

Environment Act 1995 part IV

Air Quality Action Plan

London Borough of Hackney



Summary

London has some of the worst air quality in the UK and air pollution is estimated to cause 1,600 premature deaths every year in London. Figures in the report "On the move"¹ showed that 226 people died in road accidents in London in 1998 compared to an estimated 380 deaths from transport emissions. The report also estimates that Londoners lose around 34,000 years of life every year from transport-related pollution.

Local Authorities in the UK are required to carry out reviews and assessments of air quality to identify any areas where air quality is worse than objectives set by the government. The objective levels have been set to protect health. Reviews and assessments carried out by the council have established that the objectives for Nitrogen Dioxide and fine particles (PM₁₀) will not be achieved and in March 2001 air quality management areas (AQMA) were declared in the south of the borough and areas bordering the major road network, a further recommendation is also being taken forward to declare the whole borough an AQMA for both pollutants.

This action plan outlines the steps that the council is already taking to improve air quality in Hackney. The action plan focuses on reducing pollution from road traffic which is the main source of emissions in Hackney.

The action plan incorporates measures in the Mayor of London's Air Quality Strategy that the Mayor expects local authorities in London to take.

The measures outlined in this air quality action plan together with those in the Mayor's air quality strategy will improve air quality, however it is anticipated that there will remain areas where air quality is worse than the objectives for nitrogen dioxide and possibly for PM₁₀.

¹ On the move London Health Commission Published 12th October 2000

A draft of the air quality action plan was published in 2004 and was widely distributed for consultation. The final action plan has been produced taking into account comments received during the consultation.

The actions that Hackney council is taking to improve air quality are summarised in the table overleaf,

Summary of air quality actions

Action 1	The council will work with partners such as Transport for London (TfL) and other London Boroughs to promote a London LEZ for the achievement of air quality benefits in the long term.
Action 2	The council will replace older vehicles in the fleet starting with the refuse vehicles, all vehicles to be Euro IV or less than 5 years old.
Action 3	The council will ensure that all leased vehicles are less than 5 years old.
Action 4	The council will support the use of cleaner fleets by businesses in Hackney by discounted business permits to fleets powered by alternative fuels and electric vehicles.
Action 5	The council is committed to assisting businesses in the borough to develop travel plans.
Action 6	The council continues to support the London night time and weekend lorry controls on all heavy vehicles over 16.5 Tonnes on local roads.
Action 7	The council will investigate the full potential of both the Regents Canal and the River Lea navigation waterways in reducing the level of freight transported by the road network.
Action 8	The council will seek the provision of alternative fuels and electric vehicle charging points at new filling stations through the planning process and encourage the provision of fuel alternatives at existing filling stations through partnership working with suppliers, and work to develop electric vehicle charging points at other locations.
Action 9	The Council is committed to enforcing the powers conferred by the Road Traffic (Vehicle Emissions) (Fixed Penalty) Regulations 2002 in relation to roadside vehicle emission testing and powers to issue fixed penalty notices in respect of parked vehicles with idling engines.

Action 10	The council through its Transport Strategy will continue to support the London bus initiative.
Action 11	The council through its Transport Strategy will continue to support the London wide LBPN policies.
Action 12	The council will continue to work with transport for London (TfL) to undertake a review of traffic signage within the borough, to ensure that signs are clear and visible to encourage walking as an alternative to cars.
Action 13	The Council is committed to its UDP Policy TR1, TR2 and TR3 related to the continued provision and support for cycle facilities and an integrated cycle network for London.
Action 14	The Council is committed to continue support for community based sustainable transport initiatives that contribute to modal shift.
Action 15	The Hackney Council staff travel plan will support the council's environmental objectives and reduce reliance on the private car for journeys to work and any business related travel undertaken on behalf of the council.
Action 16	The Council is committed to continue promoting sustainable modes of transport through travel awareness campaigns.
Action 17	The council will promote the work of the Energy Savings Trust's programmes that promote the use of cleaner fuels for transport and better insulation and heating efficiency for buildings and homes and champion small-scale renewable energy such as solar and wind power.
Action 18	The Council will continue to lobby and work with partners on matters affecting the way ELLP integrates with the Underground and National Rail networks.
Action 19	The Council seeks to achieve zero growth of traffic on borough roads by 2011 and is committed to

	contributing towards London wide traffic reduction targets.
Action 20	The Council is committed to implementing controlled parking zones to improve the safe movement of pedestrians, traffic, buses and cyclists and improve parking conditions for residents and businesses where consultation with local residents and businesses shows a need for a CPZ.
Action 21	Following the completion and assessment of the Windus Home Zone the possibility of further home zones will be investigated.
Action 22	The Council will give consideration to demand management measures such as congestion charging should opportunities arise.
Action 23	The Council will continue to require the provision of new pedestrian and cycle links as part of new developments and encourage these links to integrate into existing routes.
Action 24	The Council will continue to support developments that place the emphasis on the use of sustainable modes of transport, such as public transport cycling and walking.
Action 25	The Council will require detailed air quality assessments of proposed developments where a proposed development could have a significant impact on air quality.
Action 26	The Council will continue to enforce the provisions of the Pollution Prevention and Control Regulations to ensure that permitted industrial processes are operated in accordance with DEFRA guidance.
Action 27	The Council will continue to enforce Clean Air Act controls to deal with the use of unauthorised fuels.
Action 28	The Council will continue to discourage the use of bonfires for waste disposal and distribute information on the on the effects of bonfires on air quality through leaflets and through the Council's website.
Action 29	The Council will promote composting as an alternative means of waste disposal reducing waste to

	landfill/incineration and any perceived need for domestic bonfires.
Action 30	The Council will continue to provide advice on effective heating and insulation through its appointed scheme contractors.
Action 31	The council will develop a code of construction practice for contractors undertaking work within the borough in order to avoid the occurrence of elevated levels dust levels from construction and demolition sites.

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Chapter 1 Introduction

1.1 Air pollution and health

London has the worst air quality in the UK and air pollution is estimated to cause 1,600 premature deaths every year in London (source: GLA Air Quality Action Plan).

More people are harmed every year by transport-related air pollution than by road accidents. Figures in the report *On the move*² showed that 226 people died in road accidents in London in 1998 compared to an estimated 380 deaths from transport emissions. The report also estimates that Londoners lose around 34,000 years of life every year from transport-related pollution. The combined effect of road accidents and transport-related air pollution are estimated to be responsible for at least one per cent of the city's total deaths every year. The main reasons for tackling poor air quality are the link between air quality and the quality of life and the need to minimise the risk of poor air quality to human health. We now have a better understanding of the short-term and the long-term health effects of air pollution largely due to the work undertaken by the Committee on the Medical Effects of Air Pollutants (COMEAP4).

Short-term increases in particles, sulphur dioxide and nitrogen dioxide are associated with increased deaths brought forward and increased respiratory or cardiovascular hospital admissions in the elderly and those who are already ill. These pollutants can also worsen symptoms in those with asthma. COMEAP has also recently reported that long-term exposure to particles is associated with reduced life-expectancy mainly as a result of earlier deaths from heart disease. Carbon monoxide increases symptoms in those with heart disease, and lead affects brain development in children.

Benzene and 1,3-butadiene both cause cancer.

4 COMEAP research can be found via the Department of Health web site at www.doh.gov.uk/comeap/index.

² *On the move* London Health Commission Published 12th October 2000

1 THE NEED FOR AN AIR QUALITY ACTION PLAN

1.1 The UK Air Quality Strategy

In 1997, Government produced The National Air Quality Strategy (NAQS) in line with the requirements of the Government White Paper '*This Common Inheritance*'. The NAQS set down the current process known as Local Air Quality Management (LAQM) within the UK. Through the preceding Environment Act, 1995, this placed a statutory duty on local authorities throughout the UK to periodically review and assess air quality within their areas.

The NAQS set to protect human health against adverse effects of seven priority pollutants. It proposed to set standards and objectives for these pollutants based on the recommendations of the Expert Panel on Air Quality Standards (EPAQS) and the workings of the Committee on the Medical Effects of Air Pollution (COMEAP). The pollutants identified as being of concern are:

- . •Benzene
- . •1,3 Butadiene
- . •Carbon Monoxide (CO)
- . •Lead (Pb)
- . •Nitrogen Dioxide (NO₂)
- . •Fine Particulates (PM₁₀)
- . •Sulphur Dioxide (SO₂)

Air Quality Standards are set on medical and scientific evidence concerning the health effects of each of the above pollutants. Each standard includes an objective level for the pollutant and a target date by which the objective level must be achieved. Achievement of the Air Quality Standard should ensure that the pollutant does not pose any adverse health effects for future generations and ensures an appropriate level of safeguarding against increased emissions. Where problems in air quality are known to exist, and measures are outside the authority's powers, the authority must show that it is at least working towards the achievement of the objectives.

In 2000, Government reviewed the NAQS and set down a revised Air Quality Strategy for England, Scotland, Wales and Northern Ireland (AQS). This set down a revised framework for air quality standards and objectives for the seven pollutants, which were subsequently set in Regulation in 2000 through the Air Quality Regulations 2000. These were subsequently amended in 2002 through the Air Quality (Amendment) Regulations 2002.

More recently, (September 2003) The Air Quality Limit Values Regulations 2003 set new objectives for Nitrogen Dioxide for achievement by 2010 whilst also setting down new objectives for benzene and carbon monoxide.

In addition, for London, The Mayor's Air Quality Strategy provides the overarching policy against which London Boroughs should report on air quality. The Mayor's Air Quality Strategy recognises the need for London Boroughs to work together on air quality issues in order to meet the objectives. It sets out a number of proposals that should be included in the individual London Borough Action Plans. It highlights a number of specific measures to be undertaken by The Mayor in pursuit of the air quality objectives and provides necessary links with other strategies including Transport and Energy.

In Europe the Air Quality Framework and Daughter Directives prescribe Limit Values for certain pollutants which all member states must meet. LAQM has a key role to play in helping the UK meet its objectives under these Directives.

The key elements of the Environment Act 1995 concerning the NAQS are listed in Table

1.1.

Table 1.1: Major elements of the Environment Act 1995

Part IV Air Quality	Commentary
Section 80	Places a statutory duty on the Secretary of State (SoS) to produce a national air quality strategy.
Section 81	Obliges the Environment Agency to take account of the strategy.
Section 82	Requires local authorities to review air quality and to assess whether the air quality standards and objectives within their areas are likely to be exceeded.
Section 83	Requires a local authority, for any area where air quality standards are not being met, to issue an order designating it an air quality management area (AQMA).
Section 84	Imposes duties on a local authority with respect to AQMAs. The local authority must carry out further assessments and draw up an action plan specifying the measures to be implemented within the AQMA, and the time-scale for doing so, to move towards attainment of the air quality standards and objectives.
Section 85	Gives reserve powers to cause assessments to be made in any area and to give instructions to a local authority to take specified actions. Authorities have a duty to comply with these instructions.

Section 86	Provides for the role of County Councils to make recommendations to a district on the carrying out of an air quality assessment and the preparation of an action plan.
Section 87	Provides the SoS with wide ranging powers to make regulations concerning air quality. These include standards and objectives, the conferring of powers and duties, the prohibition and restriction of certain activities or vehicles, the obtaining of information, the levying of fines and penalties, the hearing of appeals and other criteria. The regulations must be approved by affirmative resolution of both Houses of Parliament.
Section 88	Provides powers to make guidance which local authorities must have regard to.

1.3 Local Air Quality Management

The current AQS provides the basis for implementation of Local Air Quality Management throughout the UK. It requires local authorities to carry out a review and assessment of air quality within its area to identify the current and future locations where air quality objectives are “not likely” to be achieved by their target dates. Previous technical guidance (1998 and 2000 versions) has provided a means by which local authorities can fulfil this duty. In January 2003, new technical guidance and policy guidance were issued by DEFRA for local authorities continuing with the process of review and assessment. The new guidance sets the framework for the requirements of review and assessment for future years, taking account of experiences from the previous round of review and assessment.

Within the First Round of Review and Assessment it was recommended that local authorities dispose of this duty through undertaking a three-stage assessment, increasing in detail at each stage. The first stage of this process (Stage 1) includes undertaking a desktop review in order to identify all sources of pollution within the area. Using [then] Technical Guidance issued by Government significance is placed on sources of pollution both within the authority’s area and those immediately outside the authority’s area, that are likely to impact on air quality. Having identified those sources and areas that require further attention, simple screening assessments (Stage 2) or detailed monitoring and modelling programmes (Stage 3) are undertaken. The more recent (2003/2004) Second Round of Review and Assessment provides a basis for local authorities to again update their previous air quality assessments. In doing so, local authorities should take into consideration changes in national air quality standards and objectives and revised Technical Guidance (LAQM.TG(03)), new emission sources, and any significant proposed planning developments due to take place before the relevant objective date.

Section 83(1) of the Environment Act 1995 requires local authorities to designate as Air Quality Management Areas (AQMAs) those areas where it is likely that the objective levels for any of the designated pollutants would not be achieved.

Section 84 of the Environment Act 1990 requires local authorities to make a further investigation of the air quality within any AQMAs that they may have declared to confirm the findings of the Stage 3 report. It additionally requires local authorities that have declared an AQMA to prepare an Air Quality Action Plan to reduce the levels of problem pollutants in the AQMAs.

1.4 The Mayor's Air Quality and Transport strategies

1.4.1 The Mayor's Air Quality Strategy

The Mayor's Air Quality Strategy provides the over-arching policy against which London Boroughs should report on air quality. The Mayor's Air Quality Strategy recognises the need for London Boroughs to work together on air quality issues in order to meet the objectives. It sets out a number of proposals that should be included in the individual London Borough Action Plans. It highlights a number of specific measures to be undertaken by The Mayor in pursuit of the air quality objectives and provides necessary links with other strategies including Transport and Energy.

1.4.2 Mayors Transport Strategy (MTS)

The (London) Mayor's ten key transport priorities, as described in the (London) Mayor's Transport Strategy (MTS) all support air quality improvement:

- Reducing traffic congestion;
- Overcoming the backlog of investment on the Underground so as to safely increase capacity, reduce overcrowding, and increase both reliability and frequency of services;
- Making radical improvements to bus services across London, including increasing the bus system's capacity, improving reliability and increasing frequency of services;
- Better integration of the national rail system with London's other transport systems to facilitate commuting, reduce overcrowding, increase safety and move towards a London-wide, high-frequency "turn up and go" Metro Service;
- Increasing the overall capacity of London's transport system by promoting major new cross London rail links, including improving access to

international transport facilities and new Thames River crossing in east London;

- Improving journey time reliability for car users, which will particularly benefit outer London where car use dominates, whilst reducing car dependency by increasing travel choice;
- Supporting local transport initiatives, including improved access to town centres and regeneration areas, walking and cycling schemes, safe routes to school, road safety improvement, better maintenance of roads and bridges and improved co-ordination of streetworks;
- Making the distribution of goods and services in London more reliable and efficient, whilst minimising negative environmental impacts;
- Improving the accessibility of London's transport system so that everyone, regardless of disability, can enjoy the benefits of living in, working in and visiting the Capital, thus improving social inclusion;
- Bringing forward new initiatives to provide integrated, simple and affordable public transport, improving key interchanges; enhance safety and security across all means of travel; ensure that taxis and private hire vehicles are improved and fully incorporated into London's transport system and provide better information and waiting environments.

1.5 Policy Framework in Hackney

Hackney's Air Quality Action Plan (AQAP) builds on several existing local strategies and policies, which are briefly reviewed below.

1.5.1 Hackney Community Strategy (2004-2014)

Hackney's Community Strategy sets out how the Council aims to improve Hackney over the next five to ten years and highlights the potential economic and social polarisation of Hackney's wide range of culturally diverse communities. For example, many of Hackney's residents do not have the opportunities that they need, or deserve - recent censuses show that a far wealthier and highly educated proportion of the population is moving into the Borough as a result of London's expanding economy. However, this brings with it a problem with regards to attracting large employers. The loss of manufacturing jobs has taken many employment opportunities away from the Borough. As such, unemployment is high and many Hackney residents work outside the Borough. It is a priority for the Council to encourage large employers into the area. As such, there is no major employer (beyond that of the Council itself) which would benefit from discussions regarding sustainable travel plans.

1.5.2 Hackney Transport Strategy

The Hackney Transport Strategy, which currently is in draft format, gives us a renewed focus on transport by providing a strategic framework to take forward transport initiatives over the next 5 years, which will endure for future users benefit. The Strategy has identified our current transport issues and how these can be addressed through new transport schemes and initiatives.

The key element of the transport vision for Hackney is a strong commitment to facilitating and promoting of modal shift through the highest level of public transport, walking and cycle use in London. This will assist in delivering air quality targets.

Public transport, walking and cycling play a crucial role in Hackney:

- Hackney has the tenth highest proportion of people using public transport in England and Wales;
- Half of the journeys to work by Hackney made by foot or bicycle;
- Hackney had the greatest increase in cycling as a mode of transport to work between 1999 and 2001; and
- 56% of Hackney households do not have a car, significantly lower than the Greater London average of 37%.

Our transport vision for Hackney in 5 years time is:

- Strong commitment to facilitating and promoting of modal shift through the highest level of public transport, walking and cycle use in London;
- Accessible by foot, attractive and thriving town centres, where there is a high quality of urban design and a higher level of pedestrian priority;
- Lower levels of congestion, enabling good business access and a better environment;
- Target of nil-increase in private car ownership;
- Improved transport safety and security for all of its residents and businesses;
- Improved the accessibility for its residents to jobs and facilities both within and outside the borough;
- Better rail services and a fully integrated East London Line extension (ELLX), with significantly improved interchanges;
- Much better conditions for buses on all the main routes, with higher levels of reliability, faster journey times; and

- An integrated cycle network offering a safe alternative to and from all key destinations.

1.5.3 The Hackney Local Implementation Plan (LIP)

The Hackney Local Implementation Plan (LIP) demonstrates how the transport strategic targets by 2011 can be achieved through transport projects and programmes.

In their respective LIP documents, each London Borough has to demonstrate how they plan to meet the following London wide targets:

1. Road Safety: To achieve a reduction of 40% in numbers of people Killed and Seriously Injured by 2010 compared with 1994-1998 overall and separately for pedestrians, cyclists and motorcyclists; a reduction of 50% in the number of children killed or seriously injured; and a reduction of 10% in the slight casualty rate per 100 million vehicle kilometres. This clearly needs the support of the TfL and the Metropolitan Police.
2. School Road Safety: To review road safety around all primary and secondary schools by 2008 (New target).
3. Bus Excess Wait Time: To reduce bus excess wait time (EWT) to 1.3 minutes per passenger journey by 2009/10 (New target)
4. Borough Bus Target: An additional target will be set for our boroughs' contribution to improving bus journey times through the management of the road space. This is being discussed with the TfL and other boroughs with the aim of setting the Target in summer 2005.
5. Traffic volumes: To achieve, between 2001 and 2011, a zero growth of weekday traffic with the rest of inner London boroughs. (Existing target set in Proposal 4G.12 of the Transport Strategy).
6. General Traffic Journey Time Reliability: To ensure disruption and variability of journey times for general traffic on 'A' roads and busy bus routes is reduced, or not increased, year on year. .
7. Modal Shift: To maintain or increase the proportion of personal travel made by means other than car.
8. School Travel Plans: To work with schools or groups of schools to review travel to all schools by March 2008, with significant progress having been made by March 2006.

9. Compliance: To achieve improvements in compliance with parking and loading regulations from a baseline to be agreed between boroughs and TfL by December 2004.

10. Access: To achieve year on year improvements in the proportion of trips made by equality and inclusion target groups underrepresented in the public transport travel market, particularly disabled people and women travelling at night.

11. Taxicard: To ensure that Hackney's Taxicard scheme conforms to an agreed all-London standard in terms of service quality, eligibility assessment and entitlement by 2006.

12. Walking: To achieve an increase of at least 10% in journeys made on foot per person in London between 2001 and 2015.

13. Cycling: To achieve an increase of at least 80% in cycling in London between 2001 and 2011.

14. Roads: To bring all 'A' roads and busy bus routes up to serviceable standard – that is, a UK PMS score of 70 or below – by 2010.

1.5.4 The Hackney Unitary Development Plan (UDP)

The Hackney Unitary Development Plan (UDP) from 1995 contains Air Quality related policies, as shown below. These are likely to be updated in the Local Development Framework (LDF), which is currently in preparation.

Pollution Control

EQ40 Noise Control

EQ41 Development close to existing sources of noise

EQ42 Air Pollution

EQ43 Development of Contaminated Land

EQ44 Water Pollution

Waste Management and Recycling

EQ45 Waste Disposal

EQ46 Recycling Facilities

Renewable Energy

EQ47 Renewable Energy

EQ40 NOISE CONTROL

The council will require proposals likely to introduce a potential noise nuisance into sensitive areas or to increase ambient noise levels over large areas to incorporate

appropriate measures to ensure that background noise levels pertaining prior to the development are not increased to an unacceptable degree.

The council will not permit development proposals which could lead to an unacceptable increase in noise levels, affecting existing or future occupiers of adjacent premises.

EQ41 DEVELOPMENT CLOSE TO EXISTING SOURCES OF NOISE

Where development sensitive to noise is to be located close to a permanent source of noise generation the council will require that measures are taken to minimise the effects on future occupants.

EQ42 AIR POLLUTION

The council will not permit development proposals which could give rise to unacceptable levels of atmospheric pollution, including dust, fumes, smoke, gases and odours.

EQ43 DEVELOPMENT OF CONTAMINATED LAND

The council will require proposals for the development of contaminated land to include appropriate measures to protect future users or occupiers of the land, the public, new structures and services, wildlife, vegetation, ground water and surface water courses.

EQ44 WATER POLLUTION

The council will consult with the national rivers authority, Thames Water Utilities and British Waterways and will not permit development which will lead to deterioration in the quality of underground or surface water.

EQ45 WASTE DISPOSAL

The council may permit proposals for waste disposal operations providing they do not have an adverse effect on public amenity or safety, nature conservation or the local environment, subject to other policies in the plan.

EQ46 RECYCLING FACILITIES

The council will encourage and support proposals for bottle banks, paper collection points, recycling centres and civic amenity sites subject to:

- (a) Satisfactory location relative to other recycling facilities;
- (b) Satisfactory accessibility to local residents, including by public transport, cycle and on foot;
- (c) Satisfactory standards of detailed design, layout and access;
- (d) There being no unacceptable effects upon neighbouring uses and the environment of the surrounding area in terms of appearance, noise and disturbance;
- (e) Adequate access and parking for car borne users without causing unacceptable danger and delay to other road users. The council will encourage

provision of recycling facilities as part of new development proposals, of a type and scale commensurate with the development as a whole.

EQ47 RENEWABLE ENERGY

The council will normally permit proposals to harness renewable energy providing they would not cause unacceptable environmental or visual intrusion.

1.5.5 Hackney Parking Enforcement Plan

Hackney Parking Enforcement Plan is being produced in three different parts. The first part, PEP Policy Plan (2005) is the statement of the Council's overarching parking policies. The PEP aims to provide a framework for parking that supports economic regeneration consistent with constraining overall traffic volumes within levels which do not jeopardise environmental objectives.

The following PEP proposals support the Council's air quality objectives:

The Council should seek to improve sustainable access by:

- P11 Provide secure and conveniently located cycle parking, especially in areas of high demand;
- P12 Providing adequate powered two-wheeler vehicle parking, especially in areas of high demand;
- P13 Setting car parking standards for new development as maxima in accordance with the London Plan standards, taking into account the relative levels of public transport accessibility across the Borough.
- P14 Ensuring that parking management is supportive of sustainable travel initiatives, such as travel plans, car clubs and car free development.

The Council should meet environmental objectives by:

- P15 Ensuring that parking management complements the Council's transport policies, having regard to the Council's ability to meet road traffic reduction targets for the borough and to reduce unnecessary car travel.
- P16 Supplying and locating parking spaces and set parking charges, having regard to the Council's ability to meet air quality and other environmental objectives for the Borough.
- P17 Ensuring that parking management is supportive of local environmental initiatives, including the Council's Streetscene initiative.

1.5.6 Hackney Recycling Strategy 2004-2007

The Council has made enormous progress from a base of less than 1% recycling

to 6.9% for 2003/04. The forecast for 2005/2006 is 13.69%

There Council's vehicle mileage has increased as a result of additional recycling rounds. Dry recycling materials are currently taken to ECT's depot which is off Lea Bridge Rd, less than 2 miles from the Borough boundary. Green and organic kitchen waste is taken to Edmonton.

In the new recycling contract the Council will endeavour to reduce the impact of increased mileage, but our priority will be to ensure a balance between an agreed collection methodology and best value. Recycling materials are likely to be taken to Edmonton and Hornsey Street in Islington.

As recycling increases, further efficiencies in the residual waste collection service should arise, however these will need to be measured against the predicted overall increase in waste tonnage.

The development of a waste by water initiative based at Millfields, by removing the need to drive to Edmonton would greatly reduce mileage by the Council's waste fleet. The potential progress of the project beyond design stage will be known in April 2006.

Chapter 2

2 Results of Hackney's Reviews and Assessments of air quality

London Borough of Hackney completed the first round of review and assessment in 2002 having previously reported Stage 1 and Stage 3 reports in 1999 and 2001, respectively. Stage 2 was not undertaken within the first round on the basis that this was a voluntary screening stage and local authorities could progress to a more detailed Stage 3 assessment if they so wished.

Two general categories of pollution occur within the Borough;

- . •static industrial sources; and,
- . •road traffic.

The first stage review and assessment determined that there was no likelihood that the objectives for benzene, 1, 3-butadiene, carbon monoxide, and lead would be exceeded. The assessment concluded that for nitrogen dioxide, and sulphur dioxide further assessment was required.

The third stage assessment was carried out in conjunction with other central London authorities using sophisticated dispersion modelling methods. The work was undertaken by Cambridge Environmental Research Consultants (CERC) Ltd. The Secretary of State has accepted the findings. Namely, dispersion modelling indicates that annual mean concentrations of SO₂ across central London are in the region of 5 – 13µg/m³ and that the values of the 15-minute mean objective are well below the objective of 266µg/m³. For, annual mean concentrations lie below 33µg/m³ for the majority of the Borough, with small areas near busy roads predicted to have annual mean concentrations around 35µg/m³. No areas within the Borough were found to have levels of that would exceed the annual mean objective of 40µg/m³. However, provisional longer-term objectives for (2010) would be exceeded across the Borough, if set in Regulation.

The Stage 3 report highlighted that it is NO₂ that is the main pollutant of concern with respect to the attainment of the objectives for 2004/2005. Detailed dispersion modelling indicated that the majority of the Borough would not exceed the NO₂ annual mean objective of 40µg/m³. However, residential properties in the immediate vicinity of busy roads, particularly in the south of the Borough, were likely to experience annual mean NO₂ concentrations above the objective. The maximum predicted annual mean concentration was 48.1µg/m³. The area of concern with respect to the attainment of the objective was identified as a relatively small area in the locality of Great Eastern Street and Shoreditch High Street.

As a result of the review and assessment process, LB Hackney declared an AQMA within the south of the Borough. This initially covered the area within the vicinity of Shoreditch and the Inner Ring Road alongside main arterial routes. However, consideration to the longer-term objectives for 2010 has meant that the initial AQMA order has been revised to now cover the whole of the Borough and to additionally include.

2.1 Stage 4 Source-Apportionment work.

Having declared an AQMA within the Borough, the Stage 4 work was undertaken by CERC to confirm the findings of the Stage 3 assessment and also to determine the main contributors to the levels of pollutants within the AQMA. It has already been established through the Stage 3 work that road traffic forms the main emissions of pollutants within the southern area of the Borough – the Stage 4 work aimed to establish those vehicle classes, which are most polluting.

The source-apportionment work was undertaken to establish the relative contribution of each source group to the levels of total emissions within the Borough, and to the resulting ground-level concentrations of pollutants. In order to manage the process the Stage 4 work focused on three worst-case receptors as shown in the following table and shown in Figure 1.1.

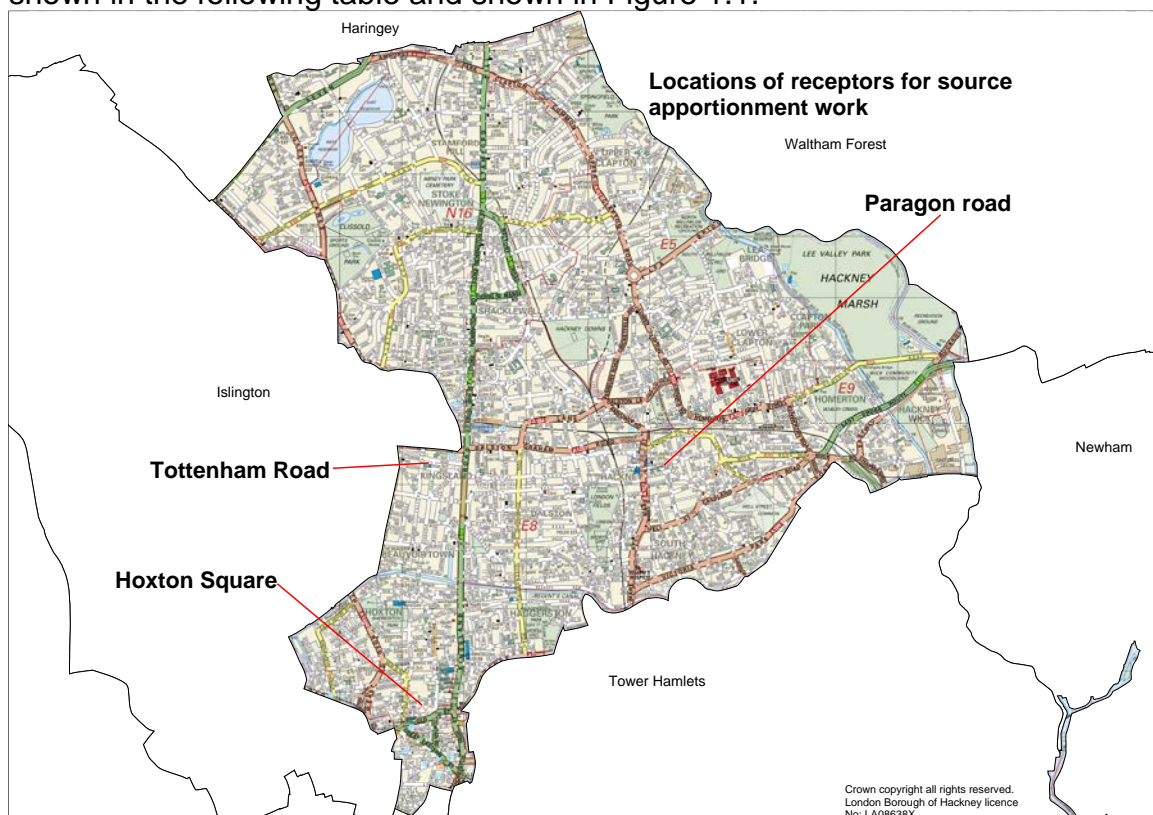


Table 1.2 Annual mean NO₂ (2005) and PM₁₀ (2004) concentrations at specific receptors

Receptor name	Annual average NO ₂ (µg/m ³)	Annual average PM ₁₀ (µg/m ³)
Paragon Road	48.1	29.7
Hoxton Square	47.0	29.5
Tottenham Road	44.9	29.4

Results show that annual mean NO₂ concentrations in 2005 are exceeded at all 3 receptor locations, and are, at most, 8.1µg/m³ above the annual mean objective. For PM₁₀ the annual mean is not exceeded, nor is the fixed 24-hour mean objective for the 2004 objective. However, longer-term (2010) consideration to the annual mean objective for PM₁₀ indicates that the majority of the Borough would exceed the objective of 23µg/m³.

2.1.1 Total Emissions and contributions to concentrations

Table 1.3 shows both the total emissions and emissions per square kilometre of NO_x and for each of the source groups covering the Borough only, the rest of Central London, and all of London. Results show that the Borough contributes approximately 1% of the total emissions and 1% of the total emissions to the greater London area.

Table 1.3 Annual mean NO_x and PM₁₀ emissions for different source types

Source Location	NO _x		PM ₁₀	
	t/yr	t/km ² /yr	t/yr	t/km ² /yr
LB Hackney	470	24.7	25	1.3
Rest of Central London	5411	33.5	312	1.9
All of London	55571	22.5	2899	1.2

Tables 1.4 and 1.5 shows the relative contributions of different source groups to the predicted 2004/2005 concentrations at the three specific receptor points shown in Figure

1.1.

Table 1.4 Contributions ($\mu\text{g}/\text{m}^3$ and percentage) to annual mean NO_x concentrations at specific receptor locations from different source types.

Source Location	Source type	($\mu\text{g}/\text{m}^3$)	(%)
Paragon Road	LB Hackney	20.3	34
	Other Central London Boroughs	10.0	17
	Rest of London	20.1	33
	Background (regional)	9.9	16
Hoxton Square	LB Hackney	11.7	21
	Other Central London Boroughs	13.0	24
	Rest of London	19.8	36
	Background (regional)	9.9	18
De Beauvoir School	LB Hackney	10.1	20
	Other Central London Boroughs	11.0	22
	Rest of London	19.8	39
	Background (regional)	9.9	20

Table 1.5 Contributions ($\mu\text{g}/\text{m}^3$ and percentage) to annual mean concentrations at specific receptor locations from different source types.

Source Location	Source Type	PM₁₀ ($\mu\text{g}/\text{m}^3$)	PM₁₀ (%)
Paragon Road	LB Hackney	1.1	4
	Other Central London Boroughs	0.4	1
	Rest of London	0.8	3
	Background (regional)	27.5	92
St Monicas School	LB Hackney	0.7	2
	Other Central London Boroughs	0.5	2
	Rest of London	0.8	3
	Background (regional)	27.5	93
De Beauvoir School	LB Hackney	0.7	2
	Other Central London Boroughs	0.4	1
	Rest of London	0.8	3

Background (regional)	27.5	94
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Results of the different source groups show contrasting patterns of occurrence between the two pollutants. For NO_x it is the locally generated emissions within the Borough that make a significant contribution to the overall concentrations at each of the receptors. For PM₁₀ it is the regional background concentrations that make up the most significant contribution. Additionally for NO_x the results show that emissions from other Central London Boroughs, and the rest of London as a whole, are on a par with those generated locally. As such, regional measures are required to reduce London-wide emissions of NO_x details of which are included in the Mayor's Air Quality Strategy.

2.1.2 Traffic vs. Non-Traffic Emissions and contributions to concentrations

Table 1.6 shows both major, minor and all source contributions to emissions within the Borough for NO_x and PM₁₀. Results show that it is the major roads, which are the main contributor to emissions within the Borough, which represent a similar percentage of the total emission on an area basis for the rest of Central London. Minor roads represent a significantly smaller proportion of emissions of NO_x and PM₁₀ when compared to major roads within the Borough and Central London areas. However, the cumulative impact of a high number of minor roads is significant for the whole London area, whereby minor roads represent 25% of NO_x emissions and 35% of PM₁₀ emissions for the whole of London.

Table 1.6 Annual mean NO_x and PM₁₀ emissions for major roads, minor roads and all sources Source

Location	Major roads		Minor roads		All sources t/yr
	t/yr	% of total	t/yr	% of total	
NO_x					
LB Hackney	219	47	27	6	470
Rest of Central London	2191	40	268	5	5411
All of London	14057	25	14100	25	55571
PM₁₀					
LB Hackney	16.6	66	3.3	13	25.4
Rest of Central London	173	56	32	10	308
All of London	959	33	1004	35	2899

Table 1.7 shows the relative contributions of different source groups to the predicted 2004/2005 concentrations at the three specific receptor points shown in Figure 1.1.

Source Location	Source type	($\mu\text{g}/\text{m}^3$)	(%)	PM 10 ($\mu\text{g}/\text{m}^3$)	PM 10 (%)
Paragon Road	Non-road sources	27.0	45	28.0	94
	Minor roads	5.2	9	0.3	1
	Major roads	28.1	47	1.5	5
Hoxton Square	Non-road sources	28.5	52	27.9	95
	Minor roads	5.3	10	0.3	1
	Major roads	20.6	38	1.2	4
Tottenham Road	Non-road sources	27.5	54	28.0	94
	Minor roads	5.2	10	0.3	1
	Major roads	18.0	36	1.0	3

Results show that non-road sources make a significant contribution to concentrations at the three receptors – the previous section has shown that background levels of PM₁₀ are the main contributor, whilst Table 1.7 shows that emissions from major roads is the second major contributor to PM₁₀ at each of the three receptors. For NO_x the contribution from major roads and non-road sources is similar for Paragon Road. For Hoxton Square and Tottenham Road non-road sources are the major source of NO_x.

2.1.3 Breakdown of traffic emissions

Tables 1.8 and 1.9 show the overall contributions to NO_x and PM₁₀ across different vehicle types for the Borough, Central London and the whole of London.

Table 1.8: Emissions from different vehicle classes (t/yr)

	Cars	Taxis	LGVs	HGVs	Buses
Hackney	59.5	13.3	25.4	81.3	39.8
Central London	716	193	240	767	495
London	4850	366	1559	5552	1730

Table 1.9: Emissions from different vehicle classes (t/yr).

	Cars	Taxis	LGVs	HGVs	Buses
Hackney	4.4	2.3	4.3	4.5	1.0
Central London	60	33	41	43	13
London	297	65	264	289	44

The maximum contribution to annual emissions of NO_x and PM₁₀ are derived from the HGV vehicle class – 37% and 28% for NO_x and PM₁₀ respectively.

Table 1.10 shows the relative contribution to predicted concentrations of NO_x and PM₁₀ at the three receptor locations shown in Figure 1.1 from different vehicle classes.

Table 1.10 Contributions (µg/m³ and percentage) to annual mean NO_x and PM₁₀ concentrations at specific receptor locations from different vehicle types.

Source Location		NO _x		PM ₁₀	
		(µg/m ³)	(%)	(µg/m ³)	(%)
Paragon Road	Buses	7.5	27	0.16	11
	HGVs	8.8	31	0.38	26
	LGVs	2.8	10	0.38	25
	Taxis	1.1	4	0.14	10

	Cars	7.8	28	0.42	29
Hoxton Square	Buses	3.5	17	0.07	5
	HGVs	7.1	35	0.29	24
	LGVs	2.4	12	0.31	25
	Taxis	1.8	9	0.21	18
	Cars	5.8	28	0.32	27
Tottenham Road	Buses	3.5	19	0.07	7
	HGVs	6.3	35	0.27	27
	LGVs	2.0	11	0.26	26
	Taxis	0.9	5	0.11	11
	Cars	5.3	30	0.30	29

2.1.4 Summary of Source-apportionment work

The source apportionment work has considered the total emissions of NO_x and PM₁₀ from the Borough in relation to the Central London area and London as a whole. Additionally, focus of attention has been made with respect to three specific receptor points with regards to: (1) the relative contribution at those receptor points of emissions from the Borough; (2) emissions from major and minor roads (and non-road sources) and, (3) from different vehicle classes.

Results show that for NO_x emissions from the Borough are marginally less than that from the Central London area, and additionally represent only 1% of the total emissions of NO_x within the London area as whole. However, at the local level, contributions for specific receptor locations highlight that it is locally generated levels of NO_x that is the main contributor. Moreover, additional consideration to the relative contribution across source types show that it is emissions from the major roads and non-road sources that is most important. Specifically, the vehicle class making the most significant contribution from major roads is the HGV type. For non-road sources emissions from Central London is important.

For PM₁₀ it is the general background levels that are shown to make the most contribution to predicted 2004 PM₁₀ levels at specific receptor locations. Major roads again make a higher contribution to PM₁₀ levels than minor roads. However, this contribution is significantly smaller than that observed for NO_x. Of the major road contribution it is again HGVs that make the highest contribution to levels of PM₁₀ predicted for 2004.

Key Points:

- The AQMA has been declared on the basis of exceedence of the annual mean NO₂ objective (2005).

- The Stage 4 review and assessment indicates that annual mean PM₁₀ concentrations are likely to exceed the 2010 objective (23µg/m³) throughout large parts of the borough.
- Source apportionment work has shown that main roads make a significant contribution to levels of NO₂ through NO_x emissions, whilst for PM₁₀ it is the regional background contribution that is significant to overall levels
- Non-road sources (general background levels of) also make a significant contribution to levels of NO₂ through NO_x emissions
- Of the major roads sources, it is Heavy Goods Vehicles (HGVs) that make the most contribution to levels of NO₂ through NO_x emissions. For PM₁₀ similar contributions to overall levels are made from HGVs, LGVs and cars.
- A reduction in NO₂ of at least 8.1µg/m³ is required on the annual mean at the worst case receptor to achieve the objective.
- For PM₁₀ no exceedences of the current 2004 objective are predicted to occur within the Borough.

2.2 Updating and screening assessment

Guidance issued by DEFRA required local authorities to carry out an Updating and Screening Assessment (USA). The USA is intended to identify significant changes that may have occurred since the last Review and Assessment, which might lead to a risk of the air quality objectives being exceeded. These might include new monitoring data, revised objectives or new or increased emission sources. All seven pollutants are to be covered by the assessment and consideration is to be given to any revised objectives.

Hackney's USA assessment which was undertaken in August 2004 followed the checklist methodology provided in DEFRA guidance LAQM TG (03) and on the Local Air Quality Management web site at <http://www.airquality.co.uk/archive/laqm/laqm.php>. Where the updating and screening assessment identifies a new risk of an objective being exceeded a detailed assessment is required for each pollutant identified.

The report considered all seven pollutants and revised objectives for carbon monoxide, benzene, lead, nitrogen dioxide, sulphur dioxide, and particulate matter PM₁₀ and concluded that all standards and objectives for carbon monoxide, benzene, 1,3 butadiene, lead and sulphur dioxide are likely to be met and thus a more detailed assessment is not required for these pollutants.

This report has considered Nitrogen dioxide and PM₁₀, air quality management areas are already in respect of exceedence for both pollutants, the report has examined factors such as new roads factories etc which could lead to additional areas of exceedence. The report concludes that no additional factors have been identified which would warrant a more detailed assessment.

Monitoring will continue in the Hackney Council area and a progress report will be published

3 THE ACTION PLAN PROCESS

3.1 Aims of the Action Plan.

The immediate aim of the action plan is to set down and identify a number of appropriate measures that can be taken to improve air quality within the AQMA. The action plan should appraise each measure in terms of feasibility and benefits to air quality, whilst providing explicit consideration to time-scales with respect to implementation.

3.2 Structure of the Action Plan

Chapter 2 has previously given a brief outline of the size and scope of the air quality problems in the AQMA.

This chapter provides the background to the action planning process and includes details with respect to the overall themes of this document and the process by which consideration to measures has been achieved.

Chapter 3 deals with existing and future actions that can be taken. The approach to policies has been to package policies according to the overall themes by which they operate. These include:

- . Reducing Emissions from Road Transport
- . Traffic Management Actions
- . Non-traffic Actions

The approach has been to first describe the policies in the context of air quality and then provide a tabular summary for specific details. Each action or proposal in the table includes an estimate of how long it will take, how costly it is, and what air quality benefit it will deliver. It also has details of which body (internal or external) will be responsible for implementing it. In many cases, this involves working closely with external partners to deliver improvements, for example, Transport for London manage the Transport for London Road Network – the strategic road network for London. Some Council initiatives and policies can impact directly or indirectly on air quality. These will have been subjected to Council consideration and in many cases directly to public consultation. The first part of the table of actions is based on existing Council Policy. In addition to those actions that already form part of the Council's Policies several extra initiatives are also needed to reduce emissions. These new initiatives form the second part of each detailed tabular summary.

Chapter 5 explains how the Council will monitor the effectiveness of this action

plan.

Chapter 6 provides details on the process of consultation undertaken by the Council in determining the policy measures that should be included within the action plan.

3.3 Impact assessment

For each proposal, or package of proposals, included in the draft AQAP some consideration to the impacts of the proposed measure(s) on air quality is included. The approach to 'impact assessment' within the draft Plan has been to, where possible, determine quantitatively the reduction in pollutant emissions or concentrations derived from the proposal. However, limitations to this approach are evident and quantitative analysis is confined to those proposals that lend themselves easily to such an approach through the use of complex dispersion models, and/or the use of emissions estimates. For example, where a proposed reduction in the volume of traffic is suggested a dispersion model can be used to determine the impacts on air quality within the affected area. Less practical to assess fully is a proposal that entails increasing the coverage of cycle lanes within an area, or increasing the number of 'walk-to-schools' initiatives. Consequently, where such 'soft-measures' are proposed an estimate of the improvements in air quality brought about by the package as a whole has been made, based on 'best estimates'.

3.4 Time-scales

Part IV of the Environment Act stipulates that a local authority must move towards achieving the air quality objectives within its area, where those objectives have been shown to be exceeded in the relevant future years. Under Section 84 of the Act the local authority, in drawing up its action plan, must give due consideration to the time-scales to which the objectives are required to be achieved. The current AQMA within the Borough is declared on the basis of predicted exceedences of the annual mean objective for NO₂.

Many of the existing measures are in place as a consequence of existing strategy implementation. New policy measures should give due regard to this date and time-scales for these measures have additionally been identified. It is stated from the outset that the extent of the problem within the AQMA is such that no single policy measure is likely to solely achieve the required reduction in ambient levels of NO₂. As such, the achievement of the objective is dependent upon the cumulative impacts of a number of measures, the main one of which has been identified and is outside the authority of the Borough. It is therefore unlikely that the proposals included within this action plan will achieve the necessary reductions in NO₂ within the time-scale of the objective date. However, it should be emphasised that policies included within the plan will safeguard air quality in those existing areas not shown to be an issue, whilst additionally bringing about

an improvement in air quality across the Borough both the in the short-term and in the longer-term.

3.5 Funding

All of the policy measures included within the Action Plan have already had funding allocated, or ongoing funding is being sought through the latest Borough Spending Plan. No new measures for which funding has yet to be sought with the exception of the proposed low emissions zone are included within the plan.

3.6 Responsibilities

The Borough is under statutory duty through Part IV of the Environment Act 1995 to work towards achievement of the air quality objectives where an AQMA has been declared. This action plan sets out to identify those measures over which the Council has direct control, whilst additionally identifying those measures which are the responsibility of other parties. Within the Borough's actions, responsibilities have been additionally identified across relevant departments covering Environment, Planning, and Transport. Where necessary partnership working is required to realise the policy included more than one body has been identified.

The AQMA is declared within the southern part of the Borough around road links that form part of the Transport for London Road Network (TLRN). As such, Transport for London (TfL) are a necessary consultee within the process and will be responsible for those measures it deems most likely to improve air quality within the AQMA. The Mayor for London is responsible for some of the policy measures outside of road transport that could aid in reducing general background levels of pollution across the Borough and within the Greater London Area.

3.7 Costs, benefits and feasibility

It is difficult to precisely quantify some of the effects of the proposals and it was decided to use broad descriptors for the Timescale, Cost and Air Quality Benefit. In approaching this aspect of the action plan the Council has taken heed of current advice from the DEFRA Action Planning Helpdesk and also sought to refer to useful examples of action plans already submitted. It has been concluded that a simple matrix approach is best suited to the current needs based on the following descriptors:

Time-scale definitions

Long = Long Term (5 - 10 years plus)
Medium = Medium Term (2-5 years)
Short = Short Term (within the next 2 years)

Cost definitions

High = more than £100,000

Medium = £50,000 – £99,999

Low = less than £49,999

Air Quality Benefit

High = improvements greater than 2µg/m³

Moderate = 1 - 2 µg/m³

Reasonable = 0.2 – 1 µg/m³

Negligible = less than 0.2 µg/m³

Key Points:

- . • The action plan has aimed to identify a number of policy measures that could assist in the Borough moving toward the achievement of the annual mean objective for NO₂
- . • The action plan has built upon existing strategies set down within the context of the Borough and through London-wide initiatives through the Mayor for London's Air Quality and Transport Strategies.
- . • Where possible, the action plan has tried to assess the impacts on air quality of each proposed measure and additionally attempted to provide an assessment of the cumulative impacts of each package of measures
- . • The action plan has indicated whether funding has been achieved through the identification of existing measures, alongside where additional funding is required through new measures
- . • Time-scales and responsibilities for the implementation of each measure and/or package of measures are provided
- . • The action plan has attempted to provide a measure of ranking the measures according to feasibility, cost and benefits

Chapter 4 Air Quality Actions

4.1 Introduction

No single measure will solve the air quality problem within the AQMA. A series of smaller measures each delivering part of the required improvement is likely to be the most successful approach to achieving reductions in pollutant concentrations across the Borough.

The actions we are going to take to improve and manage air quality in Hackney are submitted under the following themes:

- **Reducing Emissions from Road Transport**
- **Traffic Management Actions**
- **Non-traffic Actions**

A table listing all the actions is presented in Appendix xxxx. The table identifies those departments within the Council responsible for the implementation of the policy, or whether the implementation relies on partnership working with external organisations.

Moreover, for each action the perceived (or calculated) air quality benefits are reported each measure alongside any readily identifiable non-air quality benefits (both positive and negative) that could impact on the community. These include such aspects as reduced noise, costs to businesses, social exclusion and affordability. In addition, for each proposed policy measure an assessment of the way in which the measure will be perceived by relevant stakeholders has been made, alongside the costs and feasibility of implementation.

The Annex provides an overall tabular summary for each of the proposed measures included in each of the packages.

It is recognised from the outset that many of the existing and proposed actions contained within this Air Quality Action Plan would, in themselves, not provide a substantial benefit to air quality. It is therefore important that each theme of actions is considered in terms of the cumulative impacts on air quality. In order to highlight this statement on the cumulative impacts of each package of measures (existing plus proposed) is made.

4.2 Reducing Emissions from Road Transport

The first package of measures (reducing emissions from road transport) aims to reduce emissions within the AQMA and elsewhere in the Borough. In considering the policies to be included consideration has been made to targeting the volume of traffic within the AQMA, cleaning up emissions of existing vehicles, setting new stringent emissions standards for entering into the AQMA and also encouraging

the uptake of alternative cleaner fuel types. Additionally, it is recognised that the Council should lead by example in the context of clean emissions and therefore policies aimed at reducing emissions from its own fleet, and that of its contractors, are also included. The current sections deal with these aspects in more detail and include existing and new actions.

- **Low Emission Zone (LEZ)**
- **Reducing Emissions from Hackney Fleet and LB Hackney contractors**
- **Working with businesses in Hackney**
- **Vehicle Emission Testing**
- **Refuelling Infrastructure**

4.2.1 Low Emission Zone (LEZ)

A low emission Zone is an area from which vehicles that fail to meet a specified emission standard are excluded or controlled. The London Low Emission Zone Feasibility Study was completed in 2003. The feasibility study investigated schemes to restrict the access of vehicles unless they complied with a specific emission limit. The study concluded that a scheme focusing on heavy vehicles could reduce both concentrations of air pollutants and the areas of London that exceed the Government's national air quality objectives. The concept of a Low Emission Zone was pioneered in Sweden in the 1990s.

Details of the scheme as currently proposed are as follows:

- The proposed LEZ would cover the whole of the GLA area (excluding motorways) and the preferred approach is to implement via a Scheme Order under the GLA Act 1999.
- The proposed scheme :
 - Target Heavy Goods Vehicles, buses, and coaches from early 2008.
 - Potentially be extended to Light Goods Vehicles in 2010.
 - Targeting PM10 from 2008, and potentially NOx from 2010.
 - Non-compliant vehicles to pay charge.
 - Scheme to operate 24/7.
 - Scheme to be operated by cameras.
 - Non-payers to receive penalty charge.
- The proposed standards for heavy diesel-engined vehicles which could be used within the LEZ without payment of a charge are:
 - for 2008, a standard of Euro III for particulates (PM10) only; and
 - for 2010 a standard of Euro IV for particulates (PM10) or, in the event that NOx certification capability is available, a standard of Euro IV for PM10 and NOx.
- Expected that some 60 000 HGVs, buses and coaches would need to be upgraded or replaced to meet the proposed 2008 standard (this

represents some 35% of the heavy vehicles operating within London) and up to a further 100,000 to meet the proposed 2010 standard (this represents some 60% of the heavy vehicles).

- If the decision were taken to include diesel-engined LGV's in 2010, some 50 000 to 80 000 additional vehicles could be affected (this represents between 10 and 20% of the LGV's operating within London).
- **The objectives of the LEZ are twofold:**
 - To move London closer to achieving the government's air quality objectives (and European Union Limit Values) for 2010; and
 - To improve the health and quality of life of people who live and work in London, through improving air quality.
- **What would it achieve?**
 - ▶ Reductions in tonnes of PM10 and NO2 emitted
 - ▶ Reductions in areas of London exceeding air quality targets
 - ▶ Range of health benefits:
 - reductions in premature deaths
 - reductions in hospital admissions
 - reductions in respiratory problems
 - ▶ Other non-health benefits, including buildings soiling and noise reductions.

The principle challenges are:

- **DfT support for continuation of the Reduced Pollution Certification scheme;**
 - Awaiting formal response from DfT regarding the level of operational support they will provide for a LEZ, i.e. the certification process to support the fitting of Particulate and NOx abatement equipment.
- **Increased proportions of direct NO2;** TfL continues to collate the available research on this issue and to conduct trials to further inform research.
- **Supply of abatement technology;** we will need to ensure that abatement technology manufacturers will be able to meet the demand generated by the proposed LEZ.
- **Objections from some operators and stakeholders;** Vehicle operators are likely to have concerns about the cost to their industry of compliance with the LEZ. Ongoing dialogue with stakeholders is taking place, along with analysis of likely impacts.
- **Enforcement against vehicles registered outside the UK;** With the high levels of proposed penalties for non-compliance with the

LEZ, UK operators are keen to see a 'level playing field' with respect to foreign operators.

- Earliest date for LEZ implementation is early 2008.

The objectives of the proposed Greater London LEZ are:

- to move London closer to achieving the air quality objectives (and EU limit values) for 2010, in support of the Government's Air Quality Strategy (AQS) and the EU's Air Quality Framework and Daughter Directives; and
- to improve the health and quality of life of people who live and work in London, through improving air quality.

Action 1

The Council will work with partners such as Transport for London (TfL) and other London boroughs to promote a London LEZ for the achievement of air quality benefits in the long-term.

ACTION 1 LOW EMISSION ZONE (LEZ)	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	GLA, TfL, LB Hackney	This policy would achieve the greatest impact on air quality and likely to lead to a significant reduction in the area of exceedence of the annual mean NO ₂ objective within the Borough. Benefits would not be realised until the longer-term (2008/2010).	Range of health benefits: - reductions in premature deaths - reductions in hospital admissions - reductions in respiratory problems Other non-health benefits, including reduced building soiling. Negative- increased costs to business & fleet operators.
	Cost effectiveness & feasibility	Timescales for implementation	Perception
	An automatic scheme set-up costs to between £6 million and £10 million, with annual running costs of around £5 million - £7 million. Feasibility high.	Earliest date for LEZ implementation is early 2008	Operators largely supportive of the scheme.

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4.2.2 Council and Contractor Fleet Management

The Council currently has a fleet made up of hire, lease and owned vehicles. Of the Directorates it is Environment, Social Services and Housing that hold the largest proportion of the Council’s fleet. These consist mainly of transit vans; refuse vehicles, skip-luggers and minibuses.

The fleet manager is developing a fleet strategy. As part of the strategy emissions from the fleet will be reduced by replacing older vehicles, the first phase of which will be the replacement of the refuse vehicles. On completion of replacement programme all vehicles in council ownership will be Euro IV or no older than 5 years old.

Emissions from the refuse vehicles are being further reduced by reducing the maintenance period to 6 weeks, and by a weekly tyre maintenance programme.

The council will trial alternative fuels, fuel additives and other emission reduction devices where practical and subject to cost.

The Council’s Streetscene department has used an electric van as a staff pool car since summer 2004.

The pollution team has funding to purchase an electric or van for air pollution monitoring.

Action 2

The council will replace older vehicles in the fleet starting with the refuse vehicles, all vehicles to be Euro IV or no older than 5 years old.

Action 3

The Council will ensure that all leased vehicles are less than 5 years old.

ACTION 2& 3 COUNCIL FLEET	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	LB Hackney, Fleet Department	This option would set the Council's stance on air quality issues and show that it wishes to 'lead by example'. It would reduce emissions from Council activities through the many miles travelled on a daily basis. It is unlikely that the air quality benefits would be significant from the policy as a stand-alone entity. However, the policy has strength in the message that it sends out residents in Hackney.	Positive: electric vehicles are quieter than other vehicle so could reduce levels of noise associated with activities. Negative: could lead to difficulties with contractors and costs of services as required to provide cleaner vehicles which would be passed onto the Borough
	Cost effectiveness & feasibility	Timescale	Perception
	£3.8m already available for refuse vehicle fleet replacement	Fleet strategy due to be finalised November/December 2005	Likely to be positive

4.2.3 Working with the business

Business activity is responsible for a large proportion of pollution in London. There are many ways in which this could be reduced, and the business benefits presented by environmental improvement can be substantial.

The easiest ways for businesses to reduce air pollution are:

- Buy or lease cleaner vehicles.

- Produce travel plans to help staff to walk, cycle or use public transport to get to work.
- Use efficient fleet management to reduce emissions and costs.

4.2.4 Incentivising low emission fleets

The Council's PEP (Parking and Enforcement Plan) includes policy encouraging LPG, LNG, electric and hybrid powered vehicles. Electric powered vehicle receive 100% discounts on (Residents' and Business) Permits with the remaining 3 categories receiving 25% discounts.

Action 4
The Council supports the use of cleaner fleets by business in the Hackney by offering discounted business permits to fleets powered by alternative fuels and electric vehicles.

ACTION 4 INCENTIVISING LOW EMISSION FLEETS	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	LB Hackney, Parking Department	It is unlikely that the air quality benefits would be significant from the policy as a stand-alone entity. However, the policy has strength in the message that it sends out residents in Hackney.	Positive: Negative:
	Cost effectiveness & feasibility	Timescale	Perception
	Costs passed onto contractors for external fleets.	Already in place	Positive

4.2.5 Business Travel Plans

A business travel plan is a set of measures that provide staff with more efficient and environmentally friendly options for travelling to work and travelling on business. Business The may business travel plan should form part of any planning application that is likely to have significant transport implications in the borough.

Action 5

The Council is committed to assisting businesses in the borough to develop travel plans.

4.2.6 London Lorry Ban

The Greater London Lorry Ban (Restriction of Goods Vehicles) was introduced in 1985. Its aim was as an environmental control measure to prevent unnecessary lorry movements at night and weekends. Hackney supports the London Lorry Ban on local roads in the borough.

The ALG maintains the scheme, issuing permits to those lorry operators with essential business in London. Around 56,000 permits per year are issued, supplemented by the London Lorry Map which shows those roads affected by the scheme to provide assistance to lorry operators with information on routing. The ALG enforces the London Lorry ban, and prosecutes around 2,000 offences against the ban annually.

Revisions for the London Lorry Ban are currently (end of 2005) being discussed. Exception of vehicles powered by alternative fuels is one of the potential new measures considered.

In addition to the London Lorry Ban the Council has its own local 7.5 tonne lorry ban in certain areas:

- The Homerton area north of Homerton Road
- The Middelton Road area
- Richmond Road and Englefield Road
- Cowdrey Road and Homerton Road overnight bans.

The Council implements a Borough-wide overnight ban on all vehicles over 5 tonnes.

This aims to balance the importance of goods access to local businesses with the environmental concerns of local residents, with many night-time bans related specifically to noise issues.

Action 6

The Council continues to support the London night-time and weekend lorry controls on all heavy vehicles over 16.5 tonnes on local roads.

ACTION 6 LONDON LORRY BAN	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	ALG	The direct air quality impacts are likely to be negligible as a result of stand-alone policy but will make sure that future air	Positive: no worsening of congestion Negative: higher levels of noise if not implemented

		quality is not compromised.	
	Cost effectiveness & feasibility	Timescales for implementation	Perception
	Existing policy in place.	Been implemented since 2005	Positive

4.2.7 Inland Waterway Distribution

'Sustainable Distribution: A Strategy' (1999) was one of the documents that spun out of the 1998 Integrated White Paper on Transport. The Strategy contains a number of proposed actions related to fiscal measures, international issues, strategic planning, rail freight, interchange, inland waterways and coastal shipping amongst others.

Improvements to strategic planning included closer consideration to freight. The Council endorses advice in Planning Policy Guidance note 13 that local authorities should encourage the carriage of freight by rail or water. The Council believes that the Regents Canal and River Lee Navigation hold much further potential in meeting the recreational and freight needs of the Borough. UDP policy TR15 actively seeks to favour development that proposes to utilise either of these two waterways:

- TR15: Canals and the River Lee Navigation. The Council will favourably consider proposals which support leisure and freight movement on the Regents Canal and River Lee Navigation [subject to other policies in this plan].

Action 7

The council will investigate the full potential of both the Regents Canal and the River Lee Navigation waterways in reducing the level of freight transported by the road network.

ACTION 7 WASTE BY WATER	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	LB Hackney (LB Hackney (Fleet, Planning and Streetscene Departments)	The direct air quality impacts are likely to be negligible as a result of stand-alone policy.	Positive: safer roads Negative: increased activity adjacent to environmentally sensitive areas
	Cost effectiveness & feasibility	Timescales for implementation	Perception
	Costs to existing operators will be high,	Work on design of a suitable vehicle for waste	Positive by residents

	<p>whilst costs to new operators will be commensurate with new schemes based on road transport. Costs to operators for switching from road to water transport modes Positive. Feasibility high.</p>	<p>transfer by water funded by TfL.</p>	
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4.2.8 Provision of alternative fuel supplies within the Borough

One of the principle means of encouraging fleet operators and private vehicle users to switch over to cleaner fuels is to increase their availability. Currently there is no provision of alternative fuel supplied within the Borough resulting in those with alternative fuelled vehicles having to drive outside of the Borough to seek fuel. This increases the number of miles required for re-fuelling and therefore reduces the advantage gained through lower emissions attributed to cleaner fuel usage.

The Energy Saving Trust currently (2005) operates a grants programme for transport refuelling and recharging infrastructure. Grants are available for any organisation with a base in the UK who will be installing in the UK a refuelling or recharging point for road vehicles, where there is an environmental need to build a refuelling or recharging infrastructure for that fuel.

Other funding for alternative fuel supplies that the Council could investigate in tapping into from the government and European sources are: Low Carbon Research and Development Programme, Low Carbon Bus Programme, Low Carbon Vehicle Programme, Air Quality Retrofit Programme and Air Quality Vehicle Programme.

Action 8
The council will seek the provision of alternative fuels and electric vehicle charging points pumps at new filling stations through the planning process and encourage the provision of fuel alternatives at existing filling stations through partnership working with suppliers, and work to develop electric vehicle charging points at other locations.

ACTION 8 PROVISION OF ALTERNATIVE FUEL SUPPLIES	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	GLA, TfL, LB Hackney	This option would provide additional fuel choices for residents within the Borough and reduce vehicle emissions. It is	Positive: increased consumer choice Negative: none identified

		unlikely that the air quality benefits would be significant from the policy as a stand-alone entity.	
	Cost effectiveness & feasibility	Timescales for implementation	Perception
	Costs likely to be small. Feasibility is high	Funding to develop electric vehicle charging points has been provided via the Borough Spending Plan.	Positive

4.2.9 Roadside Emission Testing

Since the introduction of the Road Traffic (Vehicle Emissions) (Fixed Penalty) Regulations 2002 local authorities in England and Wales have greater control over vehicle emissions testing at roadside locations. Previously roadside emission testing has been carried out by the Vehicle Inspectorate under regulation 61 of the Road Vehicle (Construction and Use) Regulations 1986 which lay down maximum permitted levels of emission of regulated pollutants from vehicles. The new local authority powers provide a wholly applicable means for local authorities to undertake roadside emissions testing for those vehicles that it has most concern over with on-the-spot fines for those that fail the test. Moreover, Regulation 12(1) states:

“An authorised person who has reasonable cause to believe that the driver of a vehicle that is stationary on a road is committing a stationary idling offence may, upon production of evidence of his authorisation, require him to stop the running of the engine of that vehicle”.

Consequently, the new powers go above, and beyond that previously provided to local authorities to cover idling emissions also.

The ALG and the Mayor launched an exhaust-testing programme with the aim of cleaning up London’s air. With one in five vehicles estimated to be above the legal limit on emissions set under the MOT test, the scheme aimed to crackdown on those vehicles making the most significant contribution to overall pollution levels. The ALG successfully secured £600,000 from the Department for Transport and £135,000 from the Mayor to fund the feasibility study which finished in March 2004. Vehicles stopped were tested for pollutants including CO, CO₂ and hydrocarbons. High emissions of these pollutants mean that vehicles are inefficient. Under the new Fixed Penalty Regulations 2002 drivers found to be above the emissions limits set by the MOT tests are warned or face penalty charges. If charged, they will be issued with a £60 fine, reduced to £30 if the vehicle is brought into MOT standard within 14 days.

Since the London wide programme finished the council has carried out testing as part of the Shoreditch enforcement action day, and further testing will be carried

out as part of coordinated enforcement actions. The powers to deal with parked idling vehicles will be exercised as and when necessary, although to date it has not been necessary to issue any fixed penalties but rather information that these powers were available has been sufficient to deal with problem cases.

Action 2
The Council is committed to enforcing the powers conferred by the Road Traffic (Vehicle Emissions) (Fixed Penalty) Regulations 2002 in relation to roadside vehicle emissions testing and powers to issue fixed penalty notices in respect of parked vehicles with idling engines.

ACTION 2	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	LB Hackney (Transport and Environmental Services), other central London Boroughs and the ALG	This option would target those vehicles deemed to be most polluting and send a clear message to those owners of vehicles that are poorly maintained that penalty payments and on-the-spot fines would be a possibility. It is unlikely that the air quality benefits would be significant. However, the policy has strength in the message that it sends out to vehicle owners that further penalties may be incurred as a consequence of poor maintenance.	Positive: none identified Negative: could lead to increased vehicle abandonment.
	Cost effectiveness & feasibility	Timescales for implementation	Perception
	High ~ £1000		Likely to be negative due to penalty payments.

Statement of cumulative impacts of Package:

The cumulative impact of the first package (Reducing Emissions from road transport) is likely to bring about the most significant reduction in emissions – and hence ground level concentrations of pollutants – of all the packages within the action plan. The extent of the impact is wholly dependent upon the inclusion of the London LEZ within the package. With its inclusion, air quality benefits are likely to be high ($>2\mu\text{g}/\text{m}^3$) on the annual mean NO_2 concentrations. Without the inclusion of the LEZ, the impacts of the proposed package will be significantly reduced and are unlikely to be reasonable ($0.2 - 1.0\mu\text{g}/\text{m}^3$) or moderate ($1.0 - 2.0\mu\text{g}/\text{m}^3$). The package will in the longer-term result in reductions in the annual mean NO_2 levels, which are likely to achieve the standard by 2010.

4.3 Actions to Encourage Modal Shift

4.3.1 Introduction

This package of measures is aimed at encouraging and facilitating a behavioural change in the public travelling in Hackney to favour sustainable modes of transport, and reduce the need for using private car. As such, measures aimed at improving the quality of services on the existing transport networks, and future enhancements of these networks in addition to making cycling and walking easier, is likely to encourage modal shift towards sustainable forms of transport.

This package of measures includes:

- Buses
- Cycling and walking
- Parking
- Travel Plans
- Travel awareness (general)
- London wide and Local traffic reduction targets

4.3.2 London Bus Initiative (LBI)

The London Bus Initiative Phase 1 (LBI1) was a 3 year fixed term initiative established in April 2000 and supported with a £60m grant from Government, as a new partnership approach to improving bus services in the Capital. It was an umbrella partnership that drew together the London Bus Priority Network (LBPN) Partnership of all 33 individual London local authorities, Transport for London's (TfL) Bus Priority Team and London Buses, bus operators and enforcement agencies.

The vision for the initiative was “to deliver a step change enhancement of the actual and perceived quality of London's bus service” with the aim of making travel by bus more attractive and getting more people to use buses.

Fundamentally, the LBI approach was to address the experience on the whole bus route, rather than just looking at the operation of the bus service. This included improvements to for example pre-journey information and planning and the quality of bus stops.

4.3.3 Bus Plus

The BusPlus programme was an initiative designed to make a real difference to the quality of some of London's key bus routes. BusPlus, which was completed in 2004, was established to upgrade 70 key bus routes across London to make them more reliable, safer, cleaner and more comfortable than ever before.

Hackney has 11 Bus Plus routes, all of which have received (and most continue to receive) bus priority measures. Two bus routes are London pilots (38 and 149) for Intensified Bus Priority. Route 253 is a flagship route.

Action 10

The Council, through its Transport Strategy will continue to support the LBI and BusPlus.

ACTION 10 LONDON BUS INITIATIVE	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	TfL, LB Hackney (Traffic and Transportation)	This policy would ensure that bus lanes within the Borough are clear of obstruction and enable buses to operate to a timetable. The direct air quality impacts are likely to be negligible for the policy as a stand-alone entity.	Positive: increased public confidence in public transport Negative: none identified
	Cost effectiveness & feasibility	Timescales for implementation	Perception
	Costs based on 10 CCTV to compliment existing cameras ~ £350K. Operational costs? Feasibility high as other London Boroughs have already set up Enforcement SLAs with TfL.		Positive, although some local businesses may perceive the policy to be another attempt to curtail business within the area by restricting deliveries, etc.

4.3.4 London Bus Priority Network (LBPN)

Both the London wide and Hackney specific transport policies support the provision of a more efficient bus network through bus prioritisation measures. The LBPN is an 865Km network of borough roads across London that complements the London Strategic Road Network. While the management of the LBPN lies with Transport for London (TfL), the boroughs actively liaise on its implementation.

The Transport for London funded works to the LBPN consist of traffic management or highway infrastructural measures that can be shown to improve reliability and journey times for buses. Measures may also include essential and/or minor related elements that mitigate or support the implementation of schemes and assist in the approval of the main scheme by relevant bodies.

In implementing measures there is a bias towards buses and with due regard to pedestrians, pedal cyclists and local servicing needs. Measures considered include further provision of bus lanes, queue relocation, bus advance area (pre-signals), bus gates, Selective Vehicle Detection, BUS SCOOT, SPRINT signal control techniques, or traffic management measures such as changes to parking, waiting and loading restrictions and signal timing changes. All are envisaged to bring about improvements in the LBPN aimed at reducing overall bus journey times, and hence encourage uptake by members of the public.

Bus priority initiatives, such as the London Bus Initiative and the LBPN implemented by the Council over the past couple of years have resulted in average performance of bus routes in Hackney equalling the London average for the first time in years, instead of trailing it.

Action 11
The Council, through its Transport Strategy will continue to support the London wide LBPN policies.

ACTION 11 LONDON BUS PRIORITY NETWORK	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	LB Hackney (Traffic and Transport, TfL, London Buses	Contrary to national trends increases in number of people using buses in London has increased significantly. A significant modal shift to the LBPN could bring about reasonable reductions in air pollution as a result of reduced vehicle numbers on the road.	Positive: increased public confidence in public transport Negative: area coverage favours main arterial routes
	Cost effectiveness & feasibility	Timescales for implementation	Perception
	Costs already secured through BSP. Feasibility high with current experience showing a demand for bus travel across London.		Positive

4.3.5 Walking Initiatives

Walking is an activity that most members of the community can do. It is a healthy activity and offers most people the simplest form of exercise. Encouraging people to switch from their car and to walk instead can also help to reduce air pollution. The Council will seek to increase the proportion of all journeys made on foot. This will be achieved by:

- Pedestrian crossing improvement programme
- Development of pedestrian routes that link residential areas with town centres, and
- Creation of attractive pedestrian routes

In order that pedestrians can successfully complete their journeys by foot it is necessary that street names are in place and are clearly seen. Street name-plates form an integral part of any street – they are not only street furniture but are an essential tool in providing information as to the correct street name and, in most cases, a post code. Often, street name-plates are missing from one end of the street, or are located on just one side, or are too high or too low, or obscured from view.

Sections 12 and 13 of Capital Ring, which are part of the London's strategic walking routes pass through Hackney. Although it is essential that streets that are part of the Capital Ring Walk be properly signed, signage for pedestrians and cyclists needs to be kept in good condition on all roads in the borough. Hackney's Public Realm Design Guide should be referred to as guidance.

Action 12

The council will continue to work with Transport for London (TfL) to undertake a review of traffic signage within the borough, to ensure that signs are clear and visible to encourage walking as an alternative to cars.

ACTION 12 PROMOTING WALKING	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	LB Hackney (Street lighting), TfL	The direct air quality impacts are likely to be negligible for the policy as a stand-alone entity. However, the policy has strength in the promotion of sustainable forms of transport.	Positive: health benefits to be obtained from walking Negative: security issues for streets where surroundings are not lit appropriately
	Cost effectiveness & feasibility	Timescales for implementation	Perception
	Costs already secured through BSP. Feasibility high with current experience showing a demand for bus travel across London.		Positive

4.3.6 Promoting and enhancing local and strategic cycle routes

The Council is committed to improvement and extension of local cycle routes that link with the London Strategic Cycles routes (LCN+), through the development process.

The London Strategic Cycle Network (LCN+) will be completed in Hackney by 2008 in partnership with the London Cycling Campaign (LCC). The current UDP includes the following policies to achieve this:

TR3: Cycle Routes. The Council will promote the provision of cycle facilities, and in particular will ensure the implementation of an integrated cycle network for London.

Action 13

The Council is committed to its UDP policy TR1, TR2 and TR3 related to the continued provision and support for cycle facilities and an integrated cycle network for London.

ACTION 13 PROMOTING AND ENHANCING CYCLE ROUTES	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	LB Hackney (Planning Department and Traffic and Transportation)	The direct air quality impacts are likely to be negligible for the policy as a stand-alone entity. However, the policy has strength in the promotion of sustainable forms of transport.	Positive: health benefits to be obtained from cycling Negative: security issues at cycle facilities
	Cost effectiveness & feasibility	Timescales for implementation	Perception
	Provision of local routes funded through development contributions. TfL and The Council also provide funding for Feasibility high.	On going	Positive

4.3.7 Community based sustainable transport initiatives

The Council has a In addition to UDP policy TR3 the Council currently supports the initiative of the Neighbourhood Renewal Fund (NRF) in supporting Sta bikes and Supa Nova – a school/parent led initiative to create ‘cycling schools’ providing on-road cycle training.

Action 14

The Council is committed to continue support for community based sustainable transport initiatives that contribute to modal shift.

ACTION 14 Community based sustainable transport initiatives	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	LB Hackney (Planning Department and Traffic and Transportation)	The direct air quality impacts are likely to be negligible for the policy as a stand-alone entity. However, the policy has strength in the promotion of sustainable forms of transport.	Positive: health benefits to be obtained from cycling Negative: security issues at cycle facilities
	Cost effectiveness & feasibility	Timescales for implementation	Perception
		On going	Positive

4.3.8 Travel Plans

A travel plan is a strategy which, through its implementation, an organisation is able to manage journeys related to the operation of its business in a manner that minimises economic, social and environmental costs and reduce dependence on single car journeys.

The Council strongly supports the use of sustainable transport modes, and is currently preparing a travel plan that enhances the way the Council employees can travel to and from work and undertake any business related journeys during the day by sustainable forms of transport.

However, we are conscious of the need for the Hackney Travel Plan not only to support our environmental objectives, but also to contain measures that will benefit our employees and take account of their needs.

Action 15

The Hackney Council Staff Travel Plan will support the Council’s environmental objectives and reduce reliance on the private car for journeys to work and any business related travel undertaken as part of the job.

ACTION 15 Travel Plans	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	LB Hackney (All Departments. However, Travel Plan coordinators will be placed in the Traffic and Transport Team)	The direct air quality impacts will depend on the proportion of staff changing their mode of transport from private car to public or active transport.	Positive: health benefits and increased sense of well-being, possible cost savings on individual travel expenditure. Negative:
	Cost effectiveness & feasibility	Timescales for implementation	Perception
		On going	A right mix of carrots should off-set potential restrictions to parking.

4.3.9 Travel Awareness Campaigns

The Council has over the past couple of years been an active participant to various travel awareness campaigns such as cycling week, school travel week and a supporter of Shoreditch Car-free Festival. LB Hackney joined the London wide travel awareness campaign ‘goodgoing’ in April 2005.

Action 16
The Council is committed to continue promoting the sustainable modes of transport through travel awareness campaigns.

ACTION 16 Travel awareness campaigns	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	LB Hackney (Traffic and Transportation)	The direct air quality impacts are likely to be negligible for the policy as a stand-alone entity. However, the policy has strength in the promotion of sustainable forms of transport.	Positive: health benefits to be obtained from cycling and walking Negative: security and safety issues at cycle facilities and in areas where street-lighting is poor
	Cost effectiveness & feasibility	Timescales for implementation	Perception
	The Council applies funding for travel awareness projects from the TfL through the LIP and annual BSP submission. The funding sought in the future is set to increase over the next few years as we join the goodgoing campaign.		Positive

4.3.10 The Energy Savings trust

The Energy Savings trust encourages energy efficiency and the integration of renewable energy sources into the economic fabric of our society. To achieve this EST promote the use of cleaner fuels for transport and better insulation and heating efficiency for buildings and homes and champion small-scale renewable energy, such as solar and wind power.

TransportEnergy is an initiative run by the Energy Savings Trust and mainly funded by Government. TransportEnergy provides information and advice about cleaner vehicles, fleets & travel plans.

The energy savings trust is planning to offer grants for the following programmes this is subject to approval of answers to questions submitted to the European Commission:

1. Low Carbon Research and Development Programme - to provide funding to vehicle developers towards the costs of developing prototype low emission vehicles.

2. Low Carbon Bus Programme - to provide grants to bus operators for purchasing low carbon buses.
3. Low Carbon Vehicle Programme - grants to encourage the purchase of low carbon cars and car derived vans
4. Air Quality Retrofit Programme - grants for fitting conversions and exhaust systems to existing vehicles.
5. Air Quality Vehicle Programme - purchase grants based on air quality standards at EEV levels for new buses and trucks.

Action 17

The Council will promote the work of the Energy Savings Trust’s programmes that promote the use of cleaner fuels for transport and better insulation and heating efficiency for buildings and homes and champion small-scale renewable energy, such as solar and wind power..

ACTION 17	Responsibility	Air Quality Impacts	Non Air Quality Impacts
Promoting the work of the energy savings trust.	LB Hackney (Pollution Team, Regeneration)	The direct air quality impacts are likely to be negligible for the policy as a stand-alone entity. However, the policy has strength in the promotion of uptake of new energies.	Positive: Promotion of environmental issues. Negative: none identified.
	Cost effectiveness & feasibility	Timescales for implementation	Perception
	Publicity costs to promote the grants schemes and sustainable energies likely to be minimal (estimate max £10-20k?)		Positive

4.3.11 Major infrastructure developments

East London Line Project (ELLP)

The borough has no convenient access to the tube network with the nearest tube being at the borough boundary with Islington at Manor House on the Piccadilly Line and Finsbury Park on the Piccadilly and Victoria Lines.

This is set to change with the extension of the East London Line from Shoreditch to Dalston which will be the first significant new rail project for the new millennium.

The phase 1 of the East London Line Extension (ELLX) will extend the existing route from Whitechapel to Dalston. New stations will be provided at Shoreditch, Hoxton, Haggerston and Dalston. The project is expected to complete in 2010. The borough fully supports the work that is being undertaken and is working with TfL to provide links and interchanges with the route

The Hackney Council is an active member of the East London Line Group consisting of local authorities, businesses, regeneration agencies and other interested parties, seeking the earliest go-ahead for the extensions. The Group has been a major force in pushing this project forward; culminating with the announcement on 20 July 2004 by the Mayor of London that the first phase of the extensions would now be going ahead.

Dalston Interchange

The existing Dalston station will be turned into a new high quality rail and bus interchange through the Dalston Area Action Plan.

Other proposed transport project affecting Hackney in the future are:

- Channel Tunnel Rail Link – under construction;
- Thameslink 2000
- CrossRail 2 – ongoing planning, implementation determined on the outcome of CrossRail 1;
- Possible DLR extension from Bank to Bishopsgate Goodsyard (DLR 2020 horizon Study)
- DLR Stratford International – subject to ongoing feasibility and planning studies.

Action 18

The Council will continue to lobby and work with partners on matters affecting the way ELLX integrates with the Underground and National Rail networks.

ACTION 18 East London Line Extension	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	LB Hackney (Traffic and Transportation) - lobbying TfL, Secretary of State (implementation and funding)	Air quality benefits of major schemes that encourage uptake of public transport and reduce levels of traffic are likely to bring about moderate benefits in air quality.	Positive: increased consumer choice for travel modes Negative: demolition of local and regional sites of interest, private property, and loss of local businesses in the short-term
	Cost effectiveness & feasibility	Timescales for implementation	Perception
	Overall costs for infrastructure development will be significant. Estimated costs for whole ELLP £1 billion.	On going	Positive

4.3.12 London Olympics 2012

Hackney and the Lee Valley – specifically the southern area of the Lee Valley around Stratford – form the mainstay of London 2012 Olympics. Stratford City, the Olympics and its Legacy all lie immediately to the east of the borough in the Lower Lea Valley. This area is set to grow significantly and will become a major destination for leisure and commerce. This offers significant opportunities for Hackney in terms of employment and services. The council will be working with the neighbouring authorities and transport operators to ensure that access opportunities are fully exploited.

The London Olympics are being built around the sustainability theme, and schemes like the ‘Olympic Active Spectator Programme’ will encourage spectators to walk or cycle to venues, via use of bike pools and secure cycle storage.

Other sustainable measures of the London 2012 Olympics

- 80% of visitors/staff will use rail services to reach the Olympic Park

- low/no emission vehicles will be used to transport Olympic Family
- no private car access to any Olympic venue except for Olympic Family

4.3.13 Regional and Local Traffic Reduction Targets

There are both London wide and local, Hackney specific targets for controlling congestion and pressure for road space.

- 0% traffic growth on borough roads by 2011(achievement subject to growth on routes outside of the borough’s control).
- 4% traffic growth target on strategic roads by 2011(TfL target for the Eastern Sub Region of London)

The Hackney Transport Strategy (which at the time of writing in October 2005) is still in draft form takes the stance that the problem is unrestrained access to the network is the problem and managing the network is the solution. By this I mean strengthening our parking policies, taking a decision to be active and supportive in the road user charging debate - it will come to the Gateway next, and be positive about the reallocation of road space to the space efficient modes.

Action 19
The Council d seeks to achieve a zero growth of traffic on borough roads by 2011 and is committed to contributing towards London wide traffic reduction targets.

ACTION 19 Zero growth of traffic on borough roads by 2011	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	LB Hackney (Traffic and Transportation, Parking), TfL	On local roads the contribution of traffic towards air pollutants should stay the same or reduce slightly as a result of the Council’s traffic reduction targets.	Positive: health benefits from alternative transport modes Negative: none identified
	Cost effectiveness & feasibility	Timescales for implementation	Perception
		On going	Neither for or against...

4.3.14 Parking and Enforcement Plan

Action 20
The Council is committed to implementing controlled parking zones to

improve the safe movement of pedestrians, traffic, buses and cyclists and improve parking conditions for residents and businesses where consultation with local residents and businesses shows a need for a CPZ.

ACTION 20 Parking and enforcement plan	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	LB Hackney (Traffic and Transportation, Parking), TfL	The direct air quality impacts are likely to be negligible as a result of stand-alone policy.	Positive: health benefits from alternative transport modes Negative: none identified
	Cost effectiveness & feasibility	Timescales for implementation	Perception
	Feasibility high on basis of other strategies and policies in place. Costs based on existing schemes?	On going	Local residents are consulted on any proposed CPZs

4.3.15 Home Zones

A Home Zone is a street or group of streets designed primarily to cater for the interests of pedestrians and cyclists rather than giving priority to motorists. The aim is to open up the space for social use by reconfiguring the space to make it more favourable for pedestrians and cyclists. Most commonly, traffic-calming features, controlled parking, planting, appropriate low speed limits and play areas are introduced. Home zones are less common because of their high cost but are increasing in popularity because they improve the quality of life in residential areas.

Hackney Council in partnership with the Cazenove Rd Area Action Group are progressing a Home zone in and around Windus Street. This is located within the Triangle area described above which is targeted for a 20mph zone. The Windus Street scheme will go one step further to deal with promoting social interaction and improve community relations as well as safety. Consultation and initial design has recently been completed and a phased implementation is due to take place during 2004/05 and 2005/06.

The Windus Home Zone is expected to be completed by March 2006.

Action 21

Following the completion and assessment of the Windus Home Zone the possibility of further Home Zones will be investigated.

ACTION 21 Home Zones	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	LB Hackney (Traffic Team)	The direct air quality impacts are likely to be negligible as a result of stand-alone policy.	Positive: improved environmental surroundings, safer roads Negative: none identified
	Cost effectiveness & feasibility	Timescales for implementation	Perception
	Feasibility high on basis of other strategies and policies in place. Costs based on existing schemes?	On going	Positive by residents.

4.3.16 Congestion Charging Zone

The Western extension for London wide Congestion Charging (CC) was approved in September 2005. It should however be noted that the only objective in the Mayor's Air Quality Strategy relating to Congestion Charging was that there should be a 100% discount for certain alternatively fuelled vehicles.

As stated in the Hackney Transport Strategy, the council will give consideration to demand management measures, such as a national congestion charging scheme should a need arise.

Action 22

The council will give consideration to demand management measures, such as Congestion Charging, should opportunities arise.

ACTION 22 Congestion Charging	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	LB Hackney, TfL, Secretary of State	The direct air quality impacts are likely to be negligible as a result of	Positive: reduced congestion

		stand-alone policy.	Negative: increased costs to businesses
	Cost effectiveness & feasibility	Timescales for implementation	Perception
		n/a	Positive and

4.3.17 Cumulative impacts of actions to encourage modal shift

The cumulative impact of this package (actions to encourage modal shift) is likely to bring about a negligible (less than $0.2\mu\text{g}/\text{m}^3$) improvement in the annual mean NO_2 concentrations. The strength of this package is informing members of the public about air quality issues within the Borough and promoting the work that the Council is undertaking to improve the quality of life with respect to the occurrence of pollution. The package within itself is unlikely to achieve the objective for 2005 at all locations either in the short-term, or the longer-term (2010).

4.4 Non-traffic measures

4.4.1 Introduction

This package of measures recognises the need to reduce general background levels of pollution both inside and outside the AQMA and is consistent with the approach taken by other London Boroughs to realise reductions across the region.

Whilst it has been shown that road traffic is the main source of and NO₂ within the Borough it is recognised that background levels of pollutants within London make a significant contribution to the overall pollution burden of the Greater London area.

4.4.2 Land Use Planning

The UDP contains a number of policy measures aimed at reducing the dependency on private vehicle use where new developments are proposed. It is well recognised that through the use of appropriate planning and land use policies that an integrated approach to transport can be achieved. Those relevant include:

Environmental Quality

- ST16** The Council will seek to ensure that developments do not result in problems of pollution, or are a risk to health and safety of the public.

Transport

- ST28** The Council will seek to ensure that all development is appropriately related to transport infrastructure which will serve its needs. The Council will actively discourage development in inappropriate locations.
- ST30** The Council will support and encourage the improvement of public transport including new transport links, bus priority schemes, improved interchanges and access for people with disabilities.
- ST31** The Council will control the provision of non-residential off-street car parking in order to restrain commuting by car.
- ST34** The Council will seek to retain and extend local services, shops and employment uses, in order to reduce dependence on transport (particularly private transport).
- ST38** The Council will ensure that major retail developments including food superstores are reasonably accessible by public transport and will not undermine the vitality and viability of nearby town centres as a whole.

- TR1: New Pedestrian and Cycle Links. The Council will require the

provision, where appropriate, of new pedestrian and cycle links through development sites and open spaces, especially where these provide links to existing routes.

- TR2: Protection of Routes
- TR3: Cycle Routes
- TR4: Safeguarding of Land. The Council will safeguard land shown in the proposals map for public transport use.
- TR7: Car Parking. The Council will oppose car parking, which results in the use of cars as an alternative to public transport.

In order to assist London Boroughs in assessing proposed developments for air quality issues the ALG issued a Technical Guidance Note ‘Air Quality Assessments for Planning Applications’ in 2001 which provides guidance on the sorts of planning applications for which air quality assessments would normally have to be undertaken, if thresholds are exceeded by proposals, for example, any development with a car parking capacity of 300 spaces or more.

Action 23
The Council will continue to require the provision of new pedestrian and cycle links as part of new developments sites and encourage these links to integrate into existing routes.

Action 24
The Council will continue to support developments that place the emphasis on the use of sustainable modes of transport, such as public transport, cycling and walking.

Action 25
The Council will require detailed air quality assessments of proposed developments where a proposed development is shown to exceed the threshold criteria of the ALG Technical Guidance Note dated 20 March 2001, and any revisions thereof.

ACTION 23, 24 & 25	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	LB Hackney (Planning, Transport and Environmental Health Teams)	These options would curtail any inherent increase in traffic due to development, whilst simultaneously encouraging uptake of other forms of transport. Air quality impact on current (2003) levels likely to be negligible but	Positive: health benefits to be obtained from walking and cycling; reduced traffic growth for future years.

		ensures no worsening of air quality due to development in the future.	
	Cost effectiveness & feasibility	Timescales for implementation	Perception
	No costs for the Council. Costs for developers negligible. Feasibility high.	On going	Positive by members of the public but may be negative by developers.

4.4.3 Local Authority Pollution Control (LAPC)

The Pollution Prevention and Control Act 1999, provides the necessary controls over industries with significant air pollution potential. Local authorities were given responsibility for smaller industries (known as Part B processes), whilst the Environment Agency act as regulator for larger industrial processes (known as Part A processes).

The results of the review and assessment process have highlighted that there are no significant industrial processes (large or small) within the Borough that lead to any direct exceedence of air quality standards. However, the Council will continue to use its powers of authority to maintain the relevant level of regulation of industrial processes within the Borough. Where necessary, industrial process owners will be encourage to use Best Available Techniques (BAT) to further reduce any potential impacts on air quality, where adverse emission releases occur.

Action 26

The Council will continue to enforce the provisions of the Pollution Prevention and Control Regulations to ensure that permitted industrial processes are operated in accordance with DEFRA guidance.

4.4.4 Clean Air Act

The Clean Air Act was introduced as a direct response to the smogs in London in the early part of the 20th century. It introduced Smoke Control Areas to prohibit the burning of coal in domestic premises unless the fuel used or type of fireplace is of an approved type. The Act also regulated industrial emissions from boiler plant.

The whole of Hackney is a Smoke Control Area, along with the whole of Greater London and all major urban areas in the United Kingdom.

Action 27

The Council will continue to enforce the provisions of the Clean Air Act 1993 to prevent the use of unauthorised fuels.

4.4.5 Environmental Protection Act 1990

Bonfires do not fall within the legislation of the Clean Air Act 1956 as they do not provide a means of creating domestic heat but merely a manner in which disposal of unwanted goods and waste can be achieved. They are an unnecessary source of air pollution within the Borough and can be regulated only through enactment of the Environmental Protection Act 1990, where a nuisance has been shown to arise.

Action 28

The Council will continue to discourage the use of bonfires for waste disposal and distribute information on the effects of bonfires on air quality through leaflets and through the Council’s web-site.

ACTION 26, 27 & 28	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	LB Hackney (Environment Department)	The direct air quality impacts are likely to be reasonable for localised hot-spots where routine bonfires take place. Contribution to overall air quality within the Borough is likely to be negligible.	Positive: reduced likelihood of nuisance occurrence Negative: none identified
	Cost effectiveness & feasibility	Timescales for implementation	Perception
	Feasibility high. Costs are small based on existing duties of Council’s Environment department.	On going	Positive by residents.

4.4.6 The Council's Waste Recycling Strategy - Promotion of composting

The Council is committed to the Government targets on reducing the amount of municipal waste going to landfill. In line with this requirement the Council's Waste Recycling Strategy (2002- 2004) sets out how the Council propose to achieve these goals through a number of recycling schemes covering kerbside collections and conventional 'bring sites'.

Composting organic waste can greatly reduce the potentially harmful emissions arising from bonfires and the pollution of water courses from landfill sites through returning organic matter to the soil. However, composting produces bio-aerosols, which may require consideration for large municipal waste composting sites.

The composting market in the UK is relatively immature. However, between 1993 and 1997 the number of large composting sites within the UK rose from 20 to 47. This continues to increase. The Council is currently looking into a number of composting schemes – centralised, decentralised, home composting and community composting - and is currently evaluating the relative merits of each.

Action 29

The Council will promote composting as an alternative means of reducing waste disposal reducing waste to landfill/incineration and any perceived need for domestic bonfires.

ACTION 29 Promoting composting	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	LB Hackney (Environment Department)	The direct air quality impacts are likely to be reasonable for localised hot-spots where routine bonfires take place. Contribution to overall air quality within the Borough is likely to be negligible.	Positive: reduced likelihood of nuisance occurrence Negative: none identified
	Cost effectiveness & feasibility	Timescales for implementation	Perception
	Feasibility high. Costs are negligible for home composting.	On going	Positive by residents.

4.4.7 Emissions from domestic heating

Emissions from heating buildings account for a significant proportion of London's air pollution. It is stated in the Mayor of London's Air Quality Strategy that about 21% of nitrogen oxides emissions (arising from burning natural gas), result from

the heating of buildings.

Through the Decent Homes Programmes, the Council is committed to making all social housing decent by 2010. The minimum standard set is works such as having good roofs, heating, insulation and reasonably modern kitchens and bathrooms.

In addition Hackney makes available grants through the Home Energy Efficiency Scheme for anyone on benefits. Work carried out includes draught prevention, loft and cavity insulation, all of which provide energy efficient improvements and could lead to reduction in the use of domestic boilers and hence emissions to air. In addition to the Energy Efficiency Scheme the Council promotes the work of the Winter Fuel Helpline for those eligible according to the criteria for payment. To get a Winter Fuel Payment for winter 2003/2004 you needed to be 60 or over in the qualifying week of 15 to 21 September 2003 and normally living in Great Britain or Northern Ireland in that week. However, some people cannot get a Winter Fuel Payment.

Action 30

The Council will continue to provide advice on effective heating and insulation through its appointed scheme contractors

ACTION 30 Reducing emissions from domestic heating	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	LB Hackney (Environmental Services and Housing)	The direct air quality impacts are likely to be negligible as a result of stand-alone policy.	Positive: improved standard of living and longer-term cost savings to residents. Negative: none identified
	Cost effectiveness & feasibility	Timescales for implementation	Perception
	Feasibility high. Costs covered through existing grants	On going	Positive by residents.

4.4.8 Controlling dust from construction sites.

Construction activities can represent a significant local source of particulates without the employment of appropriate mitigation measures. Where significant dust issues occur the Environmental Protection Act 1990 can be used to initiate control measures through 'nuisance'. However, it is best to avoid such issues from the outset in order to avoid costly legal proceedings against the site and to avoid any protracted investigations regarding the likely source of dust.

Action 31

The Council will develop a Code of Construction Practice for contractors undertaking work within the Borough in order to avoid the occurrence of elevated levels of dust emanating from construction sites.

ACTION 31 Code of Construction Practice	Responsibility	Air Quality Impacts	Non Air Quality Impacts
	LB Hackney (Environment department)	The direct air quality impacts are likely to be reasonable in the vicinity of construction sites. Contribution to overall air quality within the Borough is likely to be negligible.	Positive: improved surrounding during construction Negative: none identified
	Cost effectiveness & feasibility	Timescales for implementation	Perception
	Feasibility high. Costs minimal.	On going	Positive.

4.4.9 Statement of cumulative impacts of non traffic measures

The cumulative impact of this package ('Non-traffic measures) is likely to bring about a reasonable ($0.2 - 1.0 \mu\text{g}/\text{m}^3$) improvement in the annual mean background NO_2 concentrations across the Borough. The package within itself is unlikely to achieve the objective for 2005 at all locations either in the short-term, or the longer-term (2010).

5 IMPLEMENTATION AND MONITORING

5.1 Future Monitoring of Implementation

Latest Policy Guidance (LAQM.PG(03)) issued to local authorities undertaking their continued duties on air quality has set out the future monitoring requirements of technical and policy issues.

The guidance on progress reporting indicates minimum reporting requirements expected by DEFRA and the Devolved Administrations. For action plan policies it is envisaged that a tabular summary of progress to date against the relevant policy would be enough. Where delays in achieving the implementation of the policy against the relevant time-scale have been encountered the local authority should indicate why delays have occurred, whilst additionally highlighting the revised time-table to which the policy measure would be assessed for future reporting.

5.2 Monitoring the Effectiveness of the Borough Spending Plan

Many of the policies contained within this action plan are contained within the Borough Spending Plan – the over-arching theme of which is a better deal for Hackney residents on transport and a more sustainable approach to transport issues. The Council aims to monitor the effectiveness of the plan through a number of follow-up assessment methods. Those most relevant to the air quality action plan are shown below and include a data collection programme.

5.2.1 Traffic surveys

Manual surveys are very flexible in terms of when and where they are done and the precise information that is collected.

These monitor traffic continuously. They provide data over a long period of time that can be averaged and is therefore not distorted by one-off circumstances. This data does not give a break down of specific vehicle types.

Currently the only traffic survey data comes from TfL surveys or from scheme specific surveys. Funding is available from the Borough Spending Plan 2006/7 to carry out traffic surveys, and details of the monitoring schemes are currently being devised.

5.2.2 Cycle automatic traffic counters

These operate continuously and provide an ongoing source of data on numbers of cyclists on these routes. In addition to count surveys, the Council is considering developing a survey for 2006/7.

5.2.3 Bus journey times

TfL carry out bus journey time surveys and provide information to the council.

6 CONSULTATION

The Council works closely with other local authorities as part of the Central London Air Quality Cluster Group to ensure that the Council's air quality policies are consistent with its neighbours and statutory bodies. This has additionally included working with statutory bodies including the Environment Agency (EA), Greater London Authority (GLA), DEFRA and the Association of London Government (ALG).

Consultees have included Neighbouring Local Authorities, the central London cluster group, the statutory consultees, all 420 local groups identified by the council's communications section, in addition an article was placed in Hackney Today, and the consultation documents have been placed in all libraries, the council's website and summaries available in other council offices. Consultees' responses have been used in preparation of this final action plan. In addition many of the actions in the plan have been the subjected to widespread local consultation, for example the Controlled Parking Zones.

Statutory Consultees include:

- . •Secretary of State – DEFRA
- . •Environment Agency
- . •The Mayor
- . •Transport for London
- . •Neighbouring authorities – Central London Cluster Group

APPENDIX 1 - GLOSSARY OF TERMS AND ABBREVIATIONS

AQMA	Air Quality Management Area
ALG	Association of London Government
BAT	Best Available Techniques
BSP	Borough Spending Plan
CERC	Cambridge Environment Research Consultants Ltd
CFV	Clean Fuel Vehicles
CPZ	Controlled Parking Zone
CNG	Compressed Natural Gas – same as the gas many use for cooking but stored in a compressed form.
DEFRA (DETR)	Department for Environment, Food and Rural Affairs (formerly Department of the Environment, Transport and the Regions (DETR)).
EA	Environment Agency
ELLX	East London Line Extension
EST	Energy Savings Trust
Euro Standards	Europe wide vehicle standards that set progressively stricter emission limits for years 1996, 2000, 2006 and 2008 respectively. For example, Euro III and Euro IV.
FQP(s)	Freight Quality Partnership(s)
GLA	Greater London Authority
HGV(s)	Heavy Goods Vehicle(s)
LAPC	Local Authority Pollution Control
LAQM	Local Air Quality Management
LGV(s)	Light Good Vehicle(s)

LNG	Liquefied Natural Gas – a mixture of propane and butane, currently the most widely used cleaner fuel in the UK.
LP	Local Plan
Modal Shift	Change of method of transport from one to another e.g. moving from car use to other forms of transport such as walking, cycling or public transport.
NAQS (AQS)	National Air Quality Strategy (Air Quality Strategy)
RPC	Reduced Pollution Certificate
SoS	Secretary of State (for the Environment)
SRA	Strategic Rail Authority
t/yr (t/km/yr)	tonnes per year - the amount of pollutant emitted within the period of one year (<i>also on an area basis (km²)</i>)
TfL	Transport for London
TLRN	Transport for London Road Network
µg/m(mg/m)	microgram per cubic metre (<i>milligrams per cubic metre</i>) For example, a nitrogen dioxide concentration of 1 µg/m ³ (<i>mg/m³</i>) means that one cubic metre of air contains one millionth (<i>one thousandth</i>) of a gram of nitrogen dioxide.
UDP	Unitary Development Plan

APPENDIX 2 - REFERENCES

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APPENDIX 3- UK AIR QUALITY STANDARDS AND OBJECTIVES

Summary of objectives of the National Air Quality Strategy

Pollutant	Objective	Measured as	To be achieved by
Benzene All Authorities	16.25 µg/m ³	Running Annual Mean	31 December 2003
Benzene Authorities in England and Wales only	5 µg/m ³	Annual Mean	31 December 2010
Benzene Authorities in Scotland and Northern Ireland only ^a	3.25 µg/m ³	Running Annual Mean	31 December 2010
1,3-Butadiene	2.25 µg/m ³	Running Annual Mean	31 December 2003
Carbon monoxide Authorities in England, Wales and Northern Ireland only ^a	10.0 mg/m ³	Maximum daily running 8 Hour Mean	31 December 2003
Carbon monoxide Authorities in Scotland only	10.0 mg/m ³	Running 8 Hour Mean ^b	31 December 2003
Lead	0.5 µg/m ³	Annual Mean	31 December 2004
	0.25 µg/m ³	Annual Mean	31 December 2008
Nitrogen dioxide^c	200 µg/m ³ Not to be exceeded more than 18 times per year	1 Hour Mean	31 December 2005
	40 µg/m ³	Annual Mean	31 December 2005

Nitrogen Oxides**	(V) 30 µg/m ³	Annual Mean	31 December 2000
Ozone*	100 µg/m ³	Running 8 hour Mean Daily maximum of running 8 hr mean not to be exceeded more than 10 times per year	31 December 2005
Particles (PM₁₀) (gravimetric)^d All authorities	50 µg/m ³ Not to be exceeded more than 35 times per year	24 Hour Mean	31 December 2004
	40 µg/m ³	Annual Mean	31 December 2004
Particles (PM₁₀) Authorities in Scotland only ^e	50 µg/m ³ Not to be exceeded more than 7 times per year	24 Hour Mean	31 December 2010
	18 µg/m ³	Annual Mean	31 December 2010
Sulphur dioxide	266 µg/m ³ Not to be exceeded more than 35 times per year	15 Minute Mean	31 December 2005
	350 µg/m ³ Not to be exceeded more than 24 times per year	1 Hour Mean	31 December 2004
	125 µg/m ³ Not to be exceeded more than 3 times per year	24 Hour Mean	31 December 2004
	(V) 20 µg/m ³	Annual Mean	31 December 2000
	(V) 20 µg/m ³	Winter Mean (01 October - 31 March)	31 December 2000

Notes:

a. In Northern Ireland none of the objectives are currently in regulation. Air Quality (Northern Ireland) Regulations are scheduled for consultation early in 2003.

b. The Quality Objective in Scotland has been defined in Regulations as the running 8-hour mean, in practice this is equivalent to the maximum daily running 8-hour mean

c. The objectives for nitrogen dioxide are provisional.

d. Measured using the European gravimetric transfer sampler or equivalent.

e. These 2010 Air Quality Objectives for PM 10 apply in Scotland only, as set out in the Air Quality (Scotland) Amendment Regulations 2002.

$\mu\text{g}/\text{m}^3$ - micrograms per cubic metre

mg/m^3 - milligrams per cubic metre

*Ozone is not included in the Regulations

** Assuming NO_x is taken as NO_2

(V) These standards are adopted for the protection of vegetation and ecosystems. All of the remainder are for the protection of human health.

New particle objectives for England, Wales, Northern Ireland and Greater London not included in Regulations

Region	Objective	Measured as	To be achieved by
Greater London	50 $\mu\text{g}/\text{m}^3$ not to be exceeded more than 10 times per year	24-hour Mean	31 December 2010
Greater London	23 $\mu\text{g}/\text{m}^3$	Annual Mean	31 December 2010
Greater London	20 $\mu\text{g}/\text{m}^3$	Annual Mean	31 December 2015
Rest of England, Wales and Northern Ireland	50 $\mu\text{g}/\text{m}^3$ not to be exceeded more than 7 times per year	24-hour Mean	31 December 2010
Rest of England, Wales and Northern Ireland	20 $\mu\text{g}/\text{m}^3$	Annual Mean	31 December 2010

