

Transport for London

Environmental action plan 2002 Summary report

- ⊖ **Air quality** – improving air quality by reducing emissions, promoting cleaner fuels, implementing traffic management measures, leading by example with the TfL fleet and exploring possibilities for a low emissions zone or zones.
- ⊖ **Energy** – reducing greenhouse gas emissions and introducing cost-effective, energy-efficient measures, cleaner technology and the use of renewable energy.
- ⊖ **Ambient noise** – reducing noise on the worst affected areas of the TLRN, investigating low noise surfaces and vehicles, traffic management measures and operating techniques and promoting noise reduction on the rail network.
- ⊖ **Open space and biodiversity** – carrying out biodiversity surveys, promoting responsible use of open spaces and waterways and enhancing biodiversity.
- ⊖ **Waste** – encouraging movement of waste by rail and water and investigating and updating procedures to reduce, re-use and recycle it.
- ⊖ **Health** – promoting healthier means of travel, reducing pollutants that contribute to ill health, improving road safety and access to health services and assessing the health impacts of projects.



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Introducing TfL's environmental action plan

Transport for London's (TfL's) environmental action plan is the first step in co-ordinating and managing all our actions that impact on London's environment. It is part of a wide-ranging programme for the development and implementation of environmental policy, involving all TfL's corporate units (Finance and Planning, Corporate Services, Communications and Public Affairs, Media Relations) and business units (Street Management, Surface Transport, Rail Services). The plan should be seen in the context of the Mayor's strategies, particularly the Mayor's Transport Strategy and five environmental strategies, and will contribute to their development. It will also contribute to the Mayor's State of the Environment report to be published in 2003, the first in a series of four-yearly reports reviewing environmental policy, energy use and progress against targets in the capital.

The environment in which people live has a major effect on their health. The plan therefore examines the main environmental and health impacts of the London transport network and sets out specific actions to deal with these impacts. These actions cover six areas: air quality, energy, ambient noise, open space and biodiversity, waste, and health, setting targets in each. The plan both reflects and will inform TfL's business planning process and adopts the same six year timeframe, though many of the actions are ongoing or may take longer to complete. Like the recently published TfL Business Plan, it will be reviewed annually.

London Underground's environmental policy and procedures are not addressed specifically here, as London Underground is not yet part of TfL. Instead, details of these can be found on the London Underground website (www.thetube.com/content/about/report/environment).

TfL's environmental statement

TfL will carry out its business in a responsible way and aim to ensure that the social, economic and environmental strands of the concept of sustainable development are an integral part of the decision-making processes across the organisation.

In line with the Mayor's Transport Strategy, TfL will aim: 'to maximise the health and environmental benefits of increasing the use of public transport in relation to the car, facilitating walking and cycling, and reducing the health and environmental damage caused by vehicular emissions, traffic congestion and overcrowding' (The Mayor's Transport Strategy, page 84, paragraph 3.63).

We are well aware of the difficulties we face in improving the environment in the capital, given projected levels of population growth and the effects this growth will have on the transport system. However, the Mayor's Transport Strategy gives a clear lead in committing the Greater London Authority (GLA) and its functional bodies to the principle of sustainable development.

Sustainable development has been defined as 'development which meets the needs of the present without compromising the ability of future generations to meet their own needs' (Our Common Future, The Brundtland Report, 1987). To achieve this, economic development must go hand-in-hand with environmental improvement and social inclusion. That is why TfL has produced a Social Inclusion Action Plan and is preparing a Women's Action Plan and a Children and Young People's Action Plan, to sit alongside the TfL Business Plan in aiming to meet the sustainable development agenda.

Towards a sustainable transport system

At TfL we recognise the strong links between transport and the environment. Our aim is not only to reduce further damage to the environment in the capital but also to make real improvements that can be enjoyed by those who live in, work in, and visit London.

We see four major ways in which TfL can work to meet the objectives of the Mayor's Transport Strategy by actively improving health and the environment in London.

- ◆ **Promoting sustainable and healthy means of travel.**
- ◆ **Reducing the negative environmental impacts of the transport network.**
- ◆ **Improving the local environment, particularly town centres.**
- ◆ **Assessing the environmental and health impacts of new projects.**

We are taking forward initiatives in all these areas.



Promoting sustainable and healthy means of travel

Walking, cycling and public transport are more sustainable forms of travel than the private car. Walking and cycling in particular can reduce the risk of cardiovascular disease, help with weight control and offer psycho-social benefits. TfL is therefore developing a package of strategies to make walking and cycling in the capital more attractive, as well as improving the public transport system to encourage drivers to leave their cars at home.



Improving the bus network

Investment in increased levels of service and improved reliability on the bus network is a priority for us. More than 11,000 additional spaces will be provided on bus services into and out of central London in the morning peak hours. New routes will include extensions to the Night bus network and more links to town centres and regeneration areas. We shall also be offering improved wheelchair access on all non-Routemaster services by 2004/05, modernising and expanding bus stations, introducing articulated 'bendy buses' on Red Arrow routes in central London and increasing the number of bus priority lanes. In addition, the BusPlus programme, delivered by the London Bus Initiative partnership,

will upgrade 70 of London's most heavily used bus routes to make them safer, cleaner, more comfortable and more reliable, and so encourage the public to make more use of them. This will not only reduce congestion but also free up other transport services to take more passengers.

Walking and cycling

Working with key boroughs and user groups, we are developing strategies for encouraging walking and cycling in London by making it a safer and more attractive place for these users and by reducing the volume of motorised traffic. We are producing a Walking Plan, and a Cycling Action Plan (see Actions 26 and 27 for details).

Travel awareness

Green Travel Co-ordinators have been appointed to develop travel awareness projects. Their role is to develop an action plan for London and support travel plan co-ordinators in the boroughs through development of best practice. They will also raise awareness of the issue through



marketing and publicity, and through awareness raising events such as Car Free Day 2002.

Interchange initiatives

Over a million people make an interchange every morning in the course of their journey. To make interchange safer and more efficient TfL have implemented a package of measures at a number of London's 600 or so interchanges, including more signs to direct people to and from the stations, improved security, travel information posters and a pilot scheme for taxi shelters outside stations. We will continue to roll out these measures at more stations and design and implement further schemes to improve interchange.

New light transit schemes and Croydon Tramlink extensions

The Mayor has recently announced the go-ahead for a number of light transit schemes, including two new tram schemes, the West London Tram Scheme and the Cross River Tram Scheme; and two new busway schemes, the Greenwich



Waterfront Transit Scheme and the East London Transit Scheme. TfL is also currently managing a study considering four main options for extending Croydon Tramlink. A decision on the progress of these options will be made in summer 2002.

Fares and ticketing initiatives

Since TfL's formation in July 2000, we have introduced a number of fares initiatives to reduce the real cost of bus travel. These include a cash fares freeze for daytime travel, Night bus fares reduced by a third, Bus Pass prices reduced, a new One Day Bus Pass to cover the whole network, and a new 'Bus Saver' ticket. We have also introduced an overall fares freeze in real terms on the Docklands Light Railway, Croydon Tramlink and

the London Underground. Looking ahead, Smartcard ticketing, which will be introduced starting in late 2002 on buses and the Underground and later extended to the Docklands Light Railway and Croydon Tramlink, will offer opportunities for stored value ticketing and targeted fares initiatives.

Major rail projects

A number of extensions or upgrades to the rail network in London are underway or planned.

- ◆ A new Docklands Light Railway extension to the City Airport is planned to be completed during 2005. Plans are also being considered for further extensions – one under the Thames to Woolwich Arsenal, beginning in 2004, if an application to Parliament is successful.
- ◆ Northern and southern extensions to the East London line are planned to be operational by 2006.
- ◆ A shortlist of options has been drawn up for Crossrail Line 1, which could be under construction in 2007 if approval can be secured by 2004.
- ◆ A ministerial decision on the Thameslink 2000 project, which will enable many cross-London journeys to be made without a change of train in the centre, is expected before the end of 2002.
- ◆ Pilot routes on the proposed South London Metro in 2003 will simplify and improve the national rail network.

- ◆ Service levels will increase as a result of the simultaneous re-negotiation of the London rail franchises.

Congestion charging for central London

By levying a daily charge on motorists travelling in or through central London, this scheme aims to encourage people to think again about using their vehicles in the centre of the city. A discount will be available for vehicles using cleaner alternative fuels (see Action 3 for details). The congestion charging initiative will therefore reduce congestion, reduce through-traffic, further encourage the use of public transport and increase business efficiency by speeding up the movement of goods and people. All revenues generated by congestion charging will be invested in the Greater London transport system.

Moving goods more sustainably

The London Sustainable Distribution Partnership has been established by TfL to bring together the boroughs, businesses and the freight industry to develop a more effective strategy for the distribution of goods and services in London. It will look at ways of improving conditions for service vehicles in central London, review the London Lorry Ban, seek to minimise the environmental impact of freight transport and servicing, and explore strategies for encouraging a progressive shift of freight from the roads to more sustainable modes of transport, such as rail and water.

Reducing the negative effects of the transport network

The transport network can have negative effects on the environment, such as the emission of greenhouse gases and other pollutants, noise, increased litter and waste, and the destruction of wildlife habitats. TfL has been actively taking measures to reduce all these effects, with London Buses leading the way by gaining a top national environmental award. The need to reduce the damage caused to the environment through the transport network is reflected in the action areas in this plan.



TfL London Buses begin trials of three zero emission hydrogen fuel cell buses in 2003.



TfL London Buses are carrying out trials of solar and wind-powered bus stops.



London Buses have won a top national award in recognition of their efforts to improve air quality in London by reducing bus emissions. This Bus Industry award is presented to the scheme that is considered to have made the biggest contribution to improving the environmental friendliness of buses, the environment in which buses operate, or the environment for bus users. Details of initiatives to reduce emissions from buses in London are set out in the report *Cleaner Air for London*. (London Buses, 2001)

Improving the local environment

The transport infrastructure, particularly our streets, makes up a significant part of our living environment. Infrastructure improvements can therefore make conditions in residential areas more liveable by making them more attractive and encouraging social and leisure activities. If London's growing population is to be housed in a sustainable way, the transport system must also provide proper access to new residential developments. TfL is working to improve the transport infrastructure, and thereby the local environment, through the following:



Promoting area-based improvements

TfL is working towards an area based approach to improving the environment. We are working with the boroughs to support and provide funding for initiatives that will benefit

cyclists and pedestrians – particularly older people, disabled people and others for whom lack of easy access is a problem. We have already set up a Cycling Centre of Excellence and appointed a Head of Walking to encourage more cycling and walking in the city.

Supporting the development of the Mayor's London Plan

TfL is working closely with the GLA, developing policies and assessment mechanisms for determining sites for future development, setting appropriate levels of car parking and ensuring proper access. TfL advises on proposed developments to ensure that transport provision and accessibility are properly taken into account in all land-use proposals. We are also working to secure improvements in public transport to benefit existing developments.

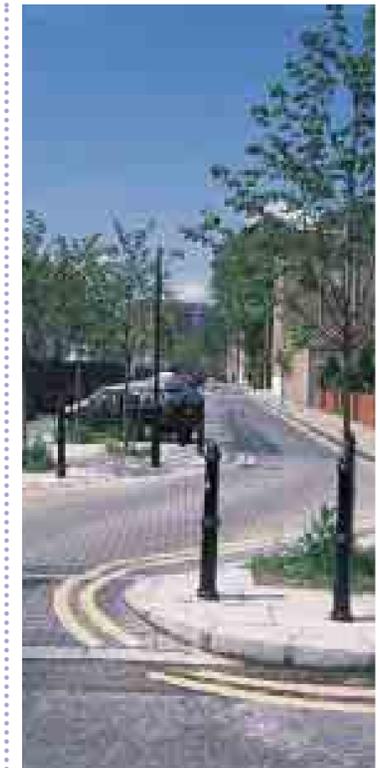
Improving town centres

Flagship town centre schemes with reduced traffic as well as improved access and conditions for public transport, walkers and cyclists, are a priority for TfL funding. We also support the Mayor's Capital Standard Initiative, launched in March 2002, which involves working with the London boroughs to improve the cleanliness of their streets and create a more pleasant street environment.

Making improvements to the street environment

Our projects to improve the street environment for

pedestrians include streetscape guidance for the TfL Road Network, and a plan for reducing street clutter including illegal advertising boards. A particularly successful scheme has been the transformation of the area around Stockwell with better lighting and pedestrian access to the Memorial Garden. These improvements, carried out in collaboration with the London Borough of Lambeth and the Stockwell Partnership, are part of a £0.5 million scheme to make Stockwell a user-friendly and attractive transport interchange. The scheme will deliver new 'green man' pedestrian crossings, relocation of bus stops to ease interchange, a dedicated cycle lane and new footpaths.



Assessing the environmental and health impacts of new projects

TfL intends to use a combination of the best of two methods currently used by central and local government departments and agencies: Social Cost Benefit Analysis (SCBA), and the New Approach to Transport Appraisals (NATA) as revised by the Guidance on the Methodology for Multi-Modal Studies (GOMMMS) (DETR 2000). SCBA appraises projects by attaching a monetary valuation to benefits and comparing their benefits and costs, while NATA complements this by considering all the impacts of a given decision against a number of government

objectives, using a combined qualitative and quantitative approach.

In addition, we are working to ensure that a project's environmental effects are appraised in much the same way as its impacts on other Mayoral (and government) objectives. If a project does or could have significant environmental impacts, a thorough qualitative / quantitative appraisal is required and this is a key determinant in the allocation of funds for new projects. We have also begun the process of incorporating Health Impact Assessment (HIA) into our project appraisal methodology. HIA assesses the impacts of a particular project, policy or action on people's health, using evidence and stakeholder experience.

Leading by example

As with other parts of the GLA family, TfL must lead by example in planning for sustainable development in London. This includes working in partnership, with TfL involved in many information-sharing and consultative partnerships to encourage environmental best practice in transport plans and initiatives. These include the Climate Change Partnership, the London Health Commission, the Low Emission Zone Steering Group and the Sustainable Distribution Partnership. TfL must improve its internal environmental performance and we are producing an internal environmental plan for corporate units. We already demonstrate our commitment to the environment in a number of important ways including production of green travel plans, green procurement and fleet management.

The Street Management Green Travel Plan

This 'SMART Plan' for employees in the Street Management directorate encourages safe walking and cycling, use of public transport, and the use of cycle couriers wherever possible. It provides new facilities for cyclists, including free cycle training, secure parking, a cycle maintenance workshop, and a cycle pool with plans to add folding and city bikes. It also ensures that fleet vehicles are environmentally-friendly and offers defensive driver training for fleet drivers.

Green Procurement

TfL is committed to introducing the concept of environmental responsibility into the procurement process. We are a signatory to the Mayor's Green Procurement Code (launched in March 2002) and are committed to discussions on the use of recycled products and to providing baseline data on recycled purchases. As the methodology develops, we shall also be discussing possibilities for signing up to that part of the Code concerned with setting targets for recycled products.

We meet regularly with our top 25 suppliers to discuss procurement strategies that support sustainability, good environmental practice and social inclusion. We are also looking at our

Corporate Procurement Strategy, the formal document necessary for signing off any procurement activity above a set value, with a view to expanding the sections on environmental issues. At the same time, our Street Management Procurement Best Value Review has identified a range of actions and policy initiatives to support sustainability and equal opportunities.

Fleet Management

The agency managing TfL fleets has recently achieved the international environmental management standard ISO 14001. They monitor the environmental performance of their fleets through an Environmental Improvement Plan, which is updated annually. The fleet managers are also taking forward a number of specific initiatives including:

- ◆ trials on alternatively fuelled vehicles: liquefied petroleum gas (LPG), compressed natural gas (CNG), battery power (external and on-board charging) and hybrid vehicles;
- ◆ a policy of installing and retrofitting particulate traps on more vehicles to achieve at least Euro 3 standard;
- ◆ signing up to the London First Clean Air Charter in 1999;
- ◆ providing guidance to drivers on fuel efficiency;
- ◆ close monitoring of fuel usage; and
- ◆ working with TfL to increase the number of alternative fuel vehicles on the fleet.



TfL Street Management use an electrically-powered Ford 'Think' vehicle for deliveries between buildings.

Action areas

TfL plans to focus on initiatives in action areas that reflect the Mayor's environmental strategies and issues in the Mayor's Transport Strategy and the London Plan. There are six action areas.

Air quality – improving air quality by reducing emissions, promoting cleaner fuels, improving air quality through traffic management measures, leading by example with the TfL fleet, and exploring possibilities for a low emissions zone or zones.

Energy – reducing and promoting the reduction of greenhouse gas emissions and the introduction of cost-effective, energy-efficient measures, cleaner technology and the use of renewable energy.

Ambient noise – reducing noise on the road and rail networks by investigating low noise surfaces and vehicles, and traffic management measures and operating techniques.

Open space and biodiversity – protecting and encouraging responsible use of open spaces including the Thames and other waterways, and enhancing biodiversity.

Waste – encouraging movement of waste by rail and water and investigating and updating procedures to reduce, re-use and recycle it.

Health – promoting healthier means of travel, and improving road safety and access to key health services and facilities.

Air quality actions

Actions	Targets	Progress
Action 1 - Reduce London bus emissions	All London buses to be Euro 2 with retrofit or better by 2005 Re-engine programme for Routemasters to Euro 2 by 2005 All buses to have particulate traps by 2005	Between April 2001 and March 2002, the network received 1100 cleaner London buses to at least Euro 2 standard on the network, including 600 to Euro 3 standard. 76 per cent of the fleet meet at least Euro 2 standard, 18 per cent have oxidising catalysts, and 50 per cent have particulate traps.
Action 2 - Include an emission target in the London Service Permit	Buses must be Euro 1 standard by 2005	This includes all buses operating through London Local Service Permits, including some local services, sight-seeing tours and some commuter services.
Action 3 - Include 100 per cent discount for alternative fuel vehicles (meeting specific conditions*) subject to the central London congestion charge	Central London Congestion Charging scheme to be in operation in February 2003	100 per cent discount agreed.*
Action 4 - Increase use of water-diesel emulsion fuel	Increase the use of this fuel on the network in 2002/3	Trials in progress on 123 vehicles to be complete by October 2002.
Action 5 - Investigate the potential and feasibility of fuel cell buses	Trial of three fuel cell buses to be completed in October 2005	London Buses is taking part in a European trial of three zero-emission Hydrogen Fuel Cell low-floor buses with an operating range of 200-250 kms, starting in October 2003.
Action 6 - Investigate taxi/private hire vehicles' emissions	Work to be initiated during 2003	
Action 7 - Develop and implement traffic management measures to help reduce emissions	London Traffic Control Centre to be operational by August 2002	Study of relationship between traffic management measures and air quality proposed. Home Zones and 20 mph zones are supported through borough funding.

* The following vehicles will not have to pay the congestion charge provided they are registered with TfL and pay an annual £10 charge:

- All alternative fuel (i.e. gas, electric, fuel cell etc.) vehicles, including bi/dual fuel vehicles that are approved vehicles or have been converted by an approved supplier as listed on the TransportAction Register maintained by the Energy Saving Trust or an equivalent register maintained by an equivalent body in the European Economic Area. Alternative fuel goods vehicles (vans and lorries) must meet Euro 3 emissions standards or higher, and cars and light commercial vehicles must meet emissions standards 30 per cent above Euro 4.

- Electrically propelled vehicles.

Air quality actions

Actions	Targets	Progress
Action 8 - Improve traffic flow through Street Works task force	Improvements by 2004	Task Force established December 2001.
Action 9 - Work with boroughs on air quality issues including funding air quality initiatives	Review borough draft AQAPs	Funded LB Camden's ClearZone. Reviewed LB Croydon's and LB Camden's draft Air Quality Action Plans (AQAPs) and will review other boroughs' AQAPs.
Action 10 - Improve the environmental performance of TfL managed fleets and investigate alternative fuels	Convert Street Management vehicles to LPG by 2006	Discussions in progress with Ford on sourcing 'Think' electric cars for use as pool vehicles. TfL fleet managers gained ISO 14001 in March 2002.
Action 11 - Transport for London will encourage their contractors to reduce emissions from their vehicle fleets	Contractors will be encouraged to meet Euro 3 standards by 2004	Information about the current fleets is being sought from current contractors.
Action 12 - Manage LEZ feasibility study	Phase 2 completion by Autumn 2002	The first phase of the study has shown a LEZ could make a significant contribution to meeting air quality objectives. Second phase now in progress considering possible geographical areas, costs/benefits, transport impacts, details of implementation and enforcement.

Energy actions (See also Air Quality Actions 1-12 above)

Action 13 - Investigate the use of renewable energy applications on TLRN network	Extend the percentage of street lighting from renewables from April 2002 (subject to availability of green energy)	Trials on renewable energy powered bus detector equipment in progress. Currently 10 per cent of street lighting for ex-trunk roads is from renewable sources.
Action 14 - Investigate illumination of bus stops and shelters using renewable energy sources	Complete trials and, if feasible, implement in 2003	Pilot trials on three solar and one wind-powered bus stops in March 2002. Trials of a further 49 bus stops will be carried out later in 2002.
Action 15 - Improve the fuel efficiency of buses	Seventy of London's most heavily used routes to be upgraded, reducing congestion and thereby improving fuel efficiency by 2005.	
Action 16 - Continue the trial of Light Emitting Diode (LED) traffic signals	Examine feasibility by 2006	On-going trials of energy-efficient LED traffic signals are ongoing and will continue for the next 3-4 years.

Ambient noise actions

Action 17 - Report on noise on TLRN	Report due December 2002	This is the first step in reducing noise in worst affected areas.
Action 18 - Use low noise surfacing when resurfacing carriageways where appropriate	Carry out as part of planned maintenance when re-surfacing is required	
Action 19 - Sample measurement of noise on TLRN	Complete by Spring 2002	To improve understanding of 24-hour noise profiles and provide comparisons with future noise mapping and modelling.

Open space & biodiversity actions

Actions	Targets	Progress
Action 20 - Progress further biodiversity surveys on TLRN	Complete area studies	Pilot biodiversity survey of North Central Area completed. Studies of four remaining areas are ongoing.
Action 21 - Carry out tree planting as part of street improvement schemes where appropriate	Implement on an ongoing basis	Project investigating how conditions for tree root growth can be matched to highway engineering requirements completed in March 2002.

Waste actions

Action 22 - Investigate how TfL can best encourage movement of waste by rail and water	Implement on an ongoing basis	London Sustainable Distribution Partnership, formed in February 2001, will examine possibilities.
Action 23 - Examine the suitability of recycled materials for TLRN	Implement on an ongoing basis	Examine, as first stage, whether recycled materials have approval for use on lower speed roads.

Health actions

Action 24 - Carry out a review of walking, cycling and area-based schemes	Complete review by autumn 2002	First phase programme approved February 2002 for implementation 2002/03. The second phase will include schemes and initiatives for 2003/04 - 2008/09
Action 25 - Develop a Walking Plan	Produce plan by end 2002	Head of Walking appointed summer 2001.
Action 26 - Develop a cycling action plan within the Cycling Centre of Excellence	Develop Cycling Action Plan by December 2002	The CCE has been established and is working in partnership with the London boroughs to introduce a network of high quality (LCN+) cycle routes with improved parking and accessibility. A procedure for auditing all street and interchange schemes will be developed in 2002.
Action 27 - Carry out improvements to the TLRN, particularly for vulnerable street users and public transport	Implement on an ongoing basis	Seven area improvement schemes will be in place by the end of 2002 with two more scheduled for early in 2003.
Action 28 - Improve the safety of buses	From September 2002 - all newly employed drivers/conductors to achieve BTEC within one year of appointment, and by December 2003 - all service controllers to have achieved BTEC qualification	Part of the training content for the new BTEC award is focussed on improved driving skills.
Action 29 - Implement street safety initiatives	Reduce casualties by 40 per cent on 1994-98 figures by 2010	London Road Safety Plan agreed in July 2001 and now being implemented. Measures include improvements to crash hot spots, mass-media campaigns targeted at motor-cycle crashes and pedestrian casualties, and the introduction of more 20 mph speed limits and speed cameras. The interim report on progressing the London Road Safety Plan on the TLRN will be ready in March 2002.
Action 30 - Incorporate health assessments into project appraisal	2003	Seminar on use of Health Impact Assessments to determine the health impacts of new projects held in April 2002.