Haringey Council

Agenda item:

[No.]

CABINET On 8th February 2011

Report Title : **Review of the Council's Air Quality Action Plan**	
Report of **Director of Urban Environment - Niall Bolger** Signed : 18th January 2011	
Contact Officer : Keith Betts Commercial service manager , Enforcement (x 5525)	
Wards(s) affected: **All**	Report for: **[Key / Non-Key Decision]**

1. Purpose of the report

1.1 Following a statutory consultation, the reviewed Air Quality Action Plan (AQAP) is brought to Cabinet for approval and subsequent publication. This action plan will guide local initiatives towards the national target of reducing the level of certain pollutants in the atmosphere affecting human health.

2. Introduction by Cabinet Member

Haringey council declared the whole borough as an Air Quality Management Area in 2001, because it was projected that two key air pollutants (particulate matter and nitrogen dioxide) most significantly associated with motor vehicles would continue to be above limits set by UK legislation.

In Haringey, in common with most urban areas, our evidence is that these two pollutants will remain above their set limits along our some of our major roads. As a consequence Haringey has a statutory responsibility to plan to reduce these pollutant levels and to monitor our progress and the impact of our activities.

This Air Quality Action Plan is Haringey's second statutory plan for reducing levels of particulate matter and nitrogen dioxide and reflects how we will link up with our other

strategic approaches to transport planning, energy efficiency and climate change. Specifically the work we will undertake to improve air quality will also help us to deliver our ambition for carbon reduction.

Haringey's resident survey for 2009-10 revealed that 'control of pollution' was an area of personal concern for 11% of those responding. The reasons, whilst not recorded, may reflect the fact that poor air quality harms our health and can lead to an increase in cardiovascular and lung disease. The measures in our action plan to reduce air pollution will therefore contribute to a reduction in ill health and an increase in the life expectancy for those that live and work in the borough.

This plan is also consistent with the Government's planned strategy for public health by both reflecting personal responsibility and proportionate use of interventions.

3. State link(s) with Council Plan Priorities and actions and /or other Strategies:

3.1 The Air Quality Action Plan details at Section 2 the links with the following plans and strategies:

- The Sustainable Community Strategy
- The Council Plan
- The Greenest Borough Strategy
- The Core Strategy
- Haringey's Transport Strategy
- The Tree Strategy
- The Cycling Strategy & Action Plan
- The Sustainable Modes of Travel to School Strategy

3.2 A Strategic Environmental Assessment has not been undertaken specifically in respect of this action plan. However , this was comprehensively covered in the Council's LIP 2 Transport Strategy. The LIP also covered an Environmental Impact Assessment . The links between this action plan and the Councils Transport Strategy are extensive in this respect.

4. Recommendations

4.1 That the revised Air Quality Action Plan as contained in Appendix 2 be approved for adoption and published .

5. Reason for recommendation(s)

5.1 Under the Environment Act 1995, the whole borough has been declared an Air Quality Management Area (AQMA). Subsequent to this, an Air Quality Action Plan (AQAP) is required that details the Council's proposals and actions to work towards the Government's air quality objectives in respect of the pollutants of concern. The Council produced and published it's first AQAP a number of years ago.

5.2 The decision to update the AQAP is partly as a result of the proposed publication of several significant strategic documents in relation to air quality. In addition, our original action plan was published some years ago and as we have recently undertaken local air quality modelling in partnership with neighbouring boroughs, this will provide further baseline information for the new action plan.

5.3 In reviewing and updating the AQAP the council must have due regard to the DEFRA guidance issued by the Secretary of State under section 88(1) of the Environment Act 1995 and the GLA and Mayor's Directions and documents. Schedule 11 of the Act requires local authorities to consult on the preparation or revision of an air quality action plan (see section 10 below).

5.4 The revised plan is in 3 main chapters;

- Introduction with national, regional and local context
- Haringey's Supporting Plans and Strategies
- Haringey's Air Quality Objectives and Measures.

The actions proposed in the plan centre around transport measures, non transport measures, such as biomass and industrial emissions, and awareness raising measures.

5 Other options considered

5.1 The requirement to produce an Air Quality Action Plan is a statutory requirement following the declaration of Haringey as an Air Quality Management Area (AQMA). Such a declaration is required where pollutants are likely to exceed air quality objective levels . This is certainly the case for Nitrogen Dioxide (NO_2) and Particulate Matter (PM10). Other options are therefore not applicable.

6 Summary

6.1 The Council's Air Quality Action Plan (AQAP) has been revised and updated to show how Haringey intends to fulfil it's obligations for air quality management and how we will monitor the effectiveness of the measures introduced.

6.2 The main objectives of the revised AQAP are to:

- Demonstrate the Council's commitment to improving air quality and lead by example.
- Provide an overview of local key policies with respect to air quality thus inform about air pollution.
- Improve air quality whilst maintaining value for money and to explore wider economic opportunities.
- Involve all relevant council departments and external agencies where appropriate, to ensure a balanced and integrated approach for Haringey.
- To improve the quality of life and health of the residents and workforce in Haringey.
- To fulfill statutory obligations for local air quality management and assist the UK Government and Mayor of London in meeting air quality Limit Values

7 Chief Financial Officer Comments

7.1 The measures outlined within the action plan are largely already contained within existing strategies, policies and service plans and hence budgeted for. Accordingly, if any of the actions outlined in the Action Plan cannot be funded from the budget allocated for 2011-12 then they will only be implemented once funding has been identified and agreed by Cabinet as necessary.

8 Head of Legal Services Comments

8.1 Local authorities have a duty under S.84 (2)(b)of the Environment Act 1995 to "prepare a written plan in pursuit of the achievement of the air quality standards and objectives in the designated Air Quality Management Area". Consultation requirements for such reviews are found in Schedule 11 to the Act. Guidance by the Secretary of State must be taken into account. Current guidance on the preparation of an Air Quality Action Plan is found in the Local Air Quality Management Policy Guidance - LAQM (PG09);

9 Equalities & Community Cohesion Comments

9.1 Poor air quality harms human health across the board and can increase the incidence of cardiovascular and lung disease. Those within our communities with existing respiratory conditions or reduced lung function can be more severely affected by higher levels of pollutants such as Nitrogen Dioxide and Fine Particulates which act as irritants within the body.

9.2 A recent GLA commissioned study analysed long term exposure to poor air

quality and ascertained by extrapolated data that this contributed to an equivalent of 4,267 deaths in London in 2008, or 277 deaths in Haringey and Enfield .

9.3 Tackling poor air quality remains a challenging task given that Haringey, like other London boroughs continues to breach the air quality objectives for NO_2 and PM10. The reduction of air pollution is a task that must be tackled nationally and internationally. Our local initiatives support the work of other authorities on a regional and national basis , the actions that Government takes, and general industry in the reduction of emissions from it's processes and the development of low emission products.

10 Consultation

10.1 Consultation on the Air Quality Action Plan is required under statute from Schedule 11 of the Environment Act 1995. Following previous cabinet approval, the draft AQAP was subject to full public consultation for a 12 week period beginning 28th September 2010 through to 17th December 2010.

10.2 Statutory consultees include:

- The Secretary of State
- The Environment Agency
- Transport for London
- Mayor of London (GLA)
- All neighbouring authorities
- Other public authorities as appropriate and
- Bodies representing local business interests and other organisations as considered appropriate by the Council.

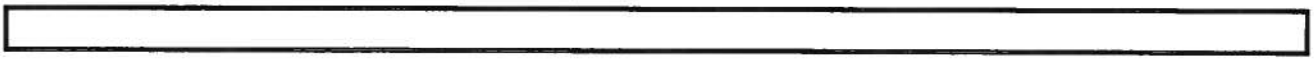
The statutory consultees above are broadly the same as those required in the consultation for the Council's LIP2 Transport Strategy.

10.3 The comments received during consultation are detailed and analysed at Appendix 1 . We have not been able to directly consider comments related to climate change as CO_2 is not one of the health pollutants of concern as detailed in the Air Quality Standards Regulations 2010. Actions to reduce defined health pollutants such as oxides of nitrogen and particulate matter will almost certainly reduce CO_2 emissions at the same time.

11 Use of appendices /Tables and photographs

11.1 Appendix 1 Summary and analysis of Comments received

11.2 Appendix 2 Final draft policy



APPENDIX 1
AQAP – Comments received following consultation

Comment Received	Response
Local Resident – Alex Keel.	
it is good to see that Haringey is signed up to the Nottingham Declaration	Haringey Council signed the Nottingham Declaration December 2006, committing itself to prepare a plan of action to significantly reduce greenhouse gas emissions and to work towards the government target of at least 60% reduction in carbon dioxide (CO2) levels by 2050, with real progress by 2020. No change to plan required
What is worrying in this plan that Haringey has identified the biggest "culprit", which are diesel fuelled cars and other traffic which comes under the remit of the mayor of London	The London Atmospheric Emissions Inventory (LAEI) 2008 estimates the main contributing sources of PM10 emissions in Haringey were from road transport, being the largest source of particulate matter emissions (**57%**) The 2008 LAEI estimates that the main direct sources of NOx emissions in Haringey were road transport (**50%**) and gas boilers (43%) with rail contributing 6%. No change to plan required
Haringey CAN act, insofar making e.g. school runs and usage of B roads completely undesirable and cumbersome by erecting street furniture and traffic signals to slow traffic down.	The Council is conscious of too much street clutter and is removing unnecessary street furniture. There is a fine balance between making 'improvements' to roads and improving local air quality. Highgate North Hill is not a road identified to be of air pollution concern / hotspot by the latest borough wide air quality modelling. However, the Council is undertaking 12 months of NO2 monitoring at Highgate Primary school, North Hill. The results of this study will be available in January 2012. No change to plan required
North Hill (N6), that is used as a short cut for the A1. Now if the borough narrowed the street and	Highgate North Hill has not been identified as a priority area for funding under the Council's Transport Strategy to 2014 but may be eligible for

Comment Received	Response
installed priority traffic signals (i.e. narrow the road in 2 or 3 spots and allow only one flow of traffic, giving bicycles and pedestrians however more room, people would have to realise that it is quicker by foot, bicycle or even by bus.	future funding after 2014 following a future review. The Council is carrying out a scoping review for a borough wide speed limit of 20mph along all residential streets. The outcome of this review is due in March 2011. However, a borough wide 20mph speed limit may have implications for air quality – studies have shown that 20mph zones do not improve air quality, but in fact worsen air quality. No change to plan required
Also, instead of cutting down trees, trees should be planted and nurtured	Street trees are an integral and sometimes historical component of the urban landscape and as such are valued by local residents. To remove street trees unnecessarily is against Council policy and also the Mayor of London's Strategy – 'Planting the Right Tree in the Right Place'. No change to plan required
B-roads like North Hill should be made "residents only" with enforcement of illegal use.	The 'privatisation' of borough B-roads is not covered by the air quality action plan. No change to plan required
Similarly, any adjustment of driveways to turn them into paved over parking areas should be declined outright as there is no need to have 2 or 3 cars per household.	North Hill is within the Highgate Conservation area. The Council is committed to the preservation and enhancement of conservation areas and any alteration in a conservation area is considered with respect to additional controls under planning legislation and so full planning permission is therefore required. No change to plan required

Comment Received	Response
Haringey could take the lead and have drop off points for schools where the children get picked up by a school bus.	There is a consideration in the Air Quality Action Plan to implement 'No idling Zones' around schools in the borough and other 'sensitive use' buildings, Although this will require a feasibility assessment, extensive consultation and full council approval. No change to plan required
Councillor Lorna Reith	
The majority of actions are about reducing traffic, and encouraging greener vehicles. This (inevitably) overlaps almost entirely with the climate change work and the sustainable transport strategy but it raises the question as to whether we need 3 different plans or whether a "folder" of actions that fit all 3 strategies wouldn't be a more cost effective (in terms of officer time) way to go about it.	We have not been able to directly consider comments related to climate change as CO_2 is not one of the health pollutants of concern detailed in the Air Quality Standards Regulations 2010. However, actions to reduce defined health pollutants such as oxides of nitrogen and particulate matter will almost certainly reduce CO_2 emissions at the same time. Climate change and air quality collectively are one of the Council's priorities under the Sustainable Community Strategy and are both addressed in the Council's Greenest Borough Strategy. The requirement for the council to have an AQAP is statutory, as is the Transport Strategy, however the requirement for a climate change strategy is not a statutory requirement. No change to plan required
The plan mentions that domestic gas combustion is responsible for over 20% of NOx emissions but then oddly doesn't link this with the work to reduce gas consumption as part of climate work.	Biomass is the preferred, cheap alternative for gas in new developments. However, biomass has a negative impact on air quality, with high emissions of NO2, PM2.5 and dioxins. The Councils Affordable Warmth Strategy, a sub-strategy of the over-arching Housing Strategy 2010-2019 states how the council intends to tackle fuel poverty and promote Energy Efficiency over the next ten years. The plan has been amended to reflect energy efficiency and affordable warmth activity.

Comment Received	Response
The measures in the plan are not all SMART by any means. They do have measuring criteria but these are not about emissions reductions let alone about reductions in pollutant concentrations. *It is admittedly very difficult to attribute emissions reductions figures to many of these actions.* But the plan as a whole then lacks any sense of proportion. Will these actions together make a significant difference to emissions and/or concentrations? What scale of measures would be required to achieve the EU limit values? The plan doesn't attempt to tell us, or even tell us why it is hard to do this.	As the respondent points out, it is very difficult to attribute emissions reductions figures too many of the actions contained within the air quality action plan. The measures detailed in the AQAP are measures that the Council can take and are planning to take under other strategies and which collectively, will have a positive impact on the local air quality leading to reductions in the concentrations of the pollutants of concern – NO2 and PM10. The plan has been changed and now includes as table 5 of the appendix the percentage reduction in NO2 concentrations at specific monitoring locations required to meet the Governments objective at that location. Dealing with poor air quality requires coordinated action from a wide range of organizations, both internally and externally to the council. Measures detailed in this plan reflect action being taken by the Mayor of London and the Government, as well as locally.
In section 1.4 it tells us that gas boilers are responsible for 24% of particle emissions and 36% of NOx emissions. So, if we achieve a 40% emissions reduction in CO2 by 2020, we will presumably have to achieve at least a 40% cut in gas consumption locally which would equate to a cut of 24% x 40% = 9.6% particles and 36% x 40% = 14.4% cut in NOx emissions.	These calculations do not equate to those of NO2 and PM reductions required for example – monitoring site at Archway Road, in 2007 measured 67.2µg/m3, which equates to a 41% reduction in NO2 concentrations at that locality. Percentage decreases in concentrations have been calculated at monitoring localities where monitored and measured to exceed Govt. objective and incorporated into document – based on 2007 diffusion tube results, as used in the BV report. A reduction of 40% CO2 emissions will not necessarily be enough to bring about a reduction of pollutants of concern to meet the AQ objectives – a 40% CO2 reductions in gas consumption in Haringey will not be enough to meet Govt. NO2 and PM10 targets.

Comment Received	Response
	Figures incorrect - Greater London NOx contributions, according to MAQS are 46% from road transport and 22% from domestic gas. No change to plan required.
reduce traffic emissions by 40% by reducing traffic and encouraging low emission vehicles we would, all other things being equal, reduce particulates by 23.2%. So achieving a 40% CO2 cut should deliver 32.8% reduction in particulate emissions	There is no clear correlation between CO2 emissions and particulate emissions – also not clear whether referring to PM10 or PM2.5. In 2007, PM10 objectives measured at 2 locations within the borough (HGY1 and HGY2) were achieved. No change to plan required
If we had that information we could a) better assess this as a strategy and b) perhaps add quantified health benefits to the CO2 reduction target.	The plan has been changed to reflect a new objective that the council will seek to work with the newly appointed Director of Public Health to seek to assess the air pollution impact on Health in Haringey.
Defra – Air Quality Division.	
London Borough of Haringey Council should ensure that clear source apportionment data is included which demonstrate that road vehicles are the dominant source of NOx and PM emissions. It is not clear how important the different sub sets of vehicles are in terms of contributing to overall emissions. London Borough of Haringey Council could identify traffic composition figures (%cars, %buses, % HGV, %LGV etc) and use the DfT emission factors calculator to assess the potential emissions from each vehicle class to gauge whether measures such as modernising the local bus fleet will have a significant impact on reducing air pollution in the local area and beyond.	A source apportionment exercise was carried out previously for the Stage 4 air quality Assessment in 2004. The plan has been changed to reflect a new objective for the council to make an application for defra grant funding for an apportionment project.

Comment Received	Response
London Borough of Haringey Council should include commentary of the scale of NO_x and PM_{10} reduction required in order to achieve concentrations in line with the respective annual mean objectives. sca	The plan has been changed. This has now been included for the diffusion tube monitoring sites at which there have been exceedences of the annual NO2 objective and can be found at Table 5 in the appendix.
We welcome the indicators that have been included below all highlighted actions. We encourage the Council to adopt these indication within a table that follows the format as shown in Box 4.3 of LAQM TG(09). London Borough of Haringey Council should move to adopt this format of table in place of that included in Table 1. This will ensure fluidity with the way progress is reported annually in future years	The plan has been changed to reflect required format Box 4.3 of the LAQM.TG(09) guidance in their annual reporting to defra and GLA.
The plan is largely consistent with guidelines in LAQM.PG(09) and the Council should be commended on the detail provided in the draft action plan.	No change to plan required
GLA – Development and Environment.	
The overall plan is clear, concise and generally follows the guidance outlined in LAQM PG(09)....The plan provides a good overview of other relevant plans and regional policies that are likely to have a bearing on local air quality.	No change to plan required
The London Borough of Haringey should be commended on their updated Action Plan. It contains all the measures that are key to the Mayor's strategy to improve emissions from both	No change to plan required

Comment Received	Response
transport and non-transport sources. It also contains awareness raising activities to improve public protection from poor air quality within the borough.	
We also welcome the use of SMART measures, clearly indicating how each measure will be monitored during its implementation. We understand the challenge of achievement of the air quality objectives within the borough.	No change to plan required

APPENDIX 2
London Borough Of Haringey

Air Quality Action Plan 2010 - 2018

July 2010

Document Control

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V2	Final draft	14/01/2011
V2.1	Final	8/02/2011

Approval history

Version	Approving body	Date
V1	***Internal Management Team***	9/2010
V2	***Internal Management Team***	21/01/2011
	Defra	06/01/2011
	GLA	17/01/2011

Executive Summary

The borough of Haringey, like most other London boroughs and urban areas, experiences poor air quality, the main contributor being road traffic. Air pollution in Haringey is largely due to the vast number of vehicles that travel through the borough and the dense network of roads and buildings which not only emit pollution, but also prevent pollution from dispersing. In addition, local air quality is affected by pollution generated outside of the borough boundary and so achievement of the Government's air quality targets requires coordinated action from the Government, Mayor of London and from within the council.

In 2001 the whole borough was declared an Air Quality Management Area (AQMA), for the pollutants of nitrogen dioxide and respirable particles (PM10). Local authorities have a duty under the Environment Act 1995 to "prepare a written plan in pursuit of the achievement of the air quality standards and objectives in the designated Air Quality Management Area"; i.e. to detail the Council's proposals and actions to work towards the Government's air quality objectives in respect of the pollutants of concern. The Council produced and published its first Air Quality Action Plan (AQAP) in 2003. Some progress was made against key actions in the 2003 AQAP such as;

- Successful lobbying for a London wide Low Emission Zone (LEZ), the first phase of which came into operation in February 2008.
- Approval and publication of the Council's Transport Local Implementation Plan (LIP). This sets out the Council's commitment towards achieving the objectives of the Mayor's Transport Strategy and includes a range of measures to reduce vehicle pollution and encourage a modal shift away from cars.
- In 2008/2009 a total of 12 electric vehicle charging points were installed in 5 car-parks across the borough.
- All schools in Haringey have completed travel plans and there are 5 workplace travel plans in place across the borough in 2008/2009
- The Council has its own staff travel plan.
- There are 27 car clubs at 14 on-street location in 2008/2009
- Inclusion of policies in the Unitary Development Plan (UDP) to support air quality.
- Improvements to our network of air pollution monitoring stations.

A decision was made to update the AQAP partly as a result of the proposed publication of several significant strategic documents in relation to air quality; such as the Mayors latest Air Quality Strategy 'Clearing London's Air'. In addition we have recently undertaken local air quality modelling in partnership with neighbouring boroughs; providing further baseline information for this updated action plan.

The main objectives of the revised AQAP are to:

- Demonstrate the Council's commitment to improving air quality and lead by example

- Provide an overview of local key policies with respect to air quality thus inform about air pollution

- Improve air quality whilst maintaining value for money and to explore wider economic opportunities.

- Involve all relevant council departments and external agencies where appropriate, to ensure a balanced and integrated approach Haringey

- To improve the quality of life and health of the residents and workforce in Haringey.

- To fulfil statutory obligations for local air quality management and assist the UK Government and Mayor of London in meeting air quality Limit Values

This AQAP outlines how Haringey intends to fulfil obligations for air quality management and how we will monitor the effectiveness of the measures introduced. It also outlines the main sources of pollution in the borough. The measures proposed in this plan centre around firstly, transport measures, such as the Council's fleet emissions, car clubs, electric vehicles, travel plans and cycling. Secondly, non transport measures such as new and car free developments, biomass and industrial emissions and lastly awareness raising measures, such as providing pollution information through monitoring, awareness in schools and promoting reduced car use. Where applicable, each highlighted measure has a monitoring indicator. It is these indicators that will be reported on each year. The Council has limited powers to improve air quality, so much of the measures within this AQAP are already required of the council. The measures within this plan complement other corporate policies such as transportation, planning and the overarching Councils Core strategy.

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Measure 5 – 20 mph Zones/DIY Streets
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Measure 7 – Green Travel Promotion/Smarter Travel
Measure 8 – Cycle Routes and Cycle Parking
Measure 9 - North London Transport Forum

3.3 Non-Transport Measures

Measure 10 - Determining the Impact of new developments on local air quality
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Measure 12 – Control of dust during demolition and construction phases.
Measure 13 – Biomass Boilers

Measure 14 – Tree Planting
Measure 15 – Controlling emissions through Climate Change actions.
Measure 16 – Industrial Process Emissions.
Measure 17 – Smoke and Emissions from Bonfires.

3.4 Air Quality Awareness Raising Measures:

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Measure 19 - Air Pollution Information
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Appendices

I. Haringey's Air Pollution Monitoring Sites

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III. Transport Neighbourhood Priority Areas

IV. TfL Roads in Haringey.

V. Table of percentage reductions in pollutant concentrations at monitoring sites that consistently exceed the Government's annual objective for NO_2.

References.

1 Introduction

Poor air quality harms human health and can increase the incidence of cardiovascular and lung disease. London has some of the worst air quality in the country, which is primarily due to the density of developments and its geographical location. All local authorities are required to assess air quality and identify areas where it is unlikely to meet objectives set by the Government. The objectives have been set at levels at which minimal effects on human health are likely to occur. Air quality in Haringey does not meet the objectives for annual average nitrogen dioxide and daily average fine particles (PM10). As a consequence, the whole borough has been declared an Air Quality Management Area for these two pollutants.

This document outlines measures that the council aspires to take, and in some instances is already taking, to improve air quality in the borough. Some measures are already underway such as reducing emissions from the council fleet and buildings, controlling emissions from construction sites and new developments and installing electric vehicle charging points. This AQAP focuses on measures that work towards reducing levels of nitrogen dioxide and fine particles (PM10 and PM2.5). The key priority measures that are proposed in this plan include:

- Reducing emissions from the council fleet;
- Increasing number of electric vehicle charging points;
- Increasing number of car club memberships;
- Travel plans (Council & Schools);
- Implementation of reduced speed zones; and
- Improved cycling infrastructure.

Dealing with poor air quality requires coordinated action from a wide range of organizations, both internally and externally to the council. Measures detailed in this plan reflect action being taken by the Mayor of London and the Government, as well as locally. Following publication of this AQAP, an annual report will be produced detailing progress with actions, the latest monitoring data and any other relevant information.

1.1 National and Regional Air Quality Regulations

Local Air Quality Management (LAQM)

National

Existing and future pollutant levels in the UK are assessed in relation to the national air quality objectives, established by the Government. The air quality objectives incorporated into UK legislation are derived from the Limit Values prescribed in the EU Directives and transposed in national legislation by each member state. The Air Quality Standards (England) Regulations 2007 details the objectives for the ten pollutants of concern.

The Environment Act 1995 requires the Government to produce a National Air Quality Strategy. In July 2007, the Government published the revised National Air Quality Strategy for England, Scotland, Wales and Northern Ireland, setting out national policies measures for the management of ambient air quality to protect human health. The Government's aim for air quality policy in the UK is to ensure that all polluting emissions and ambient air quality generally throughout the country do not cause harm to human health, vegetation and the environment. The purpose of the national strategy is to map out, as far as possible, the future of ambient air quality policy in the UK to 2005 and beyond; looking towards the EU air quality limit values to be achieved by 2010 and beyond.

The strategy sets out health based standards for eight main pollutants with the air quality objectives for seven of these pollutants that must be achieved by various dates to 2010, depending on the pollutant. The strategy identifies the action that needs to be taken at international, national and local level and provides the framework that allows relevant groups, such as industry, business, and local government to identify the contributions they can make to ensure that the air quality objectives are achieved. The strategy also contains a new standard for very fine particles ($PM_{2.5}$); which are particles measuring less than 2.5 micrometers' in diameter. There is no 'safe limit' for these very fine particles as it is considered that exposure presents a significant risk to health as they may be inhaled very deeply into the lungs.

Part 1V of the Environment Act 1995 places a duty on local authorities to regularly review and assess air quality in their areas, and to determine whether or not the air quality objectives are likely to be achieved. Where exceedences are considered likely, the local authority must then declare an Air Quality Management Area (AQMA) and prepare an Air Quality Action Plan setting out the measures it intends to put in place in pursuit of the objectives.

1.2 Air Quality Objectives

The air quality objectives applicable to LAQM **in England** are set out in the Air Quality (England) Regulations and are shown in Table 1.1. This table shows the objectives in units of micrograms per cubic metre $\mu g/m^3$ (milligrammes per cubic metre, mg/m^3 for carbon monoxide) with the number of exceedences in each year that are permitted (where applicable).

Table 1.1 Air Quality Objectives included in Regulations for the purpose of Local Air Quality Management in England.

	Concentration	Measured as	
Benzene	16.25 $\mu g/m^3$	Running annual mean	31.12.2003
	5.00 $\mu g/m^3$	Running annual mean	31.12.2010
1,3-Butadiene	2.25 $\mu g/m^3$	Running annual mean	31.12.2003
Carbon monoxide	10.0 mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.5 $\mu g/m^3$	Annual mean	31.12.2004
	0.25 $\mu g/m^3$	Annual mean	31.12.2008
Nitrogen dioxide	200 $\mu g/m^3$ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 $\mu g/m^3$	Annual mean	31.12.2005
Particles (PM_{10}) (gravimetric)	50 $\mu g/m^3$, not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 $\mu g/m^3$	Annual mean	31.12.2004
Sulphur dioxide	350 $\mu g/m^3$, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 $\mu g/m^3$, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 $\mu g/m^3$, not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

Note 1: There are new obligations for Particles (PM2.5) which are not required to be included in the local authority LAQM duties.
Note 2: The Limit Values remain in force for every year after the target date.

1.3 London and the GLA Air Quality Strategy

The Mayor of London is required under the Greater London Authority Act 1999 to produce eight strategies, including an Air Quality Strategy for London. The Mayor's 'Cleaning London's Air' Air Quality Strategy; published in 2002; contains policies and proposals intended to improve London's air quality towards the objectives in the Government's National Air Quality Strategy. The strategy explained London's current air quality, sources and predictions of future levels of pollution. It set a strategic

framework for dealing with Air Quality problems for London. A change of Mayor of London has produced a revised London air quality strategy; 'Clearing the Air' which details Transport and non-Transport measures for tackling air pollution in London. Through this strategy and others such as London Plan, the Transport Strategy and the Energy Strategy there are interrelated ideas / considerations for the London boroughs to take forward to work towards an improvement in local air quality.

All London boroughs are required to have regard to the Mayor's Air Quality Strategy when undertaking their LAQM duties and to ensure their Local Development Plans and their Local Implementation Plans (LIPs) are in general conformity with the Mayor's London Plan and the Mayors Transport Plan; which are the strategic plans setting out the planning framework for future spatial development and transport in London. The Mayor also produces the London Atmospheric Emissions Inventory for use by boroughs in discharging their Local Air Quality Management duties.

Impact on health

The House of Commons Environmental Audit Committee heard evidence during its investigation into air quality in 2010 (1) that at least 3,500 people in London die prematurely each year due to poor air quality, and this figure could be as high as 8,000. The Committee also heard evidence that particularly vulnerable individuals could have their lives cut short by up to 9 years. This impact on mortality is generally attributed to fine particles.

An independent investigation, commissioned by the Greater London Authority, into the mortality impacts of particulate air pollution, suggests that in 2008, when the air quality was relatively good, the figure was likely to be 4,267(2). A study involving school children in East London has revealed that the lung capacity of 8 and 9 year olds is 5% lower than the national average, with 7% of the children having a lung function at a level internationally regarded as hazardous(3).

(1) **House of Commons Environmental Audit Committee**, Air Quality Fifth Report of Session 2009 – 10. Volume 1
www.publications.parliament.uk/pa/cm/cmenvaud.htm

(2) **Dr Brian G Miller Institute of Occupational Medicine**. Report on estimation of mortality impacts of particulate air pollution. Consulting report P951-001. June 2010
www.london.gov.uk/publication/mayors-draft-air-quality-strategy

(3) www.news.bbc.co.uk/1/hi/world/africa/8092182.stm

1.4 Air Quality in Haringey

Since 1991 the council has been monitoring air quality in accordance with the requirements set out in Part IV of the Environment Act 1995. The current locations of the monitoring sites across Haringey are seen at Appendix 1.

During the first stage of the Review and Assessment of air quality in the Council's area, it was determined that all of the health based pollutants would be achieved by their objective date, except for the pollutants for nitrogen dioxide (NO_2) and respirable particulate matter (PM10). Exceedences of the air quality objectives for these two pollutants were predicted along main roads in the borough. As required by the LAQM process where exceedences were considered likely an Air Quality Management Area must be declared. In 2001 the decision was taken to declare the whole of the borough of Haringey an Air Quality Management Area for the pollutants of NO_2 and PM10.

Haringey's Air Quality Action Plan was published in 2003. The plan is aimed at reducing NO_2 and PM10 emissions, primarily through measures to reduce traffic flow and vehicle emissions and to promote, improve and encourage the use of more sustainable forms of transport. Other actions focus on measures to raise public awareness of air pollution, greener travel and local policy measures. Of all the 38 measures identified in the Action Plan that work towards meeting the Government's objectives for NO_2 and PM10, the introduction of a London wide Low Emission Zone (LEZ) is the most effective, although a further reduction in traffic levels is required.

Since then, Haringey council has been reporting each year on air quality in the boroughs' area, as required by the LAQM process. Data analysis continues to demonstrate that the London Borough of Haringey was correct in its decision to declare an Air Quality Management Area for the pollutants of PM10 and NO_2. The latest Air Quality reports are available on the council website:

http://www.haringey.gov.uk/index/business/licensing_regulations/environment_and_waste/pollutioncontrol/pollutioncontrol_air.htm

Tackling poor air quality remains a challenging task given that Haringey, like other London boroughs continues to breach the air quality objectives for NO_2 and PM10. The dominant source of NO_2 and PM10 emissions in Haringey is road transport with a variety of other sources contributing emissions. According to the latest London Atmospheric Emissions Inventory (LAEI) 2008, compiled by the GLA, contributions of NOx emissions in Haringey comprise of 50% from road transport and 43% from gas.

Understanding the sources of PM10 and NO_2 emissions plays an important role in determining what measures should be introduced to improve air quality. At a local level, Haringey's primary role is to implement measures to minimise NO_2 and PM10 emissions in the borough.

Particulate Matter

Particles vary in size, with those measuring 10 micrometers (μm) or less referred to as PM10. PM10 concentrations comprise particles from a variety of sources at a given location. Primary particles arise directly from natural and man-made sources. Natural sources include pollen, sea salt and sand particles. Man-made sources are predominantly from combustion sources such as motor vehicles, gas and wood fired boilers and bonfires. These particles are released in the fine size fraction – PM2.5 (<2.5μm). Coarse sized particles (2.5-10 μm) arise from industrial processes, such

as cement batching plants and construction and demolition work. These particles tend to have an impact close to the emission source. The wearing of vehicle tyres and brakes, plus the re-suspension of deposited particles on road surfaces have been the focus of increased attention as important sources of fine and coarse particle emissions in urban areas.

Secondary particles are produced from the chemical reactions in the atmosphere involving gases such as nitrogen oxides and volatile organic compounds. These exist as PM2.5 and have a regional rather than local influence, dispersing over a wide area. Consequently, a large proportion of the particulate matter emissions in the UK are from Europe and as far as Africa.

The London Atmospheric Emissions Inventory (LAEI) 2008 estimates the main contributing sources of PM10 emissions in Haringey to be from road transport, being the largest source of particulate matter emissions (57%), followed by Agricultural / Nature emissions (17.5%). Road transport can be further divided into vehicle PM10 emission sources, with heavy goods vehicles and Light Goods Vehicles contributing the greatest emissions.

Nitrogen Dioxide

Nitrogen released from combustion sources such as vehicle engines and gas boilers, it combines with oxygen to form nitric oxide (NO). This further combines with oxygen to form nitrogen dioxide (NO_2). Whilst nitric oxide is considered not be harmful to health at ambient concentrations, nitrogen dioxide is. Nitrogen dioxide and nitric oxide are referred to together as oxides of nitrogen (NOx). During hot and sunny weather, NOx and volatile organic compound (VOCs) emissions react in the atmosphere to form ground level ozone. Ozone is one of the main constituents of photochemical smog, with higher concentrations in summer when sunlight and temperatures are higher.

The 2008 LAEI estimates that the main direct sources of NOx emissions in Haringey were road transport (50%) and gas boilers (43%) with rail contributing 6%. The vehicle types responsible for the largest contribution of NOx emissions from road transport are cars and heavy goods vehicles.

Table V in the appendices illustrates the percentage reduction in concentrations at each of the monitoring sites where the measurements of NO_2 exceed the annual average of 40 $\mu g/m^3$.

1.5 Haringey's Air Quality Modelling.

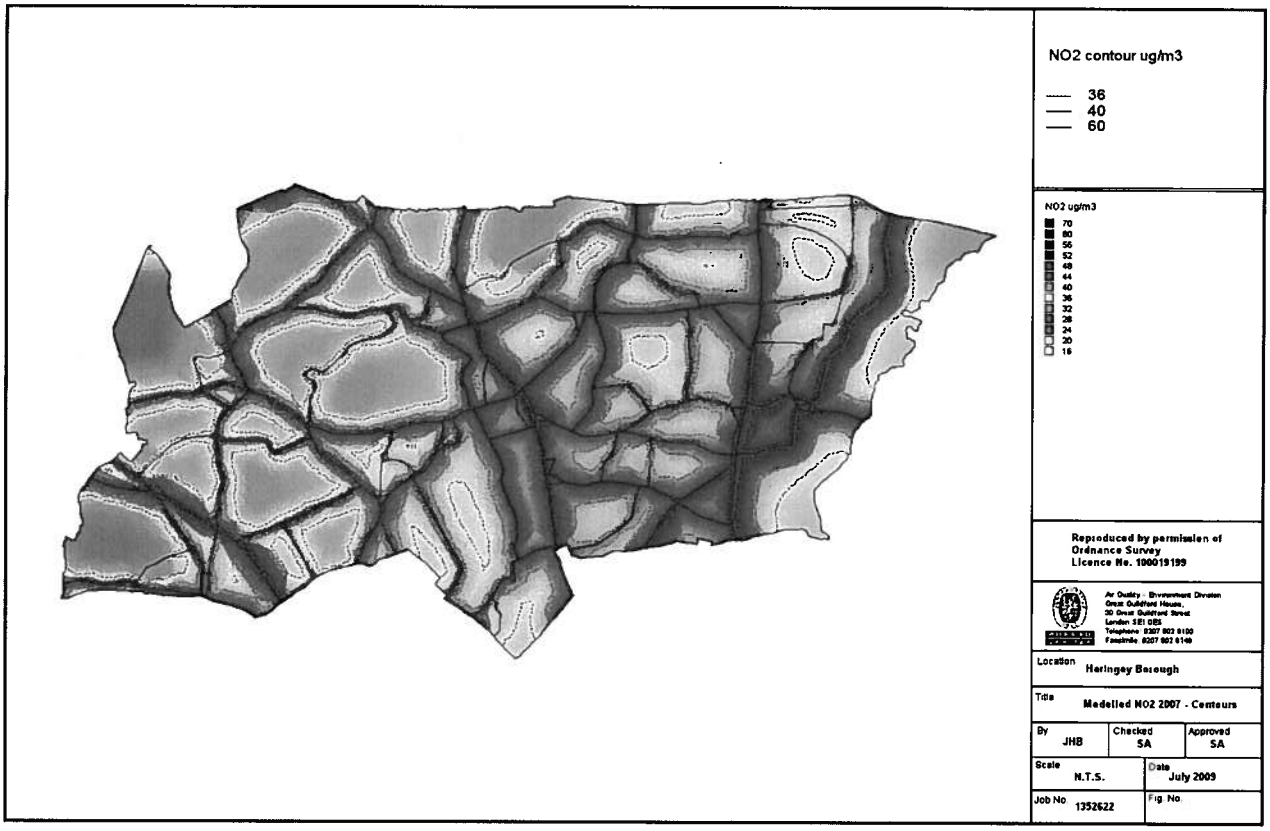
In August 2009, in joint partnership with seven boroughs in the North London Air Quality cluster group, an update of air quality dispersion modelling was commissioned for road traffic emissions for the pollutants of PM10 and NO_2 for each borough. For Haringey, this included a borough wide air quality assessment to update the previous modelling carried out in 2001, a detailed scenario air quality assessment for one specific location and identification of 'hotspot' areas; that are predicted to exceed the air quality objectives. Tottenham Hale gyratory was chosen for the scenario assessment and there 14 hotspot areas are predicted to exceed 60$\mu g/m^3$ annual mean NO_2 and therefore presents a potential risk for the hourly NO_2 objective. The full report is available on the council website at the link above.

Updated emissions inventories, refinement in modelling technology, advances in vehicle technology and changes in traffic types flows due to recent changes in London, such as the low Emissions Zone and Congestion Charge and new data, all influenced the need for a more up to date picture of air quality in the borough.

Figures 1 and 2 show modelled annual mean concentrations of nitrogen dioxide and particulate matter across the borough. The maps clearly follow the boroughs busiest and main roads. The annual mean air quality standard for nitrogen dioxide (40µg/m^3) is shown to be exceeded at roadside building facades, with the highest concentrations predicted at certain junctions. The daily mean particulate matter air quality standard (50 µg/m^3) is breached at slightly fewer receptor locations. This modeling exercise reveals that improving air quality will continue to be challenging, especially at the most heavily trafficked parts of the borough.

Figure 3 shows the identified 'hotspots' that are predicted to exceed the 60µg/m^3 annual mean NO_2 and so a risk of exceeding the hourly NO_2 objective. Recommendations for additional monitoring in these areas is made to determine whether there is exceedence of the hourly NO_2 objective, which may require further declaration of AQMA areas for the hourly NO_2 objective.

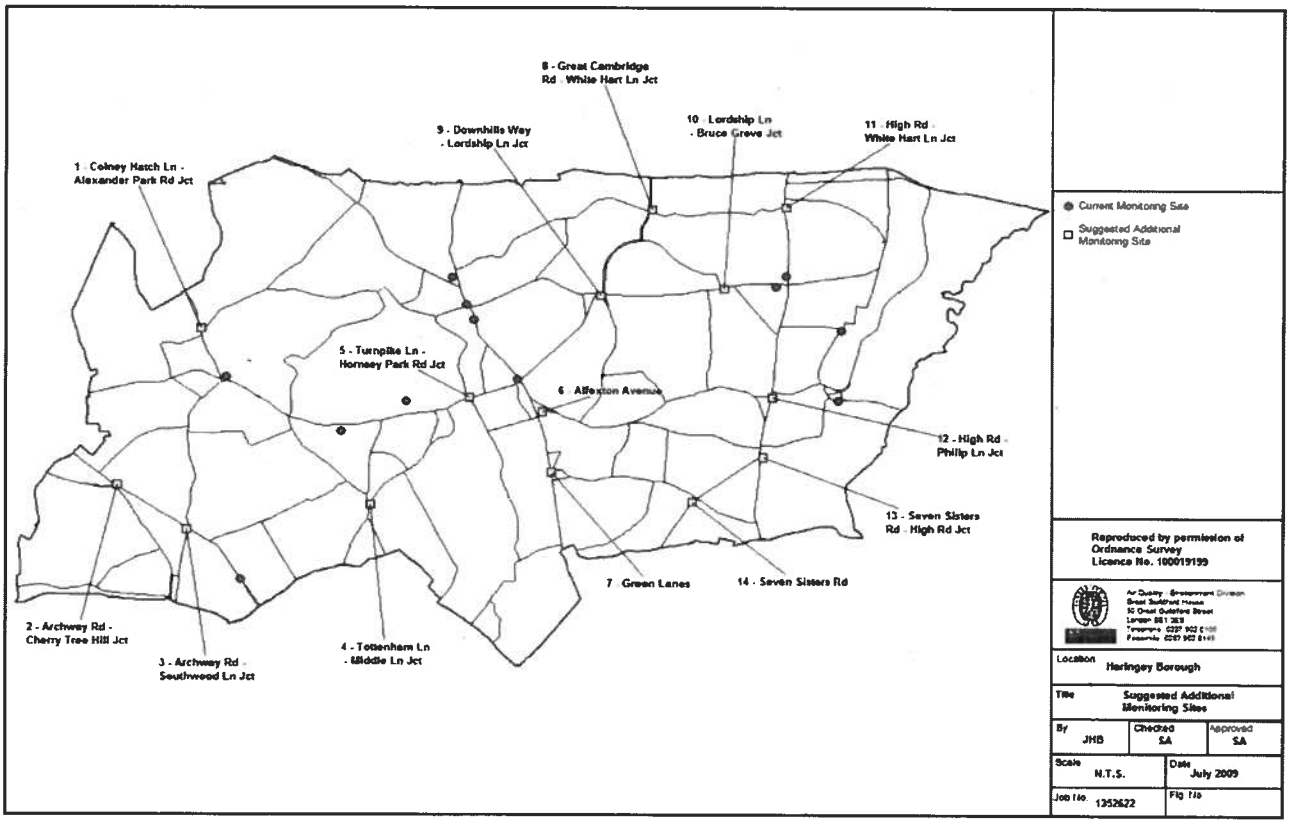
Figure 1 - Modelled NO_2 Annual Mean 2007 for Haringey



As can be clearly seen, NO_2 exceedences of the objective are adjacent main roads. Again, this is consistent London wide.

Figure 2 - Modelled PM_{10} Annual Mean 2007 for Haringey

Figure 3 - Identified 'Hotspots' Where Additional Monitoring Recommendations Have Been Made



As a result of this updated borough wide air quality assessment, the council has taken the decision to update the 2003 AQAP. It is considered that the AQAP has now reached the end of its lifespan with many of the actions having been completed, although some actions are constant, as a result of statutory obligation.

2 Haringey's supporting Plans and Strategies

2.1 The Sustainable Community Strategy

The Sustainable Community Strategy, 'A Sustainable Way Forward', is the councils overarching plan for Haringey. It provides a ten year vision from 2007 to 2016 for Haringey and was adopted by the council following extensive consultation. The main aim of the strategy is to improve the quality of life for everyone and it sets out the council's ambitions for the borough and how the council wants Haringey to be like in 2016. The Community Strategy also addresses issues that are key challenges and opportunities for Haringey.

The vision for the borough to 2016 is:

"A place for diverse communities that people are proud to belong to"

The six sustainable community priorities are:

- People at the heart of change
- have an environmentally sustainable future
- have economic vitality and prosperity shared by all
- be safer for all
- have healthier people with a better quality of life, and
- be people and customer focused

Predominantly focussed towards climate change and carbon emissions, the environmentally sustainable future vision gives a nod towards air pollution; ..."Poor air quality, road congestion and homes and buildings that are poorly built and costly to heat, diminish both our quality of life and our well-being."

Progress of the six sustainable community priorities above are reported annually. Further detail is available at the following link:

http://www.haringey.gov.uk//index/council/hsp/partnership_strategies_and_plans/sustainable-community-strategy.htm

2.2 The Council Plan

The Council Plan sets out the Council's vision and priorities. It is updated annually to reflect any changes in Council priorities and identify what key activities are being undertaken to address changing local and national circumstances.

The Council's vision is to be "A Council we are all proud of"

The Council's priorities are:

- A Greener Haringey - becoming one of London's greenest boroughs
- A Better Haringey - cleaner, greener and safer places

- A Thriving Haringey - encouraging lifetime well-being at home, work, play and learning
- A Caring Haringey - promoting independent living while supporting adults and children when needed.
- Delivering Change and Improving Quality – customer focused, cost effective achieving high levels of satisfaction

The Council Plan shows the council's performance against the best value performance indicators, comprehensive performance assessment and other local indicators. It shows what we shall do to achieve our priorities in the coming year and informs the council's business planning process, at all levels of the organisation, through to individual staff. The plan is updated annually.

Detailed information can be found in the Council Plan at the following link:

http://harinet.haringey.gov.uk/index/council/performance_and_finance/councilplan.htm

2.3 Greenest Borough Strategy

The Greenest Borough Strategy was adopted by the council in 2008 and sets out how the Council will take forward actions to tackle climate change and embed environmental sustainability into all the council does.

Haringey Council is committed to creating a greener, more sustainable environment for its residents and visitors to the Borough and recently produced 'The Greenest Borough Strategy 2008 – 2018' to support this commitment. This sets out an overarching strategy for improving quality of life, wellbeing and to create a cleaner, greener and safer Haringey. It provides a framework for a coordinated approach to tackling environmental issues in Haringey.

In December 2006 Haringey council signed the Nottingham Declaration, thereby committing to a plan of action to significantly reduce greenhouse gas emissions and to work towards the Government target of 60% carbon dioxide emissions by 2050. Although primarily focussed on climate change and aspires to a committed 40% carbon emissions reduction across the borough, within the document, Priority 3, 'Managing Environmental Resources Efficiently' makes reference to improving local air quality and reducing the borough's indirect greenhouse gas emissions as one of the six objectives. Priority 6, 'Promoting Sustainable Travel' lists the two objectives to 'Reduce Car and Lorry Travel' and, 'Improve Public and Community Transport'.

This Air Quality Action Plan details the Council's approach to the management of local air quality, it will complement and link with other relevant strategies.

2.4 Core Strategy

Replacing the Council's Unitary Development Plan (UDP), Haringey's Core Strategy is the new plan for the future developments of the borough up to 2026. The plan sets out how the Council will deliver a better choice of high quality design, affordable housing, better community facilities, more schools and training opportunities, improved public transport and more attractive and safer streets and parks.

The Core Strategy forms part of the Local Development Framework, a folder of documents to guide planning and development in the borough for the next 15 years. Haringey's Core Strategy is the key Development Plan Document. Together with the London Plan and Haringey's emerging Development Management Policies, these three documents make up the statutory 'development plan' for Haringey.

The Council has developed a series of strategic priorities detailed in the Sustainable Community Strategy document. These priorities set the basis for the Core Strategy and its objectives. These objectives are developed further in the Core Strategy Strategic policies. A total of twenty five core strategy objectives have been identified against the 5 strategic priorities from the overarching Sustainable Community Strategy. Of the 25 objectives, one is directly associated with the management of air quality in the borough. Set under the Sustainable Community Strategic priority of 'An Environmentally Sustainable Future' is the core strategy objective *"to manage air quality within the borough by travel planning, promotion of walking, cycling and public transport. To promote the use of more sustainable modes of transport."* The detail is contained in the Core Strategy Policy 7. This policy focuses on promoting sustainable travel and making sure all development is properly integrated with all forms of transport. Haringey will support development that improves the integration of land use and transport. Further detail on the Council's approach to environmental protection is set out in the Development Management Document (DPD) and the Sustainable Design and Construction (SPD).

All Core Strategy policies are interrelated and should not be viewed in isolation. Core Strategy policies do not repeat national or London Plan policies, but do refer to specific national and regional targets. The Core Strategy should be read alongside the London Plan.

There are some key regeneration projects within the borough including Tottenham and Haringey Heartlands, Tottenham High Road regeneration corridor, the Upper Lea Valley and Wood Green and the measures detailed below will form part of the planning proposals and decision making process where practicable.

2.5 Haringey's Transport Strategy (LIP)

The Mayor of London has published his revised Transport Strategy covering the period 2011 to 2031. At the same time there is a revised London Plan and the Economic Development Strategy; together the three strategies determine London's economic and social development over the next 20 years.

At the local level, implementation of the Mayor's Transport Strategy (MTS) is delivered in Haringey by the Local Implementation Plan (LIP). Haringey has identified the borough transport objectives and developed its LIP based on the goals and challenges within the MTS and the sub regional transport plan for North London. Haringey has identified 11 transport objectives; objective No. 6 is specific to air quality;

"Improve air quality within the borough through initiatives to reduce and mitigate the effects of pollutant emissions from road and diesel operated rail transport."

The overall traffic and transport investment programme (Local Implementation Plan) in the borough is designed to improve road safety and encourage shifts to more sustainable modes of transport; something that evidence suggests is being achieved. The numbers of new pedestrian crossing facilities, cycle and bus facilities are an indication of this purpose. Traffic volumes in Haringey have fluctuated over the last decade, with a sustained increase recorded between 2004 and 2007, followed by a reduction during 2008 which equates to a 2% overall reduction in traffic volumes since 2001.

TfL allocates LIP funding to boroughs for transport projects through 4 main categories, Corridors/Neighbourhoods, Smarter Travel, Major Schemes and Maintenance. The corridors programme consists of developing holistic schemes that address issues relating to the smoothing of traffic flow, bus reliability, local safety, cycling, walking and the public realm. Identification of corridors are based on the A road network in the borough excluding TLRN routes as these roads are likely to present the greatest problems in terms of congestion and traffic flow. Other roads such as B roads are addressed through Neighbourhood funding. The neighbourhoods programme consists of schemes which deliver local area improvements including CPZs, 20mph zones, accessibility and the reduction of street clutter, environmental schemes including air quality improvements, the expansion of the car club network and increasing the number of electric charging points. Haringey's LIP includes measures such as Cycle Highway Schemes, Cycle Parking, Electric Charging Points, Better Streets and Cleaner local authority fleets which will help to deliver the Mayor's goals and objectives at the local level.

Haringey Council has identified the following as priority for the Corridors and Neighbourhoods programme:

- Wood Green High Road, Green Lanes corridor and the adjoining residential neighbourhoods of Hornsey Park and St. Ann's.
- Tottenham Hale and Tottenham Green neighbourhoods as part of the Tottenham Hale Gyratory complementary measures
- Seven Sisters and North Tottenham neighbourhood and corridors.
- Local safety scheme programme
- DIY streets/20mph zones
- Biking Borough strategy delivery
- Local cycle routes
- Cycle training
- Electric charging points
- Car club scheme development
- Workplace Travel Plans

Highway congestion hotspots in Haringey have been identified and include town centres, particularly Wood Green High Road through to Green Lanes and Seven Sisters through Tottenham High Road to Edmonton. Other congested hotspots include Seven Sisters Road, the Tottenham Hale Gyratory, the A10 (Great Cambridge Road), the A406 North Circular Road, and key routes to access

both the A10 and the A406. Not all of these priority areas correspond to the air pollution hotspots. Of the 14 air quality hotspots identified in the modelling, 7 are located on the TfL routes, over which Haringey has no control.

Further detail is contained within Haringey's LIP 2011 – 2014.

2.6 Tree Strategy

Trees play an essential role in towns and cities providing a wide range of environmental, economic and social benefits that contribute to people's health and well being. Trees can make the urban environment a healthier, attractive and more comfortable place to live and work. Some benefits are measurable – such as improvements in air quality, many are not, but they can have a positive impact on the lives of those living and working in the urban environment.

The Council Tree strategy provides a framework for the management and maintenance of council owned trees and enhancement of its stock. Application of the policies within the Tree Strategy will ensure trees within Haringey are managed in a pro-active and systematic manner, leading to improvements in tree health and a more sustainable tree population. The Tree Strategy outlines the council's commitment to increasing the total number of trees under its ownership. New trees will be planted in streets, parks and housing sites.

2.7 Haringey Biking Borough Strategy / Action Plan

Studies in London have revealed that, over short distances the pedal cycle is capable of being the fastest, most inexpensive, reliable and beneficial form of wheeled transport. It is particularly suitable for local trips, a third of which are under a mile long, and 85% of which are less than five miles in length. Cycling, together with other measures such as travel plans, traffic restraint and initiatives to encourage more walking is crucial to reducing congestion, improving the environment and promoting social inclusion and better health.

Haringey has a network of cycle routes across the borough including cycle lanes on main roads, separated cycle lanes and special fully signed, quiet routes. Haringey's cycle stategy objectives aim to maximise the role of cycling in Haringey within an overall framework of road danger and traffic reduction, and sustainable development.

2.8 Sustainable Modes of Travel to School Strategy

The Education and Inspections Act 2006 placed a duty on all local authorites to produce a 'Sustainable Modes of Travel Strategy'. The strategy contains plans to help make walking, cycling and public transport a realistic and attractive option for journeys to and from schools in the borough.

The strategy aims to:

- Reduce the number of people travelling to school and college by car and increase the numbers walking and cycling

- Improve the information that parents and pupils have about the different ways they can travel to school
- Improve the safety of routes to and from schools
- Improve the health and wellbeing of children
- Improve accessibility to, from and between schools

Under this overarching strategy, every school in Haringey now has a School Travel Plan in place.

3 Haringey's Action Plan Objectives and Measures

3.1 Objectives and Measures:

This revised action plan identifies the most up to date initiatives already being implemented or to be implemented by Haringey to reduce NO_2 and PM10 emissions from the affecting main emission sources – road transport, new developments and small industrial processes.

An integrated approach to improving local air quality at priority locations has been adopted in the new Air Quality Action Plan. This will help to ensure that policies and initiatives related to air quality, transport and planning are balanced and coordinated across the Council. In the long term, tackling air quality issues together achieves greater cost savings and health benefits.

The main objectives of the Action Plan are to:

- Demonstrate the Council's commitment to improving air quality and lead by example
- Provide an overview of local key policies with respect to air quality
- Improve air quality whilst maintaining value for money and to explore wider economic opportunities.
- Involve all relevant council departments and external agencies where appropriate, to ensure a balanced and integrated approach Haringey
- To improve the quality of life and health of the residents and workforce in Haringey.
- To fulfil statutory obligations for local air quality management and assist the UK Government and Mayor of London in meeting air quality Limit Values

The Plan comprises of three main sections of Transport Measures, Non-Transport Measures and Awareness Raising. Under each of these three sections are measures of specific relevance and interest to Haringey for implementation where practicable, at the identified priority areas and so are likely to affect a decrease in emissions of the pollutants of concern, NO_2 and PM10.

The council will demonstrate how ongoing progress is being made with delivering the measures proposed in this action plan by using performance indicators. Quantification of air quality reductions in NO_2 and PM10 emissions will be made where possible.

3.2 Transport Measures:

The dominant source of emissions of NO_2 and PM10 in Haringey arises from road transport which the Council has little control over. Across London, monitoring evidence shows background levels of NO_2 to be increasing. This is consistent with the increase from petrol to diesel fuelled cars as the dominant source of NO_2 in urban areas is attributed to diesel fuelled vehicles; such as London buses which fall under the responsibility of the Mayor of London and road transport emissions from major

roads outside of borough. In order to help lower PM10 and NO_2 concentrations across London, the Mayor introduced the Low Emission Zone in February 2008.

Londonwide it has been estimated that by 2031 there will be an additional 1.3 million people making an extra 3 million journeys made each day. In Haringey alone it has been calculated that this equates to a 16% increase in journeys made each day. The continuing need for new housing in Haringey due to the increasing population, changes in social structure (e.g. households are getting smaller and the population is ageing) and the increasing need for affordable housing will result in additional travel demand and contribute to already congested sections of the borough transport network.

Reducing NO_2 and PM10 emissions from road transport is one of the most important routes to improving air quality in Haringey. Lowering the number of vehicles on our roads, easing congestion, encouraging residents and businesses to use less polluting forms of transport, and improving driver behaviour are key methods to reaching this goal. The Council is addressing some of these issues through a wide variety of measures.

The following Transport measures are measures identified through the Mayors Transport strategy; endorsed and funded by TfL, the Mayors air quality strategy and the London Plan. The measures identified below can be implemented where practicable at the priority hotspots, areas and corridors identified above.

Measure 1 – To Lead by example and reduce Emissions from the Council Fleet

Improvements in vehicle exhaust emissions are necessary to lower PM10 and NO_2 emissions from road vehicles. Benefits will also be gained in terms of lower carbon dioxide emissions. Low emission vehicles are those which emit the lowest amounts of NO_2, PM10 and CO2 and are sometimes referred to as 'Green Vehicles'. This can be achieved using a number of different methods including lowering vehicle size, improving engine design and fuel efficiency, driving vehicles which meet the latest European Emission Standards and fitting pollution control equipment such as diesel particle traps. Low emission vehicles also include those which use clean fuels and alternative technology such as liquid petroleum gas (LPG), compressed natural gas (CNG), biofuels (biodiesel) and biomethane. Alternative technology includes electric, hybrid and hydrogen fuel cell vehicles.

The Haringey fleet is LEZ complaint, i.e. Euro III standard or higher. Contracted out services using LGVs and HGVs such as street cleansing and waste collection vehicles, are also compliant with the requirements of the LEZ. A Fuel strategy is planned which will inform the Council's sustainable transport and vehicle fleet procurement policies. Green fleet management can bring about cost savings, as well environmental benefits by lowering fuel usage. Improvements in emissions can be achieved by the uptake of clean fuels and technology in particular hybrid, electric and bio-methane in place of diesel vehicles, the adoption of smaller vehicles, the use of new vehicles which meet the latest Euro Standards and fitting pollution control equipment such as diesel particle traps.

The council is seeking to:

- **put in place the infrastructure to monitor fuel use, vehicle mileage and vehicle emissions to evaluate vehicle efficiency and report effectively on NI 194.**

- **prepare a fuel strategy for council fleet vehicles.**

- **work towards accreditation with the ISO14001 environmental management scheme for the fleet service.**

- **lead by example and ensure that the Mayors car will be a low emission / electric vehicle.**

- **through the procurement and contract process ensure that vehicles used by contractors to carry out council out-sourced functions are low emission vehicles.**

- **reduce further the payments made to staff for car user allowances and continue to promote the staff travel plan. More stringent criteria have resulted in a 7% reduction in payments. Through the staff travel plan, there is an option in place to exchange the car allowance with a sustainable travel subsidy.**

- **increase the number of secure cycle lock-ups and showering facilities at council buildings to encourage staff to use cycles or walk for work.**

- **adopt National Indicator NI 194, but this can only when an upgrade of the Council computer system to all transport modules of SAP HCM is made to enable data collation of the grey fleet for meaningful baseline data and annual reporting of NI 194.**

These measures can be monitored through the National Indicators for emissions from the council's own estate and operations for air quality; NI 194 and carbon dioxide emissions; NI 185. Information on staff travel will also be gathered in addition to vehicle type, mileage and fuel use as part of NI 194 although this is dependant upon investment in the relevant SAP modules. The baseline data for the NI 185 and NI 194 needs to be collated, robust and accepted by the National Audit Office before any reduction targets can be set. Targets set must adhere to 'SMART'; i.e. Specific, Measurable, Acheivable, Realistic, Timebound.

Monitoring: NI 194

Measure 2 – Electric Vehicle Charging Points

Electric vehicles are particularly suitable for driving in urban areas like Haringey where short distances are covered. These vehicles produce no air pollution tailpipe emissions and so are beneficial in terms of improving urban air quality. Distances that electric vehicles can travel is gradually increasing due to improvements in battery technology.

Recent research has identified electric and plug-in hybrids vehicles as the most promising technologies that can help achieve significant reduction in CO_2 emissions from road transport in the UK, and deliver benefits to local air quality. The Mayor of London is committed to the take-up and use of electric vehicles in London and has provided funding for 25,000 electric vehicle charging points across the capital by 2015. Haringey council intends to install 45 public charging points by end of 2013. To date there are 13 electric vehicles charging points installed in 6 car parks across Haringey. The scheme in Haringey is administered by Elektromotive Ltd. Only members of the electric vehicle scheme can use the charging points, for which an annual fee, currently set at £50.00 is payable.

Electric vehicle Charging Points are located within the following 6 car parks:

Area	**Location**	**Number of charging point spaces and conditions of use**
N22 Wood Green	Bury Road car park, level 1	Two charging point spaces
N22 Wood Green	Shopping City East car park, level 2	Three charging point spaces. Car parking tariffs apply for using these bays
N22 Wood Green	Shopping City West car park, level 2	Three charging point spaces. Car parking tariffs apply for using these bays
N17 Bruce Grove	Stoneleigh Road car park	Two charging point spaces
N10 Muswell Hill;	Summerland Gardens car park	Two charging point spaces
N8 Crouch End	Crouch Hall Car Park	One Charging point space

The council is seeking to:

- **to increase the number of public charging points across the borough. Priority will be given to town centre locations, transport interchanges such as railway stations, locations in employment areas and near leisure facilities.**

- **investigate the possibility to exclude or reduce electric vehicles from controlled parking zone payments and other car parking charge schemes that are in operation across the borough and under council control in order to incentivise the take-up of electric vehicles.**

- **increase charging point spaces for new developments through planning conditions and Section 106 agreements.**

Monitoring: Number of on and off street electric vehicle charging points

Measure 3 – Car Clubs

Car club membership provides the convenience of using a vehicle without the costs of owning, insuring and parking one. Using a car club vehicle is also a step towards easing parking problems and reducing carbon dioxide emissions as car club cars are usually recently registered vehicles and subsequently have among the lowest emissions of on-road vehicles in their class. Car club users typically give up owning a first or second car on joining; others defer purchasing one in preference to using the car club instead. It is estimated that every car club vehicle typically replaces 23 private cars being taken off the road. Zipcar (formerly Streetcar) has been awarded the contract to operate all on-street car club bays in Haringey

There are now over 3000 Streetcar members in Haringey and membership figures have more than doubled within the last year. As car club membership continues to grow and demand for access to car club vehicles increases in the borough, the Council and the car club operator Zipcar are keen to further increase the number of car club vehicles for which priority will be given to town centre locations and in off-street car-parks.

The council is seeking to:

- **expand the number of car club locations, particularly in the East of the borough.**

- **continue work in partnership with Zipcar to increase the number of operational car club vehicles in the borough.**

- **continue discussions with Zipcar to introduce cleaner, alternative fuelled vehicles to the Haringey car-club fleet.**

- **improve car club accessibility for mobility impaired drivers.**

Monitoring: Number of car clubs and bays in the borough

Measure 4 – Travel Plans

Workplace Travel Plans:

A workplace travel plan is a package of measures introduced by employers to encourage staff to travel by greener alternatives than single-occupancy car-use. Such a plan for example, could include a commitment to improve cycling facilities; a dedicated bus service or restricted car parking allocations, or a car sharing scheme. It might also promote flexible-working practices such as remote access and video conferencing.

A travel plan can offer benefits to both the organisation and its employees, and the community that surrounds it. It may help to relieve local parking or congestion problems or improve public transport connections across the area. It may also relieve stress on employees through reducing delays or providing the opportunity to cut their travel commitments by working from home on occasion.

Leading by example, Haringey council staff travel plan was introduced in 2008 Since 2009 the staff travel plan has made significant achievements, most notably reducing single occupancy car trips to work by 5% and increasing cycling to work by 2.5%.

Haringey council has worked with local businesses to implement workplace travel plans. In 2009 eleven work place travel plans had been secured with three voluntary travel plans introduced through the TfL 'New way to work' programme.

School Travel Plans:

School travel plans serve to reduce traffic congestion and parking problems around schools. Their aim is to actively encourage children, parents and staff to walk or cycle to school. Walking and cycling boosts health, well-being and allows children, parents and staff to travel independently and safely. Schools are encouraged to also promote public transport such as buses, trains and tubes.

Schools with approved travel plans are awarded grants from Transport for London, and the Department for Children, Schools and Families. Schools can receive funding for anything from engineering measures, to planning curriculum work and classroom resources.

Haringey council has been highly successful in increasing the sustainable travel for school journeys with all 98 state and independent schools in Haringey having a travel plan in place. Overall Haringey schools with travel plans have achieved a decrease in 5.4% of car-use for school journeys between 2004 and 2010. Work is continuing with the schools to implement the sustainable modes of travel identified in each travel

plan. Initiatives include 'WoW' (Walk on Wednesdays) and the Walking bus. Haringey has supported the annual launch of the WOW campaign each year since the first event in 2007. Walking bus routes are currently in operation at the following schools:

- Ferry Lane – 2 routes (Wednesday mornings in operation with a third planned for this academic year)
- Coleraine Park – 1 route (Wednesday morning) established in May 2008
- St Mary's RC Junior School run an informal route, which the school manage.

Other new walking bus routes are planned for St Martin of Porres, St Mary's CE Infants and Junior School, Noel Park Primary School and Risley Avenue Primary and to expand to a new, 3rd, route to Ferry Lane School.

The council is seeking to:

- **encourage local businesses to develop and maintain travel plans.**
- **allocate annual LIP funding for the employment of a sustainable transport advisor to promote workplace travel plans and other sustainable travel initiatives through the North London Sub-regional Partnership.**
- **consider matching funding or contribute to the cost of implementing a measure identified within a workplace travel plan up to the value of £2000. For example, the council will consider providing a financial contribution towards the installation of secure cycle parking facilities, lockers or shower facilities.**
- **review Haringey's Corporate staff tavel plan and introduce new incentives and intiatives to reduce staff car use.**
- **review all school travel plans and together with other information sources such as accident statistics, will enable the compilation of an annual Barriers to Sustainable Travel Report which will evaluate progress made in reducing barriers and ensure that any new or emerging barriers are addressed as soon as possible.**
- **to monitor each year how young people travel to school, using the iTRACE database and the NI 198.**
- **to continue to provide cycle training to pupils at Haringey's schools.**

Monitoring: NI 198

Measure 5 – 20 mph Zones/DIY Streets

A 20mph zone combines speed reduction measures and speed limit signs to reduce the average speed of vehicles down to 20 mph. They are successful in improving road safety and reducing casualties on our roads. Statistical studies and the number of vehcile related accidents show where these are needed.

The focus of implementation has to date been largely in the east of the borough where there are relatively high number of road collision casualties. The zones have been put in place to reduce these casualty numbers but also to support social inclusion and regeneration initiatives in these areas. To date the council has implemented 10 x 20mph zones in residential areas across the borough.

In July 2007, Haringey was one of the first boroughs to introduce a CO_2 emissions-based Residential Permit charging system and differential charges for second and more permits per household.

The council is also working with Sustrans (Sustainable Transport Charity) to develop the 'DIY Streets'. It incorporates working with the local community to develop traffic calming and home zone type measures whilst at the same time encourages local residents to adopt more sustainable transport behaviour.

The council is seeking to:

- **work in partnership with Sustrans and a group of local streets to pilot the DIY Streets project.**
- **learn from working with Sustrans and further develop the DIY Streets project to other groups of local streets in partnership with local communities. Planned neighbourhoods include Hornsey area, Noel Park estate, North Tottenham and Seven Sisters.**

Measure 6 – Non-idling Zones

Motorists who leave their engines running when parked cause unnecessary air pollution emissions. It is currently an offence to leave a vehicle engine idling for more than two (four) minutes whilst parked under the Road Vehicle (Construction and Use) Regulations. From July 2002, local authorities were given powers to enforce these regulations. Authorised officers can ask drivers to switch their engine off if they are deemed to be letting them idle unnecessarily. Should the motorist refuse to turn the engine off, a fixed penalty notice of £20 can be issued. Only a handful of authorities adopted the powers but abandoned enforcement of them as the cost of implementation far outweighed the benefit and the fine of £20.00 is too low to disincentivise drivers from leaving vehicle engines idling.

The Mayors draft Air Quality Strategy is seeking a change in the legislation from central government and for the level of the fine to be increased to that of parking and speeding fines. Haringey council supports this.

In addition to enforcement of idling vehicles, a number of hotspots have been identified in the borough where idling vehicles are problematic, including outside schools.

The council is seeking to:

- **encourage the Mayor and Dft to amend the idling vehicle legislation and an increase in the fine.**
- **Investigate the potential to introduce non-idling zones at / around idling vehicle hotspots identified.**

Measure 7 – Green Travel Promotion/Smarter Travel

Haringey council considers 'Smarter Travel' initiatives to offer the greatest scope towards the reduction of motor vehicle traffic and encouraging a greater modal shift to sustainable tranport. Smarter Travel initiatives aim to encourage the change of travel behaviour to more sustainable forms of tranport. A key focus is the provision of practical advice and useful information enabling simple and effective changes to the way we travel.

Travel awareness campaigning is a key element of Haringey Council's aim to reduce car dependency and promote travel alternatives. Six out of ten journeys made in Haringey are less than 5 km long – an ideal distance for walking, cycling or taking public transport. The council encourages the switching of just one weekly car journey for walking, cycling, public transport and car sharing.

Haringey holds local events to promote greener travel, including the popular Bike Week, Doctor bike sessions for commuters, bike rides across the borough and walking. There are over 380 hectares of green open space and nine parks coveted with the Green Flag status in Haringey. Walking is an excellent way to adopt a more active lifestyle and the health benefits can make a difference. In Haringey 31% of all trips are on foot. The council has produced a 'Get Up & Walk' leaflet, promoting walks and trails around the paths, parks and open spaces in Haringey and a 12-mile 'Better Haringey' circular trail around the borough. The Council has developed a Public Rights of Way Improvement Plan that sets out how public rights of way will be improved to meet the current and foreseeable future needs of users, including those with mobility problems. It also provides a focus for investment and enhancements to encourage walking in the medium to long term, including lighting, surfaces and signage.

The council is seeking to:

- **continue to promote walking and cycling in the borough.**

- **influence travel behaviour through the smarter travel initiatives.**
- **continue the Doctor Bike sessions for commuters at strategic locations across the borough.**

Measure 8 – Cycle Routes and Cycle Parking

The borough is part of the London Cycle Network and London Cycle Guide No.5 provides a map of Haringey's on and off road cycle routes. The Haringey Cycling Campaign, although independent from the council, works closely with the council to provide cycling facilities in priority locations.

Haringey Council supports cycle training to anyone who lives, works or studies in Haringey and provides free cycle training for children through local schools. The council has contracted out the cycle training provision to Cycle Training UK, via the 'Bikeability' programme.

The council has to date installed over 430 cycle stands across the borough. The programme of cycle parking stands is committed through the LIP, with more stands planned.

Haringey council supports the development and implementation of Greenways Cycle and pedestrian routes. Four links are currently being developed:

- Link 1 Parkland Walk south (between Highgate and Finsbury Park)
- Link 2 Parkland Walk north (between Muswell Hill and Muswell Hill Road)
- Link 3 Finsbury Park to Lea Valley
- Link 4 Highgate to Alexandra Palace Park.

Other Greenway links are planned and prioritised. Further details can be found in the LIP 2011 – 2014.

The council is seeking to:

- **continue working closely with the Haringey Cycling Campaign**
- **secure funding to support, continue and complete Greenways routes**
- **invest in infrastructure for cycling in the Borough, on the basis of the categorisation of the cyclists' network as described in Haringey's Cycle Action Plan.**
- **investigate the feasibility of the inclusion of a cycle hub at Wood Green into the London bwide cycle hire scheme.**
- **commit to the programme of increasing the number of cycle parking stands across the borough.**

Monitoring: Number of off-street and on street cycle parking spaces each year.

Measure 9 – North London Transport Forum

The North London Transport Forum is the sub regional transport partnership for north London and is a sub-group under the North London Strategic Alliance (NLSA). The partnership's ongoing objectives include raising the profile of north London, addressing gaps in transport provision and supporting sustainable growth. North London's sub-regional partnership brings together the boroughs of Barnet, Enfield, Haringey, Waltham Forest and private and voluntary organisations to work on key cross boundary issues related to transport in North London. The partnership plays a valuable role in identifying areas for joint action and securing strategic agreement between the Boroughs and is the instrument through which the sub-regional elements of the Mayor's Transport Strategy are being delivered.

North London already has a population of over 1 million people - greater than the city of Birmingham. This is projected to grow by 160,000, or 15%, by 2016 which will have a direct impact on the transport infrastructure in the sub-region. The sub-region provides the link between central London and three of the Government's growth areas: the London-Stansted-Cambridge Corridor and the Milton Keynes – South Midlands Growth Area to the north and Thames Gateway to the east. Access to and from these growth areas is vital if north London is to successfully support the predicted growth in population. Key challenges for North London are how the existing transport network can address current problems and additional demand placed on it in light of forecast growth.

The council is seeking to:

- **continue working closely with the North London Transport Forum**
- **secure funding to support, improve, continue to develop and maintain sustainable transport links.**

3.3 Non-Transport Measures

The land-use planning system plays a central role in managing the environmental impacts of new development and contributes to the protection and long-term improvement of air quality. This is achieved by ensuring that new developments do not have a negative impact on local air quality, and that public exposure to air pollutants is reduced in areas which breach the Government's air quality standards. Planning Policy Statement (PPS)23 regards air pollution as a material planning consideration when determining planning applications.

New spatial planning documents will form the Local Development Framework and replace the Unitary Development Plan from 2010. Haringey is currently developing policies, and the evidence to support these policies, which will continue to require that air pollution emissions associated with new developments are minimised, during both construction and operation phases. Planning policies that deliver reductions in carbon dioxide emissions and sustainable developments will be a central theme in the LDF. Attention will be given to balancing measures to reduce carbon dioxide emissions from new developments whilst protecting air quality, especially with regards to the use of biomass.

In 2006 the Council produced Supplementary Planning Guidance on air quality. Although continued to be used for development control purposes, this guidance document is now out-of-date and under the new Local Development Framework (LDF), it will be updated and amended to reflect the (LDF) policy on air quality in the form of a Supplementary Planning Document.

PM10 and NOx emissions can arise during the construction and operational phases of developments, the impacts influenced by the size and location of the development.

Measure 10 – Determining the Impact of new developments on local air quality

The majority of new or planned developments in Haringey are residential or mixed-use developments, but few are large enough to have a significant impact on local traffic flows. There have been car-free residential dwellings and the council's UDP has parking standards to limit residential parking. Most major developments are required to implement measures such as travel plans and local improvements to reduce traffic as part of Section 106 agreements. Air quality is recognized as a major planning consideration and all developments in areas adjacent the boroughs main road networks are evaluated for air pollution. Not all planning applications require a detailed air quality assessment to be carried out, but each major application is considered with a regard to air quality.

An air quality impact assessment is required with planning applications which have the potential to cause a negative impact on air quality, particularly in cases where an increase in stationary and/or transport emissions may arise, or where new residents could be exposed to poor air quality. The assessment must have due regard to the LondonCouncils *'Air Quality and Planning Guidance'* 2006 (amended 2008) document. Where an air quality assessment shows that a new development is likely

to have a negative impact on air quality, or expose new residents to poor air quality, mitigation measures will be required.

The council is seeking to:

- **require major developments to have an air quality assessment as part of the planning application.**

Measure 11 – Car free developments

The Council has been limiting private car use through the planning system. The integrating of land use and transport planning policies, delivered through the Council's Unitary Development Plan and forthcoming Local Development Framework, limits private car use through requiring car free and car capped developments. Supporting measures to reduce the need to travel include the requirement for new development to facilitate sustainable forms of transport such as cycling.

The Council is seeking to:

- **require new developments in the borough to reduce transport emissions through the use of car-clubs, be car-free developments, an active travel plan or provision of sustainable forms of transport.**

Monitoring: Number of transport assessments and travel plans submitted with planning applications.

Measure 12 – Control of dust during demolition and construction phases.

During the demolition and construction phase of a new development, controlling dust emissions will reduce the impact of dust emissions on local PM10 concentrations and prevent nuisance complaints by local residents. Sources of dust include demolition activities, grinding and cutting of materials, stockpiles of dusty materials and re-suspended particles that are deposited on roads carried on the wheels construction vehicles. Construction vehicles and machinery give rise to exhaust emissions of nitrogen oxides and fine particulate matter, which can also impact on local air quality. Haringey requires developers to comply with the 'London Best Practice Guidance to Control Dust and Emissions from Construction and Demolition', 2006 through s106 obligations and the National Considerate Constructors Scheme for medium and major developments. Major developments are required to submit Construction Management Plans which include a risk assessment with planning applications. Construction Management Plans outline best practice measures for controlling dust and air pollution emissions.

The Council is seeking to:

- **continue to require all medium and major developments to have a Construction Management Plan submitted at the application stage.**
- **control of demolition and construction dust from developments through an SPD.**

Measure 13 – Biomass Boilers.

The Mayors Energy strategy determines biomass boilers to deliver the largest CO_2 savings, at lowest costs, compared to other renewable energy sources and is often the preferred option for meeting the renewable energy target. Particles released from biomass boilers are predominantly in the PM2.5 size fraction, which are associated with the most dangerous impacts to human health. The impacts of biomass combustion on air quality have been recognised in a report commissioned by the London Councils' 'Air Quality Impacts of Wood Fuelled Biomass' in 2007, and the Draft UK Renewable Energy Strategy, 2008. There is concern regarding the cumulative impact on air quality of biomass in urban areas; where Air Quality Management Areas. This presents further challenges in meeting the PM10 and NO2 air quality objectives in London.

All developments which include biomass are required to carry out an air quality impact assessment. The council will begin a detailed inventory of biomass heating appliances in the borough with technical information. Haringey is seeking s106 agreements from developers wanting to install biomass boilers and will require the use of high quality wood pellets, specific biomass boiler design features, boiler maintenance, particulate matter emission control technology and annual emissions testing as part of this agreement.

Haringey is continuing to work with the GLA and defra to explore further the possibility of legislating against the installation of biomass boilers in AQMA areas and employ other types of renewable energy technology.

The borough of Haringey is designated a Smoke Control Area in accordance with the Clean Air Act 1993. As a result of this legislation, only authorised fuels can be used which do not produce smoke or the heating appliance must be an exempt appliance, such as boilers and small stoves which are fueled using wood in order to operate in the borough. The authorised fuels and exempt appliances are designated as such by the Government. The Clean Air Act is not suitable for controlling fine particle emissions from wood fired heating appliances, as this legislation is designed to deal with smoke. Haringey is lobbying the GLA and defra to amend and update the Clean Air Act legislation.

The Council is seeking to:

- **draw up a s106 for developers installing biomass boilers.**
- **use planning conditions to control the emissions from biomass boilers.**

- **maintain a register of biomass boilers operating in the council area.**
- **continue to work with the Mayor of London and defra to update the Clean Air Act 1993 legislation and biomass GLA biomass policy in AQMAs.**

Measure 14 – Tree Planting.

Haringey is an urban borough with many varieties of trees. On the streets, housing estates or in the borough parks, there are over 35,000 trees. Calls from the public regarding trees in the borough average some 2,500 calls a year.

Street trees are an integral and sometimes historical component of the urban landscape and as such are valued by local residents. Haringey has a street tree population in excess of 11,000 trees and is increasing the total year on year. Street trees are inspected regularly, with pruning works being carried out where necessary.

Haringey council also operates a tree sponsership scheme, with the cost and planting of the tree bourne by the sponserer and maintenance carried out by the council.

The Council operates a Tree Warden scheme to improve and encourage community participation in tree related matters. Tree Wardens care for trees and promote the wide range of benefits they provide. A total of 65 residents are registered as tree wardens and 40 have attended 3 or more training sessions.

In the last 3 years 2,450 new trees were planted in Haringey.

The Council is seeking to:

- **increase public involvement in the management of Council trees.**
- **improve tree management and create a safer, healthier tree population.**
- **continue to scope and plant 250 new trees each year where applicable.**

Monitoring: No. of new trees to be planted each year.
Number of trained Tree wardens actively taking part in events.

Measure 15 – Controlling emissions through Climate Change actions.

Following recent evaluations of the Government's management of the air quality process, defra have recently produced (March 2010) "*Air Pollution: Action in a Changing Climate*". This document identifies that action to reduce climate change effects is also an opportunity to deliver air quality benefits. Actions such as ultra low-carbon vehicles, renewable sources of energy that do not involve combustion and

energy efficiency measures are listed as having air quality/climate change co-benefits. Reference is also made of the need to avoid policies which tackle climate change but damage air quality and vice versa. Electricity generation and road transport are identified as being the most significant sources of both air quality and climate pollutants with other sources such as biomass burning.

Through the climate change programme Haringey council promotes the energy efficiency grants made available to eligible homeowners through the Energy Savings Trust. Under the Decent Home Grant scheme, grants are available to vulnerable homeowner occupiers and private sector tenants for the installation of energy efficiency measures and boiler replacements. Council tenants' homes must have effective heating and insulation, in addition the Haringey standard states that homes must be warm and efficient. Energy efficiency improvements linked to gas heating in the Council's housing and building stock are integral to reducing energy consumption. These are necessary to meet national performance targets relating to both air quality and climate change. The Council is working in partnership with the Energy Saving Trust Advice Centre for London to make 100 energy monitoring devices available to residents to loan from the boroughs libraries. Other initiatives include weekly Energy Doctor Sessions providing free advice on how to save money on home energy bills and reduce CO_2 emissions.

The Council is tackling fuel poverty, promoting energy efficiency and affordable warm homes and CO_2 reductions from domestic properties though actions detailed in the 'Affordable Warmth Strategy 2009 – 2019'. Under this strategy the Council's vision is:

> 'To make sure that no household in Haringey lives in a cold, unheated home and that people know how to use energy in their homes efficiently, therefore saving money and reducing CO2 emissions'

The Muswell Hill Low Carbon Zone is one of the Mayor of London's 10 low carbon zone areas that have been selected as pilot areas for projects to reduce carbon emissions. The aim of the Low Carbon Zones project is to achieve a 20.12% reduction in carbon emissions in each zone by 2012. The work in these zones will also go on to help towards the Mayor of London's target of a 60% cut in carbon emissions by 2025.

Awareness raising events include the annual Going Green Conference and Green Fair. The Going Green conference focuses on carbon reduction and the latest event attracted over 100 people, primarily due to the adoption by the council of a 40% reduction in CO_2 emissions by 2020.

The council is seeking to:

- **provide an SPD for developers on sustainable developments and energy efficiency and renewables to meet the 20% renewable target.**
- **continue promotion of and raising awareness of carbon reduction measures to all who live and work in Haringey.**
- **continue to work with the energy savings trust and promote energy efficiency measures to private and council tenants.**

- **strive to achieve a 40% reduction in carbon emissions from the council's own estate and operations by 2015.**

- **replace ageing boilers with high efficiency condensing boilers and upgrading the central heating system through the provision of programmable temperature and timing controls through the 'Homes for Haringey annual boiler replacement programme**

Measure: NI 185.
No. of boilers replaced each year.

Measure 16 – Industrial process emissions.

The Council has a duty under the Environmental Permitting (England and Wales) Regulations 2007 to control air pollution emissions from small industrial processes referred to as the Local Authority Pollution Prevention and Control Regime (LAPPC). Haringey regulates sixty -five Part B Installations covering five different types of industrial activities, listed below. Regulatory duties include carrying out compliance inspections, determining new Part B applications, issuing environmental permits and undertaking enforcement action where operators fail to meet compliance.

Respraying of Road Vehicles	**1**
Dry Cleaners	**43**
Petrol stations	**16**
Cement batching plants	**1**
Wood Coating	**1**
Mobile crushers	**2**

The council is seeking to:

- **ensure that emissions from small industrial processes are controlled under Best Available Technique and are regulated in accordance with the latest Government guidance.**

Measure 17 – Smoke and emissions from Bonfires.

Smoke from bonfires can have damaging health effects, and people with existing health problems are especially vulnerable, e.g. asthmatics, bronchitis sufferers, people with heart conditions, children and the elderly. Under the Waste Management (England and Wales) Regulations 2006 it is an offence to dispose of domestic waste in a way likely to cause pollution of the environment or harm to human health. Domestic nuisances caused by bonfire are addressed by the Environmental Protection Act 1990, which includes "smoke, fumes or gases emitted from premises so as to be prejudicial to health or a nuisance."

The burning of commercial waste is not permitted. Industrial or commercial bonfires and smoke emissions from chimneys are dealt with under the Clean Air Act 1993. This Act gives local authorities powers to control emissions of dark smoke, grit, dust and fumes from industrial premises and furnaces and to declare "smoke control areas," in which smoke from the chimneys of domestic properties is not allowed. The whole of Haringey is a smoke control area. It is an offence to burn coal, wood or any other unauthorised fuel on open fires or in an unauthorised oven, stove or burner anywhere in the borough.

The council is seeking to:

- **the continued enforcement of smoke from bonfires and chimneys through the Environmental Protection Act 1990 and the Clean Air Act 1993.**

  Measure*: *No. of domestic bonfire complaints received each year.

3.4 Air Quality Awareness Raising Measures

Air pollution harms not only the environment but also people's health and well being; it can cause serious health problems and reduce quality of life. Poor air quality impacts most on vulnerable people such as the elderly, young children and those with heart and lung problems, causing respiratory disorders and aggravating asthma.

Raising awareness of air pollution can help to protect those most vulnerable to the associated health impacts and adapt their behaviour by making lifestyle changes to reduce emissions. The Mayor of London has made a commitment, through his latest draft Air Quality Strategy to '*raise awareness of air quality and health issues through publicity campaigns'*.

Measure 18 – Air Pollution and Health Measures

AirTEXT

Recently Haringey council signed to the airTEXT consortium which is run and managed by the London borough of Croydon and comprises of all 33 London boroughs. AirTEXT is a messaging service via SMS, telephone or email providing air quality information and health advice when air pollution levels are forecast to be moderate, high or very high for all who live or work in London. People with conditions such as asthma, bronchitis, emphysema and heart disease for which symptoms can be worsened by air pollution are encouraged to subscribe. The website for further information is:

www.airtext.info

Walkit

Individual exposure to poor air quality can be managed by choosing walking routes away from the most polluted areas. In Haringey these tend to be the busiest roads. Choosing to take a route which takes you away from busy roads will reduce exposure to the harmful pollutants and consequently have a beneficial effect on health.

In April 2010 Haringey, as part of the North London Air Quality Cluster Group, also signed to Walkit. This is an urban walking route planner between any two points, and includes information on journey time, calorie burn, step count and carbon saving. Routes chosen can be either direct, less busy or low polluting routes. The weblink is:

www.walkit.com

The council is seeking to:

- **Promote the walkit website and Airtext messaging service to residents and those who work or travel through the borough.**
- **work with the Director of Public Health to assess the health impact of poor air quality in Haringey.**

Measure*: *No. of Haringey residents subscribing to airtext each year.

Measure 19 – Air Quality Data Information

Air Pollution Monitoring

Haringey Council has been monitoring air pollution since 1994. To date there are two automatic monitoring sites in operation within the borough and 10 passive diffusion tube locations. Appendix 1 shows a map of the locations of all monitoring sites, automatic and non-automatic, in the borough as of July 2010.

Monitoring data is imperative to the requirement under the Environment Act 1995 for local authorities to periodically review and assess the air quality in their area. Monitoring data provides:

- A measure of actual concentrations and exceedences of objectives
- Information on trends in air pollution
- Provides the basis for verifying the results of air quality models used to predict future air pollution.

For this reason, data from both the automatic sites are included in the London Air Quality Network (LAQN), which is managed by the Environmental Research Group (ERG), Kings College London. ERG manages the data collected, validates and ratifies it in order for it to be 'fit for purpose'. The data is available on their website at:

www.Londonair.org.uk

Over the next couple of years Haringey will review its air quality monitoring network which is dependant on existing internal or external funding streams. Principally the council intends to review the current NO_2 diffusion tube network and expand the monitoring locations to cover the hotspot areas identified by the recent modeling work. This will help to improve our understanding of air quality across the Borough.

School Awareness Project

Haringey plans to work with schools in the borough and promote air quality issues. Much environmental work has been carried out in schools in Haringey and it is envisaged that this work can be further enhanced through the linking of air quality with other environmental issues such as - climate change, sustainable travel and energy efficiency. There is commitment in the School Travel Plan towards educating school children and the wider air quality issues.

Two schools have already been identified, Tiverton School and St Ann's school to begin this promotional work, although in order to progress and implement this initiative, it is dependant on funding through the air quality grant scheme.

Dissemination of air quality information to the public.

Air quality information on Haringey's website is poor with very little air quality information. The intention is that the council website will be reviewed and updated with Haringey's air quality information, making it easy to find and readily available to the public.

The council is seeking to:

- **continue to monitor air pollution levels across the borough and review the air quality monitoring locations.**

- **raise awareness of air quality issues through working with local schools and linking measures that reduce air pollution with other environmental issues.**

- **update the councils air quality information on the council website.**

- **Apply for defra grant funding for source apportionment work of the pollutants of concern, NO_2 and PM10.**

Table 1: Summary of Measures and Monitoring

Measure	Timeframe	Monitoring	Lead Department
Measure 1 - To Lead by example and reduce Emissions from the Council Fleet	2010/2011	NI 194 ISO 14001 accreditation Staff car payments	Human Resources/Transport Section/Fleet Manager/Environmental Health
Measure 2 – Electric Vehicle Charging Points	On-going	No. of Electric vehicle charging points/yr No. of people sign to use to electric vehicle charging points / yr.	Transport Policy
Measure 3 – Car Clubs	On-going	No. of car-clubs	Transport Policy / Development Control
Measure 4 – Travel Plans	On-going	NI 198 No of local business travel plans	Travel Plan Team
Measure 5 – 20 mph Zones/DIY Streets	On-going		Transport Policy

Measure	Timeframe	Monitoring	Lead Department
Measure 6 – Non-Idling Zones	2 years	No. of no-idling zones implemented	Transport Policy / Environmental Health
Measure 7 – Green Travel Promotion	On-going	Modal shift	TfL
Measure 8 – Cycle Routes and Cycle Parking	On-going	Number of off-street and on street cycle parking spaces each year.	Transport Policy
Measure 9- North London Transport Forum	On-going	Funding/improvements	Transport Policy
Measure 10 - Determining the Impact of developments on local air quality	On-going	No. of Traffic Assessments submitted with planning application / yr	Development Control / Environmental Health
Measure 11 – Car Free Developments	On-going	No. of approved car free developments / yr	Transport Policy / Environmental Health
Measure 12 – Control of dust during demolition and construction phases.	On-going	No of sites investigated	Development Control / Environmental Health
Measure 13 – Biomass Boilers	On-going	No. of biomass boiler	Development Control /

Measure	Timeframe	Monitoring	Lead Department
		installed with conditions/ yr	Environmental Health
Measure 14– Tree Planting	On-going	No. of trees planted / yr.	Arboriculture officer
Measure 15 – Controlling emissions through climate change	Until 2015	Reduction in carbon emissions from the council's own estate and operations NI 185 Homes for Haringey annual boiler replacement programme	Sustainability Team
Measure 16 – Industrial process emissions.	On-going statutory duty	No of breaches identified/yr	Environmental Health
Measure 17 – Smoke and Emissons from Bonfires	On-going statutory duty	No identified/yr	Environmental Health
Measure 18 – Air pollution and Health Measures • Airtext	On-going	No. of residents subscribe to	Environmental Health

Measure	Timeframe	Monitoring	Lead Department
• Walkit • Health impact assessment		Airtext/yr Subject to findings of impact assessment	Environmental Health with Director of Public Health
Measure 19 - Air Pollution Information • Air quality Monitoring • Dissemination of Information • School Awareness Project • Undertake apportionment	On-going 2011/12	NO2 and PM10 (2.5) Defra funding	Environmental Health

Appendices

I. Haringey's Air Pollution Monitoring Sites

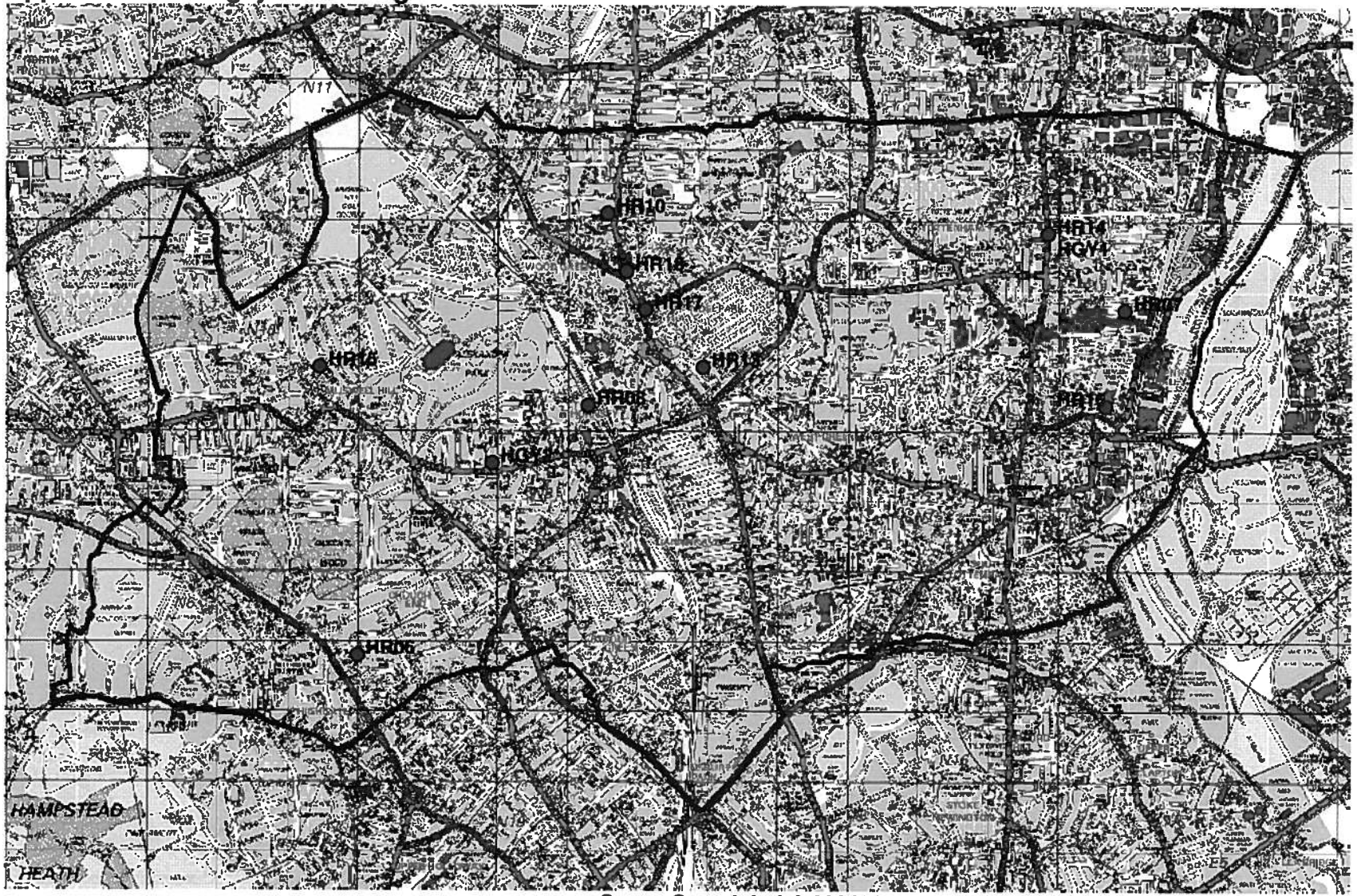
II. Transport Corridor Priority Areas

III. Transport Neighbourhood Priority Areas

IV. TfL Roads in Haringey.

V. Table of percentage reductions.

Appendix I - Haringey Monitoring Sites



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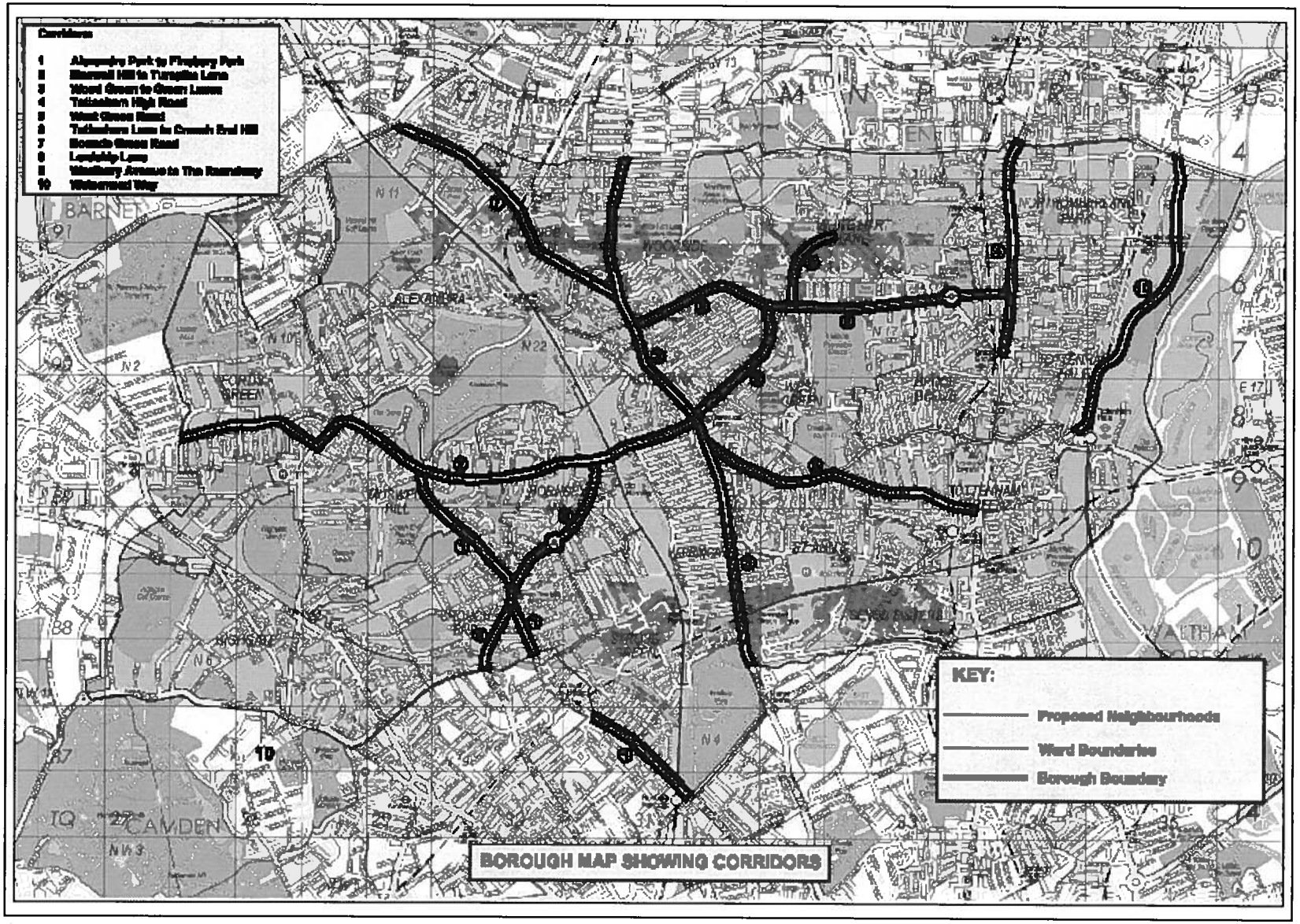
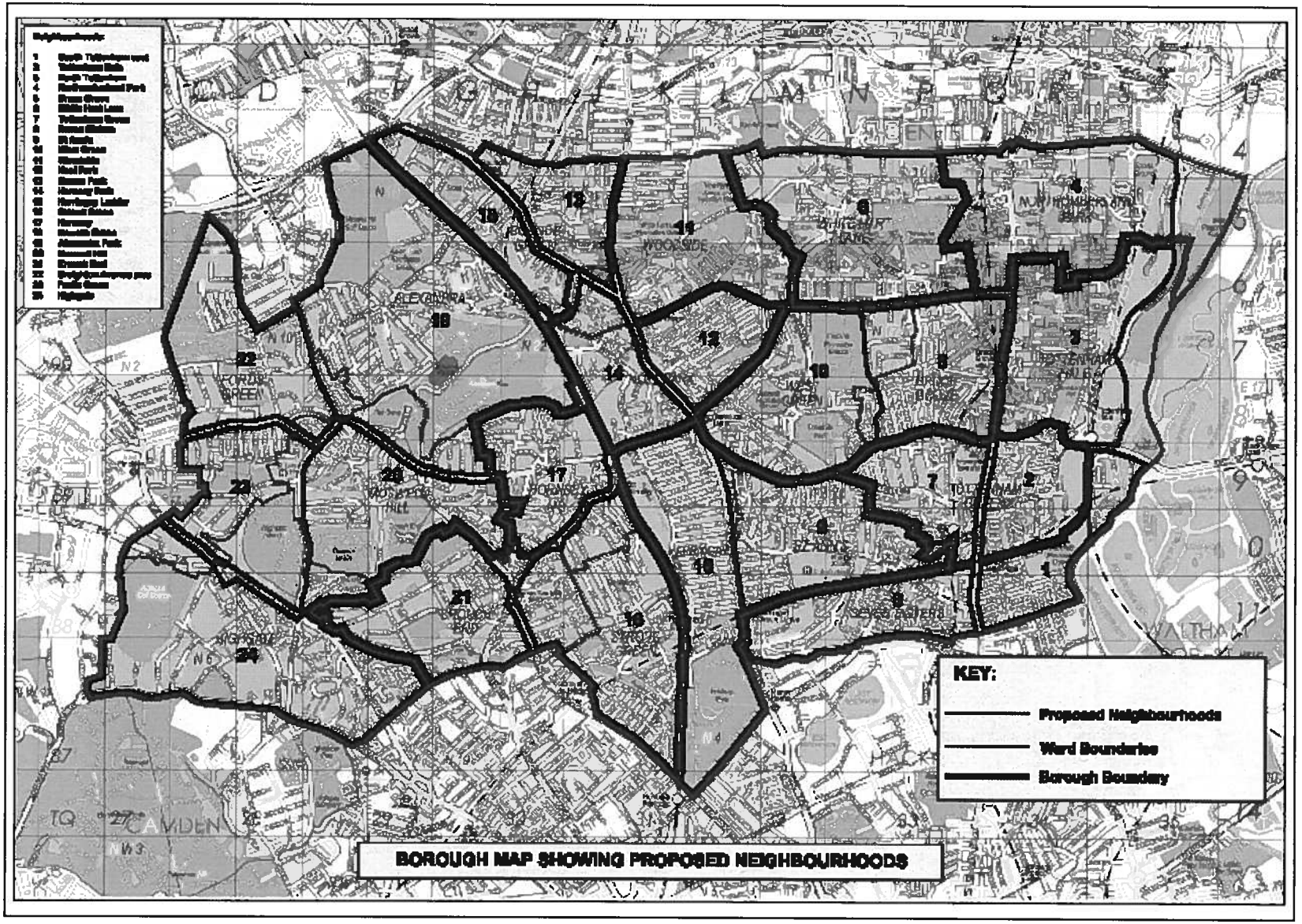
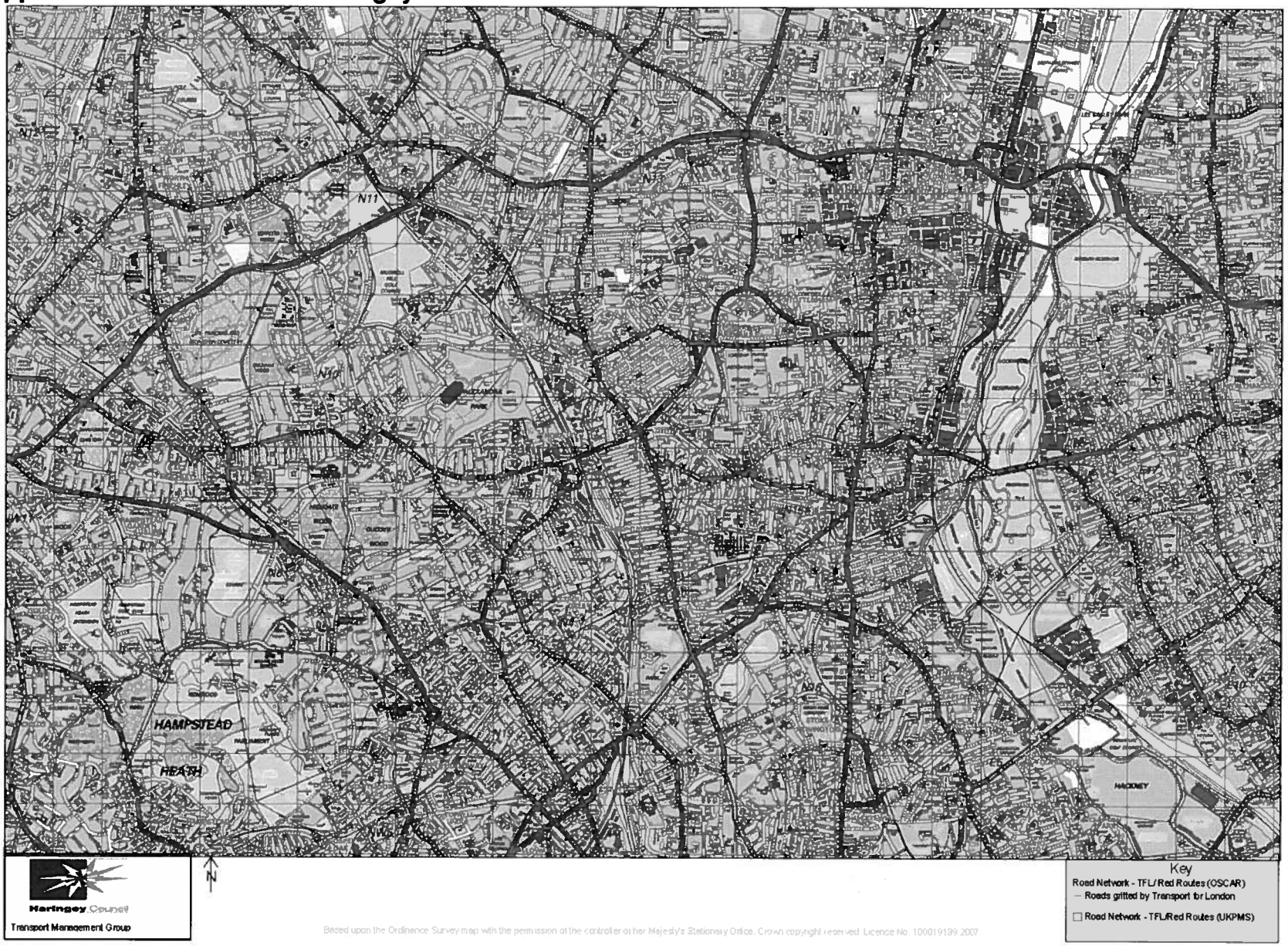
Appendix II - Transport Corridor Priority Areas



Appendix III - Neighbourhood Priority Areas



Appendix IV - TfL Roads in Haringey.



Appendix V.

Table to show percentage reduction in concentrations required at monitoring sites where the NO_2 objective is measured and exceeds the annual objective of 40µg/m^3.

Site	2007		2008		2009	
	Measured	**Percentage Reduction**	**Measured**	**Percentage Reduction**	**Measured**	**Percentage Reduction**
HR06 - Archway	67.2 µg/m^3	**40.48%**	71.7 µg/m^3	**44.2 %**	70.3 µg/m^3	**43.1 %**
HR13 – Turnpike Lane/High Road	74.9 µg/m^3	**46.60%**	73.83 µg/m^3	**45.8 %**	73.1 µg/m^3	**45.3 %**
HR14	Achieved	**Achieved**	45.65 µg/m^3	**12.4 %**	46.7 µg/m^3	**14.5 %**
HR15 – Muswell Hill Broadway	49.7 µg/m^3	**19.5%**	44.10 µg/m^3	**9.3 %**	52.9 µg/m^3	**24.4 %**
HR16 – Tottenham Hale	48.7 µg/m^3	**17.8%**	60.27 µg/m^3	**33.6 %**	67.2 µg/m^3	**40.5 %**
HR17 – High Road, N22	68.8 µg/m^3	**42%**	73.09 µg/m^3	**45.3 %**	83.4 µg/m^3	**52 %**
HR18 – High Road / Lordship Lane	59.2 µg/m^3	**32.4%**	69.01 µg/m^3	**42 %**	64.3 µg/m^3	**37.8 %**

References:

- **Haringey's Local Implementation Plan, London Borough of Haringey 2007**
- **Haringey's Greenest Borough Strategy, London Borough of Haringey 2008**
- **Mayor's Transport Strategy (draft), Mayor of London 2010 – Clearing The Air.**
- **The London Plan (consolidated with Alterations since 2004), Mayor of London 2008**
- **Mayor's Air Quality Strategy (draft), Mayor of London 2010**
- **Core Strategy, Haringey 2010.**
- **Bureau Veritas - North London Air Quality Cluster Group Modelling – Haringey Council, August 2009.**
- **Defra – LAQM Policy Guidance (PG09)**