

Royal Borough of Kingston upon Thames

Environmental Report Addendum November 2005

Introduction

This addendum adds further detail to the Local Implementation Plan Environmental Report (March 2005) in the form of:

- an outline of the Local Implementation Plan (LIP) and its main objectives
- the LIP's relationship with other plans and programmes
- an analysis of international, national, regional and local plans which concern environmental protection and have informed the development of the LIP and its SEA
- a description of the duration of environmental effects and any secondary, complementary or synergistic effects
- a note on the methods used to assess LIP effects
- more information on what will be monitored, how it will be conducted and by who
- a non-technical summary of the Environmental Report

Outline of the Local Implementation Plan (LIP) and its main objectives

The LIP contains the transport strategy to be pursued by the Borough up to 2011, coinciding with the period covered by the Mayor's Transport Strategy and contributing to that Strategy's implementation in this Borough.

The LIP philosophy is to comprehensively reduce the need to travel, in terms of frequency and distance but to selectively increase the opportunity to travel if this is needed to provide adequate accessibility. The overall expectation is that the Borough's economic and social needs can be supported without any increase (and in fact a small decrease) in traffic as a result of greater reliance on non-car forms of transport. This will lead to an improvement in air quality and make an important local contribution to limiting global warming.

The LIP will improve accessibility and social inclusion and the Council will continue working closely with the Mobility Forum and voluntary sector partners in Kingston. The Council will take an active approach at the sub-regional level to advance medium and long-term public transport priorities on orbital movement and links between regional centres.

LIP objectives are:

- To restrain demand for travel as a whole
- To make non-car means of transport more attractive, thereby reducing reliance on the car
- To reduce congestion on the road network
- To improve accessibility to town centres and other important facilities for non-car users
- To make efficient use of our limited road space
- To maintain our transport assets at an appropriate level and at least meet national highway condition standards
- To improve road safety and the quality of streets in respect of security, noise, air quality and visual appearance
- To make social inclusion and equality considerations central to our transport policies.

The LIP contains several targets which quantify the progress being aimed for. The most important are to bring the car share of all trips by Borough residents (53% in 2001) down to 50% by 2006 and 45% by 2011 so that 55% of trips will be made by other means in 2011. That will permit a slight decrease in absolute levels of car use in the Borough's town centres (down 5% by 2011) and in the remainder of the Borough (down 3% by 2011). Compared to the 1994 to 1998 average, the numbers of killed and seriously injured on the roads will fall by between 40% and 55% by 2010, depending on the class of road user.

All schools will have travel plans, cycle use will double and walking trips per person will rise 10%. The condition of roads and footways will be brought up so that all are at a safe and serviceable standard by 2011.

As part of the consultation process a Local Implementation Plan Consultation Draft Summary was produced in March 2005. This remains available by request from Caroline Stanyon, Local Implementation Plan (LIP) Team, 020-8547-5204.

LIP relationship with other plans and programmes

The LIP is influenced by a wide range of other plans whose content has some bearing on transport and environmental policy in the Borough. In approximate order of importance to the LIP's contents these are:

Plan or Programme	Area of Influence
Mayor's Transport Strategy	All aspects
The London Plan	Population and employment forecasts, land use policy, parking policy, social inclusion objectives.
Borough Policy Statement	Objective to promote alternatives to the car and achieve a sustainable future, and reconcile economic development with "putting the environment at the heart of everything we do".
RBK Community Plan	The Plan contains the aspirations of the community which, wherever possible, the LIP seeks to deliver.
SWELTRAC Policy	South West London transport improvements which the LIP seeks to deliver.
South London sub-regional development framework (SRDF)	Regional aspects of planning and transport
Disability Discrimination Act (1995)	Equality aspects of transport policies
RBK Air Quality Action Plan (2005)	Air quality improvement
National Motorcycling Strategy (2005)	PTW policy

Analysis of international, national, regional and local plans which concern environmental protection and have informed the development of the LIP and its SEA

It is assumed that local and regional plans have already taken into account national and international obligations and objectives. Only the most relevant international and national plans are therefore listed.

Plan or Programme	Area of Influence
International	
EU Birds Directive 79/409/EC	Biodiversity and the protection of endangered species of bird
EU Habitats Directive 92/43/EC	Biodiversity and the protection of key habitats
Kyoto Protocol on Climate Change (1997)	Sets the obligation for signatories to reduce greenhouse gases by, in the UK's case, at least 12.5% below 1990 levels by 2008 to 2012
National	
Environment Act (1995)	This Act required the preparation of a national air quality strategy and a system of Local Air Quality Management by local authorities.
Road Traffic Reduction Act (1997)	Established a duty on local authorities to reduce traffic or reduce the growth rate of traffic
National Road Safety Strategy (2000)	Basis for road safety targets that have been adopted (or bettered) by London and by individual local authorities
Environmental Assessment of Plans and Programmes Regulations 2004	Domestic legislation to implement EU directive on SEA
UK Sustainable Development Strategy 1999 (revised March 2005)	Overall sustainability considerations including resource consumption
Regional	
Mayor's Air Quality Strategy (2002)	Road vehicle emission reduction
Mayor's Biodiversity Action Plan (2002)	This contains 72 proposals to protect and care for London's biodiversity. Greening the built environment is especially relevant to the LIP
Mayor's Municipal Waste Management Strategy (2003)	Directs Boroughs to ensure waste is handled in a sustainable manner
Mayor's Energy Strategy (2004)	Sets target to reduce CO2 to at least 20% below 1990 levels by 2010
Mayor's Ambient Noise Strategy (2004)	Prioritises the need to cut noise from transport, especially road vehicles

Description of the duration of environmental effects and any secondary, complementary or synergistic effects

Air quality limits are set to take both the peak concentration and the duration of medium and high concentrations into account. Research indicates that, whilst exposure to vehicle pollution will not cause asthma or other similar respiratory diseases, it can adversely affect those who have an existing predisposition or susceptibility. These effects may vary with pollution levels.

Studies show that when these levels increase, so do admissions to hospitals; particularly amongst the elderly and those having heart and lung disorders. Locally the Kingston Primary Care Trust has identified rising admissions year on year for patients over 65 with respiratory problems. They have used data from the Meteorological Office in conjunction with virology data in a pilot project to predict when patients with chronic breathing problems would become unwell. This allows pre-emptive treatment at home and reduces hospital admissions. The approach should be extended to all GP surgeries by late 2005.¹

There is a connection between climate change and air quality in two areas. The first is that summertime smog and air quality problems are exacerbated by high temperatures, which also contribute to health problems for vulnerable groups with respiratory diseases. Past CO2 emissions already make further rises in temperature inevitable and unless radical measures are taken to limit future CO2 emissions the temperature rises will strongly accentuate the negative consequences of a given level of air pollutant emissions.

The second and rather paradoxical synergistic effect is that reducing air pollutant emissions, especially those that affect the atmosphere well above ground level, will in turn reduce their blocking effect and will allow more sunlight to reach the earth, accentuating global warming.

These synergistic effects make it all the more pressing to limit emissions of both global warming gases and air quality pollutants.

Methods used to assess LIP effects and technical difficulties encountered

In order to test the effect of a variable being studied one needs, ideally, to hold all other variables constant. This can be done in a laboratory but is almost never possible in the transport area where numerous real world variables affect outcomes like traffic levels, congestion, casualties, patronage of buses and trains, levels of walking and cycling and so on. There is therefore always a subjective element in assessing the effects of an intervention or combination of interventions. The Council relies on the expertise of officers in particular fields to apply a common sense test to any data; to analyse to the best of their ability how other variables have affected or may affect outcomes. At times two elements of the LIP may at least temporarily detract from each other, for instance a stepped up programme of road or bridge maintenance may worsen congestion and air quality while the work is underway. When the Council report on progress in the LIP Annual Progress Report the environmental results will be accompanied by an explanation in cases where this has occurred. Windfall gains from variables the Council does not control will also be mentioned, for instance favourable weather.

In some cases annual surveys are used, for instance to record rare species in the Borough, to make screenline counts of cyclists or to record the condition of roads or footways. In other cases continuous automatic surveys are conducted at fixed locations, notably of traffic counts and air quality.

What will be monitored, how it will be conducted and by who?

Table 6 in the Environmental Report has now been updated as follows:

¹ Source: Paragraph 4 of Appendix N covering Provision of beds – Kingston Hospital, considered at Executive on 26 July 2005

Objectives	Existing or Potential Indicators	How and by Who
Population and Human Health		
Reduce crime and fear of crime at transport interchanges	Numbers of incidents of crime against the person at transport interchanges and % change year on year	British Transport Police
Improve road safety particularly for cyclists, pedestrians and motorcyclists	Number of killed or seriously injured on Borough roads.	Metropolitan Police collect and compile casualty statistics, RBK analyse them to decide local action needed.
Improve physical fitness, by encouraging walking and cycling particularly for short journeys.	% of journeys made on foot/cycling.	London Transport Demand Survey
Improve accessibility of transport for all sections of the community to reach key services (especially health services).	% of residents within 400 metres of a bus stop which is the objective in London Buses 'Guidelines for Planning Bus Services'.	London Buses and RBK
	Public Transport Accessibility Level (see figure 2.8 in Local Implementation Plan)	TfL
Material Assets		
Reduce impact of transport infrastructure on natural resources e.g. by using recycled aggregates in construction and maintenance.	% of recycled aggregates used in road maintenance projects.	RBK Highway Asset Management section
Improve condition of pavements and transport infrastructure through regular maintenance.	BVPI 187 on footway condition	RBK Highway Asset Management section using methods detailed in paragraphs 5.13 to 5.16 in the Local Implementation Plan.
Biodiversity, Landscape/Townscape		
Protect and enhance greenbelt and open spaces.		Loss of greenbelt and open spaces, if any, is recorded by Planning Policy section in the UDP Annual Monitoring report
Reduce the impact on rare and declining species and those of local importance.	Annual recording of numbers and types of rare species in the Borough	RBK Ecology Officer
Enhance streetscape.	Number of projects aimed at improving streetscape.	RBK Neighbourhood Services Department

Objectives	Existing or Potential Indicators	How and by Who
Noise		
Reduce negative effects of noise from transport infrastructure.	Traffic decreases next to schools and hospitals (using ATC data). Number of noise complaints made in relation to traffic	RBK Highways and Transportation data collection section Environmental Health Department
Increase use of 'quiet' modes; walking and cycling	Mode share for walking and cycling by RBK residents	London Transport Demand Survey
Climatic Factors		
Reduce vulnerability of transport infrastructure to effects of climate change (e.g. flooding risk).	Condition of drainage system from highway	RBK Highway Asset Management section
Reduce greenhouse gas emissions from transport sources.	% of journeys made by sustainable modes. Number of vehicle miles travelled in the Borough.	London Transport Demand Survey DfT annual estimate of million vehicle kilometres
Reduce need to travel by private car.	Average new build density	UDP Annual Monitoring report
Air Quality		
Reduce emissions from transport sources in AQMAs.	Emissions data from roadside air quality monitoring stations.	Measured annually and recorded in Air Quality Action Plan progress report and UDP Annual Monitoring Report.
	Traffic decreases in AQMAs.	Whole Borough is an AQMA. Target for traffic decline will be measured annually (see section above).

Non-technical summary of the Environmental Report

The Environmental Report is written in as concise and plain English a style as possible but inevitably it contains some more technical material. For the reader who desires a simpler approach the following non-technical summary should be useful.

The Environmental Report contains an analysis of how the Local Implementation Plan will affect the environment of the Borough and wider effects like global warming. The intention is to see the whole environmental picture at the time a strategy is being drafted so that the strategy itself can be shaped in the most favourable way for the environment. The Report starts by recording the outcome of an earlier scoping report used to determine which environmental topics were significant enough to merit full coverage in the report.

These were:

- Biodiversity
- Air Quality
- Energy use, Climatic Factors and CO2 emissions
- Human Health (casualties, noise and obesity)
- Material Assets and Streetscape Issues
- The inter-relationship between environmental factors.

In each case the Report discusses what environmental problems exist, assesses the baseline situation as measured by the current or most recent data, then discusses what opportunities exist to resolve or reduce the problem in future.

Biodiversity in RBK

A long standing problem is the impact of transport on flora and fauna and a resulting reduction in biodiversity. This stems from transport infrastructure and from use of vehicles. Roads and railways tend to form long barriers to wildlife moving across them. This can lead to isolation in pockets of habitat too small to permit a healthy population.

There are 1,260 hectares of protected open space in the Borough, 13 sites of importance for Nature Conservation at Grade 1 and 15 at Grade 2. There are also nine Local Nature Reserves (LNR) and one proposed LNR. Air quality is affected by vehicle emissions though rarely at levels sufficient to harm plants. A sporadic but often more serious problem is contamination of watercourses and soil from surface run-off containing oil and fuel, heavy particulates, brake lining dust and heavy metals from the catalytic converters on cars. This all has a devastating effect on the fish population, and aquatic plant life.

The Council's transport strategy will result in land take from additional infrastructure being modest in future. The main form of landtake will be small scale and piecemeal, often resulting from efforts to encourage sustainable transport. Cycle and pedestrian paths built along verges and other green areas are an example. The LIP strategy entails a 'no net loss' approach to any new build or maintenance activity so that, if loss of trees or important habitat is unavoidable at a site, mitigation measures, including replacement, and new habitat schemes take place at another location. The Council will ensure that, during all types of highway maintenance, contractors and council officers use the latest techniques to reduce contamination of watercourses and soil and to manage and maintain the network in a manner that favours fauna and flora e.g. green corridors along road verges.

Air Quality

Poor air quality is significant cause of ill health and early death in London. It is estimated that 1,600 deaths are brought forward and 1,500 breathing problem-related hospital admissions per year occur as a result of air pollution. The RBK population is 2% of London's so the RBK share of these totals can be estimated at 32 deaths brought forward each year and 30 hospital admissions.

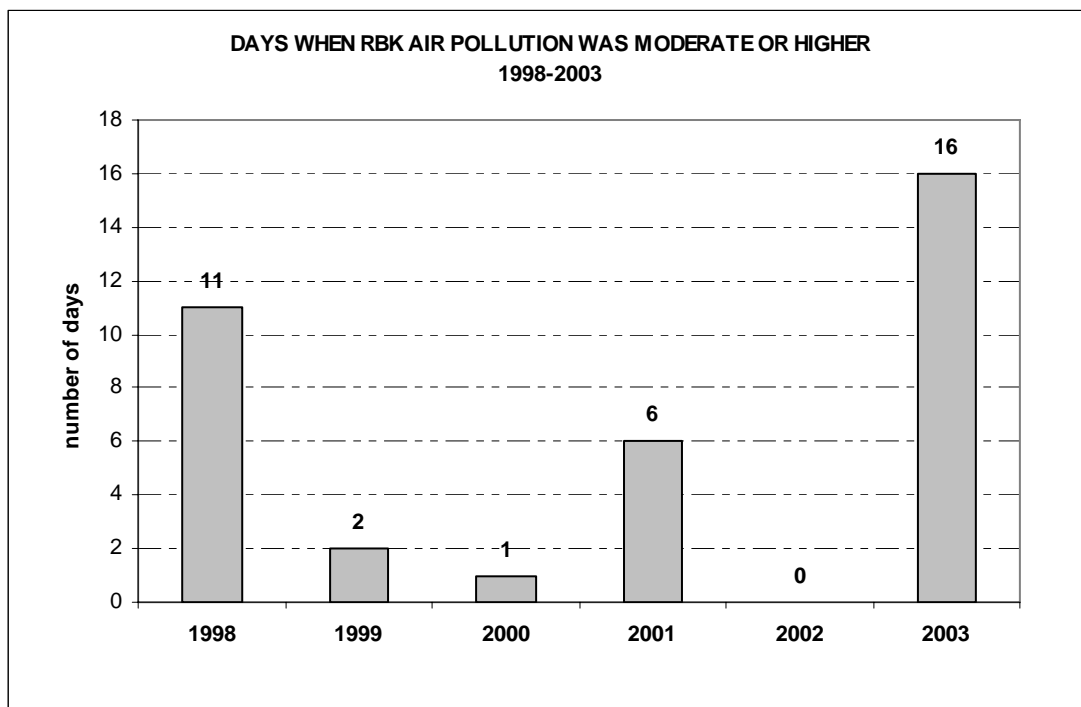
Most air pollutants are declining due to more stringent emission limits for vehicles. However nitrogen dioxide (NO₂) and fine particle are still above air quality limits and are not forecast to fall sufficiently to meet the limits in the next few years.

58% of the NO₂ and 68% of fine particle emissions in London are from road transport. A further pollutant with health implications is ozone which is normally highest in rural areas.

Specific areas in RBK which exceed the Air Quality Strategy objective include all or part of the:

- A3 (Kingston by pass)
- A307 (Richmond Road, Kingston Hall Road/ Wheatfield Way/ Clarence Street)
- A238 (Coombe Road/ Coombe Lane West/ Cambridge Road)
- A308 (Wood Street/ Kingston Street/ Kingston Road/ Cromwell Road/ Queen Elizabeth Road/ London Road/ Kingston Hill)
- A240 (Ewell Road/ Broadway/ Kingston Road/ Kingston Vale)
- A243 (Hook Road)
- A2043 (Kingston Road/ Malden Road)

An overall picture of air quality in the Borough follows:



For Nitrogen Oxides (NO_x) the annual mean level recorded beside the A3 has exceeded the limit every year, generally by 30% to 40%. The 24 hour mean for particulates should not exceed the limit value more than 35 times a year. Conditions had been improving until 2002 when only two days exceeded the limit. However, the 2003 heat wave had a significant effect on both NO_x and particulates. Provisional 2004 results show a much better picture.

Improved air quality derived from traffic reduction is one of several justifications for the LIP strategy on modal shift. The Council will increase efforts to promote modal switch away from inappropriate car use (especially on short journeys) and work to encourage cleaner vehicles using electricity or fuels such as LPG. A common misconception is that the air inside a car is cleaner than the air a pedestrian or cyclist breathes. Studies have shown that this is quite wrong and our travel awareness material makes this clear.

Energy Use, Climatic Factors and Carbon Dioxide (CO 2) Emissions

Total energy consumption in London has been growing consistently during the last 40 years and transport is a major consumer. Nationally the transport sector's emissions have increased by 47% since 1990.

The role of transport is actually worse than these figures show because they exclude air travel other than take off and landing. Air travel has grown much faster than surface travel in the last two decades. Aviation accounts for just over 3.5% of total global CO2 emissions but this could reach 15% by 2050 if growth is allowed to continue unchecked. CO2 created by transport use is accentuating what is already the most serious long term problem facing the world. Although scientific opinion is virtually unanimous and many people are attempting to modify their lifestyles, western societies in general are still in denial about the problem. The necessary changes to use of energy in the course of personal transport have hardly begun.

CO2 emissions are expected to increase 13% in RBK between 1999 and 2005. In RBK the main impact of climate change will be via flooding and the Council has Environment Agency maps showing those parts of the Borough vulnerable to flooding. Large areas of housing in Kingston beside the Thames and Hogsmill Rivers feature.

The LIP provides an opportunity to make a conscious choice about cutting energy use in the course of transport. The Council has little opportunity to alter fuel efficiency so must seek a reduction in traffic levels in order to bring down CO2 emissions. It can and will improve fuel efficiency in its own small fleet of vehicles and the larger fleets of contractor's vehicles. It has opportunities to promote conversion to energy efficient lighting and other energy saving devices in public transport facilities, roadside lighting, and general street furniture. Solar panels could be installed in the roofs and south facing walls of Council car parks and in south facing noise barriers.

Human health (casualties, noise and obesity)

Casualties

CASUALTY REDUCTION TARGETS AND PROGRESS					
As at 31 December 2004					
Category	1994 – 1998 Annual Average Casualties	Number of Casualties in 2004	% reduction by 2004	% Reduction required by 2010 from the 1994 – 1998 average	RBK target maximum number of casualties in 2010
Killed or seriously injured casualties					
All	124	64	48%	50%	62
Pedestrians	32	16	50%	50%	16
Pedal cyclists	14	10	28%	40%	8
Powered two wheelers	22	16	27%	40%	13
Children	13.4	7	47%	55%	6

The LIP road safety chapter details a strategy to use the pattern of casualties to set priorities for road safety activity. A particular priority in coming years is to work with all the Borough's schools to ensure reviews of safety in their surrounding area are completed by 2008.

Noise

A road traffic noise map of London allows residents to see what level of traffic-generated noise applies to their streets. This will help the Council identify areas where noise reduction through quiet, micro asphalt/thin road surfacing or mitigation through use of barriers is required.

Obesity

Rising levels of obesity among children and diabetes among obese adults in the Borough, on a par with national trends, are in part connected to transport trends. There is increased reliance on door to door car travel compared to walking and cycling. School Travel Plans offer the means to reverse recent trends and get more children walking and cycling to their schools or using public transport that includes a walk at one or both ends of the trip. Workplace and other green travel plans are also priorities in the LIP.

Material assets

Sustainability principles require that this generation should not subsidise its lifestyle by passing the costs to subsequent ones. The condition of some road assets in the Borough is inadequate and a backlog of maintenance exists which the LIP will tackle. The Council will aim to use, or ensure its contractors use, recycled material whenever possible in the course of construction and maintenance work.

Streetscape issues

Street clutter is a prime concern of heritage and conservation groups. Inevitably transport related signing and installations make up much of the street furniture. An audit of the Borough's street furniture will allow removal of redundant and duplicate signing and installations.

The interrelationship between environmental factors

It is likely that transport contributes at least 20% of the RBK 'ecological footprint' i.e. the area of land and water required to provide all the energy, water, food and other materials that we consume. It is therefore incumbent on the Council to follow a LIP strategy that will cut the transport contribution and play some part in bringing down the overall impact of RBK residents on the planet.

Alternative strategies and measures

A requirement of the Report is to consider whether the transport objectives could be achieved in any alternative way that would be more beneficial for the environment. In principle a congestion charging zone covering all or part of the Borough could be established provided it was supported by the Mayor of London.

Two conditions are however pre-requisites – equity and a cost-effective means of collecting the charge. Both would be major challenges for a congestion charging zone in RBK. Pursuing congestion charging as a centrepiece of the LIP approach to traffic reduction would be a radical but high-risk approach. It would mean initially diverting some financial resources away from investment in public transport, walking and cycling facilities and from highway maintenance. If the scheme succeeded as a net revenue raiser it would become possible to make good and then exceed the investment expenditure. The risk is that a good deal of time money and effort would be spent on a scheme that foundered.

The preferred strategy is the sustainable transport approach without congestion charging. The principal reason is that the number of risk elements associated with delivery of a congestion charging scheme in RBK make it almost certain that the scheme would be sub-optimal in its pricing, coverage, implementation date and therefore effect. The worst case scenario is that it would divert resources from other measures during development, then founder before the implementation stage.

Monitoring the environmental effects of the Local Implementation Plan

There will be an annual report on those environmental variables that can be monitored. This will form part of the LIP Annual Progress Report.

The Environmental Report, (and the addendum), lists those indicators that will be reported on.

End of non-technical summary.

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