (Whitecourt, Iddesleigh Terrace, Dawlish)	43.1	39.7
AQMA 1 proposed extension (Wolborough Street, Newton Abbot)	61.1	56.3

Table 3: Projected annual mean NO_2 concentrations at worst case receptor within AQMA's

Although some of the projections are below the annual mean NO_2 objective and EU limit value this does not take into account the major developments proposed within Teignbridge.

It should also be noted that the current monitoring data has shown a gradual year on year increase in annual NO_2 concentrations at the worst case receptors.

2.8 Likelihood of objectives being achieved

It will be challenging to meet the level of NO_x reduction required in order to achieve the NO_2 annual mean objective in a number of areas across the district. However, the implementation of the measures outlined in this action plan combined with the options identified as a result of the regional scale dispersion modelling will make a significant impact in achieving the objective.

It has not been possible to determine quantitatively the actual reduction in the emissions and annual mean NO_2 concentration for inclusion in this action plan but this data will be included in future action plan progress reports. Details of the measures to be scenario tested are contained within section 4.2.

CHAPTER 3
EXISTING STRATEGIES AND POLICIES RELEVANT TO AIR QUALITY

Introduction

There are a number of related policies and strategies at the regional and local level that can be tied in directly with the aims of the AQAP, and that will help to contribute to improving the overall air quality within the district. AQAPs should support existing and forthcoming plans, policies and strategies within Teignbridge and visa versa. The following strategies and policies relate to air quality:

- *Draft Regional Spatial Strategy for the South West (RSS)*
- *The National Performance Indicators 185, 186, 188 and 194*
- *Devon Local Area Agreement (2008-2011)*
- *Local Transport Plan for Devon 2006-2011*
- *Teignbridge Community Strategy*

- *Teignbridge District Council Corporate Plan (2008 to 2011)*
- *Teignbridge District Council Local Development Framework*
- *Devon County Council Minerals Core Strategy*
- *Devon County Council Sustainable School Travel Plan Strategy 2007 – 2011*
- *Teignbridge Parking Strategy*
- *Teignbridge Procurement Strategy*
- *Teignbridge Carbon Management Action Plan*
- *The Nottingham Declaration*
- *Energy Efficiency*

3.2 Regional Spatial Strategy (RSS)

The planning process has an important role to play in improving air quality and reducing exposure to air pollutants. This is the case at the strategic level, through planning policy and local development frameworks, and at the local level, through development control.

In England, Regional Spatial Strategies (RSS) set out the broad development strategy for a fifteen to twenty year period and contain policies on air quality.

The RSS emerged from the Planning and Compulsory Purchase Act 2004 which abolished Structure Plans, and replaced Regional Planning Guidance (RPG) with the RSS which is now the strategic level plan charged with informing the Local Development Frameworks (LDFs). The RSS is a statutory legal document and is produced by the eight English Regional Assemblies. It is the main policy document setting out the Spatial Strategy for growth and development in each of the regions and the strategic policies which will shape this.

The RSS must have regard to national policy and advice issued in guidance. Those that relate to air quality include:

- Planning Policy Statement 23 (PPS23) which covers systems for pollution control, air quality, water quality and development on land affected by contamination;
- Planning Policy Guidance Note 13 (PPG 13) Transport which sets out guidance on reducing the need to travel, especially by private car, promoting more sustainable transport choices for people and moving freight;
- Planning Policy Statement 1 (PPS1) Delivering Sustainable Development which sets out the Government's overarching planning policies on the delivery of sustainable development through the planning system;
- Planning Policy Statement: Planning and Climate Change - Supplement to Planning Policy Statement 1 which sets out how spatial planning should contribute to reducing emissions and stabilising climate change (mitigation) and take into account the unavoidable consequences (adaptation);
- Planning Policy Statement 22 (PPS22): Renewable Energy which sets out the Government's policies for renewable energy, which planning authorities should have regard to when preparing local development documents and when taking planning decisions.

3.2.1 Draft Regional Spatial Strategy for the South West

The RSS for the South West is currently in draft format and is waiting final approval from the Secretary of State. Section 7, Enhancing Distinctive Environments and Cultural Life Policy provides a policy on air quality.

Policy RE9 – Air Quality states:

'The impacts of development proposals on air quality must be taken into account and Local Authorities should ensure, through Local Development Documents (LDDs), that new developments will not exacerbate air quality problems in existing and potential AQMAs'.

Until the RSS is adopted, the Devon Structure Plan 2001-2016 sets out the strategic planning framework for the development and use of land within Devon. The planning of residential, commercial industry and infrastructure can affect local air quality and the Structure Plan makes this consideration explicit when assessing development proposals:

Policy CO15 – Air Quality states:

'Development that would give rise to deterioration in air quality should not be located where that deterioration would adversely affect other land uses and amenity in the vicinity'.

3.3 The National Performance Framework & the Air Quality Indicator 194

The new air quality indicator, NI194[20], requires local authorities to report on emissions of NO_x and primary fine particles (PM_{10}) from their own estates and operations. All local authorities are required to develop a baseline of emissions from their own estates and operations and then report on total emissions and percentage reduction in emissions against this indicator each year.

The rationale behind NI194 is to identify authorities that are proactive in minimising significant air pollution emissions through their actions, measures and leading by example.

Teignbridge District Council will also be reporting on NI 185[21], NI 186 and NI 188[22] that relate to carbon dioxide (CO_2). The aim of NI185 'CO_2 reduction from local authority operations', is to measure the progress of local authorities to reduce emissions from their own operations which are directly under their control and to encourage them to demonstrate leadership on tackling climate change. NI 186 is the per capita reduction in CO_2 emissions in the Local Authority area. Whilst the overall aim of NI 188 'Adapting to climate change', is to embed the management of climate change risks and opportunities across the local authority and partner services, plans and estates and to take appropriate adaptive measures where required.

3.4 Devon Local Area Agreement 2008-2011

The Devon Local Area Agreement (LAA) was approved by Hazel Blears on the 1st July 2008. The LAA includes 31 targets derived from the set of national performance indicators for local authorities, which are proposed for designation by the Secretary of State. The LAA contains a number of targets that relate to reducing traffic congestion, climate change and reducing CO_2 emissions.

3.5 Local Transport Plan for Devon 2006-2011

The Local Transport Plan (LTP)[23] is produced by Devon County Council and sets out a five year transport strategy for Devon for the period 2006 – 2011. Air quality is included within the LTP as a shared priority - safety, congestion and accessibility form the other priority areas. The Devon LTP provides the mechanism for improving local air quality through transport and traffic related measures. Formula funding for the allocation of funds associated with schemes geared toward delivery of these shared priority areas, currently favours those local authorities with declared AQMAs. The air quality target for 2006-2011 that relates to Teignbridge is:

'AQ1 Limit growth in traffic to 15% by 2010/11'

The LTP sets out the programme of local transport schemes for the period 2006 to 2011. Measures for Teignbridge include:-

- Major enhancement scheme at Bank Street and Wolborough Street, Newton Abbot in partnership with Teignbridge DC;
- Managing car park capacity with Variable Message Signing (VMS) in Newton Abbot;
- Introduction of low emission, low floor buses on several town bus routes in Newton Abbot in partnership with operators;
- Programme to upgrade bus waiting facilities across whole of Newton Abbot;
- Improved capacity and enhanced passenger waiting facilities at Newton Abbot's bus station;
- Introduction of Automatic Number Plate Recognition Cameras throughout Newton Abbot as part of intelligent Transport System strategy
- Several new signalised crossings for pedestrians and cyclists.
- Submission of major scheme bid to DfT for funding of the South Devon Link Road. *(Source: DCC LTP Progress Report 2008)*[24]

[20] *http://www.defra.gov.uk/environment/quality/air/airquality/local/indicator.htm*
[21] *http://www.defra.gov.uk/environment/localgovindicators/ni185.htm*
[22] *http://www.lga.gov.uk/lga/core/page.do?pageId=1382860*
[23] *http://www.devon.gov.uk/index/transport/devon_local_transport_plan/dltp.htm*
[24] *http://www.devon.gov.uk/ltpprogressreport08.pdf*

3.5.1 Integration of Air Quality Action Plans into the Local Transport Plan

Defra LAQM.PGA (05)[25] provides updated policy guidance for those authorities with AQMAs declared in their areas, for which local traffic has been identified as the main emission source. Where this is the case, Defra recommends that the AQAP should be integrated into the LTP. The advantages of integration include helping to raise the profile of air quality in transport planning; as road transport is a major source of local air pollution, it makes sense to integrate those action plan measures which deal with traffic management, congestion relief into the LTP and it can assist with funding schemes that benefit air quality.

DCC has produced their annual report on progress of the LTP for 2008, as required by the Department for Transport. However, after 2008, there is no requirement for the county council to produce this progress report. The AQAP will therefore be fully integrated into the LTP3 from 2011.

3.5.2 Devon County Councils Duties under the Environment Act 1995

County Councils also have a duty under section 86(3) of the Environment Act 1995 to put forward proposed measures which they themselves can implement, to work towards meeting the air quality objectives. Specific schemes likely to have direct and indirect impacts on the air quality are referred to where relevant within this action plan.

3.5.3 Local Transport Plan and Planning

The LTP contains key objectives which apply to new developments. These are:

- Reduce the need to travel – development to be located where it is accessible to public transport;
- Managing the travel need – discourage car based travel and encourage more sustainable modes;
- Parking Strategies – requiring parking standards for new development to be at or below regional guidance;
- Promoting sustainable modes of travel – establishing travel according to following hierarchy; walking, cycling, public transport and private vehicles;
- Accommodating development – development should be provided where the travel infrastructure is in place;
- Walking and cycling – development proposals should make provision for walking and cycling;
- Public transport – development to be located where it is accessible to public transport.

3.6 Devon County Council Bus Strategy

The Transport Act requires all local transport authorities to prepare a bus strategy, as part as the LTP. The Devon CC mandatory LTP targets are:

'C3 20% growth in passenger trips on local bus services from 2003/4 baseline of 18.2m to 21.8m trips by 2010/11'

'C4 bus punctuality improved from 62% to 90% by 2010/11'

'C5 Increase satisfaction with bus services by 20% by 2009/10'

3.7 Teignbridge Community Strategy (2007 to 2011)

Part 1 of the Local Government Act 2000 places a duty on local authorities in England and Wales to prepare a community strategy to promote and improve the economic, social and environmental well being of their areas and to contribute to the achievement of sustainable development in the UK.
Teignbridge Strategic Partnership has published their second community strategy[26] in consultation with residents. The Teignbridge

[25] *http://www.defra.gov.uk/environment/airquality/local/guidance/pdf/laqm-pga05-addend.pdf*

[26] *http://www.teignbridge.info/CHttpHandler.ashx?id=8449&p=0*

Strategic Partnership is a collaboration of statutory agencies, businesses, voluntary and community groups. The aim of the partnership is bringing these groups together to improve neighbourhoods, public services and the quality of life for everyone. Seven key themes have been identified and the two that relate to air quality are:

- **Looking after the environment**
  Protecting the local environment around housing and villages;
  Promoting and developing renewable energy;
  Encouraging communities to reduce any negative impact on the environment.
- **Access to services, including transport**
  Reducing traffic congestion in urban areas;
  Integration of public transport to meet community needs;
  Reduced high fares on public transport.

The sustainable community strategy is being revised and the Teignbridge Strategic Partnership is working in partnership with the Local Development Framework in relation to spatial planning and infrastructure development within the district.

3.8 Teignbridge District Council Corporate Plan (2008 – 2011)

This document[27] published in 2008 sets out the overarching strategic objectives and the key priorities for Teignbridge District Council for the period 2008 to 2011. The vision is to make Devon

'England's greenest county with strong local communities that are prosperous and welcoming with an excellent quality of life and a sustainable future.'

Of the five goals, the following three relate to air quality:

- **Goal 2 Health and Wellbeing – improve the health and wellbeing of residents and communities;**
- **Goal 4 Sustainable Communities – promote the development of sustainable communities;**
- **Goal 5 Environment – protect and enhance the local natural and built environment.**

Within these three key goals, the key objectives and tasks of relevance to the AQAP are to:

Goal 2 Health & Wellbeing Objective 2.2 'Protect the health of the residents of and visitors to Teignbridge.'

f. 'Work in partnership to develop and implement an action plan to improve Air Quality for the residents of Teignbridge in the identified Air Quality Management Areas' ES[28]

g. 'Undertake the actions described in the Devon Affordable Warmth Strategy which seeks to improve heating efficiency and reduce fuel poverty'. H[29]

Goal 4 Objective Sustainable Communities 4.2 'Develop a Local Development Framework and supporting policies to deliver sustainable communities and an adequate level of housing and employment for the future.'

c. 'Work with the Regional Development Agency and other key stakeholders to ensure that the necessary infrastructure is delivered to support growth and the quality of life for local residents'. EDT[30]

Goal 4 Sustainable Communities Objective 4.4 'Work with partners to develop a Transport Strategy for Teignbridge.'

b. 'Work with Devon County Council to develop a Teignbridge Transport Strategy to support the future development of the area and improve quality of life. The strategy should seek to tackle:

- Congestion;
- Sustainability and transport alternatives including provision for cyclist;
- Improved safety;
- Reduced noise and pollution.' PDPM[31]

[27]http://www.teignbridge.gov.uk/CHttpHandler.ashx?id=17372&p=0
[28]Lead Officer Environment & Safety Services
[29]Lead Officer Housing
[30]Lead Officer Economic Development and Tourism
[31]Lead Officer Planning, Design and Property Management

- **Goal 5 Environment Objective 5.3 'To provide community leadership for local people and organisations in combating the causes of climate change.'**

a. 'Support people in reducing carbon generating energy consumption in domestic premises through the general provision of information on energy saving and practical implementation of renewable energy sources. Support this with the provision of grants for targeted vulnerable households.' ES

b. Work with partners to provide information to local companies on how to reduce their negative environmental impacts. ES

c. Through work on the Transport Strategy for Teignbridge investigate and implement ways of supporting local people develop more sustainable approaches to transport'. PDPM[32]

Goal 5 Environment Objective 5.4 'To reduce energy consumption from our own operations by 5% annually over the next 3 years.'

a. 'Achieve the milestones set out in the Council's carbon management Plan which will reduce our energy consumption year on year in real times when taking development and growth into consideration'. ES

b. 'Appoint an Energy Efficiency and Climate Change Officer to support the Council and the community to improve environmental performance'. ES

c. 'Ensure the Council's Procurement Plan supports environmentally responsible local businesses and encourages green procurement.' SSP[32]

d. 'Develop and adopt a Sustainability Impact Assessment methodology that will apply to all the council's policies, budgets and decisions.' PRC[33]

Goal 5 Environment Objective 5.5 'Protect and enhance the natural environment and public green spaces through the development of planning policies and taking account of the views expressed in local community plans.'

e. 'Take action to protect the environment through the establishment of protections (such as Tree Preservation Orders) and effective enforcement action against polluters and other sources of environmental damage and nuisance.'

3.9 Teignbridge District Council Local Development Framework (LDF)

The Planning and Compulsory Purchase Act 2004 requires Local Planning Authorities to prepare a Local Development Framework (LDF). This sets out the Local Authorities policies for meeting the community's economic, environmental and social aims for the future, where this affects the development and use of land. The LDF is used to describe a folder of documents, which include all of the local planning authority's Local Development Documents (LDDs). An LDF is comprised of Development Plan Documents (which form part of the statutory development plan) and Supplementary Planning Documents. The LDF also comprises the Statement of Community Involvement; the Local Development Scheme; and the Annual Monitoring Report. These planning documents guide the future planning decisions within a Local Authority.

The LDF for Teignbridge is at an early stage following the withdrawal of the previous core strategy and will contain policies relating to air quality, sustainability and climate change. The core strategy should be adopted in July 2012. The traffic and air quality scenario testing modelling results of the various development options, for Newton Abbot, Teignmouth and Dawlish will be used as part of the evidence based decision process.

Supplementary Planning Documents (SPD) on the following topics will be produced:

- Air quality and guidance for developers;
- Air quality and section 106 contributions – The Beacon councils have produced one SPD on planning obligations; it is recommended that Teignbridge produce one SPD on planning obligations, detailing the type and scale of planning obligations that is required for development proposals within Teignbridge.

[32] *Lead Officer Shared Services and Procurement*
[33] *Lead Officer Policy Resources and Communication*

3.10 Devon County Council Minerals Core Strategy

Devon County Council is currently preparing the Minerals Core Strategy and this will contain the Council's vision and objectives for minerals planning. Preparation of the Minerals Core Strategy is being undertaken with respect to the following principles, a sound evidence base; early and extensive stakeholder involvement and the delivery of sustainable development.

National and regional minerals policies[34] promote the transportation of minerals by means other than road and require that facilities for rail and water movement be safeguarded to ensure that they remain available for mineral use. The following facilities in Teigbridge are currently used or have been used for the transportation of minerals and are safeguarded through the designation as Mineral Consultation Areas:

- Teignmouth Quay, Teignmouth – currently active
- Heathfield Sidings, Newton Abbot –not currently active
- Teigngrace Goods Yard – not currently active
- Heathfield Processing Plant Rail Sidings, Newton Abbot – currently active

Teignmouth Quay and Heathfield processing plant rail sidings export ball clay, but there is potential use for the rail movement of minerals from the other two sites.

Teignbridge District Council will work in partnership with Devon County Council to explore the potential for the movement of minerals by rail from the two inactive rail sidings.

3.11 Devon County Council Sustainable School Travel Plan Strategy 2007 – 2011

Devon County Council is committed to ensuring that 'every child will be able to travel to school as healthily, sustainably and most of all as safely as possible'. The aims of the strategy are:

- A1 - Reduce the number of cars used for school journeys;
- A2 - Work with parents and schools to improve safety on the school journey;
- A3 - Promote healthy lifestyles for children and young people;
- A4 - Meet the requirements of the Education and Inspections Act 2006 to in the provision of home to school transport.

DCC school travel advisors have been working with local schools to promote these aims and the schemes that have been introduced include:

- Walking buses;
- School crossing patrols - helping children to cross the road in safety;
- Cycle awareness training schemes;
- Safer routes to school;

3.12 Teignbridge Parking Strategy

A significant influence on whether people drive into towns is whether they can park. In areas close to the town centre, people are likely to be encouraged to drive if free parking in adjacent residential areas is available. Residents parking permit schemes; in conjunction with parking disincentives for town centre car parking, discourage people from commuting into town and parking all day. Parking permits can however be unpopular with local residents. There is also a conflict between increased car parking charges for long stay parking which will discourage commuters and the resultant decrease in revenue for the Council.

The Road Traffic Regulations Act permits local authorities to determine where motorists can park and how much it will cost them. Teignbridge in partnership with Devon County Council introduced a car parking strategy in 2005.

The purpose of the Teignbridge parking strategy was to identify the local parking provision and to develop both the medium

[34]Para 16 of MPS1 and Policy RE10 of the Draft RSS http://www.communities.gov.uk/documents/planningandbuilding/pdf/152993.pdf

and long term approach for the overall vision for parking in the district of Teignbridge from 2005-2011. A number of actions are contained within the strategy and these will be are referred to where relevant within this action plan.

3.13 Teignbridge Procurement Strategy

Buying and providing goods and services in a way that reduces their environmental impacts in terms of energy and emissions is a key method by which businesses can help improve air quality. Emissions to air can occur during the manufacturing process, when goods are being used and disposed of and when transporting goods from the place of production to the retail outlet. The energy used during the process is also a source of emissions to air.

The Devon Districts Working Together Procurement Strategy 2010 - 2013 is an informal collaboration between the seven Districts in Devon (Teignbridge, South Hams, Torridge, West Devon, Mid Devon, East Devon and North Devon). Chapter 16 of the Strategy is devoted to sustainability and environmental procurement and places an obligation on the councils to minimise the environmental impacts of the products and services they purchase. Procurement Officers will be encouraged to consider sustainability and environmental issues throughout the procurement cycle from identification of need, to disposal. A regional sustainability and environment procurement policy is to be adopted that will ensure compliance with environmental laws.

3.14 Teignbridge Carbon Management Action Plan

The Governments Air Quality Expert Group report on Air Quality and Climate Change 2007[35] concluded that there are many complex linkages between air quality and climate change and that measures which result in benefits both for air quality and climate change should be promoted. Win-win measures that can lead to reductions in emissions of both air quality and climate change pollutants include energy conservation e.g. through improved insulation of houses; demand management/ behavioural change, including improved public transport coupled with disincentives for private car usage and the use of new technologies in road transport e.g. hybrid vehicles, hydrogen from natural gas or from renewables, lean burn petrol vehicles fitted with nitrogen oxide traps.

Win-lose measures include use of biofuels for transport and domestic use, increased use of diesels in vehicles in place of petrol and lose-win measures include fitting particulate traps on diesel vehicles.

The Teignbridge climate change action plan was launched in March 2007 and the majority of the actions proposed, aim to reduce CO_2 emissions are also expected to reduce NO_2 emissions. Measures that have been implemented are contained within **Appendix 3**.

3.15 Nottingham Declaration

Teignbridge DC signed the Nottingham Declaration on 10th April 2006 acknowledging the increasing impact that climate change will have on the community and the Council's commitment to tackling the causes and effects of a changing climate on the district.

The Council through its Declaration is committed to:

- Working with central Government to contribute, at a local level, to the delivery of the UK Climate Change Programme, the Kyoto Protocol and the target for CO_2 reduction by 2010;
- Participate in local and regional networks for support;
- Within the next 2 years develop plans with our partners and local communities to progressively address the causes and the impacts of climate change, according to our local priorities, securing maximum benefit for our communities;
- Publicly declare, within appropriate

[35] *http://www.defra.gov.uk/environment/quality/air/airquality/publications/airqual-climatechange/documents/fullreport.pdf*

plans and strategies, the commitment to achieve a significant reduction greenhouse gas emissions from our own authority's operations, especially energy sourcing and use, travel and transport, waste production and disposal and the purchasing of goods and services;

- Assess the risk associated with climate change and implications for our services and our communities of climate change impacts and adapt accordingly;
- Encourage all sectors in our local community to take the opportunity to adapt to the impact of climate change, to reduce their own greenhouse gas emissions and to make public their commitment to action;
- Monitor the progress of our plans against the actions needed and publish the results.

The Teignbridge climate change team has been working with the air quality officer to ensure that proposed measures benefit both air quality and climate change.

3.16 Energy efficiency in domestic premises

Increasing efficiency in domestic properties can benefit local air quality by reducing emissions from boilers. The Home Energy Conservation Act 1995 (HECA) required all local authorities with housing responsibilities to prepare, publish and submit to the Secretary of State an energy conservation report identifying energy conservation measures which would result in a significant improvement in the energy efficiency of all residential accommodation in its area. This Act has now been superseded by the Carbon Action Network.

A number of initiatives have been developed in Teignbridge some of which are targeted at raising the overall energy efficiency of housing and others provide energy advice to households:

- Warm 4 Winter Scheme – this is a home insulation scheme run in partnership with Miller Patterson (the insulation contractor) and Teignbridge District Council;
- Warm Front – this a Government grant scheme who provide grants of up to £2,700 for draft proofing, home insulation and heating;
- The Warm Zones scheme – this is a partnership scheme with Eon (utility company) and the Devon local authorities funded by the Government cert grant. This is a 3 year project that is focusing on Teignmouth initially. Work in Newton Abbot and Dawlish will commence in the second and third years.

CHAPTER 4
FINANCING & SCENARIO TESTING

4.1 Financing

The Devon County Council 2nd Local Transport Plan (LTP) has allocated funding for a number of measures within Teignbridge that tie in with the action plan measures to improve air quality. Devon County Council LTP schemes are detailed in **Table 4**.

Other measures to improve air quality within the AQMAs and throughout the district will be funded by Teignbridge District Council, by developers through section 106 agreements and by securing grant monies from Defra.

Scheme	Completion Year	Location	Approximate Cost
South Devon link road	To be confirmed	Kingskerswell A380	£150 million
Automatic number plate recognition (ANPR) cameras. 31 links which monitor traffic speed and volume to determine congestion levels.	2006/07	Newton Abbot, Kingsteignton and Kingskerswell	£150,000
Connect 2 walking and cycle route between Kingsteignton and Newton Abbot	2012/13	Newton Abbot, Kingsteignton	£500,000
Cycle route between Station Rd, Penn Inn and Decoy using enhanced shared use foot and cycleway including toucan crossing of Torquay Rd through conversion of signalised junction.	2012/13	Newton Abbot	£175,000
Cycle route – Bradley Industrial Estate to Totnes Rd near Beverley Way. Part of a planned route towards Totnes.	To be confirmed	Newton Abbot	Subject to design
Variable Message Signs (VMS) to provide information to drivers about congestion, alternative routes etc.	2009/10	Newton Abbot, Kingsteignton	£200,000
Newton Abbot bus station improvements	2009/10	Newton Abbot	£65,000
Improvement to Newton Abbot local buses	2009/10	Newton Abbot, Kingsteignton	£85,000
Replacement of route 2 buses with 8 Euro IV vehicles and 5 Euro V vehicles	2008/09	Teignmouth, Kingsteignton, Newton Abbot	£750,000
Teign Estuary cycle route between Newton Abbot & Teignmouth	2020 (estimate)	Newton Abbot, Teignmouth	£5 million (or higher)

Table 4: Devon County Council LTP schemes

4.2 Scenario testing

A number of the measures will be scenario tested in order to determine the actual reduction in NO_2 emissions. The results of the modelling will help to define whether particular measures should be implemented or whether further measures need to be identified. The scenario testing includes the following:

- regional scale modelling of Newton Abbot and surrounding areas;
- dispersion modelling of Teignmouth and Dawlish;
- dispersion modelling of the impact of the South Devon link road (Kingskerswell by-pass);
- dispersion modelling of the impact of managed bus emissions within the AQMAs through Bus Quality Partnerships;
- dispersion modelling of the impact of an additional turning lane in Bitton Park Road, Teignmouth;
- dispersion modelling of the impact of traffic signal controls in Iddesleigh Terrace, Dawlish;

CHAPTER 5
AIR QUALITY ACTION PLAN MEASURES

Guidance has been issued by Defra and Environmental Protection UK (formerly National Society for Clean Air)[36]. A broad list of potential measures to improve air quality was compiled, based on Government guidance and examples of best practice in air quality from the UK and abroad. A small working group consisting of Devon County Council Transport Planners and the Teignbridge Air Quality Officer was formed to discuss potential road transport options.

These potential measures were then assessed against the following criteria, based on Government guidelines, and those measures that were considered to be inappropriate or not cost effective were discarded.

- Air quality impact (i.e. reduction in emissions or concentrations)
- Cost effectiveness
- Non air quality impacts (wider environmental, economic and social consequences)
- Perception and practicality
- Timescale for implementation

It is difficult to quantify the impact of the "soft" measures, for example, workplace travel plans, the provision of cycle lanes, the promotion of walk to school initiatives. In these cases professional judgement was used to indicate the expected impact.

5.1 Air quality impact

Air quality impacts have been classed as low', 'medium' and 'high' based on Government guidance. For each measure the expected reduction in annual mean NO_2 concentrations has been evaluated, based predominantly on professional judgement. The 'hard' measures will be subject to a detailed analysis to determine the expected reduction, the results of which will be reported in future action plan progress reports.

The following classification scheme was used:

Low: Imperceptible - Improvements unlikely to be detected within the uncertainties of monitoring and modelling, however, the measure is a step in the right direction.

Medium: Perceptible – an improvement of up to 2 $\mu g/m^3$ NO_2 which could be shown by a modelling scenario.

High: Significant – improvement of greater than 2 $\mu g/m^3$ NO_2 which can be clearly shown by modelling and monitoring.

[36] *http://www.airquality.co.uk/archive/laqm/documents/laqm-pg03.pdf*
http://www.airquality.co.uk/archive/laqm/documents/laqm-pga05-addend.pdf
http://www.environmental-protection.org.uk/assets/library/documents/AQActionPlansInterim.pdf
http://www.environmental-protection.org.uk/assets/library/documents/AQActionPlansLAGuide.pdf

5.2 Cost

Government guidance is clear in that local authorities are not expected to undertake a detailed cost effectiveness impact of each measure but to provide a broad indication of the cost and the exact cost if available. The following classification scheme has been used

£ = < £50k
££= £50k to £150k
£££= £150k to 2 million
££££= > 2milliion

5.3 Non-air quality impacts

The action plan should take account of other policies and should also consider the social, economic and broader environmental impacts of the measures considered.

5.4 Practicability/feasibility

The feasibility of implementing individual measures is not straightforward or easy to quantify. The following factors have been taken into consideration:

- Availability of enabling legislation;
- Availability of funding;
- Politically acceptable;
- Synergies/conflicts with Council policies;

To be successful an action plan needs to gain wide support across the community. The consultation process therefore engaged four groups of stakeholders, the public, industry and commerce, elected representatives and external agencies. Each of these groups have differing views and concerns when a specific measure is recommended to improve air quality and so their views have been taken into consideration in the final AQAP.

5.5 Timescale

The timescale for the implementation of the measures has also been considered. Short term relates to those measures that can be implemented within 1 year. Medium term relates to those implemented within 2 years (i.e. still within the lifetime of LTP2 2006-2011) and long-term relates to those measures which are > 2 years (i.e. these are potentially subject to feasibility studies and will be considered for implementation in the LTP3.

5.6 Categories for the proposed measures

In order to enable more effective targeting, the proposals have been divided into the following categories:-

- Emissions management;
- Traffic reduction and management;
- Public and sustainable transport;
- Strategic Planning, LDF and planning applications;
- Publicity and promotion;
- Other transport measures;
- Non transport related measures.

CHAPTER 6
MEASURES CONSIDERED FOR IMPROVING AIR QUALITY IN TEIGNBRIDGE

This chapter sets out details of the possible measures identified for inclusion in the action plan. During the process, it was established that a number of the measures had been or were in the process of being implemented.

6.1 Emissions management

6.1.1 Freight Quality Partnerships

Road transport remains the dominant mode of movement of goods traffic within the UK. This is because HGV traffic and road transport generally affords increased mobility and cost-efficiently facilitates the provision of goods and services at retail outlets, businesses and the home.

However, the movement of freight has an affect on local roads, both in built up areas and the narrow lanes in rural areas. It contributes to noise pollution, air quality pollution, and vulnerable road users such as pedestrians, cyclists and horse riders can feel intimidated by large vehicles.

Freight Quality Partnerships (FQP) are partnerships between interested stakeholders, the freight industry and local government. The aim is to develop an understanding of local freight distribution issues and problems and to promote constructive solutions, which reconcile the need for access to goods and services with local environmental and social concerns.

The 2004 White Paper 'Future Transport: A Network for 2030'[37] affirms the importance of an integrated, sustainable freight transport system that supports economic growth, whilst simultaneously reducing adverse impacts on society and the environment. Planning Policy Guidance 13 (PPG 13) provides local authorities with planning policy guidance, also promotes sustainable distribution and the development of FQPs.

[1] Newton Abbot Freight Quality Partnership

The Newton Abbot Area FQP was set up in 2000 and was seen as an appropriate area in Devon for its first FQP, as freight transport is important to the area, not only for local deliveries but also for the clay industry. A number of key aims were identified including:

- To improve air quality and minimise noise, vibration and disturbance from freight movements;
- To reduce the environmental impact of freight movement;
- To promote the maximisation of other means of freight transport such as rail and sea;
- To promote research into innovative ways to distribute and deliver goods and the feasibility of freight transfer depots;
- To encourage best practise and develop environmentally sensitive, economic and efficient delivery of goods
- To maximise the use of modern high specification vehicles and ensue the most efficient operation, at both HGV depots and destination sites.

An action plan was formulated and the following measures have been implemented:

- Production of drivers' freight maps;
- New signs identifying the location of the industrial estates around Newton Abbot;
- Information boards at the entrances to Brunel Industrial estate and Broadmeadow, Teignmouth

The group expanded at the end of 2008 and is now known as the Devon FQP.

Teignbridge will continue to work in partnership with the Devon FQP. There are opportunities to extend the use of the rail network (section 10.1) and for a possible mini transfer depot for delivery vehicles (section 6.1.2[1]).

Impacts: Helps reduce congestion; reduces pollution and CO_2 emissions; quieter vehicles.

[37] *http://www.thepep.org/ClearingHouse/docFiles/The.Future.of.Transport.pdf*

6.1.2 HGV reduction schemes

[1] Mini Freight Transfer Depots or Urban Consolidation Centres (UCC)

An urban consolidation centre is a place of transhipment from long distance traffic to short distance (urban) traffic, where consignments can be sorted and bundled. The key objective of UCCs is to avoid vehicles delivering part loads into urban areas. The ability to consolidate the delivery of goods in fewer and smaller vehicles increases the efficiency of distribution. Consequently, environmental impacts such as pollution, congestion and noise are decreased.

Considerable progress has been made in Europe, on ways to reduce the numbers of HGVs in towns and cities that at the same time protect the local economy. In Germany, HGV reduction strategies have been implemented that are mutually beneficial to all parties in the logistics chain and therefore maximise incentives for all.

In Germany, partnerships between logistics contractors are reducing lorry numbers and improving the urban environment. Benefits to the companies and freight operators include reduced fuel and operational costs, increased competitiveness, fewer delays.

The Freiburg scheme in Germany has reduced total journey times from 566 hours to 168 hours, per month, the monthly number of truck operations from 440 to 295 and the time spent by the lorries in the city from 612 hours to 317 hours per month. The number of customers supplied and has remained the same. The Kassel scheme showed a showed a 70% reduction in vehicle kilometres and an 11% reduction in the number of trucks.[38]

The first city based scheme in the UK was introduced in the Broadmead shopping centre in Bristol in 2004. As of 2006, fifty-one retailers were receiving consolidated deliveries resulting in a 68% reduction in vehicle movements, equating to 73,500 vehicle kilometres saved[39].

The source apportionment study, detailed in the Teignbridge further assessment report 2006[40], has shown that although HGVs only represent a small percentage of vehicles in the 'hot-spot' areas within Teignbridge, they contribute significantly to the emissions. The schemes in Germany and Bristol serve to demonstrate the strengths, weaknesses and opportunities for further development of such schemes in Teignbridge, where similar projects have been initiated (Freight Quality Partnerships) but inexhaustively implemented.

A report was commissioned by the Newton Abbot FQP in 2002 to investigate the feasibility of a mini transfer depot at Heathfield. No progress had been made but a feasibility study into a mini transfer depot outside Newton Abbot is planned.

Impacts: Reduction in HGV numbers on the road; reduced congestion; reduced emissions including CO_2; savings to haulage operators.

[2] The Motorvate Scheme

The Motorvate scheme, which is sponsored by The Department for Transport (Dft) and managed by the Energy Savings Trust, helps organisations cut their fleet travel costs and at the same time, help the environment. Simple targets are set for improving fuel efficiency and reducing CO_2 and other vehicle emissions over a three year period. An expert panel of consultants are used to advise organisations on what they can do to reduce vehicle fuel consumption.

Haulage operators will be encouraged, through the Devon FQP, to take advantage of the scheme in an effort to cutting CO_2 emissions and other emissions, reducing their vehicle use and procuring cleaner, more efficient vehicles.

Impacts: Reduction in HGV numbers on the road; reduced congestion; reduced emissions including CO_2; savings to haulage operators.

[38]Whitelegg, J. (1997). A guide to achieving traffic reduction targets in England and Wales. Liverpool John Moores University

[39]http://www.freightbestpractice.org.uk/developing-skills

[40]http://www.teignbridge.gov.uk/CHttpHandler.ashx?id=10283&p=0

[3] HGVs & Teignmouth Docks

A survey was undertaken in 2002 by ABPmer, of heavy goods freight movements to and from the docks as part of an environmental impact assessment for the proposed works to Teignmouth Docks. All freight to and from the Docks is transported by road via the A381 Kingsteignton to Teignmouth road and the B3192 Teignmouth to Exeter road north bound only. At this time there was no monitoring of the traffic pollution along Bitton Park Road, so an air quality problem had not been identified.

The surveys indicated a total annual HGV movement of 55,600 with an average daily movement of 213. The survey also indicated that 40% of the movement takes place between 06:15 and 09:30. ABPmer estimated that the development would potentially generate an increase of approximately 19 movements per day, which equates to 5000 additional vehicle movements.

A freight study will be undertaken subject to Defra grant funding, to 'review' existing traffic count data, on site road freight observations, survey of local businesses, analysis of data, review of potential schemes and recommendations of measures The last phase of study will assess the top priority options in more detail.

Impacts: Reduction in HGV numbers on the road; reduced congestion; reduced emissions including CO_2; savings to haulage operators.

6.1.3 HGV ban in AQMAs

Heavy goods vehicles (HGVs) such as lorries and buses are responsible for a greater proportion of emissions than smaller vehicles. Buses are considered separately in sections 8.1 and 8.2. A complete HGV ban would remove the most heavily polluting vehicles from the most sensitive areas but they would have a negative impact for local businesses. The roads where there are currently exceedences of the annual mean NO_2 objective are all on main routes into or through towns, so an HGV ban is not considered feasible at the present time, but it has not been ruled out for the future.

Impacts: Reduced congestion; reduced emissions and CO_2; inconvenient to companies, haulage industry.

6.1.4 Delivery times outside peak hours

Delivery vehicles in congested streets can increase traffic congestion. This extra congestion can be alleviated if deliveries are only allowed outside of specified hours. This is unlikely to improve air quality considerably but as a package of measures should be considered.

This is an action that was being investigated by the Newton Abbot FQP and no progress had been made yet. This action needs to be progressed by the Devon FQP.

Impacts: Reduced congestion; reduced emissions and CO_2; may inconvenience businesses.

6.1.5 Teignbridge District Council fleet

Teignbridge District Council currently owns and operates 65 vehicles and the Cleansing and Market Services have invested in a number of actions aimed to reduce emissions from their fleet:

- In December 2007, 12 Euro 5 refuse trucks were purchased which had Selective Catalytic Reduction (SCR) systems fitted. The SCR process consists of injecting ammonia (NH_3), 'AdBlue', into the exhaust gas which converts the NO_x emissions into nitrogen and water, which flow harmlessly out of the exhaust;
- Refuse collections during peak times are minimised or avoided in congested areas. Schools are avoided around 9am;
- The vehicles are checked daily before and after driving by the drivers. The checks include brakes, mirrors, tyre pressures, exhaust, engine oil/water/ levels;
- A number of the fleet drivers have undertaken a smarter driving course partially funded by the Energy Savings Trust;
- Spreadsheets logging vehicle mileage, fuel usage and efficiency savings are maintained;
- High usage vehicles are replaced after 5 years and low usage vehicles after 6 years.

The Energy Savings Trust offer a free environmental examination for fleets of 50+ vehicles and this initiative is being planned shortly.

A feasibility study was undertaken a couple of years ago, with the intention of introducing electric vehicles. The study concluded that the cost would be prohibitive within the constraints of the existing budgets and that CO_2 emissions would be higher as the electricity would have to be sourced from fossil fuels as renewable sources were not available.

Impacts: Reduced emissions from council fleet, reduces CO_2 emissions, financial savings, improvement of authority environmental profile, potential for fuel efficiency savings and financial savings.

6.1.6 Smarter driving (eco-driving)

Driving more efficiently can reduce emissions and fuel consumption by an average of 15%[41].

Teignbridge District Council has arranged for 'smarter driving' training to all drivers of the council fleet and has extended this to staff at a subsidised cost. To date 37 Teignbridge fleet drivers have received training and 31 staff have signed up[42].

Impacts: Improves awareness of fuel efficiency and environmental impact of vehicles; reduces CO_2 emissions; more economical driving; improved road safety; reinforce Council's commitment to the environment.

6.1.7 Hackney carriages

Teignbridge District Council has a statutory duty to licence hackney carriages and private hire operators. Teignbridge currently licences 178 hackney carriages and 82 private hire vehicles[43]. There is the potential to include tighter emissions standards for hackney carriages in Teignbridge, which is a measure that a number of other councils have implemented. An initial scoping study will be undertaken to determine the feasibility of this.

Impacts: Reduced vehicle emissions and CO_2; more fuel efficient; unpopular with drivers.

6.1.8 Low Emission Zone (LEZ)

A low emission zone is a geographically defined area where only vehicles meeting minimum emission standards would be allowed to enter a designated zone or a pollution hot spot in a town or city. An LEZ prohibits older vehicles from operating in an area and so accelerates the turnover of the vehicle fleet or requires the operators of older vehicles to fit abatement equipment to their vehicles. Although traffic volumes do not necessarily change, vehicles travelling in an area have lower emissions and this leads to air quality improvements.

Over 60 cities and towns in 7 countries around Europe currently successfully operate LEZs, to help meet the air quality limit values[44], where

[41]Energy Savings Trust (2008) http://www.energysavingtrust.org.uk/Travel/The-smarter-driving-challenge
[42]As of 4th March 2009
[43]As of 20th February 2009
[44]EU limit values are legally binding EU parameters that must not be exceeded. They are set for individual pollutants and are made up of a concentration value, an averaging time over which it is to be measured, the number of exceedences allowed per year, if any, and a date by which it must be achieved.

the most polluting vehicles are regulated. Such zones have been successfully operated in other European countries for instance, Austria, Italy, Sweden, the Netherlands, the Czech Republic, Germany, Denmark and there are currently 63 in operation with a further 71 to come on line between now and 2013.[45]

The London LEZ is currently the only one in operation in the UK and it came into force on 4th February 2008. There is a planned phased introduction of an increasingly stricter regime up to 2012, when it will be fully operational.

The two main legal options for implementing LEZs in the UK are Traffic Regulation Orders under the Road Traffic Regulations Act 1984 and section 106 agreements as planning obligations.[46] The Government has recently published practice guidance for local authorities considering implementing LEZs[47].

The implementation of LEZs has been considered for Newton Abbot, Teignmouth and Dawlish, but due to the increased level of strategic growth and major infrastructure planned in these areas, the implementation of an LEZ at this time is felt to be premature but it has not been ruled out for the future. This will be subject to consultation. With regard to the AQMA through Kingskerswell, the South Devon Link Road is a key determinant of the future actions that will be required for this AQMA.

Impacts: Encourage development of alternative technologies, fuels and mobility modes; overall improvement to urban environment and long-term improvement to built environment; potential for social prejudice of individuals owning older vehicles; enforcement difficulties and resource cost.

6.1.9 Vehicle emissions testing

Under the Road Traffic (Vehicle Emissions) (Fixed Penalty) Regulations 2002, local authorities are able to adopt powers for undertaking vehicle emission testing at the roadside. A fixed penalty notice of £60 can be issued to those drivers whose vehicle emissions exceed national limits. The objectives are to determine compliance with the MOT emission standards and to raise public awareness of polluting vehicles. The vehicles are pulled over randomly and tested one at a time.

A research programme co-ordinated by Environmental Protection UK (formerly NSCA) on road side emission testing concluded that the small numbers of vehicles identified as polluting was unlikely to result in a measurable contribution to air quality improvement. However, road side emission testing does increase public awareness, through its deterrent effect. Most authorities would have preferred a system based on proof of vehicle rectification rather than a fixed penalty notice. However there is no effective enforcement framework for detecting and rectifying minor vehicle offences, including emissions failures and there is no clear consensus on how this gap should be addressed. In addition, emissions of NO_x are not included in the MOT test and since this is the pollution of concern, this is a serious limitation.

The possibility of vehicle emission testing in Devon was reviewed by the Devon Air Quality Management Group and it was decided that rather than undertake road side emission testing of the vehicles in Devon, the vehicle emissions would be measured by a technique known as remote sensing.

Impacts: Reduction in gross polluting vehicles; increases overall awareness in fuel efficiency and environmental impacts; encourages increased personal awareness and accountability for travel behaviour; financial cost.

6.1.10 Remote Sensing of vehicle emissions

Remote sensing technology allows for large numbers of vehicles to be screened and offers a quick and effective method of measuring exhaust emissions from motor vehicles under

[45] *http://www.lowemissionzones.eu/content/view/20/46/lang,en/*
[46] *http://www.statutelaw.gov.uk/content.aspx?activeTextDocId=2223862*
[47] *http://www.defra.gov.uk/environment/quality/air/airquality/local/guidance/documents/practice-guidance2.pdf*

normal driving conditions. No involvement on the part of the drivers is required as there is no need for the vehicles to be pulled over. The technique allows for more than 1000 vehicles an hour to be monitored and the data collected naturally reflects the on road vehicle composition, as well as including vehicle measurements from the newest vehicle technologies on the market.

The remote sensing technique has been applied in numerous locations around the world including the United States, UK, Sweden, Taiwan and New Zealand. Remote sensing studies have consistently indicated that 50% of the pollution comes from about 10% of the vehicles measured[48]. Lack of maintenance and older vehicles being tampered with, have been identified as the reasons for this.

A Defra grant was awarded to a partnership of 5 of the Devon local authorities; Teignbridge District Council, Torbay Borough Council, Plymouth City Council, South Hams District Council and Mid Devon District Council in 2008, to share a remote sensing vehicle emissions monitoring device. The main aim of the monitoring was to determine the percentage of 'high polluting' vehicles that use the County's roads. The study would be the first of its kind in Devon and would provide valuable information on the emissions profiles of on road vehicles and would provide important data for effective emissions reduction measures within the AQMAs.

The sampling sites in Teignbridge were Highweek Street, Newton Abbot and Bitton Park Road, Teignmouth. They were selected as they are both within AQMAs and exceedences of the NO_2 annual mean objective had been measured at relevant receptors. Two days of monitoring were undertaken at each location in February 2008 to experience winter time weather conditions and two days at both locations in June 2009 to experience summer time conditions.

Vehicle emission data in excess of 15,000 vehicles was collated and we are currently in correspondence with the DVLA for them to provide information as to vehicle make, model, fuel type and cylinder capacity. This information is necessary for the data to be analysed in detail.

Impacts: Reduction in gross polluting vehicles; increases overall awareness in fuel efficiency and environmental impacts; encourages increased personal awareness and accountability for travel behaviour; financial cost.

6.1.11 Enforcing idling engines legislation

The Road Traffic (Vehicle Emissions) (Fixed Penalty) (England) Regulations 2002 permits local authorities to issue fixed penalty notices to drivers who leave their engines idling unnecessarily whilst stationary and who refuse to switch them off. Teignbridge has authorised some its officers to issue fixed penalty notices under the provisions of this legislation and the bus operatives have been advised. Signs will be erected in the problem areas with fixed penalty notices being issued later this year, if necessary. In some circumstances where buses congregate at Newton Abbot Bus interchange, this may provide localised improvements in air quality.

Impacts: Feasible in limited areas where AQMAs are present; potential to reduce emissions including CO_2; raises awareness.

[48]Cadle, S.H. and Stephens, R.D. (1994) Remote sensing of vehicle exhaust emissions. Environmental Science and Technology, 28 (6): 258A – 64A; Sadler, L., Jenkins, N., Legassick, W. and Sokhi, R.S. (1996). Remote sensing of vehicle emissions on British urban roads. The Science of theTotal Environment, 189/190: 155-160; Shafizadeh, K., Eisinger, D.S., and Niemeier, D. (2004). Gross Emitting Vehicles: A Review of the Literature. The California Department of Transportation

6.1.12 Speed restrictions

Local authorities can set speed limits by making orders under the Road Traffic Regulations Act 1997. Emissions are related to speed and lower traffic speeds within the AQMAs will give rise to higher emissions of nitrogen oxides (NO_x). However, where slower speeds reduce 'stop start' traffic, this may lower emissions.

This is feasible but speed restrictions of 30 and 40mph are already in place within the AQMAs and it would currently be of no additional benefit to slow traffic down further. However it remains an important consideration for road safety.

Impacts: May lower or increase emissions; Improved safety.

6.1.13 Traffic control systems

[1] Split Cycle and Offset Optimisation Technique (SCOOT)

The SCOOT (Split Cycle and Offset Optimisation Technique) urban traffic control system is a tool for managing and controlling traffic signals in urban areas. It is an adaptive system that responds automatically to fluctuations in traffic flow through the use of on-street detectors embedded in the road.

SCOOT systems can hold traffic queues outside an area when congestion exceeds a preset threshold. When a SCOOT system detects buses, it can give them priority. This cuts delays to buses and makes bus journey times more predictable.

There are currently no SCOOT systems within Teignbridge, but potential corridors will be investigated within Newton Abbot, Kingsteignton and Bitton Park Road Teignmouth by Devon County Council by April 2010. This date has since been reviewed by Devon County Council and the work will be carried out as part of the infrastructure planning to support Teignbridges' Core Strategy.

Impacts: Reduced congestion; reduced emissions; improves traffic flow.

[2] Increased green time for traffic signals in Bitton Park Road, Teignmouth approach

The Bitton Park Road congestion study modelling report commissioned in 2006, by Devon County Council, identified a range of traffic improvement options aimed at improving the traffic flow and air quality. One of the options was for 'increased green time for Bitton Park Road approach'. The study established that the capacity of the Bitton Park Road approach to the Shaldon Bridge junction could be increased by prioritising this phase in the traffic signal staging by the provision of additional green time. This would aim to improve traffic flow and air quality along Bitton Park Road. However, the proportion of green time on other approaches would be reduced, resulting in a corresponding reduction in capacity.

This has been in operation for the last 2 years. Unfortunately, due to vehicles turning into and out of the new Tescos Express Store and other roads meeting Bitton Park Road, this has prevented a realistic assessment of this measures impact taking place. A possible solution is to remove the on street parking by the terraced houses and provide a turning lane for the Tescos Express store. This is discussed in section 7.5[2].

Impacts: Reduced congestion; reduced emissions; improved traffic flow; longer waiting time for drivers at other approaches to junction.

[3] Iddesleigh Terrace, Dawlish Traffic Controlled Scheme

Iddesleigh Terrace in Dawlish is a small canyon and experiences difficulties when HGVs and buses attempt to pass. A possible solution is for the section of road to be subject to traffic signal control, which would only allow traffic to pass on a single carriageway. The walkways would be widened with such a scheme thereby distancing the edge of the road to the

residential receptors. The air quality modelling of the proposed scheme will be undertaken by Teignbridge District Council using section 106 monies secured through developments in Dawlish.

Impacts: Reduced congestion; reduced emissions; longer waiting time for drivers at other approaches to junction.

6.1.14 Teignbridge car allowance scheme

In January 2006, the portfolio holder for Human Resources submitted a report to Teignbridge Executive to consider the introduction of a green mileage scheme. The Teignbridge Corporate Plan 05/06 under 'Caring for the Environment' had stated that the Council would review its car mileage scheme so that it was not based on the engine size.

The principles of the proposed scheme were that the car allowances would be based on the CO_2 vehicle exhaust emission classifications that the DVLA used for their rates of vehicle excise duty. The scheme was devised so that the highest rates would be paid to the owners of vehicles with the lowest CO_2 emissions and lower rates to those vehicles with high CO_2 emissions. In the discussions, the Executive Members noted that there was some additional considerations regarding oxides of nitrogen that the Council needed to take into account in any green mileage scheme. It was resolved that no further action would be taken on the current report and that work would be undertaken to consider the wider environmental implications for a revised car mileage scheme.

A meeting has recently been held with the Teignbridge Energy Efficiency Officer and Human Resources concerning bicycle and walking allowances but no further progress has been made with regard to the green mileage scheme.

Impacts: Reduced emissions; raises awareness, helps meet NI indicators; unpopular with staff.

6.1.15 Hydrogen fuelled vehicles

Hydrogen has the potential to play a key role in delivering clean low carbon transport. If used in highly efficient fuel cell vehicles, the only emission from the exhaust is pure water. Hydrogen can be generated from a wide range of sources which has the potential to reduce reliance on oil. If produced using renewable electricity, such as wind and waves, or from biomass materials, hydrogen fuel cell vehicles offers the prospect of low carbon, pollution free motoring.

The University of Birmingham are currently undertaking research in the development and demonstration of hydrogen fuel cell vehicles. Links will be maintained with the University of Birmingham in the development and demonstration of hydrogen fuel cell vehicles. The introduction of pilot schemes will be considered where possible.

Impacts: Low carbon pollution free motoring; raises awareness; encourage development of alternative technologies.

6.1.16 Variable Message Signs (VMS)

Clear and accurate signing around towns could assist in reducing unnecessary miles travelled and congestion. VMS can be used to reduce traffic 'searching' for parking spaces by directing cars to available spaces. There are 9 VMS being installed in the Newton Abbot area in total and the final batch are being installed in 2009/10.

Impacts: Reduced vehicle and CO_2 emissions; saves time; fuel savings; reduction in road rage

CHAPTER 7.0
TRAFFIC REDUCTION, MANAGEMENT AND IMPROVING THE ROAD NETWORK

7.1 By-passes

By-passes have the potential to divert traffic away from a 'hot-spot' area within a built up area, town or village to let the traffic flow without the interference from local traffic, to reduce congestion and improve safety. However, bypass routes are often controversial as they require the building of a road carrying heavy traffic where no road previously existed. This creates a conflict between those who want a bypass to reduce congestion in a built up area and those who oppose the development of rural undeveloped land.

The proposed South Devon Link Road around Kingskerswell has been granted conditional planning permission. Further information is contained within section 1.3.3.

Impacts: Reduced congestion; encourages constant traffic flow; does not encourage modal shift to public transport; may increase CO_2 and other greenhouse gas emissions; potential loss of passing trade for community; loss of environmental amenity, open space, pasture; increases overall demand for road space rather than suppressing demand.

7.2 Decriminalised parking enforcement

Vehicles that are illegally parked on major roads during the morning and evening rush hours can cause significant congestion and increased pollution. Tighter enforcement of these controls particularly at sites experiencing high levels of pollution can reduce congestion and reduce pollution. Decriminalised parking enforcement means that the local authority assumes responsibility for the enforcement of illegal on street parking from the police. The Road Traffic Act 1991 makes these powers available to local authorities.

Parking was decriminalised in Teignbridge on the 5th May 2008.

Impacts: Encourages traffic flow, reduced vehicle and CO_2 emissions.

7.3 Coordination of road works

Road works can be a significant cause of congestion and subsequent increased emissions. The frequency of roads works could be reduced within the AQMAs, by coordinating works and charging utilities for spending longer than scheduled on completing works, thus helping to reduce congestion and emissions.

Devon County Council appointed a Traffic Manager in 2005 to monitor the network and co-ordinate highway activities. The Traffic Manager's Unit aims to minimise the disruption to the travelling public by directing the timing of all planned works including road works, utility works, and events. Systems are being developed to automate this process as far as practicably possible.

The Traffic Managers priorities that relate to air quality include:

- Identifying and tackling the causes of congestion;
- Coordinating all activities on the network, including road works, street works to minimise disruption

Impacts: Helps to tackle congestion and stop/start driving caused by road closures and temporary traffic controls.

7.4 Automatic number plate recognition cameras

Automatic number plate recognition cameras enables accurate measurements of journey times on a 24 hour basis, 365 days a year. The system has the ability to inform drivers of delays and accidents ahead both during and before the journey. It also enables a more accurate analysis of when the worst delays occur and between which points along the road network.

31 automatic number plate recognition links have been installed in Newton Abbot and along the A380 through Kingskerswell.

Impacts: Helps to tackle congestion; aids action planning.

7.5 Reallocation of road space

Reallocating road space to buses, pedestrians and cycles can make these modes of transport more attractive.

[1] Kingskerswell A380 Bus and HGV priority lanes

In June 2006, Devon County Council submitted a report to Teignbridge Highways and Traffic Orders Committee to seek approval for the construction of bus and HGV priority lanes on the approaches to Jury's Corner within the Kingskerswell A380 AQMA. The scheme had been approved by Devon County Council as part of the Devon Local Transport Plan 2006-2011 to improve bus punctuality, reduce delays to Heavy Goods Vehicles (HGVs) and improve air quality.

A schedule of objections to the proposals was submitted and the Teignbridge District Council Committee refused the application to construct the priority lanes.

Impacts: Reduce congestion; encourages modal shift; improves fitness and wellbeing; subject to democratic process.

[2] Bitton Park Road, Teignmouth proposed turning lane

Limited road space restricts the option for a bus/HGV lane in Bitton Park Road, Teignmouth. However, the feasibility of a scheme in Bitton Park Road which removes the on-street parking and provides a turning lane into the Tescos Express Store and filling station will be undertaken. This will determine whether the scheme will improve the flow of the traffic and ascertain any air quality improvements at the terraced houses. However this is likely to be unpopular with residents as it would remove the 'on-street' parking.

Impacts: Reduce congestion; encourages modal shift; unpopular with local residents.

[3] Newton Abbot Re-development

As part of the redevelopment of Newton Abbot and strategic infrastructure improvements, consideration will be given to the reallocation of road space for buses, pedestrians and cycles.

Impacts: Reduce congestion; encourages modal shift; improves fitness and wellbeing

7.6 Re-routing of roads

[1] Newton Abbot Town Centre redevelopment

As part of the redevelopment of the Town Centre a road enhancement scheme was implemented. This altered the traffic flow within the town centre and increased the priority given to buses and cyclists. The effect of this can be seen in the reduction of the level of NO_2 at 13 Highweek Street where an exceedence of the annual mean had been occurring. Since this change the annual mean is well below the objective.

Impacts: Reduction in vehicle and CO_2 emissions; bus routes improved.

[2] Bitton Park Road Mini Roundabout

As part of the Bitton Park congestion study undertaken in 2006 by Devon County Council, one of the scenarios that was considered, was the installation of a mini roundabout to replace the existing signal lights at Shaldon Bridge. Devon County Council is still considering the report and the feasibility of implementing any of the improvement schemes identified in the report.

Impacts: Reduction in vehicle and CO_2 emissions; limited road space.

7.7 High Occupancy Vehicle Lanes

A significant proportion of vehicles contain only one occupant, particularly during peak hours. High occupancy lanes are aimed at utilising the road network more efficiently by encouraging car sharing. A number have been introduced in the UK, namely Leeds, Bradford and Bristol. This option is not currently being pursued within Teignbridge but this has not been excluded from future consideration.

Impacts: Tackles congestion by encouraging more efficient use of vehicles through car sharing; encourages modal shift; need road space.

7.8 Park and Ride or Park and Change

Park and ride schemes provide parking on the fringes of towns and cities and are served by public transport to encourage the transfer to buses or other modes i.e. walking, as a town centre congestion reduction and environmental management measure. In the UK, park and ride schemes have been in existence since the 1970s when they were first introduced in Oxford and they have proven to be very popular in recent years by a number of local authorities.

A study undertaken by the Transport Research Laboratory[49] showed that schemes can actually encourage people to make longer journeys to get to the park and ride site than travel through congested traffic conditions to the town centre. The research also showed that between 10% and 25% of motorists had switched from public transport to driving to the park and ride.

Park and ride schemes have the potential to reduce car use within urban centres but the extent to which this has been achieved has not been well documented. Some form of car constraint, for instance reducing the number of spaces available in the centre by the equivalent number of park and ride spaces would prevent a net increase in total parking capacity, is likely to be required to encourage drivers to transfer from car use and to prevent any reduction in congestion.

Provision of a park and ride/change facility serving central Newton Abbot, and connection to the public transport network, will be important to reducing congestion in and around the town. Development of a park and ride/ change facility is needed to mitigate growth in the area and to accommodate changing transport patterns. Efforts to identify and secure a park and ride/change area will be undertaken through framework planning for Newton Abbot.

Impacts: Reduces congestion; Encourages modal shift; may increase car useage.

7.9 Road user / congestion charging

The Transport Act 2000 allows local authorities discretionary powers to introduce road user charging. The Act guarantees that all the revenue raised by charging must be recycled to improve local transport for at least ten years.

London has introduced road charging scheme known as the congestion charge and Durham has implemented one on a smaller scale. The London congestion charge was introduced in 2003 and is based on a single charge of £8 for vehicles entering a central London zone between the weekday hours of 07:00 – 18:30.

Road user / congestion charging is not currently being pursued within Teignbridge but is has not been excluded from future consideration. This will be subject to consultation.

Impacts: Improves air quality; raises money from transport/public transport; reduced congestion; reduced noise; cost to motorist; potential equity issues; unpopular with some motorists.

[49] *Pickett M.W and Gray S.M (1996) The effectiveness of bus based park and ride. Transport Research Laboratory*

7.10 Priority red route schemes

In the UK, priority red routes are major roads in urban areas, in which stopping, even to load or unload a vehicle, is prohibited or only allowed during very restricted periods at times displayed on nearby signs. The aim is to enhance the traffic flow and the routes are marked with continuous red lines painted along the road adjacent to the kerb.

The concept was originally introduced to unclog the main arterial routes in London and led to the term red routes being commonly used. A pilot red route scheme was introduced in 1991 in North and East London. The study concluded that bus journey times were reduced by 8 minutes and a 33% improvement in reliability was achieved[50]. A number of other councils have followed suit including Solihull, Coventry, Birmingham, Northamptonshire, Dudley, Luton, Telford, Wolverhampton and Doncaster.

One of the measures within The Teignbridge Parking Strategy 2005-2011 involved the County Council undertaking a review of parking on strategic routes into the main towns and consideration of whether red routes should be introduced. No further progress has been made.

Impacts: Reduced congestion; improved traffic flow; reduced vehicle emissions; unpopular with local businesses.

7.11 Clear Zones

The Clear Zones initiative was designed to encourage solutions to traffic problems in towns and cities while making sure that town centres retain their accessibility. A clear focus of the initiative was to reduce congestion and improve air quality by developing an integrated transport policy to meet local needs.

The implementation of clear zones is not currently feasible along the A380 through Kingskerswell, Bitton Park Road, Teignmouth or Newton Abbot.

Impacts: Reduced congestion; improved safety; improved street scene environment.

7.12 Home Zones

The Home Zone concept, called woonerf, was pioneered in the late 1970s in the Netherlands and has since been successfully created in many other countries. Home Zones are an attempt to strike a balance between vehicular traffic and everyone else who uses the street, including pedestrians, cyclists, business people and residents.

Some see Home Zones as a way of 'reclaiming' local streets from the traditional domination by cars. Others see it as a way of restoring the safety and peace in neighbourhoods that are becoming overwhelmed by speeding traffic.

This option is not currently being pursued within Teignbridge but this has not been excluded from future consideration.

Impacts: Reduces potential for accidents and injury; improved overall local environment and quality of life for residents; reduces ambient noise levels from traffic.

[50]*OECD, 1994*

7.13 Newton Abbot interchange

A scheme of environmental improvements and changes to the number and location of bus stops will be taking place over the next 5 years at its existing location. As part of the Newton Abbot Masterplanning, consideration is being given to a new bus interchange.

Impacts: Reduces potential for accidents and injury; improved overall local environment and quality of life for residents; reduces ambient noise levels from traffic.

CHAPTER 8
PUBLIC AND SUSTAINABLE TRANSPORT (SMARTER CHOICES)

8.1 Quality Bus Partnership Agreements

Devon County Council has developed quality bus partnerships with local bus service operators to upgrade vehicles on key routes. An important part of the partnership has been to improve access to bus services for all, including persons with disabilities and limited mobility. Additional seating capacity and better quality vehicles are both measures that play an important part in attracting people to sustainable modes of travel.

Impacts: Reduced vehicle and CO_2 emissions; encourages modal shift; enhanced customer experience.

8.2 Emissions standards for buses

New buses are increasingly cleaner as a result of the introduction of more stringent emission standards. Devon County Council does not currently set minimum Euro emission standards for buses travelling within any of the AQMAs. The County Council initially agreed to undertake air quality scenario testing of future bus fleet profiles within the AQMAs to determine whether this measure should be pursued. However, funding is now subject to a decision through the emerging Local Transport Plan 3 (LTP3). This follows the current Defra practice guidance 3 on measures to encourage the uptake of low emission vehicles.

Impacts: Reduced vehicle and CO_2 emissions; efficiency savings; quieter buses; enhanced customer experience.

8.3 Provision of real time information at bus stops

Real Time Passenger Information (RTPI) provides bus passengers with information as to when the next bus is due and if there are any delays in the service. It is often used as a package of measures to enhance the bus services, in an effort to encourage modal shift to buses by commuters and leisure passengers.

The benefits include improving information to bus users and building public confidence in using bus services, for both users and current non users. This information has delivered recorded increases in bus use, with evidence suggesting that it can create customer increases and service improvements.

Devon County Council is considering the implementation of RTPI and currently anticipates that this will be in the third phase of the Local Transport Plan.

Impacts: Encourages modal shift; more efficient use of bus resources; improved customer satisfaction; reduced vehicle and CO_2 emissions.

8.4 Traveline

The Traveline service is provided by a partnership of 15 operators and 18 local authorities covering the whole of the South West region plus the Hampshire/Portsmouth/ Southampton area. It provides information on all bus services in the areas served through the telephone enquiry service and the website and online journey planner.

The number of telephone calls a year is in the region of 600,000 and the number of hits a week is approximately 800,000[52].

[51] *http://www.dft.gov.uk/pgr/sustainable/smarterchoices/ctwwt/chapter14conclusions.pdf*
[52] *http://www.devon.gov.uk/businfostrat.pdf*

The Devon County Council LTP target relating to Traveline is to:

'Ensure that the quality of data submitted to Traveline is at least 99% accurate.'

Impacts: Encourages modal shift; more efficient use of bus resources; improved customer satisfaction; reduced vehicle and CO_2 emissions.

8.5 Devonwide Concessionary Fares Scheme

The Concessionary Bus Travel Act 2006 enables all residents of England who are 60 and over, and eligible disabled people, guaranteed free off peak local bus travel. The scheme is in its third year and the figures for March 2008 to September 2008 show that 734 passes were issued. In October 2008 the scheme became a national scheme and is managed by Devonwide.

Impacts: Encourages modal shift; encourages bus companies to improve services particularly in rural areas; increased accessibility; reduce vehicle emissions and CO_2.

8.6 Smarter choices

Smarter choices or soft measures are techniques for influencing people's travel behaviour towards more sustainable options such as encouraging school, workplace and individualised travel planning. They also seek to improve public transport and marketing services such as travel awareness schemes, car clubs and encouraging teleworking.

[1] School travel plans

School travel plans, on average, cut school traffic by between 8% and 15%[53].
Devon County Council has a dedicated team of School Travel Plan Advisors who help schools throughout Devon develop travel plans, to improve congestion, air quality and children's health. The following target has been set in the LTP2:

'Increase healthy travel to school by achieving 100% travel plan coverage of state schools by 2010'

Data from Devon County Council for 2008 has shown that there are currently 52 schools in Teignbridge of which 7 do not have a travel plan. The data does not include independent schools. Devon County Council undertakes regular surveys of schools assessing the different modes of travel **(Table 5)**. This data is completed by the pupils and therefore should be considered as unratified and subject to bias. Teignbridge will work in partnership with Devon County Council to increase the uptake and implementation of school and workplace travel plans, particularly where they have an impact on the AQMAs.

Mode of Travel	Number	Percentage %
Bus	71	0.4
Dedicated School bus	2267	13.8
Public Service Bus	701	4.3
Car/Van	4163	25.3
Car Share	428	2.6
Cycle	147	0.9
Train	257	1.6
Taxi	242	1.5
Walk	7946	48.3
Other	12	0.1
Boarder	0	0
No Data	228	1.4

Table 5: Devon County Council School Survey Data 2008

[2] Car clubs

A car club is a pool of cars for the use of local people. Members of the club can hire the vehicles, as and when they need, from an hour to weekend or longer. It gives members the flexibility of using a car for private or business journeys, without the costs or worry of owning or maintaining one. A fee is paid on joining the scheme and you then pay as you go.

[53] *http://www.dft.gov.uk/pgr/sustainable/smarterchoices/ctwwt/chapter14conclusions.pdf*

Moorcar was established in Ashburton in 1992 with one lease car and six members. The carclub now has seven cars across four towns, including Buckfastleigh, South Brent, Chagford with Totnes coming on line soon and has eighty members. Half of those members now no longer have a second car and some have got rid of their cars altogether.[54]

'In the UK, former car owners increased their use of non car transport modes by 40% after joining a carclub'[55]

In 2007, Devon County Council commissioned Carplus to undertake a scoping study in the Newton Abbot/Kingsteignton area for the potential for a carclub. A survey was carried out and 2500 leaflets were sent out to residents, of which 84 were returned. 24 individuals said that they would be interested; 37 confirmed that they were possibly interested; 18 confirmed that they thought it a good idea but would not fit their lifestyle and 5 were not interested.

Free car parking spaces have been secured at Newton Abbot Railway station for 2 vehicles.

Teignbridge has secured a grant from Defra for a car club within Newton Abbot. This is for the purchase of 2 vehicles.

It is the intention to increase the number and location of vehicles as the scheme takes off and when more funding becomes available i.e. section 106 contributions.

[3] Teleconferencing/videophoning

Teleconferencing typically reduces business travel by between 10% and 30% in organisations that promote its use.[56]

All Teignbridge phones are capable of being used for teleconferencing. Teignbridge District Council has installed videoconferencing facilities in the Chief Executive's office and will be promoting and encouraging its use.

[4] Walking

Walking is the most important mode of travel at the local level and offers the greatest potential to replace short car trips, particularly under 2 kilometres.

As part of a Government Initiative, 'Walking for Health', Teignbridge runs a successful local walking scheme, 'Walk This Way'. The scheme runs led walks which are usually under an hour, suitable for all ages and abilities.

The walks are a good way of meeting new people and getting to know your local areas of Teignbridge. All walks are free of charge and anyone is welcome to join in. Parents and young people are welcome, as well as people in wheelchairs.

The New Incentive scheme aims to encourage new walkers and walk leaders onto the scheme and improve the health and fitness of Teignbridge residents. Walking for Health is supported by Devon County Council, Natural England and NHS Devon.

[5] Cycling

Cycling also has the potential to substitute for short car trips, particularly those under 5km, and to form part of a longer journey by public transport. The Transport White Paper reaffirmed the important contribution cycling can make in an integrated transport system and endorsed the targets and aspirations of the National Cycling Strategy.

The Devon LTP policy related to walking and cycling is to:

- Identify a network of strategic routes within towns and urban areas which provides a safe and convenient means of pedestrian and cycle access facilities;
- Improving pedestrian and cycle links between settlements and adjacent rural areas;
- Ensuring that all development proposals make a provision for pedestrians and cyclists, and that, wherever possible, such provision is well related to the defined network of pedestrian and cycle routes.

[54] *http://www.moorcar.co.uk*

[55] *Environmental Change Institute, University of Oxford 'Uk car clubs: an effective way of cutting vehicle useage & emissions?' 2004*

[56] *http://webarchive.nationalarchieves.gov.uk/+/http://www.dft.gov.uk/pgr/sustainable/smarterchoices/ctwwt/chapter14conclusions.pdf*

Teignbridge District Council works closely with the County Council on the development and implementation of cycle schemes and will continue to do so.

In addition, the Teignbridge District Council Cycling Review Group has been formed to investigate issues relating to cycling in the district and to make recommendations to address those issues.

Proposed cycling routes and schemes include:

- Newton Abbot to Kingsteignton cycling route;
- NCN Route 2 Teignmouth to Newton Abbot cycling route;
- Kingsteignton to Bovey Tracey cycling route;
- 'Cycle to Your Hearts Content' is a local partnership project between Devon Primary Care Trust, Teignbridge Primary Care Trust, Teignbridge District Council and Devon County Council Travelwise. The programme is fully supervised and bikes and accessories are provided together with advice and assistance throughout. The project aims to encourage residents back into cycling as a form of exercise to improve their health and lifestyle and to provide the confidence and skills to ride their bike safely. There are 6 sessions per course and three schemes were run in 2008. A total of 50 people participated in these schemes.
- 'Cyclescheme' – this allows Council employees to lease a bicycle and deductions are made from the individuals pay over an 18 month period. The scheme forms part of the Government's 'Cycle to Work' initiative and the bicycles are subject to tax and national insurance relief. Since the scheme started in April 2006, 25 Teignbridge employees have signed up to the 'Cyclescheme'.
- New cycle racks have been installed outside the front entrance of Teignbridge District council;
- Four bikes have also been purchased for Teignbridge staff to use for local meetings or lunch visits.

Impact: improved fitness; reduced congestion; reduced vehicle and CO_2 emissions; improved town and local environment; improved choice; precieved danger from traffic; financial savings to individuals.

8.7 Travel plans

Travel plans are documents that set out a package of complimentary measures for the overall delivery of more sustainable travel patterns. They should be implemented to encourage a shift in transport mode for those who are or will be travelling to and from the development.

Travel plans should set out clear targets, measurable outputs and should set out the arrangements for monitoring the progress of the plan, as well as arrangements for enforcement in the event that the agreed objectives are not met.

Travel plans have considerable potential to reduce traffic and to contribute to improvements in health, air quality and safety by providing greener alternatives to car dependency. Teignbridge has produced a Green Travel Plan to encourage alternative sustainable transport methods other than the single user private car. Alternative options include walking, cycling, public transport, car sharing and flexible working. The Green Travel Plan was approved in the 3rd November 2008 Executive Committee actions are being progressed and the plan is continually reviewed.

[1] Developing travel plans with existing employers

In 2008, Devon County Council undertook a travel to work tally for the Newton Abbot area and a travel plan programme for Newton Abbot is being developed.

Impacts: Reduces parking and congestion; reduction in vehicle and CO_2 emissions; improve wider environment i.e. visual amenity and noise; fosters improved relations between company, employees and local residents;

8.8 Workplace parking charging

One of the most effective ways of achieving mode shift away from the car and subsequent vehicle pollution emissions is through the introduction of stricter car park management. Introducing parking charges for staff is an option but it can be a very sensitive and contentious issue.

Teignbridge District Council Members considered the issue of charging for staff car parking at Informal Executive on the 29th September 2008. The Members decided that the cost of introducing any version of the proposals would outweigh the benefits. Workplace parking charging was considered again at the Executive on the 8th March 2009. It was resolved that a 50 pence a day rate be introduced at Forde House offices for all staff and members. The car parking income would be used to support the delivery of green travel.

Impacts: Reduces congestion; reduction in vehicle and CO_2 emissions; unpopular with staff; income for green travel initiatives

CHAPTER 9
STRATEGIC PLANNING, LDF AND DEVELOPMENT CONTROL

The land use planning system is recognised to play an integral part in improving air quality. Local planning authorities must strike a balance between economic, social and environmental considerations when making decisions about proposed developments.

Planning Policy Statement 23: Planning and Pollution Control (2004) sets out the Government's core policies and principles on the most important aspects of land use planning. Annex 1: Pollution Control, Air and Water Quality is specific to air quality and should be taken into account by Regional Planning Bodies (RPBs) in preparing Regional Spatial Strategies (RSS) and Local Development Documents prepared by local authorities. They are also material to decisions on individual planning applications.

9.1 Local Development Frameworks (LDF) and air quality

The policies set out in the local authority planning documents (LDF) determine the authority's approach to the relationship between planning and air quality. They are important as new developments are judged against these policies. As Teignbridge's LDF emerges, the opportunity arises for AQMAs to be specifically identified. This will ensure that their profile is highlighted throughout the local planning process and development control procedure. Teignbridge has produced their Local Development Scheme which sets out the timetable by when the documents within the LDF will be produced.

9.1 [1] Regional Scale Dispersion Modelling

As Newton Abbot has been identified as a Strategically Significant Town (SSCT) and the main focus for development in Teignbridge District until 2026, regional scale dispersion modelling will be undertaken to determine the impacts of the significant new housing and economic development growth. The results of the modelling along with the transport modelling will enable the development to proceed and prevent delays to delivery, transport infrastructure, and improve the air quality. Further information is contained within sections 1.3 and 1.3.1.

9.1 [2] Dispersion Modelling for Possible Strategic Growth in Teignmouth and Dawlish

The coastal towns of Teignmouth and Dawlish may also be identified for strategic growth. Any air quality modelling, will inform and influence the LDF process.

Impacts: Raise awareness of air quality issues at local policy level: prevent air quality from worsening: develop schemes to improve the air quality.

9.2 Promotion of mixed use developments.

Mixed use developments are designed to reduce travel demand and increase the overall integration of different but compatible land use. As well as the air quality and environmental benefits, there are socio-economic benefits too.

PPG13 states that local authorities should

'promote high density, mixed use development in and around town centres and near to major transport interchanges.'

PPS 1: Delivering Sustainable Development also promotes mixed use developments in the preparation of development plans.

This will play an important part in reducing the need to travel as new developments will be close to existing transport links. This will be considered as part of the LDF process and such developments will be encouraged where practicable.

Impacts: Reduce distance travelled & improved public transport access; financial savings to residents and businesses; improved fitness.

9.3 Planning Obligations - Section 106 Agreements

The use of Section 106 Agreements in relation to air quality is clearly stated in Planning Policy Statement 23 Annex 1: Pollution Control, Air and Water Quality. In particular it states that

'where it is not appropriate to use planning conditions to address the impact of a proposed development, it may be appropriate to enter into a planning obligation under section 106 of the Town and Country Planning Act 1990.'

Section 106 Agreements can be used to:

'Improve air quality and make other environmental improvements before a development goes ahead or offset the subsequent impact of a proposed development. In particular- the purchase, installation, operation and maintenance of air quality monitoring equipment or provision of other assistance or support to enable authorities to implement any necessary monitoring or actions in pursuit of an Air Quality Action Plan' (PPG23, Annex1).

This guidance has been actively implemented by a number of other local authorities including Greenwich Borough Council.

Planning obligations may make acceptable a development which would otherwise be considered unacceptable in planning terms. Section 106 Agreements can provide improved transportation, improve the air quality to the local community but may incur increased development costs.

Teignbridge and Devon County Council currently seek 106 contributions from developers and will continue to do so. **Table 6** summarises the total contributions Devon County Council achieved as of March 2009 for sustainable transport measures. **Table 7** summarises the total Teignbridge contributions for our air quality projects that have been agreed as of March 2009.

Impacts: Reduces the traffic impacts of new developments; source of funding for AQAP measures; may increase cost of development.

9.4 Air quality assessments of relevant new developments

The intention of an air quality assessment is to demonstrate the likely changes in air quality or exposure to air pollutants, as a result of a proposed development. Developments will require an air quality assessment where a significant change in air quality is expected or anticipated.

The impact of a development on air quality should be considered in terms of:

- Potential breaches of the national air quality objectives and/or European limit values;
- Increase in, or introduction of new public exposure;

AQMA	Location	Description of works	Contribution
Dawlish	Secmaton Rise	Public transport	£210,000
Dawlish	Shell Cove	Public transport	£9,000
Dawlish	Treston House	Public transport and traffic calming.	£25,000
Dawlish	Sainsbury Supermarket	Public transport plus footway/ cycleway works	£300,000
Teignmouth	Deer Park Avenue	Public transport	£5000
Newton Abbot	New Hospital Jetty Marsh Road	New bus service, toucan crossing	
Newton Abbot	Centrax	Public transport and footway/ cycleway	£236,000
Newton Abbot	Lidl Kingsteignton	Sustainable transport modes	£90,000
Newton Abbot	Hackney Lane Kingsteignton	Public transport/cycleway	£20,000
Newton Abbot	Redrow Jetty Marsh Road	Safer routes to school	£66,000
Newton Abbot	Sanctuary Housing Jetty Marsh Road	Safer routes to school	£23,400
Newton Abbot	Reynell Road	Public transport and cyclepath	£490,000
Kingskerswell	Carswell	Public transport and cyclepaths	£60,000
		Total	£1,534,400

Table 6: Devon County Council Section 106 Contributions

AQMA	Location	Description of works	Contribution
Dawlish	Sainsburys supermarket	Actions in AQAP	£36,380
Dawlish	Secmaton Rise, Dawlish	Actions in AQAP	£14,700
		Total	£51,080

Table 7: Teignbridge District Council Agreed Section 106 Contributions as of March 2009

- Overall degradation of local air quality; and
- Where to grant planning permission would conflict with or render unworkable, the AQAP.

Planning applications requiring an Environmental Impact Assessment, as part of the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999[57] can require an assessment of the likely effect on air quality from the proposed development. However, other planning applications that fall outside of the EIA Regulations may still require an air quality assessment. The Environmental Protection UK (formerly NSCA[58]) 'Development Control: Planning for Air Quality' 2006 Update[59] contains criteria for when an air

[57] *http://www.opsi.gov.uk/si/si1999/19990293.htm*
[58] *National Society for Clean Air*
[59] *http://www.environmental-protection.org.uk/assets/library/documents/Development_Control_planning_for_air_quality.pdf*

quality assessment should be provided by the applicant. Teignbridge District Council follows this guidance which ensures that a consistent approach is taken with all planning applications.

The Environmental Protection UK guidance also states that:

'air quality assessments should not be imposed as planning conditions. They should be completed prior to submission to enable the results to be taken into consideration when the application is determined.'

Teignbridge District Council endeavours to follow this guidance. A spreadsheet is also being development that will assist developers and air quality consultants in what needs to be included in an air quality assessment.

Impacts: Allow air quality issues to be addressed and emissions to be suitably controlled where appropriate; improve air quality; reduce car use; reduce exposure to poor air quality; perceived reduction in development opportunities; may increase cost of development.

9.5 Cumulative impact of developments

It is clear that major developments can have a significant impact on air quality through the generation of additional traffic. Smaller developments can, cumulatively, also have a significant impact. PPS23 Appendix 1G states that:

'Air quality deterioration maybe cumulative. LPAs will need to consider the effects of multiple developments on the air quality of an area, and in particular, the overall effect of additional load from further development proposals.'[60]

The cumulative impact and background creep is also recognised in the Environmental Protection UK (formerly NSCA) guidance Development Contol: Planning for Air Quality[61], whereby individual developments which are relatively low polluting, but which cumulatively result in a significant worsening of air quality.

A practical approach for mitigating the cumulative impacts of transport, emissions from development, as detailed in the 'Low Emission Strategies: using the planning system to reduce transport emissions' good practice guidance[62], is to require standardised contributions from all developments over a certain threshold. However the overall effect must be to encourage low emission development rather than to provide an easy option for developers simply to buy the right to pollute.

The requirement of standardised contributions is the approach adopted by Teignbridge District Council and the resulting fund is used to assist in the implementation of the AQAP. See Appendix 4 for details.

Impacts: Improve air quality; reduce car use; reduce exposure to poor air quality; perceived reduction in development opportunities; may increase cost of development.

9.6 Supplementary planning documents

Supplementary Planning Documents expand or add details to policies laid out in development plan documents. It is proposed that Teignbridge produces an SPD on air quality to assist developers in giving due consideration to air quality impacts when submitting planning applications.

Impacts: To adopt a consistent approach to air quality assessments for developers; air quality impact is considered on all relevant planning applications.

9.7 Require submission of travel plans

PPG13: Transport states that:

'travel plans should be developed for all significant travel generating uses'. This encourages modal shift and reduction in single occupancy vehicle movements.'

[60] *http://www.communities.gov.uk/documents/planningandbuilding/pdf/pps2annex1.pdf*
[61] *http://www.environmental-protection.org.uk/assets/library/documents/Development_Control_planning_for_air_quality.pdf*
[62] *http://www.defra.gov.uk/environment/quality/air/airquality/local/guidance/*

During 2008 Teignbridge District Council Development Control Officers recommended that Travel Plans were submitted on 11 planning applications.

There is a degree of inconsistency within the conditions with similar developments having differing requirements. A standard Travel Plan condition should be agreed with the Service Manager - Development Management.

Impacts: Reduces parking and congestion; improved wider environment (visual amenity and noise).

9.8 Assessment of planning applications and the monitoring and enforcement of planning conditions

All planning applications that meet the criteria for the need for an air quality assessment as detailed in the Environmental Protection UK (formerly NSCA) guidance 'Development Control: Planning for Air Quality -2006 Update' are required to submit one with their application. In line with the guidance, Teignbridge District Council endeavours to consider the impact and where appropriate to encourage the use of conditions to mitigate, offset or compensate the impacts.

The use of conditions requiring post decision air quality assessments is actively discouraged. This is because during the design stage of a development, changes can be made to the building to ameliorate existing poor air quality.

In some circumstances where the air quality impact is still over riding despite all available mitigation, refusal on grounds on air quality will be recommended.

Impacts: Air quality impact is considered on all relevant planning applications; expense to developers; reduced vehicle and CO_2 emissions.

9.9 Monitoring and enforcement of Section 106 Agreements

Teignbridge District Council has a dedicated team of officers who prepare, produce and monitor Section 106 Agreements. This ensures that all monies that are requested are used for the purposes that they are provided.

Impacts: Enables infrastructure improvements; modal shift; reduced vehicle and CO_2 emissions; promotes sustainable developments; expense to developers.

9.10 Include cycle facilities in new developments

PPG13: Transport requires local authorities, in the preparation of their development plans and in determining planning applications to seek the provision of:

- Convenient safe and secure cycle parking and changing facilities in developments and cycle storage facilities at transport interchanges
- Cycle routes and cycle priority measures in major new developments
- The completion of national cycle networks.

During 2008, 17 conditions were placed on planning approvals for a variaty of cycle related improvements. These range from the provision of covered cycle storage areas for staff to improvements to the existing national cycle network and the creation of new cycle routes.

Impacts: Encourages modal shift; improved road safety; reduces traffic and CO_2 emissions; encourages health and wellbeing.

9.11 Apply maximum parking standards to new developments

The availability of parking has a major influence on the means of transport that people choose for their journeys. PPG 13: Transport states that

[63] *http:// http://www.environmental-protection.org.uk/assets/library/documents/Development_Control_planning_for_air_quality.pdf*

'reducing the amount of parking in new development (and in the expansion and change of use in existing development) is essential, as part of a package of planning and transport measures, to promote sustainable travel choices.'

PPG13 introduces the concept of maximum parking standards. Policies in development plans should set maximum levels of parking rather than minimum standards to reduce the land take up of development and to tackle congestion. Local authorities should use their discretion in setting the levels of parking appropriate for small developments so as to reflect local circumstances. Annex D in PPG13 sets out the maximum levels that should be applied throughout England. Annex D is being phased out with new guidance contained in PPS4.

One of the measures in Teignbridge District Councils Parking Strategy 2005-2011 relates to Devon County Council, Teignbridge District Council and the National Park Authority applying maximum parking standards.

Maximum parking standards will be encouraged at developments within Teignbridge. Devon County Council have confirmed that they may depart from PPG13 guidance for reasons of sustainability.

Impacts: Limits number of cars on new developments; encourages changes in modal shift.

9.12 Include walking facilities in new developments

PPG13 states that local authorities should:

'... create more direct, safe and secure walking routes, particularly in and around town centres and local neighbourhoods, and to schools and stations, to reduce the actual walking distance between land uses, and to public transport.'

Teignbridge will encourage the development of walking facilities when considering applications for new developments and during the strategic planning for major growth.

Impacts: Encourages modal shift; Improves fitness and wellbeing.

9.13 Promote and encourage a proportion of the energy on new development sites to come from renewable and/or low carbon sources

Renewable fuels and materials have an important role to play in delivering the UK climate change objectives as laid down in the Climate Change Act 2008.[64] The Energy Act 2008 proposes a number of initiatives to help meet this target, however national measures alone will not meet the emissions reduction target and local actions and initiatives will also be required.

The emerging Regional Spatial Strategy for the South West recognises this and RE5: Decentralised Energy to Supply New Development states:

'Local planning authorities should set targets in their DPD's for the energy to be used in new developments to come from decentralised and renewable or local carbon energy sources where it is feasible and viable, and the development thresholds to which such targets shall apply. In the interim before targets are set in DPD's, at lease 10% of the energy to be used in new developments of more than 10 dwellings or a 1000m^2 of non residential floor space should come from decentralised and renewable or local carbon sources, unless, having regard to the type of development involved and its design, this is not feasible or viable.'

PPS: Planning and Climate Change[65] also sets out clear expectations on how the Government expect the planning process to contribute to reducing emissions and stabilising climate change within the preparation of regional spatial strategies, local development documents and in the determination of planning applications.

The Energy Savings Trust's Practical help advisory service provides free training for local authority planning and building control officers on climate change. Their planning presentation

[64] *http://www.opsi.gov.uk/acts/acts2008/ukpga_20080027_en_2#pt1-pb1-l1g1*
[65] *http://www.communities.gov.uk/documents/planningandbuilding/pdf/ppsclimatechange.pdf*

looks at the role planning and building control has to play in mitigating climate change. It takes into account its contribution to meeting NI 186 and looks at examples of planning policies in other councils.

Training will be arranged for Teignbridge planners and building control officers in order to help with the promotion and encouragement of renewable and decentralised low energy carbon sources on new development sites.

Impacts: Reduction in CO_2 emissions; reduction in dependence upon fossil fuels; assist Council in achieving NIs relating to carbon management.

9.14 Building control standards

In July 2007 the Government published 'Building a Greener Future' which confirmed the governments intention for all new homes to be zero carbon by 2016. Part L of the building regulations sets out the legal requirements for the conservation of fuel and power in dwellings and this will be gradually strengthen between now and 2016. The mechanism for achieving this reduction will be the code for sustainable homes, which was introduced by the government in 2008. The code sets 6 levels of sustainability for new homes, all of which require higher energy efficiency standards than the current building regulations. These standards are mandatory for all new build social housing which must achieve code rating level 3 or above. It is also mandatory for all new homes sold since the 1st May 2008 to have a code rating as part as a home information pack.

Impacts: Improved energy efficiency; reduction in CO_2 emissions; reduced dependence on fossil fuels; financial savings for residents.

9.15 Combustion Installations

The use of biomass to generate energy offers significant potential advantages for the reduction in emissions of greenhouse gases. The Energy Act 2008 acknowledges the role of biomass and the potential contribution to renewable energy in the UK. Biomass includes any biological material, derived from plant or animal matter which can be used for producing heat and or power, fuels including transport fuels, or as a substitute for fossil fuel based materials and products.

Although expanding biomass use for energy meets Government targets, there is the potential for an increase in air pollutants that affect human health. A significant increase in biomass combustion, particularly of wood fuel, could have a detrimental impact on particulate matter (PM_{10}) and oxides of nitrogen concentrations[66].

Best practise guidance[67] has been provided by Environmental Protection UK and the Local Authorities Coordinators of Regularity Services (LACORS) for air quality officers and developers, for assessing the potential air quality impact of using biomass.

This guidance is being followed by the Teignbridge air quality officer when considering planning applications in relation to combustion plant such as biomass combustion plant.

Impacts: Reduced dependence on fossil fuels; reduction in CO_2 emissions; assist Council in achieving NIs relating to carbon management and the possible reduction in NO_x and PM_{10}.

9.16 Plant more trees

Roadside trees can help to improve the air quality in towns and near traffic hot spots. Trees absorb pollutants through the same process that they take up nutrients, through the stomata, roots and hairs. Additional pollution is removed by capture on the leaf/ needle and bark surfaces. However not all trees are beneficial to air quality and some species have a negative effect, for example, Crack Willow, English Oak, Poplar. These species can emit gases known as volatile organic compounds (VOCs). VOCs in combination with NO_x can contribute to the production of other pollutants, especially

[66] *http:// www.airquality.co.uk/archive/reports/cat18/0806261519_methods.pdf*
[67] *http:// www.environmental-protection.org.uk/biomass/*

ozone and fine particles which damage human health when in the troposphere. The trees that have the greatest capacity to improve air quality include Ash, Common Alder, Field Maple, Larch, Norway Maple, Scots Pine and Sliver Birch.

Although tree planting is unlikely to reduce the concentrations of air pollutants significantly, increased planting has a positive impact on local environmental quality and amenity. Trees also act as carbon traps thereby making tree planting a cost effective additional condition on appropriate planning applications.

Impacts: Positive impact on environmental quality, amenity and traps CO_2.

CHAPTER 10
OTHER TRANSPORT MEASURES

10.1 Rail freight

The rail network is an under-utilised resource for freight movements. Modal shift from road to rail freight reduces road congestion and provides environmental improvements without compromising economic growth and prosperity.

Local authorities are in key position to facilitate the development of terminals by safeguarding suitable sites in the planning process and developing the road networks that service them. A key role in the planning process is the protection of sites for the use of rail. It may also be appropriate to insist that rail connection and use are stipulated in a planning consent.

The South West region contains the only significant sources of Ball Clay and China Clay in the UK. Other significant minerals include lignite, sandstone and granite. Two sites in Teignbridge, Heathfield and Hackney Sidings, were identified as possible freight interchange facilities and were included in the Teignbridge Local Plan.

However, the rail network in the region is unable to handle the 'high cube' (9'6'') containers on conventional rail wagons. A study undertaken by Network Rail and published in 2007, did not identify the South West region as a priority for gauge enhancement based on demand forecasts and the likely business case for investment.[70] This will limit the type of freight that can be carried on the local network.

[1] Heathfield

A feasibility study was undertaken from 1997 to 2000 by Teignbridge District Council in respect of potential opportunities for rail freight on the Newton Abbot to Heathfield branch line and the possible provision of a road/rail freight transfer facility at the Heathfield industrial estate. Heathfield is a mixed residential and industrial estate adjacent to the Devon Expressway, 4 miles North West of Newton Abbot. A survey was launched to establish the level of interest from local companies in the potential use of the branch line and a road/rail freight interchange facility. Out of 81 local companies approached, 15 would consider using a facility at Heathfield.

The results of the survey were made available to Railtrack, the Freight Transport Association (FTA) and the country's 3 principal rail freight companies, English, Welsh and Scottish Railway Ltd (EWS), Direct Rail Services and Freightliner Limited, for their consultation.

The Teignbridge Local Plan identified Heathfield as a potential site for a modest road/rail freight interchange facility. Key objectives for the Local Plan would include:

- Securing 'open space' to the road/rail freight interchange facility for the wider business community;
- Securing a means of vehicular access across the branch line; and
- Securing any improvements to the local highway network to Drumbridges and A38 Devon Expressway.

[68] *http://www.es.lancs.ac.uk/people/cnh/UrbanTreesBrochure.pdf*
[69] *http://www.devon.gov.uk/mcs-technicalreport.pdf*
[70] *The Draft Revised Regional Spatial Strategy for the South West incorporating the Secretary of State's Proposed Changes – for Public Consultation July 2008*

The Newton Abbot Freight Quality Partnership was considered to have an important role to play in the future prospect for rail freight at Heathfield. As this partnership no longer exists in this local format no progress has been made.

The Teignbridge Local Plan is no longer an active planning document and has been superseded by the requirement for a LDF. Teignbridge will be considering the use of the rail network as part of its preparation of the documents of the LDF.

Impacts: Reduces road congestion; reduced vehicle and CO_2 emissions.

[2] Hackney Sidings

A proposal for a rail freight depot at Hackney Sidings was investigated by the Newton Abbot FQP in 2001. It was proposed to have a direct access onto Quay Road in Newton Abbot and Teignbridge District Council, the County Council and Railtrack were pursuing grant applications. A planning application was being prepared but no further progress has been made.

Impacts: Reduction in greenhouse gases and local air pollutants; reduced congestion; reduction of freight on roads.

10.2 Passenger rail

Newton Abbot is served by First Great Western, Cross Country and South West Trains, and is the main line service route between Penzance and Paddington. Local rail journeys are also important and Devon County Council works in close partnership with the rail industry to:

- Financially support additional local train services where justified;
- Promote rail travel – through provision of publicity and timetables and through support for the Devon and Cornwall Rail Partnership;
- Implementation of station access and improvements at Newton Abbot;
- Seeking improvements to the local rail network.

[1] Investigate feasibility for the re-introduction of a passenger service to Heathfield

Passenger services to Heathfield ceased in 1958. However, the introduction of a new service was considered in 1998 as part of the investigation into the potential branch line at Heathfield. It was reported to Members in the Teignbridge Economy Committee (23rd March 1998) that the viability of a passenger service to Heathfield would need to be investigated by Devon County Council.

Railtrack had also indicted that substantial infrastructure works would be required to upgrade the line for passenger services and they were unaware of any interested train operating companies. English, Welsh and Scottish Railway Limited (EWS) had also expressed concern over the potential conflict with freight operations.

The Members resolved that the long term prospect for the re-introduction of a passenger service to Heathfield should be pursued with Devon County Council and Railtrack. No further progress has been made.

Impacts: Encourages modal shift; reduced congestion; reduced vehicle and CO_2 emissions

10.3 Maritime and ports

Teignmouth Harbour is a sub regionally important port that is situated on the Teign Estuary near Newton Abbot. Teignmouth is an important port for the shipping of ball clay, which is mined at Kingsteignton to international markets. Other imports and exports include animal feed, bulk fertiliser, soya pellets, rape seed, hipro soya and slag. In 2008, the docks handled 317 vessels with more than 530,000 tonnes of cargo. In 2006 the port company

enhanced the port's facilities by deepening the berths, building additional storage facilities and providing a new public slipway.

During the redevelopment of Teignmouth Quay, consideration was given to the use of rail as a means of transporting ball clay to the docks. In discussions with Network Rail it was concluded that the main line would need to be closed to allow freight trucks to join the railway network. This was not acceptable to Network Rail and it was therefore not pursued in the redevelopment project.

Impacts: Reduced congestion; reduced emissions.

10.4 Inland waterways

The Teign Estuary Officer has considered the use of the inland waterways (Stover and Hackney Canals) to transport clay to Teignmouth Docks. Since they were last used large developments have taken place in Kingsteignton and at Newton Abbot Racecourse which has made the remaining infrastructure unworkable.

Impacts: Reduced congestion; reduced emissions.

10.5 Road traffic count data

In order to assist with both the traffic scenario testing and air quality modelling, it is necessary to obtain annual road traffic count data in pollution hot spots within AQMAs. Road traffic data will allow the effectiveness of actions within this action plan to be quantifiably measured too.

Impacts: Accurate assessment of AQAP and LTP measures.

CHAPTER 11
PUBLICITY, PROMOTION AND INFORMATION

11.1 Air Quality Strategy

The development of a local air quality strategy, to provide the framework for ensuring the longer-term commitment and support for air quality issues, and the delivery of services in an integrated manner is recommended in the Defra Policy Guidance LAQM.PG (09). A strategy can provide over-arching principles, agreed at a high level, that ensure co-benefits and risks are considered when implementing different policies. For example, a strategy could acknowledge the co-benefits of tackling PM_{10} and NO_2 and greenhouse gases together, and acknowledge any trade offs between air quality management, planning and transport policy. Defra expect an air quality strategy to follow three general rules as a minimum:

- Strategies should be concise, containing fundamental principles that have been adopted with the full understanding of Heads of Service of the legal and other drivers behind these principles;
- Strategies should outline the management structure for delivering on air quality improvements, and identify consultation groups that will be engaged;
- Agreement and integration of functions such a transport planning, land planning and air quality action planning.

An air quality strategy for Teignbridge will be developed to provide a framework for ensuring long term commitment and support for air quality issues.

Impacts: Co-ordinated approach for the Council: reduction in NO_2, PM_{10} and CO_2; raises awareness of air quality issues within the Council; community engagement.

11.2 Promote the Smoky Vehicle Hotline on Teignbridge District Council website

The smoky vehicle hotline is a service provided by the Vehicle Inspectorate (VOSA) and enables members of the public to report excessively smoky commercial vehicles. It is necessary for the following information to be reported:

- the vehicle registration;
- vehicle type and details of make, model and colour;
- location at which the vehicle was witnessed;
- date and time;
- vehicle operator if available.

The Inspectorate follows up every report received, initially by letter, inviting the vehicle operator to check the vehicle concerned and report back with details of any remedial action that has been taken.

In order to monitor the progress, information as to numbers of vehicles being reported in the Teignbridge district will be gathered from the Vehicle Inspectorate.

Impacts: Reduces vehicle and CO_2 emissions; community engagement; raises awareness of air quality issues.

11.3 Supporting promotional campaigns

Promotional campaigns, for example, 'Car Free Day', 'National Liftshare Day' are national one off events that use a wide range of media aimed at improving general public awareness of problems resulting from transport choices and possible solutions. As well as focusing on local air quality and carbon emissions, travel awareness campaigns aim to improve informed knowledge of the facilities available or walking, cycling and public transport.

The national travel awareness events that will be supported include:

- Car Free Day
- National Liftshare Day
- National Walk to School Week
- Bike Week and Bike to Work Week

Teignbridge will be promoting these events in conjunction with our County Council colleagues.

Impacts: Reduces vehicle and CO_2 emissions; community engagement; raises awareness of air quality issues.

11.4 Air quality monitoring data on Teignbridge District Council website

It is important that information on air quality is provided in a clear and accessible way. The Council website is currently being upgraded and is due to be launched in the new year. The new website will have much more detail on the air quality, monitoring sites and real time data.

Impacts: Raises awareness of air quality issues; up to date information.

11.5 Provision of Information on 'High Pollution Days'

Air quality alerts provide free information about air pollution to asthma sufferers and other people with respiratory conditions. The service, usually by text, is designed to inform vulnerable people of a pollution episode the day before it is expected to help them make informed choices about managing their respiratory health.

A number of schemes have been set up around the UK including Slough, West Sussex, and London Councils. Teignbridge District Councils new upgraded website due to be launched this year, allows the public to enter their email address and when the levels of air pollution reach a certain level, an email will be sent automatically. Teignbridge will be promoting this service.

Impacts: Raises awareness of air quality issues; up to date information; assist sufferers of respiratory disorders.

11.6 Health promotion (work with NHS Devon)

Promotion of good health can be related to the links between air pollution and health, and also in encouraging people to walk and cycle, especially for short journeys.

One of Teignbridge District Councils key corporate objectives is 'to improve the health and wellbeing of residents and communities'. Working in partnership with external organisations such as NHS Devon will be explored as a way of increasing the number of people to whom information and education on health impacts of pollution are targeted.

Impacts: Raises awareness of air quality issues; assist sufferers of respiratory disorders.

11.7 Production of newsletters/leaflets/ posters

The production of newsletters, leaflets and posters are all methods of increasing public awareness of air quality issues. This could include posters on billboards, posters on buses, information leaflets to businesses, articles in free council papers etc.

A survey of local industries which hold an industrial permit within Teignbridge was undertaken in 2008. The survey sought views on how the Council could assist businesses in reducing their environmental impact. The comments have been evaluated and an action plan developed. A total of 63 questionnaires were sent out and 17 returned.

A scheme to advise food businesses of energy savings measures has also been developed by the Devon Food Sub Group. The leaflet titled 'A guide to an Environmentally Sustainable Business' will be handed out to the food businesses, currently 1495, during routine inspections and when standard letters are sent out.

Both of these schemes support Teignbridge's commitment in meeting Goal 5 'Environment – provide a clean, green and safe local environment' of the corporate plan.

Impacts: Raises awareness of air quality issues; provides information on sustainability issues; assists business in reducing their environmental impact; savings to businesses and industry.

CHAPTER 12
OTHER NON-TRANSPORT MEASURES

12.1 Teignbridge District Council air quality monitoring

Teignbridge monitors NO_2 using passive diffusion tubes and two continuous analysers. The continuous analysers are located at the junction of Highweek St/Halcyon Rd/Bradley Lane in Newton Abbot and Bitton Park Road in Teignmouth. A number of passive diffusion tubes are also located within each of the AQMAs.

The suitability of monitoring locations will be reviewed annually.

Impacts: raises public awareness; informs planning process; accurate data.

12.2 Compulsory purchase of properties

The use of Compulsory Purchase Orders would lead to the removal of relevant public exposure but would not address the problem of air pollution and should only be considered where there are no other viable options.

The numbers of properties that this would affect in each of the AQMAs is approximately:

- Newton Abbot 85 homes
- A380 Kingskerswell 7
- Bitton Park Road, Teignmouth 37
- Iddesleigh Terrace, Dawlish 11

This does not take into account flats or multiple occupancies and is only a rough estimate of the

impact of this measure. This will be subject to the consultation process.

Impacts: Removal of residents from exposure to vehicle pollution and noise; improved health; unpopular with residents; potential blight for neighbouring properties; expensive option; potential legal challenges.

12.3 Local Pollution Control

Under Part 1 of the Environmental Protection Act 1990 Teignbridge District Council regulates certain industrial premises, which emit pollution to the atmosphere. Stringent operating conditions are imposed on the operator of the processes, setting pollution emissions limits which should not be exceeded and requiring emissions monitoring to confirm that the emission limits are being met. It is the responsibility of the operator to ensure that they comply with the permit conditions at all times. The processes are subject to regular inspections and review in accordance with the standards imposed by the Secretary of State Guidance.

Teignbridge District Council currently regulates 67 processes, all of which are inspected either once or twice yearly, depending on guidance issued by the government.

Of the 67 regulated processes, there are 6 permitted activities within the AQMAs. These are:

- 1 Dry cleaner, Newton Abbot;
- 1 Waste Oil burner, Newton Abbot;
- 1 Unloading of petrol into storage, Newton Abbot;
- 2 Unloading of petrol into storage, Kingskerswell;
- 1 Unloading of petrol into storage, Bitton Park Road, Teignmouth.

Teignbridge will continue to use these guidelines to ensure that operating standards are maintained and emissions to air are kept to a minimum.

Impacts: Reduces PM_{10} and NO_x; ensures consistent enforcement.

12.4 Nuisances under the Environmental Protection Act 1990

There are four Teignbridge District Council officers who deal with nuisances under the Environmental Protection Act 1990 and Clean Air Act 1993. The work is ongoing and enforcement action is taken where necessary. In 2008 fifty bonfire complaints were received by Teignbridge District Council.

In order to promote alternative ways of disposal a leaflet will be prepared to accompany all complaints received.

Impacts: Reduced emissions; encourages environmentally friendly disposal of waste; improved neighbourly relations; increased uses of civic amenity sites and associated travel.

12.5 Energy efficiency in domestic premises

Teignbridge, through its Affordable Warmth/ Home Energy officer supports people in reducing carbon generating energy consumption in domestic premises. This is through the general provision of information on energy saving and practical implementation of renewable energy sources. This is supported by the provision of grant top ups to assist with the implementation of energy saving measures for example, heating, draught proofing and insulation.

- New boiler installations from 1.3.08 to 1.3.09 throughout whole of Teignbridge - 2876;
- Number of cavity wall installations from 1.3.08 to 1.3.09 throughout whole of Teignbridge - 2886;
- 1st April 2007 and 31st March 2008 Warm Front has recorded 178 loft installations in Teignbridge. It should be noted that there are many other installation companies who install loft insulation which are not included in this figure.

Teignbridge will continue to work in partnership to improve home energy awareness and improve standards of home insulation and heating systems in domestic premises.

Impacts: Improves energy efficiency within the housing stock of the district; meets NI's.

CHAPTER 13
IMPLEMENTATION AND MONITORING

An important part of the action planning process is to monitor the implementation of and to determine the effectiveness of the measures.

The LTP includes a number of mandatory and local indicators. Those relevant to air quality in Teigbridge include:

Tackling traffic congestion

- C2 Improve journey time reliability in Newton Abbot by 5% by 2010/11, whilst ensuring no increase in vehicle delay;
- C3 Increase bus patronage by 20% by 2010/11;
- C4 Improve bus punctuality to 90% and lower average excess waiting time to 1,25 minutes by 2012/13;
- C6 Increase the number of cycle trips by 55% by 2010/11;
- C7 Ensure the quality of data submitted to Traveline is at least 99% accurate.

Improving air quality

- AQ1 Limit growth in traffic to 15% by 2010/11.

Promoting health and wellbeing

- H1 Increase healthy travel to school by achieving 100% travel plan coverage of state schools by 2010.

In addition, Teignbridge will continue to maintain a network of automatic and passive samplers, and it is intended that this data will be used to monitor progress. The monitoring network will be reviewed and extended where gaps exist.

Other monitoring measures include

- Total Council parking provision;
- Proportion of short stay parking;
- Price difference between long and short stay parking;
- Percentage of planning permissions exceeding maximum parking standards;
- Number of planning applications submitted with air quality assessments;
- Number of travel plans conditioned on planning permissions;
- Number of cycling facilities conditioned on planning applications;
- Section 106 contributions;
- Proportion of workforce within the Teignbridge District covered by travel plans;
- Mode share of peak period journeys to urban centres;
- Mode share of journeys to work;
- Information on fleet numbers (buses and HGVs);
- Age of buses and HGVs;
- Emission standards of buses and HGVs;
- Annual distance travelled of buses and HGVs;
- Numbers of HGVs retrofitted;
- Numbers of hackney carriages and private hire vehicles tested annually and emission failure rates

Each of the measures within the Air Quality Action Plan has a specific measurable target which will be monitored to allow reports on progress.

CHAPTER 14
PRIORITISATION OF OPTIONS

This section outlines the measures described in chapters 6 to 13 and identifies in each case:

- whether this is a new measure;
- whether they are already implemented;
- whether they are going to be implemented either through LTP, Teignbridge District Council funding, section 106 monies or through applications for a Defra grant;
- whether they have been rejected.

New proposed measure	Measure already implemented	Measure in progress/ ongoing	Measure not considered cost effective/feasible will be subject to public consultation

Air Quality Impact A
1 = Imperceptible (step in right direction)
2 = up to 2.0 µg/m^3
3= >2.0 µg/m^3

Cost B
1 = >2million
2 = £150k to 2million
3 = £50k to £150k
4 = <£50k

Cost Benefit A*B
Higher result is better

Ranking
12 to 9 = 1
5 to 8 = 2
4 to 1 = 3

Ranking – based on professional judgement, taking into account cost benefit, timescale, feasibility, funding, non air quality impacts and public consultation -

WILL BE COMPLETED AFTER PUBLIC CONSULTATION

1 = the measure has is already been implemented or being implemented.
2 = the measure is accepted and will be implemented subject to available resources.
3 = the measure will not be implemented as it is not considered feasible.

Emissions Management									
No. *(Section No)*	**Measures**	**Direct or indirect impact on AQMA**	**Air quality Impact**	**Cost**	**Cost Benefit**	**Timescale for Implementation**	**Lead/Key Organisation**	**Indicator of progress**	**Ranking**
1. *6.1.1 [1]*	Formation of Freight Quality Partnership	Indirect All	2	4	8	FQP formed 2000	FQP, DCC & TDC	Formation of group	N/A
2. *6.1.1 [1]*	Production of drivers' maps for freight industry.	Indirect All	1	4	4	Completed 2002	FQP, DCC & TDC	Production of map	N/A
3. *6.1.1 [1]*	Install information signs on main routes into Newton Abbot showing location of industrial estates.	Direct Newton Abbot	1	4	4	Completed 2002	FQP, DCC & TDC	Installation of signs	N/A

4. *6.1.1 [1]*	Provide information boards at entrance to Brunel Ind. estate, Newton Abbot and Broadmeadow Ind. estate, Teignmouth .	Indirect Newton Abbot and Teignmouth	1	4	4	Completed 2003	FQP, DCC & TDC	Installation of boards	N/A
5. *6.1.2 [1]*	Feasibility study into mini freight transfer depot for Newton Abbot	Direct Newton Abbot	1	3	3	Feasibility study to be undertaken Dec 2010	FQP, DCC & TDC	Completion of study	3
6. *6.1.2 [2]*	Promote and implement Motorvate Scheme	Indirect All	1	3	3	Ongoing	FQP & TDC	No. of participants	3
7. *6.1.2 [3]*	Undertake freight study along Bitton Park Road, Teignmouth, subject to Defra grant funding	Direct Teignmouth	1	3	3	Collate information by April 2011.	TDC	Completion of study	3
8. *6.1.3*	HGV ban in AQMAs	Direct All	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9. *6.1.4*	Investigate delivery times outside of peak hours	Direct Newton Abbot	1	4	4	April 2011	FQP, DCC & TDC	Reduction in peak hour delivery	3
10. *6.1.5*	Teignbridge DC council fleet –purchase of Euro 5 refuse trucks	Direct All	1	3	3	Completed Dec 2007	TDC C&MS	Purchase of New vehicle	N/A
11. *6.1.6*	Teignbridge DC fleet - 'smarter driving course'.	Direct All	1	4	4	Completed Feb 2009	TDC C&MS	Completion of staff training	N/A
12. *6.1.6*	Teignbridge DC –Fleet efficiency savings spreadsheet	Indirect All	1	4	4	Ongoing	TDC C&MS	Monitor maintenance regime to ensure emissions are kept to a minimum	3

New proposed measure	Measure already implemented	Measure in progress/ ongoing	Measure not considered cost effective/feasible will be subject to public consultation

13. *6.1.6*	Teignbridge DC -refuse trucks avoid congested streets	Direct All	1	4	4	Ongoing	TDC C&MS	Monitoring route times through tracking devices	3
14. *6.1.6*	Teignbridge DC - Energy Savings Trust green fleet review	Direct All	1	4	4	Completed by April 2011	TDC E&SS	Completion of review	3
15. *6.1.6*	Smarter driving for TDC employees	Direct All	1	4	4	Completed April 2009	TDC E&SS	Completed with available funding	N/A
16. *6.1.7*	Hackney carriages – scoping study of tighter emission standards for vehicles	Indirect All	1	4	4	Completed by April 2011	TDC E&SS	Completion of Study	3
17. *6.1.8*	Introduce a Low Emission Zone in AQMAs	Direct All	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18. *6.1.10*	Vehicle emissions testing in Highweek Street, Newton Abbot and Bitton Park Road, Teignmouth	Direct Newton Abbot and Bitton Park Road	1	4	4	Emission testing completed. Waiting for vehicle information from DVLA.	TBC, TDC, PCC, MDDC,SHDC	Completion of data analysis	3
19. *6.1.11*	'Switch off your engine signs' to be installed in problem areas	Direct – Newton Abbot	1	4	4	Completed by October 2010	TDC E&SS	Installation of signs	3
20. *6.1.11*	Enforce idling emissions legislation within AQMAs	Direct – Newton Abbot	1	4	4	Ongoing	TDC E&SS	No of vehicles stopped.	3
21. *6.1.12*	Introduce speed restrictions	Direct All	N/A	N/A	N/A	N/A	N/A	N/A	N/A

22. *6.1.13 [1]*	Assess feasibility of Introducing traffic light signal co-ordination (SCOOT) schemes within AQMAs	Direct All	1	4	4	To be confirmed	DCC	Completion of study	3
23. *6.1.13 [2]*	Increased green time for traffic signals in Bitton Park Road, Teignmouth.	Direct Teignmouth AQMA	1	4	4	Completed	DCC	Increased green time	N/A
24. *6.1.13 [3]*	Air quality modelling of proposed traffic signalled scheme in Iddesleigh Terrace, Dawlish (subject to Defra funding)	Direct Dawlish AQMA	1	4	4	Completed by April 2011	TDC E&SS	Modelling completed	3
25. *6.1.14*	TDC to review its lease car scheme and car allowances in order to identify and implement reforms which encourage the use of the cleanest and most fuel efficient vehicles	Indirect All	1	4	4	Completed by December 2010	TDC	Scheme reviewed	3
26. *6.1.15*	Maintain links with the University of Birmingham in the development and demonstration of hydrogen fuelled cell vehicles.	Indirect All	1	4	4	Completed by December 2010	TDC E&SS	Demonstration of vehicle in Teignbridge	3
27. *6.1.16*	Install VMS in Newton Abbot to inform drivers of availability of car parking spaces.	Direct Newton Abbot	1	2	2	Completed	DCC & TDC (E&SS)	Installation of signs	N/A

New proposed measure	Measure already implemented	Measure in progress/ ongoing	Measure not considered cost effective/feasible will be subject to public consultation

Traffic Reduction, Management and Improving the Road Network									
No. *(Section No)*	Measures	Direct or indirect impact on AQMA	Air quality Impact	Cost	Cost Benefit	Timescale for Implementation	Lead/Key Organisation	Monitoring	Ranking
28 7.1	South Devon Link Road, Kingskerswell	Direct Kingskerswell	3	1	3	To be confirmed	DCC and TBC	Completion of road	3
29 7.2	Decriminalised parking enforcement	Direct All	1	4	4	Completed May 2008	DCC and TDC	Parking enforcement a TDC function	N/A
30 7.3	Appointment of traffic Manager to co-ordinate road works within the AQMA's	Direct All	1	4	4	Completed 2005 Co-ordination ongoing	DCC	Appointment of Traffic Manager & number of roadworks	3
31 7.4	Installation of Automatic Number Plate Recognition Cameras	Indirect Newton Abbot and Kingskerswell	1	3	3	Completed 06/07	DCC	ANPR Cameras installed	N/A
32 7.5 [1]	Construction of bus and HGV priority lanes, A380 Kingskerswell	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
33 7.5 [2]	Modelling a proposed turning lane, Bitton Park Road, Teignmouth	Direct Teignmouth	1	4	4	April 2011	TDC	Report completed	3
34 7.5 [3]	Reallocation of road space for buses, pedestrians and cycles as part of the redevelopment of Newton Abbot	Direct Newton Abbot	2	2	4	Completed 2015	TDC and DCC	Redevelopment of Newton Abbot completed	3

35 *7.6 [1]*	Re-routing of roads (Highweek Street), as part of the redevelopment of Newton Abbot	Direct Newton Abbot	3	2	6	Completed in July 2005	DCC	Roads re-routed	N/A
36 *7.6 [2]*	Consider installation of a Mini roundabout at Shaldon Bridge junction, Teignmouth	Direct Teignmouth	1	4	4	April 2011	DCC	Decision on implementation of scheme	3
37 *7.7*	High Occupancy Vehicle Lanes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
38 *7.8*	Park and Ride or Park and Change schemes	Direct Newton Abbot	2	2	4	Ongoing	DCC and TDC	Scheme implemented	3
39 *7.9*	Road user or congestion charging schemes	Direct All	N/A	N/A	N/A	N/A	N/A	N/A	N/A
40 *7.10*	Consider installation of Priority red route schemes on major roads.	Direct All	1	4	4	April 2011	DCC	Decision on implementation	3
41 *7.11*	Implementation of clear zones within the AQMAs	Direct Newton Abbot	N/A	N/A	N/A	N/A	N/A	N/A	N/A
42 *7.12*	Home zones	Direct Newton Abbot	N/A	N/A	N/A	N/A	N/A	N/A	N/A
43 *7.13*	Improvements to Newton Abbot bus interchange	Direct Newton Abbot	1	3	3	March 2010	DCC and TDC	Redevelopment completed.	N/A

New proposed measure	Measure already implemented	Measure in progress/ ongoing	Measure not considered cost effective/feasible will be subject to public consultation

Public and Sustainable Transport (Smarter Choices)									
No. *(Section No)*	Measures	Direct or indirect impact on AQMA	Air quality Impact	Cost	Cost Benefit	Timescale for Implementation	Lead/Key Organisation	Monitoring	Ranking
44 8.1	Formation of bus quality partnership	Indirect All	1	4	4	Formed 2000	DCC	Formation of partnership	N/A
45 8.2	Bus emissions – emission scenario modelling to be undertaken (subject to Defra grant funding)	Direct Newton Abbot Teignmouth Dawlish	1	4	4	April 2011	TDC	Completion of modelling.	3
46 8.2	Consideration of implementation of bus emissions standards within AQMA once scenario testing complete	Direct Newton Abbot Teignmouth Dawlish	1	4	4	December 2010	DCC	Decision on implementation of scheme	3
47 8.3	Provision of real time information at bus stops.	Direct	1	2	2	To be confirmed	DCC	Decision	3
48 8.4	Traveline	Indirect All	1	3	3	Ongoing	DCC	No of enquiries and web hits	3
49 8.5	Devon wide concessionary fares scheme	Direct All	1	2	2	Ongoing	TDC	No of passes issued	3
50 8.6 [1]	Promotion and implementation of school travel plans	Direct All	2	4	8	Ongoing	DCC and TDC	Information on numbers; modal shift	2

51 *8.6 [2]*	Car Clubs - apply to Defra for grant to buy 2 vehicles for Newton Abbot.	Direct Newton Abbot	1	3	3	Completed	TDC E&SS	Grant awared	N/A
52 *8.6 [3]*	Install teleconferencing facilities at Teignbridge District Council	Direct All	1	3	3	Completed	TDC	No. of meetings held	N/A
53 *8.6 [4]*	Promotion and continuation of the 'Walk this Way' initiative	Indirect All	1	4	4	Ongoing	TDC L&GS	No. of events and participants	3
54 *8.6 [5]*	Promotion and facilitation of the Newton Abbot to Kingsteignton cycling route	Direct Newton Abbot	1	2	2	March 2013	DCC and TDC	Provision of cycle route	3
55 *8.6 [5]*	Promotion and facilitation of the NCN Route 2 Newton Abbot to Teignmouth	Direct Newton Abbot Teignmouth	1	1	1	December 2020	DCC and TDC	Provision of cycle route	3
56 *8.6 [5]*	Promotion and facilitation of the Kingsteignton to Bovey Tracey cycling route	Direct Newton Abbot	1	1	1	To be confimed	DCC and TDC	Provision of cycle route	3
57 *8.6 [5]*	Promotion and continuation of the 'Cycle to your Hearts content' partnership	Indirect All	1	4	4	Ongoing	TDC L&GS	No. of events and participants	3
58 *8.6 [5]*	Promotion of Teignbridge District Council's Cyclescheme for employees	Indirect All	1	4	4	Ongoing	TDC	No. of employees on scheme	3
59 *8.6 [5]*	Installation of cycle racks for members of the public at Teignbridge District Council offices.	Indirect Newton Abbot	1	4	4	Completed	TDC	Completion of scheme	N/A
60 *8.6 [5]*	Provision of bikes for Teignbridge staff to use for local meetings and lunch visits.	Indirect Newton Abbot	1	4	4	Completed	TDC	Provision of bikes	N/A
61 *8.7[1]*	Develop and implement travel plans existing employers	Direct Newton Abbot	2	3	6	Ongoing	DCC	No. of travel plans developed; modal shift data	2
62 *8.8*	Introduction of workplace charging parking scheme.	Indirect Newton Abbot	1	4	4	Autumn 2010	TDC E&SS	Introduction of scheme	N/A

New proposed measure	Measure already implemented	Measure in progress/ ongoing	Measure not considered cost effective/feasible will be subject to public consultation

Strategic planning, LDF and development control									
No. (Section No)	Measures	Direct or indirect impact on AQMA	Air quality Impact	Cost	Cost Benefit	Timescale for Implementation	Lead/Key Organisation	Monitoring	Ranking
63 9.1	LDF needs to identify AQMAs	Direct All	1	4	4	In progress July 2012	TDC P	AQMAs in LDF	3
64 9.1 [1]	Undertake regional scale dispersion modelling of the air quality impact of the strategic growth of Newton Abbot and surrounding area.	Direct Newton Abbot	1	3	3	In progress December 2010	TDC E&SS	Modelling study completed	3
65 9.1[2]	Possible dispersion modelling of the air quality impact of the strategic growth of Teignmouth and Dawlish.	Direct Teignmouth and Dawlish	1	4	4	To be confirmed	TDC E&SS	Modelling study completed	3
66	Specific measures will be defined by completing measures 65 and 66	Direct Newton Abbot Teignmouth and Dawlish	3	1	3	To be confirmed	TDC E&SS	Measures defined	N/A
67 9.2	Promote mixed use developments	Direct All	1	4	4	Ongoing	TDC P	No. Mixed use developments	3
68 9.3	Planning obligations – Section 106 Agreements	Direct All	3	4	12	Ongoing	DCC, TDC P E&SS	Total and No. of contributions	1
69 9.4	Ensure applicants undertake air quality assessments (AQA) of relevant new developments	Direct All	2	4	8	Ongoing	TDC, P, E&SS	No. of AQA's submitted	2

70 *9.4*	Air quality spreadsheet guidance to developers on what should be included in an AQA	Indirect All	1	4	4	June 2010	TDC E&SS	Guidance produced	3
71 *9.5*	Consider the cumulative impact of new developments	Direct All	2	4	8	Ongoing	TDC E&SS	No. of applications assessed for cumulative impact	2
72 *9.6*	Produce SPD guidance on air quality and Section 106	Direct All	1	4	4	July 2012	TDC P E&SS	SPD produced	3
73 *9.7*	Require submission of travel plans for new developments	Direct All	2	4	8	Ongoing	TDC DCC	No. of travel plans submitted	2
74 *9.8*	Monitor and enforce planning conditions.	Direct All	3	4	12	Ongoing	TDC	Conditions being enforced	1
75 *9.9*	Monitoring of Section 106 Agreements	Direct All	3	4	12	Ongoing	TDC L&DS, P	Contributions collected	1
76 *9.10*	Include Cycle facilities in new developments	Direct All	1	4	4	Ongoing	TDC	No of cycle facilities in new developments	3
77 *9.11*	Assess new developments for maximum parking standards	Direct All	1	3	3	Ongoing	DCC, TDC and DNP	No. developments with maximum parking standards applied	3
78 *9.12*	Include walking facilities in new developments	Direct All	1	4	4	Ongoing	DCC, TDC DNP	No of walking facilities in new developments	3
79 *9.13*	Training provided to promote and encourage renewable and low carbon energy generation in new developments	Indirect All	1	4	4	December 2010	TDC E&SS P	Training Completed	3
80 *9.14*	Building control standards	Indirect All	1	4	4	Ongoing	TDC -	No. of dwellings where standard applied	3
81 *9.15*	Combustion Installations (Biomass)	Indirect All	1	4	4	Ongoing	TDC E&SS	How many? How many require an AQA?	3
82 *9.16*	Encourage planting of more trees	Indirect All	1	4	4	Ongoing	TDC P	No of planning applications	3

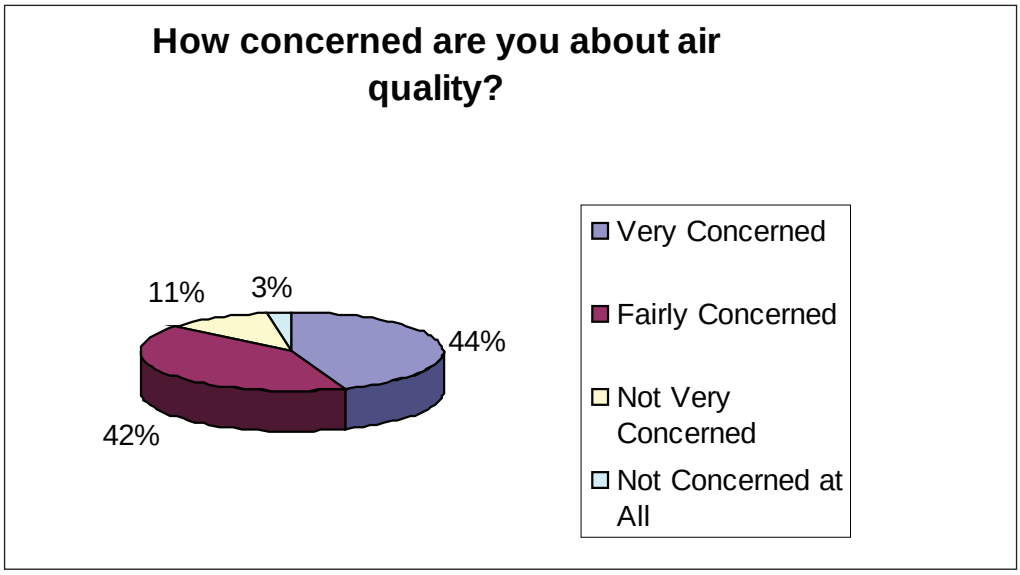
New proposed measure	Measure already implemented	Measure in progress/ ongoing	Measure not considered cost effective/feasible will be subject to public consultation

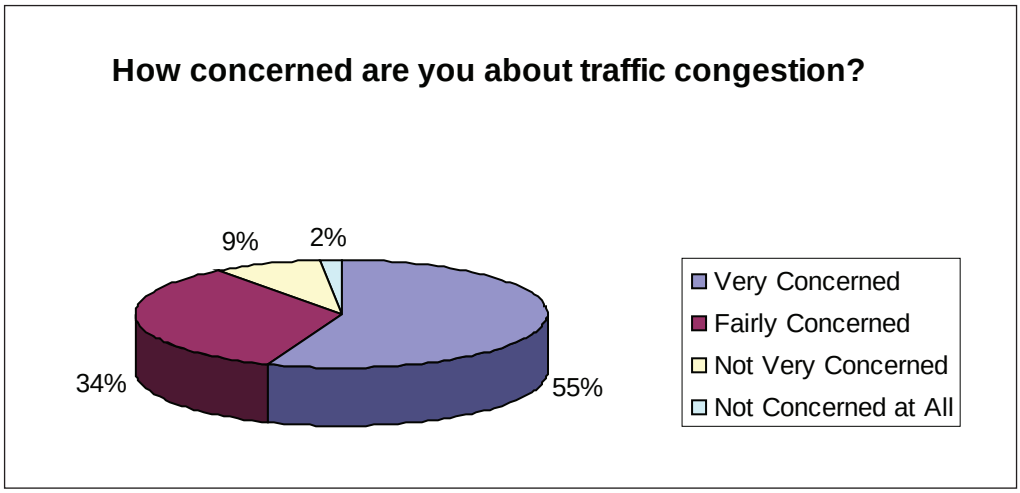
Other transport measures									
No. *(Section No)*	Measures	Direct or indirect impact on AQMA	Air quality Impact	Cost	Cost Benefit	Timescale for Implementation	Lead/Key rganisation	Monitoring	Ranking
83 10.1[1]	Feasability study into a road/rail freight interchange facility at Heathfield	Direct Newton Abbot	1	1	1	To be confirmed	TDC, DCC	Creation of interchange	3
84 10.1[2]	Progress the proposal for a rail freight depot at Hackney sidings	Direct Newton Abbot Teignmouth	2	1	2	To be confirmed	TDC, DCC	Creation of rail freight depot	3
85 10.2	Financially support additional local train services where justified	Direct All	1	4	4	Ongoing	DCC	Total amount of finance provided	3
86 10.2	Promote rail travel – through provision of publicity and timetables and through support for the Devon and Cornwall Rail Partnership	Indirect All	1	4	4	Ongoing	DCC	New Promotional information	3
87 10.2	Implementation of station access and improvements at Newton Abbot	Indirect Newton Abbot	1	2	2	To be confirmed	DCC	Improvements completed	3
88 10.2 [1]	Re-introduction of a passenger service to Heathfield	Direct Newton Abbot	1	1	1	To be confirmed	TDC, DCC	Passenger service started	3
89 10.3	Transportation of ball clay to Teignmouth Docks	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
90 10.4	Consider use of inland waterways to transport ball clay to Teignmouth Docks.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
91 10.5	Road traffic count data	Indirect All	1	4	4	Ongoing	DCC	Annual road count data submitted	3

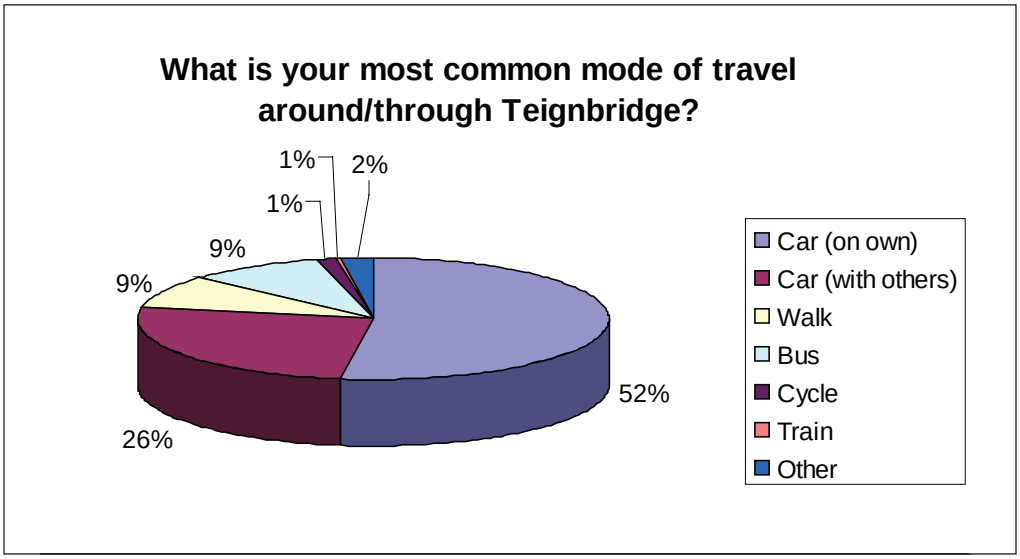
Publicity, Promotion and Information									
No. (Section No)	Measures	Direct or indirect impact on AQMA	Air quality Impact	Cost	Cost Benefit	Timescale for Implementation	Lead/Key Organisation	Monitoring	Ranking
92 11.1	Produce an Air Quality Strategy	Indirect All	1	4	4	December 2011	TDC E&SS	Strategy produced	3
93 12.2	Include the smoky vehicle hotline on Teignbridge District Council website	Indirect All	1	4	4	Completed	TDC E&SS	Website updated	3
94 11.3	Support national travel awareness events	Indirect All	1	4	4	Ongoing	TDC E&SS	No. of awareness days supported	3
95 11.4	Upgrade and promote Teignbridge District Council air quality website	Indirect All	1	4	4	August 2010	TDC E&SS	Upgraded website launched	3
96 11.5	Provide an information service on high pollution days within the district.	Direct All	1	4	4	December 2010	TDC E&SS	Upgraded website launched	3
97 11.6	Work in partnership with NHS Devon to promote good health to encourage walking and cycling	Indirect All	1	4	4	Ongoing	TDC E&SS	Form Partnership	3
98 11.7	Produce a variety of information media to raise public awareness of air quality issues.	Indirect All	1	4	4	Ongoing	TDC E&SS	Information produced	3

Other non-transport measures									
No. (Section No)	Measures	Direct or indirect impact on AQMA	Air quality Impact	Cost	Cost Benefit	Timescale for Implementation	Lead/Key Organisation	Monitoring	Ranking
99 12.1	Continue to monitor levels of NO_2 and review sites annually for suitability	Indirect All	1	3	3	Ongoing	TDC E&SS	Annual review completed and data reported to DEFRA	3
100 12.2	Compulsory purchase all properties within the AQMA with relevant public exposure	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
101 12.3	Continue to inspect permitted industrial processes.	Direct Newton Abbot Teignmouth Kingskerswell	1	4	4	Ongoing	TDC E&SS	No of premises, no within AQMAs, breaches of permit conditions	3
102 12.4	Provide information to residents on environmental issues relating to bonfires to discourage inappropriate burning	Indirect All	1	4	4	Ongoing	TDC E&SS	No of leaflets sent out with complaint letters	3
103 12.5	Improve home energy awareness and standards of home insulation and heating systems	Direct All	1	4	4	Ongoing	TDC H	No. installations and grants	3
104 3.13	Encourage Teignbridge suppliers to apply for the Defra 'Ecolabel'.	Indirect All	1	4	4	Ongoing	TDC SS&P	No. of suppliers signed up to Ecolabel	3
105 3.13	Introduce a green procurement code - environmentally friendly purchasing	Indirect All	1	4	4	April 2010	TDC SS&P	Green Procurement code launched	N/A
106 3.13	Incorporate sustainability considerations into tender evaluations	Indirect All	1	4	4	Ongoing	TDC SS&P	No. tenders considered	3

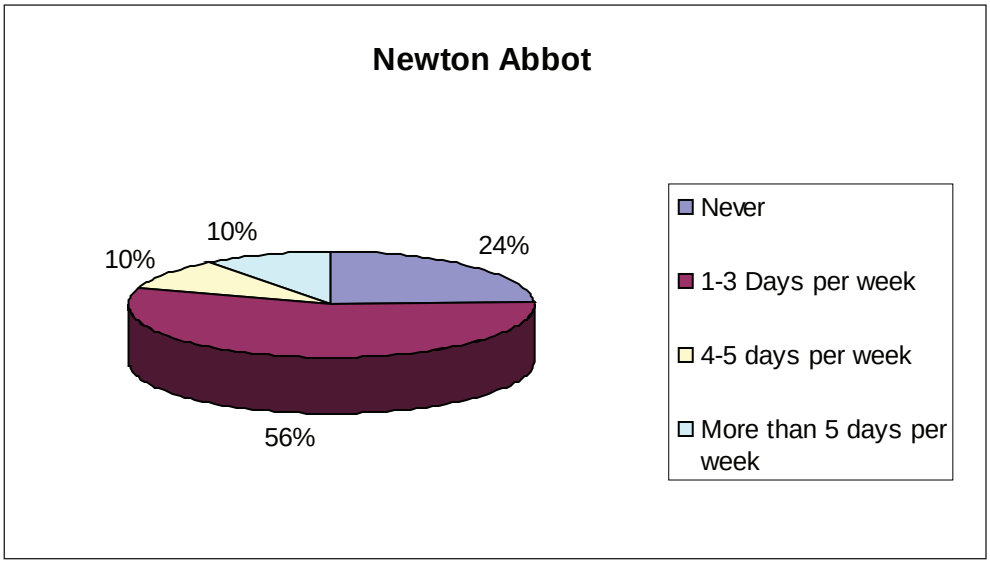
APPENDIX 1
RESULTS OF PUBLIC CONSULTATION 2007

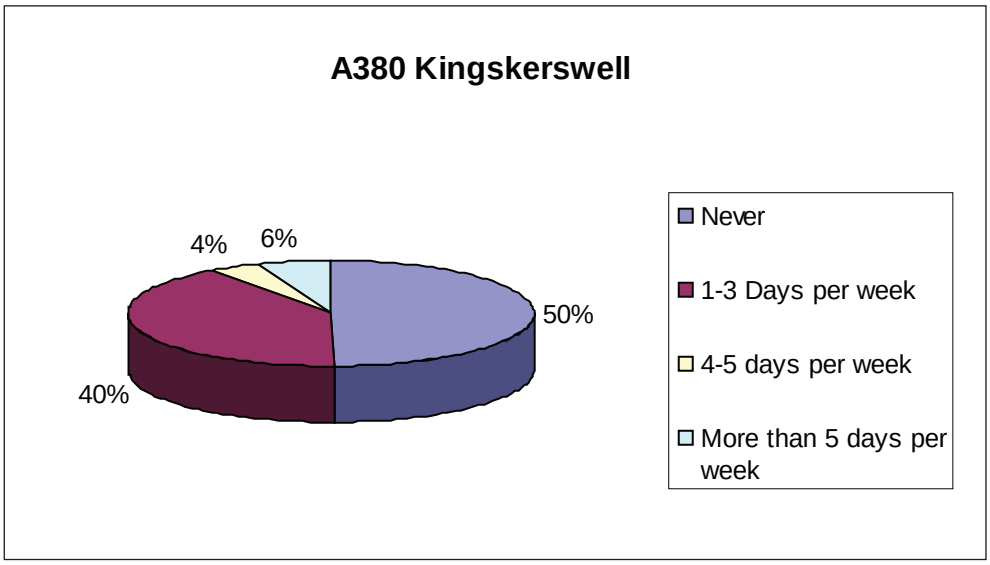


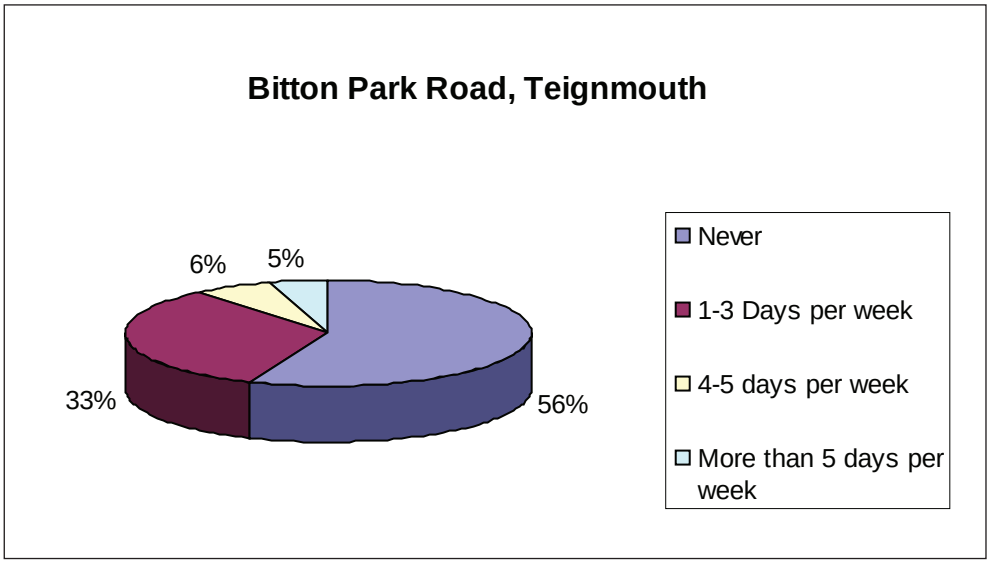


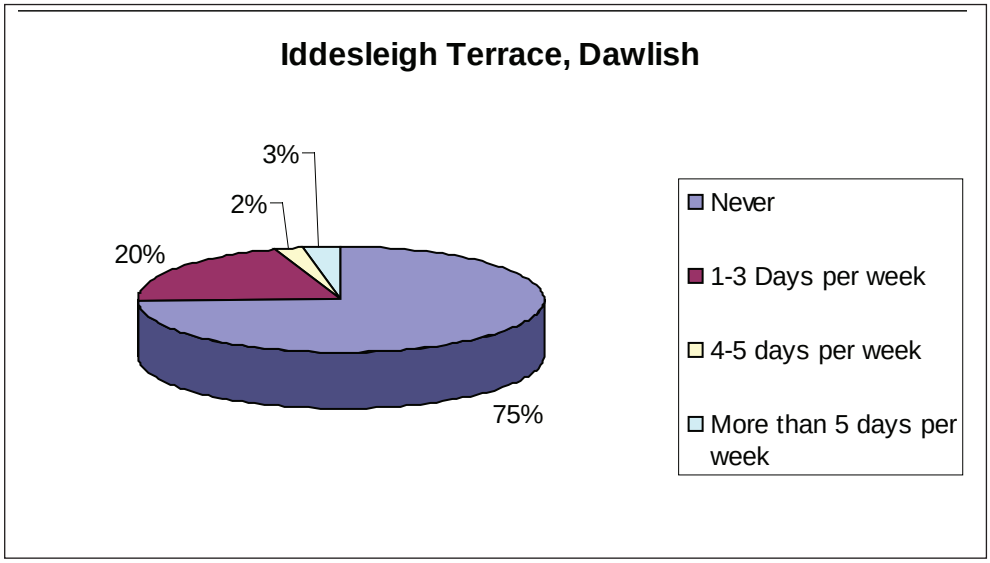


Does your most common journey by car take you through any of the following areas?

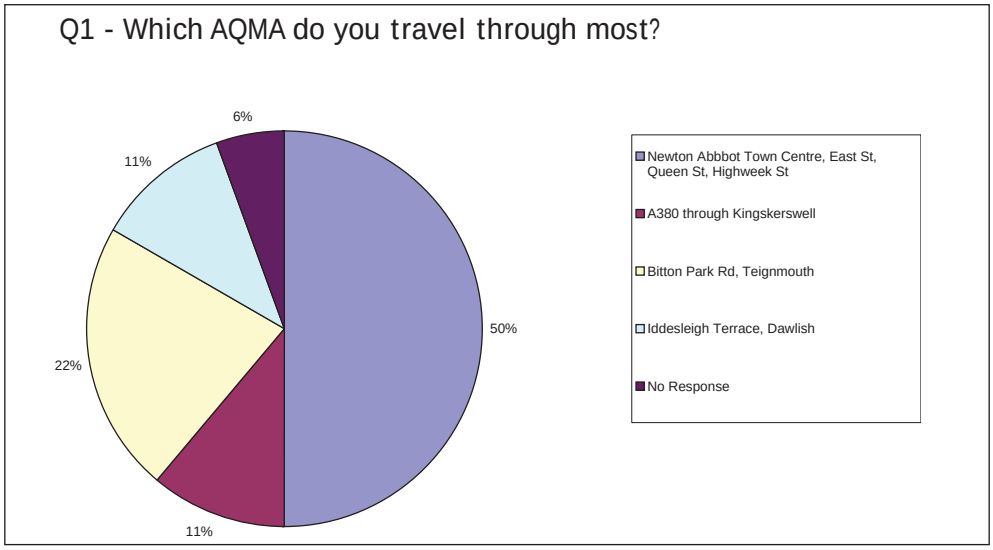


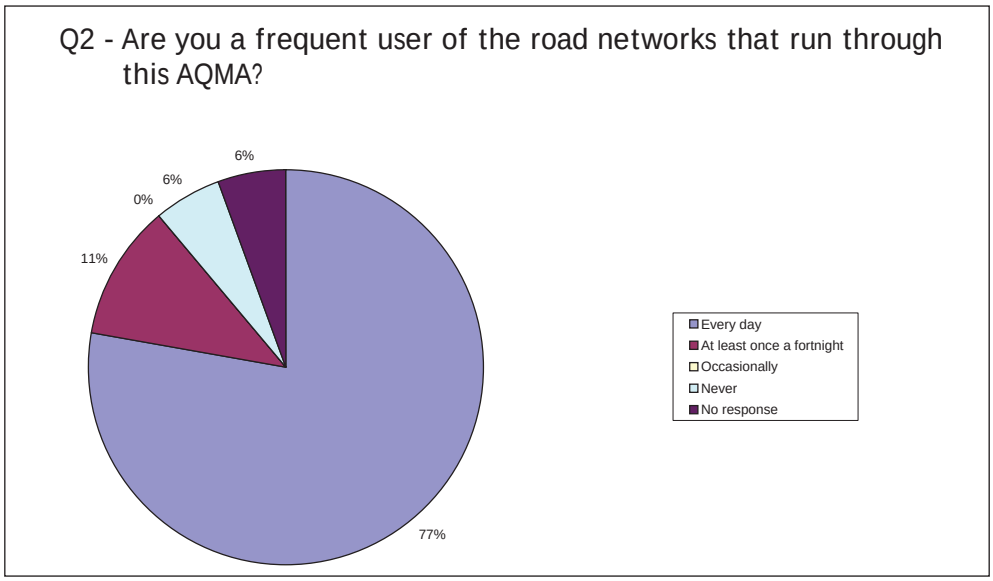


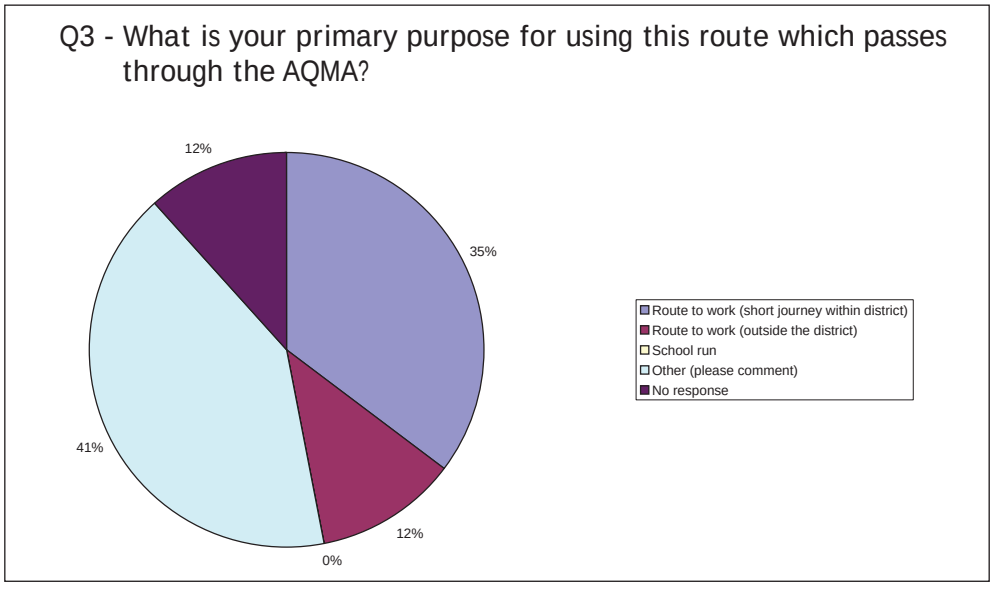



Iddesleigh Terrace, Dawlish
3%
2%
20%
75%
Never
1-3 Days per week
4-5 days per week
More than 5 days per week

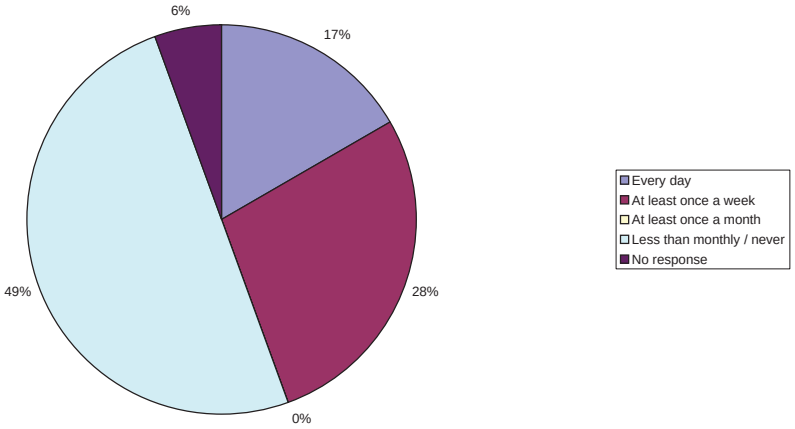
APPENDIX 2
RESULTS OF FULL CONSULTATION 2010



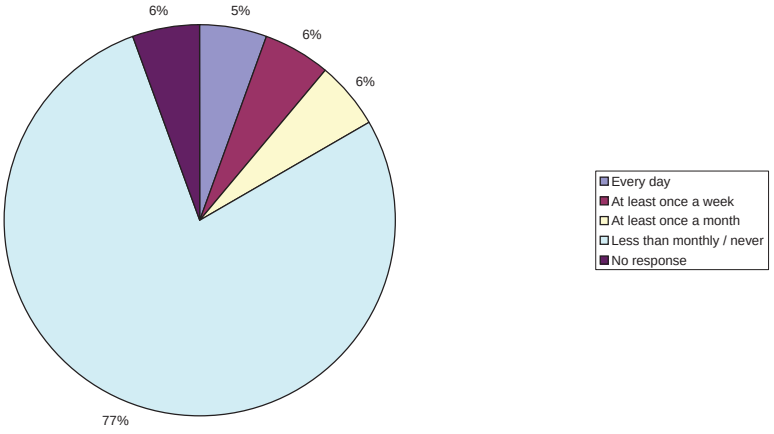




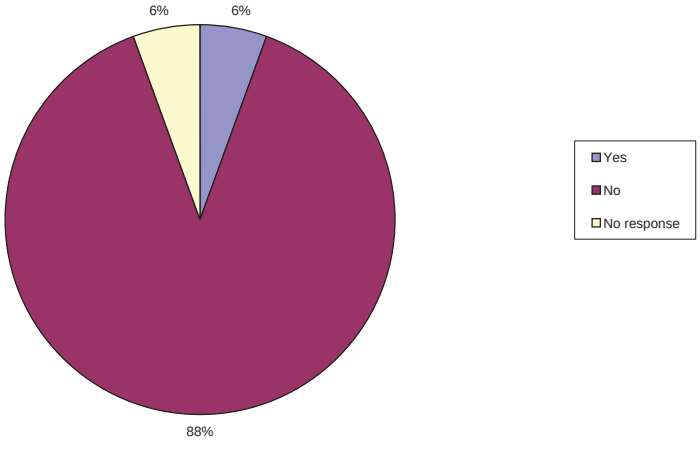
Q4 - How frequently do you use public transport within Teignbridge District?



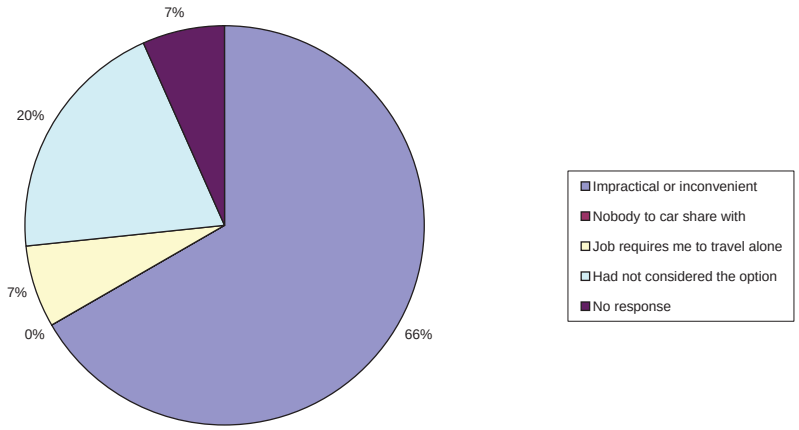
Q5 - How often do you use the cycle facilities provided within the district?



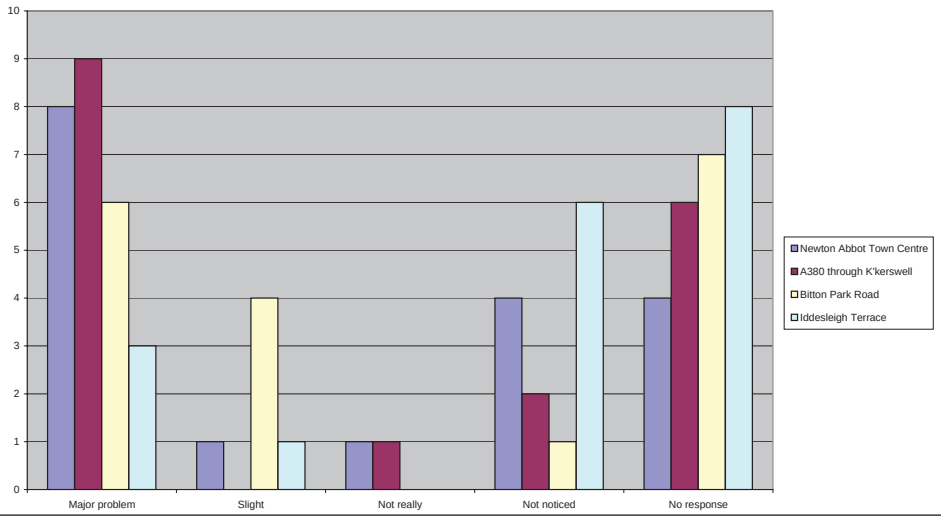
Q6 - Do you take part in any car sharing schemes?



Q7 - If no, for what reason?



Q8 - Do you consider air pollution in the AQMAs to be of concern?

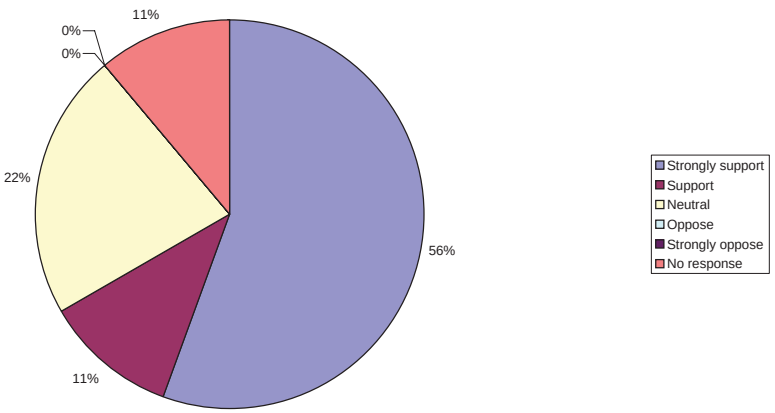


Q9 - What would encourage you to uses buses/bicycles/walk rather that using your vehicle?

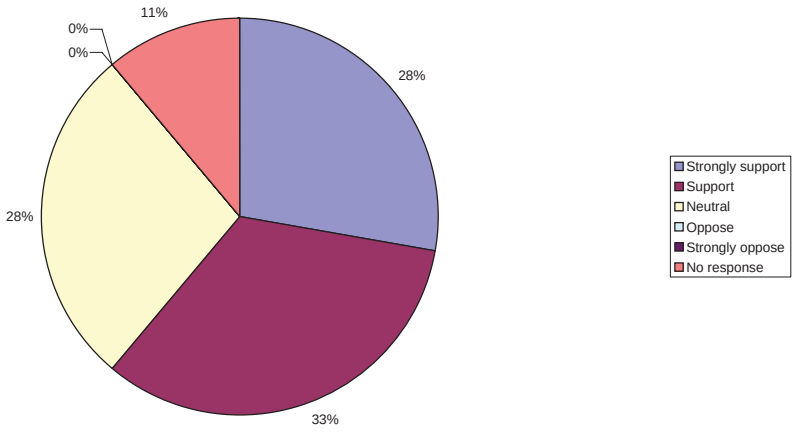
- Buses not near (Much physical activity impractical - age related).
- Only if we could get to our place of work without changes buses and get there on time.
- I work in Paignton. To get to work takes approximately 1 hour 16 minutes and costs £16.00. Cycling costs very little but still takes 55 minutes for the 11.5 mile trip (averaged out over the 6 months). Train when running was always more expensive.
- If bus fares were cheaper, more of them, I walk to work, but if I need to go out with my work the net of transport is not there.
- More frequent time table and better access to different places.

- I already use public transport
- I would love to cycle or walk to work but work in Exeter so its not possible! I may consider using the bus if there was a direct service to Sowton Industrial Estate without having to change in Exeter for the Park and Ride. Would also have to be a regular,
- I already use my bicycle as primary transport, however the volume of traffic often renders this impractical and actively unpleasant/ injurious to health.
- I use the train to work every day, but would the proposed cycle route from Teignmouth to Newton Abbot would be very handy for me.
- Easier to understand timetables and bus shelters and bus route into Brunel Road Industrial Estate.
- Reliability, more frequent, easier access and parking.
- Yes, but disablement prohibits.
- Smaller buses running more frequently.
- A decent bus service. The No. 2 is so unreliable. appointments missed, 40/50 minutes waiting at bus stop. Stagecoach has monopoly and could not care less. Am tired of complaining to them.
- I walk all the time only use car for shopping and long journeys.

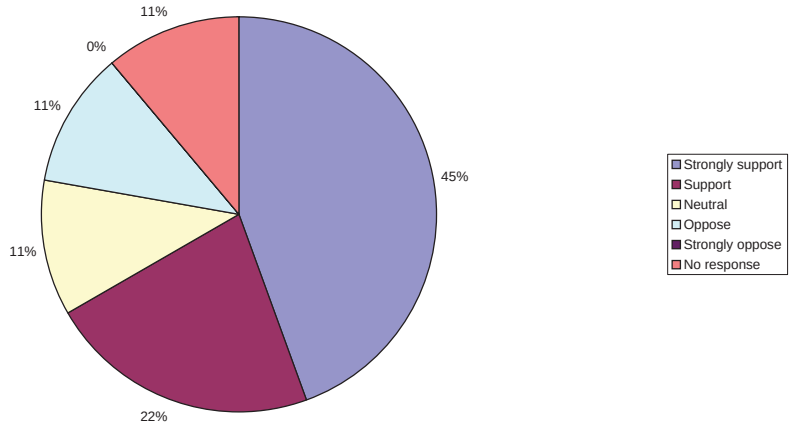
Q10 - Mini freight transfer depot for Newton Abbot?



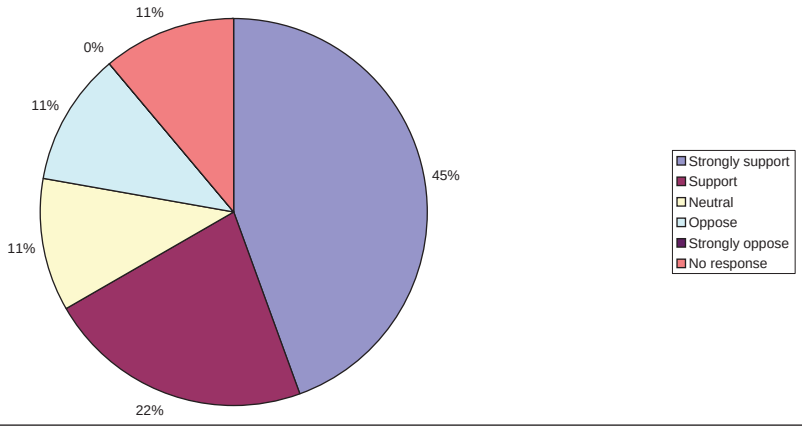
Q11 - Delivery time outside peak hours:



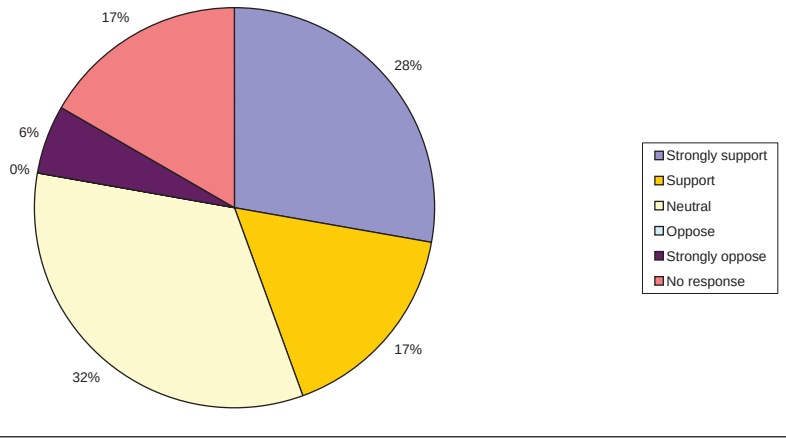
Q12 - Tighter emission standards for taxi's



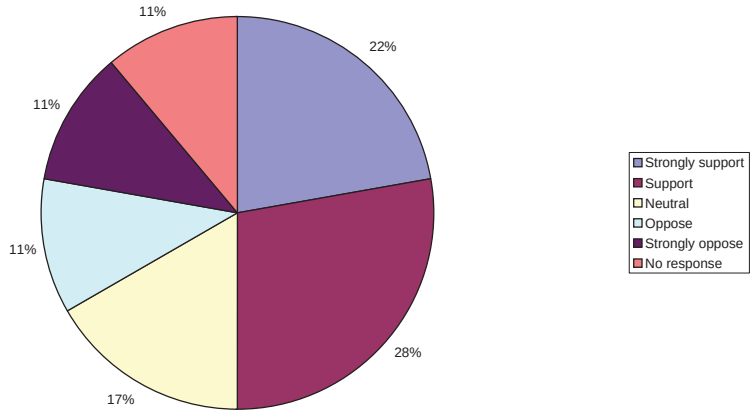
Q13 - Promotion & implementation of car clubs in Newton Abbot, Teignmouth, Kingskerswell & Dawlish:



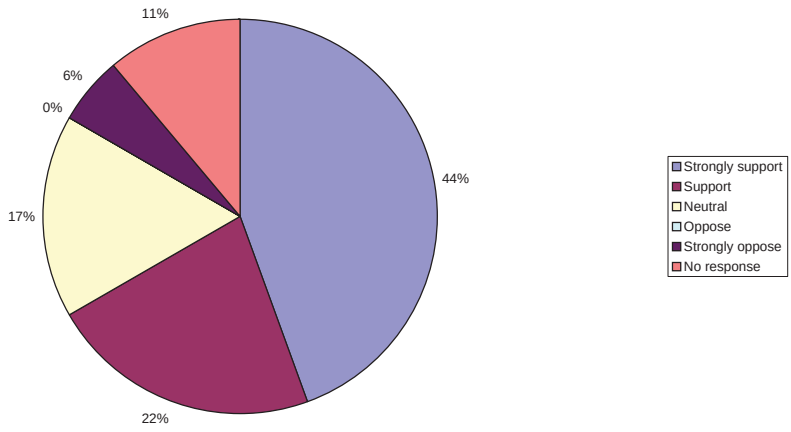
Q14 - SCOOT Traffic Systems within AQMAs:



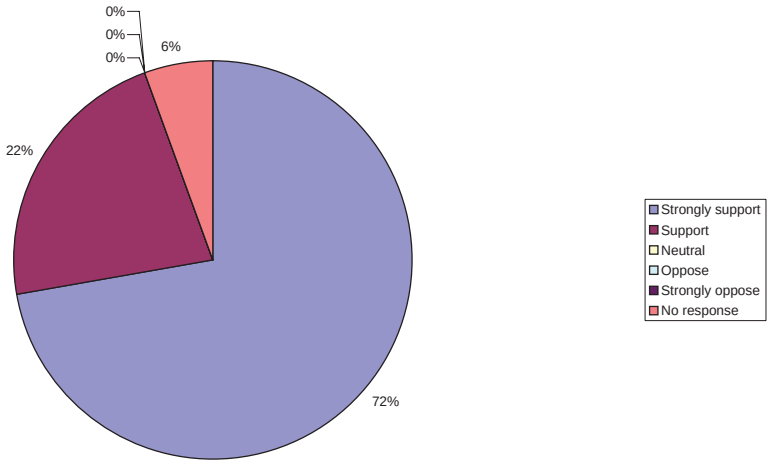
Q15 - Re-allocation of road space within Newton Abbot, e.g. bus lanes



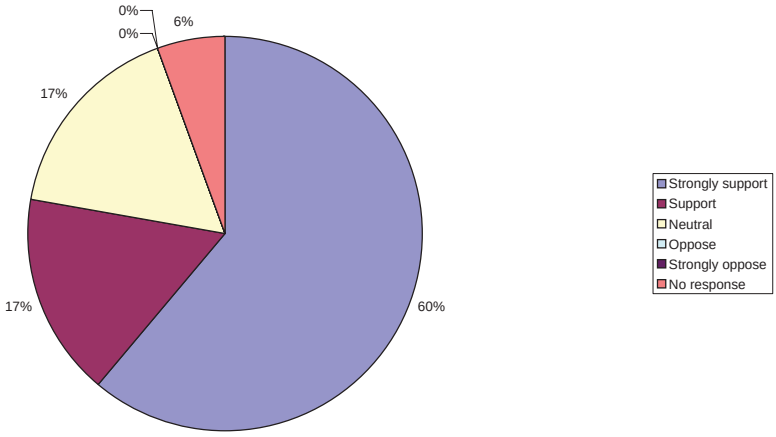
Q16 - Provide an information service to the public on high pollution days:



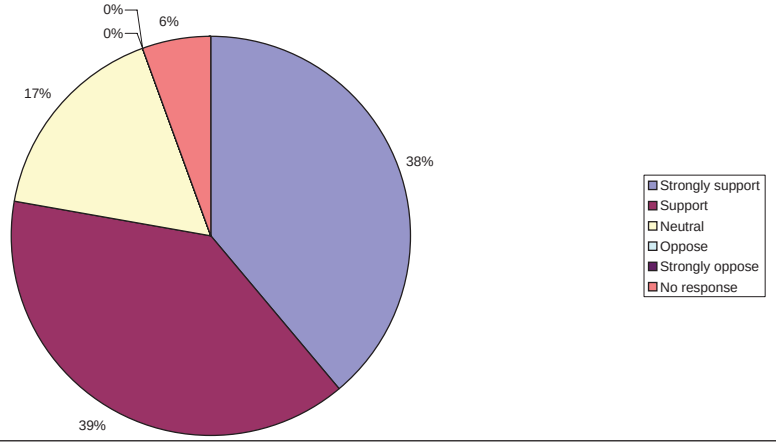
Q17 - Minimum bus emission standards within AQMAs



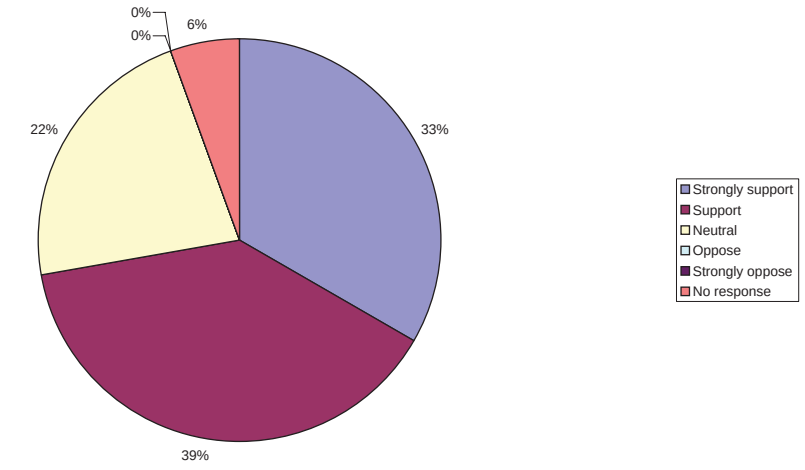
Q18 - Provision of real time bus information at bus stops:



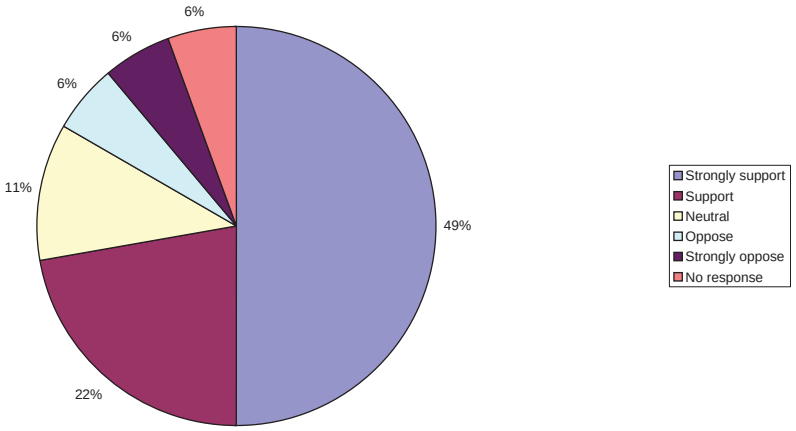
Q19 - Feasibility study into a road / rail freight depot at Heathfield:



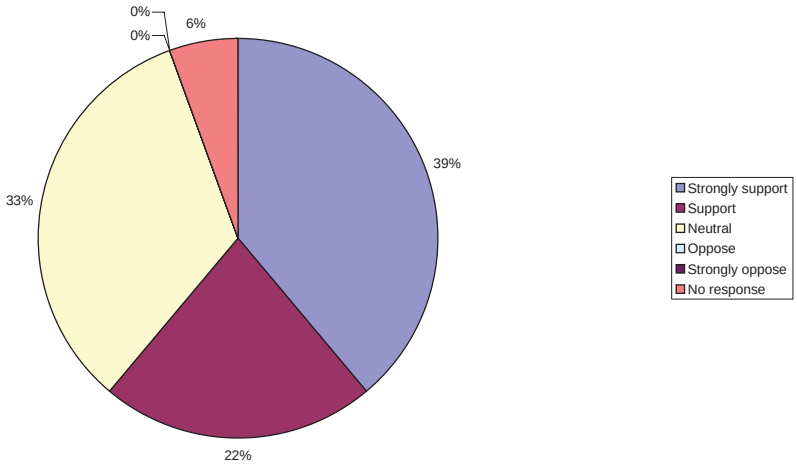
Q19 - Feasibility study into a rail freight depot at Hackney Sidings, Teigngrace:



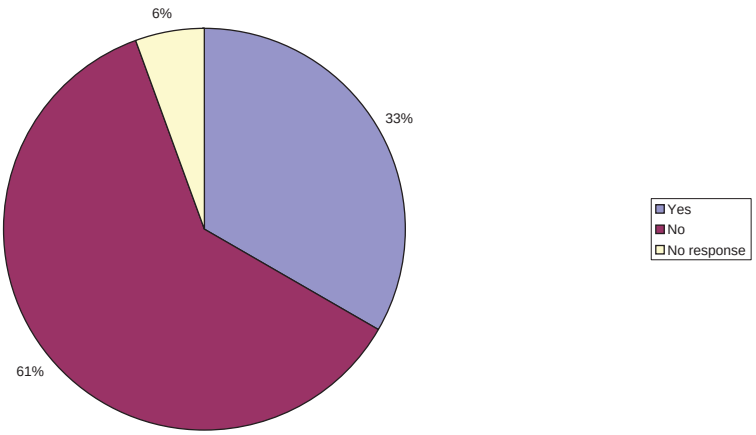
Q21 - Park & ride schemes:



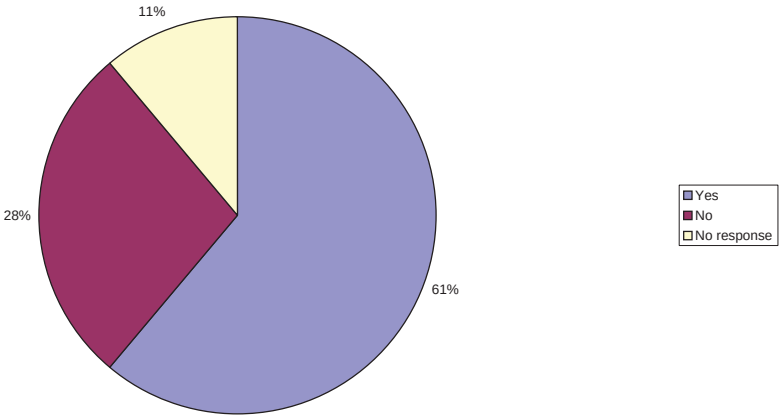
Q22 - Re-introduction of a passenger service to Heathfield:



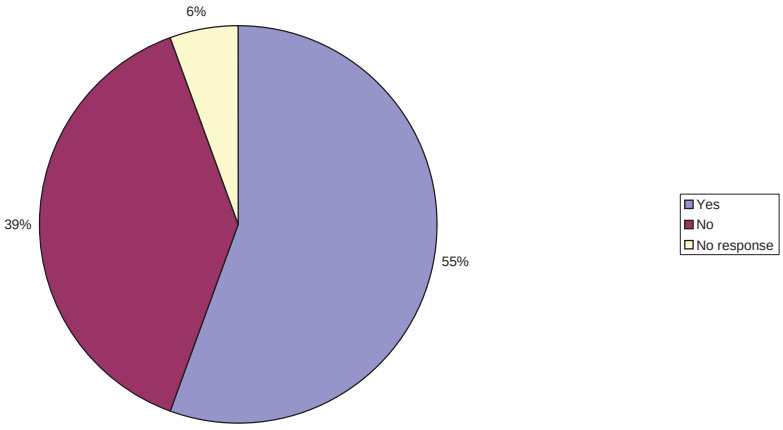
Q23 - Heavy goods vehicle ban in AQMAs?



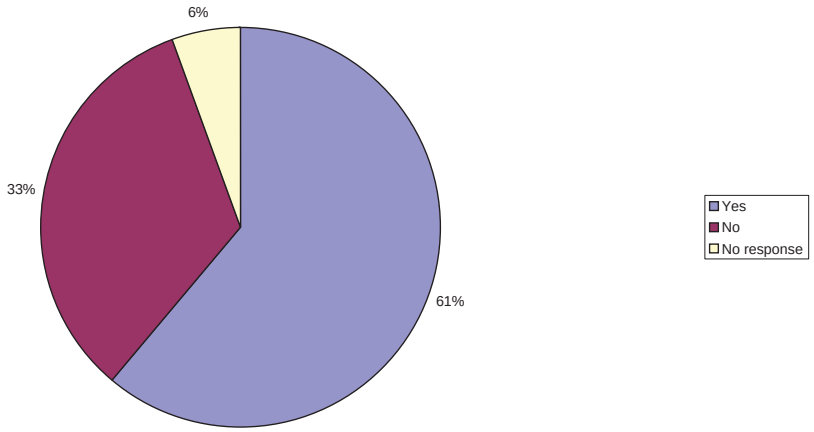
Q24 - The introduction of a Low Emission Zone in AQMAs:



Q25 - Road user or congestion charging schemes?



Q26 - Compulsory purchase of all properties within the AQMAs where the air quality objectives are exceeded:



APPENDIX 3
ENERGY EFFICIENCY PROGRESS TO DATE AUGUST 2008

The following energy saving measures have been introduced in the last year:-

Forde House Campus

1. A fully integrated building management system is now operating in Forde House, which allows computerised monitoring and control of heating and ventilation in the building
2. SAVA stats have been introduced to boilers at Forde House to reduce heating water unnecessarily by monitoring the temperature of return flows from central heating
3. Thermostatic control has been introduced into the Council Chamber to manage heating and temperatures.
4. New insulation to pipework on ground, first and second floor toiled areas
5. Old Forde House has been fitted with low energy light bulbs or high frequency fluorescents.

6. Thermostatic radiator valves have been replaced in Old Forde House
7. Fortic tank replaced with 3kw immersion heater in Old Forde House

Dawlish Leisure Centre

8. SAVA stat controls have been installed on boilers
9. Heat saver chemical pool cover installed
10. Inverter controls for pool circulating pumps installed
11. Sports hall re-lamped with triphospher tubes

Newton Abbot Leisure Centre

12. SAVA stat controls have been installed on boilers
13. Building Management System has been provided with night set back setting to save energy when the pool area is not in use
14. Chemical pool cover installed
15. Inverter control installed on 3 pool circulating pumps
16. High efficiency lighting units installed to replace old units
17. All switches labelled

Lido Pool

18. Chemical pool cover installed
19. Inverter controls installed on pool water circulating pumps

Buckfastleigh and Ashburton Pools

20. New high efficiency boilers have been installed

Decoy Wet Play Area

21. Toilets operate using recycled water harvested from wet play area for flushing

General

22. Recycling facilities provided for waste separation in Forde House complex, Leisure Centres and Forde Road Depot
23. Solar powered parking meters have been installed in car parks
24. Green envoy group has been established and have supported the following:

a. Recycling projects to make use of old waste paper bins run with local school children
b. World environment day marking of Climate Change awareness stand in Newton Abbot.
c. Gardening club proposal put together

d. Switch off energy campaign across all departments
e. Introduction of recycling system
f. Staff news items

25. The refuse vehicle fleet has been replaced by lorries with Euro V engines
26. Office individual printers have been replaced by Service Group printers
27. The hours of Decorative Lighting have been reduced by six weeks
28. Variable speed drives have been installed to ventilation and filtration units at leisure centres and swimming pools
29. Market hall boilers have been installed to ventilation and filtration units at Leisure Centres and swimming pools.
30. Market hall boilers are being replaced with high efficiency models at present
31. Annual water savings estimated to be 9,845 cubic metres which equates to 9,845,000 litres of water or 2,165,594 gallons
32. Introduction of electronic billing for energy
33. Some fridges requiring replacement have been replaced with 'A' rated models
34. Doubling of orders placed by email
35. An energy efficiency officer post has been established and recruitment process is underway

APPENDIX 4
AIR QUALITY STANDARDISED CONTRIBUTIONS FOR NEW DEVELOPMENTS

Developments within the AQMA:-

- For any developments of 10 or more residential units, £100 per dwelling unit;
- For any commercial schemes of 500m^2 and above, £10 per m^2;
- For any developments with proposed vehicle parking spaces, £50 per car parking space.
- For mixed use, contributions will be sought based on the combination of the individual elements of the development.

Developments outside the AQMA

- For any developments of 50 or more residential units, where the traffic statement or assessment shows an increase in the AADT as a result of the development on roads within an AQMA, £100 per dwelling unit;
- For any commercial scheme which meets the criteria for a Transport Statement or Assessment as detailed in the DfT 'Guidance on Transport Assessment', the difference in the AADT on any road through the AQMA as a result of the development will be charged at £16 per vehicle. The AADT needs to be verified and agreed by Devon County Council;
- For mixed use contributions will be sought based on the combination of the individual elements of the development.

GLOSSARY OF ABBREVIATIONS

%	Percentage
AADT	Annual average daily traffic flow (relating to traffic)
AQAP	Air Quality Action Plan
AQMA	Air Quality Management Area
AQO	Air Quality Objective
C&MS	Cleansing and Market Services
CO_2	Carbon dioxide
DCC	Devon County Council
Defra	Department for Environment, Food and Rural Affairs
Dft	Department for Transport
DNP	Dartmoor National Park
DVLA	Driver and Vehicle Licensing Agency
EDT	Economic Development and Tourism
ES	Environment and Safety Services
E&SS	Environment & Safety Services
EU	European Union
EWS	English, Welsh and Scottish Railway Ltd
FQP	Freight Quality Partnership
H	Housing Services
HGV	Heavy goods vehicles
LAA	Local Area Agreement
LAQM	Local Air Quality Management
LDD	Local Development Documents
LDF	Local Development Framework
L&DS	Legal and Democratic Services
LEZ	Low Emission Zone
L&GS	Leisure and Green Spaces
LGV	Light goods vehicles
LPAs	Local Planning Authorities
LTP	Local Transport Plan
m	Metres
m/s	Metres per second
MDDC	Mid Devon District Council
NAQS	National Air Quality Strategy
N/A	Not applicable
NSCA	National Society for Clean Air
NO	Nitric oxide
NO_2	Nitrogen dioxide
NO_x	Nitrogen oxides
O_3	Ozone
P	Planning Services
PCC	Plymouth City Council
PDPM	Planning, Design and Property Management
PG (03)	Policy guidance 2003
PG (09)	Policy guidance 2009
PM_{10}	Particulate matter less than 10 microns in diameter
PPG 13	Planning Policy Guidance 13: Transport
RPB	Regional Planning Bodies

RPG	Regional Planning Guidance
RSS	Regional Spatial Strategy
RTPI	Real Time Passenger Information
SCOOT	Split Cycle and Offset Optimisation Technique
SCR	Selective Catalytic Reduction
SHDC	South Hams District Council
SPD	Supplementary Planning Documents
SSCT	Strategically Significant Cities and Towns
SS&P	Shared Services and Procurement
TBC	Torbay Borough Council
TDC	Teignbridge District Council
TG (03)	Technical guidance 2003
UCC	Urban Consolidation Centre
$\mu g/m_3$	Micro-grams per cubic metre of air
VMS	Variable Message Signing
VOSA	Vehicle and Operator Services Agency

Environmental Control Team
Environment and Safety Services
Teignbridge District Council
Forde House, Brunel Road, Newton Abbot, Devon, TQ12 4XX
t: 01626215066 or e: envc@teignbridge.gov.uk