2013 Air Quality Action Plan
For Harrogate Borough Council

In fulfilment of Part IV of the Environment Act 1995
Local Air Quality Management
<table>
<thead>
<tr>
<th><strong>Local Authority Officer</strong></th>
<th>Emily Revill</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Department</strong></td>
<td>Community Services</td>
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<tr>
<td><strong>Address</strong></td>
<td>Springfield House, Kings Road, Harrogate HG1 5NX</td>
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<td><strong>Telephone</strong></td>
<td>01423 500600 ext.56633</td>
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<td><strong>e-mail</strong></td>
<td><a href="mailto:EP@harrogate.gov.uk">EP@harrogate.gov.uk</a></td>
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<tr>
<td><strong>Report Reference number</strong></td>
<td>AQAP/2013</td>
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<td><strong>Date</strong></td>
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Executive Summary

Air Quality Management Areas (AQMAs) were declared in Knaresborough and Ripon on 26 November 2010, the areas were declared due to current and projected levels of nitrogen dioxide which breach, or are likely to breach the nitrogen dioxide (annual mean) objective (40 micrograms per cubic metre (µg/m$^3$)) as prescribed by the Air Quality (England) Regulations 2000 (as amended by the Air Quality (England) (Amendment) Regulations 2002).

This Action Plan is being developed in accordance with Harrogate Borough Councils Statutory Duty under Section 84(1) of the Environment Act 1995 in order to identify measures to reduce the concentrations of Nitrogen Dioxide.

In 2009 a Detailed Assessment (Harrogate BC, 2009) concluded that the declaration of an Air Quality Management Area was necessary at Bond End in Knaresborough and Low and High Skellgate in Ripon due to exceedences of the annual mean objective for nitrogen dioxide (NO$_2$) at relevant receptors.

The Further Assessment (Harrogate BC, 2011b) concluded that the AQMAs are caused by levels of traffic, exacerbated by the canyon like features of Ripon in particular. The Further Assessment also established that in Knaresborough Heavy Duty Vehicles (HDV’s) make up 3.5% of vehicles, but account for 46% of NO$_x$ emissions, whilst in Ripon, HDV’s make up 3% of vehicles, but account for 40% of NO$_x$ emissions.

Officers from Harrogate Borough Council have worked with officers from North Yorkshire County Council (the highway authority) in order to draw up an initial list of potential measures for the Action Plan. Focus groups were then held with relevant council employees which, concluded that the initial list was too extensive and that the measures should be split into five broad areas of:

- Education, incentives and behaviour change;
- Restrictions on vehicles travelling through AQMAs;
- Signposting;
- Engineering measures;
- Planning controls.

During the period between 12 March 2012 and 8 May 2012, the council undertook a consultation process where statutory consultees, external organisations and the general public were consulted on the five main areas of action. Drop in sessions for members of the public were held at Knaresborough and Ripon Libraries. Prior to the consultation sessions a Council Member workshop was also held.

The final measures included in the Action Plan are shown in the table at the end of the summary; this also includes consideration of air quality impacts, costs and timescales.
The report lists measures which will be subject to consideration in the future, these are:

- Electric Vehicle Charging Point
- Eco-stars
- Procurement for school bus contracts
- Working with Local Groups
- Taxis
- Working with local bus companies/service providers

The report also considers measures which have been discounted as they are inappropriate at present; these are the re-opening of Borrage Lane, Ripon and the Harrogate and Knaresborough Northern Relief Road.

The measures proposed will be evaluated on an annual basis to ensure that they remain effective and appropriate.
<table>
<thead>
<tr>
<th>Action/ Objective</th>
<th>Organisation Responsible</th>
<th>Indicators</th>
<th>Target</th>
<th>Air Quality Impact</th>
<th>Non Air Quality Impact</th>
<th>Public Perception</th>
<th>Cost and Feasibility</th>
<th>Source of HBC Funding</th>
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<tr>
<td>1. Investigation in to the feasibility of HGV Restriction</td>
<td>NYCC</td>
<td>HGV count</td>
<td>To be derived from HGV studies</td>
<td>Medium</td>
<td>Noise reduction</td>
<td>Likely to be positive</td>
<td>£75k to £500k</td>
<td>Feasible</td>
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<td>2. Traffic Signal improvements</td>
<td>NYCC</td>
<td>Queue length count</td>
<td>Signal Health check and improvement works to be completed by December 2014</td>
<td>Medium</td>
<td>Traffic flow improvements</td>
<td>Good</td>
<td>£75k to £500k</td>
<td>Feasible</td>
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<td>3. Improvement of Cycling Routes and Facilities</td>
<td>NYCC, HBC, Developers</td>
<td>No. of miles new cycling lanes/routes</td>
<td>On-going/ as developers come forward</td>
<td>Low</td>
<td>Improvements in health, reduced congestion</td>
<td>Good</td>
<td>£75k to £500k</td>
<td>Feasible</td>
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<td>4. Signage</td>
<td>NYCC, HBC, Local Organisations</td>
<td>Queue length count</td>
<td>Survey of signage completed by April 2014</td>
<td>Low</td>
<td>Reduce congestion</td>
<td>Good</td>
<td>Up to £75k</td>
<td>Feasible</td>
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<td>5. Planning Policy</td>
<td>HBC, NYCC</td>
<td>Date for implementation No further AQMAs declared</td>
<td>SPD to be completed 2014</td>
<td>Medium</td>
<td>Amenity, road safety, noise reduction</td>
<td>Likely to be positive</td>
<td>Up to £75k</td>
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<td>6. Smarter</td>
<td>NYCC, HBC</td>
<td>Reaching set</td>
<td>Medium</td>
<td>Reduction in car</td>
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<td>targets</td>
<td>Organisational travel survey</td>
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<td>DCS existing budgets</td>
<td>Consider grant funding from DEFRA/DFT/other organisations for projects</td>
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<tr>
<td>7. Travel Plans and School Travel</td>
<td>NYCC, HBC, Schools, Employers, Developers</td>
<td>Reaching set targets/ reduction in number of children driven to school</td>
<td>Medium</td>
<td>Reduction in accidents, improved amenity, improved health</td>
<td>Likely to be positive</td>
<td>Up to £75k Feasible</td>
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<td>8. Reduce Emissions from HBC fleet</td>
<td>HBC</td>
<td>Number of vehicles using latest emissions standard/ fuel saving methods</td>
<td>On-going</td>
<td>Increase in numbers per year</td>
<td>Low</td>
<td>Cost savings</td>
<td>Positive</td>
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<td>9. Air Quality Information</td>
<td>HBC, NYCC</td>
<td>Completion of webpage/ No. of hits on webpage</td>
<td>Completion of webpage by June 2013, 25 hits per month after completion</td>
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<td>Financial savings for drivers</td>
<td>Likely to be positive</td>
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<td>Additional resource, some use of DCS existing budgets</td>
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<td>HBC, local residents/ landowners</td>
<td>Number of trees and plants</td>
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<td>Amenity</td>
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<td>Up to £75k Feasible</td>
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### Notes:

<table>
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<td>AQ impact</td>
<td>Less than 5%</td>
<td>5%-10%</td>
<td>Greater than 10%</td>
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<tr>
<td>Other LTP benefits (B1 - 5)</td>
<td>Minor</td>
<td>Moderate</td>
<td>Significant</td>
</tr>
<tr>
<td>Other added value</td>
<td>No/other benefits</td>
<td>Moderate</td>
<td>Significant benefits</td>
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<td>Cost score</td>
<td>£500k plus</td>
<td>£75k to £500k</td>
<td>Up to £75k</td>
</tr>
<tr>
<td>Acceptability score</td>
<td>Least popular</td>
<td>Average popularity</td>
<td>Most popular</td>
</tr>
<tr>
<td>Deliverability</td>
<td>Hard to deliver</td>
<td>Average deliverability</td>
<td>Easy to deliver</td>
</tr>
</tbody>
</table>

- **Air Quality Impact Score**: Likely effect on level of monitored emissions.
- **Economic benefits**: Ensure transport helps recovery of areas of the County with weaker economies, maintain and grow the stronger economies.
- **Environmental benefits**: Contribute towards addressing the problems of climate change, reduce transport related air quality problems, protect the natural and built environment from the impact of transport.
- **Accessibility benefits**: Maintain and where possible improve transport services and infrastructure to help people to access services they need. Local provision of services.
- **Safe and healthier travel benefits**: Improve road safety, promotion of healthier active travel such as walking and cycling, making people healthier, reducing congestion and air pollution.
- **Quality of life**: Through the delivery of the LTP make a positive attempt to improve quality of life.
- **Non LTP benefits/added value**: Any other contribution to delivering the air quality improvement e.g. Supplementary finance package, linked works, development impact etc.
- **Cost Score (reverse scoring)**: In terms of cost scoring, the lower the cost, the higher the acceptability, therefore, schemes with a cost below £75k will attract the highest score and those costing above £500k will attract the lowest score.
- **Public Acceptability Score**: Whether or not the scheme is likely to be accepted by the public or whether there is anticipated opposition, this has been drawn up using the public responses to the consultation.
- **Deliverability (officer view)**: Ability to deliver the scheme within the current policy framework and funding available.
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Glossary of Terms

NO\textsubscript{x} – Oxides of Nitrogen
NO\textsubscript{2} – Nitrogen Dioxide
NO – Nitrogen Oxide
AQMA – Air Quality Management Area
AQO – Air Quality Objectives
LAQM – Local Air Quality Management
NYCC – North Yorkshire County Council
µg/m\textsuperscript{3} – Micrograms per cubic metre
HDV – Heavy Duty Vehicles (HGV’s and buses)
HGV – Heavy Goods Vehicle
LGV - Light Goods Vehicle
Defra – Department for Environment, Food and Rural Affairs
HBC – Harrogate Borough Council
LTP – Local Transport Plan
Ha - Hectares

Relevant receptor - These are defined within the Environment Act 1995 as “all locations where members of the public might be regularly exposed, e.g. building facades of residential properties, schools, hospitals, libraries etc.” For the 1 hour objectives it also includes kerbside sites (e.g. pavements of busy shopping streets) and outdoor locations to which the public might reasonably expect to spend 1 hour or longer, including car parks, bus stations and railways stations which are not fully enclosed.
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8. View down Low Skellgate (away from Ripon city centre)
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1 Introduction

Local air quality management (LAQM) forms a key part of the Government’s strategy to achieve the air quality objectives contained within The Air Quality (England) Regulations 2000 (SI 928) and The Air Quality (England) (Amendment) Regulations 2002 (SI 3043). As part of its duties Harrogate Borough Council (the council) has undertaken reviews and assessments and published reports of local air quality on a regular basis since 1999. A round up of all the reports produced can be found in Appendix A. The full reports are available on the council’s website.

In 2009 a Detailed Assessment (Harrogate BC, 2009) concluded that the declaration of an Air Quality Management Area (AQMA) was necessary at Bond End in Knaresborough and Low and High Skellgate in Ripon due to exceedences of the annual mean objective for nitrogen dioxide ($NO_2$) at relevant receptors. The report recommended that as a precautionary approach those properties within 90% of the annual mean objective ($36\mu g/m^3$) should also be included in the AQMAs.

The Detailed Assessment report and conclusions were accepted by the Department for Environment, Food and Rural Affairs (Defra). A consultation exercise to decide the extent of the AQMAs was undertaken; with the result being that those residential properties breaching the $36\mu g/m^3$ were included as recommended in the Detailed Assessment.

The Order Designating the AQMAs was made on the 26 November 2010 (Appendix B).

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 AQMAs in pursuit of compliance with the Air Quality Objectives (AQO’s).

The purpose of the action planning process is to identify, through joint working with North Yorkshire County Council (NYCC) and other relevant organisations, viable measures that will work towards achieving the air quality objectives within the Knaresborough and Ripon AQMA’s. 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 Knaresborough and Ripon AQMAs have arisen because of road traffic emissions. NYCC is the relevant transport authority for roads on the local network and will work jointly with the council on transport measures within the district. NYCC 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.

The Action Plan reflects the relevant organisational responsibilities for actions within the AQMAs and proposed measures detailed in Section 4 of the Action Plan identify such responsibilities.
2 The Air Quality Management Areas and Further Assessment of Air Quality

2.1 Bond End, Knaresborough

The Knaresborough Air Quality Management Area (No 1) Order was made by Harrogate Borough Council on 26 November 2010 (Appendix B). The Knaresborough 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 showing the location and extent of the AQMA is shown at 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 area, it was decided that declaring a single area covering all the required locations was preferable to declaring multiple smaller AQMA. As well as being more complex to administer, the designation of multiple AQMAs would have increased the risk of missing out areas of exceedence.

Figures 2 to 4 show current photographs of the area.
Figure 1: Map of Knaresborough Air Quality Management Area
Figure 2: View down Bond End (towards Harrogate)

Figure 3: View towards Boroughbridge Road
Figure 4: View up Bond End
2.2 Low/High Skellgate, Ripon

The Ripon Air Quality Management Area (No 1) Order was made by the council on 26 November 2010 (Appendix B). The Ripon AQMA relates to current and projected levels of nitrogen dioxide that breach, or are likely to breach, the NO₂ (annual mean) air quality objective of 40 μg/m³, as prescribed by the Air Quality (England) Regulations 2000 (as amended). A map showing the location and extent of the AQMA is shown at Figure 5.

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 area, it was decided that declaring a single area including 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.

Figures 6 to 7 show photographs of the AQMA in Ripon.
Figure 5: Map of Ripon Air Quality Management Area
Figure 6: View up High Skellgate (towards Ripon City Centre)

Figure 7: View up Low Skellgate (towards Ripon City Centre)
2.3 Relevant receptors in the AQMAs

The properties within the Knaresborough AQMA are predominantly residential however there are a small number of local businesses. In comparison the Ripon AQMA contains a larger percentage of commercial or business properties. In total there are an estimated 37 occupied residential units in the Knaresborough AQMA and 57 occupied residential units in the Ripon AQMA. There are no schools, day nurseries, hospitals or residential care homes within the AQMAs.

2.4 Air Quality Further Assessment

Since the AQMA Orders were made we have continued to monitor levels of NO$_2$ within the district, including monitoring locations within the AQMAs. Additional diffusion tubes have been added at some locations to ensure the most accurate results are collected. Following the declaration of AQMAs, a Further Assessment Report should be written within 12 months. The Further Assessment Report was published in April 2012 (Harrogate BC, 2011).

The aims of a Further Assessment are:
- 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 the development of the Air Quality Action Plan by determining the improvements in air quality needed. It allows 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:

• That there remain exceedences of the nitrogen dioxide AQO within the AQMAs.

• That monitoring results obtained after declaration of the AQMA confirmed that the existing extents of the AQMAs were appropriate, so do not need to be extended or reduced.

• Exceedence of the annual mean NO\textsubscript{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 AQMAs for example industrial processes, 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 AQMAs.

• That source apportionment shows that local road traffic accounts for up to 77.29\% of the total NO\textsubscript{2} annual mean concentration in the Knaresborough AQMA and 75.48\% of the total NO\textsubscript{2} annual mean concentration in the Ripon AQMA. Approximately 40\% and 46\% respectively of this arises from emissions of oxides of nitrogen NO\textsubscript{x} (NO + NO\textsubscript{2}) from Heavy Duty Vehicles (HDV’s).

• The estimated reduction in emissions of NO\textsubscript{x} from local road traffic necessary in order for the NO\textsubscript{2} annual mean AQO to be met at all public exposure locations in the AQMA is at least 15.5\%.

The Further Assessment source apportionment findings are particularly significant. Local road traffic was found to be the predominant source of NO\textsubscript{x} in the area. Traffic counts showed that HDV’s are responsible for around 46\% of local road traffic emissions in Knaresborough and 40\% in Ripon, despite making up less than 4\% of traffic in the AQMAs. The findings suggest that measures to reduce road traffic, including in particular HDV’s, in the AQMAs should achieve significant reductions in NO\textsubscript{2} concentrations.

The results of the Further Assessment have been used in the development of the Action Plan to identify the most appropriate measures that will help bring about the most effective reduction in emissions and concentrations of NO\textsubscript{2}.

The Annual Progress Report 2011 and Updating and Screening Assessment 2012 consider the monitoring results which have been collected following the monitoring which was reported in the Further Assessment. A summary of previous Air Quality reports is at Appendix A.
The monitoring data for the 2011 Annual Progress Report showed that the only relevant breaches of the annual mean AQO for nitrogen dioxide have been within the areas that were declared AQMAs. The monitoring carried out in 2010, which informed the 2011 Annual Progress Report showed a decrease in concentrations when compared with previous years. However the monitoring carried out in 2011 which informed the 2012 Updating and Screening Assessment showed that the concentrations have increased again district wide.

Graphs showing the trends in concentrations from 2006 to 2011 in Knaresborough and Ripon are shown in figures 9 and 10.

![Figure 9: Trends in annual mean nitrogen dioxide concentrations measured at Knaresborough diffusion tube monitoring sites](image_url)
The council operates a network of nitrogen dioxide (NO$_2$) diffusion tubes across the district with sites in Knaresborough and Ripon as well as several other sites elsewhere in the district. The locations of the Knaresborough sites are shown in Figure 11 and Ripon in Figure 12.
Figure 12: Map of NO\textsubscript{2} diffusion tube monitoring sites within and in the proximity of the Ripon AQMA

The Further Assessment Report included a calculation of the reduction in local road traffic NO\textsubscript{x} emissions that is needed to reduce NO\textsubscript{2} levels so that there are no breaches of the AQO in the AQMAs. The calculation is based on the methodology described in paragraphs 7.21-7.24 and Box 7.2 of the Technical Guidance LAQM.TG (09) (Defra, 2009a). A calculator (version 1.1) was issued by Defra in December 2008 based on a new approach that takes account of ozone (O\textsubscript{3}) concentration and changes in the proportions of primary NO\textsubscript{2} and regional NO\textsubscript{x} and NO\textsubscript{2} in future years. Defra released the latest version of the calculator (version 2.1) on 22 January 2010. The calculator may be downloaded from the Defra LAQM support web page at http://laqm.Defra.gov.uk/tools-monitoring-data/no-calculator.html

The minimum NO\textsubscript{2} reduction was identified using the reduction in NO\textsubscript{2} that would be required in each of the “worst-case” locations (within the AQMAs) to meet the AQO. Using the monitoring results from 2010, each of the highest measured annual mean concentrations was at relevant receptors, so these figures were used. The results of these calculations are shown in Table 1. Further calculations have been done with the monitoring results from 2011; these are also shown in Table 1.

The Further Assessment also worked out the apportionment of road traffic NOx emission, to apportion the concentration of road traffic NOx between HDV’s (HGV’s and Buses) and Light Duty Vehicles (LDV): cars, vans and motorcycles. Defra and the devolved administrations have provided an emissions factor toolkit (latest version 5.1.2), which allows the user to calculate the vehicles emissions for multiple road links based on vehicle fleet composition, traffic speeds and road type. When the
Further Assessment was carried out version 4 of the toolkit was used, this has now been superceded by version 5.1.2 which can be found at: http://laqm.defra.gov.uk/review-and-assessment/tools/emissions.html#eft

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<th>Year</th>
<th>Relevant</th>
<th>Exposure</th>
<th>Location</th>
<th>Site ID</th>
<th>Total NO₂ (µg/m³) Annual Mean</th>
<th>Total Background NO₂ (µg/m³)</th>
<th>Road NOₓ (µg/m³) (from NO₂ to NOₓ Conversion Sheet)</th>
<th>Road NOₓ (µg/m³) Equivalent to Total NO₂ Concentration of 40µg/m³ (From NO₂ to NOₓ conversion Spreadsheet)</th>
<th>Required Reduction in Road NOₓ (µg/m³)</th>
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Table 1: Calculation of Required Road Traffic NOₓ Reduction

The toolkit was run using traffic flow data for Knaresborough and Ripon, a summary of this is shown in tables 2 and 3. Figures 13, 14 and 15 show the final results.

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Table 2: Knaresborough Traffic Data

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<th>Road</th>
<th>%HDV</th>
<th>Traffic Flows 7am-7pm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Skellgate</td>
<td>2.69</td>
<td>7056</td>
</tr>
<tr>
<td>High Skellgate</td>
<td>2.65</td>
<td>5959</td>
</tr>
</tbody>
</table>

Table 3: Ripon Traffic Data

Figure 13: Road traffic NOₓ apportionment Bond End 24 kilometres per hour
Figure 14: Road traffic NO$_x$ apportionment Low Skellgate 16 kilometres per hour

Figure 15: Road traffic NO$_x$ apportionment High Skellgate 16 kilometres per hour
3 Air Quality Action Plans – Policy Development and Consultation

3.1 Local Air Quality Management Policy Guidance

The Local Air Quality Management Policy Guidance LAQM.PG(09) provides statutory guidance on the content and development of air quality action plans. This document outlines that the Air Quality Action Plan should include the following as a minimum:

1. Quantification of the source contributions to the predicted exceedences of the objectives (to enable measures to be effectively targeted);
2. Evidence that all available options have been considered on the grounds of cost-effectiveness and feasibility;
3. Indicate how the council will use its’ powers and also work in conjunction with other organisations and agencies in pursuit of the air quality objectives;
4. Clear timescales in which the council, other organisations and agencies aim to implement measures identified within the plan;
5. Quantification of the expected impacts of the proposed measures and, where appropriate, an indication as to whether the measures will be sufficient to meet the air quality objectives; and
6. Indicate how the council intends to monitor and evaluate the effectiveness of the action plan.

The content of this guidance has been taken into consideration during the development of the draft Action Plan.

It is important for the success of Action Plans to have involvement of local organisations, including local residents and businesses together with other groups and organisations. This Action Plan has been drawn up after consultation with relevant forward planning and transportation representatives from the council and NYCC.

Meetings and exchange of information with relevant organisations has occurred during the period since declaration of the AQMAs in November 2010, with the aim of agreeing a draft action plan to improve air quality in both locations.

Air Quality Action Plan Working Group

A working group was formed to provide an appropriate forum for developing the draft Air Quality Action Plan. The group included representatives from Public Protection and Forward Planning at the council, and colleagues from within NYCC with an interest in air quality. The officers were selected for their roles in areas of work that were relevant to the subject and who might be able to influence the measures being considered within the draft plan. Where appropriate other officers were consulted on specific areas of work.
Local Transport Plan and AQMA Action Planning

The Environment Act 1995 makes special provision for county councils to input into the Review and Assessment process and the preparation of any action plan. It recognises the crucial role of county councils as highway 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) that 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 borough councils should work together in their action planning process. It is 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.

It has long been recognised that elevated levels of NO$_2$ in Knaresborough and Ripon are largely attributable to emissions from road vehicles. Accordingly the council and NYCC have worked closely particularly since declaration of the AQMA.

The third Local Transport Plan (LPT3) came into effect on 1 April 2011 and covers the 5 year period from 2011-2016. It sets out the County Council's 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, are both recognised. The council and NYCC are committed to continuing to work together to make sure that LTP3 and the council's Air Quality Action Plan is coordinated in order to reduce the polluting effects of road vehicles and improve air quality.

3.2 Consultation on Action Plan Options and their Assessment

Range of Possible Options

The Policy Guidance LAQM.PG(09) states that Air Quality Action Plans must focus on ‘effective, feasible, proportionate and, quantifiable measures’ and provide ‘evidence that all available options have been considered on the grounds of cost effectiveness and feasibility’.

A wide range of potential options could be available to the council and other organisations to improve local air quality within the Knaresborough and Ripon AQMA’s and the surrounding area. At the onset of the action planning process it was appropriate to consider all the potential options. The identification of potential measures for the consideration of the working group was undertaken through a review of existing local and regional plans, consideration of measures referenced in LAQM.PG(09) and relevant Environmental Protection UK guidance documents as well as recommendations of members of the working group. It is recognised that whilst the council may not have the necessary powers to implement all options, they may work with, or encourage other organisations and agencies that have the capacity to take the options forward.
The full list of draft measures for both Knaresborough and Ripon were drawn up by the working group, these measures are outlined below. Two consultation sessions were carried out with officers from the council and NYCC. A summary from the workshops is attached as Appendix C.

The final conclusion of these sessions was that the initial list was too extensive and that the measures should be split into five broad areas of:

- Education, incentives and behaviour change;
- Restrictions on vehicles travelling through AQMAs;
- Signposting;
- Engineering measures;
- Planning controls.

These broad areas were then taken forward as the basis of a public consultation exercise.

**Cabinet Member Consultation**

A report was taken to the cabinet member for Public Protection and Rural Affairs which detailed three options for the consultation process with costs. The Cabinet Member approved the following process for consultation.

**Consultation Process**

During the period between 12 March 2012 and 8 May 2012, the council undertook a consultation process where statutory consultees, external organisations and the general public were consulted on the five main areas of action. Consultation leaflets and an attached questionnaire (Appendix D) were sent to all residents living in the AQMA’s and to the list of consultees attached as Appendix E. The consultation leaflets were also made available at Knaresborough and Ripon Libraries, Ripon Town Hall, Knaresborough House and some council offices.

A new webpage was also created with details of the consultation, and elected members and council officers were emailed with an invitation to complete the questionnaire online.

The consultation was advertised in the local press, and ‘drop in’ sessions were held at Knaresborough and Ripon Libraries. These were designed to encourage local residents to come and ask the officers questions relating to the consultation and to view the five key areas identified. These ‘drop in’ sessions were advertised on the website, and posters were placed around Harrogate, Knaresborough and Ripon.

**Members Workshop**

A further consultation session was held on 7 February 2012, with elected members from both the council and county council. The discussion was based around the key air quality issues in Knaresborough and Ripon, the statutory responsibilities of the council to reduce pollution and to monitor air quality, the AQMAs, the role of NYCC,
the preparation of the Action Plan and the consultation arrangements. Feedback from the consultation session is attached as Appendix C.

**Consultation Summary and Comments**

We distributed approximately 500 consultation leaflets and received over 80 responses. Most of the respondents to the survey agreed with the measures that were put forward for each of the above five areas, with only two respondents disagreeing with all of the measures. The most widely supported measure was for better signposting to direct vehicles to specific locations and car parks and better signposting of pedestrian and cycle routes.

The questionnaire also gave the respondents the opportunity to make their own comments and put forward suggestions, the responses to the consultation are attached as Appendix F. The main comments that came out of the exercise are shown below.

**Knaresborough**

<table>
<thead>
<tr>
<th>Measure (ranked in order of frequency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Ban HGV’s from using Bond End unless access is required</td>
</tr>
<tr>
<td>2. Northern Bypass</td>
</tr>
<tr>
<td>3. Need existing cycle paths to be extended and new cycle routes to connect Knaresborough to Harrogate</td>
</tr>
<tr>
<td>4. Rural bus routes are not frequent enough</td>
</tr>
<tr>
<td>5. Reduce the speed limit to 20mph in the town centre</td>
</tr>
<tr>
<td>6. Train fares from Knaresborough to Harrogate are expensive</td>
</tr>
<tr>
<td>7. Target bus companies particularly school bus companies for polluting vehicles.</td>
</tr>
<tr>
<td>8. There are too many signs already</td>
</tr>
<tr>
<td>9. Restrict delivery times to local stores to early mornings or evenings</td>
</tr>
<tr>
<td>10. Promote the use of the local bus service</td>
</tr>
</tbody>
</table>

*Table 4: Knaresborough Comments from Consultation Exercise*

**Knaresborough Town Council**

<table>
<thead>
<tr>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Re-routing of the A59 to avoid Knaresborough Town Centre</td>
</tr>
</tbody>
</table>

*Table 5: Knaresborough Town Council Consultation Comments*
Ripon

<table>
<thead>
<tr>
<th>Measure (ranked in order of frequency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Alternative traffic controls/routing for traffic</td>
</tr>
<tr>
<td>2. Re-open Borrage Lane to through traffic</td>
</tr>
<tr>
<td>3. HGV restriction/weight limit</td>
</tr>
<tr>
<td>4. Better bus routes to rural communities, with cheap fares</td>
</tr>
<tr>
<td>5. One way system around Ripon, through traffic should not use High Skellgate</td>
</tr>
<tr>
<td>6. Build a new road from Kwik Fit to Firby Lane</td>
</tr>
<tr>
<td>7. Make Low Skellgate one way or pedestrianise.</td>
</tr>
<tr>
<td>8. Ban buses and HGV’s using Low and High Skellgate</td>
</tr>
<tr>
<td>9. Improve and increase cycle routes</td>
</tr>
<tr>
<td>10. Bus use promoted/improvements in Public Transport</td>
</tr>
</tbody>
</table>

Table 6: Ripon Comments from Consultation Exercise

Ripon City Council

<table>
<thead>
<tr>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Alter junction on Low Skellgate to prevent queuing/stopping traffic, creation of a roundabout or traffic island.</td>
</tr>
<tr>
<td>2. Re-open Borrage Lane, or construct a new link road between Barefoot Street and Firby Lane</td>
</tr>
<tr>
<td>3. Enforce weight restrictions to 7.5 tonnes</td>
</tr>
<tr>
<td>4. Change traffic light sequences</td>
</tr>
<tr>
<td>5. Target Transdev, encourage dual fuel technology</td>
</tr>
<tr>
<td>6. Replace the 36 bus with smaller buses on the outskirts of the city</td>
</tr>
<tr>
<td>7. Obtain traffic study (standard practice)</td>
</tr>
</tbody>
</table>

Table 7: Ripon City Council Consultation Comments
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 Knaresborough and Ripon AQMAs. These have been divided into three categories:

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

Overview

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 see section 7. A description of each of the elements considered is shown in Table 9, along with an explanation of the different bandings used in Table 10.

Measures Proposed for Implementation

Action 1 – Investigation into the feasibility of HGV Restriction

The source apportionment exercise undertaken as part of the Further Assessment established that around 3% of traffic going through Bond End and Low and High Skellgate was made up of HGV’s and buses, but that these accounted for 46% of emissions in Knaresborough and 40% of emissions in Ripon.

NYCC will be carrying out a Heavy Goods Vehicle (HGV) surveys to identify the routing of HGV’s in Knaresborough and Ripon. If a significant proportion of vehicles are shown to be taking inappropriate routes to their destination, an HGV restriction may be appropriate.

The studies will consider whether those vehicles which are entering the AQMA’s are doing so in order to service units in the local vicinity, or whether there is potential for them to be rerouted on to a more suitable part of the network.

Any restriction would be subject to further statutory consultation prior to implementation. Should the HGV survey not establish the need for an HGV restriction, this option will be taken no further.

Results of Knaresborough HGV Survey

The results of the Knaresborough HGV survey were reported to the North Yorkshire County Area Committee for the Harrogate District on 21 March 2013. The implications for the Bond End Air Quality Management Area were considered in terms of a
potential weight restriction in the area. The report concluded that should a weight restriction be implemented there would still remain a high number of HGVs requiring access to Knaresborough town centre for unloading/loading.

The report highlights the fact that the A59 is part of the Primary Route Network. Roads on the Primary Route Network (PRN) must provide unrestricted access to 40 tonne vehicles under EU Directive 89/460/EC (DFT, 2012). It would be necessary to remove the A59 from the Primary Route Network before any weight restriction on this road could be implemented.

In considering the report Members of the County Area Committee for the Harrogate District recommended that NYCC officers continue to work with Harrogate Borough Council officers to attempt to bring emissions back within the permitted standard and to consider in detail all the measures included in the Air Quality Action Plan.

<table>
<thead>
<tr>
<th>Objective</th>
<th>To establish whether a restriction would be feasible in the areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsibility</td>
<td>NYCC</td>
</tr>
<tr>
<td>Air Quality Impact</td>
<td>Medium</td>
</tr>
<tr>
<td>Non Air Quality Impact</td>
<td>Noise reduction</td>
</tr>
<tr>
<td>Public Perception</td>
<td>Likely to be positive</td>
</tr>
<tr>
<td>Cost &amp; Feasibility</td>
<td>Medium, Feasible</td>
</tr>
</tbody>
</table>

**Action 2 - Traffic Signal Improvements**

NYCC will investigate the efficiency of the current traffic signals in both locations and will identify any potential for improvement. This investigation will also include assessing whether all of the traffic signals are necessary.

<table>
<thead>
<tr>
<th>Objective</th>
<th>To achieve optimum utilisation of the junction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsibility</td>
<td>NYCC</td>
</tr>
<tr>
<td>Air Quality Impact</td>
<td>Medium</td>
</tr>
<tr>
<td>Non Air Quality Impact</td>
<td>Traffic flow improvements</td>
</tr>
<tr>
<td>Public Perception</td>
<td>Good</td>
</tr>
<tr>
<td>Cost &amp; Feasibility</td>
<td>Medium, Feasible</td>
</tr>
</tbody>
</table>

**Action 3 - Improvement of Cycle Routes and Facilities**

The areas around Knaresborough have a number of cycle routes already, but it is recognised that further routes would be beneficial when considering the wider cycling network. A network of cycle routes in Harrogate and Knaresborough is identified in the Harrogate and Knaresborough Cycling Implementation Plan and protected by draft local planning policy IN3 Protection of sites and routes for transport infrastructure. In preparing the Action Plan we will work with NYCC and local cycling groups in order to improve the provision of cycling facilities in strategic locations within the Knaresborough area. A map of current and potential future cycling routes around Knaresborough is attached as Appendix G. Funding for this work will primarily be through developer contributions in association with local developments, through
the Community Infrastructure Levy (if adopted by the council) and from Defra Air Quality Grants. Due to on-going public sector financial constraints it is not likely that there will be significant levels of funding available from NYCC.

In Ripon we will work with local cycling groups and NYCC to review the 2004 Cycle Plan and identify routes which would link the City to surrounding areas and where cycle facilities would be most used. As with the Knaresborough AQMA, funding for this work will primarily be through developer contributions in association with local developments, through the Community Infrastructure Levy (if adopted by the council) and from Defra Air Quality Grants. Due to on-going public sector financial constraints it is not likely that there will be significant levels of funding available from NYCC.

Cycle routes and facilities will be promoted within the local areas, including safe storage and appropriate signage to direct people to key locations. A ‘Cycle Map’ is being produced for Harrogate and Knaresborough by NYCC (Appendix G) through the Local Sustainable Transport Fund grant awarded in 2012 to North Yorkshire County Council for the Harrogate area.

<table>
<thead>
<tr>
<th>Objective</th>
<th>To encourage more people to cycle rather than use cars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsibility</td>
<td>HBC and NYCC, developers</td>
</tr>
<tr>
<td>Air Quality Impact</td>
<td>Low</td>
</tr>
<tr>
<td>Non Air Quality Impact</td>
<td>Improvements in health, reduced congestion</td>
</tr>
<tr>
<td>Public Perception</td>
<td>Good</td>
</tr>
<tr>
<td>Cost &amp; Feasibility</td>
<td>Medium, feasible</td>
</tr>
</tbody>
</table>

**Action 4 – Signage**

Work will be undertaken to review direction signage in and around the AQMAs to seek influence over the flow of traffic through the areas. As well as traffic signage consideration will also be given to pedestrian, cyclist and parking signage to see if this may also be used to reduce the traffic flowing through the AQMAs or by encouraging the use of other transport options.

<table>
<thead>
<tr>
<th>Objective</th>
<th>To direct people to the most appropriate route to their location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsibility</td>
<td>HBC, NYCC, local organisations.</td>
</tr>
<tr>
<td>Air Quality Impact</td>
<td>Low</td>
</tr>
<tr>
<td>Non Air Quality Impact</td>
<td>Reduce congestion</td>
</tr>
<tr>
<td>Public Perception</td>
<td>Good</td>
</tr>
<tr>
<td>Cost &amp; Feasibility</td>
<td>Low, Feasible</td>
</tr>
</tbody>
</table>

**Action 5 – Planning Policy**

In order to gain the best outcome the Planning and Environmental Protection teams will work together to look to develop Air Quality Guidance.
The Harrogate District Sites and Policies Development Plan Document (which should be read in conjunction with the core strategy) has reached the formal Public Consultation stage (Consultation starts on 10 May 2013). This includes a specific draft policy relating to air quality, a copy of this draft policy is outlined below:

**POLICY TRA4: AIR QUALITY** *(policies TRA1 to TRA3 are set out in the council’s adopted Core Strategy)*

Action to protect and improve air quality will be undertaken within the Harrogate District by requiring all planning applications that give rise to significant amounts of traffic to provide information on the increase in pollution arising as a result of the development proposals and identify mitigation measures to address these issues as part of a Transport Assessment/Travel Plan. Mitigation measures proposed must have regard to the current Local Transport Plan and the Air Quality Action Plan.

Air Quality may also be an issue in relation to factors other than traffic. Information on the increase in air quality emissions arising as a result of the development proposals will need to be provided together with appropriate mitigation measures.

Where air quality is likely to be an issue pre application discussion with the Environmental Protection Team, Department of Community Services will be required.

Further policies already exist which ensure an adequate level of parking, is provided as part of development proposals and that consideration is also given to the provision of other facilities to encourage the use of non-car modes of travel.

Air Quality is a material planning consideration and must be given due weight when considering planning applications. A Supplementary Planning Document will be developed for Air Quality. The document will aim to:

- Prevent the need to designate new AQMA’s
- Prevent an increase in pollution, particularly within AQMA’s
- Make sure that air quality is fully considered in the decision making process
- Assist planners in dealing with air quality considerations in applications
- Assist developers in assessing air quality in their application

<table>
<thead>
<tr>
<th>Objective</th>
<th>To protect and/or enhance air quality by controlling development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsibility</td>
<td>HBC/NYCC</td>
</tr>
<tr>
<td>Air Quality Impact</td>
<td>Medium</td>
</tr>
<tr>
<td>Non Air Quality Impact</td>
<td>Amenity, road safety, noise</td>
</tr>
<tr>
<td>Public Perception</td>
<td>Likely to be positive</td>
</tr>
<tr>
<td>Cost &amp; Feasibility</td>
<td>Low. Feasible</td>
</tr>
</tbody>
</table>
**Action 6 – Smarter Travel Choices**

The term ‘smarter choices’ refers to sustainable travel modes that reduce the negative impacts of travel such as congestion, pollutant and carbon emissions, and increases activity levels. Promotion of smarter choices aims to encourage use of public transport, cycling, walking and also to provide information to allow people to make informed travel choices. Smarter choices include initiatives like travel planning, personalised travel planning and travel awareness campaigns, encouragement of active travel, car clubs, car sharing and homeworking/flexible working.

The council 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, active travel modes and low carbon vehicles will be encouraged and the benefits of these types of transport will be promoted.

Through the Action Plan we will approach businesses to promote sustainable transport for employees at businesses across the district, approach schools to encourage pupils to walk to school, promote existing sustainable transport schemes and we will produce a website to highlight different ways to carry out sustainable travel in the district.

<table>
<thead>
<tr>
<th>Objective</th>
<th>To reduce the number of car journeys by increasing the use of more sustainable forms of transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsibility</td>
<td>NYCC, HBC, Employers</td>
</tr>
<tr>
<td>Air Quality Impact</td>
<td>Medium</td>
</tr>
<tr>
<td>Non Air Quality Impact</td>
<td>Reduction in car journeys, reduced accidents, improved health</td>
</tr>
<tr>
<td>Public Perception</td>
<td>Neutral</td>
</tr>
<tr>
<td>Cost &amp; Feasibility</td>
<td>Low cost. Feasible.</td>
</tr>
</tbody>
</table>

**Action 7 – Travel Plans and School Travel**

Plans to encourage travel by means other than the single car user are often included in air quality action plans as a measure to reduce pollutant emissions. There are four main types of travel plans:

- school travel plans
- workplace travel plans
- residential travel plans
- personalised travel planning

Travel plans work by:

- suggesting alternatives to travel by car,
- using initiatives that lessen the impact of cars
- encouraging modal shift e.g. car sharing, public transport, cycling and walking.
This can be supported through incentives such as provision of cycle parking, showers and changing facilities in the workplace, flexible working arrangements 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.

NYCC currently require certain new developments that exceed 1Ha or 80 units, whichever is the lesser, 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 when NYCC will contribute to an initiative.

As well as individual travel choices the council, along with 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 Council’s adopted Core Strategy Policy TRA1: Accessibility, requires all developments which are likely to have significant transport implications to include a transport assessment and the production of a travel plan.

LTP 3 identifies that the encouragement of larger employers to develop travel plans and support staff to travel more sustainability is an intervention that NYCC can influence. NYCC will continue to encourage existing businesses to develop travel plans and provide assistance to businesses through travel awareness and behavioural change training.

All state schools in North Yorkshire 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 LTP 2. During LTP 3, NYCC will continue to encourage schools to undertake active travel planning and implement sustainable travel initiatives. NYCC will continue to work with schools where appropriate to update their travel plans and identify any new measures that may be required. 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 options 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 travelling to school |
| Responsibility | NYCC, HBC, Individual Schools, Employers and developers |
| Air Quality Impact | Medium |
| Non Air Quality Impact | Reduction in accidents, improved amenity, improved health |
Public Perception | Likely to be positive
Cost & Feasibility | Low. Feasible

Action 8 – Reduce Emissions from the Harrogate Borough Council Vehicle Fleet

Environmental impact is an important consideration when the council buys new vehicles. The council uses a significant number of fleet vehicles, particularly for waste and recycling collection services. At the procurement stage it is specified that vehicles must meet the latest Euro emission standards. At present 65% of the fleet is equipped with the latest Euro 5 engines.

Other measures to reduce emissions from the council vehicle fleet include the following current initiatives;

Engine Limiter
This limits the engine revs to the manufacturers recommended peak torque. This stops the engine being over revved for no more power gain. This will save on fuel consumption and exhaust emissions.

<table>
<thead>
<tr>
<th>Objective</th>
<th>To reduce NOx and other vehicle exhaust emissions from the councils vehicle fleet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsibility</td>
<td>HBC</td>
</tr>
<tr>
<td>Air Quality Impact</td>
<td>Low</td>
</tr>
<tr>
<td>Non Air Quality Impact</td>
<td>Cost savings</td>
</tr>
<tr>
<td>Public Perception</td>
<td>Positive</td>
</tr>
<tr>
<td>Cost &amp; Feasibility</td>
<td>Low. Feasible</td>
</tr>
</tbody>
</table>

Action 9 – Air Quality Information/Education

The 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 necessary to raise awareness of the necessity to improve air quality and to 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.

<table>
<thead>
<tr>
<th>Objective</th>
<th>To raise public awareness of the need to improve air quality and build support of Action Plan measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsibility</td>
<td>HBC, NYCC</td>
</tr>
<tr>
<td>Air Quality Impact</td>
<td>Low</td>
</tr>
<tr>
<td>Non Air Quality Impact</td>
<td>Financial savings for drivers</td>
</tr>
<tr>
<td>Public Perception</td>
<td>Likely to be positive</td>
</tr>
<tr>
<td>Cost &amp; Feasibility</td>
<td>Low. Feasible</td>
</tr>
</tbody>
</table>
Action 10 - Local Planting

There is some evidence to show that urban planting can in the medium term have a positive effect on pollutant concentrations in known pollution hotspots, for example green walls and planting of shrubs/trees. The type of trees and shrubs used has to be carefully considered, as some species are very efficient at absorbing pollutants whereas other can increase levels of pollution.

The use of trees in a street canyon can also have a positive or negative effect due to the circulation of air. The AQMAs in Knaresborough and Ripon both have canyon like features, which will require investigation in detail before any planting is proposed. To have a positive effect the planting must be close to the area of concern to allow the pollutants to be absorbed and should at least be within the AQMA.

The following will need to be given careful consideration:
- The availability of land for planting within the AQMAs
- Ownership of any land/property within the AQMAs where planting would be appropriate
- Negotiation required with private property owners to encourage them to take part in any scheme and to maintain any planting that is introduced.
- Any risks associated with maintenance of planting close to the road side etc.
- Planning requirements
- Consultation with the Parks Service over the types of plants and trees
- Possible impact on infrastructure i.e. buildings, roads, sewers and drains
- Costs of planting and maintenance - consultation would be required with Parks and the Arboriculture manager
- Modelling of weather data, air and traffic flows within the AQMAs to ensure that the planting is put in the areas that will have the maximum impact on improving local air quality.

Planting can take several years to become established and as such the air quality impact would not be able to be measured for some time. The initial scoping of this option will require further consultation. Indications are that it would have a low impact on air quality.

<table>
<thead>
<tr>
<th>Objective</th>
<th>Urban Planting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsibility</td>
<td>HBC local property and landowners</td>
</tr>
<tr>
<td>Air Quality Impact</td>
<td>Low</td>
</tr>
<tr>
<td>Non Air Quality Impact</td>
<td>Noise reduction, amenity</td>
</tr>
<tr>
<td>Public Perception</td>
<td>Likely to be positive</td>
</tr>
<tr>
<td>Cost &amp; Feasibility</td>
<td>Low. Feasible</td>
</tr>
</tbody>
</table>
5 Measures to be Subject to Future Consideration

5.1 Electric Vehicle Charging Points

We will investigate the potential for encouraging the take up of electric vehicle charging points and establish if the Harrogate district could be promoted as an area for investment by low emission technology businesses. There is potential to investigate the take up of this technology from existing businesses such as hotels, bed and breakfasts, leisure facilities, business parks, large supermarkets and council car parks.

5.2 Eco Stars

Ecostars Europe is a project establishing a common fleet recognition scheme in a number of European regions to support energy efficient, cleaner goods and passengers vehicle movements. This type of scheme has been adopted in nearby locations. [http://www.care4air.org/ecostars/index.html](http://www.care4air.org/ecostars/index.html). New members of the scheme will be assessed in the following areas: fleet composition, fuel management, driver skills development, vehicle specification/preventative maintenance, use of IT support systems and performance monitoring and management.

The benefits include:

- Recognition at vehicle and whole operation levels for the company’s best practices
- Support in outlining measures, which could help to improve performance and save money, potentially leading to higher operational star ratings over time
- Additional opportunities for enhanced recognition for further progress through the scheme star ratings
- Opportunities to raise operational and environmental profiles, particularly in the eyes of other operators, customers and local communities

5.3 Procurement for School Bus Contracts

A number of school service buses travel through the AQMAs on their routes to the local schools. NYCC review these contracts on a regular basis and look at the procurement process. There may be potential to explore this further in future years.

5.4 Working with Local Groups

We may explore joint working on certain projects and measures with local groups or those who have a specific interest in certain areas.

5.5 Taxis

As a Local Authority we use our licensing of private hire and hackney carriages (taxi) powers to control emissions from these vehicles. Currently taxis licensed by the council must be, for a first application for a vehicle licence, under 5 years of age from the date of 1st registration and not more than 9 years in the case of any subsequent
application for renewal (or 12 years in the case of a council approved wheelchair accessible vehicle). There may be the potential to investigate the current ages of vehicles and to discuss with the Taxi Liaison Group possible emission reducing measures for example:

York City Council has a condition which from 1st June 2012, any replacement vehicle must meet the following Euro emission standard:

- a) Petrol – Euro 4 or better
- b) Diesel – Euro 5

### 5.6 Working with local bus companies/service providers

We will attempt to work with local bus companies and service providers to make companies aware of funding available to them to encourage the uptake of greener buses. The green bus fund allows bus companies and Local Authorities in England to compete for funds to help them buy new low carbon emission buses. A low carbon emission bus (LCEB) is a bus that is capable of achieving the LCEB target for greenhouse gas emissions, which is equivalent to a 30% reduction in its greenhouse gas emissions compared to the average Euro III diesel bus of the same total passenger capacity. LCEBs also need to meet Euro V or better emissions standards.

The maximum grant per bus is 50% of the difference between the cost of the low carbon emission bus and the cost of its standard diesel equivalent. For fully electric buses the maximum grant is 80% of the difference in cost.
6 Measures Considered Inappropriate at Present

6.1 Re-opening of Borrage Lane – Ripon

The Borrage Lane prohibition of driving order proposals were brought before the North Yorkshire County Council Harrogate Area Committee in 1996. The carriageway on Borrage Lane is narrow in width (3.5m) with the potential for rat running, on this basis the road was restricted to access only for vehicles.

At the time the original order was made the possibility of changing the road to one way only was debated, however it was considered that it would make the situation worse rather than better.

During the public consultation on the Action Plan the possibility of re-opening of Borrage Lane was put forward by members of the public. Whilst the re-opening of Borrage Lane could have the potential to reduce vehicle numbers on Low Skellgate the physical conditions of Borrage Lane have not changed since the restriction was introduced, making the road no more suitable than it was 1996. In addition, the narrowness of the road and the physical characteristics of it having limited pavements and properties fronting directly onto the highway make it particularly unsuitable for HGV’s, those vehicles whose re-routing would deliver the greatest benefits to the AQMA.

6.2 Northern Relief Road

The Harrogate and Knaresborough northern relief road is a scheme which has appeared for some time on NYCC’s major schemes reserve list and which is currently declared on searches by NYCC. The scheme at the last estimate was anticipated to cost well in excess of £25m and therefore is unlikely to be delivered in the foreseeable future due to financial constraints.
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 8: List of Action Plan Measures and Rankings

<table>
<thead>
<tr>
<th>Action</th>
<th>Measure</th>
<th>Organisation</th>
<th>Target Date</th>
<th>Air Quality Impact Score</th>
<th>(b1) Economic benefits</th>
<th>(b2) Environmental benefits</th>
<th>(b3) Health &amp; Safety benefits</th>
<th>(b4) Accessibility benefits</th>
<th>(c) Quality of Life benefits</th>
<th>Cost Score (reverse scoring)</th>
<th>Acceptability Score</th>
<th>Deliverability</th>
<th>Overall Score*</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Investigation into the feasibility of HGV Restriction</td>
<td>NYCC</td>
<td>Surveyed and reported by June 2013</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Traffic Signal Improvements</td>
<td>NYCC</td>
<td>December 2014</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Improvement of Cycling Routes and Facilities</td>
<td>HBC, NYCC, Developers</td>
<td>On-going</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>Highway Signage</td>
<td>HBC, NYCC, Local Organisations</td>
<td>Survey completed by April 2014</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>Planning Policy</td>
<td>HBC, NYCC</td>
<td>End of 2014</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>19</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>Smarter Travel Choices</td>
<td>NYCC, HBC, Employers</td>
<td>On-going</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>22</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>Travel Plans and School Travel</td>
<td>NYCC, HBC, Schools, Employers, Developers</td>
<td>On-going</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>Reduce Emissions from HBC fleet</td>
<td>HBC</td>
<td>On-going</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>16</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>Air Quality Education / Information</td>
<td>HBC, NYCC</td>
<td>June 2013</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>Local Planting</td>
<td>HBC, local residents/land owners</td>
<td>End of 2014</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>17</td>
<td>7</td>
</tr>
</tbody>
</table>

*overall score calculation

$$2a + b1 + b2 + b3 + b4 + b5 + c + d + e + f$$
Table 9: Description for each element

<table>
<thead>
<tr>
<th>Description for each element</th>
<th>Description for each element</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Quality Impact Score</td>
<td>Likely effect on level of monitored emissions.</td>
</tr>
<tr>
<td>Economic benefits</td>
<td>Ensure transport helps recovery of areas of the County with weaker economies, maintain and grow the stronger economies.</td>
</tr>
<tr>
<td>Environmental benefits</td>
<td>Contribute towards addressing the problems of climate change, reduce transport related air quality problems, protect the natural and built environment from the impact of transport.</td>
</tr>
<tr>
<td>Accessibility benefits</td>
<td>Maintain and where possible improve transport services and infrastructure to help people to access services they need. Local provision of services.</td>
</tr>
<tr>
<td>Safe and healthier travel benefits</td>
<td>Improve road safety, promotion of healthier active travel such as walking and cycling, making people healthier, reducing congestion and air pollution.</td>
</tr>
<tr>
<td>Quality of life</td>
<td>Through the delivery of the LTP make a positive attempt to improve quality of life.</td>
</tr>
<tr>
<td>Non LTP benefits/added value</td>
<td>Any other contribution to delivering the air quality improvement e.g. Supplementary finance package, linked works, development impact etc.</td>
</tr>
<tr>
<td>Cost Score (reverse scoring)</td>
<td>In terms of cost scoring, the lower the cost, the higher the acceptability, therefore, schemes with a cost below £75k will attract the highest score and those costing above £500k will attract the lowest score.</td>
</tr>
<tr>
<td>Public Acceptability Score</td>
<td>Whether or not the scheme is likely to be accepted by the public or whether there is anticipated opposition, this has been drawn up using the public responses to the consultation.</td>
</tr>
<tr>
<td>Deliverability (officer view)</td>
<td>Ability to deliver the scheme within the current policy framework and funding available.</td>
</tr>
</tbody>
</table>

Table 10: Action Plan Measures - Cost and Impact Descriptor Bandings

<table>
<thead>
<tr>
<th>Description for each element</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>AQ impact</td>
<td>Less than 5%</td>
<td>5%-10%</td>
<td>Greater than 10%</td>
</tr>
<tr>
<td>Other LTP benefits (B1 - 5)</td>
<td>Minor</td>
<td>Moderate</td>
<td>Significant</td>
</tr>
<tr>
<td>Other added value</td>
<td>No/other benefits</td>
<td>Moderate</td>
<td>Significant benefits</td>
</tr>
<tr>
<td>Cost score</td>
<td>£500k plus</td>
<td>£75k to £500k</td>
<td>Up to £75k</td>
</tr>
<tr>
<td>Acceptability score</td>
<td>Least popular</td>
<td>Average popularity</td>
<td>Most popular</td>
</tr>
<tr>
<td>Deliverability</td>
<td>Hard to deliver</td>
<td>Average deliverability</td>
<td>Easy to deliver</td>
</tr>
</tbody>
</table>
8 Implementation and Monitoring

Table 10 above provides estimated timescales for the implementation of proposed action plan measures.

Table 11 below gives details of indicators and targets for the action plan measures in order to monitor implementation progress and the impact of measures on air quality in the AQMA.

The council 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 AQMAs. In addition, traffic flow changes on the key roads will also be assessed through the review and assessment process.

There will be regular review and assessment of the action plan measures that are proposed in order to evaluate progress in accordance with details in Table 11. This will be reported on annually to Defra. There will also be ongoing consideration of other measures, in particular those measures identified in the action plan as warranting future consideration.
### Table 11: Action Plan Measures – Indicators and Targets

<table>
<thead>
<tr>
<th>Action</th>
<th>Details</th>
<th>Organisation</th>
<th>Indicators</th>
<th>Target</th>
<th>Overall Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Investigation into the feasibility of HGV Restriction</td>
<td>NYCC</td>
<td>HGV count</td>
<td>To be derived from HGV studies</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Traffic Signal Improvements</td>
<td>NYCC</td>
<td>Queue length count</td>
<td>Signal Health check and improvement to be completed by December 2014</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Improvement of Cycling Routes and Facilities</td>
<td>HBC, NYCC, Developers</td>
<td>No. of miles new cycling lanes/routes</td>
<td>Ongoing/ as developers come forward</td>
<td>Reduction of annual mean NO\textsubscript{2} level at all monitoring locations in the AQMA’s in 2013</td>
</tr>
<tr>
<td>4</td>
<td>Signage</td>
<td>HBC, NYCC, Local Organisations</td>
<td>Queue length count</td>
<td>Survey of signage completed by April 2014</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Planning Policy</td>
<td>HBC, NYCC</td>
<td>Date for implementation/No further AQMAs declared</td>
<td>SPD to be completed by June 2014</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Smarter Travel Choices</td>
<td>NYCC, HBC, Employers</td>
<td>Reaching set targets/Organisational travel survey</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Travel Plans and School Travel</td>
<td>NYCC, HBC, Schools, Employers, Developers</td>
<td>Reaching set targets/reduction in number of children driven to school.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Reduce Emissions from HBC fleet</td>
<td>HBC</td>
<td>Number of vehicles using latest emissions standard/ fuel saving methods.</td>
<td>Ongoing Increase in numbers per year.</td>
<td>Achievement of NO\textsubscript{2} Annual mean objective at all monitoring locations in the AQMA’s in 2015</td>
</tr>
<tr>
<td>9</td>
<td>Air Quality Information</td>
<td>HBC, NYCC</td>
<td>Completion of webpage/ No. of hits on webpage</td>
<td>Completion of webpage by June 2013, 25 hits per month after completion.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Local Planting</td>
<td>HBC</td>
<td>Number of trees/plants planted</td>
<td>Planting completed</td>
<td></td>
</tr>
</tbody>
</table>

Action Plan
References

DEFRA 2009a
Local Air Quality Management – Technical Guidance LAQM.TG (09) February 2009

DEFRA 2009b

Environment Act 1995 London: HMSO,

North Yorkshire CC, 2011
Local Transport Plan 2011-2016.

Harrogate BC, 2009
2009 Detailed Assessment of Air Quality at Bond End, Knaresborough; Low and High Skellgate, Ripon and Woodlands Junction, Harrogate, February 2009.

Harrogate BC, 2011a
2011 Air Quality Annual Progress Report, April 2011

Harrogate BC, 2011b
2011 Air Quality Further Assessment for Harrogate Borough Council, April 2012

Harrogate BC, 2012
2012 Updating and Screening Assessment, April 2012

DFT, 2012
Department for Transport - Guidance on Road Classification and the Primary Route Network
## Appendix A

### Summary of Previous Air Quality Reports

<table>
<thead>
<tr>
<th>Report Title and Date</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2006 Updating and Screening Assessment Report</strong></td>
<td>Detailed Assessment required for sulphur dioxide at Knaresborough Railway Station. Nitrogen dioxide Annual Mean Objective not met at the Woodlands public house, but progress to Detailed Assessment not required.</td>
</tr>
<tr>
<td><em>September 2006</em></td>
<td></td>
</tr>
<tr>
<td><strong>2007 Annual Progress Report</strong></td>
<td>Sulphur dioxide Detailed Assessment at Knaresborough Railway Station not carried out as initial investigative work identified no relevant exposure.</td>
</tr>
<tr>
<td><em>July 2007</em></td>
<td>Nitrogen dioxide Annual Mean exceedence at Low Skellgate, Ripon and Bond End, Knaresborough reported. Detailed Assessment required.</td>
</tr>
<tr>
<td></td>
<td>Nitrogen dioxide Annual Mean Objective not met at the Woodlands public house, but progress to a Detailed Assessment not required.</td>
</tr>
<tr>
<td><strong>2008 Interim Annual Progress Report</strong></td>
<td>Detailed Assessment continues to be required for nitrogen dioxide in central Ripon and central Knaresborough (as per previous year).</td>
</tr>
<tr>
<td><em>June 2008</em></td>
<td>Continuation of nitrogen dioxide Annual Mean Objective not being met at the Woodlands public house, leads to recommendation for progress to a Detailed Assessment.</td>
</tr>
<tr>
<td><strong>2009 Detailed Assessment Report</strong></td>
<td>Progress to declaration of Air Quality Management Areas (AQMAs) was recommended at the locations in Knaresborough and Ripon, due to a predicted exceedence of the nitrogen dioxide annual mean.</td>
</tr>
<tr>
<td><em>February 2009</em></td>
<td></td>
</tr>
<tr>
<td><strong>2009 Updating and Screening Assessment Report</strong></td>
<td>Nitrogen dioxide monitoring data for 2008 continues to indicate an exceedence of the annual mean Air Quality Objective at; Bond End Knaresborough; Low and High Skellgate, Ripon; Skipton Road, Harrogate and the junction of Wetherby Road and Hookstone Chase in Harrogate. A number of recommendations were made for future monitoring.</td>
</tr>
<tr>
<td><em>September 2009</em></td>
<td>Screening for other pollutants did not identify any other potential exceedences of Air</td>
</tr>
</tbody>
</table>
| **2010 Annual Progress Report**<br>**June 2010** | New monitoring data for nitrogen dioxide confirmed that Air Quality Management Areas should be declared at Low and High Skelligate, Ripon and Bond End, Knaresborough.  
Re-siting the diffusion tube to first floor level at Woodlands public house has indicated that the annual mean Air Quality Objective for nitrogen dioxide was not exceeded. |
| **Declaration**<br>**November 2010** | Air Quality Management Areas (AQMA’s) declared for Low and High Skelligate, Ripon and Bond End, Knaresborough for exceedences of the annual mean Air Quality Objective for nitrogen dioxide. |
| **2011 Annual Progress Report**<br>**June 2011** | The report concluded that the following actions are required;  
- Continue with developing the Further Assessment and Air Quality Action Plan  
- Continue monitoring at locations close to the limits  
- Carry out triplicate tube monitoring within the Air Quality Management Areas  
- Continue to monitor the nitrogen dioxide concentration at the Woodlands public house at the 1st floor level, which is the relevant exposure. |
| **2012 Further Assessment**<br>**April 2012** | The Further Assessment concluded that there remain exceedences of the Air Quality Objective within the AQMA’s, and that the extent of the AQMA’s is correct. It was found that at least a 16% reduction in NOx was needed to meet the AQO. |
Appendix B

Air Quality Management Orders

SECTION 83(1) ENVIRONMENT ACT 1995
THE KNARESBOROUGH AIR QUALITY MANAGEMENT AREA (NO 1)
ORDER 2010
ORDER DESIGNATING AN AIR QUALITY MANAGEMENT AREA

Harrogate Borough Council in exercise of the powers conferred upon it by Section 83(1) of the Environment Act 1995, hereby makes the following Order.

This Order may be cited to as the Knaresborough Air Quality Management Area (No1) Order 2010 and shall come into effect on 26 November 2010.

The Air Quality Management Area will be an air quality management area in relation to nitrogen dioxide only.

The area designated as an air quality management area is described as the roads or stretches of roads listed in Schedule 1, (which are shown marked in red on the map in Schedule 2) and includes all the properties, whether residential or commercial, with facades on these roads. The designated area shall be taken to include the whole of these properties, i.e. buildings and associated open space within the same curtilage.

This Area is designated in relation to current and projected levels of nitrogen dioxide which breach, or are likely to breach, the nitrogen dioxide (annual mean) air quality objective (40 µg/m³) as prescribed by the Air Quality (England) Regulations 2000 (as amended by the Air Quality (England) (Amendment) Regulations 2002).

This Order shall remain in force until it is varied or revoked by a subsequent order.

DATED 26 NOVEMBER 2010

THE COMMON SEAL OF HARROGATE BOROUGH COUNCIL WAS HEREUNTO AFFIXED

UNDER THE AUTHENTICATION OF:

MR P JORDAN (HEAD OF LEGAL AND DEMOCRATIC SERVICES)
SECTION 83(1) ENVIRONMENT ACT 1995
THE RIPON AIR QUALITY MANAGEMENT AREA (NO 1) ORDER 2010
ORDER DESIGNATING AN AIR QUALITY MANAGEMENT AREA

Harrogate Borough Council in exercise of the powers conferred upon it by Section 83(1) of the Environment Act 1995 hereby makes the following Order.

This Order may be cited to as the Ripon Air Quality Management Area (No 1) Order 2010 and shall come into effect on 26 November 2010.

The Air Quality Management Area will be an air quality management area in relation to nitrogen dioxide only.

The area designated as an air quality management area is described as the roads or stretches of roads listed in Schedule 1, (which are shown marked in red on the map in Schedule 2) and includes all the properties, whether residential or commercial, with facades on these roads. The designated area shall be taken to include the whole of these properties, i.e. buildings and associated open space within the same curtilage.

This Area is designated in relation to current and projected levels of nitrogen dioxide which breach, or are likely to breach, the nitrogen dioxide (annual mean) air quality objective (40 µg/m³) as prescribed by the Air Quality (England) Regulations 2000 (as amended by the Air Quality (England) (Amendment) Regulations 2002).

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THE COMMON SEAL OF HARROGATE BOROUGH COUNCIL WAS
HEREUNTO AFFIXED

UNDER THE AUTHENTICATION OF:

MR P JORDAN (HEAD OF LEGAL AND DEMOCRATIC SERVICES)
Appendix C
Summary of Members Workshop

North Yorkshire County Council attended a workshop held on 7 February 2012. The workshop was prepared jointly by the Department for Community Services at Harrogate Borough Council and North Yorkshire County Council’s Highways and Transportation teams. The workshop included a presentation which outlined:

- key facts about air quality issues.
- Harrogate Borough Council’s statutory responsibility to contain and reduce existing pollution and prevent new sites and forms of pollution.
- the declaration of Air Quality Management Areas (AQMAs) in Knaresborough and Ripon.
- North Yorkshire County Council’s role as the highway authority in assisting the Borough Council to improve air quality in AQMAs because the source of the problem is mainly traffic related.
- preparation of the Air Quality Action Plan and draft measures identified.
- outline of consultation arrangements and next stages.

The purpose of the workshop was to raise awareness amongst Members of air quality issues in Knaresborough and Ripon and the work currently being undertaken. A question and answer session followed at which the following key issues were discussed:

- **Consultation** - the consultation will include Members and Town and City Councils who are included on a stakeholder list produced for the consultation. Public comments will also be sought. It was suggested that NYCC Education should also be consulted because of its role in relation to letting contracts for school transport.

- **Monitoring in other areas** – there are 60 diffusion tubes across the District including within areas where there is traffic congestion and where the layout of streets is restricted, making it more difficult for air to circulate and pollution to disperse.

- **More could be done for cyclists across the District** – better promotion is required and more could be done to work with employers and encourage use of electric bikes and alternative forms of travel. Safe cycle lanes are required. Lessons could be learnt from the London experience. Promoting walking and cycling is one of the actions being consulted upon.

- **Local Development Framework** – air quality and actions to address the impacts of future growth need to be considered as part of the emerging Sites and Policies DPD. Developer contributions should be used to fund measures. A rail halt at Manse Farm needs investigation.

- **Traffic Signals Health checks – Ripon** – the operation of signals at High and Low Skellgate need to be investigated and coordination improved if possible. Investigate moving signals further out eg near to Kwik Fit and removing yellow box at Water Skellgate/High/Low Skellgate junction.
• **Traffic signals health checks – Bond End** - NYCC to look at timing and phasing of traffic lights at Bond End. Need to consider in detail and establish best solution for this junction. Suggestion that mini roundabouts should be considered – but recognised there are issues for pedestrians and cyclists and space may not be available. Also look at York Place. Sitting traffic causes problems especially for pedestrians. Trials of alternative schemes suggested.

• **Traffic signs** – suggestion that signs should be erected to tell drivers to switch off engines whilst in traffic queues at signals. Need to raise awareness.

• **Driver behaviour** – suggested that innovative work is required in this area and that Leeds University may be able to help.

• **Improvement of walking routes** – key routes into Ripon and Knaresborough need to be improved to encourage walking eg ensure continuous pavements and footpaths which are wide enough to accommodate all users.

• **Funding for schemes** – whilst it was recognised that funding for schemes is currently constrained consideration should be given to short, medium and longer term measures which may be aspirational.

• **HGV Ban/Knaresborough** – recognised that this is a measure to be considered further but issues in relation to access for businesses on High Street. Work needs to be done with operators – many HGVs travel through Knaresborough on route elsewhere. Possible re-routing through Boroughbridge was suggested. Also need to look at sign posting of routes.

• **Improved technology for buses** – both in relation to buses and priority measures at signals. What improvements are Transdev proposing? What could be achieved in relation to potential future development proposals to the east of Knaresborough?

• **Tree Planting** – the benefits to air quality from tree planting need further investigation. Trees are being planted at Conyngham Hall which is on the edge of the AQMA for the Jubilee.

• **Bridge over river near Conyngham Hall** – create an alternative route into Knaresborough.

• **Encourage greener buses/vehicles** – need to discuss with bus company especially when new development is proposed eg at Knaresborough East. HBC and NYCC should also look at their fleets. Also need to contact bus companies which provide school transport from Leeds.

• **Numbers using public transport** – what percentage of people could be attracted onto public transport?

• **Lorry ban in Wetherby** – has the impact of this on Knaresborough been assessed?

• **Satellite Navigation Equipment producers** – suggestion that these could be contacted in order to influence routes taken. However, this could have an adverse impact on tourism. Difficult to contact producers as no overall group/association.
• **Knaresborough Railway station** – has been a problem in the past.
• **Draft leaflet for consultation** – a copy of the draft leaflet and questionnaire was handed out to Members. There was a 10 day period in which to comment prior to the leaflet being printed.
Appendix D
Consultation Leaflet and Questionnaire

Draft Air Quality Action Plan

As a Local Authority, Harrogate Borough Council has a statutory duty to manage local air quality (under Part IV of the Environment Act 1995). We carry out regular reviews and assessments of air quality in the district against objectives set by the Department for Environment, Food and Rural Affairs (DEFRA).

Previous reviews of air quality found that locations at Low and High Skeldgate, Ripon and Bond End, Knaresborough are exceeding the Air Quality Objective for Nitrogen Dioxide of 40 micrograms per cubic metre. Consequently, Air Quality Management Areas (AQMA) were declared in November 2010.

Following the declaration we have 18 months to produce an Action Plan which identifies mitigation measures and suggests options to improve air quality. As pollution in these areas is caused mostly by traffic we have been working with North Yorkshire County Council Highways and Transportation teams on the preparation of a draft Action Plan.

This leaflet identifies some potential measures and what they aim to achieve. The measures are the conclusions of two workshops organised for officers from both councils. The workshops identified two key themes for improvement which take a realistic view of what is achievable in the current economic climate (and with reduced funding for highway related improvements). We would like to hear your views and suggestions.

The five key areas identified are:

1. Education, incentives and behaviour change
2. Restrictions on vehicles travelling through AQMAs
3. Signposting
4. Engineering measures
5. Planning Controls
Find out more:

Speak to officers at these ‘drop in sessions’.
Information will also be available in libraries throughout the consultation period 12 March to 8 May 2012.

Ripon

Ripon Library,
The Arcade,
Ripon HG4 1AG
Tel: 0845 634 9524
email: ripon.library@northyorks.gov.uk
Monday 19 March 2.30pm - 6.30pm
Saturday 31 March 11.00am - 3.00pm

Knaresborough

Knaresborough Library,
Market Place,
Knaresborough HG5 8AG
Tel: 0845 3005112
email: Knaresborough.library@northyorks.gov.uk
Friday 23 March 3.00pm - 7.00pm
Saturday 21 April 11.00am - 3.00pm

For background information visit www.harrogate.gov.uk/aqconsult
Contact the Environmental Protection team on environmentalprotection@harrogate.gov.uk
or by calling 01423 556633.

What can you do to help?

For information on how simple actions like driving smoothly, changing gears at the right time and clearing out clutter can save you fuel and reduce emissions visit www.direct.gov.uk/environmentandgreenerliving. This website also includes information on a range of greener travel issues.

You can find out further information on North Yorkshire County Council travel policies at www.northyorks.gov.uk and information on travelling by bus at www.northyorkstravel.info/index.html.
**Tell us what you think**

Closing date for comments is 8 May 2012 (4.00pm)

Note: If you prefer, you can complete this questionnaire online at www.harrogate.gov.uk/aqconsult.

When you have ticked the boxes on this page, please comment on any of the following in the table below.

<table>
<thead>
<tr>
<th>Ref:</th>
<th>Draft measures being considered</th>
<th>What will this do?</th>
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<tbody>
<tr>
<td>1a.</td>
<td>Work with key groups, including employers and schools, to raise awareness of air quality issues.</td>
<td>Encourage more sustainable travel and a better understanding of ways to improve air quality.</td>
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<td>1b.</td>
<td>Promote public transport, car share, walking and cycling as alternatives to car use.</td>
<td>Reduce car use, congestion and queuing within AQMAs. Encourage use of travel websites, personal travel planning advice, easier ticket purchase etc.</td>
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<td>2a.</td>
<td>Work with bus companies, HGV operators and school transport to consider alternative routes and use of ‘greener’ vehicles.</td>
<td>Reduce the source of the pollution.</td>
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<td>2b.</td>
<td>Investigate introduction of HGV bans/weight restrictions.</td>
<td>Reduce the main source of the pollution but ensure the problem is not moved elsewhere.</td>
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<td>3a.</td>
<td>Use signposting on approaches to Harrogate Borough and Ripon to recommend alternative routes.</td>
<td>Direct traffic away from AQMAs.</td>
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<tr>
<td>3b.</td>
<td>Better signposting to direct vehicles to specific locations and car parks. Better signposting of pedestrian and cycle routes.</td>
<td>Direct traffic away from AQMAs and encourage walking and cycling.</td>
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<tr>
<td>3c.</td>
<td>Signs to explain the benefits of turning off engines when in traffic queues.</td>
<td>Explain the benefits on air quality and fuel consumption. Environmental impact of signs needs to be considered.</td>
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<tr>
<td>4a.</td>
<td>Traffic signals health check and monitoring.</td>
<td>Reduce number of queuing vehicles within AQMA and reduce level of pollutants.</td>
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<td>4b.</td>
<td>Bus priority measures at signals.</td>
<td>Reduce queuing times for buses in AQMAs.</td>
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<td>5a.</td>
<td>Further develop planning policy and guidance on air quality.</td>
<td>Ensure air quality impacts are addressed when considering future development proposals.</td>
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<td>5b.</td>
<td>Ensure requirements for Transport Assessments and Travel Plans include measures to address air quality issues.</td>
<td>Ensure integration of transport and air quality assessments when considering the impacts of future development proposals.</td>
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<td>Draft measure Ref No.</td>
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Note: please use additional sheets if required.

**Thank you for your comments**

Please return this sheet to: Department of Community Services, Environmental Protection, Springfield House, Kings Road, Harrogate HG1 5NX

**Name(s).................................................................**  
**Postal Address.............................................................**

**Email address.................................................................**  
**Telephone number.............................................................**

**IMPORTANT NOTE:** All comments received will be made publicly available and will be attributable to individual respondents. Your address, telephone number and email will not be made public and will be treated as confidential information. These details will be stored on the council’s Air Quality Action Plan database and used for consultation purposes only. We will only record comments when these details have been given.

**Next steps:**

- We will prepare a report summarising all responses and publish it on the council’s website.
- All comments will be considered carefully and reported back to members of both councils who will decide the measures to be included in the Action Plan.
- The draft Action Plan will be finalised and sent to DEFRA.
- The Action Plan will be kept under review and information in it updated.
- An annual monitoring report will be sent to DEFRA outlining progress.
- These reports will be made available on the council’s website.
Appendix E
List of Consultees

Members from Harrogate Borough Council
All members

Members from North Yorkshire County Council
Andrew Goss - Harrogate Bilton and Nidd Gorge
Geoff Webber – Harrogate Bilton and Nidd Gorge
John Batt – Knaresborough
Bill Hoult – Knaresborough
John Fox - Harrogate Central
John Marshall - Harrogate Central
Don Mackenzie - Harrogate Saltergate
Jim Clark - Harrogate Harlow
Margaret-Ann de Courcey-Bayley - Harrogate Starbeck
Keith Barnes - Harrogate Oatlands
Bernard Bateman - Ripon North
Andrew Williams - Ripon South
Gareth Dadd - Thirsk (Executive Member for Highways and Planning Services)

Harrogate Borough Council Officers
LDF Transport Working Group
Environmental Strategy Manager
Parking Services Manager
Waste and Environmental Services Manager
Communications and Media Manager
Home Energy Conservation Officer
Economic Development Officer
Transport Manager
Licensing Manager
Principle Parks Officer
Environmental Protection Team
Development Planners
Head of Environment
Head of Parks and Open Spaces
Head of Public Protection

Local Groups
Ripon City Council
Knaresborough Town Council
The Ripon and District Chamber of Trade and Commerce
Ripon Greater Improvement Partnership
Ripon Civic Society
Knaresborough Civic Society
Knaresborough Chamber of Trade
Renaissance Knaresborough/FEVA
Renaissance Knaresborough Green Group
Harrogate Cycling Improvements Group
The Action for the Environment Group
Harrogate District CO₂ Reduction Action Group
Freight Transport Association
North Yorkshire Police Authority
North Yorkshire Fire and Rescue Service
York and North Yorkshire Primary Care Trust
Environment Agency

**Bus Operators**
Transdev/Harrogate and District Travel
Harrogate Coach Travel Ltd
Sandla Transport Services Ltd
Eddie Brown Tours Ltd
Dales & District Travel/Proctors Coaches
Little Red Bus/Harrogate District Community Transport
Rainbow Travel (Harrogate) Ltd
Bibbys of Ingleton
T Gillingham and Sons
National Express

**Voluntary Groups**
Harrogate and Area Council for Voluntary Service
Ripon Council for Voluntary Service
Harrogate and District Access Group

**Local Schools**
Greystone Community Primary School - Ripon
Holy Trinity Church of England Infant School - Ripon
Meadowside Community Primary School - Knaresborough
St John’s Church of England Primary School – Knaresborough
Moorside Infants School - Ripon
Moorside Junior School – Ripon
St Mary’s Catholic Primary School – Knaresborough
St Wilfred’s Catholic Primary School - Ripon
King James's School – Knaresborough
Ripon Grammar School - Ripon

**Supermarkets**
Wm Morrison Supermarket Plc
Sainsbury’s Supermarket Ltd
The Co-operative Group
Booths
Tesco Plc
Lidl UK
# Appendix F
## Public Consultation Comments

<table>
<thead>
<tr>
<th>Measure No.</th>
<th>1a</th>
<th>1b</th>
<th>2a</th>
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<th>3b</th>
<th>3c</th>
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<td><strong>Comments</strong></td>
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<td>Why ask the local resident and occupiers of the properties affected by polluted air when you are the authority with responsibility to act and resolve the issues. Without delay. Clearly the removal of heavy goods vehicles will go a long way to lowering the level of pollution but apply the restrictions don't just have workshops to talk about it. Actually implement the obvious and thereby help to improve people's health and respiratory problems caused by the levels of pollution also apply the smokeless zone law which covered Bond End from 1969/70. Fossil fuel pollutants have always been known to be a serious problem here.</td>
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<td>1b. Promote the use of the local bus service with features and timetables in local free press 2a. Follow the London Low Emission Scheme to keep old and unsuitable commercial vehicles out. 4a. Provide bus lane and bus priority schemes to reduce private car use.</td>
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<td>Why is the questionnaire targeted at HGV/PCV when the vast majority of traffic on Low Skellgate is cars? Why are you not considering re-routing the traffic away from Low Skellgate? The road is not suitable for the amount of traffic. Why are you not considering making Low Skellgate a one way street? Why are you not considering pedestrians using Low Skellgate?</td>
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<td>Our house has the Yellow Box outside car/buses/etc. should not enter this box and stay stationary however this is a daily problem with up to 5 cars in this yellow box at any one time. Our house is a listed building and we have been told by the council to repair and paint the front of the house, we did this on Boxing Day last year, however the front of the house is looking a mess again due to the cars, vans etc. stopping in the Yellow Box this is a narrow part of the road. We feel making Low Skellgate a one way road would help protect these old buildings. The traffic light moved near to Kwik Fit and speed humps up Low Skellgate.</td>
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<td>Recycling and reusing is a massively under addressed issue. 1A. I cannot see that air quality is a real issue even in Water &amp; High Skellgate, although Sustainable Travel is.</td>
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<td>RL2</td>
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4. Eliminate lengthy traffic queues on northbound approach (A61) Harrogate Road, by complete removal of traffic signals at Skellgate/Somerset Row junction - to be replaced with mini roundabout in the ample space available at this junction. Advantages are (1) Substantial reduction in emissions by removal delays. (2) Major savings in electricity consumption and maintenance costs for traffic signals. Also reopen Borrage Lane route to filter off traffic from Harrogate Road to westbound routes - this again relieving pressure on Low Skellgate.

(1) In an ideal world the draft measures should help. In reality no one except residents on Low Skellgate care as long as they go from A to B as quickly as possible. If the traffic lights at the end of Low Skellgate were repositioned to Kwik_fit end of the street, it would stop standing traffic at the narrow point and improve air quality. (2) Very few cars etc. take note of the yellow box and continually block the path of oncoming traffic. Ripon Bypass cost millions and should be used properly to bring traffic into Ripon via North Road/Street (a straight road into Ripon). Only buses should be allowed to come into Ripon via Low Skellgate and private cars not the enormous delivery lorries, tractors and large vans, at the very least a weight limit should be enforced.

3c The cost of putting up signs/signs themselves is a waste of money that can be better directed elsewhere plus better education at learning level would help more with this issue by letting people how much can be saved (esp. at rail crossings) and what it is equivalent to is better than signage as generally if people see them most would ignore them. 4a Traffic lights after a certain time should all be on car recognition and only change as a car is there as currently most nights (as with taxis) and sit at lights waiting for nothing coming through wasting time and petrol this would also work at non-peak times and if system used where if cars aren't sat at a particular section of lights it just skips straight to next sequence with cars waiting this too will reduce pollution. General to be fair using greener vehicles is great but there are not the funds for this, so on buses to local routes/ non regular service why did you get rid of all the small "shopper" buses that were smaller caused less nuisance down rural roads and ran (presumably) at less cost when bus route not full non-peak times.

None of these are going to achieve what is required it is only tinkering at the edges, what is required is a northern bypass especially if the LDF goes ahead for the houses and bus that are going to be built on the east side of Knaresborough the bypass needs to be from Goldsborough roundabout to the A61.
1a + 1b. The number of packed cars outside the city or Ripon Secondary Schools and surrounding side streets indicate how many young people drive to school rather than walk or use transport provided. The queuing of traffic is noticeably longer at school opening and closing times. 

2b. Weight restrictions already used. 3abc. Not much manoeuvre here because of Ripon's narrow streets BUT you could incorporate a one way system (include Borrage Lane please). Turning off engines requires drivers’ co-operation. (Most don't even signal!) 4. Replace traffic lights at Low Skellgate, Water Skellgate and High Skellgate with a roundabout. (Cars jump lights causing the flow of traffic to cease on Low Skellgate due to narrow road). Although some of the streets around the centre of the city are narrow a one way system could be incorporated which would improve traffic flow. Congestion is a major factor on Blossomgate, Trinity Lane, Clotherholme Road and Lark Lane junction. Its speed is a consequence then introduce more speed bumps but give an alternative system a trial for a long period - not just for a couple of weeks or months.

5a. The obvious solution, which should be treated with some urgency, would be the building of a link road from near Kwik Fit to Firby Lane, and widen Firby Lane. Instead of wasting money on the solutions on the previous page, all monies should go towards the creation of the ling road. This would have the benefit of pedestrians walking along Low and High Skellgate not having to dodge traffic. Amazing that accidents have not happened in this area. 4. In the meantime the use of fans (used in tunnels) should be investigated. They would only be needed when queuing traffic caused a build-up of nitrous oxide.

2b. It would be very beneficial to reduce the number of HGV's traversing through the centre unless their journey was specifically to deliver or collect from premises within the town.

1b. I feel this is rather long term in effect it may work, but when, and to what extent. If a more immediate effect is wanted, it might be better to give priority to those measures having a quicker effect.

3a. Open up Borrage Lane to one way through traffic and this would hugely improve flow of traffic in Low Skellgate. 3c. Turning off engines in queues is common practice in Switzerland - studies must be available on benefits.

Not enough bike lanes too many cars for kids to use the roads safely. Bus far too expensive when you have more than one child they now charge full fare for a child of 10 years this doesn't help it works out cheaper to run the car.

4b. Since buses are caught in traffic queues this idea is pointless. The press appear to suggest a "roundabout" at the junction of High, Low, Water Skellgate - this is worth a trial period (without lights).

Any ideas/suggestions to help with the air quality help people with asthma, chest disorders, more traffic which is inevitable everything helps.
1b. Car share not a viable option. Cycling is dangerous without cycle routes marked on road. 2b. Restrict HGV access into town/city. Other routes are now available. 3b. Local traffic would ignore signposts and use same routes as normal. 3c. Sign posts to “turn of engines” may start to impact on visual beauty of old city. 4b. Buses given priority status would need a re-routing of traffic - has failed in the past. 5b. I would have thought air quality would still be part of the planning process.

1b. Cost of public transport very expensive for those of us who actually pay!

4b. Buses & HGV's should be banned from areas re: AQM. Therefore no need for priority to these vehicles at traffic signals.

4. Remove traffic lights wherever possible to keep traffic moving and not stationary. The phasing of lights at Morrison's and Skellgate in Ripon seems to be totally illogical, with standing traffic shown a red light and a completely clear road, usually Water Skellgate, shown green. A lot of queues along Westgate are caused by school traffic trying to clear the traffic lights at Low Skellgate and backing up past the hospital and blocking Park Street. The whole traffic system in this part of Ripon is very badly organised.

1b. I am hugely in favour of alternatives to the private car. There is only so much room in both town centres! Is there any room for a park and ride outside either? 2a. Promote, improve and develop public transport and reduce car parking in town centres will have many benefits. 4b. See Above! Also: Public transport needs to be a serious priority, or it will never be sufficiently reliable to attract car drivers.

1b. Ensure sufficient public transport available throughout the day. Do NOT cut services to villages. Provide buses/trains to destinations people need. Keep fares reasonably priced.

4a&4b. How on earth can bus priority measures at traffic lights be effectively put in place when there is no room for buses to overtake queuing traffic on Lower and High Skellgate? When traffic is queued being so narrow effectively becomes a single track road. Ban buses and HGV's to alternative routes.

Heavy traffic i.e. trucks etc. should not be allowed through Knaresborough. House building should consider increase in traffic e.g. when Scotton Banks Hospital Housing was built we were assured there would be no increase of traffic at Bond End- rubbish! Priority consideration should be given to Bond End such as a bypass. Old attractive buildings at risk - cost of continually re-decorating and brushing soot, black, filthy and smelly, from window sills. Continual noise and air pollution and building tremors and danger walking on narrow pavements.

4. The only long term solution is to stop through traffic using Low Skellgate and the “Stanley MacKintosh” proposals should be given serious consideration and costed asap, as that residents understand what is involved. I believe that none of the measures proposed will solve the problem without a permanent ban on traffic.
2a&b. Very important that routes through AQMA’s are removed from satellite navigation systems e.g. A59 Satnav routes takes you through Knaresborough rather than on the bypass. This is the single biggest issue. Make the High Street "for access only" for HGV’s.

1. My experiences lead me to believe people will not care as long as long as it is not on their doorstep. 2. Already applied not obviously not made any reduction in pollution. 3a&b. Signposting - too late to turn round. 3c. It is doubtful anyone will turn off their engines. They currently rev their engines at the lights. 4b. Impossible to separate cars from buses at Bond End. Suggest writer of report visits site. 5. A car park for houses on Bond End has been built in past year so not sure if this is a serious suggestion. These actions appear to be of an education/monitoring nature with no sign of any real and measureable outcomes.

2b. To prevent the hold ups in Knaresborough High Street whilst lorries delivery to Tesco double yellow line opposite Tesco, but make provision for lost spaces elsewhere.

Where is our N Bypass?

Where is the planned Northern Bypass? The rest as appears very worthy but of little consequence. We already have far too many signs.

1a/1b Education can only help increase awareness 2a/2b But only an outright ban will stop HGV’s that for economic reasons will take the shortest/easiest route regardless.

1b The most effective and proven way to reduce car use and increase sustainable modes is individualised travel marketing or Travel Smart, it has been shown to reduce car use by 10% on average. Perhaps an LSTF bid could include this. Research shows that people will use public transport more if it is good quality, reliable and affordable, whilst there is a good bus and train service between Harrogate and Knaresborough fares are expensive. Rural bus services to villages surrounding Knaresborough are not very frequent, not at the right time of day and are very expensive for people without a bus pass. If public transport is to be publicised for people to use it, services must be improved and made more affordable. New cycle routes are not included in the proposal. I feel that to encourage cycling, cycle infrastructure is needed. The planned cycle route connecting Tendergate Lane to High Bond End would provide a safe cycle route for those cycling to Ripley Road, Scotton Gates, Scotton etc. Cycling currently at High Bond End is dangerous and prohibits cycling. A cycle route connecting Knaresborough Town Centre to Harrogate Road could connect Kirkgate at the pedestrian railway crossing past the church and could join Harrogate Road opposite Henshaws, thus avoiding the Air Quality zone and the busy traffic lights. An extension of the Harrogate Road cycle path to the High bridge would also be welcome. I also think restrictions on HGV’s using roads in our Historic town need to be enforced. It is fine for HGV’s delivering to the High Street to use Bond End but many HGV’s seem to be passing through, when they could instead use the bypass and more suitable roads into Harrogate. Better signage for HGV’s might help but those not delivering to Knaresborough should be charged for passing through. They must pay for the environmental pollution they course and the damage and wear they do to the local roads.
## Action Plan

### P21

1. Pollution by the following operators: school bus, Stephensons, Easingwold, Abbotts Leeming, Little Red Bus, to a degree Transdev (every 7 minutes) - they need to be visited.
3. 20mph strictly administered through town centre (including Bond End).
4. Education difficult - hitting the pocket may have more effect.
5. Bus priority will be difficult to administer.
6. Finish the by-pass so you can exclude all the heavy traffic! Otherwise you are not going to solve this pollution problem.

### P22

Stronger measures than NYCC suggest are needed to improve Air Quality

### RL21

- Re-open Borrage Lane to through traffic. Proliferation of signs is blighting our countryside! No more signs please.

### RL22

- Most of these questions aren’t practical; Bond End is a hinge point for traffic.
- Better signposting on sat navigation systems. Better Rural Bus Service that doesn’t stop at 6:00pm
- Statutory duty to collect waste as Local Authority & have to use LGVs to carry out the work.

### W1

- Box too small for the 3+ comments I wish to make!

### W2

- Re Q2, restrictions on HGVs and buses only relevant if they are a significant % of traffic flow.

### W3

- Implement Firby Lane link /relief road and reopen Borrage lane outbound one way.

### W4

- Could there be more emphasis on visitors to the area rather than just HGV’s, buses and school buses.

### W5

- There is simply not enough room here for anything other than a trivial comment.

### W6

- Gvt already educates on car use. Too many signs. Too much traffic = dangerous to walk

### W7

- Remove traffic lights at High St/Boroughbridge Rd. Alter Trunking route Weight and Time Restrictions

### W8

- I believe the best solution for Low Skellgate would be a one way system
- re-open Borrage Lane to through traffic heading west to reduce vehicles queuing along Low Skellgate

### W9

- The recent introduction of parking charges in Market Place car park, Ripon has stopped the circling of traffic trying to obtain a free space which is hoped will have a positive effect on both traffic in the area and the pollution caused.
We gave up smoking 2 years ago when the terrace on the corner of the High Street/Boroughbridge Road had been demolished and was being rebuilt. We had two weekly medical checks over a 3 month when our CO2 was measured. Our levels increased by 4 points when the terrace was rebuilt and we had quit smoking. We have lived here for 4 years and had to redecorate twice. The pollution is eating the fabric of the building. This demonstrates the seriousness of the problem. We face the road directly and see/hear the traffic 24/7. One key problem is standing vehicles. The answer has to be to remove the traffic lights or turn them off as they do not control the traffic flow, merely delay it. When they are broken the traffic moves better. At 3-4 am trucks can stand for 3 minutes on the High Street waiting to go down the Boroughbridge Road. 40% of the truck traffic is feeding the 24/7 automotive supplies company. They should be re-routed from the A1 at Boroughbridge.

In an ideal world! No room for priority bus lanes on Ripon streets. It would help the situation at Skellgate if traffic (HGV excepted) arriving in Ripon via Harrogate Road and bound for the west/north west of the city and Pateley Bridge direction were directed along Borrage Lane. HGVs should come in from by-pass via Boroughbridge Road where fume build-up is slightly less troublesome.

1a and 1b. In order to achieve behaviour change, appoint a sustainable travel officer. Complete the cycle path from High Bridge to the path by the A59. The missing gap is a huge disincentive to use this otherwise excellent cycle route. The gap is dangerous, with cyclists squeezed by central reservation and then 2 lanes of traffic. 4. Advanced stop lines for cyclists at lights. 5. Travel plans to be monitored after submission - another reason to appoint a sustainable travel officer.

Please do not assume the pollution is mainly from HGVs and buses. The reason NO2 levels are rising in Ripon/Knaresborough and in many other AQMAs across the world is due to the increasing numbers of diesel cars/vans on the road. Do a traffic survey to quantify this. Incentivise alternative fuel use. Promote the use of zero emission vehicles as a cost effective way for businesses to reduce their fleet emissions.

We already have what could be an almost traffic free route from Harrogate to Knaresborough. From the rear of Harrogate Station - Asda - Bilton Lane - Beryl Burton Way to High Bridge. 3 short sections require pot hole work. High Bridge to Starbeck cycle way requires completion.

The only way is to restrict the traffic coming into Knaresborough. The High Street is becoming more and more dangerous to pedestrians and from pollution. The HGV's must be directed on an alternative route.

A lot of the pollution is from standing traffic - more intelligent traffic signals should be considered. The suspicion is that HGV and other vehicles use Knaresborough as a route to Harrogate to avoid the delays on Wetherby road - further research is needed to validate this. If this is the case weight and speed restrictions (20mph) should be implemented.
1. NYCC/NY Police need to enforce the traffic regulations that exist already intended to prevent traffic movements that result in unnecessary standing traffic. 2. NYCC should audit the current signal-controlled junction at Water Skellgate/Low Skellgate/High Skellgate and Somerset Row, prepare options to assess as an alternative the practicality of a non-signal controlled junction (possible roundabout/mini-roundabout) and investigate revisions to traffic orders (including making Lower Skellgate one-wa southbound). 3. NYCC needs to prepare as a matter of urgency a design for a new highway between Firby Lane and Low Skellgate including the significant down grading of Low and High Skellgate being, in the Society's opinion, the only truly worthwhile investment that will address the concerns about air quality in the highway network. 4. The Society considers the contribution of education; signposting and planning policy will be marginal.

As part of your air quality consultation, we would like to bring to your attention one of our letters, printed in the Knaresborough Post on 1 October 2010, which incorporates most of our views on how air quality might be improved in Knaresborough. A scanned copy of this letter 'Fresh ideas to cut pollution' is being sent to environmentalprotection@harrogate.gov.uk today.
Appendix G
Map of Current and Proposed Cycling Routes Knaresborough

Harrogate & Knaresborough Cycling Implementation Plan 2013