

Gedling Borough Council - England



2012 Air Quality
Action Plan for
Gedling Borough Council

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

November 2012

Gedling Borough Council - England

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Executive Summary

Part IV of the Environment Act 1995 requires local authorities to review and assess the current and future air quality in their areas against objectives set out for eight key air pollutants, under the provisions of the National Air Quality Regulations 2000 and the Air Quality (Amendment) Regulations 2002.

Local Authorities should only undertake a level of assessment that is commensurate with the risk of an air quality objective being exceeded. Where an air quality objective is deemed, following Detailed Assessment, to be breached then the Local Authority must declare an Air Quality Management Area (AQMA) and put in place an Action Plan in order to bring pollutant levels below the objective.

The 2009 Updating and Screening Assessment concluded that a detailed assessment should be carried out. This Detailed Assessment report concluded that, the objective for Nitrogen Dioxide was likely to be exceeded along the A60 Mansfield Road between its junction with Thackerays Lane and Oxclose Lane.

The AQMA order for the A60 Mansfield Road was made on 1st April 2011 following consultation with affected parties.

The Problem

The Further Assessment Report included a source apportionment exercise which indicated that diesel vehicles contribute the largest portion of NO_x emissions. HGVs, Buses and diesel cars share the main proportion of the emissions; with diesel LGVs and petrol cars contributing to a lesser extent.

Therefore it was considered that when assessing the options for the Action Plan consideration should be given to targeting reductions in emissions from the commercial fleet (HGVs, Buses and LGVs) as these make up a large proportion of the emissions. However, actions to tackle the remaining 37% of emissions, from private cars (petrol & diesel), should also be included to ensure the maximum reductions in emissions possible.

The reduction in NO₂ emissions required, based on 2010 worse case adjusted diffusion tubes results, expressed as a concentration, would be a 5 µg/m⁻³ reduction in NO₂ from 45 to 40 µg/m⁻³. The reduction in road NO_x emissions required to meet the 40 µg/m⁻³ objective has been calculated as 16µg/m⁻³ which represents a 24% reduction in roadside NO_x.

Air Quality Action Plan

This action plan has been drafted with the assistance of a stakeholder group, made up of key representatives from Gedling Borough, Nottinghamshire County and Nottingham City Councils. The group considered a wide range of options which were refined into the list of 'potential options/measures'.

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These measures were assessed against the following criteria:

- Potential air quality impact;
- Potential costs;
- Overall cost-effectiveness;
- Potential co-environmental benefits, social impacts and economic impacts;
- Feasibility and Acceptability.

The proposed measures were considered in total to place the option in a prioritised order. This then became the draft Action Plan which was subject to review by the statutory consultees and a public consultation process. The Plan is summarised below:

Summary of the Air Quality Action Plan

No.	Measure	Timescale
1	Improve links with Local Planning and Development Framework	On-going
2	Improve links with Local Transport Strategy	On-going
3	Target reductions in emissions from Buses	Short/Medium Term
4	Target reductions in emissions from Heavy and Light Goods Vehicles	Short/Medium Term
5	Public Transport	Short/Medium Term
6	Traffic Control and Management	Short/Medium Term
7	Promoting Travel Choices	Short/Medium Term
8	GBC waste collection	Short-term
9	Promotion of Cycling and Walking	Short/Medium Term
10	Travel Plans	Short/Medium Term
11	Communication and Education	Short/Medium Term
12	Parking Control and Management	Short/Medium Term
13	Target reductions in emissions from Taxis	Medium-term
14	Target reductions in emissions from the Council Fleet & Contract Vehicles.	Short/Medium Term
15	Encourage the uptake of alternative fuels.	Long-term
16	Park and Ride*	Long-term
16	Low Emission Zone*	Long-term
17	Re-routing Freight Operators**	Long-term

NOTE

* this option is included but may not be feasible.

** this option is included but considered potentially unacceptable.

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1 Introduction

This Action Plan has been developed in recognition of the legal requirement on the local authority to work towards air quality objectives under Part IV of the Environment Act 1995 and relevant regulations made under that part. As such this plan has been designed to address the air quality problems identified along the A60 Mansfield Road (see Appendix A).

The plan has been developed from discussions with interested stakeholders both internal and external, forming an informal steering group.

Before the plan can be adopted it must be subject to consultation with the general public, and must be appraised and accepted by the Department for the Environment, Food and Rural Affairs (DEFRA).

1.1 Objectives and Report Content

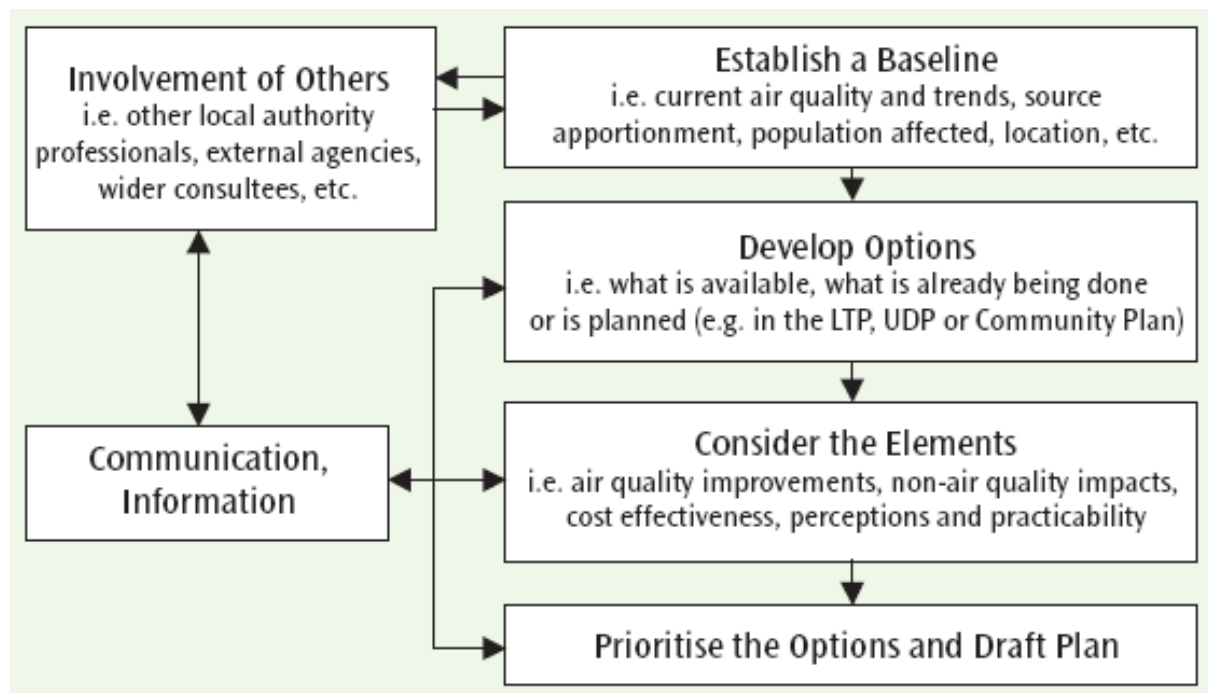
The objective of the Air Quality Action Plan (AQAP) is, on the basis of the evidence available, to set out the local actions that will be implemented to improve air quality and work toward meeting the objectives. Policy Guidance (PG09) outlines that an air quality Action Plan must include the following:

- quantification of the source contributions to the predicted exceedences of the relevant objectives; this will allow the Action Plan measures to be effectively targeted;
- evidence that all available options have been considered;
- how the local authority will use its powers and also work in conjunction with other organisations in pursuit of the air quality objectives;
- clear timescales in which the authority and other organisations and agencies propose to implement the measures within its plan;
- where possible, quantification of the expected impacts of the proposed measures and an indication as to whether the measures will be sufficient to meet the air quality objectives. Where feasible, data on emissions could be included as well as data on concentrations where possible; and
- how the local authority intends to monitor and evaluate the effectiveness of the plan.

The basic stages of the action planning process are outlined in Figure 1.1 and can be summarised as:

1. establishing the baseline,
2. developing options,
3. considering the elements,
4. prioritising the options.

Chapters 2 and 3 will establish the baseline by which the Action Plan measures can be assessed. By reviewing the current air quality status, outlining the problem pollutant(s), sources of the pollution and areas of concern.



Source: NSCA, 2001, p7

Figure 1.1 The Basic Stages in Action Planning

Chapters 4 and 5 then go onto consider the process of ‘action plan options development’ and the action plan options and their assessment.

Chapter 6 considers effectiveness and impacts of the proposed measures. Whilst Chapter 7 then prioritises the options, to formulate the Action Plan.

2 Ambient Air Quality and Local Air Quality Management

2.1 The National Air Quality Strategy

The air quality objectives applicable to Local Air Quality Management (LAQM) in England are set out in the Air Quality (England) Regulations 2000 (SI 928), and the Air Quality (England) (Amendment) Regulations 2002 (SI 3043). The pollutant of concern is Nitrogen Dioxide (NO₂) the objective being:

Table 2.1 Air Quality Objectives for Nitrogen Dioxide.

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Nitrogen dioxide	200 µg/m ⁻³ not to be exceeded more than 18 times a year	1 hour mean	31.12.2005
	40 µg/m ⁻³	annual mean	31.12.2005

2.2 Nitrogen Dioxide

[Source: Nitrogen Dioxide in the UK, AQEG, 2004]

Nitrogen dioxide is a brown gas, with the chemical formula NO₂. It is chemically related to nitric oxide (nitrogen monoxide), a colourless gas with the chemical formula NO (Figure 2.1). These abbreviations are often used instead of writing the names of the chemicals in full.

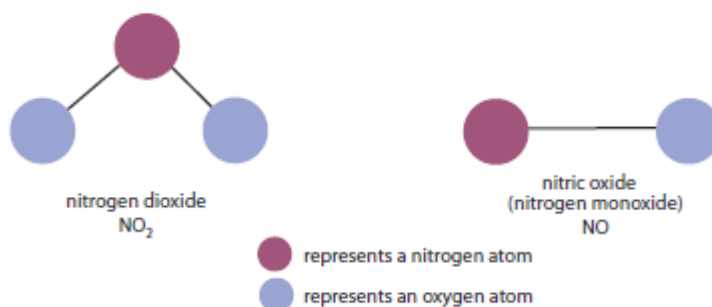


Figure 2.1 Diagram of the structures of NO₂ and NO

Together, NO and NO₂ are known as Nitrogen Oxides or NO_x. NO_x is released into the atmosphere when fuels are burned (for example, petrol or diesel in a car engine or natural gas in a domestic central heating boiler).

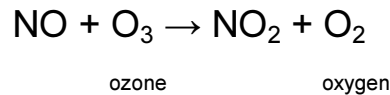
NO_x emissions from burning fossil fuels are mainly as NO, but some sources can release a lot of NO_x as NO₂. These **primary** NO₂ emissions are particularly important from diesel vehicles (especially when moving slowly), and can make up as much as 25% of the total NO_x emissions from this source.

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One reason for this is as a side-effect of measures that have been developed to reduce emissions of particulate matter (PM) from diesel vehicles by treating the exhaust using diesel particulate filters.

These primary NO₂ emissions can lead to high concentrations of NO₂ at the roadside, especially where there are many diesel vehicles.

NO₂ is also formed in the atmosphere in a chemical reaction between NO and ozone (O₃):



Because this NO₂ is not released straight into the atmosphere, but is formed there by a chemical reaction, it is known as **secondary** NO₂.

Sometimes this reaction cannot take place because there is not enough O₃ for the NO to react with. This is most common close to where NO is released, for example, near to busy roads.

There is evidence that high levels can inflame the airways in our lungs and, over a long period of time, affect how well our lungs work. People with asthma are particularly affected. NO₂ can also affect the wider environment, including vegetation.

2.3 The Local Air Quality Management Regime

The review and assessment of air quality is the first step in the Local Air Quality Management (LAQM) process. Part IV of the Act requires each local authority to review air quality 'from time to time' and should only undertake a level of assessment that is commensurate with the risk of an air quality objective being exceeded.

Where the authority identifies an area where one or more of the objectives are likely to be exceeded, the authority is required to designate the identified area, by official Order, as an Air Quality Management Area (AQMA). Such Orders may be amended or revoked as a result of the findings of later air quality assessments where these indicate a change in the extent of the exceedence, or that the relevant objective(s) are likely to be attained.

Following the declaration of an AQMA, the local authority is required to undertake a Further Assessment of current and likely future air quality within the AQMA, and to develop an Air Quality Action Plan (AQAP) outlining the measures that will be implemented at a local level in pursuit of the air quality objectives. The Further Assessment should be completed within 12 months of the AQMA designation Order and provide the technical justification to enable the authority to prepare an AQAP "for the exercise by the authority, in pursuit of the achievement of air quality standards and objectives in the designated area".

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The Air Quality Strategy states that air quality issues should be dealt with in a holistic and multidisciplinary way. In developing an Air Quality Action Plan it is therefore important that the local authority engages with officers across relevant services, notably strategic, development and transport planners, to ensure the actions are supported by all parts of Local Government.

It is vital that organisations, groups and individuals that have an impact on local air quality work toward the objectives of an adopted plan. Furthermore, it is essential that the AQAP considers existing policies and programmes in operation within the region that may have important implications for the plan.

2.4 Existing Strategies and Policies relevant to Air Quality in Gedling

2.4.1 Gedling Borough Planning Policies

The Replacement Local Plan - Saved Policies

Gedling Borough's Replacement Local Plan was adopted in 2005 and provides the main planning framework for the Borough until replaced by other documents prepared under new legislation introduced in 2004. As part of this new legislation, the adopted Local Plan policies were reviewed and either saved or deleted in July 2008.

The Local Plan (formerly Local Development Framework)

Changes in planning legislation have sought to introduce a simpler and more effective planning system, and to strengthen community involvement in planning. The Saved Policies from the adopted Local Plans for each Council are therefore to be replaced by new Local Plans. These can consist of a number of Development Plan Documents taking into account the local demands of development and growth, while seeking to protect the environment and the well-being of local communities.

At the core of the development plan is a strategy which sets out what development will be required and broadly where it will go. The strategy will be followed by work to provide the details on matters such as housing and employment sites and design requirements.

To ensure that this strategy works across a wide area, Gedling Borough have decided to work together with Broxtowe Borough Council and Nottingham City Council to produce an aligned and consistent strategy; the Aligned Core Strategies.

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2.4.2 Nottinghamshire Air Quality Strategy

In 2007 the strategy was revised and updated and the new, revised strategy entitled 'A breath of fresh air for Nottinghamshire, An Air Quality Improvement strategy for the next Decade' was launched on April 25th 2008.

The strategy seeks to fulfil the following main objectives:

- Minimise air pollution and the impact of global warming and climate change.
- Encourage sustainable development in Nottinghamshire to protect the health and wellbeing of the population.
- To work with businesses, stakeholders and the residents of Nottinghamshire to encourage sustainable improvements in air quality.
- Support and maintain the work of the Nottinghamshire Air Quality Steering Group.
- Complement other county wide groups and strategies adopted and supported by Local Authorities and the County Council and other organisations such as the Environment Agency, Primary Care Trusts, Highways Agency and the Health Protection Agency.
- Ensure that the strategy to improve air quality in Nottinghamshire is reviewed on an ongoing basis to ensure that it is fit for purpose.

A copy of the document is now available for download from www.gedling.gov.uk

2.4.3 Local Transport Plan for Nottinghamshire

The third Local Transport Plan (LTP3) for Nottinghamshire came into effect on 1 April 2011. The LTP3 was drawn up in consultation with the public, stakeholders and County Council elected members. The strategic goals of the LTP3 are to:

- provide a reliable, resilient transport system which supports a thriving economy and growth whilst encouraging sustainable and healthy travel
- improve access to key services, particularly enabling employment and training opportunities, and
- minimise the impacts of transport on people's lives, maximise opportunities to improve the environment and help tackle carbon emissions.

The consultation identified twelve local transport objectives that will be addressed to help deliver the LTP3 strategic goals. Delivery of the local transport objectives will also help deliver air quality improvements; and the table below details the impact that delivery of each of the objectives will have on the air quality improvements within the AQMA.

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Major positive Impact	Positive Impact	Minor positive impact	No impact	Minor negative Impact	Negative Impact	Major negative impact
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Local Transport Plan objectives	
Tackle congestion and make journey times more reliable	
Improve connectivity to inter-urban, regional and international networks, primarily by public transport	
Address the transport impacts of planned housing and employment growth	
Encourage people to walk, cycle and use public transport through promotion and the provision of facilities	
Support regeneration	
Reduce transport's impact on the environment	
Adapt to climate change and the development of a low-carbon transport system	
Improve levels of health and activity by encouraging active travel instead of short car journeys	
Address and improve personal safety when walking, cycling or using public transport	
Improve access to employment and other key services, particularly from rural areas	
Provision of an affordable, reliable, and convenient public transport network	
Maintain the existing transport infrastructure	

The LTP3 commits to working in partnership with the district councils to deliver air quality improvements generally; but particularly within the AQMAs. The LTP3 recognises the role of the Air Quality Action Plan (AQAP) to help provide a systematic way of joining up air quality management and transport planning.

The Comprehensive Spending Review, announced on 20 October 2010, detailed several changes in local transport funding. The DfT will reduce overall transport funding by 15% in real terms over the four year period of the Spending Review, making savings of 21% from the revenue budget and an 11% reduction in capital spending.

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The funding for local transport improvements, such as addressing congestion or air quality, is called the integrated transport block and is calculated by DfT through needs based formulas. The integrated transport block for Nottinghamshire in 2011/12 represents a reduction in funding of £5.73m or 46% in comparison to the initial 2010/11 funding allocations (before the Government delivered a 25% in-year cut in June 2010). These reductions in funding will have a serious impact on the delivery of transport improvements within the AQMA.

The County Council has developed a joint Local Sustainable Transport Fund (LSTF) bid with Nottingham City Council and Derbyshire County Council. The bid concentrates on four work packages aiming to improve the economy (primarily through reduced congestion) and developing a low carbon transport network. It is anticipated that measures undertaken included in the bid will therefore have a positive impact on the AQMA.

2.5 Consultation on the Action Plan

The Government expects local authorities to work closely with other local authorities, agencies, businesses and the local community to improve local air quality. Schedule 11 of the 1995 Act requires local authorities to consult:

- the Secretary of State;
- the Environment Agency;
- the highways authority ;
- all neighbouring local authorities;
- the county council
- other public authorities as appropriate; and
- bodies representing local business interests and other organisations as appropriate.

The draft document has undergone two levels on consultation. Firstly, a period of “internal” consultation was undertaken; to those that attended the workshop and other internal stakeholders, not able to attend the workshop. Comments from this period of consultation were then considered to create the final draft.

The document then under went a longer period (8 weeks) of public consultation, were the general public were asked to submit comments and contribute to the AQAP.

3 A60 Mansfield Road Air Quality Assessments

Gedling Borough Council has completed its LAQM duties in compliance with the guidance (Chapter 2.3). Air Quality issues along the A60 Mansfield Road have been highlighted and assessed a number of times; as outlined by below.

3.1 Summary of Assessments

First Round Review and Assessments

Monitored, emissions inventory and modelled data concluded that whilst current levels exceeded objectives, in certain locations, no exceedences occurred when the data was projected to 2005.

However, at the request of DEFRA further detailed monitoring and modelling was carried out along the A60(T) Mansfield Road, in the Daybrook Square area. This suggested a possible exceedence for a number of receptors in Daybrook Square. Further detailed modelling was carried out for these receptors based on the monitored data. This concluded that no exceedence of the objective would occur. (Air Quality Review and Assessment – Stage 3; NETCEN; AEAT/ENV/R/0869; Dec 2001)

No Air Quality Management Areas (AQMA's) were declared.

Detailed Assessment 2006

Following the 2005 Progress report, a detailed assessment was carried out. The report concluded that :

“The results from the monitoring and modelling carried out to date would tend to indicate that Nitrogen Dioxide levels along the A60 Mansfield Road are below the annual objective of $40\mu\text{g}/\text{m}^{-3}$.

The area is however, of continual concern and therefore Gedling Borough will continue to monitor levels along this road. Gedling Borough will also review the configuration of the co-located diffusion tubes, which may be a contributing factor to the large differences between national and local bias adjustment studies.”

Detailed Assessment 2007

The 2006 Updating and Screening Assessment concluded that a detailed assessment should be carried out for a number of locations including the A60 Mansfield Road.

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The Detailed Assessment concluded that:

“Overall results from the monitoring and modelling carried out to date would tend to indicate that Nitrogen Dioxide levels along the A60 Mansfield Road are below the annual objective of $40\mu\text{g}/\text{m}^3$. Therefore we do not consider it necessary to declare an Air Quality Management Area at this time. The area is however, of continual concern and therefore Gedling Borough will continue to monitor levels along this road.”

Detailed Assessment 2010

The 2009 Updating and Screening Assessment concluded that a detailed assessment should be carried out again. The 2010 report concluded that,:

- On balance, the objective for Nitrogen Dioxide was likely to be exceeded along the A60 Mansfield Road between its junction with Thackerays Lane and Oxclose Lane.
- Based on the contour models this equated to approximately 50 residential properties exposed to pollutant concentrations above the objective.
- Therefore, it was proposed that GBC declare an Air Quality Management Area (AQMA) for Nitrogen Dioxide.

The AQMA order for the A60 Mansfield Road was made on 1st April 2011 following consultation with affected parties. See Appendix A for a plan of the AQMA.

3.2 Summary of 2011 Further Assessment

A Further Assessment was carried out in 2011; the report concluded that:

Results of ongoing monitoring since declaration have found levels that agree with the findings of the previous assessments, particularly the Detailed Assessment.

Additionally the following has been reviewed, since declaration of the AQMA:

- There have been no major developments in or around the AQMA.
- No changes to statutory guidance.
- All assumptions made during the Detailed Assessment are still valid.
- There were no comments from Consultees during the Detailed Assessment and declaration of the AQMA.

Source Apportionment

The Source Apportionment exercise generally showed that diesel vehicles contribute the largest portion of NO_x emissions. HGVs (25%), Buses (22%) and diesel cars (21%) share the main proportion of the emissions; with diesel LGVs (15%) and petrol cars (16%) contributing to a lesser extent.

The reduction in NO₂ emissions required, based on 2010 worse case adjusted diffusion tubes results, expressed as a concentration, would be a 5 µg/m⁻³ reduction in NO₂ from 45 to 40 µg/m⁻³.

The reduction in road NO_x emissions required to meet the 40 µg/m⁻³ objective has been calculated as 16µg/m⁻³ which represents a 24% reduction in roadside NO_x.

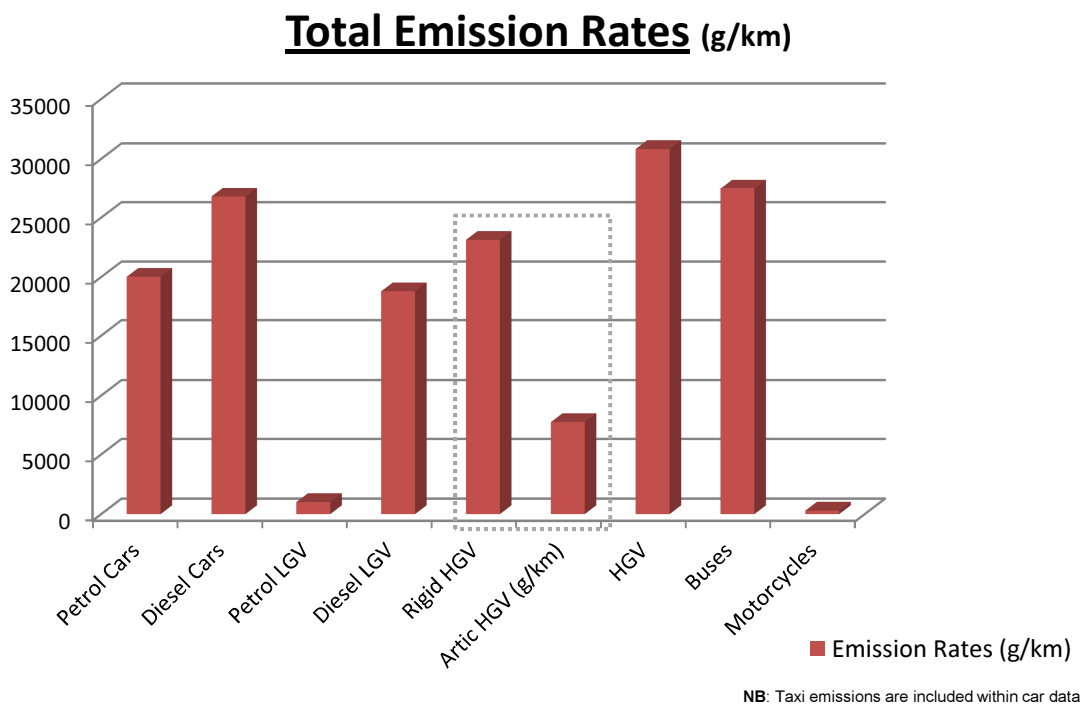


Figure 3.1 Total NO_x Emission Rates by Vehicle Type (sum of all road links)

Percentage Emissions by Vehicle Type

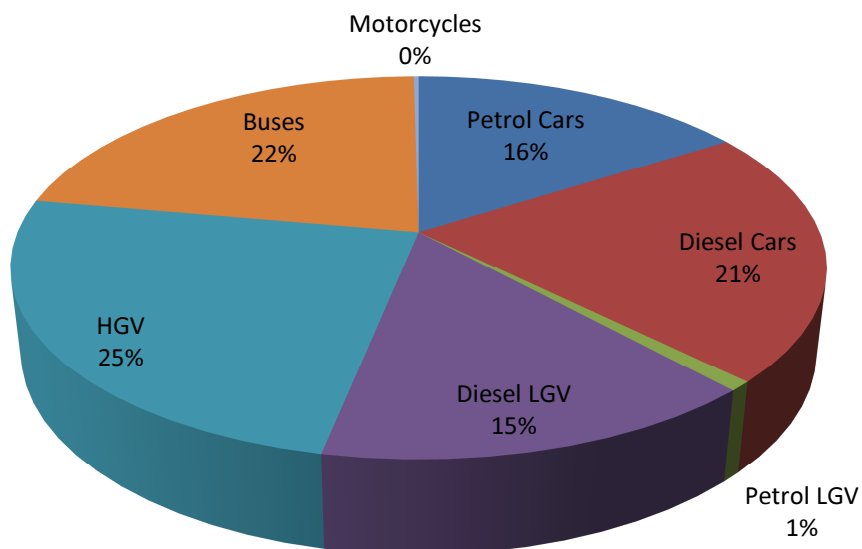


Figure 3.2 Percentage NOx Emissions by Vehicle Type (sum of all road links)

The Report then went on to recommend that:

The current extent of the AQMA is maintained, based on continued monitoring with the area.

When assessing the options for the Action Plan consideration should be given to targeting reductions in emissions from the commercial fleet (HGVs, Buses and LGVs) as these make up a large proportion of the emissions.

However, actions to tackle the remaining 37% of emissions, from private cars (petrol & diesel), should also be included to ensure the maximum reductions in emissions possible.

4 Development of the Action Plan

4.1 Action Plan Steering Group

In order to establish options for consideration in the plan a workshop event was held, attended by interested stakeholders; including:

- Ward Councillors,
- Portfolio Holder for Health and Well Being,
- Nottinghamshire County Council – Local Transport Plan Manager
- Nottinghamshire County Council –Accessibility & Travel Planning Officer
- Nottingham City Council – Environmental Health & Trading Standards
- GBC Planning Policy Officer
- GBC Public Protection Officers

Those unable to attend therefore correspondence stakeholders;

- Ward Councillors
- Portfolio Holder for Environment and Sustainability
- GBC Corporate Director(s)
- GBC Service Manager Planning and Economic Development
- GBC Economic Development Officer
- Health Protection Agency - Environmental Public Health Scientist
- Nottingham City Council – Principal Transport Planning Officer

4.2 Action Plan Development Process

The outputs from the workshop were then incorporated, and refined during meetings with the County Council Transport Planning Officers creating a list of potential measures for further consideration and prioritisation.

The first draft of the action plan was then submitted for internal consultation with the stakeholders above, for their comments. These comments were then incorporated to form the final draft submitted for public consultation.

4.3 Action to date

Following the source apportionment work, it was clear that heavy goods and passenger transport vehicles make a major contributor of emissions of NO_x within the A60 AQMA. As such Gedling Borough submitted a successful bid to DEFRA for air quality grant funding in 2011 to create an ECOSTars Fleet Recognition Scheme. The scheme launched in March 2012.

5 Action Plan Options and their Assessment

5.1 Initial Assessment of Options

Policy Guidance (PG09) states that when formulating an action plan it should show “*evidence that all available options have been considered*”. Therefore at the beginning of the process it is considered appropriate to review all potential options/measures.

The identification of potential measures for consideration was carried out through a review of existing action plans in Nottinghamshire, other action plans highlighted as good practice, guidance produced by Environmental Protection UK as well as recommendations made by stakeholders during the workshop event.

The workshop held with stakeholders began with a presentation of the seven ‘broad options’ available, Table 5.1 below outlines these in more detail. These broad options were used as discussion points to focus on particular measures that might be moved forward through the options appraisal process.

Table 5.1 – Potential Option Types to Improve Air Quality

Type	Description	Notes
1	Move Receptors.	Is this really an option? Can the principle receptors be moved from the affected area? Where the exceedence is the hourly objective this may be feasible.
2	Move Sources away from AQMA.	Road transport emissions have been shown to represent the principal source of NO _x within the AQMA. The construction of new roads could divert traffic away from the roads in the AQMA. Less traffic on these roads results in lower pollution levels in the AQMA. However, the opportunity to build such roads is frequently absent. In cases where such roads can be built, care needs to be exercised that the locations where the new roads are built do not become AQMA in turn. Note that this option moves emissions from one location to another with no requirement to reduce them. Overall emissions may be increased by such actions.
3	Optimise Traffic Flows around AQMA.	Changes in how the roads in the AQMA are signed or otherwise managed may reduce emissions from road transport a) by diverting some traffic onto better routes for them, or b) by reducing congestion/ stationary traffic. Note that the opportunity to take such action is frequently limited.

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Type	Description	Notes
4	Strategic Measures.	<p>Road transport emissions constitute a significant source of air pollution across the UK, and have contributed to the declaration of numerous Air Quality Management Areas. Due to the prevalence of road transport, a local long-term strategy is required to bring about a progressive reduction in emissions from the road transport sector in future years and encourage improvements in local air quality as a result.</p> <p>A long-term strategy aimed at reducing concentrations from these sources might include:</p> <ul style="list-style-type: none"> • Building the capacity to better assess and manage the environmental impacts from road transport. • Specific commitments or targets within local development and transport planning policy
5	Reduce Emissions through technical means.	<p>The majority of vehicles using roads in the AQMA are conventional petrol or diesel powered vehicles with a range of ages. There are many technical options to convert such vehicles into ones using cleaner engine and fuel technology. By accelerating the uptake of these technologies the emissions in the AQMA would be reduced.</p> <p>Note that technology does not always work in a positive sense for all emissions. They sometimes trade benefits for one pollutant against negative aspects for another one.</p>
6	Reduce Emissions via achieving better travel choices/ behavioural change.	<p>An important way to reduce emissions from transport is to reduce the number of journeys made through the AQMA. This could be achieved either through reducing the need to make some journeys, or by ensuring that these journeys are made via a less polluting form of transport. The success of such measures depends on policies that influence how people make travel choices.</p> <p>Note that there is increasing emphasis placed on such policies and that they work holistically by reducing emissions of all pollutants and greenhouse gases.</p>
7	Other.	<p>May include a variety of measures e.g. targeting reduced emissions from domestic sources, industry or statutory nuisance.</p>

After Table 5.1; AEA, 2010

5.1.1 Initial response to the options

Certain options considered by the Steering Group and subsequently during communications with stakeholders were considered to be unfeasible or did not fit the targeting of sources (as outlined in the Further Assessment). These options were removed from further consideration at this time.

Appendix B lists all the options considered.

Table 5.2 Options eliminated from further consideration

Options / Measure
1. Move Receptors
Remove homes and businesses
2. Move Sources away from AQMA
Relocating GBC Depot
Delivery Hub
Reduce/remove Forest Park and Ride
3. Optimise Traffic Flows around AQMA
Changes to Junction Layout (Oxclose Lane)
Consideration of on-street parking charges.
Review of right turning at certain junctions.
Speed Controls
4. Strategic Measures
Road User Charging/Congestion Charge
5. Reduce Emissions through technical means
Idling Vehicle Enforcement
7. Other
Smoke Control Enforcement
Bonfire Smoke - Statutory Nuisance

The measures listed above in Table 5.2 have been excluded at this stage we are subsequently left with the measures that are now considered further.

5.2 Development of Proposed Measures

Each of the measures shortlisted for further consideration are discussed in more detail below. Where appropriate, measures have been grouped together under common themes and responsible authorities for implementation are given.

5.2.1 Move Sources away from the AQMA

Park and Ride

As part of the development of LTP3 the County Council reviewed its list of prioritised major schemes. Of the schemes retained one scheme would have a significant impact on the AQMA, the A60 Leapool to Sherwood Express busway. This scheme would include a park and ride site along with bus priority measures along the A60.

This scheme requires further investigation before it can be determined if it is feasible or affordable; both from a transport and development planning point of view. Any such scheme would also potentially be subject to funding agreement from the Department for Transport (DfT).

It should also be noted that increased bus services could have a negative impact on the AQMA unless buses used are low emission vehicles.

Measure	Title
1	Park and Ride
Definition	Key Intervention
The creation of a Park and Ride scheme.	Remove a proportion of the car traffic therefore reducing traffic congestion along the AQMA.
Responsible Authority and other parties	Powers to be used
Nottinghamshire County Council	Statutory / Voluntarily

Re-routing of Heavy Goods Vehicles

The major source of the emissions has been identified as being due to commercial vehicles; the vast majority of these are through vehicles. Reduction in Heavy Goods Vehicles would therefore directly reduce exposure in the AQMA.

The effectiveness of any lorry routeing measures is variable, largely depending on local circumstances and the attractiveness of alternative routes, and the level of reduction which any measures would be likely to achieve is difficult to predict.

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There are also questions over the acceptability of these measures; moving heavy goods vehicles onto alternative routes, including minor roads may just move the problem, causing objections from residents and businesses.

Enforcement is also a considerable issue with any environmental weight limit, given that, the general exception for access makes identification of offending vehicles difficult. Whether such measures are feasible would require further consideration before moving ahead with any of the measures.

Measure	Title
2	Re-routing of Freight Operators
Definition	Key Intervention
<p>This measure has been used to include other measures related to:</p> <ul style="list-style-type: none"> a) Restriction of vehicle types using road at certain times of the day. b) Restricting the road as appears on route finders and Satellite Navigation Systems. c) Consider diverting HGVs – Oxclose Lane/Edwards Lane 	<p>Removing Heavy Goods Vehicles that use the A60 as a through road.</p>
Responsible Authority and other parties	Powers to be used
<p>Nottinghamshire County Council Gedling Borough Council</p>	<p>Statutory / Voluntarily</p>

5.2.2 Traffic management – optimisation of traffic movement through AQMA

Traffic Control and Management

Queuing of traffic can result in elevated concentrations of air pollution, creating localised hot spots. These may be reduced by the phasing of traffic signals to facilitate the smooth flow of traffic along a given street. Nottinghamshire County Council have agreed to review measures they may be able to implement to ease the flow of traffic along the A60.

Measure	Title
3	Traffic Control and Management
Definition	Key Intervention
<p>This measure has been used to include other measures related to the management of traffic flow; including:</p> <ul style="list-style-type: none"> a) Consideration and installation of SCOOT/MOVA and other traffic signal efficiency improvements, including CCTV at appropriate junctions within the AQMA. b) Nottinghamshire County and City Councils jointly fund the traffic control centre that monitors traffic movement and provides real time traffic control over many traffic signal installations. c) Consideration of bus priority measures at traffic signal junctions. d) Review of 24hr bus lane restrictions. e) Effective co-ordination of street works to minimise traffic disruption and unnecessary congestion as part of the County Council's network management duty. f) Effective management of incidents to minimise traffic disruption and unnecessary congestion as part of the County Council's network management duty. g) Effective contingency planning to minimise traffic disruption and unnecessary congestion as part of the County Council's network management duty. 	<p>Reduce traffic congestion along the AQMA.</p>
Responsible Authority and other parties	Powers to be used
Nottinghamshire County Council	Statutory / Voluntary

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Gedling Borough Waste Collection

One simple measure that can be considered is to ensure that refuse collections along the A60 occur outside of peak times.

Measure	Title
4	Gedling Borough Waste Collection
Definition	Key Intervention
Ensure that collections around the AQMA occur outside of the rush hour.	Reduce traffic congestion along the AQMA.
Responsible Authority and other parties	Powers to be used
Gedling Borough Council	Voluntary

Parking Management and Control

Parking policies have an important role to play in reducing reliance on the car. The decision to use a car for the journey to work is greatly influenced by the availability and cost of parking. Nottingham City Council introduced a workplace car parking levy in October of 2011. At this stage it is not known what effect this charge has had on commuting traffic, and therefore emissions levels.

In Gedling parking strategies should aim to support policies that encourage travel by sustainable modes, whilst also supporting town centre development and economic growth.

Measure	Title
5	Parking Management and Control
Definition	Key Intervention
Ensure that car parking in and around the AQMA is managed and reviewed via: <ul style="list-style-type: none"> a) Civil parking enforcement b) Continual review of car parking charging, to promote public transport options. 	Promote public transport through review of car parking arrangements.
Responsible Authority and other parties	Powers to be used
Gedling Borough Council Nottinghamshire County Council	Statutory / Voluntary

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Low Emissions Zone

A Low Emission Zone (LEZ) is a geographically defined area where the most polluting vehicles in the fleet are restricted or discouraged from using. The aim is to improve air quality by setting an emissions based standard for the vehicles within the area; thereby encouraging the use of alternative fuelled vehicles such as electric, hybrid.

They have been used successfully throughout Europe mainly in large city areas; it is not known if there have been any successful implementation of LEZ's covering smaller more defined areas, such as the A60 AQMA.

The potential for an LEZ would require further investigation before it can be determined if it is feasible or affordable. Any such scheme would also be subject to finding the funding necessary.

Measure	Title
6	Low Emissions Zone
Definition	Key Intervention
Consider the feasibility of a Low Emission Zone.	Low Emission Zone would restrict/discourage high polluting vehicles.
Responsible Authority and other parties	Powers to be used
Gedling Borough Council Nottinghamshire County Council	Statutory / Voluntary

5.2.3 Strategic measures

The air quality action plan needs to support and consider existing and future development and transport plans, as they need to take into account this action plan. Therefore integrating this action plan with the Local Transport Plan(s) (LTP) and the Local Plan (formally the Local Development Framework LDF) is considered essential to ensure a strategic approach to resolving air quality issues.

Improve links with Local Planning and Development Framework

Planning and development control play an important role in minimising the potential detrimental impacts that new developments may have on local air quality. This strategic measure is intended to minimise the potential impact of future developments on local air quality across Gedling Borough.

Air quality is already considered during the development planning process; the new planning policy framework states that:

“Planning policies should sustain compliance with and contribute towards EU limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative impacts on air quality from individual sites in local areas. Planning decisions should ensure that any new development in Air Quality Management Areas is consistent with the local air quality action plan.”
DCLG, section 124, p29

Whilst it is important that all large-scale developments are considered in terms of their potential impact on local air quality, it is particularly important that proposed developments that may exert an impact on the AQMA should be subject to particular consideration in terms of their potential impact on local air quality, and that all practicable mitigation measures are implemented.

This measure also includes the development of an Air Quality Supplementary Planning Document (SPD). This document would serve as guidance to developers outlining the potential requirement to undertake an Air Quality Impact Assessment for certain developments and the required content of such assessments, plus the potential requirement for mitigation measures.

Measure	Title
7	Improve links with Local Planning and Development Framework
Definition	Key Intervention
<p>This measure has been used to include other measures related to land use planning; including:</p> <ul style="list-style-type: none"> a) Ensure sustainable development on vacant sites within and in the vicinity of the AQMA. b) Ensure AQAP and AQMA are considered in future planning policy frameworks (Local Plans). 	<p>Local planning considerations aim to mitigate the cumulative negative air quality impacts of new development.</p>

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Measure	Title
7	Improve links with Local Planning and Development Framework
Definition	Key Intervention
<p>c) Co-ordination of land-use planning and transport infrastructure (including through the Local Plan). Development of car parking standards that encourage cycling, walking and public transport use.</p> <p>d) Secure appropriate levels of developer contributions (Section 106 and/or CIL) for use on air quality improvement projects. Use of collected development control contributions to provide cycling, walking and public transport improvements within the AQMA.</p> <p>e) Development of an Air Quality Supplementary Planning Document (SPD)</p> <p>f) Use of planning conditions for Delivery Times, Travel Plans etc.; including enforcement to ensure compliance.</p>	
Responsible Authority and other parties	Powers to be used
<p>Gedling Borough Council: Planning and Economic Development, and Public Protection Services.</p> <p>Gedling Borough Council and Nottingham City Council</p>	Voluntary

Improving links with Local Transport Strategy

Emissions from road transport have been identified as the key source of NO_x in and around the AQMA. As such the Local Transport Plans (LTP) produced by Nottinghamshire County Council and Nottingham City Council are key documents for delivering initiatives aimed at improving air quality along the A60 corridor.

Measure	Title
8	Improving links with Local Transport Strategy
Definition	Key Intervention
Continue links with both County and City Transport Planners to ensure AQAP is considered in future transport planning.	Measures to ensure the current poor air quality in the AQMA is improved where possible and to avoid future problems are implemented via the Local Transport Plan.
Responsible Authority and other parties	Powers to be used
<p>Gedling Borough Council</p> <p>Nottinghamshire County Council</p> <p>Nottingham City Council</p>	Voluntary

5.2.4 Reduce Emissions from Sources by Technical Means

As described in Section 3.2 emissions from commercial vehicles (lights goods, heavy goods and buses) make a significant contribution to the emissions of NOx. As such measures aimed at these target areas are considered in the following.

Several measures outlined below are common across the vehicle types:

1. The Eco Stars fleet recognition scheme is designed to provide recognition, guidance and advice to operators of goods vehicles, buses and coaches, who are implementing operational best practice measures to:
 - improve efficiency,
 - reduce fuel consumption and
 - reduce fleet emissions

Gedling Borough has recently created an Eco Stars scheme targeting operators using the A60.

2. Eco-driving or Smarter Driving training gives drivers techniques that enable them to drive more fuel efficiently. Currently courses are run through the Energy Savings Trust.

Target reductions in emissions from Buses

Measure	Title
9	Target reductions in emissions from Buses
Definition	Key Intervention
Target reductions in emissions from buses via: <ol style="list-style-type: none"> a) ECOStars Fleet Recognition Scheme. b) Promotion of the benefits of Eco-driving training for drivers. c) Ongoing delivery of Quality Bus Partnerships in Gedling Borough. (Mansfield and Nottingham City) d) Encouraging the use of emissions standards when procuring school bus contracts and supported bus services that operate within AQMA. 	Target reduced emissions from buses operating within the AQMA.
Responsible Authority and other parties	Powers to be used
Gedling Borough Council Nottinghamshire County Council Passenger Transport Operators	Voluntary

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Target reductions in emissions from Heavy and Light Goods Vehicles

Measure	Title	
10	Target reductions in emissions from Heavy and Light Goods Vehicles	
Definition		Key Intervention
Target reductions in emissions from HGV's and LGV's via: <ul style="list-style-type: none"> a) ECOStars Fleet Recognition Scheme. b) Promotion of the benefits of Eco-driving training for drivers. 		Target reduced emissions from HGV's and LGV's operating within the AQMA.
Responsible Authority and other parties		Powers to be used
Gedling Borough Council Haulage Operators		Voluntary

Target reductions in emissions from Taxis

Measure	Title	
11	Target reductions in emissions from Taxis	
Definition		Key Intervention
Target reductions in emissions from Taxi's operating around AQMA: <ul style="list-style-type: none"> a) Promotion of low emission vehicles through taxi licensing. 		Target reduced emissions from Taxi's operating within the AQMA.
Responsible Authority and other parties		Powers to be used
Gedling Borough Council Taxi Operators		Voluntary

Target reductions in emissions from Council Fleet and Contract Vehicles

The Council operates a fleet of approximately 70 vehicles ranging from cars, light goods vehicles to heavy goods refuse collection vehicles. The Council offices and depot are also within close proximity to the AQMA. Therefore, ensuring the Council takes a lead at looking at its fleet and fleet management practises will encourage others to do the same.

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Measure	Title
12	Target reductions in emissions from the Council Fleet and Contract Vehicles.
Definition	Key Intervention
<p>Continue to target reductions in emissions from the Council fleet and contract vehicles through:</p> <ul style="list-style-type: none"> a) Gedling Borough membership of ECOStars scheme. b) Ensuring new vehicles procured are cleanest possible. c) Run Eco-driving training course for officers using own and GBC vehicles for work. d) Consider alternative fuelled 'pool vehicles'. e) GBC Green Procurement (emission standards for vehicles making deliveries to the Council). 	<p>Target reduced emissions from Council fleet vehicles and Council contract fleet vehicles operating within AQMA.</p>
Responsible Authority and other parties	Powers to be used
Gedling Borough Council	Voluntary

Encourage the uptake of alternative fuels

Despite efforts to encourage walking, cycling and use of public transport, a large proportion of journeys will continue to be made by cars, and other privately owned vehicles. In these cases air quality improvements must be achieved by reducing emissions from individual vehicles. One way of encouraging the use of alternative fuelled vehicles is the help provide the infrastructure for their use.

Measure	Title
13	Encourage the uptake of alternative fuels
Definition	Key Intervention
<p>Target reductions in emissions from all vehicles operating around the AQMA:</p> <ul style="list-style-type: none"> a) GBC consider installing electric charging points for visitors and staff. b) Consider a wider network of charging points. 	<p>Encourage the uptake of alternative fuels with infrastructure improvements.</p>
Responsible Authority and other parties	Powers to be used
Gedling Borough Council Nottinghamshire County Council	Voluntary

Gedling Borough Council - England

5.2.5 Reduce Emissions from sources by means of encouraging better travel choices/ behavioural change

The choices that people and organisations make in terms of travel and general behaviour can have a significant impact on local air quality.

By raising awareness of the AQMA and promoting options by which people can contribute to improving local air quality, it is hoped that long-term behavioural change can be encouraged, with associated long-term benefits for local air quality.

It is important that members of the public and organisations are informed about local air quality issues, as their support is important to the success of this action plan. It is also important that local air quality is linked with other programmes being progressed within Gedling Borough and by Nottinghamshire County Council.

Communication and Education – Awareness Raising

Measure	Title
14	Communication and Education – Awareness Raising
Definition	Key Intervention
To increase awareness of local air quality issues. This measure has been used to include other measures related to awareness raising: a) Design and erect AQMA signs at various locations. b) Roadside Vehicle Emissions Testing (RVET) c) Tackling the School Run – communication with schools and parents. d) Undertake a publicity campaign to raise awareness of the A60 AQMA.	To increase awareness of local air quality issues and encourage change in behaviour that will contribute to improving local air quality.
Responsible Authority and other parties	Powers to be used
Gedling Borough Council Nottinghamshire County Council	Voluntary

Travel Plans

Travel plans aim to address the negative impacts of car travel, notably single occupancy vehicles, by encouraging car sharing, or a shift to more sustainable forms of transport, such as walking, cycling and public transport; or reducing the need for travel.

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Such plans typically recognise that one solution is unlikely to be suitable for everyone and thus focus on encouraging the consideration of alternative forms of travel through the provision of incentives such as improved cycle facilities, flexible working arrangements and discounted public transport.

1. Local Authority Travel Plans

Both the County Council and Gedling Borough Council have travel plans for sites within and close to the AQMA. As such it is important to review and promote the travel plans.

2. School Travel Plans

Nottinghamshire County Council has been working with schools to ensure each has a travel plan in place.

3. Workplace Travel Plans

Nottinghamshire County Council provides guidance and support to local businesses and organisations in the design of successful Travel Plans.

Measure	Title
15	Travel Plans
Definition	Key Intervention
<p>To encourage and assist organisations to develop, review and implement travel plans. This measure has included:</p> <ul style="list-style-type: none"> a) Review/Refresh Gedling Borough Council Travel Plan; b) Nottinghamshire County Council to review Travel Plan for sites within or close to the AQMA. c) Continue to support the implementation of school travel plans; d) Work with local businesses/organisations to encourage the development and implementation of travel plans. 	<p>To encourage a shift to more sustainable forms of travel, or reducing the need for travel.</p>
Responsible Authority and other parties	Powers to be used
<p>Gedling Borough Council, Nottinghamshire County Council, Nottingham City Council Businesses and Schools close to and within the AQMA</p>	<p>Voluntary</p>

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Promoting Travel Choices

The promotion of 'smarter' travel choices are a series of measures found within the Local Transport Plans (LTP3) of both Nottinghamshire County and Nottingham City Councils. The measures are designed to enhance the promotion of travel choices to the public, thereby encouraging them to utilise public transport instead of private vehicles.

Measure	Title
16	Promoting Travel Choices
Definition	Key Intervention
<p>To increase awareness of travel choice options. These measure include:</p> <ul style="list-style-type: none"> a) Undertake personalised travel planning within Gedling borough. b) Establishment of a City Car Club and consideration of extending this into the county. c) The promotion and facilitation of car sharing schemes, www.nottinghamshare.com was launched in April 2006. d) Residential Travel Packs, to be issued to all new built homes identified through planning process; promotion of walking, cycling and public transport. 	<p>To increase awareness of travel choices and encourage changes in behaviour that will contribute to improving local air quality.</p>
Responsible Authority and other parties	Powers to be used
<p>Gedling Borough Council Nottinghamshire County Council Nottingham City Council</p>	<p>Voluntary</p>

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Public Transport

The provision of a good public transport infrastructure and service is obviously a key measure within the LTP3 of both Nottinghamshire County and Nottingham City Councils. As such measures found in the transport plans are transferable here.

Measure	Title
17	Public Transport
Definition	Key Intervention
<p>To promote and increase the use of public transport. This measure includes:</p> <ul style="list-style-type: none"> a) Development of ITSO smartcard ticketing. b) Deliver the free countywide off-peak concessionary fare scheme for the over 60s and disabled. Consideration of introduction of concessionary fares for young people. c) Investigate and publicise web based journey planners. Develop and undertake annual production of marketing literature. d) Review, install/ replace flagpoles/ timetable cases along key AQMA corridors. e) Consider bus provision on the A60 and surrounding area. (Service review) f) Install 'real time' bus information along key AQMA corridors. g) Consider capacity increases on the GO2 services along the A60 corridor. 	<p>To increase use of public transport that will contribute to improving local air quality.</p>
Responsible Authority and other parties	Powers to be used
<p>Nottinghamshire County Council Nottingham City Council Passenger Transport Operators</p>	<p>Voluntary</p>

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Promotion of Cycling and Walking

Encouraging a shift towards cycling and walking represents one of the key measures in the Nottinghamshire County and Nottingham City LTP3s. As such measures are proposed to encourage members of the public to consider walking or cycling, instead of using their car, therefore promoting healthy lifestyle choices and environmental improvements. The measures in the LTP3 are therefore reflected in the following measure.

Measure	Title
18	Promotion of Cycling and Walking
Definition	Key Intervention
<p>To encourage members of the community to adopt cycling and walking as alternatives to using private vehicles.</p> <ul style="list-style-type: none"> a) Develop and undertake annual cycling promotional marketing campaigns/production of literature. b) Deliver adult and child cycle training. c) Consider the use of advance cycle stop lines at feasible junctions within the AQMA. d) Gedling Borough to hold 'Car Free Days' to encourage staff to cycle or walk to work. e) Develop and undertake annual walking promotional marketing campaigns/production of literature. f) Consider walking and cycling infrastructure and facility enhancements. 	<p>To encourage the shift away from the use of private motor vehicles for travelling to more sustainable forms of transport, or reducing the need for travel.</p>
Responsible Authority and other parties	Powers to be used
<p>Gedling Borough Council Nottinghamshire County Council Nottingham City Council</p>	<p>Voluntary</p>

6 Methodology Utilised to Assess Shortlisted Measures

The Policy Guidance (PG09) states that *“The local authority should consider the wider economic, social and environmental impact, bearing in mind other legal requirements and policy drivers from central Government.”* This chapter takes the measures and assesses their impacts, costs and feasibility in order to ensure measures are suitable for inclusion in the final plan.

6.1 Potential Air Quality Impact

A key issue is an Action Plan measures ability to reduce emissions and therefore effectively improve the air quality. To truly assess the air quality impact of each measure would require detailed, in-depth assessments. At this stage it was considered more appropriate to assess each measure in a semi-qualitative way, whereby consideration was given to:

1. The source apportionment study carried in the Further Assessment and whether the measure targeted the primary sources of emissions.
2. The estimate of the actual traffic that would be affected by the proposed measure.
3. An estimate of the emissions reduction expected from implementation of the measure, giving an indication of the significance the measure might have on meeting the air quality objective.

Therefore the air quality impacts have been assessed as having potentially:

- small ($<1\mu\text{g m}^{-3}$)
- medium ($1 - 2\mu\text{g m}^{-3}$)
- high ($>2\mu\text{g m}^{-3}$)

6.2 Implementation Costs

The potential implementation costs of each option have been estimated and are assessed as follows:

- £ Neutral/Low costs (up to £100k)
- ££ Medium costs (up to £500k)
- £££ High costs (up to £1m)
- ££££ Very high costs (above £1m)

6.3 Cost-Effectiveness

AQ Benefit \ Cost	Score	Small	Medium	High
		Score	Small	Medium
Neutral	5	5	10	15
Low	4	4	8	12
Medium	3	3	6	9
High	2	2	4	6
Very High	1	1	2	3

Range of Costs: neutral, low (<£100k), medium (<£500k), high (<£1m), very high (>£1m).
 Range of AQ benefits: small (<1µg m⁻³), medium (1-2µg m⁻³), high (>2µg m⁻³).

The above table brings together the elements of air quality benefits and cost, as outlined above, in order to produce a weighted score for a particular measure. The table is read as:

- If the product is **high** (10 or more) then the measure is more cost-effective (significant impacts for the cost involved) and perhaps favourably cost-effective;
- If the product is **medium** (between 5-9) then the measure is in the medium range of cost effectiveness;
- If the product is **low** (4 or less) then the measure is less cost-effective (small impacts for the cost involved) and perhaps unacceptably poor in cost-effectiveness terms.

It should be noted that this method only estimates the *relative* cost-effectiveness of options rather than their absolute values; this method is useful during discussions of the relative priority of different options only.

6.4 Potential Co-environmental Benefits

Consideration has also been given to any other environmental benefits that may be applicable, such as:

- Other air quality pollutants; for example Particulate Matter (PM10)
- Greenhouse gases; for example local reductions in CO₂.
- Noise.

It should be noted that this assessment has been carried out without the benefit of a detailed assessment of the measures.

6.5 Potential Social Impacts

Consideration has been given to any possible social impacts which may also result from a given measure. These co-benefits are considered without detailed examination, and are therefore possible impacts:

- Provide health benefits in terms of lower exposure to pollutants or increased mobility;
- Increase road safety;
- Improve accessibility.

6.6 Potential Economic Impacts

Consideration has been given to any possible economic impacts which may also result from a given measure. The impacts are considered without detailed examination, and are therefore plausible:

- Influence sustainable development or accessibility in and around Daybrook and Arnold;
- Reduce or increase overall travel time;
- Place additional requirements on operators.

6.7 Feasibility and Acceptability

Feasibility

An assessment of the feasibility for each of the measures has been carried out based on whether the Council has:

- The executive powers under existing legislation to implement and enforce a measure. Alternatively, whether the authority has an existing mechanism to influence other agencies to implement a measure;
- Secured funding for the measure or a straightforward route for securing funding;
- Characterised the potential positive and negative impacts of the measure with sufficient evidence or confidence to make a decision to implement the measure.

The table below sets out the criteria adopted for defining the measure as being feasible over the short, medium or long term, or as being unfeasible.

Each measure is assessed against each criterion. The final feasibility timeframe is defined according to which of the three assessments results in the longest of the four possible terms (short, medium, long or unfeasible). For example, an option for which powers are clear and for which impacts are well characterised but for which funding will be difficult to obtain would be assessed as feasible over the long term.

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Table 6.1 Feasibility Criteria Assessment.

Feasible in the:	Authority has the powers	Funding Secured	Potential positive and negative impacts are well characterised.
Short Term (1-2 years)	Yes, clearly defined and already exercised.	Yes, potentially straightforward	Yes
Medium Term (3-6 years)	Yes, but novel or with an element of uncertainty	Yes with forward planning	Not without further study
Long Term (>6 years)	Highly uncertain	No or extremely difficult	
Unfeasible	No	Will never attract funding	Hard to characterise and with high risks

After Table p51; AEA, 2010

Acceptability

A preliminary judgement is expressed on how acceptable each option might be according to the following criteria:

The measure is considered potentially acceptable if:

- the measure is likely to compel people to change their behaviour without any significant increase to their costs or,
- at least some level of behaviour change or personal costs are required but the scheme is overall consistent with the Councils priorities.

The measure is considered potentially unacceptable if:

- unacceptably intrusive changes in behaviour or large personal costs would be incurred. (i.e. unacceptable to the general public)
- considered inconsistent with the Councils priorities.

Final judgements on acceptability will necessarily rest with the elected Council members.

A summary of the results of the assessment is presented in Table 6.2 below, with further details presented in Appendix C.

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Table 6.2 - Summary Assessment of Proposed Measures

Measure	Potential Air Quality Impact	Estimated Cost	Cost Effectiveness (CE Score)	Potential Co-environmental Impacts	Potential Social Impacts	Potential Economic Impacts	Lead Authority	Feasibility / Acceptability
Move Sources away from AQMA								
1. Park and Ride	Medium	££££	Low (2)	CO2 +ve Other Pollutants +ve Noise +ve	Improved Accessibility / Mobility	Better Journey times	NCC	Long Term Feasible?
2. Re-routing Freight Operators	Medium/High	£££	Low/Medium (4-6)	CO2 +ve Other Pollutants +ve Noise +ve	None	Difficulties with deliveries to businesses	NCC/ GBC	Long Term Unacceptable?
Optimise Traffic Flows around AQMA								
3. Traffic Control and Management	Medium	£	Medium (8)	CO2 +ve Other Pollutants +ve Noise +ve	Road Safety	Better Journey times	NCC	Medium Term Acceptable
4. GBC waste collection	Small	£	Low (4)	None	None	None	GBC	Short Term Acceptable
5. Parking Control and Management	Small	£	Low (4)	None	None	None	GBC/ NCC	Short Term Acceptable?
6. Low Emission Zone	Medium/High	£££	Low/Medium (4-6)	CO2 +ve Other Pollutants +ve	None	Place additional requirements on operators.	NCC/ GBC	Long Term Feasible?
Strategic Measures								
7. Improve links with Local Planning and Development Framework				CO2 +ve Other Pollutants +ve	None	May influence development and assoc. aims.	GBC	Short Term Acceptable
8. Improve links with Local Transport Strategy				CO2 +ve Other Pollutants +ve	None	May influence development and assoc. aims.	NCC/ GBC	Short Term Acceptable

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Measure	Potential Air Quality Impact	Estimated Cost	Cost Effectiveness (CE Score)	Potential Co-environmental Impacts	Potential Social Impacts	Potential Economic Impacts	Lead Authority	Feasibility / Acceptability
Reduce Emissions through technical means								
9. Target reductions in emissions from Buses	Medium/High	££	Medium (6-9)	CO2 +ve Other Pollutants +ve Noise +ve	None	Place additional requirements on operators.	GBC/ NCC	Short/Medium Term Acceptable
10. Target reductions in emissions from Heavy and Light Goods Vehicles	Medium/High	££	Medium (6-9)	CO2 +ve Other Pollutants +ve Noise +ve	None	Place additional requirements on operators.	GBC	Short/Medium Term Acceptable
11. Target reductions in emissions from Taxis	Small	£	Low (4)	CO2 +ve Other Pollutants +ve	None	Place additional requirements on operators.	GBC	Medium Term Acceptable
12. Target reductions in emissions from the Council Fleet & Contract Vehicles.	Small	£	Low (4)	CO2 +ve Other Pollutants +ve Noise +ve	None	Place additional requirements on operators.	GBC	Medium Term Acceptable
13. Encourage the uptake of alternative fuels.	Small	££	Low (3)	CO2 +ve Other Pollutants +ve	None	Promotion of 'green' technologies	GBC/ NCC	Medium/Long Term Acceptable
Reduce Emissions via achieving better travel choices/ behavioural change.								
14. Communication and Education	Small	£	Low (4)	CO2 +ve Other Pollutants +ve	None	May have +ve or -ve impact on public perception	GBC/ NCC	Short/Medium Term Acceptable
15. Travel Plans	Small	£	Low (4)	CO2 +ve Other Pollutants +ve	Health benefits	None	NCC/ GBC	Short/Medium Term Acceptable
16. Promoting Travel Choices	Medium	££	Medium (6)	CO2 +ve Other Pollutants +ve	Health benefits	None	NCC/ GBC	Short/Medium Term Acceptable
17. Public Transport	Medium	£	Medium (8)	CO2 +ve Other Pollutants +ve	None	None	NCC	Short/Medium Term Acceptable
18. Promotion of Cycling and Walking	Small	£	Low (4)	CO2 +ve Other Pollutants +ve Noise +ve	Health benefits	Travel Times	NCC/ GBC	Short/Medium Term Acceptable

7 Action Plan

This chapter brings together the measures which have been identified as being the most appropriate to address the air quality problems along the A60; and therefore have been identified as priority measures for inclusion the final action plan.

7.1 Prioritisation of Measures

Based on the assessment undertaken in Chapter 6, a prioritised list of options has been produced. For the purpose of this Action Plan measures have been weighted both in favour of providing air quality benefits (with appropriate consideration of cost-effectiveness and the wider environmental benefits or risks) but also their feasibility.

Two of the Strategic Measures have not been assessed and therefore prioritised in the same way as the other more direct measures. Both transport and local planning strategies encompass some of the direct measures and therefore an integral part to the successful implementation of these measures.

Using the methods in Chapter 6 the overall action plan measures are scheduled as:

No.	Measure	Timescale
1	Improve links with Local Planning and Development Framework	On-going
2	Improve links with Local Transport Strategy	On-going
3	Target reductions in emissions from Buses	Short/Medium Term
4	Target reductions in emissions from Heavy and Light Goods Vehicles	Short/Medium Term
5	Public Transport	Short/Medium Term
6	Traffic Control and Management	Short/Medium Term
7	Promoting Travel Choices	Short/Medium Term
8	GBC waste collection	Short-term
9	Promotion of Cycling and Walking	Short/Medium Term
10	Travel Plans	Short/Medium Term
11	Communication and Education	Short/Medium Term
12	Parking Control and Management	Short/Medium Term
13	Target reductions in emissions from Taxis	Medium-term
14	Target reductions in emissions from the Council Fleet & Contract Vehicles.	Short/Medium Term
15	Encourage the uptake of alternative fuels.	Long-term
16	Park and Ride*	Long-term
16	Low Emission Zone*	Long-term
17	Re-routing Freight Operators**	Long-term

NOTE

* this option is included but may not be feasible.

** this option is included but considered potentially unacceptable.

7.2 Funding for Measures

The successful implementation of the Air Quality Action Plan is heavily dependent upon obtaining adequate funding and resources to deliver the proposed measures. Many of the measures included within the plan are already supported through existing strategies (e.g. LTP3) but some may require some additional funding to facilitate their implementation. Other potential sources of funding include:

- Developer contributions (Section 106 and/or Community Infrastructure Levy);
- Local Sustainable Transport Fund;
- DEFRA Air Quality Grant Funding.

The availability of such funding is likely to determine the progress of the Action Plan.

7.3 Monitoring

The final action plan will have to be approved by the Council and by DEFRA before it can become a fully adopted plan. Throughout the period that the plan is implemented the Council will:

- Continue to monitor and review air quality to assess whether the AQMA should be revised or revoked;
- Produce an annual progress report that sets out new information on air quality in the Borough, which will also report on progress made with implementing the action plan;

Progress on the transport measures will generally be monitored through the Local Transport Plan indicators and their associated monitoring processes. Table 7.1 lists the County Council LTP3 indicators that will be used to monitor progress.

In recognition of transport emissions being the main cause for declaring the AQMA, regular meetings will be undertaken with all of the stakeholders including Gedling Borough Council and the Transport Plans and Programmes Team at Nottinghamshire County Council. The aim of the meetings will be to consider options to enable managing traffic volumes in the AQMA area and their resultant emissions. It has been agreed to meet 2 times per year to discuss the progress made with the measures in the AQAP and to provide feedback on monitoring undertaken by Gedling Borough and Nottinghamshire County councils. (See Appendix C)

Gedling Borough Council - England

Table 7.1: Nottinghamshire County Council LTP3 indicators

Key outcome indicators		Intermediate outcome indicators		Contributory output indicators	
Ref.	Description	Ref.	Description	Ref.	Description
NI167 and LTP1	Average journey time per mile during the morning peak on the urban centre networks in the county	LTP6	Traffic flows into town centres	LTP21	Number of registered car sharers on Nottinghamshire
LTP2	Changes in areas wide traffic mileage (vehicle kilometres travelled)	LTP7	Organisations with a travel plan	LTP22	Public satisfaction with passenger transport information
LTP3	Child obesity levels	NI177	Number of local bus and light rail passenger journeys originating in the authority area	LTP23	Public satisfaction with driver behaviour
NI176	Access to employment by public transport	NI178	Bus services running on time	LTP25	Number of children undertaking cycle training
LTP4	Number of air quality management areas (AQMAs) on County Council managed roads	LTP8	Public satisfaction with local bus services	LTP26	Length of shared or segregated cycle lane or path
LTP5	CO ₂ emissions from road transport	LTP13	Cycling levels	LTP27	Number of fully accessible buses
		LTP15	Access to training by public transport	LTP28	Provision of information at bus stops
		LTP16	Access to health care by public transport	LTP29	Provision of real-time information
		LTP17	Access to hospitals by public transport	LTP30	Take-up of concessionary fare passes
		LTP18	Access to retail centre or local shops by public transport		
		LTP19	Accessibility to public transport services		
		LTP20	Nitrogen Dioxide levels in air quality management areas (AQMAs)		

8 Consultation on the Draft Air Quality Action Plan

8.1 Draft Air Quality Action Plan: Public Consultation Summary

The public consultation process took place over an 8 week period; 6th August to 28th September 2012. To publicise the Action Plan and the consultation process use was made of the following promotional methods:-

- An article in the Summer edition of the Councils 'Contacts' magazine, which goes to every household in the Borough.
- A piece in 'Neighbourhood news' in the Nottingham Evening Post.
- A letter to the 256 residential and business addresses in and around the AQMA
- Advertisement on the Councils information screens in the Civic Centre foyer.

All of the above pointed consultees to two places where the action plan could be viewed and comments made. Firstly, a copy of the report was available at the Council Civic Centre and secondly, a web page was created on the Councils 'Have Your Say' area.

The screenshot shows the 'Air Quality Action Plan Consultation' webpage on the Gedling Borough Council website. The page features a navigation menu with 'You Are Here' highlighted, showing the path: Community > Have Your Say > Air Quality Action Plan Consultation. The main content area is titled 'Air Quality Action Plan Consultation' and includes an introductory paragraph about the importance of air quality, a photograph of a road through a green landscape, and a section titled 'What can be done?' which outlines the council's response to the air quality issue. On the right side, there are two boxes: 'Useful Documents' containing a link to the 'Air Quality Action Plan' (999kb) and 'Get in Touch' providing contact information for environmental health, including an email address, a phone number, and the council's address.

Figure 8.1: Air Quality *Have Your Say* webpage

Gedling Borough Council - England

A number of responses were received; below is a summary of the points made: -

- Tree planting – a number of respondents questioned whether it would be possible to plant more trees.
- Tackling the school run – the obvious drop in traffic during the school holidays.
- Planning – making sure development in and around the AQMA doesn't make things worse.
- Public Transport – ensuring it remains affordable.
- Encouraging Cycling – Provision of cycle lanes and schemes to help with purchasing bicycles.
- Congestion charging/residents parking charge – would not be in support of such charges.
- Park and Ride – would welcome development.
- Tram – would an extension of the Nottingham Express Transit (NET) or Tram system up the A60 be possible?
- Alternative Fuels - Incentivising cars and buses to use alternative fuels.
- Businesses had concerns regarding the restriction of HGV vehicles.

Many of the points made cover points already in the action plan, and further reinforce their inclusion or otherwise. Further consideration has been given to the two points raised that had not been considered prior to the consultation:

Tree Planting

'Research in recent years has begun to identify how urban greening, and tree planting in particular, might be tailored to achieve air quality goals whilst still fulfilling many of the other beneficial functions of urban green space. Not all vegetation positioning yields an equal pollutant removal potential. Local airflows and pollutant concentrations will significantly affect the efficiency with which vegetation can remove pollution.' (Woodland Trust, 2012)

The difficulties with using tree planting as a method of reducing pollution can include:

- Ensuring any tree planting does not inhibit dispersion of pollution, particularly in 'street-canyons'.
- Establishing long-term maintenance and liability for trees.
- Securing landowners permission for tree planting.
- Ensuring highway visibility at junctions is maintained.

Gedling Borough Council - England

Another critical consideration is the species of tree or the mix of planting used; evergreens provide year-round 'scrubbing' whilst broadleaf deciduous species are more efficient than needle-leaf species (but they only are in leaf for part of the year). An urban tree air quality score (UTAQS) has been developed¹ which classifies trees by weighing up their ability to reduce and to exacerbate air pollution.

Along the A60 there is limited scope for additional tree planting, particularly in the areas which are worst affected. However, the Local Authority will use the development planning system to encourage the planting of the correct types of trees in developments along the A60 Mansfield Road.

Further extension to the Nottingham Express Transit (NET) System

In 2000, three options were considered to provide a light rail system to Arnold as part of the considerations of future NET extensions. The three options were via disused rail tunnels between Sneinton and Arnold, via Mansfield Road, and via the Ring Road.

Using disused rail tunnels for the whole of the route was not considered a realistic option. Similarly, using them for part of the route (to B684 Plains Road) and then on-road to Arnold was not considered realistic as it would require significant land purchase and associated works due to the width of the roads along the route to Arnold. These works would make the route both unpopular amongst local residents and also poor value for money (which would mean that it would not be a priority for funding). Using Mansfield Road was not considered a realistic option because, given the highway and junction constraints, it would have a significant impact on the existing highway network, would offer little above the existing bus services and therefore would not offer value for money or an attractive alternative to existing modes of transport. A route via the Ring Road, whilst possible, also offered poor value for money. None of the options were therefore considered any further at the time, or are currently being considered.

The Local Transport Plan sets out the County Council's position on further development of the Nottingham Express Transit (NET) system in the county. The County Council will consider future development of NET in the county where such schemes are feasible; provide good value for money for Nottinghamshire residents; where it does not have a negative impact on the highway network; have limited environmental impacts; where the scheme has public acceptance; and where the County Council can afford its contribution. Such considerations will include schemes that are promoted as part of new developments and are funded by the developer.

¹ Trees & Sustainable Urban Air Quality by Lancaster University and the Centre for Ecology & Hydrology.

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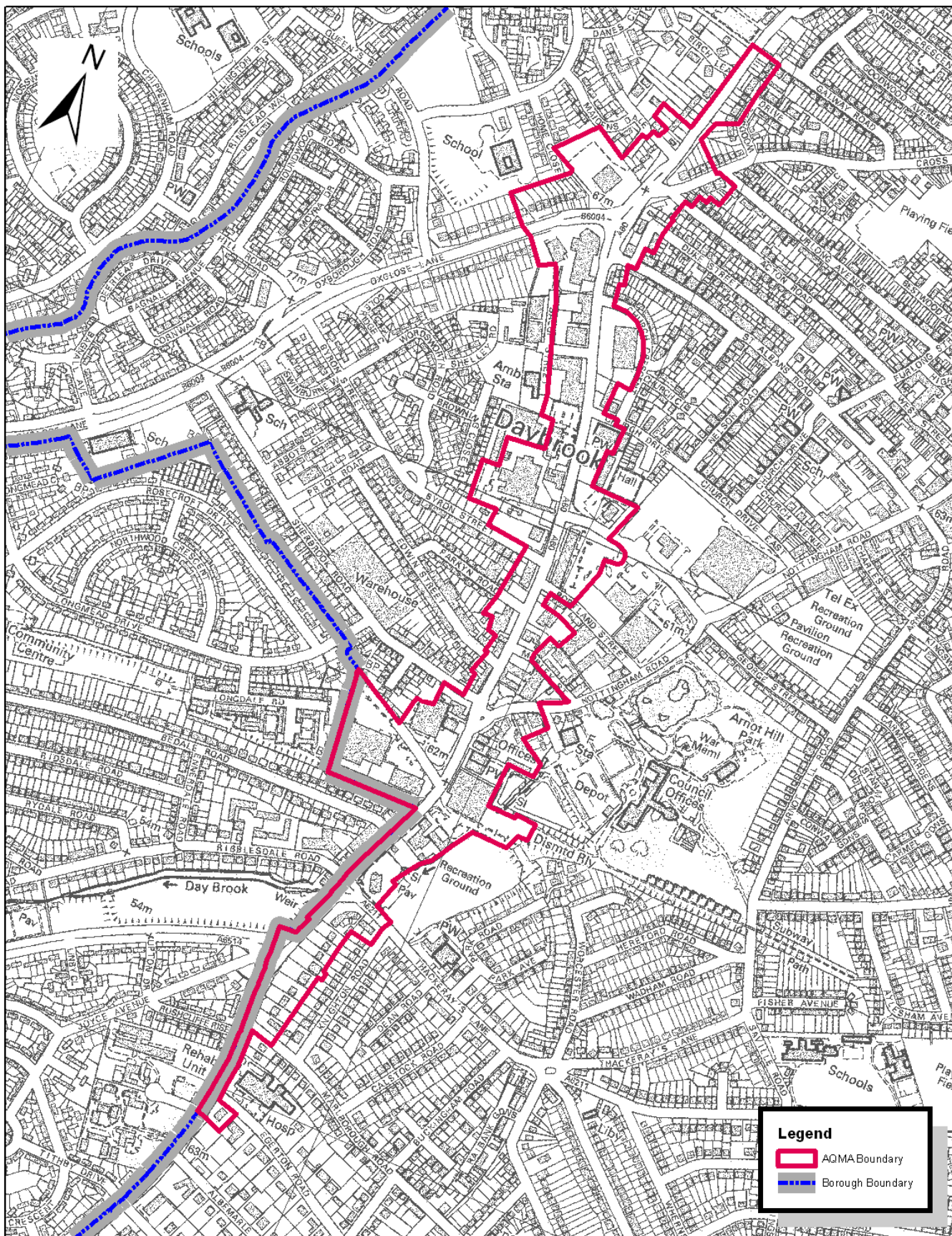
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Appendix A

Air Quality Management Area



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 Head of Planning and Environment
 Civic Centre, Arnor Hill Park, Arnold
 Nottingham NG5 6LU.

Map referred to in the
 Gedling No: 2 Air Quality Management Order 2011
 (Nitrogen Dioxide)

Date April 2011
 Scale 1:7,500

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Appendix B

Initial Consideration of the Options

Options	Comments	Conclusions
1. Move Receptors		
Remove homes and businesses	Option not feasible or practicable	Not carried forward
2. Move Sources away from AQMA		
Park and Ride	Park and Ride at Leapool or Arnold Town FC	Placed in Action Plan for further consideration and appraisal
Relocation of GCB Depot	Move Jubilee Depot – not considered further at this stage. It was considered that financially it would be more cost effective to 'clean' the fleet than relocate.	Not carried forward
Re-routing Freight Operators	Restriction of vehicle types using road at certain times of the day.	Placed in Action Plan for further consideration and appraisal
Re-routing Freight Operators	Restricting the road as appears on route finders and Sat Navs - via weight restriction?	Placed in Action Plan for further consideration and appraisal
Re-routing Freight Operators	Divert HGVs – Oxclose Lane/Edwards Lane	Placed in Action Plan for further consideration and appraisal
Delivery Hub	Create a Delivery Hub for Nottingham City Centre where goods are delivered to a central place to be shipped into the city on low emission vehicles – It was considered that this might be better considered by Nottinghamshire County and City Councils.	Not carried forward
Reduce/remove Forest Park and Ride	Forest P&R is located just outside city centre. Therefore traffic has to drive through AQMA to access it. However, tram infrastructure already in place at this site so not feasible to stop its use.	Not carried forward
3. Optimise Traffic Flows around AQMA		
Traffic control and information	Nottinghamshire County and City Councils jointly fund the traffic control centre that monitors traffic movement and provides real time traffic control over many traffic signal installations.	Placed in Action Plan for further consideration and appraisal
Traffic control	Preview right turning at certain junctions	Not carried forward
Traffic control	Traffic light phasing giving priority for buses	Placed in Action Plan for further consideration and appraisal
Intelligent transport systems	Consideration and installation of SCOOT/MOVA and other traffic signal efficiency improvements, including CCTV at appropriate junctions within the AQMA.	Placed in Action Plan for further consideration and appraisal

Options	Comments	Conclusions
Co-ordination of streetworks	Effective co-ordination of streetworks to minimise traffic disruption and unnecessary congestion as part of the County Council's network management duty.	Placed in Action Plan for further consideration and appraisal
Incident management	Effective management of incidents to minimise traffic disruption and unnecessary congestion as part of the County Council's network management duty.	Placed in Action Plan for further consideration and appraisal
Contingency planning	Effective contingency planning to minimise traffic disruption and unnecessary congestion as part of the County Council's network management duty.	Placed in Action Plan for further consideration and appraisal
Bus Lane Restriction	Removal of 24hr restriction on bus lane – section up to Woodthorpe Drive.	Placed in Action Plan for further consideration and appraisal
GBC Refuse Collections	Ensure that collections around AQMA occur outside of rush hour.	Placed in Action Plan for further consideration and appraisal
Civil parking enforcement	Civil Parking Enforcement was introduced on 12 May 2008 and is ongoing.	Placed in Action Plan for further consideration and appraisal
Car park charges	Review car parking charges for off-street facilities to promote public transport use and reduce unnecessary car trips to nearby trip attractors.	Placed in Action Plan for further consideration and appraisal
On-street parking charges	Consider on-street parking charges (e.g. controlled parking zones or meters) to reduce unnecessary car trips. Not considered to be particularly appropriate for the A60.	Not carried forward
Changes to Junction layouts	Configuration of Oxclose Lane Junction with re-development of White Hart PH. This issue could be dealt with through the planning process.	Not carried forward
Speed Controls	Are already in force (30mph) reduce speed limit?	Not carried forward
4. Strategic Measures		
Planning Policy and Development Management	Ensure sustainable development on vacant sites within and in the vicinity of the AQMA.	Placed in Action Plan for further consideration and appraisal
Planning Policy	Ensure AQAP and AQMA are considered in future planning policy frameworks (Local Plans).	Placed in Action Plan for further consideration and appraisal
Planning Policy and Development Management - Co-ordination	Co-ordination of land-use planning and transport infrastructure (including through the Local Development Framework). Development of car parking standards that encourage cycling, walking and public transport use.	Placed in Action Plan for further consideration and appraisal

Options	Comments	Conclusions
Planning Policy and Development Management - Contributions	Secure appropriate levels of developer contributions (Section 106 or CIL) for use on air quality improvement projects. Use of collected development control contributions to provide cycling, walking and public transport improvements within the AQMA.	Placed in Action Plan for further consideration and appraisal
Development Management- Conditions	Use of planning conditions for Delivery Times, Travel Plans etc.; including enforcement to ensure compliance.	Placed in Action Plan for further consideration and appraisal
Development Management - Conditions	Night time delivery to stores.	Placed in Action Plan for further consideration and appraisal
Improving links with Local Transport Strategy	Continue links with both County and City Transport planners to ensure AQAP is considered in future transport planning.	Placed in Action Plan for further consideration and appraisal
Improve links with Local Planning and Development Framework	Continue links with both GBC and City land use planners to ensure AQAP is considered in future local plans and development control.	Placed in Action Plan for further consideration and appraisal
Air Quality Planning Guidance for planning officers and developers.	Development of an Air Quality Supplementary Planning Document (SPD)	Placed in Action Plan for further consideration and appraisal
Road User charging/congestion charge	Placing a levy on users of A60 – would this move the problem to a different place? Not considered at this stage due to perceived financial burdens of implementation. Could be difficult also from a political perspective.	Not carried forward
Low Emissions Zone	Restricting types of vehicles using A60 / charging vehicles with higher emissions. (perhaps part of a larger zone for the Nottingham conurbation)	Placed in Action Plan for further consideration and appraisal
5. Reduce Emissions through technical means		
Cleaner vehicles	Develop and implement an action plan to improve the County Council's and Gedling Borough's fleet.	Placed in Action Plan for further consideration and appraisal
Cleaner vehicles	Promote and market cleaner vehicles with freight operators in around AQMA.	Placed in Action Plan for further consideration and appraisal
Electric Vehicles	Consider the implementation of electric charging points.	Placed in Action Plan for further consideration and appraisal
Gedling Borough Council – Green Infrastructure	Install Electric Charging points for visitors and staff.	Placed in Action Plan for further consideration and appraisal
Development of a Local Bus Quality Partnership	Extension of Partnership in the City Council into the A60 corridor.	Placed in Action Plan for further consideration and appraisal
Taxi Operators	Encourage low emission vehicles through taxi licensing	Placed in Action Plan for further consideration and appraisal
Green Procurement (GBC)	Ensuring new vehicles procured are cleanest possible. Contracts let by GBC include an element of emissions standards?	Placed in Action Plan for further consideration and appraisal

Options	Comments	Conclusions
Green Procurement (Education authorities)	Encouraging air quality issues to be taken into consideration in School Bus Transport contracts.	Placed in Action Plan for further consideration and appraisal
GBC Eco-driving training	Run training course for officers using own and GBC vehicles for work.	Placed in Action Plan for further consideration and appraisal
Eco-driving training	Encourage businesses in and around AQMA to provide training.	Placed in Action Plan for further consideration and appraisal
GBC Pool Cars	Electric/ Hybrid pool cars – reduce private mileage for work.	Placed in Action Plan for further consideration and appraisal
Idling Vehicle Enforcement	Idling vehicles not a principle problem along A60.	Not carried forward
6. Reduce Emissions via achieving better travel choices/ behavioural change.		
Nottinghamshire County Council - Travel Plan	Refresh the County Council and Gedling Borough Council travel plans at site within and close to the AQMA.	Placed in Action Plan for further consideration and appraisal
Gedling Borough Council - Travel Plan	Undertake measures to reduce business mileage from staff on Council business. Incentives to use public transport, cycle or walk.	Placed in Action Plan for further consideration and appraisal
Gedling Borough Council - Travel Plan	Ensure partner organisations using GBC Civic Centre are aware and engage with travel plan.	Placed in Action Plan for further consideration and appraisal
Gedling Borough Council - Parking	Review Staff Car Parking arrangements	Placed in Action Plan for further consideration and appraisal
Gedling Borough Council - Working	Encourage flexible working (mobile/home working)	Placed in Action Plan for further consideration and appraisal
Gedling Borough Council - Promotion	Car Free Days encourage staff to cycle or walk to work.	Placed in Action Plan for further consideration and appraisal
Vehicle Emissions Testing	Good at raising public (commuter) awareness. Potentially small actual impact on emissions.	Placed in Action Plan for further consideration and appraisal
Workplace travel plans	Develop workplace travel plans with businesses in the vicinity of the AQMA.	Placed in Action Plan for further consideration and appraisal
School travel plans	Develop school travel plans with schools in the vicinity of the AQMA.	Placed in Action Plan for further consideration and appraisal
Personalised travel planning	Undertake personalised travel planning within Gedling Borough including 'Residential Travel Packs'	Placed in Action Plan for further consideration and appraisal
Car clubs	Establishment of Greater Nottingham Car Club.	Placed in Action Plan for further consideration and appraisal
Car sharing	The promotion and facilitation of car sharing schemes at NCC and throughout the county. www.nottinghamshare.com was launched in April 2006.	Placed in Action Plan for further consideration and appraisal

Options	Comments	Conclusions
Awareness Raising for commuters	Signage for AQMA – inc. electronic matrix board linked to NOx analyser	Placed in Action Plan for further consideration and appraisal
Education of residents	Consultation/communication with community around AQMA; outlining the problem	Placed in Action Plan for further consideration and appraisal
Tackling the School Run	Communication with local schools and parents.	Placed in Action Plan for further consideration and appraisal
Public Transport - Ticketing	Development of ITSO smartcard ticketing.	Placed in Action Plan for further consideration and appraisal
Public Transport - Concessionary fares	Deliver the free countywide off-peak concessionary fare scheme for the over 60s and disabled. Consideration of introduction of concessionary fares for young people.	Placed in Action Plan for further consideration and appraisal
Public Transport - Information	Investigate and publicise web based journey planners. Develop and undertake annual production of marketing literature.	Placed in Action Plan for further consideration and appraisal
Public Transport - Infrastructure	Review, install/ replace flagpoles/ timetable cases along key AQMA corridors. Consider further bus priority on the A60. Install 'real time' bus information along key AQMA corridors.	Placed in Action Plan for further consideration and appraisal
Public Transport - Routing	Review Service provision in area.	Placed in Action Plan for further consideration and appraisal
Public Transport - Capacity increases	Consider capacity increases on the GO2 services along the A60 corridor.	Placed in Action Plan for further consideration and appraisal
Walking Promotion	Develop and undertake annual promotional marketing campaigns/production of literature.	Placed in Action Plan for further consideration and appraisal
Cycling Promotion	Develop and undertake annual promotional marketing campaigns/production of literature.	Placed in Action Plan for further consideration and appraisal
Cycling Promotion	Deliver adult and child cycle training.	Placed in Action Plan for further consideration and appraisal
Cycling Promotion	Consider the use of advance cycle stop lines at feasible junctions within the AQMA.	Placed in Action Plan for further consideration and appraisal
7. Other		
Smoke Control Enforcement	Whilst AQMA in a smoke control area, smoke control not really the problem, and will be dealt with outside of the AQAP.	Not carried forward
Bonfire Smoke - Statutory Nuisance	Will be dealt with via statutory nuisance outside of the AQAP.	Not carried forward

Appendix C

Monitoring of the Action Plan measures

Measure	Title
1	Park and Ride
Definition	
The creation of a Park and Ride scheme.	Key Intervention
	Remove a proportion of the car traffic therefore reducing traffic congestion along the AQMA.
Responsible Authority and other parties	
Nottinghamshire County Council	Powers to be used
	Statutory / Voluntarily

Action	Implementation Timescales (20--)									Progress Indicator	Target
	12	13	14	15	16	17	18	19			
1	●	●	●	●	●	●	●	●	●	Undertake feasibility study	If feasible and deliverable - LTP indicators LTP1; LTP2; LTP5; NI177; and LTP20

Notes
Project would be subject to available funding.

Measure	Title
2	Re-routing of freight operators
Definition	
This measure has been used to include other measures related to:	Key Intervention
<ul style="list-style-type: none"> a) Restriction of vehicle types using road at certain times of the day. b) Restricting the road as appears on route finders and Satellite Navigation Systems. c) Consider diverting HGVs – Oxclose Lane/Edwards Lane 	Removing Heavy Goods Vehicles that use the A60 as a through road.
Responsible Authority and other parties	
Nottinghamshire County Council Gedling Borough Council	Powers to be used
	Statutory / Voluntarily

Action	Implementation Timescales (20--)									Progress Indicator	Target
	12	13	14	15	16	17	18	19			
a) b) c)	●	●	●	●	●	●	●	●	●	Undertake feasibility study	Outcomes will not be clear until feasibility is complete

Notes

Measure	Title	
3	Traffic control and management	
Definition		Key Intervention
<p>This measure has been used to include other measures related to the management of traffic flow; including:</p> <ul style="list-style-type: none"> a) Consideration and installation of SCOOT/MOVA and other traffic signal efficiency improvements, including CCTV at appropriate junctions within the AQMA. b) Nottinghamshire County and City Councils jointly fund the traffic control centre that monitors traffic movement and provides real time traffic control over many traffic signal installations. c) Consideration of bus priority measures at traffic signal junctions. d) Review of 24hr bus lane restrictions. e) Effective co-ordination of street works to minimise traffic disruption and unnecessary congestion as part of the County Council's network management duty. f) Effective management of incidents to minimise traffic disruption and unnecessary congestion as part of the County Council's network management duty. g) Effective contingency planning to minimise traffic disruption and unnecessary congestion as part of the County Council's network management duty. 		Reduce traffic congestion along the AQMA.
Responsible Authority and other parties		Powers to be used
Nottinghamshire County Council		Statutory / Voluntary

Action	Implementation Timescales (20--)								Progress Indicator	Target
	12	13	14	15	16	17	18	19		
a)	●	●	●	●	●	●	●	●	Undertake feasibility of improvements and delivery of improvements to improve journey times	LTP indicators LTP1; LTP2; LTP5; NI178; and LTP20
b)	●	●	●	●	●	●	●	●	Improved journey times	LTP indicators LTP1; LTP2; LTP5; NI178; and LTP20
c)	●	●	●	●	●	●	●	●	Increased patronage on public transport	LTP indicators LTP5; NI177; NI178; LTP8; and LTP20
d)	●	●	●	●	●	●	●	●	Undertake feasibility study	Outcomes will not be clear until feasibility is complete
e)	●	●	●	●	●	●	●	●	Improved journey times	LTP indicators LTP1; LTP2; LTP5; NI178; and LTP20
f)	●	●	●	●	●	●	●	●	Improved journey times	LTP indicators LTP1; LTP2; LTP5; NI178; and LTP20
g)	●	●	●	●	●	●	●	●	Improved journey times	LTP indicators LTP1; LTP2; LTP5; NI178; and LTP20

Notes

Measure	Title
4	Gedling Borough waste collection
Definition	
Ensure that collections around the AQMA occur outside of the rush hour.	Key Intervention
	Reduce traffic congestion along the AQMA.
Responsible Authority and other parties	
Gedling Borough Council	Powers to be used
	Voluntary

Action	Implementation Timescales (20--)									Progress Indicator	Target
	12	13	14	15	16	17	18	19			
4	●	●	●	●	●	●	●	●	●	Review of collection timetables	No waste collections along A60 during peak times. LTP indicators LTP1; LTP5; and LTP20

Notes

Measure	Title
5	Parking management and control
Definition	
Ensure that car parking in and around the AQMA is managed and reviewed via: a) Civil parking enforcement b) Continual review of car parking charging, to promote public transport options.	Key Intervention
	Promote public transport through review of car parking arrangements.
Responsible Authority and other parties	
Gedling Borough Council Nottinghamshire County Council	Powers to be used
	Statutory / Voluntary

Action	Implementation Timescales (20--)									Progress Indicator	Target
	12	13	14	15	16	17	18	19			
a)	●	●	●	●	●	●	●	●	●	Improved journey times	LTP indicators LTP1; LTP2; LTP5; NI177; NI178; LTP8; and LTP20
b)	●	●	●	●	●	●	●	●	●	Improved journey times; increased bus patronage	LTP indicators LTP1; LTP2; LTP5; NI177; LTP8; LTP14; and LTP20

Notes

Measure	Title
6	Low Emissions Zone
Definition	Key Intervention
Consider the feasibility of a Low Emission Zone.	Low Emission Zone would restrict/discourage high polluting vehicles.
Responsible Authority and other parties	Powers to be used
Gedling Borough Council Nottinghamshire County Council	Statutory / Voluntary

Action	Implementation Timescales (20--)								Progress Indicator	Target
	12	13	14	15	16	17	18	19		
6	●	●	●	●	●	●	●	●	Undertake feasibility study	n/a

Notes

Measure	Title
7	Improve links with local planning and Development Framework
Definition	Key Intervention
<p>This measure has been used to include other measures related to land use planning; including:</p> <ul style="list-style-type: none"> a) Ensure sustainable development on vacant sites within and in the vicinity of the AQMA. b) Ensure AQAP and AQMA are considered in future planning policy frameworks (Local Plans). c) Co-ordination of land-use planning and transport infrastructure (including through the Local Plan). Development of car parking standards that encourage cycling, walking and public transport use. d) Secure appropriate levels of developer contributions (Section 106 and/or CIL) for use on air quality improvement projects. Use of collected development control contributions to provide cycling, walking and public transport improvements within the AQMA. e) Development of an Air Quality Supplementary Planning Document (SPD) f) Use of planning conditions for Delivery Times, Travel Plans etc.; including enforcement to ensure compliance. 	Local planning considerations aim to mitigate the cumulative negative air quality impacts of new development.
Responsible Authority and other parties	Powers to be used
Gedling Borough Council: Planning and Economic Development, and Public Protection Services. Gedling Borough Council and Nottingham City Council	Voluntary

Action	Implementation Timescales (20--)								Progress Indicator	Target
	12	13	14	15	16	17	18	19		
a)	●	●	●	●	●	●	●	●	Number of Air Quality Impact Assessments related to AQMA	100% in relation to development with potential to impact on air quality
b)	●	●	●	●	●	●	●	●	It is not possible to assign a quantitative indicator. We will report on the integration with Local Plan and provide evidence that air quality considerations have been formalised within it	n/a
c)	●	●	●	●	●	●	●	●		
d)	●	●	●	●	●	●	●	●	Sums collected for air quality projects	n/a
e)	●	●	●	●	●	●	●	●	Development of SPD	n/a
f)	●	●	●	●	●	●	●	●	No of applications conditioned, where applicable	100% in relation to development with potential to impact on air quality

Notes

Measure	Title
8	Improving links with local transport strategy
Definition	Key Intervention
Continue links with both County and City Transport Planners to ensure AQAP is considered in future transport planning.	Measures to ensure the current poor air quality in the AQMA is improved where possible and to avoid future problems are implemented via the Local Transport Plan.
Responsible Authority and other parties	Powers to be used
Gedling Borough Council Nottinghamshire County Council Nottingham City Council	Voluntary

Action	Implementation Timescales (20--)								Progress Indicator	Target
	12	13	14	15	16	17	18	19		
7	●	●	●	●	●	●	●	●	It is not possible to assign a quantitative indicator. We will report on the integration with LTP	n/a

Notes

Measure	Title
9	Target reductions in emissions from buses
Definition	Key Intervention
<p>Target reductions in emissions from buses via:</p> <ul style="list-style-type: none"> a) ECOStars Fleet Recognition Scheme. b) Promotion of the benefits of Eco-driving training for drivers. c) Ongoing delivery of Quality Bus Partnerships through Gedling Borough. (Mansfield and Nottingham City) d) Encouraging the use of emissions standards when procuring school bus contracts and supported bus services that operate within the AQMA. 	Target reduced emissions from buses operating within the AQMA.
Responsible Authority and other parties	Powers to be used
Gedling Borough Council Nottinghamshire County Council Passenger Transport Operators	Voluntary

Action	Implementation Timescales (20--)								Progress Indicator	Target
	12	13	14	15	16	17	18	19		
a)	●	●	●	●	●	●	●	●	Scheme membership	Increased no. of companies joining the scheme. LTP indicators LTP5; and LTP20
b)	●	●	●	●	●	●	●	●	It is not possible to assign a quantitative indicator as it is only promotional activity. We will report on activity	n/a
c)	●	●	●	●	●	●	●	●	Increased bus patronage	LTP indicators LTP1; LTP2; LTP5; NI177; NI178; LTP8; LTP20; LTP22; LTP23; LTP27; LTP28 and LTP29
d)	●	●	●	●	●	●	●	●	It is not possible to assign a quantitative indicator as firstly the existing policy will need to be changed and then if it is changed it will be dependent upon the expiry of existing contracts. We will report on activity	n/a

Notes

Measure	Title
10	Target reductions in emissions from heavy and light goods vehicles
Definition	
Target reductions in emissions from HGV's and LGV's via: a) ECOStars Fleet Recognition Scheme. b) Promotion of the benefits of Eco-driving training for drivers.	
Key Intervention	
Target reduced emissions from HGV's and LGV's operating within the AQMA.	
Responsible Authority and other parties	
Gedling Borough Council Haulage Operators	
Powers to be used	
Voluntary	

Action	Implementation Timescales (20--)								Progress Indicator	Target
	12	13	14	15	16	17	18	19		
a)	●	●	●	●	●	●	●	●	Scheme membership	Increased no. of companies joining the scheme. LTP indicators LTP5; and LTP20
b)	●	●	●	●	●	●	●	●	It is not possible to assign a quantitative indicator as it is only promotional activity. We will report on activity	n/a

Notes

Measure	Title
11	Target reductions in emissions from Taxis
Definition	
Target reductions in emissions from Taxi's operating around AQMA: a) Promotion of low emission vehicles through taxi licensing.	
Key Intervention	
Target reduced emissions from Taxi's operating within the AQMA.	
Responsible Authority and other parties	
Gedling Borough Council Taxi Operators	
Powers to be used	
Voluntary	

Action	Implementation Timescales (20--)								Progress Indicator	Target
	12	13	14	15	16	17	18	19		
11(a)	●	●	●	●	●	●	●	●	Review of Taxi Licence criteria	Increase in higher Euro Class and alternative fuelled vehicles in taxi fleet. LTP indicators LTP5; and LTP20

Notes
An expansion of the ECOStars scheme into taxi licensing could follow after the Mid-Devon pilot scheme.

Measure	Title
12	Target reductions in emissions from the council fleet and contract vehicles
Definition	Key Intervention
<p>Continue to target reductions in emissions from the Council fleet and contract vehicles through:</p> <ul style="list-style-type: none"> a) Gedling Borough membership of ECOStars scheme. b) Ensuring new vehicles procured are cleanest possible. c) Run Eco-driving training course for officers using own and GBC vehicles for work. d) Consider alternative fuelled 'pool vehicles'. e) GBC Green Procurement (emission standards for vehicles making deliveries to the Council). 	<p>Target reduced emissions from Council fleet vehicles and Council contract fleet vehicles operating within AQMA.</p>
Responsible Authority and other parties	Powers to be used
Gedling Borough Council	Voluntary

Action	Implementation Timescales (20--)								Progress Indicator	Target
	12	13	14	15	16	17	18	19		
a)	●	●	●	●	●	●	●	●	Membership	Increase star rating. LTP indicators LTP5; and LTP20
b)	●	●	●	●	●	●	●	●	Indicators linked to the GBC Sustainability Strategy and Action Plan	Timescales and targets feed from GBC Sustainability Strategy and Action Plan
c)	●	●	●	●	●	●	●	●		
d)	●	●	●	●	●	●	●	●		
e)	●	●	●	●	●	●	●	●		

Notes

Measure	Title	
13	Encourage the uptake of alternative fuels	
Definition		Key Intervention
Target reductions in emissions from all vehicles operating around the AQMA: a) GBC consider installing electric charging points for visitors and staff. b) Consider a wider network of charging points.		Encourage the uptake of alternative fuels with infrastructure improvements.
Responsible Authority and other parties		Powers to be used
Gedling Borough Council Nottinghamshire County Council		Voluntary

Action	Implementation Timescales (20--)									Progress Indicator	Target
	12	13	14	15	16	17	18	19			
a)	●	●	●	●	●	●	●	●	●	Indicators linked to the GBC Sustainability Strategy and Action Plan	Timescales and targets feed from GBC Sustainability Strategy and Action Plan
b)	●	●	●	●	●	●	●	●	●		

Notes
Subject to feasibility and funding

Measure	Title	
14	Communication and education – awareness raising	
Definition		Key Intervention
To increase awareness of local air quality issues. This measure has been used to include other measures related to awareness raising: a) Design and erect AQMA signs at various locations. b) Roadside Vehicle Emissions Testing (RVET) c) Tackling the school run – communication with schools and parents. d) Undertake a publicity campaign to raise awareness of the A60 AQMA.		To increase awareness of local air quality issues and encourage change in behaviour that will contribute to improving local air quality.
Responsible Authority and other parties		Powers to be used
Gedling Borough Council Nottinghamshire County Council		Voluntary

Action	Implementation Timescales (20--)									Progress Indicator	Target
	12	13	14	15	16	17	18	19			
a)	●	●	●	●	●	●	●	●	●	Feasibility assessment	Increased public awareness
b)	●	●	●	●	●	●	●	●	●	Carry out RVET day.	
c)	●	●	●	●	●	●	●	●	●	Linked to Measure 15 (c)	
d)	●	●	●	●	●	●	●	●	●	Publication of relevant promotional material	

Notes
Measure b) subject to funding

Measure	Title	
15	Travel plans	
Definition		Key Intervention
<p>To encourage and assist organisations to develop, review and implement travel plans. This measure has included:</p> <ul style="list-style-type: none"> a) Review/refresh Gedling Borough Council Travel Plan; b) Nottinghamshire County Council to review travel plan for its sites within or close to the AQMA. c) Continue to support the implementation of school travel plans; d) Work with local businesses/organisations to encourage the development and implementation of travel plans. 		<p>To encourage a shift to more sustainable forms of travel, or reducing the need for travel.</p>
Responsible Authority and other parties		Powers to be used
<p>Gedling Borough Council, Nottinghamshire County Council, Nottingham City Council Businesses and Schools close to and within the AQMA</p>		<p>Voluntary</p>

Action	Implementation Timescales (20--)								Progress Indicator	Target
	12	13	14	15	16	17	18	19		
a)	●	●	●	●	●	●	●	●	Review GBC travel plan; improved journey times; increased bus patronage; increased active travel	LTP indicators LTP1; LTP2; LTP5; LTP7; NI176; NI177; LTP13; LTP20; and LTP21
b)	●	●	●	●	●	●	●	●	Review of NCC travel plans; improved journey times; increased bus patronage; increased active travel	LTP indicators LTP1; LTP2; LTP5; LTP7; NI176; NI177; LTP13; LTP20; and LTP21
c)	●	●	●	●	●	●	●	●	No. of schools within Gedling with a school travel plan; improved journey times; increased bus patronage; increased active travel	LTP indicators LTP1; LTP2; LTP3; LTP5; NI177; LTP13; LTP15; LTP20; and LTP25
d)	●	●	●	●	●	●	●	●	No. of businesses with a travel plan; improved journey times; increased bus patronage; increased active travel	LTP indicators LTP1; LTP2; LTP5; LTP7; NI176; NI177; LTP13; LTP20; and LTP21

Notes

Measure	Title
16	Promoting travel choices
Definition	Key Intervention
<p>To increase awareness of travel choice options. These measure include:</p> <ul style="list-style-type: none"> a) Undertake personalised travel planning within Gedling borough. b) Establishment of a City Car Club and consideration of extending this into the county. c) The promotion and facilitation of car sharing schemes, www.nottinghamshare.com was launched in April 2006. d) Residential Travel Packs, to be issued to all new built homes identified through planning process; promotion of walking, cycling and public transport. 	<p>To increase awareness of travel choices and encourage changes in behaviour that will contribute to improving local air quality.</p>
Responsible Authority and other parties	Powers to be used
<p>Gedling Borough Council Nottinghamshire County Council Nottingham City Council</p>	<p>Voluntary</p>

Action	Implementation Timescales (20--)								Progress Indicator	Target
	12	13	14	15	16	17	18	19		
a)	●	●	●	●	●	●	●	●	Improved journey times; increased bus patronage; increased active travel	LTP indicators LTP1; LTP2; LTP5; LTP7; NI176; NI177; LTP13; LTP20; and LTP21
b)	●	●	●	●	●	●	●	●	Establishment of City car club. We will report on activity	n/a
c)	●	●	●	●	●	●	●	●	Increased no. of registered car users; improved journey times	LTP indicators LTP1; LTP2; LTP5; and LTP21
d)	●	●	●	●	●	●	●	●	Development of travel pack. We will report on activity	n/a

Notes

Measure	Title	
17	Public transport	
Definition		Key Intervention
<p>To promote and increase the use of public transport. This measure includes:</p> <ul style="list-style-type: none"> a) Development of ITSO smartcard ticketing. b) Deliver the free countywide off-peak concessionary fare scheme for the over 60s and disabled. Consideration of introduction of concessionary fares for young people. c) Investigate and publicise web based journey planners. Develop and undertake annual production of marketing literature. d) Review, install/ replace flagpoles/ timetable cases along key AQMA corridors. e) Consider bus provision on the A60 and surrounding area. (Service review) f) Install 'real time' bus information along key AQMA corridors. g) Consider capacity increases on the GO2 services along the A60 corridor. 		<p>To increase use of public transport that will contribute to improving local air quality.</p>
Responsible Authority and other parties		Powers to be used
<p>Nottinghamshire County Council Nottingham City Council Passenger Transport Operators</p>		<p>Voluntary</p>

Action	Implementation Timescales (20--)								Progress Indicator	Target
	12	13	14	15	16	17	18	19		
a)	●	●	●	●	●	●	●	●	Improved journey times; increased bus patronage	LTP indicators LTP1; LTP2; LTP5; NI176; NI177; LTP8; LTP20; and LTP30
b)	●	●	●	●	●	●	●	●	Improved journey times; increased bus patronage; increased accessibility	LTP indicators LTP1; LTP2; LTP5; NI176; NI177; LTP8; LTP20; and LTP30
c)	●	●	●	●	●	●	●	●	Improved journey times; increased bus patronage; increased accessibility	LTP indicators LTP1; LTP2; LTP5; NI176; NI177; LTP8; LTP20; LTP22 and LTP30
d)	●	●	●	●	●	●	●	●	Improved journey times; increased bus patronage	LTP indicators LTP1; LTP2; LTP5; NI176; NI177; LTP8; LTP20; LTP22; and LTP28
e)	●	●	●	●	●	●	●	●	Improved journey times; increased bus patronage; increased accessibility	LTP indicators LTP1; LTP2; LTP5; NI176; NI177; LTP8; LTP15; LTP16; LTP17; LTP18; LTP19; LTP20; and LTP30
f)	●	●	●	●	●	●	●	●	Improved journey times; increased bus patronage	LTP indicators LTP1; LTP2; LTP5; NI176; NI177; LTP8; LTP20; LTP22; LTP28; and LTP29
g)	●	●	●	●	●	●	●	●	Improved journey times; increased bus patronage; increased accessibility	LTP indicators LTP1; LTP2; LTP5; NI176; NI177; LTP8; LTP15; LTP16; LTP17; LTP18; LTP19; LTP20; and LTP30

Notes

Measure	Title
18	Promotion of cycling and walking
Definition	Key Intervention
<p>To encourage members of the community to adopt cycling and walking as alternatives to using private vehicles.</p> <ul style="list-style-type: none"> a) Develop and undertake annual cycling promotional marketing campaigns/production of literature. b) Deliver adult and child cycle training. c) Consider the use of advance cycle stop lines at feasible junctions within the AQMA. d) Gedling Borough Council to hold 'Car Free Days' to encourage staff to cycle or walk to work. e) Develop and undertake annual walking promotional marketing campaigns/production of literature. f) Consider walking and cycling infrastructure and facility enhancements. 	<p>To encourage the shift away from the use of private motor vehicles for travelling to more sustainable forms of transport, or reducing the need for travel.</p>
Responsible Authority and other parties	Powers to be used
Gedling Borough Council Nottinghamshire County Council Nottingham City Council	Voluntary

Action	Implementation Timescales (20--)								Progress Indicator	Target
	12	13	14	15	16	17	18	19		
a)	●	●	●	●	●	●	●	●	Improved journey times; increased active travel	LTP indicators LTP1; LTP2; LTP3; LTP5; LTP13; LTP20; and LTP25
b)	●	●	●	●	●	●	●	●	Improved journey times; increased active travel	LTP indicators LTP1; LTP2; LTP3; LTP5; LTP13; LTP20; and LTP25
c)	●	●	●	●	●	●	●	●	Improved journey times; increased active travel	LTP indicators LTP1; LTP2; LTP3; LTP5; LTP13; LTP20; and LTP25
d)	●	●	●	●	●	●	●	●	No. of 'car free days'	Annual event
e)	●	●	●	●	●	●	●	●	Improved journey times; increased active travel	LTP indicators LTP1; LTP2; LTP3; LTP5; LTP14; LTP20; and LTP25
f)	●	●	●	●	●	●	●	●	Improved journey times; increased active travel	LTP indicators LTP1; LTP2; LTP3; LTP5; LTP14; LTP20; LTP25 and LTP26

Notes

The table below details the progress against the LTP indicators detailed within the implementation of measures.

Progress against trajectory legend:	
	Going strongly in the right direction
	No clear trend/slowly going in the right direction, perhaps not fast enough to meet agreed targets
	Going in wrong direction
N/A	Data not available at time of writing

Indicator no.	Indicator	Performance	Year								
					2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
LTP1	Average journey time per mile during the morning peak on the urban centre networks in the county	Trend data			3mins 26secs	3mins 19secs	3mins 24secs				
		Targets						3mins 26secs	3mins 27secs	3mins 29secs	3mins 30secs
		Actual						3mins 16secs			
			2006	2007	2008	2009	2010	2011	2012	2013	2014
LTP2	Changes in area wide traffic mileage (vehicle kilometres travelled)	Trend data	100	102	99	100					
		Targets					101	102	103	104	105
		Actual					99	N/A			
					2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
LTP3	Child obesity levels NHS Nottinghamshire County – Reception (age 4-5)	Trend data			9.8%	8.9%	8.5%	7.9%			
		Targets							8.20%	8.00%	7.80%
		Actual							N/A		
	Child obesity levels NHS Nottinghamshire County – Year 6 (age 10-11)	Trend data			17.6%	17.3%	17.3%	16.1%			
		Targets							17.00%	16.51%	16.00%
		Actual							N/A		
	Child obesity levels NHS Bassetlaw County – Reception (age 4-5)	Trend data			10%	10.5%	10.5%	9.0%			
		Targets							10.37%	10.17%	9.95%
		Actual							N/A		
	Child obesity levels NHS Bassetlaw County – Year 6 (age 10-11)	Trend data			23.9%	19.2%	20.6%	19.3%			
		Targets							20.26%	20.02%	19.79%
		Actual							N/A		

Indicator no.	Indicator	Performance	Year								
				2007	2008	2009	2010	2011	2012	2013	2014
NI176	Working age people with access to employment by public transport (and other specified means)	Trend data		79.5%	80.8%	80.9%					
		Targets				80.9%	80.9%	80.9%	80.9%	80.9%	
		Actual				81.2%	N/A				
			2006	2007	2008	2009	2010	2011	2012	2013	2014
LTP5	CO ₂ emissions from transport on County Council managed roads	Trend data	105	106	103	100					
		Targets					101	102	103	104	105
		Actual					100	N/A			
			2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
LTP7	Organisations with a travel plan	Trend data							N/A		
		Targets									
		Actual									
			2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
NI177	No. of local bus and light rail passenger journeys originating in the authority	Trend data	32.6m	34.0m	35.1m	35.4m	35.1m				
		Targets						35.4m	35.8m	36.1m	36.5m
		Actual						34m	N/A		
			2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14
NI178	Bus services running on time (Percentage of buses on time)	Trend data									
		Targets									
		Actual							85%		
	Bus services running on time (waiting time on frequent services)	Trend data									
		Targets									
		Actual							0.89mins		
							2009/10	2010/11	2011/12	2012/13	2013/14
LTP8	Public satisfaction with local bus services	Trend data					90%				
		Targets						90%	90%	90%	90%
		Actual						71%	71.5%		

Indicator no.	Indicator	Performance	Year								
			2006	2007	2008	2009	2010	2011	2012	2013	2014
LTP13	Cycling levels	Trend data	103	104	99	100	100				
		Targets						100	100	100	100
		Actual						109			
			2006	2007	2008	2009	2010	2011	2012	2013	2014
LTP14	Footfall in towns and district centres	Trend data							N/A		
		Targets									
		Actual									
			2006	2007	2008	2009	2010	2011	2012	2013	2014
LTP15	Percentage of 16-19 year olds with access to further education colleges within 40mins travel time by public transport	Trend data					92%				
		Targets						92%	92%	92%	92%
		Actual						94%			
			2006	2007	2008	2009	2010	2011	2012	2013	2014
LTP16	Percentage of households with access to GP surgeries within 20mins travel time by public transport	Trend data					94%				
		Targets						94%	94%	94%	94%
		Actual						94%			
			2006	2007	2008	2009	2010	2011	2012	2013	2014
LTP17	Percentage of households with access to hospital within 40mins travel time by public transport	Trend data					86%				
		Targets						86%	86%	86%	86%
		Actual						86%			
			2006	2007	2008	2009	2010	2011	2012	2013	2014
LTP18	Percentage of households with access to a supermarket or local convenience store within 40mins travel time by public transport	Trend data					99%				
		Targets						99%	99%	99%	99%
		Actual						99%			
			2006	2007	2008	2009	2010	2011	2012	2013	2014
LTP19	Percentage of households within 800m of a bus stop with an hourly or better bus service Monday-Saturday (0600-1800)	Trend data					96%				
		Targets						96%	96%	96%	96%
		Actual						95%			

Indicator no.	Indicator	Performance	Year								
			2006	2007	2008	2009	2010	2011	2012	2013	2014
LTP20	NOx levels in air quality management areas (AQMA) on County Council managed roads – Gedling	Trend data							N/A		
		Targets									
		Actual									
LTP21	Number of registered car sharers on nottinghamshare		2006	2007	2008	2009	2010	2011	2012	2013	2014
		Actual	790	994	1,326	1,760	1,891	2,044			
LTP22	Public satisfaction with passenger transport information		2006/07	2007/08	2008/09	2009/10	2010/11	2011/12			
		Actual		59%	80%	82%	89.3%	91.5%			
LTP23	Public satisfaction with bus driver behaviour		2006/07	2007/08	2008/09	2009/10	2010/11	2011/12			
		Actual				61%	59.5%	63.5%			
LTP25	Number of children undertaking cycle training		2006/07	2007/08	2008/09	2009/10	2010/11	2011/12			
		Actual					4,800	4,900			
LTP26	Length of shared or segregated cycle lane or path		2006	2007	2008	2009	2010	2011	2012	2013	2014
		Actual					354km	355km			
		On-road cycle lane					21km	21km			
		Off-road shared use					158km	158km			
LTP27	Number of fully accessible bus services		2006	2007	2008	2009	2010	2011	2012	2013	2014
		Actual					70%	N/A			
LTP28	Provision of information at bus stops		2006/07	2007/08	2008/09	2009/10	2010/11	2011/12			
		Actual	74%	76%	80%	80%	95%	N/A			
LTP29	Provision of real-time information		2006/07	2007/08	2008/09	2009/10	2010/11	2011/12			
		Actual				29	64	111			
LTP30	Take up of concessionary fare passes		2006/07	2007/08	2008/09	2009/10	2010/11	2011/12			
		Actual	74	76	80	80	86%	N/A			