

# Environment

# Chapter 12

- » In 2006, London had the lowest domestic carbon dioxide emissions per person, at 2.26 tonnes, of any region in the UK. The capital's road transport emission rate per person of 1.38 tonnes was the joint lowest of all UK regions and the industrial and commercial output of 2.87 tonnes ranked third lowest.
- » Of the six key pollutants recorded by the London Air Quality Network, only concentrations of ozone increased over the period November 1996 to April 2009.
- » Total energy consumption in London in 2006 was estimated at 14 thousand Kilotonnes of oil equivalent. Of the total, 40 per cent was attributed to domestic consumption, 36 per cent to the industrial and commercial sector and slightly less than a quarter to the transport sector.
- » In 2007, the density of new dwellings per hectare in London was 74, around a third higher than the region ranked second - the North West. Almost all new dwellings in London were built on previously developed land.
- » During the third quarter of 2008, slightly fewer than four in five planning applications were granted in the capital, five percentage points fewer than the national rate.
- » Figures from 2006 showed that 17 per cent of all properties in London were located within a floodplain, compared with nine per cent in England and Wales.
- » Three-quarters of all river lengths in London were graded as good or better for chemical river quality in 2007, representing an increase of 14 percentage points on the 1993 figure.
- » Almost seven out of ten of all graded rivers in London received a rating of fairly good or better for biological river quality in 2007.
- » During the period 2007/08, just over a quarter of household waste was recycled or composted in London, the lowest rate of any region in England. The England rate of 34.5 per cent represented an increase of 3.6 percentage points on the previous year, compared with 2.6 points for London.
- » The London borough of Greenwich sent the lowest percentage of its municipal solid waste to landfill of any local authority in England at just three per cent. The London-wide rate of 53 per cent is consistent with the national rate. As a proportion, London incinerated around twice as much waste as the national average.

## Introduction

The state of the environment is a key issue for London, particularly in terms of climate change. The capital's share of UK emissions is currently estimated at eight per cent and is expected to increase to 15 per cent by 2025 according to the Mayor's 2007 Climate Change action plan. This chapter begins by addressing key factors related to climate change including, emissions, ecological footprints and energy consumption. Further aspects of both the natural and built environments such as air quality, energy, land use, planning, water quality, waste disposal and recycling, are then examined to build a broad analysis of both the present environment and of trends and patterns over time.

## Carbon dioxide emissions

In 2006, London had a rate of industrial and commercial carbon dioxide emissions (CO<sub>2</sub>) of 2.87 tonnes per person, which ranks as the third lowest region in the UK (Table 12.1). Wales had the highest per person output at just over four tonnes, while the South East had the lowest (2.57). The capital had the lowest rate of domestic CO<sub>2</sub> per resident at just 2.26 tonnes and the joint lowest rate for road transport at 1.38 tonnes per person. Northern Ireland had the highest road transport

**Table 12.1**

### Carbon dioxide emissions, 2006

	Tonnes per person		
	Industry and Commercial	Domestic	Road Transport
North East	3.85	2.50	1.76
North West	3.22	2.52	1.38
Yorkshire and The Humber	3.45	2.53	1.67
East Midlands	3.32	2.46	2.00
West Midlands	3.02	2.45	1.60
East	2.82	2.48	1.99
London	2.87	2.26	1.38
South East	2.57	2.55	1.67
South West	3.04	2.54	1.76
Wales	4.01	2.60	1.82
Scotland	3.64	2.77	1.78
Northern Ireland	2.91	3.55	2.43
United Kingdom	3.13	2.53	1.70

Source: Department for Environment, Food and Rural Affairs

CO<sub>2</sub> emission per person at 2.43 tonnes, over one tonne more per person per year.

## Ecological Footprint

The term 'Ecological Footprint' refers to the area of the earth's surface required to provide sufficient resources for a given population. The London ecological footprint measured in global hectares (gha) per person of 5.48 was higher than the UK average of 5.30. However, both the South East (5.63) and the East (5.53) had bigger footprints than the capital (Table 12.2).

The Carbon Footprint is a subset of the Ecological Footprint and was measured in tonnes of CO<sub>2</sub> per person. Again the London figure of 12.12 was slightly higher than the UK figure of 12.08. In total, five other regions had higher carbon footprints than the capital, with those in the South East producing over half a tonne more CO<sub>2</sub> per person per year than those residing in London.

In terms of Green House Gas (GHG) emission London ranked fourth of all UK regions with 16.6 tonnes per capita. This was 1.5 tonnes higher than the North East level of 15.0 tonnes – the lowest of any region, and

**Table 12.2**

### Ecological Footprint, 2004

	gha, tonnes per person		
	Ecological Footprint (gha/person)	Carbon Footprint (tonnes CO <sub>2</sub> /person)	GHG Footprint (tonnes CO <sub>2</sub> eq/person)
North East	4.83	11.14	15.03
North West	5.21	11.94	16.13
Yorkshire & Humber	5.14	11.94	16.00
East Midlands	5.24	11.99	16.20
West Midlands	5.02	11.53	15.55
East	5.53	12.62	17.03
London	5.48	12.12	16.55
South East	5.63	12.76	17.28
South West	5.42	12.37	16.70
Wales	5.03	11.60	15.66
Scotland	5.34	12.16	16.46
Northern Ireland	4.85	11.18	15.09
United Kingdom	5.30	12.08	16.34

Source: Department for Environment, Food and Rural Affairs

0.7 tonnes lower than the level in the South East - the highest of any region.

### Air Quality

The London Air Quality Network index can be used to summarise changes in the annual mean concentrations of six pollutants. The index is a derived time series using measurements from long-term monitoring sites (both roadside and background locations are included) operated by the London Boroughs and by the Department for Environment, Food and Rural Affairs. The index was set to 100 for each pollutant in November 1996. Six long-term sites were used for the Particulates (PM<sub>10</sub>) calculation, seven for Carbon Monoxide (CO), Ozone (O<sub>3</sub>) and Sulphur Dioxide (SO<sub>2</sub>), and 16 for Nitrogen Oxide (NOx) and Nitrogen Dioxide (NO<sub>2</sub>). It should be noted that measurements during 2008/09 were provisional and subject to ratification.

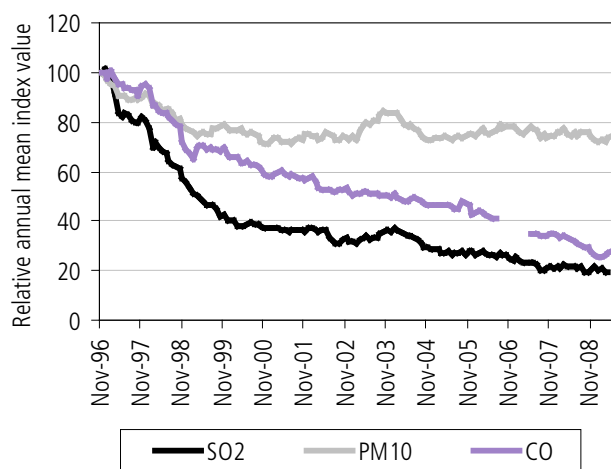
Between November 1996 and April 2009, SO<sub>2</sub> concentrations decreased by 80 per cent, PM<sub>10</sub> concentrations by 26 per cent and CO by 73 per cent. See Figure 12.3.

NOx and NO<sub>2</sub> concentrations declined by 41 per cent and 11 per cent respectively. The only pollutant to increase in

**Figure 12.3**

### Relative annual mean pollutant concentrations (CO, PM<sub>10</sub> and SO<sub>2</sub>) monitored at several sites in London

Relative annual mean index value



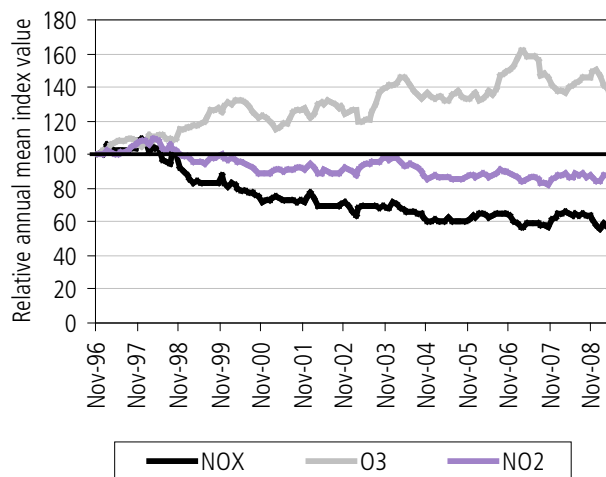
1 Measurements from January 2008 to April 2009 are provisional.  
2 Data for Carbon Monoxide between August 2006 and April 2007 are not available.

Source: Environmental Research Group, King's College London

**Figure 12.4**

### Relative annual mean pollutant concentrations (NOx, O<sub>3</sub>, NO<sub>2</sub>) monitored at several sites in London

Relative annual mean index value



1 Measurements from January 2008 to April 2009 are provisional.

Source: Environmental Research Group, King's College London

concentration was O<sub>3</sub>, which has seen an overall increase of a third over the same period. See Figure 12.4.

The Living Environment domain in the IMD 2007, contains a sub-indicator called the air quality indicator. This models the amount of Nitrogen Dioxide, Particulates (PM<sub>10</sub>), Sulphur Dioxide and Benzene in each Super

**Table 12.5**

### Average SOA indicator scores for air quality

Indicator scores

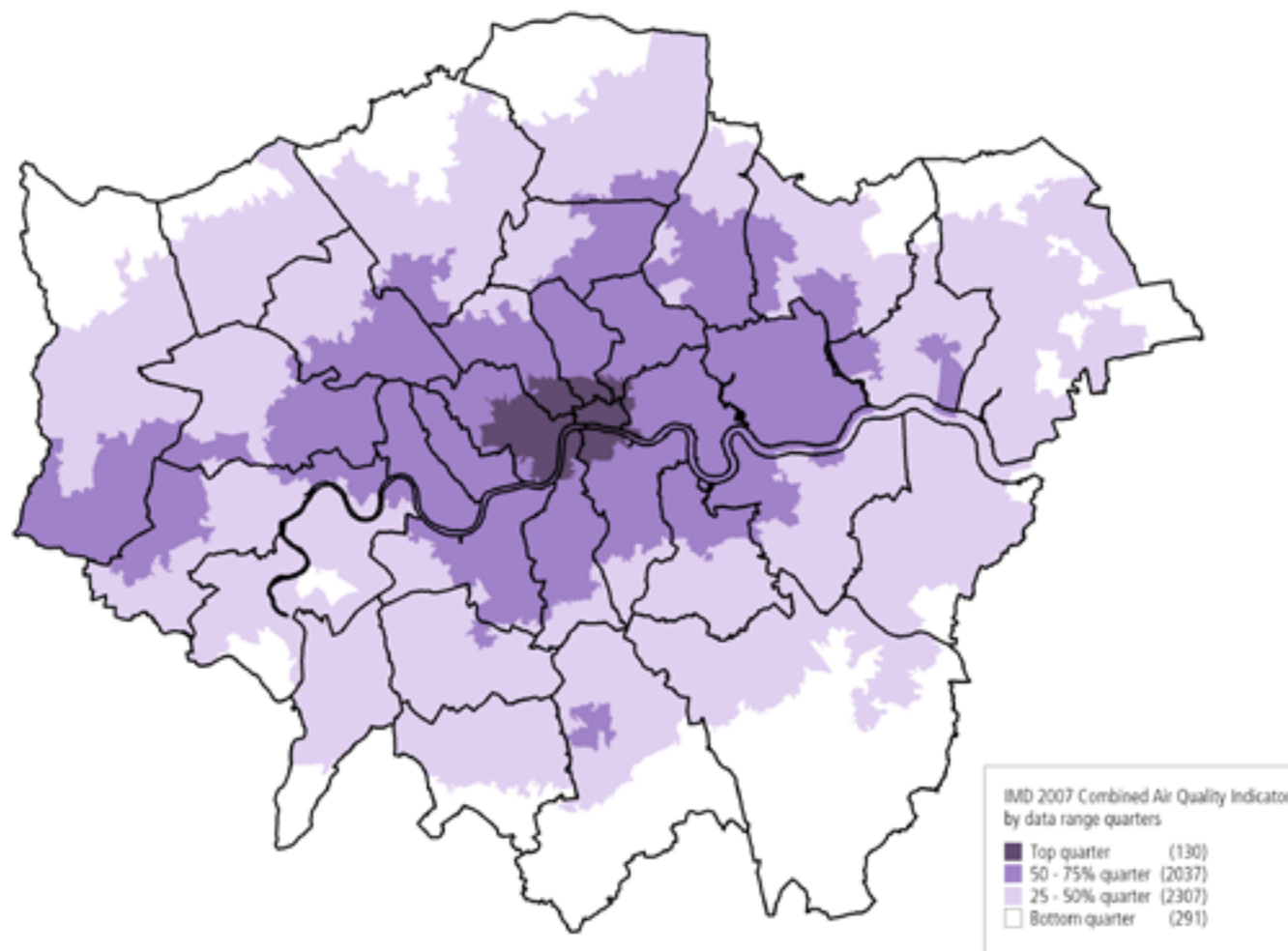
	Combined Air Quality Indicator	NO <sub>2</sub>	PM <sub>10</sub>	SO <sub>2</sub>	Benzene
North East	1.08	0.48	0.47	0.08	0.05
North West	1.17	0.52	0.52	0.07	0.05
Yorkshire & Humber	1.20	0.53	0.53	0.09	0.05
East Midlands	1.21	0.49	0.58	0.08	0.05
West Midlands	1.26	0.54	0.58	0.08	0.06
East	1.15	0.44	0.59	0.07	0.05
London	1.65	0.84	0.67	0.06	0.08
South East	1.15	0.46	0.58	0.06	0.04
South West	0.97	0.37	0.51	0.05	0.04
England	1.23	0.53	0.57	0.07	0.05

Source: Indices of Multiple Deprivation 2007, CLG

## Map 12.6

### Combined Air Quality indicator from the Indices of Multiple Deprivation 2007

Indicator score



Source: *Indices of Multiple Deprivation 2007, CLG*

Output Area (SOA) in England. Scores for all four pollutants added together give the combined air quality indicator. Data for this indicator for London are shown in [Map 12.6](#).

The London average was 1.65, the highest of any region though London is by far the most urban region ([Table 12.5](#)). London has the highest average for each of  $\text{NO}_2$ ,  $\text{PM}_{10}$  and Benzene, though amongst the lowest for  $\text{SO}_2$ .

Of the 4,765 SOAs in London, the 50 with the lowest combined score all fell within either Croydon, Hillingdon, Havering, Bromley or Kingston upon Thames.

If the range of the data is split into four equal parts, there are eight boroughs that contain SOAs with a combined indicator score in the quarter with the poorest air quality - all of them in Inner London. However, only

2.7 per cent of SOAs (130) in London fall in the quarter with the poorest air quality, meaning relatively few areas are recording very high scores. The boroughs with SOAs in the top quarter of the data are: City of London (100 per cent of all SOAs in the area), Westminster (38 per cent), Camden (21 per cent), Islington (12 per cent), Southwark (12 per cent), Tower Hamlets (five per cent), Lambeth (five per cent) and Hackney (three per cent).

When looking at the four pollutants individually, the patterns for  $\text{NO}_2$  and  $\text{PM}_{10}$  tend to follow the above picture whereas for  $\text{SO}_2$  and Benzene there are slightly different patterns. Other than in the eight boroughs already stated, boroughs containing SOAs in the top quarter for Benzene emissions are Kensington and Chelsea (88 per cent of all SOAs), Hammersmith and Fulham (62 per cent), Brent (ten per cent) and Ealing

(six per cent). There are relatively few SOAs with very high levels of SO<sub>2</sub>, though the highest is Barking and Dagenham with four per cent of its SOAs falling in the top quarter for this pollutant.

## Energy Consumption

Total final energy consumption in London in 2006 was 14 thousand kilotonnes of oil equivalent (Ktoe), the fifth highest nationally. Domestic consumption accounted for almost 40 per cent of all consumption in the capital, the highest proportion of any region in Great Britain (Figure 12.7). Just under 36 per cent was attributed to the industrial and commercial sector and slightly less than a quarter to the transport sector. Proportions for the industrial and commercial, and transport sectors were below the Great Britain average, whereas the proportion attributed to the domestic sector in London was seven percentage points higher than for Great Britain.

Figure 12.7

### Total Final Energy Consumption by sector, 2006

Percentages



Source: Department for Business, Enterprise and Regulatory Reform

In 2007, average domestic consumption of electricity measured by sales per consumer was 4,161 kilowatt hours (kWh), 231kWh or six per cent less than the Great Britain average. The highest average level of consumption was recorded in the East region at 4,795 kWh. In terms of commercial and industrial consumption, London had the second lowest rate at almost 69 thousand kWh per consumer, behind the South West at 63 thousand kWh. The North East recorded the highest rate of consumption in this sector at 109 thousand kWh per consumer, 57 per cent higher than the London figure (Table 12.8).

The capital had the second lowest regional average domestic consumption of gas at 16,900 kWh per consumer, 2,400 less than the North East at 18,300kWh, the highest of any region and 700kWh or four per cent less than the Great Britain average. Annual figures from 2007 for commercial and industrial consumption per consumer follow a similar pattern (Table 12.9). Again, London had the second lowest average consumption with 456 thousand kWh marginally more than the South East at 444 thousand kWh. Wales had the highest average consumption per consumer at 824 thousand kWh, 80 per cent higher than London.

Table 12.8

### Electricity Consumption, 2007

	KWh per consumer	
	Average domestic consumption (kWh)	Average commercial and industrial consumption (kWh)
North East	3,741	108,721
North West	4,226	91,275
Yorkshire And The Humber	4,080	89,880
East Midlands	4,352	87,555
West Midlands	4,433	82,898
East	4,795	75,083
London	4,161	68,901
South East	4,741	71,499
South West	4,724	62,751
Wales	4,143	90,462
Scotland	4,411	75,445
Great Britain	4,392	79,077

Source: Department for Business, Enterprise and Regulatory Reform

**Table 12.9**  
**Gas Consumption, 2007**

	Sales per consumer	
	Average domestic consumption (kWh)	Average commercial and industrial consumption (kWh)
North East	18,292	793,243
North West	17,932	698,648
Yorkshire and The Humber	18,099	823,661
East Midlands	17,823	666,187
West Midlands	17,538	656,940
East	17,482	645,628
London	16,911	455,522
South East	17,799	443,648
South West	15,823	556,847
Wales	17,550	850,389
Scotland	18,795	804,581
Great Britain	17,614	633,779

Source: Department for Business, Enterprise and Regulatory Reform

**Land use and Planning**

At just 39 per cent in 2005, London had by far the lowest proportion of its land occupied by green spaces and paths, less than half the rate of the next region – the North West (83 per cent). Perhaps expectedly, London therefore had higher proportions than any other region for the remaining forms of land use (Figure 12.10).

Domestic buildings and gardens occupy a third of land in the capital, compared with just five per cent for England. A further 18 per cent is attributed to non-domestic buildings, road and rail compared with three per cent in England. Finally a tenth of London’s area was estimated to be occupied by water or ‘other’, over twice as much as England at four per cent.

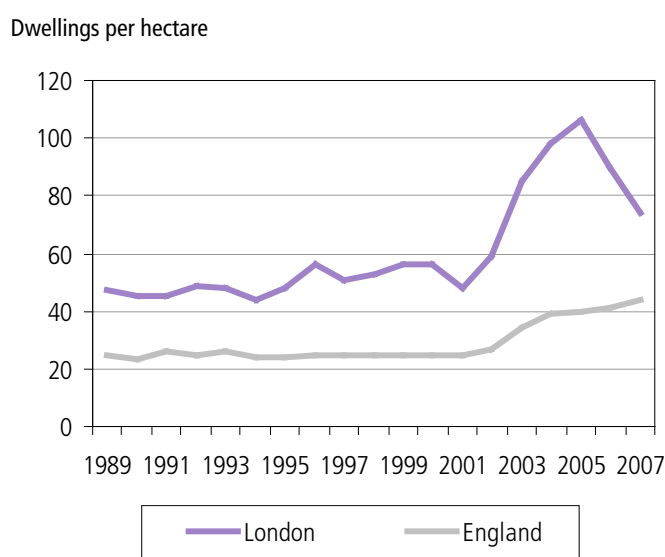
In 2007, the density of new dwellings completed per hectare in London was 74, 25 higher than the next closest region – the North West. This represents an increase of 57 per cent on the 1989 rate. However, it also masks a peak in new build density during the years 2003-2006, when an average of 95 new dwellings per hectare were built, peaking in 2005 at 106 (Figure 12.11). In comparison, the rate of new dwellings per

**Figure 12.10**  
**Land use, 2005**



Source: Generalised Land use Database

**Figure 12.11**  
**Density of new dwellings per hectare, 1989-2007**



Source: Department for Communities and Local Government

Figure 12.12

### Proportion of new dwellings built on previously developed land, 1989-2007

Dwellings per hectare



Source: Department for Communities and Local Government

hectare in England was lower at 44, however, this represents an increase of 76 per cent on the 1989 figure. The North West has seen the largest percentage increase in density at 113 per cent over the same period.

All English regions have seen an increase in the proportion of new dwellings built on previously developed land since 1989 (Figure 12.12). London has seen the smallest increase at just nine percentage points compared with a 35 percentage point increase in the West Midlands, though there is less scope for increase in London where the figure was already high. Almost all of new dwellings built in London in 2007 were built on previously developed land, compared with just three in five in both the East Midlands and the South West - the lowest regions.

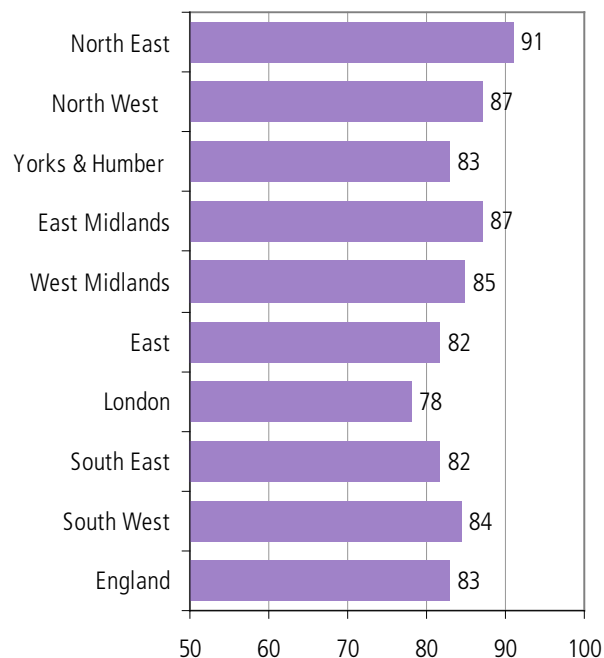
During the third quarter of 2008, 22 thousand planning decisions were made in London, of which 78 per cent resulted in the grant of an application, five percentage points lower than the England figure and 13 percentage points less than the North East – the highest region (Figure 12.13).

In terms of efficiency, 71 per cent of decisions on major planning applications were made within 13 weeks in London, which ranks third behind the West Midlands (72

Figure 12.13

### Proportion of planning applications granted, third quarter 2008

Percentages



Source: Communities and Local Government

per cent) and the North East (84 per cent). Almost four in five decisions on minor applications were made within eight weeks, which again ranks third behind the North West (79 per cent) and the North East (82 per cent).

### Flooding

During the period 1989-2006, London consistently ranked as the region with the highest proportion of new dwellings built within areas of high flood risk, peaking in 2004 when 27 per cent of all new dwellings were built in areas of high flood risk (Figure 12.14). In 2007, the capital dropped into second place with a rate of 17 per cent, two percentage points lower than Yorkshire and The Humber. The rate for England has remained relatively consistent at around ten per cent of all new dwellings over this period.

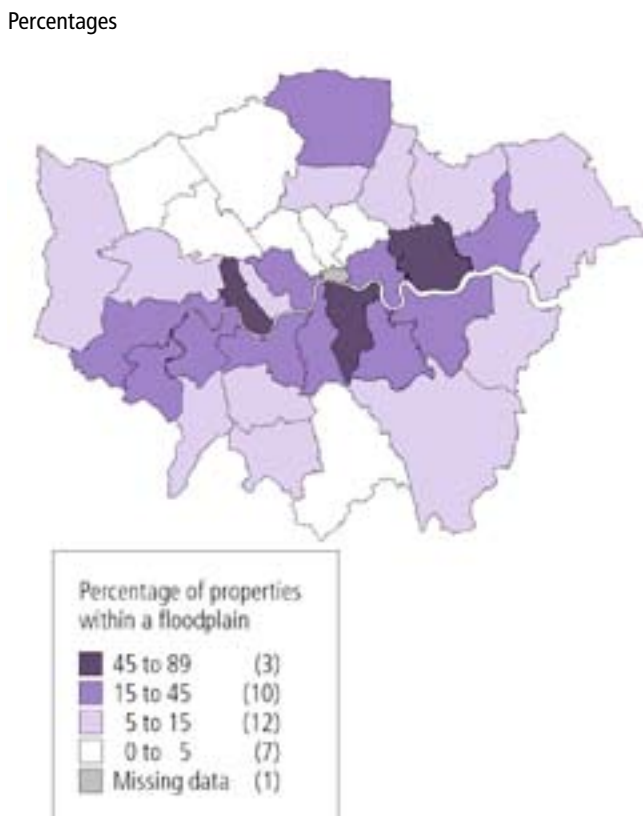
Environment Agency figures for 2006 show that 17 per cent of all properties in London were located within a floodplain compared with nine per cent in England and Wales overall. Almost nine in ten properties in

**Figure 12.14**  
**Proportion of new dwellings built in within areas of high flood risk, 1989-2007**



Source: Department for Communities and Local Government

**Map 12.15**  
**Properties located within a floodplain, 2006**



Source: Environment Agency

Hammersmith and Fulham were located within a floodplain, giving a ranking of third out of all local authorities in England and Wales. Southwark was the next highest ranked London borough at fifth (68 per cent) followed by Newham in eighth with exactly half of all properties in the authority located within a floodplain. Camden and Islington were the only local authorities out of 375 in England and Wales with no properties in a floodplain. (Map 12.15 and Table 12.23).

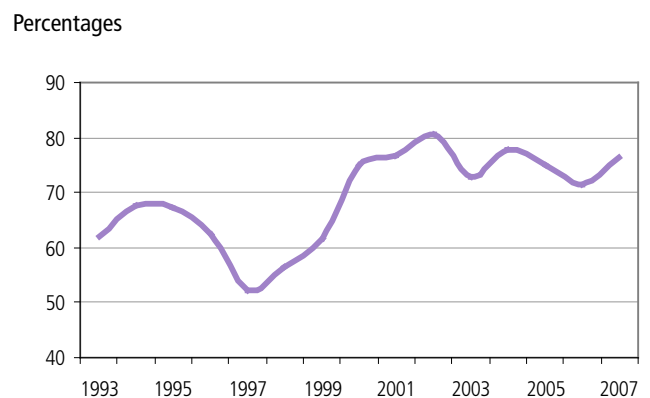
The Environment Agency also estimate risk of flooding. Enfield ranks highest in London with 7.9 per cent of properties at significant risk of flooding, and ranks 14th nationally. Merton is next highest in London (6.7 per cent) followed by Kingston upon Thames (4.5 per cent). Camden, Islington and Southwark rank as the least likely to flood in England and Wales.

**River quality**

Since 1993, chemical river quality in the Thames region has improved. The percentage of river length graded 'good' or better increased, by 14 percentage points to 76 per cent in 2007. The overall increase masks significant variation within the time series including a steep decline during the period 1997-98 to a low of 52 per cent and a peak in 2002 of 81 per cent (Figure 12.16).

In 1990, 81 per cent of river length within the Thames region had high phosphate concentrations - greater than 0.1mg/l. By 2007 this had fallen steadily to 73 per cent.

**Figure 12.16**  
**Percentage of river length in the Thames region graded good or better for chemical quality, 1993-2007**



Source: Environment Agency

**Table 12.17****Percentage of river length in the Thames region with high levels of selected nutrients, 1990-2007**

Percentage of river lengths

	High phosphate ( $>0.1\text{mg/l}$ ) <sup>1</sup>	High nitrate ( $>30\text{mg/l}$ )
1990	80.7	51.3
1995	80.7	56.2
2000	84.1	58.6
2001	78.0	53.5
2002	75.8	58.0
2003	75.1	59.5
2004	73.6	60.5
2005	73.8	60.0
2006	74.1	59.2
2007	73.3	53.7

1 mg/l is milligrams per litre

Source: Environment Agency

The percentage of rivers with high nitrate levels - greater than 30mg/l has experienced greater variation over the same time period (Table 12.17). In 1990, 51 per cent of river length in the Thames region had high nitrate concentrations. This climbed steadily towards a peak of 61 per cent in 2004 but has fallen to 54 per cent in 2007.

The percentage of river length in the Thames region graded as good or better for biological quality has seen an overall increase of nine percentage points from the 1990 figure of 56 per cent. However, this broad trend masks an initial steep increase to a 2003 peak of 72 per cent, followed by a steady decline to the 2007 proportion of 65 per cent. In 2007, 50 of London's 78 rivers stretches received a grading. Of those that were graded, 68 per cent received a rating of fairly good or better and just 16 per cent received scores of poor or worse (Map 12.18).

**Map 12.18****Biological river quality, 2007<sup>1</sup>**

River grades



<sup>1</sup> The calculation for the chemical assessment has changed. Biological Oxygen Demand (BOD) has been dropped as a parameter in the calculation, thus Ammonia and Dissolved Oxygen are now the sole parameters used. As a result, the data may show an 'improvement', where previously BOD was the worst performing parameter. This is not a true improvement in quality, and therefore needs to be taken into account when looking at the data. See [Notes and Definitions](#) for more information.

Source: Environment Agency

Table 12.19

## Household waste recycled or composted, 2006/07 and 2007/08

Percentages and thousand tonnes

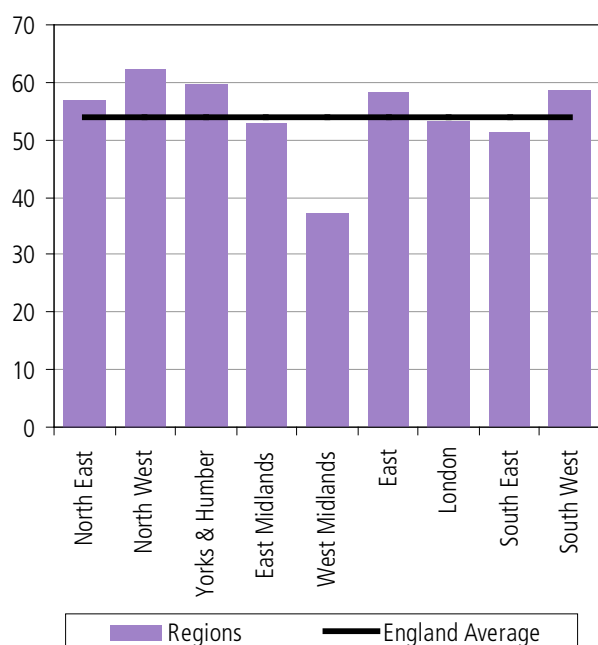
	2006/07	2007/08	% Change from 2006-07	Total Household Waste (thousand tonnes)
North East	26.4	28.4	2.1	1,268
North West	28.9	33.4	4.5	3,599
Yorkshire and the Humber	26.9	30.5	3.6	2,504
East Midlands	35.6	41.9	6.3	2,185
West Midlands	28.6	33.0	4.5	2,662
East	38.3	41.2	2.9	2,841
London	22.9	25.5	2.6	3,342
South East	33.1	36.0	2.9	4,242
South West	37.2	40.3	3.1	2,644
England	30.9	34.5	3.6	25,287

Source: Department for Food Environment and Rural Affairs

Figure 12.20

## Percentage of municipal solid waste sent to landfill, 2007/08

Percentages



Source: Department for Environment, Food and Rural Affairs

## Recycling

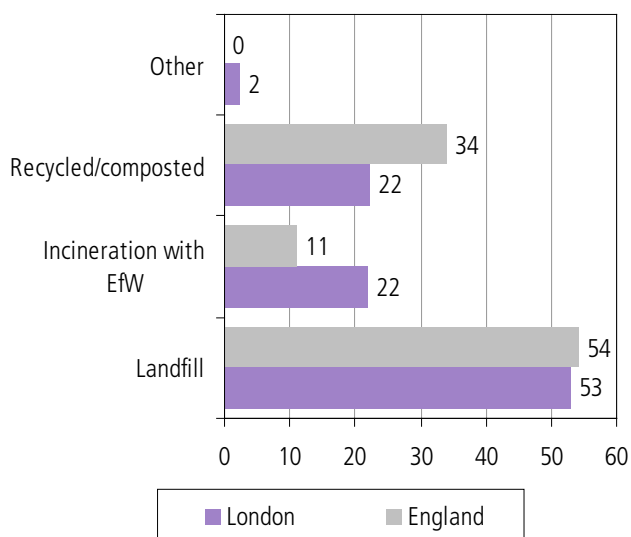
During 2007/08 London recycled or composted just over a quarter of household waste, the lowest of any region in England (Table 12.19). The rate for England was 34.5 per cent, with the East Midlands having the highest rate at 41.9 per cent. The London figure represented an increase of 2.6 percentage points on the previous year, lower than the national rate of increase of 3.6 points. The East Midlands made the largest improvement in recycling and composting rates at 6.3 percentage points, compared with the lowest in the North East (2.1).

Over the same period, the capital produced 4.15 million tonnes of municipal solid waste (household and commercial waste), of which 2.21 million tonnes was sent to landfill, a rate of 53 per cent (Figure 12.20). This figure is relatively consistent with the national rate of just over 54 per cent. Greenwich sent the lowest percentage of municipal solid waste to landfill of the 121 English waste authorities at just three per cent. Lewisham ranked second lowest at ten per cent and Westminster also featured in the ten lowest with a rate of 14 per cent (Table 12.24).

Just over 910 thousand tonnes (22 per cent) of London's municipal solid waste was incinerated with Energy from Waste (EfW), compared with just 11 per cent in England. In London a further 950 thousand tonnes (23 per cent)

**Figure 12.21**  
**Disposal of municipal solid waste by method, 2007/08**

Percentages



1 EfW is Energy from Waste.

Source: Department for Environment, Food and Rural Affairs

was recycled or composted, much less than the 34 per cent recycled or composted in England as a whole (Figure 12.21).

**Table 12.22**  
**Fly tipping incidents, 2007/08**

Numbers

	London <sup>1</sup>	England
Total Number of Incidents	549,809	1,282,820
Clearance Costs (£)	21,518,373	72,767,779
Prosecutions Taken	319	1,871
Successful Prosecution	279	1,776

1 Excluding Kingston and the City.

Source: Department for Food Environment and Rural Affairs

A total of 550 thousand fly tipping incidents were reported by local authorities onto the fly capture database in 2007/08 by London boroughs. This accounts for 43 per cent of the 1.3 million incidents nationwide (Table 12.22). The average estimated clearance cost per incident was much lower in London at £39 than for the rest of the country at £57. In terms of prosecution, London’s conviction rate of 87 per cent falls short of the national standard of 95 per cent.

**Table 12.23**  
**Proportion of properties located within a floodplain, 2006**

			Number, percentage and rank	
	Total properties in area	% of properties within a floodplain	Rank of % in floodplain in E&W (out of 375 areas)	% of properties in area with a significant chance of flooding
Barking and Dagenham	72,117	25	29	4.1
Barnet	139,441	2	300	1.7
Bexley	98,354	13	66	0.4
Brent	105,794	4	206	2.7
Bromley	138,019	6	158	2.3
Camden	96,120	0	374	0.0
Croydon	146,363	3	268	1.9
Ealing	124,618	6	151	0.2
Enfield	121,668	16	56	7.9
Greenwich	103,597	23	33	0.5
Hackney	93,939	3	285	0.2
Hammersmith and Fulham	74,358	89	3	1.3
Haringey	91,050	9	102	3.9
Harrow	88,187	3	276	1.5
Havering	101,888	8	113	1.2
Hillingdon	109,336	6	141	3.8
Hounslow	95,080	25	30	2.5
Islington	89,295	0	374	0.0
Kensington and Chelsea	76,321	6	139	1.2
Kingston upon Thames	67,025	10	94	4.5
Lambeth	120,015	22	39	0.5
Lewisham	116,728	17	53	2.8
Merton	82,074	13	70	6.7
Newham	100,876	50	8	1.9
Redbridge	101,626	5	198	2.4
Richmond upon Thames	84,502	43	11	4.2
Southwark	127,424	68	5	0.0
Sutton	81,309	5	185	1.2
Tower Hamlets	104,909	34	16	0.7
Waltham Forest	98,348	7	132	4.0
Wandsworth	128,105	30	19	2.4
Westminster	133,129	16	54	2.6
London	3,311,615	17	-	2.1
England and Wales	24,931,224	9	-	

Source: Environment Agency

**Table 12.24**  
**Local Authority waste statistics, 2007/08**

Percentages, kilograms, tonnes and rank

	Household waste			Collected waste per person, kg	Total MSW <sup>1</sup> (tonnes)	% MSW to Landfill	Rank of MSW to landfill (out of 121 in England)
	Recycling & composting rate %	Incineration %	Landfill %				
Bexley	41.6	17.9	40.0	484	132,182	45	25
Bromley	34.5	25.1	40.9	481	165,262	43	23
City of London	33.4	0.1	63.4	700	40,421	90	120
Croydon	22.7	0.2	77.0	402	183,605	76	113
Greenwich	30.5	67.4	2.1	463	112,718	3	1
Lewisham	22.0	73.2	4.9	451	141,287	10	2
Merton	27.1	0.0	72.9	405	92,241	75	112
Kingston upon Thames	25.6	0.0	75.0	420	67,560	73	109
Southwark	20.0	35.7	43.6	412	140,351	53	32
Sutton	32.5	1.1	64.8	442	93,601	69	98
Tower Hamlets	13.0	0.3	86.5	407	113,378	89	119
Westminster	22.7	59.3	17.9	357	193,523	14	9
East London Waste Authority	20.0	6.0	55.0	474	500,003	55	36
Barking and Dagenham	20.4			527			
Havering	24.0			490			
Newham	14.4			475			
Redbridge	22.4			408			
North London Waste Authority	24.4	45.7	29.9	452	944,383	31	20
Barnet	30.7			439			
Camden	27.1			318			
Enfield	28.2			422			
Hackney	22.4			380			
Haringey	25.7			366			
Islington	26.3			404			
Waltham Forest	29.7			455			
West London Waste Authority	27.1	0.7	72.4	481	771,353	74	110
Brent	21.0			401			
Ealing	28.9			387			
Harrow	39.6			455			
Hillingdon	33.8			481			
Hounslow	21.8			462			
Richmond upon Thames	36.1			435			
Western Riverside Waste Authority	26.1	0.1	73.7	381	457,397	79	117
Hammersmith and Fulham	26.9			344			
Lambeth	25.1			356			
Kensington and Chelsea	27.9			349			
Wandsworth	24.7			386			

1 Municipal Solid Waste (MSW) based on amount collected.

Source: Department for Environment, Food and Rural Affairs

