

Making London a Sustainable City

Reducing London's Ecological Footprint



London First


LONDON REMADE
The business of recycling

Making **London** a Sustainable City

Reducing London's Ecological Footprint

BACKGROUND

The 'Ecological Footprint' is increasingly used as the standard way to measure the ecological aspect of the sustainability of a country, city, or organisation. It represents the area (in global hectares - gha) of productive land or sea needed to produce the resources consumed by society and absorb the waste generated.

London First and London Remade secured Landfill Tax Credit funding from Biffaward to investigate how London's public and private sector might work together to reduce London's Ecological Footprint. This work was overseen by a cross-sector Steering Group, who commissioned research from WSP Environmental and Natural Strategies to identify the key contributors to the Ecological Footprint for London. Using this diagnostic tool, we were able to identify areas which might be reduced in their impact.

A series of consultations was held with member companies of London First, the Mayor of London, the Greater London Authority, the Association of London Government, and the London NHS. A broad spectrum of views was obtained, and the findings reflected here carry the full endorsement of the Steering Group.

We built on previous work on London's Ecological Footprint, particularly the report 'City Limits' – see references. We have sought to refine the methodology for measuring the Ecological Footprint, and to take the important further step of proposing how to reduce it.

The London Sustainable Development Framework was launched in June 2003, and includes a set of 20 headline indicators of progress. One is the Ecological Footprint. Our proposals are presented in the context of that Framework, and we hope that they will help create a common agenda for change to help everyone understand the role they can play in making London a more responsible and sustainable city.

This work should also be seen in the context of the Mayor's London Plan and the Transport and Economic Development Strategies which set out the policy framework for a sustainable approach to the development of London over the next 15-20 years. Specific strategies on Waste, Energy, Biodiversity, Noise and Air Quality all aim to improve the environment of London – see page 5.

Further information on London's Ecological Footprint, and copies of all our reports, are available from www.londonfootprint.com

FUNDED AND SUPPORTED BY

The logo for London First, featuring the words "London First" in a stylized, handwritten font. "London" is in purple and "First" is in red.

MAYOR OF LONDON

National Grid Transco

The logo for Biffaward, featuring the word "Biffaward" in a bold, sans-serif font. "Biff" is in red and "award" is in white, set against a green oval background.

investing in the environment

Biffaward Programme on Sustainable Resource Use

Objectives

This report forms part of the Biffaward Programme on Sustainable Resource Use. The aim of this programme is to provide accessible, well-researched information about the flows of different resources through the UK economy based either singly, or on a combination of regions, material streams or industry sectors.

Background

Information about material resource flows through the UK economy is of fundamental importance to the cost-effective management of resource flows, especially at the stage when the resources become 'waste'.

In order to maximise the Programme's full potential, data will be generated and classified in ways that are both consistent with each other, and with the methodologies of the other generators of resource flow/waste management data.

In addition to the projects having their own means of dissemination to their own constituencies, their data and information will be gathered together in a common format to facilitate policy making at corporate, regional and national levels.

KEY FINDINGS OF OUR RESEARCH

World cities share the same issues in relation to sustainable development. If they are to thrive they face their own immediate challenges of air quality, congestion, waste disposal etc. while also being subject to the wider threats such as those which climate change may bring. Tackling these issues is fundamental to urban development as each is capable of undermining economic competitiveness and damaging quality of life.

Sustainable urban development needs to be charted on the three axes of economic, ecological and social progress (the 'triple bottom line') but here we use the London Ecological Footprint as a tool to highlight areas of ecological impact which need urgent attention.

We found that humanity as a whole is demanding more from its environment – the Earth – than the planet can sustain. Countries such as the UK, and cities such as London, are demanding a great deal more. If everyone lived as Londoners do, it would require over three planet Earths to support them.

Area of available land in the world

1.9 gha
per person

Global average required

2.3 gha
per person

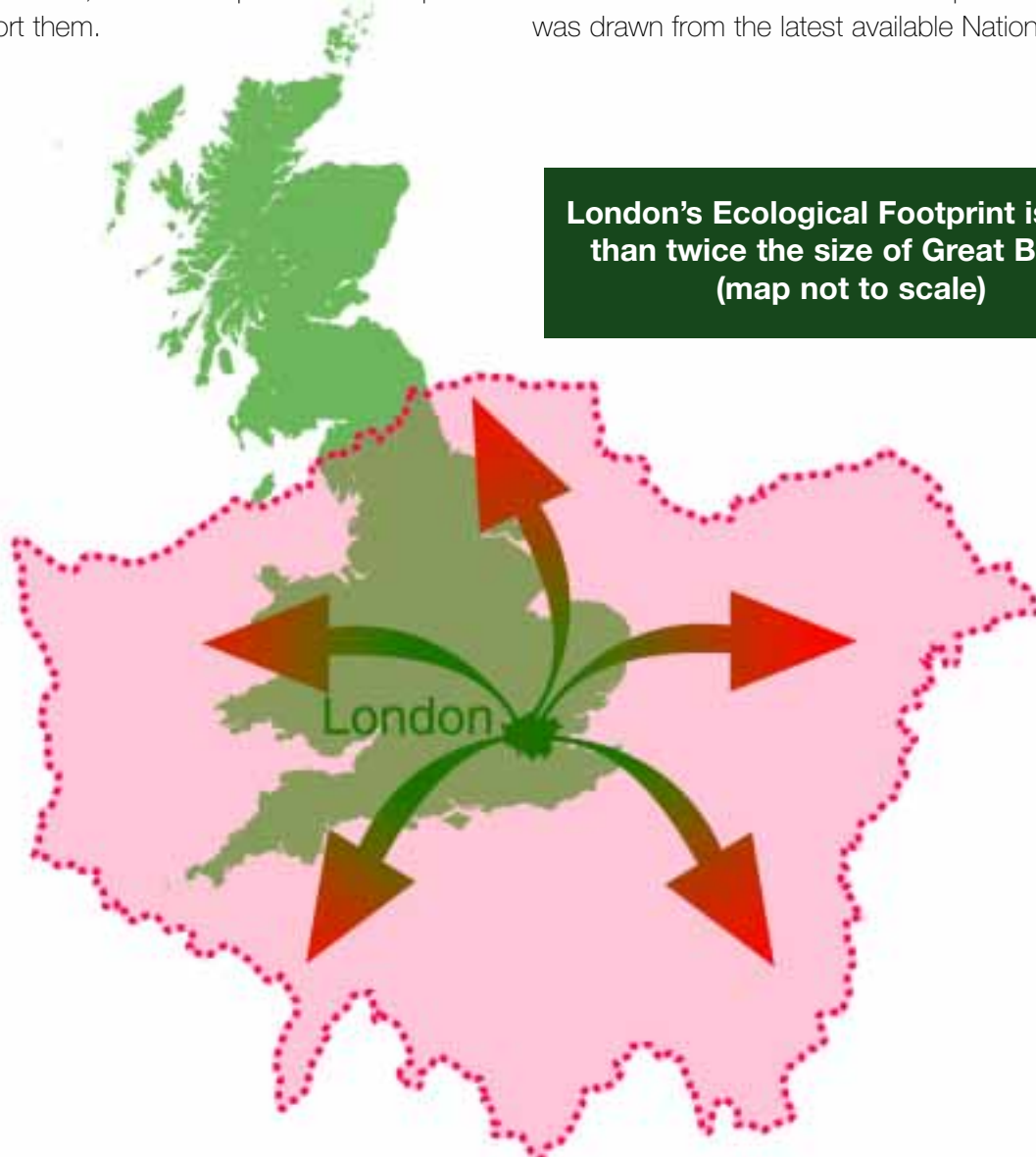
UK average required

5.3 gha
per person

London average required

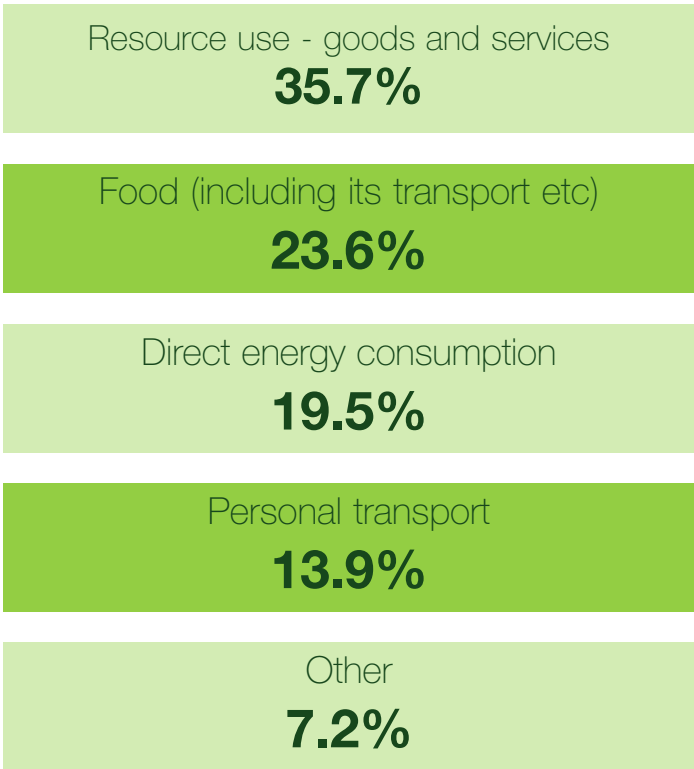
5.8 gha
per person

The full findings of our research, and the methodology used, are set out in "Determining London's Ecological Footprint and Priority Impact Areas for Action", by WSP Environmental and Natural Strategies, published in 2003 and available from www.londonfootprint.com. The data was drawn from the latest available National Accounts.



London's Ecological Footprint is more than twice the size of Great Britain (map not to scale)

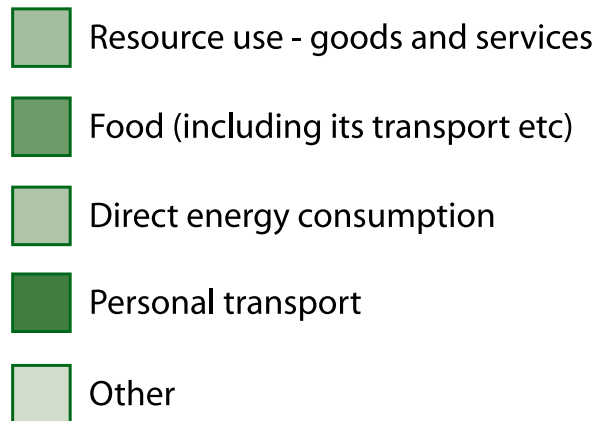
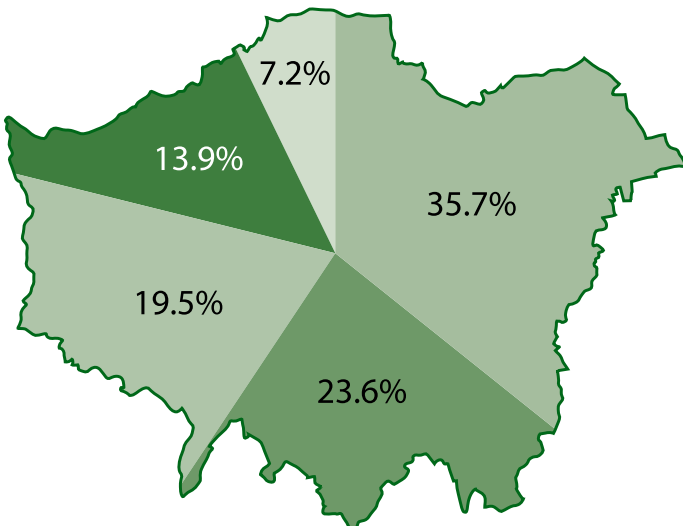
London's consumption clearly outstrips the supply of natural resources and points to major problems and constraints to future development. It is instructive to examine the main contributors to London's Ecological Footprint:



Food and packaging - a contributor to London's Ecological Footprint
Image © Adam Hinton

In many of these areas significant progress is being made by companies and the public sector. In some, like traffic reduction, London leads the way. The challenge now is to enhance London's competitiveness as a world city by seizing the opportunity to demonstrate sustainable urban development across the entire spectrum.

Our work points to a consensus to reduce London's Ecological Footprint in the ways summarised in an Agenda for Change. This is followed by a programme of potential actions, a summary of relevant policies of the Mayor and reviews of the case studies which were carried out.



AGENDA FOR CHANGE

We are presenting an 'agenda for change', which we believe takes us forward, towards a more sustainable London – a city which will be able both to meet the need of its inhabitants and to compete as a world city, without running out of resources.

Footprint analysis brings with it the ability to set priorities for action, as it allows dissimilar issues to be measured on the same scale and compared. This Agenda sets out the key areas in which action will need to be concentrated in order to make London a more sustainable city.

None of these are new, but the choice of key areas, and the order in which they are placed, does shed new light on the priorities for action.

Our aim throughout has been to identify actions which will help to maintain and improve London's position as a world city, and where possible make London less vulnerable to future shocks.

1. RESOURCE USE

The consumption of short-life goods, especially paper, needs to be reduced. Where possible, such short-life goods should have a high recycled content. More durable goods will need to last longer, and should increasingly be second hand, repaired, or refurbished. Unsustainable forms of waste disposal should be reduced through increasing their cost and by regulation, so making recycling more economic and boosting the growing economy in secondary materials.

2. FOOD

A new approach to diet is needed, promoting the consumption of food from more sustainable sources. This will be best achieved through education campaigns, and examining public sector catering policies, so that food preferences change. Businesses supplying food should be encouraged to promote more sustainable food. Food oversupply and wastage should be reduced.

3. ENERGY AND THE BUILT ENVIRONMENT

The focus should be the heating and cooling of buildings. The European Union Directive on 'The Energy Performance of Buildings' forms the basis of the programme required. Action should be taken to improve the energy efficiency of existing buildings. New buildings should be highly energy efficient, incorporating more natural ventilation and energy recovery or electricity generation within the building. There should be greater use of energy from renewable sources.

4. TRANSPORT (for personal mobility)

By clustering activities and homes more densely in accessible locations, it should be possible for people to travel less, and to travel mainly by public transport, on foot or by bicycle. The capacity of public transport should be expanded. The relative price of transport modes should be amended to reflect their environmental and social costs. These changes will have the effect of making walking and cycling more attractive ways to travel. The problems resulting from increasing air travel will need to be tackled.

THE NEXT STEPS

Following the launch of this report, we plan to:

- Appoint expert lead organisations to develop a programme of action on each of the four key areas set out in our Agenda for Change.
- Maintain close liaison with others working in this field, both within London and elsewhere in the UK and the wider world.
- Monitor changes in London's Ecological Footprint.
- Maintain momentum through a Steering Group of leading figures from the private and public sectors.

SUPPORTERS

MAYOR OF LONDON

London First

POTENTIAL ACTIONS

In order to develop our **Agenda For Change** we consulted widely on a long list of proposals for action. Those which were generally supported are listed below. They represent actions which might be taken to help reduce London's Ecological Footprint, and a source of further work and consultation once this report has been published.

It is clearly not the case that every organisation we consulted supported every proposal, and we are not seeking to present the proposals in this way.

1. Resource Management

Actions for business

- 1.1 Adopt the Mayor's Green Procurement Code – to increase procurement of goods with recycled content.
- 1.2 Develop the Code to embrace the more efficient use of materials and equipment.
- 1.3 Develop a tool to enable organisations to measure and monitor their own Ecological Footprint, and target those areas where greatest reductions can be achieved.
- 1.4 Enhance recycling 'bring' sites, including those at supermarkets.
- 1.5 Promote sustainability good practice for employees.
- 1.6 Promote best practice through supply chains.
- 1.7 Use hire and lease schemes that result in more efficient use of equipment.
- 1.8 Better use of water resources, through use of water efficiency devices and employee awareness raising.

Actions for London public authorities

- 1.9 Explore the actions needed to expand the refurbishment, recycling & repair industries.
- 1.10 Offer incentives to households and businesses to produce less waste.
- 1.11 Enhance the waste and materials exchange networks.
- 1.12 Introduce kerbside collection for recyclables from homes where possible.
- 1.13 Continue programme of expanding the capacity to process recycled waste for re-manufacturing to expand markets for recyclates.
- 1.14 Promote home and community composting of organic waste.

Lobbying for central government action

- 1.15 Further develop the tax and incentives systems in ways that encourage better ecological practice.
- 1.16 Support further increases in landfill tax, and use the proceeds to fund recycling and waste minimisation.
- 1.17 Provide incentives for London waste authorities to promote recycling.
- 1.18 Encourage the adoption of Supplementary Planning Guidance to encourage the maximum recycling of demolition waste.

2. Food

Actions for business

- 2.1 Work with retailers to increase the supply of food from more sustainable sources.
- 2.2 Encourage caterers, and staff canteens or food services, to supply such food.
- 2.3 Support research into the wastage of food, where this occurs and how best to reduce it.

Actions for London public authorities

- 2.4 Launch a public sector-led awareness campaign on food from more sustainable sources.
- 2.5 Work with public services such as schools and hospitals to build menus around food from more sustainable sources.
- 2.6 Promote the growth of farmers' markets and local markets, community supported agriculture schemes, and home delivery of fresh produce.

Lobbying for central government action

- 2.7 Promote the purchase of fresh seasonal produce grown in the UK.

3. Energy and the Built Environment

Actions for business

- 3.1 Use building energy management systems to ensure that energy consumption is monitored and managed.
- 3.2 Commercial tenants to press for more energy efficient systems for heating, ventilation and air-conditioning.

Actions for London public authorities

- 3.3 Publicise the requirement to provide a certificate of the energy performance of a building (due by January 2006) at the point it is constructed, sold, or rented.
- 3.4 Develop a London programme of advice on the better management of energy in buildings.
- 3.5 Proposed new buildings should be assessed using BREEAM (BRE Environmental Assessment Method) – aim at Good or Excellent standard.
- 3.6 Apply Ecohomes standard (domestic version of BREEAM) to proposed new housing.
- 3.7 Seek to increase the use of renewable energy sources.

Lobbying for central government action

- 3.8 Press for early implementation of the EU Directive on 'The Energy Performance of Buildings', requiring energy assessment of new buildings and major refurbishments.
- 3.9 Lobby for a programme of Energy Improvement Grants to bring existing homes up to the Ecohomes standard – with certified providers of the improvements required.
- 3.10 Lobby for the application of the revised Part L of the Building Regulations to all new buildings (it aims to raise their energy efficiency level).

4. Transport (for personal mobility)

Actions for business

- 4.1 Produce Travel Management Plans.
- 4.2 Provide financial incentives to organisations that introduce working methods that enable people to work at home, and other means of reducing travel.

4.3 Use of new vehicle technologies with low or zero CO₂ emissions, as long as the original source of energy does not release further CO₂.

4.4 Lobby for a system of emissions trading in air travel, to encourage use of lower emission planes.

Actions for London public authorities

- 4.5 Plan London and its region around denser developments with 'high-bandwidth' public transport connections between them.
- 4.6 Promote high-density, mixed-use developments on all sites accessible to public transport.
- 4.7 Plan for new housing to be of high-density and high-quality, and accessible to public transport.
- 4.8 Plan to locate all new centres of education, shopping, employment and health with good links to transport.
- 4.9 Make funding available to help reduce car usage for journeys to school, e.g. for school buses and 'walking buses'.
- 4.10 Take the opportunity presented by reduced car usage to create more attractive pedestrian environments and facilities for cycling.
- 4.11 Establish more 20mph zones, Homezones, car-free environments, and traffic calming in residential areas, while allowing for the needs of the emergency services.
- 4.12 Change the balance of cost between car and public transport and examine, in the long term, using a sophisticated road pricing system across London.

Lobbying for central government action

- 4.13 Continue to improve London's modern 'high-bandwidth' telecommunications infrastructure.
- 4.14 Lobby for additional investment in public transport.
- 4.15 Lobby for increased capacity of the rail network.
- 4.16 Expand UK and European long-distance express rail services.
- 4.17 Extend government programmes to improve fleet fuel efficiency and reduce fuel mileage.

MAYOR OF LONDON

THE MAYOR'S POLICIES

The Mayor of London's strategies will also be important in terms of reducing the capital's footprint. Strategies on Waste, Energy, Biodiversity, Noise and Air Quality all specifically aim to improve London's environment. The London Plan and the Transport and Economic Development Strategies set out a sustainable approach to the future development of London over the next 15-20 years. These strategies contain a number of policies which aim to improve the environmental performance of businesses and so reduce damaging or unsustainable trends. In particular:

RESOURCE MANAGEMENT

- Design for a compact city
- Use sustainable design and construction methods
- Sign up to the Mayor's Green Procurement Code, minimise waste, reuse, recycle more and use products from recycled materials
- Encourage sustainable product design (using minimal resources, design for repair, reuse, upgrading, longevity and incorporating design for recycling)
- Support the development of re-manufacturing workshops and centres for brown and white goods
- Purchase 'greener' products to reduce energy use and emissions of local air pollutants, CO₂ and noise
- Minimise use of treated water, improve water efficiency, use grey water recycling schemes
- Develop and implement an Environmental Management Scheme and report progress (e.g. Corporate Social Responsibility Reporting)

City Hall - London



FOOD

- Source food and resources from sustainable sources (this provides numerous benefits, in particular for biodiversity)

ENERGY

- Use more renewable energy to reduce CO₂ emissions
- Promote the use of hydrogen (as a clean fuel), fuel cells and associated technologies
- Improve energy efficiency (upkeep of appliances, heating systems and building fabric, and staff behaviour)
- Consider passive alternatives to conventional ventilation and cooling

TRANSPORT

- Move towards more sustainable patterns of travel, including a shift towards public transport, walking and cycling, as well as the use of cleaner fuels and vehicle technologies
- Reduce the need to travel, especially by car (produce staff travel plans, promote cycling, walking and public transport, encourage flexible working)
- Promote sustainable freight transport

Transport in London - Image © TfL Visual Image Service



CASE STUDIES



BedZed - an example of sustainable housing

A COMPANY

A case study was carried out on the headquarters building of a private sector corporation. It identified a range of measures through which the company could make changes which would reduce its Ecological Footprint, for instance on the patterns of energy use in the building and the commuting of staff to work. The measures identified could be adopted by other similar companies.

A DEVELOPMENT SITE

A case study was carried out into the proposed development of a riverside site in London. The principal finding was that building modern high-density, energy-efficient housing on the site would result in a much lower Ecological Footprint than would housing the equivalent number of people in more traditional lower-density housing further from the city centre.



The Glass Eco-site run by Day Group Ltd

DAY GROUP LTD

This case study examined the Glass Eco-site run by Day Group Ltd, and funded through London Remade. It showed that the highest Footprint savings in glass recycling would be achieved through the use of the glass for the manufacture of containers rather than for aggregate substitutes. However, wider environmental concerns, such as the need for a market for coloured glass to avoid it being sent for landfill, made the case for the use of glass for aggregate substitutes worthwhile.

SURVEY OF BUSINESS OPINION

MORI were commissioned to carry out a survey of business opinion on environmental issues. The sample consisted of 200 senior business leaders. In general they viewed energy and transport as the most important issues, in spite of the evidence presented that consumption of goods and food had more impact. They felt that energy and transport were the issues where business could take action, but in general were keen to see government intervention and regulation to create a level playing field between businesses.

PARTICIPANTS

London First and London Remade gratefully acknowledge the support they received from business members and wider partners when developing ideas for this report.

STEERING GROUP MEMBERS INCLUDED

Association of London Government
BAA Plc
Biffa Waste Management
British Airways
FaberMaunsell
Greater London Authority
Imperial College
National Grid Transco
Parsons Brinckerhoff
SE London Strategic Health Authority
Thames Water
Tilfen Land

CONSULTATION PARTICIPANTS INCLUDED

Ashurst
Barclays
Berwin Leighton Paisner
BP
Canary Wharf
Corporation of London
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Nicholson Graham & Jones
Sajo
Turner & Townsend
Unilever
Upstream

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LONDON REMADE

The business of recycling

London Remade
1 Quality Court
Chancery Lane
London WC2A 1HR

www.londonfootprint.com
www.londonremade.com

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