RYEDALE DISTRICT COUNCIL

# 2011 Air Quality Action Plan for *Ryedale District Council*

Consultation Draft

In fulfillment of Part IV of the Environment Act 1995
Local Air Quality Management

2011

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| **Report Reference number** | **RDC/LAQM/AP/2011/Consultation Draft** |
| **Date** | August 2011 |

# Executive Summary

The Malton Air Quality Management Area (AQMA) Order was designated by Ryedale District Council on 14 December 2009 (Ryedale DC, 2009). The Order relates to current and projected levels of nitrogen dioxide ($NO_2$) that breach, or are likely to breach, the nitrogen dioxide (annual mean) air quality objective of 40 µg/$m^3$, as prescribed by the Air Quality (England) Regulations 2000 (as amended). A map of the AQMA is shown below in Figure 1.2. The elevated levels of $NO_2$ are mainly due to road traffic emissions. This conclusion was supported by the findings of a Further Assessment completed in January 2011. The Council therefore has an obligation under the Environment Act 1995 to devise and implement measures in pursuit of improved air quality in the Malton Air Quality Management Areas.

This document contains the action plan for Malton AQMA. It presents an evaluation of the range of air quality improvement measures that have been considered. A number of measures have been identified for inclusion in the Action Plan. They range from a major junction improvement scheme to reduce the flow of traffic through the AQMA, to measures that seek to promote less polluting forms of travel, such as school travel plans and awareness raising. A number of other measures have been identified for further evaluation and possible inclusion in future revisions of the Action Plan. Certain other measures have been rejected as being inappropriate. A commitment to ongoing air quality monitoring and periodic reviews of the measures required to attain acceptable air quality form an important element of the Action Plan.

A final action plan will be published following a period of 12 week consultation period.

# Table of contents

## Appendices

**Appendix A** - A64 Brambling Fields Interchange Community Involvement Report

**Appendix B** - A64 Brambling Fields Interchange Impact of the Proposed Development on dust and local air quality

## List of Figures



## List of Tables

# 1 Introduction

Local air quality management (LAQM) forms a key part of the Government's strategies to achieve the air quality objectives under the Air Quality (England) Regulations 2000 and 2002. As part of its duties Ryedale District Council (RDC) has undertaken reviews and assessments and published reports of local air quality on a regular basis since 1999.

In 2009 a Detailed Assessment (Ryedale DC, 2009a) concluded that declaration of an Air Quality Management Area (AQMA) was necessary in parts of Malton because the annual mean concentration of nitrogen dioxide ($NO_2$) exceeded the relevant air quality objective (AQO) at various relevant receptor locations.

The Detailed Assessment Report and conclusions were accepted by DEFRA. A consultation exercise was then undertaken with the public and various other consultees on detailed proposals for the AQMA, including its boundaries, following which an Order was made designating the Malton AQMA.

This Air Quality Action Plan has been developed in accordance the Council's statutory duty under Section 84(1) of the Environment Act 1995, to identify measures to be taken to improve air quality in the AQMA in pursuit of compliance with the AQ O's.

The purpose of the Action Planning process is to identify through joint working with the North Yorkshire County Council (NYCC) and other relevant organisations, viable measures that will work towards achieving the air quality objectives within the Malton AQMA. The aim is also to encourage active participation in the achievement of action plan measures by consulting the local community and raising awareness of air pollution issues.

The Malton AQMA has arisen because of road traffic emissions. NYCC is the relevant transport authority for roads on the local network and will work jointly with RDC on transport measures within the district. County Councils have a duty under section 86 (3) of the Environment Act 1995 to put forward proposed actions which they themselves can implement to work towards meeting the air quality objectives in an AQMA. These measures are included within the air quality section of the Local Transport Plan (LTP).

The Action Plan reflects the relevant organisational responsibilities for actions within the AQMA and proposed measures detailed in Section 4 of the Action Plan identify such responsibilities.

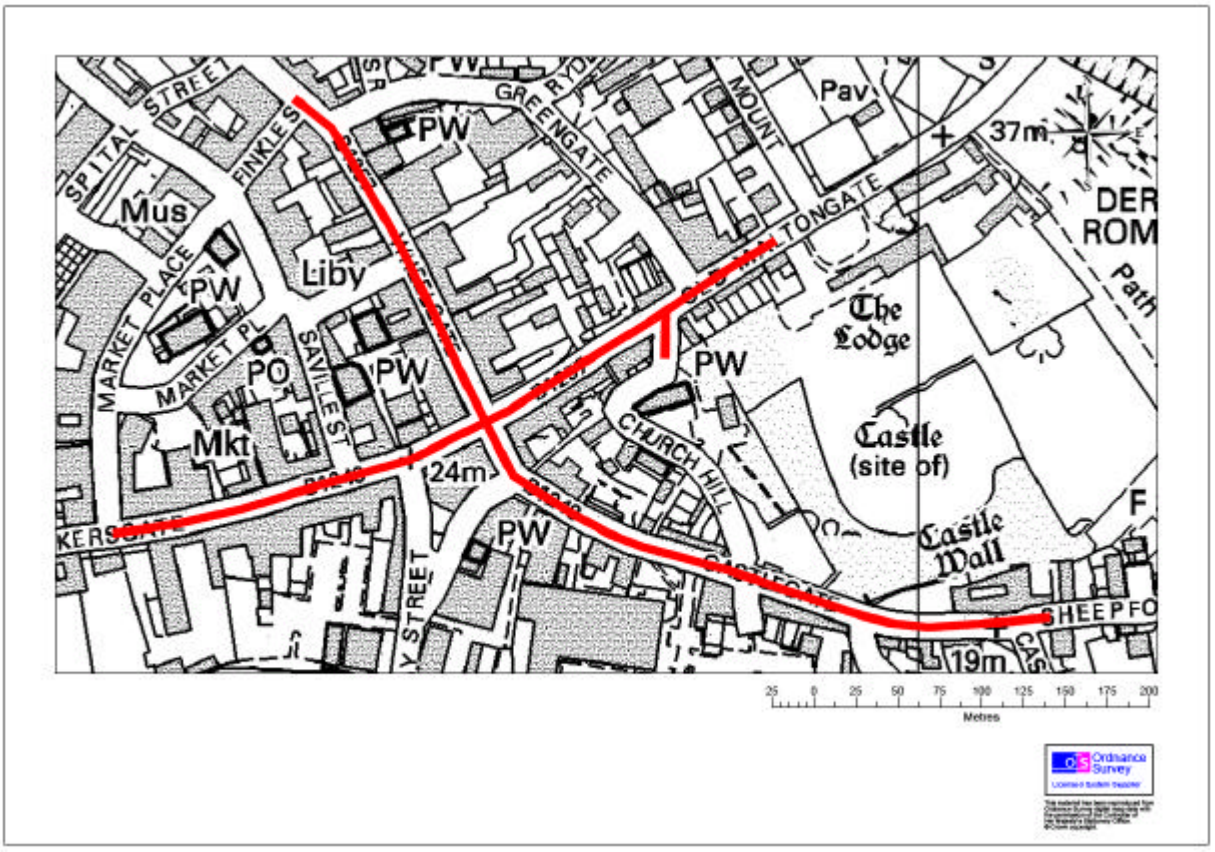
# 2 The Malton Air Quality Management Area and Further Assessment of Air Quality

The Malton Air Quality Management Area (AQMA) Order was made by RDC on 14 December 2009 (Ryedale DC, 2009b). The Malton AQMA relates to current and projected levels of nitrogen dioxide that breach, or are likely to breach, the $NO_2$ (annual mean) air quality objective of 40 µg/m$^3$, as prescribed by the Air Quality (England) Regulations 2000 (as amended). A map of the AQMA is shown below in Figure 1.

The Order identifies the area designated as an AQMA, which is described as the roads or stretches of roads listed in the Order and shown marked on the map. It includes all the properties, whether residential or commercial, with facades on these roads. The designated area includes the whole of these properties, i.e. buildings and associated open space within the same curtilage.

Although the Detailed Assessment indicated that the annual mean objective was not breached throughout the AQMA, it was decided that declaring a single area encompassing all the required locations was preferable to declaring multiple smaller AQMA's. As well as being more complex administratively, the designation of multiple AQMA's would have increased the risk of missing out areas of exceedence.

**Figure 1 - Map of Malton Air Quality Management Area**



Schedule 1 of the Order lists the roads and properties included in the AQMA:

- ***Castlegate (B1248) - between junction with B1257 and Sheepfoot Hill.***

On the North side of this road all properties from No. 1 to No. 47 Castlegate that have a façade on this road are included.

On the South side of this road all properties from No. 10 to No. 96 Castlegate that have a façade on this road plus Nos. 51, 52, 88 (Flats 1 to 6), 82 (Flats 1 to 4) Castlegate and No 4 Wells Lane are included.

- ***Yorkersgate (B1248) - between junction with B1257 and Market Street.***

On the North side of this road all properties from No. 2 to No. 42 Yorkersgate that have a façade on this road plus No. 2 Market Street are included.

On the South side of this road all properties from No. 1 to No. 39 Yorkersgate that have a façade on this road are included.

- ***Wheelgate (B1257) - between junction with B1248 and Finkle Street.***

On the East side of this road all properties from No. 4 to No. 64 Wheelgate that have a façade on this road are included. On the West side of this road all properties from No. 1 to No. 51 Wheelgate that have a façade on this road plus No 1-3, 2 and 5A St. Michael's Street are included.

- ***Old Maltongate (B1257) - between junction with B1248 and 20 metres west of junction with East Mount.***

On the North side of this road all properties from No. 31 to No. 47 Old Maltongate that have a façade on this road plus No. 76 Greengate are included.

On the South side of this road all properties from No. 2 to No. 82 Old Maltongate that have a façade on this road are included.

- ***Church Hill***

On the North side of this road Nos 1, 2 & 3 are included.

## Exposure of Relevant Receptors in the Malton AQMA

The properties within the AQMA are a mixture of residential and commercial occupancy. Many of the high street retail outlets and offices within the area have occupied flats above ground level. In total there are an estimated 160 occupied residential units in the AQMA. There are no schools, day nurseries, hospitals or residential care homes within the AQMA.

**Figure 2: Malton AQM – Castlegate (B1248) looking towards Malton Town Centre**

**Figure 3: Malton AQMA - Castlegate (B1248) approach to junction (Butcher Corner) with B1257**

**Figure 4: Malton AQM – Yorkersgate (B1248) approach to junction (Butcher Corner) with B1257**


## Air Quality Further Assessment

Since the Malton AQMA Order was made the Council has continued to monitor levels of $NO_2$ inside and within the vicinity of the AQMA and has, in accordance with obligations under the LAQM system, produced two Progress Reports and a Further Assessment Report.

A Further Assessment Report was published in January 2011 (Ryedale DC, 2011a). The aims of the Further Assessment were:

- to confirm that the decision to declare the AQMA was correct;
- to check that the extent (boundaries) of the AQMA remain appropriate; and
- to identify and quantify the principle pollution sources contributing to the AQO exceedences at locations within the AQMA (source apportionment).

The Further Assessment supports development of an Air Quality Action Plan by determining the improvements in air quality needed and allowing a targeted approach to improving local air quality through measures to be identified by the Action Plan.

The main conclusions of the Further Assessment were:

- The Malton Air Quality Management Area should remain because the latest monitoring data shows that levels of nitrogen dioxide are still likely to exceed the annual mean air quality objective (AQO) at a number of locations within the AQMA where there is public exposure.

- Monitoring results obtained after declaration of the AQMA confirm that the existing extents of the AQMA are appropriate.

- Exceedence of the annual mean $NO_2$ objective has been identified as being mainly attributable to emissions generated from road transport sources. There are no other significant sources within the locality of the AQMA, and as such, road traffic is identified as being the main source and should be the focus of measures to improve air quality in the AQMA.

- Source apportionment shows that local road traffic accounts for up to 77% of the total $NO_2$ annual mean concentration in the AQMA and that approximately 40% of this arises from emissions of oxides of nitrogen $NO_x$ ($NO + NO_2$) from Heavy Duty Vehicles (HDV's).

- The estimated reduction in emissions of $NO_x$ from local road traffic necessary in order for the $NO_2$ annual mean AQO to be met at all public exposure locations in the AQMA is at least 8.25%.

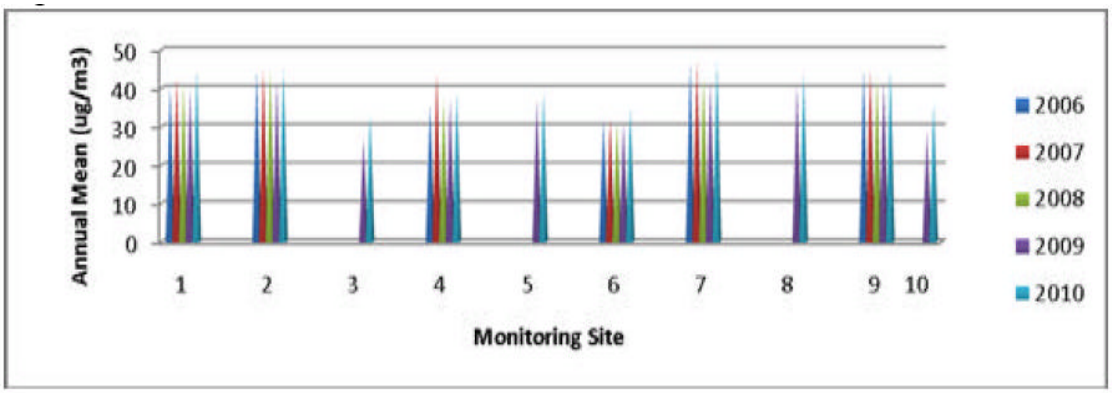
The Further Assessment Source Apportionment findings are particularly significant. Local road traffic was estimated to account for over 75% of the total annual mean $NO_2$ concentration in the Malton AQMA with HDV's responsible for up to 40% of traffic $NO_x$ emissions whilst making up less than 5% of traffic in the AQMA. The findings suggest that measures to reduce road traffic, including in particular HDV's, in the AQMA should achieve significant reductions in $NO_2$ concentrations.

The results of the Further Assessment have informed the development of the Action Plan allowing identification of the most appropriate measures for inclusion in the Plan to help bring about the most effective reduction in emissions and concentrations of $NO_2$.

The latest Progress Report, published in May 2011 (Ryedale DC, 2011b) considered the most recent monitoring results, which were not available when the Further Assessment was undertaken.

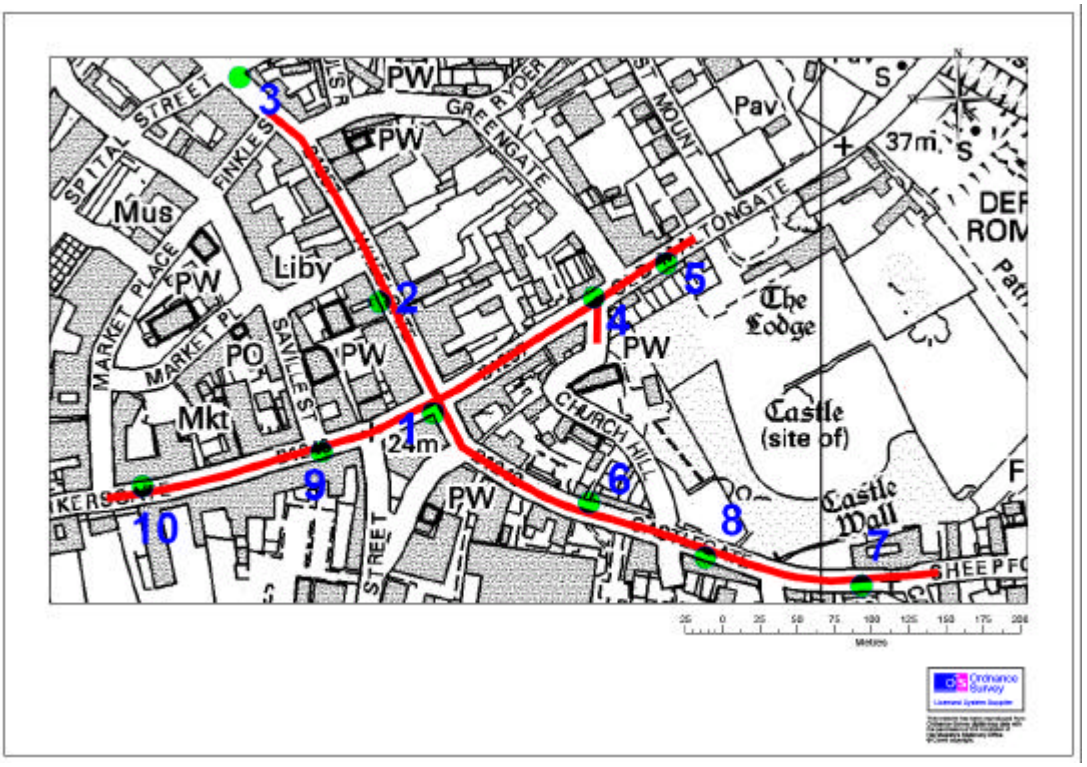
The Progress Report found that in 2010 annual mean $NO_2$ concentrations were higher than in the previous 12 months. At sites within the Malton AQMA the increase in concentrations ranged from 5 to 15%. However, looking back over the five year period 2006 to 2010 there was no discernable overall upward or downward trend in levels. This is illustrated by the trend chart in Figure 5 which shows annual mean levels at ten sites within or just outside the AQMA from 2006 to 2010.

**Figure 5: $NO_2$ Trend Chart 2006 – 2010**




RDC operates a network of nitrogen dioxide diffusion tubes at sites in Malton as well as several other sites elsewhere in the district. The location of the Malton sites are shown in Figure 6.

**Figure 6 - Map of $NO_2$ Diffusion Tube Monitoring Sites within and in proximity to the Malton AQMA**




The Further Assessment Report included a calculation of the required reduction in local road traffic $NO_x$ emissions to reduce $NO_2$ levels so that there are no breaches of the air quality standard in the AQMA. The calculation is based on the methodology described in Box 7.2 of the Technical Guidance LAQM.TG (09) (DEFRA, 2009a) and uses an Emission Factors Toolkit based on vehicle emissions factors. The toolkit allows users to calculate vehicle emissions for multiple road links based on vehicle fleet composition, traffic speeds and road type. The toolkit produces link by link

source apportionment covering vehicle exhaust emissions. The latest version of the toolkit, Version 4.2.2, was released in November 2010. It supersedes all previous versions and can be downloaded from:
http://www.defra.gov.uk/environment/quality/air/airquality/local/support/index.htm

Version 4.2.2 of the Emissions Factor Toolkit was applied in accordance with the user guide provided at:
http://laqm1.defra.gov.uk/documents/tools/Guidance_on_using_EFT_V4_2_300710.pdf
The minimum $NO_2$ reduction required was identified by determining the reduction in $NO_2$ required to achieve the AQO at the worst-case receptors within the AQMA. As the diffusion tube sites in the Malton AQMA are relevant receptor locations, the highest measured annual mean $NO_2$ concentration in 2009 was used.

Following a similar procedure, an estimate of the reduction in pollution required in the AQMA has now been calculated using the highest measured $NO_2$ concentrations for 2010. The results are shown below in Table 7. The results show that an estimated reduction in Road NOx emissions of ~24% is required based on the highest concentration (measured at Site 7).

For comparison purposes the table includes required reduction estimates based on monitoring results at the two sites with the highest measured annual mean NO2 concentration for the three years 2008, 2009 and 2010. The comparison shows year to year variability in the estimated required reduction in road traffic $NO_x$ emissions using this modeling technique and indicates a significant degree of uncertainty as to the reduction in road traffic emissions required to ensure that the $NO_2$ annual mean AQO is met consistently throughout the AQMA .

**Table 7: Calculation of Required Road Traffic NOx Reduction**

| Year | Relevant Exposure Location Site ID | Total $NO_2$ (µg/m3) Annual Mean | Total Background $NO_2$ (ug/m3) | Road NOx (µg/m3) (from $N0_2$ to NOx Conversion Spreadsheet) | Road NOx (µg/m3) Equivalent to Total $NO_2$ Concentration of 40 µg/m3 (From $NO_2$ to NOx conversion Spreadsheet) | Required Reduction in Road NOx (µg/m3) | Required %age Reduction in Road NOx |
|---|---|---|---|---|---|---|---|
| 2010 | 7 | 47 | 8.9017 | 102.3 | 77.74 | 24.9 | 24.3 |
| 2010 | 2 | 45 | 8.9017 | 94.94 | 77.74 | 17.2 | 18.1 |
| 2009 | 7 | 42 | 9.574289 | 85.86 | 78.78 | 7.08 | 8.25 |
| 2009 | 2 | 42 | 9.574289 | 85.86 | 78.78 | 7.08 | 8.25 |
| 2008 | 7 | 43 | 10.2469 | 92.16 | 80.54 | 11.62 | 12.6 |
| 2008 | 2 | 45 | 10.2469 | 100.4 | 80.54 | 19.86 | 19.78 |

# 3 Malton Air Quality Action Plan – Policy Development and Consultation

It is important for the success of Action Plans to have involvement of local stakeholders, including local residents in drawing up the Plan. The Action Plan has been drawn up for consultation with relevant environmental health, forward planning and transportation representatives from Ryedale District Council and North Yorkshire County Council.

Meetings and exchange of information with relevant stakeholders has occurred during the period since declaration of the Malton AQMA in December 2009, with the aim of agreeing a draft action plan to improve air quality in Malton.

### Air Quality Action Plan Steering Group

An Air Quality Steering Group was established and an inaugural meeting held on 10 June 2010 with representatives from Environmental Health, Development Control, Forward Planning and Highway present. The groups aim is to develop an Action Plan to reduce air pollution within the AQMA to comply with the air quality objective levels set by the legislation.

### Local Transport Plan and AQMA Action Planning

The 1995 Act makes special provision for County Council input to the Review and Assessment process and the preparation of any Action Plan. It recognises the crucial role of County Councils as highways authorities and the importance of traffic management and transport planning in achieving air quality objectives. It is particularly important, for example, that air quality Action Plans are properly co-ordinated with Local Transport Plans.

Defra has published Local Air Quality Management Policy Guidance (DEFRA, 2009b) which states that the integration of action plans with Local Transport Plans provides a systematic way of joining up air quality management and transport planning and that County and District Councils should work together in their action planning process. It will be important that these action plans seek not just to combat traffic growth, but seek ways of reducing existing traffic, either by volume or type to reduce the polluting effects of vehicles. There is also a need to ensure that action plans are integrated into the emerging Local Development Frameworks (LDFs).

It has long been recognised that elevated levels of $NO_2$ in Malton are largely attributable to emissions from road vehicles. Accordingly RDC and NYCC have worked closely over a number of years, including the period since declaration of the AQMA during which time the County Council has consulted on and completed Local Transport Plan (LTP) 3 (NYCC, 2011).

LTP 3 came into effect on 1 April 2011 and will cover the 5 year period from 2011-2016. It sets out the County Councils plans and strategies for maintaining and improving all aspects of the local transport system over the next five years. The close relationship between air quality issues and emissions from the road transport sector,

and the fact that measures to improve air quality on a local scale are closely related to the LTP, is recognised. Both authorities are committed to continuing to work together to ensure that LTP3 and RDC's Air Quality Action Plan are coordinated in order to reduce the polluting effects of road vehicles and secure the necessary improvements in air quality.

**Consultation**

NYCC, RDC and the Highways Agency (HA) are proposing a number of improvements to the highway network in and around Malton and Norton. These include a major scheme for the A64 Malton Bypass at the Brambling Fields junction, which has funding allocated as a result of financial commitments made by RDC, NYCC, the HA, and developer contributions. A Detail Design/Implementation Project Team was established for the scheme with representatives from the Highways Agency, NYCC, RDC and WSP. This scheme is at the core of the Action Plan, and further details are in Section 4 of this Action Plan.

A summary of the community involvement and consultation that has been undertaken regarding the proposed Brambling Fields Junction Scheme and a scheme of complementary measures to be funded by NYCC to ensure the improved junction will be fully utilised is contained in the Community Involvement Report produced to support the County Councils Planning Application for the Scheme. The report, which is attached to this Action Plan as a Supplementary Document, was drawn for NYCC by their consultants WSP Environment and Energy (WSP, 2011). The Report sets out details of the community involvement and consultation that has taken place in relation to the following:

**The Malton & Norton Traffic Management Strategy -** NYCC has in recent years carried out studies of the major market towns in North Yorkshire, including Malton and Norton, examining transportation arrangements, identifying traffic related problems and drawing up a preferred strategy based upon public consultation. Traffic Management Strategies (TMS) were prepared as part of the implementation of the first Local Transport Plan (LTP1), which ran from 2001 – 2006. Improvements to the junctions on the A64 at both ends of the Malton By-pass (Brambling Fields at the eastern side and Musley Bank at the west) were identified as a key issue in improving the transport arrangements of the two towns. The public consultation response from the Traffic Management Strategy strongly supported improvements to these junctions.

The Malton and Norton Strategy was completed in 2005 with a recommendation that work continue on securing the necessary funding and agreements for these strategic highway improvements to be delivered.

The County Councils second Local Transport Plan, LTP2 (2006 – 2011) provided for the preparation of **Service Centre Transportation Strategies (SCTS)**, including one for Malton & Norton. These are a development of the Traffic Management Strategies. They cover more extensive areas, the idea being to include the service centre and the surrounding area from where people travel to use the centre.

As part of the SCTS process public consultation is undertaken to gauge the opinion of those who live and work within the strategy area regarding the proposals being put forward. A wide consultation on the Malton and Norton SCTS was undertaken in the spring of 2011. Amongst the proposals included in the consultation were the Brambling Fields junction Improvement scheme and complementary measures.

The consultation was launched on 18 March 2011, with a widely advertised public exhibition staged over two days in Malton town centre. Residents and the local business community were invited to examine the various proposals, talk to Officers from NYCC, RDC, the HA and consultants WSP. Leaflets and response questionnaires were distributed at the exhibition, in libraries, the Council offices as well as being made available online for viewing and completion through the County Council's website. The consultation process closed on 18th April 2011. A total of 160 responses from members of the public were received as part of the consultation process and 127 of these, i.e. 80% of respondents, indicated their support for the Improvement to the Brambling Fields Interchange and complementary measures. Full details of the consultation questionnaire and responses made are contained in the Community Involvement Report attached to this Action Plan (Appendix A).

**The Ryedale Plan -** The Ryedale Development Plan - Draft Core Strategy was published by Ryedale District Council for consultation in summer 2010 (Ryedale DC, 2010a). The Core Strategy is a key part of the Ryedale LDF and sets out a long-term vision, objectives and strategy to guide public and private sector investment over the next 15 years. In particular it outlines the:

- expected levels of development that will take place in the District up to 2026;
- specific types of new development required to meet Ryedale's needs;
- sorts of changes that will happen in different locations;
- types of projects and investment needed to successfully deliver the strategy.

It is considered essential for achievement of the aims of the Air Quality Action Plan that the Local Plan recognises the importance of air quality in terms of the environmental impact of development and the need for sustainable transport measures. A revised publication draft of the Core Strategy is due to be presented to Elected Members for their consideration later this year. Following their decision a 6 week public consultation will take place.

**The Malton and Norton Strategic Transport Assessment (STA) -** Jacobs was appointed by Ryedale District Council to undertake a Strategic Transport Assessment (STA) (Ryedale DC 2010B) to help inform the Councils new Local Development Framework (The Ryedale Development Plan).

The purpose of the STA is to evaluate the traffic impacts associated with potential strategic development in Malton and Norton by 2026. It also considers the requirements of North Yorkshire County Council (NYCC) as the highway authority within the local area. A SATURN traffic model was used to evaluate the impact of the additional vehicles associated with the proposed strategic developments in Malton & Norton, the main objectives being:

- To test the impact of strategic development locations on the road network in Malton and Norton.

- To evidence the quantum of development that can be accommodated in Malton and Norton with out an unacceptable impact on the highway network.

- To identify any potential highway capacity problems with particular development scenarios.

- To identify deliverable highway infrastructure improvements that are likely to be required to accommodate development to go ahead without resulting in an unacceptable impact on the highway network.

- To identify other improvements for further investigation that may not be immediately deliverable, but could provide significant capacity improvements to the local highway network.

From the work undertaken in the STA, it is likely that a further strategic improvement in addition to Brambling Fields Junction will be required beyond the current plan period to accommodate future development. The STA demonstrates that there are a number of options available for this, including further junction improvements to the A64 and two significant sites put forward for potential development in Norton which involve new link roads. This additional development does not necessarily mean that there will be a significant adverse impact on air quality as new link roads have the potential to divert a significant amount of through traffic away from the town centre. For this plan period, the Council is not relying on a further strategic improvement beyond Brambling Fields. The STA identifies improvements to a number of internal junctions depending on the pattern of sites to be allocated in Malton and Norton. The allocation process will consider issues of air quality amongst a number of other issues to ensure the impact of new development is minimised.

**The Malton AQMA Air Quality Action Plan** - Under Schedule 11 of the Environment Act 1995, Local Authorities are required to consult the following on their draft LAQM Action Plan:

- the Secretary of State (DEFRA);
- the Environment Agency;
- the highways authority;
- in London, the Mayor (for London authorities only);
- all neighbouring local authorities;
- the county council (if applicable to English local authorities);
- any National Park authority;
- other public authorities as appropriate; and
- bodies representing local business interests and other organisations as appropriate.

The following is a list of statutory and non-statutory consultees that will be consulted:

Highways Agency
North Yorkshire County Council
The Secretary of State

The Environment Agency
Primary Care Trusts
Ryedale DC Councillors
Malton Town Council
Norton on Derwent Town Council
Local residents within and bordering the AQMA
Relevant local businesses, community groups and forums

The consultation will be publicised by a press release and the Action Plan will be made available to view and download on the RDC and NYCC websites, and to view at the Council Offices and local libraries.

The consultation will be undertaken for a period of 12 weeks and the Action Plan will be finalised in the light of consultees' responses.

# 4 Action Plan – Proposed Measures

This section of the report details the action plan measures that have been considered for improvement of air quality in the Malton AQMA. These have been divided into three categories:

- Measures that it is proposed are implemented;
- Measures that it is proposed are given further consideration to determine whether they should be implemented;
- Measures that at the present time are not considered appropriate for implementation.

**Overview**

The proposals to reduce $NO_2$ concentrations within the AQMA concentrate on the dominant sources of emissions, as identified in the Further Assessment, by seeking to reduce the volume of traffic passing through the AQMA.

LTP 3 identifies Butcher Corner- Malton / Norton as one of nine main locations across in North Yorkshire the County that experience regular significant congestion issues. Malton AQM is one of only three traffic pollution related AQMA's declared in North Yorkshire, an area that incorporates 7 District Councils. The other two AQMA's been declared by Harrogate Borough Council.

The Government's Network Management Duty requires local transport authorities to manage the road network in such a way as to secure ease of traffic movement. This applies to all roads in the County but is particularly important in congested areas. NYCC aims to minimise congestion and its impacts through improved traffic management. A key element of this will be through better coordination and timing of roadworks and other planned and unexpected events. NYCC will also consider measures such as altering signal timings to optimise capacity at junctions. Throughout LTP NYCC will undertake an ongoing programme of reviewing and optimising timings at signals across the County. Reducing the need to travel and managing travel demand can be achieved through various methods such as the localised delivery of services and encouraging multi-purpose trips. Additionally the need to travel can be significantly reduced through effective management of new land use developments and car parking.

Private car use can lead to large volumes of traffic on the roads. By encouraging people to use more sustainable modes such as walking and cycling for shorter trips and public transport for longer trips, traffic volumes can be reduced significantly and congestion can be avoided. In certain circumstances additional capacity may be required at specific locations to more effectively manage traffic congestion. Additional capacity can be provided by physical improvements, such as new routes and junctions and also through new and improved traffic signal and urban traffic management equipment and software.

The selection of proposed options has been based on professional judgment through the assessment of a number of considerations; including the costs and benefits of the options, and their feasibility and acceptability.

## *Measures Proposed for Implementation*

### Action 1 – A64 Brambling Fields Interchange – Junction Improvements

The proposed scheme will be undertaken by the Highways Agency under a funding agreement with NYCC and RDC. The A64 Brambling Fields Grade Separated Junction improvement, incorporating a new eastbound slip road is designed to provide an alternative route for traffic travelling on the A64 from the west to gain access to Norton and destinations to the south of Malton and Norton without having to travel through the Malton AQMA. Figure 8 shows a location plan of the scheme.

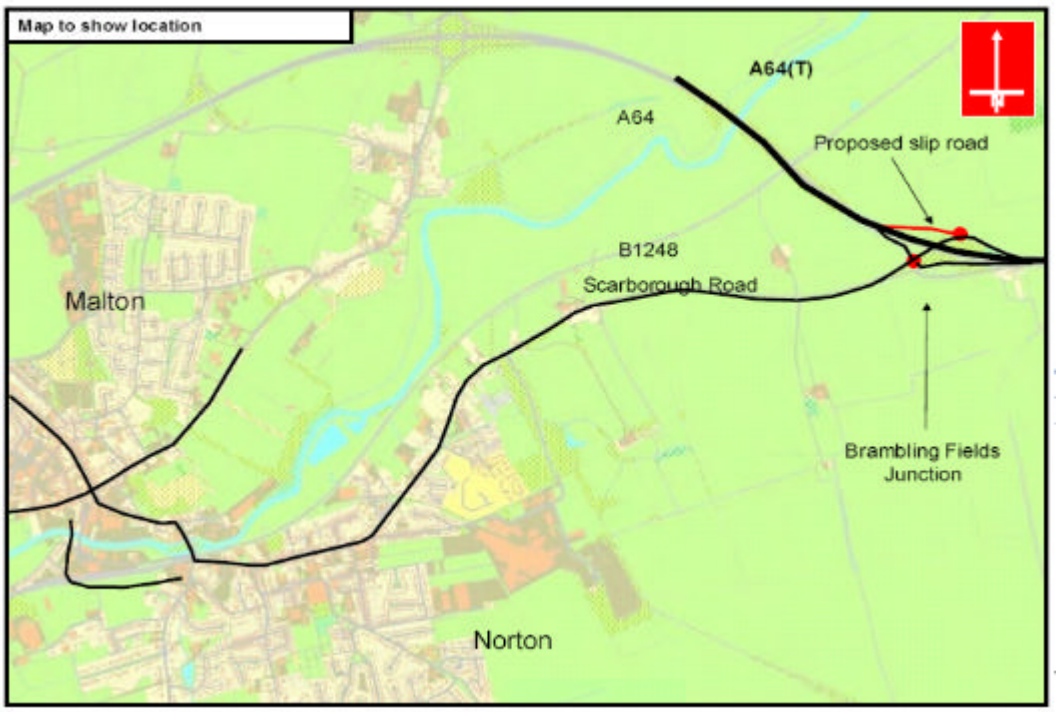
The junction improvements will also provide an alternative route for local traffic to travel between Malton and Norton allowing avoidance of the heavily congested Butcher Corner signalised junction in the AQMA and the railway level crossing between Malton and Norton, closure of which results in queuing back along Castlegate, through the AQMA, to Butcher Corner.

In conjunction with a number of related complementary measures, the scheme is expected to reduce traffic volumes passing through Butcher Corner by up to 33% and to reduce the number of vehicles queuing in the AQMA as they wait to travel through Butcher Corner and/or over the railway crossing.

Detailed design and environmental assessments have been undertaken and a planning application (NY/2011/0178/ENV) was submitted in the spring of 2011. The assessment of the environmental impact of the junction improvements was undertaken by WSP Environment & Energy. The assessment of air quality impact used the air pollutant dispersion model ADMS Roads to predict effects of the proposed development by comparing predicted $NO_2$ levels at specific relevant receptor exposure locations with and without the improvements (WSP, 2011b). The model uses road traffic flows on the local road network to predict pollutant concentrations at specific relevant exposure locations. Model verification was undertaken using measured annual mean $NO_2$ concentrations.

Traffic flows used in the assessment were obtained from a traffic model of Malton and Norton developed by Jacobs using the SATURN software package. Jacobs was commissioned by NYCC in 2008 to develop a validated model to test a number of proposed highway improvements across the local highway network. The model uses a base year of 2008 and includes all the major highway links and junctions in both Malton and Norton.

**Figure 8: Location Plan of Brambling Fields Junction Improvement Scheme**




The Air Quality section of the Impact Assessment, which also includes plans showing modelled receptor locations and tables of modelled $NO_2$ concentrations with and without the junction improvements, is attached to this Action Plan in Appendix B„

The predicted results show that the proposed development would cause both significant increases and decreases in concentrations of $NO_2$ due to the redistribution of traffic flows. The residual significance was predicted to be 'moderate adverse' to 'very large beneficial' for annual mean $NO_2$. These descriptors of air quality impact for changes to annual mean $NO_2$ concentrations are taken from guidance published by Environmental Protection UK (EPUK, 2010). The majority of receptors are predicted to experience a beneficial impact i.e. a reduction in $NO_2$ concentrations. The results of the local air quality assessment for annual mean $NO_2$ in relation to humans show that the number of exceedences of the annual mean objective reduces from six without the Proposed Development to two with the Proposed Development in place. Additionally, the results show that $NO_2$ concentrations are predicted to reduce at all receptor and monitoring locations within the Malton AQMA and any increases in concentrations predicted elsewhere would not cause any new exceedences of the annual mean objective for human receptors.

It should be noted that these predicted impacts are considered to be conditional upon a set of complementary traffic control measures to ensure that the improved junction is fully utilised. These complementary measures are detailed below under Action 2.

If planning approval is granted, construction is expected to commence in March 2012. It is estimated that construction will take about nine months and the estimated cost of the junction improvements is £5.5 million.

| | |
|---|---|
| **Objective** | To divert traffic away from Malton town centre reducing emissions of $NO_x$ in the Malton AQMA |
| **Responsibility** | Highways Agency, NYCC & RDC |
| **Air Quality Impact** | High |
| **Non Air Quality Impact** | Reduced noise, improved road safety |
| **Public Perception** | Likely to be positive |
| **Cost & Feasibility** | High cost. Feasible |

**Action 2 – Scheme of Complementary Measures**

The Malton and Norton Strategic Transport Assessment (STA) 2010, undertaken by Jacobs on behalf of Ryedale District Council to support the development of the Councils Local development Framework, modelled the traffic impact of the Brambling Field junction improvements using the SATURN software package. This testing indicated that the improved junction would not be fully utilised unless additional, complementary, measures were taken requiring and/or encouraging motorists to use the new route rather than driving their vehicles through the existing route. The STA identified a number of complementary measures, that after modification arising from consultation with NYCC, were included in the public consultation on the Malton and Norton Service Centre Transportation Strategy, described above in Section 3.

The following measures are considered necessary to reduce the number of vehicles passing through Butcher Corner, and to reduce the number of vehicles queuing in the immediate vicinity of the junction. The opportunity is also being taken to provide enhanced facilities for pedestrians and to improve the overall environment.

The total estimated total cost of the complementary measures (Actions 2a to 2d below) is £350,000.

**Action 2a – Heavy Duty Vehicle Restrictions**

It is proposed to prohibit heavy duty vehicle (HDV's) from crossing the railway level crossing on Castlegate (in both directions) and from using Railway Street and Norton Road. Exception from this ban would apply to specified vehicle categories, including vehicles requiring access to local businesses, emergency vehicles, buses and taxis.

The pollutant source apportionment exercise undertaken as part of the Malton AQMA Further Assessment indicated that although HDV movements constitute small proportion traffic in the AQMA they make a disproportionately high contribution to $NO_x$ emissions. It is therefore anticipated that the proposed HDV restrictions would result in a significant reduction in levels of $NO_2$ in the AQMA.

| | |
|---|---|
| **Objective** | To increase diversion of HDV traffic away from Malton town centre reducing emissions of $NO_x$ in the Malton AQMA |
| **Responsibility** | NYCC |
| **Air Quality Impact** | High/Medium |
| **Non Air Quality Impact** | Improved amenity - noise reduction, improved road safety |
| **Public Perception** | Likely to be positive |
| **Cost & Feasibility** | Low cost. Feasible |

**Action 2b – Castlegate Lane Reduction**

It is proposed to reduce from two to one the number of traffic lanes on the Castlegate approach to the B1257/B1248 junction at Butcher Corner. Currently the left hand lane is available for traffic heading straight ahead or left at the traffic signals with the right hand lane reserved for traffic turning right towards Old Malton,

The proposed reduction to a single lane is intended to restrict capacity and thus encourage motorists to use the alternative route via Brambling Fields junction to access Old Malton and destinations west of Malton and Norton, thereby reducing vehicle movements through the AQMA.

| | |
|---|---|
| **Objective** | To restrict traffic capacity in order to encourage motorists to avoid the town centre reducing emissions of $NO_x$ in the Malton AQMA |
| **Responsibility** | NYCC |
| **Air Quality Impact** | Medium |
| **Non Air Quality Impact** | Improved road safety |
| **Public Perception** | Likely to be mixed (pedestrians positive, motorists adverse) |
| **Cost & Feasibility** | Medium cost. Feasible |

**Action 2c One–Way Traffic Flow Restriction with Bus Contra Flow on Norton Road.**

It is proposed to introduce a one-way section on Norton road, which will be open to westbound (Norton to Malton) traffic only. The eastbound direction will be open for buses only. This is intended to prevent long distance traffic from using Railway Street (southbound) and Norton Road (eastbound) as a 'rat run'. Proposed traffic calming measures on Railway Street are intended to encourage motorists travelling from Norton to York to gain access to the westbound A64 via Brambling Fields rather than using Norton Road and Railway Street. This route, which links Malton and Norton, will be made more appealing for pedestrians and cyclists, with a dedicated cycle lane and enhancements.

This proposal is a modification of a proposal in the original STA for a complete all vehicle ban on Norton Road. The modification has arisen from an investigation by NYCC of alternatives to the all vehicle ban.

| | |
|---|---|
| **Objective** | To encourage motorists to avoid the town centre reducing emissions of $NO_x$ in the Malton AQMA |
| **Responsibility** | NYCC |
| **Air Quality Impact** | Medium |
| **Non Air Quality Impact** | Improved road safety and amenity, encouragement of cycling & walking. |
| **Public Perception** | Positive |
| **Cost & Feasibility** | Medium cost. Feasible |

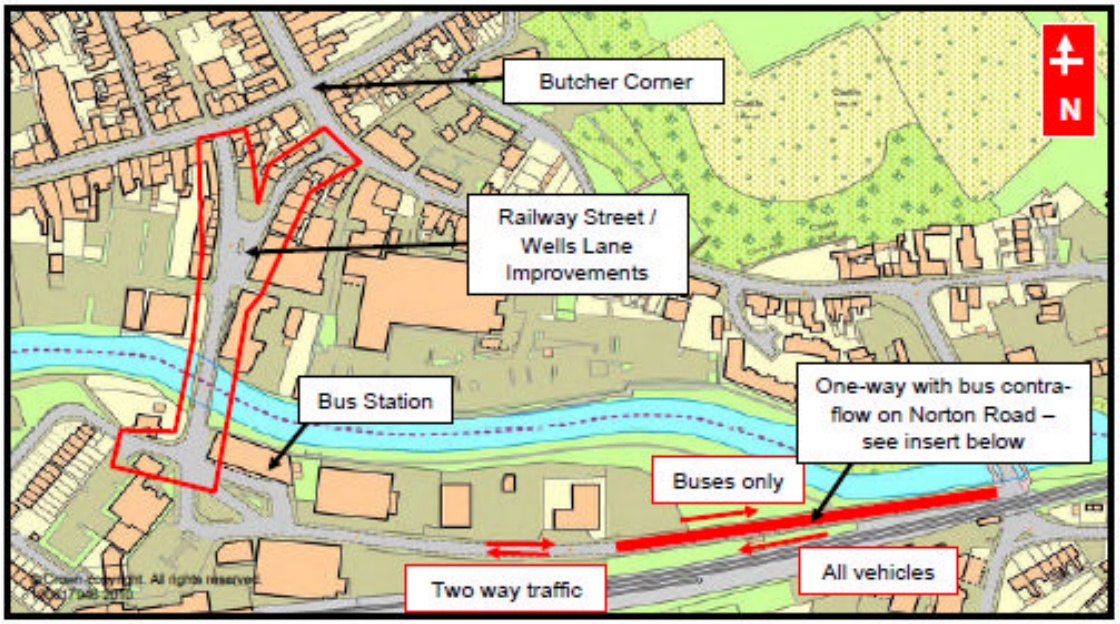
**Action 2d – A change in the signal timings at Butcher Corner Junction Traffic Lights**

It is proposed to introduce an additional pedestrian phase to the signal timings at Butcher Corner. As with measures 2b and 2c this is intended to restrict traffic capacity in order to encourage motorists to reroute onto the A64.

| | |
|---|---|
| **Objective** | To restrict traffic capacity in order to encourage motorists to avoid the town centre reducing emissions of $NO_x$ in the Malton AQMA |
| **Responsibility** | NYCC |
| **Air Quality Impact** | Low/Moderate |
| **Non Air Quality Impact** | Improved pedestrian safety |
| **Public Perception** | Likely to be mixed (pedestrians positive, motorists adverse) |
| **Cost & Feasibility** | Low cost. Feasible |

**Figure 9: Actions 2a, 2b & 2d, Complementary Traffic Measures**


**Figure 10: Action 2c, Complementary Traffic Measures**




Changes in traffic flows through Butcher Corner Junction as a result of Action Plan Measures 1 and 2a-2d can be predicted using the SATURN traffic model.

For example Table 11 below details predicted changes in annual average daily traffic flows (AADT) that would arise from the measures if they were in place in 2012.

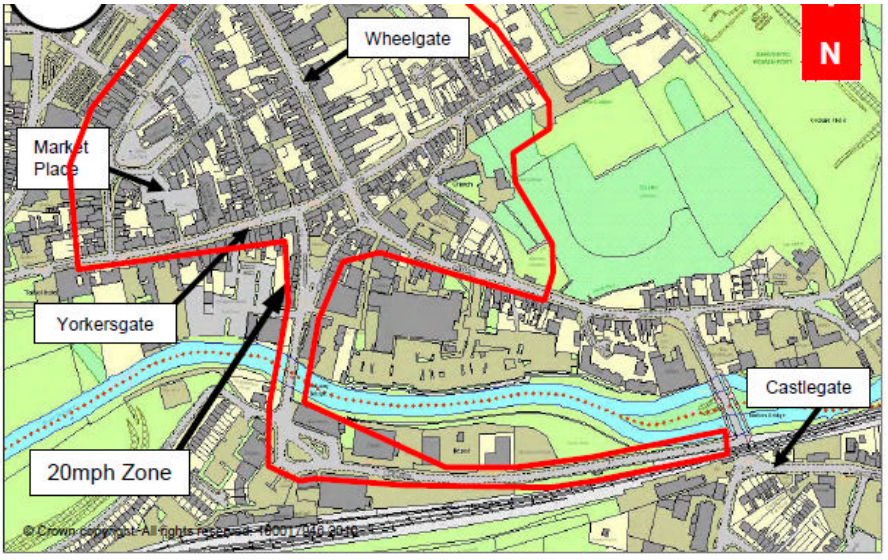
**Table 11: Predicted Changes in Butcher Corner Junction Traffic Flows arising from Action Plan Measures 1 & 2a-2d.**

| | Without Action Plan Measures | | With Action Plan Measures | | Difference | |
|---|---|---|---|---|---|---|
| **Road** | **All Vehicles AADT** | **HGV AADT** | **All Vehicles AADT** | **HGV AADT** | **All Vehicles AADT** | **HGV AADT** |
| Yorkersgate? | 4212 | 65 | 5312 | 151 | 26% | 132% |
| Yorkersgate? | 4840 | 191 | 2163 | 169 | -55% | -12% |
| Castlegate? | 7320 | 191 | 4473 | 8 | -39% | -96% |
| Castlegate? | 8776 | 214 | 8128 | 13 | -7% | -99% |
| Wheelgate? | 7148 | 253 | 3209 | 85 | -55% | -66% |
| Wheelgate? | 5125 | 109 | 2663 | 78 | -48% | -28% |
| Old Maltongate? | 4033 | 55 | 1823 | 104 | -55% | 89% |
| Old Maltongate? | 3972 | 50 | 1863 | 88 | -56% | 76% |
| **Totals** | | | | | | |
| **In?** | **22713** | **564** | **14817** | **348** | **-35%** | **-38%** |
| **Out?** | **22713** | **564** | **14817** | **348** | **-35%** | **-38%** |

## Action 3 – Town Centre 20 mph Speed Restriction Zone

The SCTS includes a proposal to establish a zone covering most of Malton town centre (including the entire Malton AQMA) and Commercial Street in Norton where a blanket road speed limit of 20 mph would apply. The proposed area is shown below in Figure 12.

**Figure 12: Proposed Town Centre 20 mph Zone**




Although this proposal was originally included in the 2005 Malton Transport Management Strategy with the intention of improving road safety, it is considered that its introduction would encourage motorists to avoid driving through the town centre thereby reducing emissions.

Local authorities can set speed limits by making Orders under the Road Traffic Regulation Act 1984. Local highway authorities no longer require the consent of the Secretary of State to introduce 20 mph zones or 20 mph speed limits.

Reducing maximum speeds is likely to do more to improve flow and capacity on congested roads outside towns and cities. The effect of lower traffic speeds on emissions in Malton town centre are uncertain but it is considered that this measure still be of benefit overall by encouraging more motorists to avoid taking a route through the town. By creating a safer environment for pedestrians and cyclists it may also encourage these modes of travel. Permanent 20 mph zones and speed limits would improve road safety but require engineering measures or the constraints of an existing road layout to ensure compliance.

| | |
|---|---|
| **Objective** | To encourage motorists to avoid the town centre, to encourage non-polluting transport modes by creating a safer environment reducing emissions of $NO_x$ in the Malton AQMA |
| **Responsibility** | NYCC |
| **Air Quality Impact** | Low |
| **Non Air Quality Impact** | Improved road safety/reduction in accidents |
| **Public Perception** | Likely to be positive |
| **Cost & Feasibility** | Low cost. Feasible |

**Action 4 – Travel Plans and Smarter Travel Choices**

A Travel Plan is a general term for a package of measures tailored to the needs of an organisation to introduce greener, cleaner and sustainable travel choices and reduce reliance on cars.

Travel Plans and travel awareness campaigns aim to reduce the negative impacts of car journeys, particularly single occupancy vehicle travel, through initiatives that lessen their impact and encourage modal shift e.g. car sharing, and encouraging use of alternatives such as public transport, cycling and walking. This can be helped by incentives such as providing cycle parking, showers and changing facilities in the workplace, flexible working arrangements such as teleworking and discounted bus and train tickets. Travel Plans can be extremely cost-effective in reducing levels of car use. To have widespread impact they require significant resources and continued promotion if the benefits are to be sustained. This is recognised in the Governments increasing promotion of 'soft-measures' or 'Smarter Choices' as they are commonly referred to. With significant amounts of investment and continued application of these campaigns it has been suggested (by DfT-sponsored research) that up to 10% of current car journeys could be switched to more sustainable modes.

Research published in 2004 'Smarter Choices – Changing the Way We Travel' provided evidence of the impact of 'Smarter Choice' measures (Cairns et al). These measures include workplace and school travel plans, personalised travel planning, public transport information and marketing, travel awareness campaigns, car sharing, car clubs, teleworking and teleconferencing, cycling and walking. Where Smarter Choice measures are implemented within a supportive policy context (for example, re-allocation of road capacity, improvements to public transport service levels or

cycle networks), they can be effective in facilitating choices to reduce car use and offer good value for money.

Ryedale DC and NYCC are committed to trying to minimise the impact of business and commuter travel by their employees. Travel for business purposes will be controlled through promoting car sharing, home working and embracing technology such as video conferencing. The use of public transport, walking and low carbon vehicles will be encouraged and the benefits of these types of transport will be promoted.

As well as individual travel choices RDC and NYCC will try to influence businesses by encouraging them to produce and implement Business Travel Plans. This will especially be the case when businesses submit planning applications for major new or expanded development. The Planning Authorities will be encouraged to require that all new developments help to support sustainable transport options.

NYCC requires certain new developments to provide a travel plan, demonstrating how travel demand can be minimised and how sustainable travel to and from the site can be encouraged. Schemes and initiatives identified through this process will normally be funded by developers, although there may be occasions where NYCC will contribute to an initiative.

Travel plans are not limited to the provision of new schemes from new developments. In LTP3 the encouragement of larger employers to develop travel plans and support staff to travel more sustainably is identified as an intervention that NYCC can influence. NYCC will continue to encourage existing businesses to develop travel plans and by providing assistance to businesses through travel awareness and behavioural change training.

NYCC will seek to provide the infrastructure (pavements, signal controlled crossings, cycle routes, bus stops etc.) and services (bus services) that allow people to choose alternatives to driving.

NYCC is currently looking at how it might encourage people to use low carbon vehicles (electric / hybrid cars etc.) This work is in its early stages but is likely to include measures such as the provision of charging points for electric vehicles or special parking places. The County Council is already a partner in a regional 'Plugged in Places' bid for funding to provide electric car changing at key points across the county.

| | |
|---|---|
| **Objective** | To reduce the number of car journeys by increasing the use of more sustainable forms of transport |
| **Responsibility** | NYCC, RDC, Employers and Developers |
| **Air Quality Impact** | Medium |
| **Non Air Quality Impact** | Reduction in car journeys, reduced accidents, improved health |
| **Public Perception** | Likely to be positive |
| **Cost & Feasibility** | Medium cost, ongoing. Feasible |

**Action 5 - School Travel**

It is recognised that parents taking children to and from by car causes localised congestion and contributes to increases in road traffic, particularly in the morning and afternoon peak periods

The decision to take children to school by car is often automatic. Throughout LTP3 NYCC will continue to challenge this and promote active travel choices to children, young people and their parents. Getting to school, particularly primary schools, is often practicable without use of a private car. NYCC can help to ensure that the opportunity to walk or cycle to school is achievable and more attractive option through promotion and development, where possible, of safe and convenient routes to school. NYCC will also continue to provide home to school transport for children who live too far away (based on the legislation) from their school to safely walk or cycle there. Due to the remote nature of many communities in the Ryedale, as elsewhere in North Yorkshire, many children have no other option than to travel to school by bus or car.

In LTP 3 NYCC has identified the encouragement of schools to undertake active travel planning and implementation of sustainable travel initiatives as a controllable intervention. All state schools in North Yorkshire, including the two secondary schools and three primary schools in Malton & Norton, have developed school travel plans. The objective being to increase the number of pupils walking and cycling to school. These plans have identified a range of actions and potential schemes, many of which were implemented during LTP2.

During LTP3 NYCC is committed to continuing to work with schools to update their travel plans and identify any new measures that may be required. Annual funding allocations are made to support the 'Safer routes to school' schemes and support school Travel Plans Many of these measures will focus on behavioural change.

NYCC will continue to carry out audits at all schools to identify what infrastructure exists to promote safe and sustainable travel for pupils. This will enable gaps to be identified and where appropriate, suitable schemes developed.

| | |
|---|---|
| **Objective** | To reduce the number of car journeys by increasing the use of more sustainable forms of transport for children and young people traveling to school |
| **Responsibility** | NYCC, Individual Schools |
| **Air Quality Impact** | Medium |
| **Non Air Quality Impact** | Reduction in accidents, improved amenity, improved health |
| **Public Perception** | Likely to be positive |
| **Cost & Feasibility** | Medium. Feasible |

## Action 6 - Public Transport

The vast majority of bus services in the Ryedale and the rest of North Yorkshire are run by private companies on a commercial basis (i.e., without any public sector funding) and the County and District Councils have no direct role in either planning or providing these services. NYCC does have powers that allow it to enter into a contract with bus operators to operate services that are not provided commercially or provided to an appropriate standard (in terms of the frequency or the coverage of the route). Services provided in this way are primarily those that allow people to access essential services (e.g. employment, education, healthcare). Support may amount to small payments made to enhance service routes or add an extra journey (or at the other end of the spectrum, to payments for the operation of totally subsidised services, which otherwise would not exist). In addition, NYCC can provide or contribute towards new infrastructure for bus users (e.g. bus stations, bus shelters, timetable cases, raised kerbs etc.) NYCC will continue to work with the bus operating companies wherever possible to improve the quality and / or frequency of commercially operated bus services wherever new or improved infrastructure is provided.

Contributions from developers will be sought for improvements to a range of physical, social and environmental infrastructure. This will be done in line with the Council's Infrastructure Delivery Plan which supports the Ryedale Plan. These improvements will include measures to support non-car modes of travel such as cycling and public transport initiatives. Contributions will be sought in two ways. On-site requirements will be secured by legal agreement through a Developer Contributions Supplementary Document. Off-site contributions will be collected on a 'tariff' basis through a Charging Schedule as part of the Community Infrastructure Levy (CIL). The Charging Schedule will be subject to a viability assessment to ensure that the strategy is deliverable.

| | |
|---|---|
| **Objective** | To reduce the number of car journeys by encouraging the use of public transport |
| **Responsibility** | NYCC |
| **Air Quality Impact** | Medium |
| **Non Air Quality Impact** | Improved road safety and amenity |
| **Public Perception** | Likely to be positive |
| **Cost & Feasibility** | High. Feasible |

## Action 7 – Air Quality Information

Ryedale District Council and NYCC will make details of the Action Plan measures and annual progress reports available on their websites to ensure broad access to the consultation and implementation process. This is considered necessary to raise awareness of the necessity to improve air quality and to and build support for action plan measures.

The Councils will also seek to raise awareness of the adverse health effects of vehicle emissions and promote smart driving techniques that drivers can use to cut emissions and save fuel costs.

| | |
|---|---|
| **Objective** | To raise public awareness of the need to improve air quality and build support of Action Plan measures |
| **Responsibility** | RDC/NYCC |
| **Air Quality Impact** | Low |
| **Non Air Quality Impact** | Financial savings for drivers |
| **Public Perception** | Likely to be positive |
| **Cost & Feasibility** | Low cost. Feasible |

**Action 8 –Planning Policy**

The planning and air quality functions of local authorities should be carried out in close cooperation.

The Ryedale Development Plan - Draft Core Strategy revised publication draft - will provide for the protection of air quality by:

- locating and managing development to reduce traffic congestion and air pollution and promoting the use of alternative forms of travel to the private car
- supporting measures to encourage non- car based means of travel or the use of low emission vehicles
- requiring development proposals within or adjoining the Malton Air Quality Management Area to demonstrate how effects on air quality will be mitigated and further human exposure to poor air quality reduced.
- only permitting development if the individual or cumulative impact on air quality is acceptable and appropriate mitigation measures are secured.

All development proposals within or near to the Air Quality Management Area which are likely to impact upon air quality; which are sensitive to poor air quality or which would conflict with any Air Quality Action Plan will be accompanied by an Air Quality Assessment.

A Travel Plan may be required to set out how developments can be made more sustainable by reducing the need to travel by private car.

In line with the Council's Infrastructure Delivery Plan, which supports the Ryedale Plan, contributions from development will be sought for improvements to a range of physical, social and environmental infrastructure.

| | |
|---|---|
| **Objective** | To protect and/or enhance air quality by controlling development |
| **Responsibility** | RDC/NYCC |
| **Air Quality Impact** | Medium |
| **Non Air Quality Impact** | Amenity, road safety, noise |
| **Public Perception** | Likely to be positive |
| **Cost & Feasibility** | Medium. Feasible |

**Action 9 – Idling/Cut engine cut pollution signage**

Signage requesting that motorists switch off their vehicle engines when stationary whilst waiting is used by a number of local authorities. For example, Waverley Borough Council uses the sign shown in Figure 11 at several level crossings in the district.

**Figure 13: Road Traffic Sign Used at Level Crossings by Waverley BC**

There is widespread uncertainty amongst motorists about the benefits of switching off engines. Primarily this concerns the length of time that an engine needs to be switched off for before the practice becomes economical. The UK Automobile Association (AA) recommends switching the engine off if you are likely to be stopped for more than 3 minutes. However, there is evidence that idling for far shorter periods of time (as little as 10 seconds) is uneconomical. In the Malton AQMA vehicles are typically stationary for several minutes whilst queuing on Castlegate when the level crossing immediately east of Malton Station is closed to allow the passage of trains on the York to Scarborough rail line. This regularly results in standing traffic all the way back along Castlegate to Butcher Corner, a part of the AQMA with the highest levels of $NO_2$ and significant numbers of exposed residents. This is illustrated by the photographs below.

**Figure 14: Norton bound traffic Queuing on Castlegate in Malton whilst railway level crossing closed**

**Figure 15: Queuing traffic on County Bridge whilst railway level crossing closed**


It is therefore proposed that signage is displayed at appropriate points approaching the crossing requesting divers to switch off engines whilst queuing. In order to address uncertainty amongst drivers of the benefits of this practice, information will be provided on the effects of idling on fuel economy and other relevant considerations, including engine wear. This will form part of a part of a wider awareness raising campaign addressing the impact of vehicle emissions on local air quality and human health and promoting 'smart driving' techniques to improve fuel economy and thereby reduce emissions (see Action Plan Measure 7).

It is estimated cost of this measure will be low, although at present no funding has been allocated.

| | |
|---|---|
| **Objective** | To reduce NOx and other vehicle exhaust emissions in the Malton AQMA |
| **Responsibility** | RDC/NYCC |
| **Air Quality Impact** | Low |
| **Non Air Quality Impact** | Improved local amenity, reduced noise, awareness raising |
| **Public Perception** | Likely to be positive |
| **Cost & Feasibility** | Low cost. Feasible |

**Action 10 – Reduce Emissions from RDC Vehicle Fleet**

Environmental impact is an important consideration when the Council buys new vehicles. Ryedale District Council uses a significant fleet of vehicles, in particular in the provision of waste collection and recycling collection services. At the procurement stage it is specified that vehicles must meet the latest Euro emission standards (currently Euro 5). At present 65% of the fleet is equipped with the latest Euro 5 engines with ad-blue additive, for enhanced efficiency and reduced emissions. By the end of 2011 as per the vehicle replacement programme all such vehicles will be of this standard. Light vehicles run on LPG utilising the latest conversion technology.

Other measures to reduce emissions from the Councils vehicle fleet include the following current initiatives.

Electronic Driving Assistant – (EDA). This computer technology is currently being trialled on a number of refuse collection vehicles. The system regulates the supply of fuel to the engine so as to optimise economy irrespective of the driver's technique in use of the accelerator pedal.

Master Naut – This is another computerised system that is being introduced to prevent vehicles being allowed to idle unnecessarily.

Web Aspx – This is a route optimisation software system that is currently being used to identify the most efficient routes for collection vehicles to take.

| | |
|---|---|
| **Objective** | To reduce NOx and other vehicle exhaust emissions from the Councils vehicle fleet |
| **Responsibility** | RDC |
| **Air Quality Impact** | Low |
| **Non Air Quality Impact** | Cost savings |
| **Public Perception** | Positive |
| **Cost & Feasibility** | Low cost. Feasible |

# 5 Measures to be subject to Future Consideration

## Public Realm Improvements

Ryedale District Council is promoting number possible improvements to highways in Malton that would bring about environmental and safety improvements for shoppers and pedestrians generally. The Council wishes to make the town centre more attractive for shoppers and visitors to support the local economy and success of the town. Previous public consultation showed high levels of support for improvements in Malton including a largely traffic-free area in the Market Place.

Designers asked to produce some initial proposals for Malton came up with two options for providing a mostly traffic-free area in part of the Market Place and a third, shared space option. The options are detailed in the Community Involvement Report and were included in the recent public consultation.

The estimated cost of the options range from £1.275m to £1.55m. At present no funding has been allocated and assistance from partners would be required

Detailed consideration of the air quality impacts of these proposals would need to be undertaken as part of the development control process.

## Voluntary Vehicle Emissions Testing

A number of local authorities organise free testing of vehicle exhaust emissions events. These are voluntary checks of exhaust emissions to make sure that vehicles are running as cleanly as possible. Advice may be given to participants about the use of driving techniques to reduce emissions. For any vehicles failing the test (which is equivalent to the MOT test) advice is given on possible causes and remedies. Essentially this is an awareness raising measure. The air quality impact is difficult to quantify but likely to be low and there are likely to be significant resource implications. Whilst no commitment is being made to adopt this measure, it is considered to warrant further assessment and consideration.

## Licensed Taxis

Controlling emissions from taxis may be an appropriate measure for inclusion in Air Quality Action Plans, particularly in cities and larger urban areas. Local authorities may use their licensing of private hire and hackney carriage (taxi) powers to control emissions from such vehicles. For example all taxis licensed by transport for London and Manchester City Council must comply with at least the Euro 3 standard which means that older vehicles have to be retrofitted with approved abatement equipment. Whilst no commitment is being made to adopt such measure, it is considered to warrant further assessment and consideration.

**Improved Cycling Network and Secure Cycle Parking Facilities**

There is the potential for improvement in air quality by increasing the proportion of trips made by alternative modes such as the bicycle in preference to the car when possible. The bicycle is a 'zero emission' mode of transport when compared to motorised vehicles. The benefits above and beyond this on health to the individual are recognised in the LTP which includes recommendations for a cycling strategy.

**Ryedale Car Parking Strategy**

RDC's current Car Parking Strategy covers the period 2006-2011. It is anticipated that through a review process a new parking strategy will be developed for Ryedale. This is likely to include a review of street parking, off-street parking, residents parking, and parking standards for development. It is important that the review has regard to the objectives of the Air Quality Action plan and that a new strategy is consistent with these objectives.

# 6 Measures Considered to be Inappropriate at Present

## Vehicle Roadside Emission Testing

Ryedale District Council can apply to the Secretary of State for powers to carry out roadside emissions testing within the AQMA under the Road Traffic (Vehicle Emissions) (Fixed Penalty) (England) Regulations 2002. Once such powers have been granted the Council may authorise adequately trained officers to carry out emissions test on any vehicle being driven through, or about to pass through, an AQMA. If an offence has been committed a fixed penalty of £60 can be issued. A driver can also be required to submit their vehicle to a test and to produce a test certificate. If the fixed penalty is not paid within the given timeframe it can rise to £90.

These powers allow local authorities, with the assistance of the Police, to stop vehicles and conduct an emissions test to establish whether the vehicle complies with legal emission standards. If a vehicle fails the test, the Council will be able to issue a fixed penalty notice to the registered keeper of the vehicle. However the penalty would be reduced if the keeper was to have the defect corrected within 14 days of the test, or if the vehicle had passed an MOT test in the 6 month period preceding the roadside test. The main principle of the scheme is to raise driver awareness of the need to properly maintain their vehicle in order to prevent excess exhaust emissions.

Tackling congestion and the large traffic volumes passing through the town centre will be the main deliverer of air quality improvements in the Malton AQMA. The air quality impact of a roadside vehicle emission testing scheme is likely to be low and would require significant staff and equipment resources, as well as imposing additional demands on North Yorkshire Police.

## Stationary Idling Enforcement

The Road Traffic (Vehicle Emissions) (Fixed Penalty) (England) Regulations 2002 enable local authorities in England to issue fixed penalty notices to drivers who allow their vehicles to run unnecessarily while stationary. These regulations came into force on July 18 2002. The powers to do this are automatically conferred by the regulations, therefore local authorities do not have to apply to be designated to use them.

Any driver of a motor vehicle who unnecessarily keeps their engine running while the vehicle is parked on a road can be issued with a fixed penalty notice of £20 by an authorised local authority officer the driver having failed to comply with a request to switch the engine off. The fine rises to £40 if the not paid within 28 days.

When an officer discovers a vehicle with its engine running the first action would be to advise the driver that it is an offence for the engine to be running in a stationary vehicle, and that such an offence carries a Fixed Penalty of £20. The officer would then request the driver to turn the engine off. A Fixed Penalty Notice would only be

issued if the driver refuses to turn off the engine even though requested to do so by an authorised officer.

There are a number of situations when it is acceptable for the engine to be idling for a short time and where action would be inappropriate, including:

- Where a vehicle is stationary 'owing to the necessities of traffic' - for example where a vehicle is stationary at traffic lights.
- Where an engine is being run so that a fault may be traced and rectified.
- Where machinery on a vehicle requires the engine to be running – for example where the engine powers a refrigeration unit, or compaction equipment in a refuse vehicle.

Having regard to the resource implications, there is insufficient evidence to show that idling emissions from parked vehicles within and in proximity to the AQMA is a significant enough issue to warrant introducing this measure, which has therefore been dismissed on the ground of cost-effectiveness. It is however proposed (See Action 9) to use signage to encourage motorists to switch off their vehicle engines whilst queuing to go through the railway crossing between Malton and Norton.

**Road User Charging or Workplace Parking Levy**

The Transport Act 2000 gave local authorities powers to introduce road user charging or workplace parking levy schemes. The revenue generated from such schemes being available to improve local transport in the area. The costs of introducing a road charging scheme can be offset by the revenue that is generated. Area wide charging is likely to be more costly than charging for use of a designated route.

The implementation of a workplace parking levy charging workers for parking at their place of work, could reduce the number of private vehicles entering Malton. The proposal is considered likely to be controversial and unpopular due to the economic implications for the local workforce. At the present time the County Council does not consider the scale of congestion in North Yorkshire is sufficient to require further consideration of localised congestion charging or workplace parking levies,

**Establishment of a Low Emission Zone (LEZ) or Clear Zone**

A Low Emission Zone (LEZ) or Clear Zone is a geographic zone defined for an area within which only motor vehicles of an acceptable emissions standard (normally Euro III) can enter and move around. The concept is held widely as a way of achieving air quality objectives within large urban area where economies of scale can be achieved with respect to set-up and operating costs. Further consideration to the implementation of an LEZ within Malton has been dismissed on the grounds of cost.

A Clear Zone is a defined urban area, usually a City, which exploits new technologies and operational approaches to improve quality of life and support economic growth, whilst minimising the adverse impacts of its transport systems. The implementation of a Clear Zone in Malton has been dismissed on the grounds of cost effectiveness.

# 7 Evaluation and Prioritisation of Proposed Action Plan Measures

The proposed measures have been ranked using a very simple scoring system to give a preliminary indication of the priority that may be assigned to each particular measure based on estimates of air quality impact, cost and feasibility. The air quality impact score is doubled to reflect the fact that this is the most important consideration.

**Table 16: List of Action Plan Measures and Rankings**

| Action | Details | Organisation | Target Date | (a) Air Quality Impact Score (*2) High –3 Medium Low-1 | (b) Cost Score High-1 Medium -2 Low–3 | (c) Feasibility Score High-3 Medium-2 Low-1 | Overall Score (a+b+c) | Ranking |
|---|---|---|---|---|---|---|---|---|
| 1 | Brambling Fields Interchange – Junction Improvement | Highways Agency, NYCC and RDC | January 2013 | 6 | 1 | 3 | 10 | 1 |
| 2a | Heavy Duty Vehicle Restrictions | NYCC | January 2013 | 4 | 3 | 2 (conditional upon completion of Action 1) | 9 | 2= |
| 2b | Castlegate Lane Reduction | NYCC | January 2014 | 4 | 2 | 2 (conditional upon completion of Action 1) | 8 | 6= |
| 2c | One-Way Restriction on Norton Road | NYCC | January 2014 | 4 | 2 | 2 (conditional upon completion of Action 1) | 8 | 6= |
| 2d | Extra Pedestrian Phase at Butcher Corner Traffic Lights | NYCC | January 2014 | 2 | 3 | 2 (conditional upon completion of Action 1) | 7 | 11= |
| 3 | Town Centre Speed Restriction Zone | NYCC | June 2013 | 2 | 2 | 3 | 7 | 11= |
| 4 | Travel Plans - Smarter Choices | NYCC and RDC | Ongoing | 4 | 2 | 3 | 9 | 2= |
| 5 | School Travel | NYCC | Ongoing | 4 | 2 | 3 | 9 | 2= |
| 6 | Public Transport | NYCC | Ongoing | 4 | 1 | 2 | 7 | 11= |
| 7 | Air Quality Information | RDC/NYCC | June 2012 | 2 | 3 | 3 | 8 | 6= |
| 8 | Planning Policy | NYCC/RDC | Ongoing | 4 | 2 | 3 | 9 | 2= |
| 9 | Idling/Cut Engine Signage | NYCC/RDC | June 2012 | 2 | 3 | 3 | 8 | 6= |
| 10 | Reduce emissions from RDC vehicle fleet | RDC | Ongoing | 2 | 3 | 3 | 8 | 6= |

**Table 17: Action Plan Measures - Cost and Impact Descriptor Bandings**

| Basis of Impact Assessment Descriptors: |
|---|
| <u>Costs</u><br><br>Low up to £75k;<br>Medium between £75k and £500k<br>High greater than £500k |
| <u>Air Quality Impact</u><br>(Reduction in annual mean $NO_2$ concentration)<br><br>Low (1) less than 5%<br>Moderate (2) from 5 to 10%<br>High (3) greater than 10%. |

# 8 Implementation and Monitoring

Table 16 above provides estimated timescales for the implementation of proposed action plan measure.

Action Plan measure 1 is expected to be completed by the beginning of 2013. Measures 2a to 2d can only be implemented after measure 1, the Brambling Fields junction improvement scheme, has been completed. The complementary measures were identified by the Malton & Norton Strategic Transport Assessment as being necessary to restrict capacity in the town centre thereby persuading motorists to use the improved junction. Testing the impact of the measures and the improved junction using the SATURN traffic model indicates that they will achieve the desired level of utilisation of the junction.

On 15 June 2011 NYCC's Ryedale Area Committee considered various improvement schemes forming part of the Malton and Norton Service Centre Transportation Strategy. Members accepted a recommendation that following completion of the Brambling Fields Junction Improvement Scheme changes in traffic flow in Malton and Norton are monitored for a period of at least 6 months and that a further report on the complementary measures is then taken to the Area Committee to agree proposals for further detailed consultation. £350 000 has been set aside to fund the measures.

This delay will provide an opportunity to assess the impact of the improved junction on traffic flows, traffic composition and air quality without the recommended complementary measures and to test the STA conclusion that the complimentary measures are necessary to ensure optimum utilisation of the junction.

RDC will work jointly on the action plan measures with the relevant partners to secure the necessary air quality improvements.

The implementation and effectiveness of the Action Plan will be carefully monitored through continuing monitoring of $NO_2$ at relevant receptor locations within the AQMA. In addition, traffic flow changes on the key roads will also be assessed through the review and assessment process, and the uptake of local measures such as Travel Plans will be monitored.

There will be regular review and assessment of the action plan measures that are proposed in order to evaluate progress. This will be reported annually. There will also be ongoing consideration of other measures, in particular those measures identified in the action plan as warranting future consideration.

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