LONDON
SUSTAINABLE DEVELOPMENT
COMMISSION

London's Quality of Life Indicators 2012 Report

Part 2 Evidence Report

January 2013

London Sustainable Development Commission (LSDC)

The Commission was established in 2002 to advise the Mayor of London on ways to make London a sustainable, world-class city. The Commission is an independent body challenging policy makers to promote a better quality of life for all Londoners, both now and in the future, whilst also considering London's wider global impacts.

The LSDC's vision is presented in 'A Sustainable Development Framework for London'*. In practice, achieving a better quality of life is about:

- Having access to quality education, jobs, services, housing and leisure;
- Living in an environment which is healthy, resilient and stable now and into the future;
- Living and working within a society which is democratic, just, engaged, diverse, responsible, supportive and vibrant;
- Being fulfilled, healthy and with sufficient personal resources to enjoy life.

Whether as individuals, communities, businesses or governments, our journey towards sustainability means we need to think about the social, economic and environmental impacts of everything we do. We must make the most out of available opportunities, designing out negative impacts and minimising them as a last resort.

The Commission is made up of individual experts from the economic, social, environmental and London governance sectors. Commissioners give their time voluntarily, promoting sustainable development, embedding sustainability into London wide strategies, and helping make sustainability a meaningful and understandable concept for all Londoners.

One of the ways the LSDC assists London is to identify priorities for improving sustainability and to provide an overview of how well London is progressing against a core set of key sustainability indicators. This report is part of that assistance.

Report authors – CAG Consultants

Founded in 1983, CAG Consultants is an independent, employee-owned co-operative. CAG provides support, policy advice and training in a wide range of fields relating to sustainable development and climate change, regeneration and stakeholder & community involvement. It focuses on delivering high quality, innovative and thoughtful work for its clients, who include government departments, local authorities, public agencies, the NHS and regeneration and community planning partnerships across the UK. CAG prides itself on its strong ethical approach and its commitment to social justice and improving and protecting the environment.

For more information, see www.cagconsultants.co.uk.

* LSDC, *A Sustainable Development Framework for London,* www.londonsdc.org

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The 2012 quality of life indicator set

The LSDC's QoL indicator set is designed to capture the breadth of challenges facing London and to provide a means to gauge how London is performing against a number of measures that are considered to be key factors in delivering a sustainable city that supports and enhances quality of life. They can also help alert policy makers to unsustainable trends.

The 2012 QoL indicator set encompasses 33 headline indicators across the environmental, social and economic spheres:

This set of indicators builds on the set used in the 2008-09 QoL report. Six new indicators have been added for the 2012 Report to reflect better the evolving challenges that London faces, particularly in the context of continued economic uncertainty:

- Water consumption
- Happiness
- Gross value added
- Low carbon and environmental jobs
- Skills
- Innovation

A number of indicators have also been amended as the dataset previously used is either no longer collected or the methodology has changed. These include:

- Ecological footprint
- Childcare
- Primary Education
- Secondary Education
- Volunteering
- Housing affordability.

The commentary on each of these indicators in this Evidence Report explains the changes that have been made.

One indicator has been removed from the set: the Green Procurement Code. The methodology for this indicator has changed to such an extent that the LSDC felt there was no longer any value in retaining it in the set.

The full definitions of the indicators are provided in the detail of this report.

Environmental	Social	Economic
1 Air quality	12 Childcare	23 Employment rates
2 CO_2 emissions	13 Education: primary	24 Business survival
3 Travel to school	14 Education: secondary	25 Income inequality
4 Traffic volumes	15 Crime	26 Child poverty
5 Access to nature	16 Decent housing	27 Fuel poverty
6 Bird populations	17 Life expectancy	28 Housing affordability
7 Ecological footprint	18 Physical activity	29 Gross value added
8 Flooding	19 Happiness	30 Carbon efficiency
9 Household recycling	20 Satisfaction with London	31 Low carbon and environmental jobs
10 Waste	21 Voting	32 Skills
11 Water consumption	22 Volunteering	33 Innovation

Results

The following section provides a summary of the key trends and messages coming out of the analysis of the indicator set. A fuller analysis for each indicator can be found in this report.

Where is London doing well?
Overall, the direction of travel for the QoL indicator set is positive. London has improved on 17 of the 33 indicators since the 2008-09 QoL report.

Hidden issues?
On the surface, the QoL indicator set appears to show that London's quality of life has improved. Dig a little deeper, however, and one discovers that the picture is not quite as positive as first appears.

Where is London underperforming?
Where is London underperforming? Five of the 33 indicators show a clear deterioration: childcare, voting, business survival, fuel poverty and gross value added. A further eleven indicators show no improvement or little change since the last QoL report. Perhaps unsurprisingly, performance is worst amongst the economic indicators. Three of the eleven slightly deteriorated. Furthermore, as highlighted above, a number of those showing improvement still reveal cause for concern when looked at more closely, such as youth employment rates and housing affordability.

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Indicators: analysis

Key

In the section that follows we have provided commentary, graphs and tables to explain the key trends for each indicator. For those who want to gain an overview it is useful to summarise what the indicators tell us.

To provide the reader with an 'at-a-glance' understanding of the trends for each indicator, we have used a set of traffic lights to describe whether or not things are moving in the right direction:

- Clear improvement
- Little or no change
- Clear deterioration
- Insufficient or no comparable data

The traffic lights are determined by comparing the data for each indicator in the latest available year against the data used in the 2004 and 2008-09 London Quality of Life (QoL) indicators reports. Between the 2004, 2008-09 and current reports the indicator data may have fluctuated (e.g. deteriorated and then improved, or vice versa). However, the traffic lights only reflect the overall change in the measure from the 2008-09 report to the latest position.

Where indicators have changed or new ones have been included, attempts have been made to find data from previous years to show progress and make comparisons.

Baseline data years

For each indicator, we have also noted the year of the data used in each report. So in the example below, we see that for the travel to school indicator, the year of data used in the 2012 report is 2010, for the 2008-09 QoL report it was 2005-06 data and for the 2004 QoL report 2001 data was used.

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Proportion of 5-16 year olds travelling to school by means other than car	✓ (2001 data)	✓ (2005-06 data)	2010

Deciding the traffic lights

For most indicator measures it is clear whether there has been improvement or deterioration and therefore whether a green or red traffic light is awarded.

However where the amounts of change are small it can be difficult to judge. As a general rule therefore we have said that where the indicator measure has changed by less than 3% since the last report, the traffic light has been set to amber, indicating little or no change. This threshold is based on the threshold used for measuring progress on sustainable development indicators nationally[1].

There are some exceptions to this rule however. For example where the indicator measure has been stable historically small changes may be considered as indicating an improvement or deterioration. Or where the overall trend is slightly above the threshold but the changes do not mark a significant improvement within the context of the historical trend. When exceptions have been made this has been stated in the text.

About the data

The authors used the latest datasets available to them at the time of writing. As the research, analysis and review period spanned March to November 2012, some of the datasets may have been superseded by the time of this report's publication.

Summary of results

Environmental

	Indicator	Trends[2]	Measure in 2009 report / Baseline	Measure in 2012 report	Movement / Progress	National average for 2012 report
1	Air Quality	✓	3,500 tonnes PM_{10} (revised 2004 figure)	2,300 tonnes PM_{10}	PM10 concentrations are broadly improving and the London Atmospheric Emissions Inventory suggests that there has been around a 30% decrease in particulate matter emissions since 2004. Despite improvements in NOx emissions, London continues to face problems meeting the EU Ambient Air Quality Directive on NO_2 emissions.	Not available
2	CO_2 Emissions	✓	46.1 $MtCO_2$ 6.2 tonnes per capita	41.6 $MtCO_2$ 5.4 tonnes per capita	Total CO_2 emissions in London were down nearly 11% since the previous QoL report. Per capita emissions fell by 13% over the same period. CO_2 emissions in 2009 were over 7% lower than 1990 levels, but will need to drop significantly further if London is to meet its CO_2 emissions reduction target of 60% on 1990 levels by 2025.	6.4 tonnes per capita (UK)
3	Travel to School	✓	44% walk, 23% bus, 26% car	40% walk, 30% bus, 23% car, 7% cycling	London is performing better than the UK in terms of the proportion of children travelling to school by means other than by car, and this proportion has increased since the previous QoL report. However there continues to be a decline in the number of children walking to school.	42% walk, 21% bus, 32% car, 4% cycling (GB)
4	Traffic Volumes	✓	31.5 billion vehicle km (revised figure)	30.0 billion vehicle km	There was an overall decline in road traffic volumes in London of 7% from 2003 to 2010. Use of public transport for passenger journeys in London has grown dramatically, increasing by 69% from 1993 to 2010, while walking and cycling levels have also increased.	Not available
5	Access to Nature[2]	≈	24,962 hectares (22%)	24,817 hectares (16%)	16% of London was identified as lying in an Area of Deficiency in access to nature in 2010. This is reportedly a fall from 22% in 2006, although most of this change is probably the result of improvements to the accuracy of mapping in GIS.	Not available
6	Bird Populations	≈	132 (bird index)	133 (bird index)	The London bird species index stood at 133 in 2008, compared with 132 in 2006. 26 of London's most common bird species were 33% more numerous in London in 2008 than they were in 1994.	Not available

Environmental

	Indicator	Trends	Measure in 2009 report / Baseline	Measure in 2012 report	Movement / Progress	National average for 2012 report
7	**Ecological Footprint**[4]	≈	4.90 global hectares per capita (revised figure)	4.64 global hectares per capita	In 2006, the Ecological Footprint of London residents was 4.64 global hectares per capita, which is below the UK average. Between 1992 and 2002 the footprint per capita rose, before stabilising between 2002 and 2006. However, the rate of consumption of resources is still well above sustainable levels. We would need 2.5 planets to enable everyone in the world to consume resources at London's rate.	4.76 gha (UK)
8	**Flooding**	●	460,000 properties at risk from flooding.	Although not comparable, 536,200 properties at risk of flooding	In 2012, there were over half a million properties in areas at risk from tidal and fluvial flooding within Greater London, with around 30,000 of those properties located in areas where there is a significant likelihood of flooding.	Not available
		✓	24,000 properties registered to receive flood warnings	40,274 properties registered to receive flood warnings	Approximately 24,000 properties were registered to receive flood warnings through the Flood Warning Service in 2007. This number had increased to over 40,000 by 2011. Regionally, London has the highest number of properties at risk from flooding but most are situated in areas with low likelihood of flooding.	
9	**Household Recycling**	✓	22.9% of household waste composted or recycled	32.5% of household waste composted or recycled	32.5% of household waste was recycled or composted in 2010-11, an increase of 9.6%. Whilst recycling and composting rates have improved, London still has a lower rate than England as a whole (41%). Furthermore, meeting the London Plan target to exceed 45% recycling and composting levels by 2015 will be a challenge.	41% (England)
10	**Waste**	✓	3.39 million tonnes of household waste collected	3.03 million tonnes of household waste collected	London produces less waste per household than any other region in England. Household waste fell from 3.39 million tonnes in 2006-07 to 3.03 million tonnes in 2010-11 despite an increasing London population. The total amount of local authority collected waste has also fallen from 4.22 to 3.76 million tonnes.	Not available
11	**Water Consumption**[5]	≈	161.7 litres per head per day New Indicator	162 litres per head per day	Household water consumption changed little, rising just 0.3 litres per head per day. Londoners consume around 15 litres per day more than the average person in England and Wales.	146.7 l/h/d (England and Wales)

Social

	Indicator	Trends[6]	Measure in 2009 report / Baseline	Measure in 2012 report	Movement / Progress	National average for 2012 report
12	Childcare[7]	✗	22.4 places per 100 children (revised figure)	21.5 places per 100 children	Childcare places per 100 children for under 8s decreased by just over 4% from 2009 to 2011. Although the actual total number of childcare places has increased, this has not kept pace with the rise in the child population. Furthermore, London has the highest childcare costs of all regions in the UK and provision is lower than for England as a whole.	26.8 per 100 children (England)
13	Education: primary[8]	✓	85% of pupils making expected progress (revised figure)	88% of pupils making expected progress	The proportion of pupils making expected progress from Key Stage 1 to Key Stage 2 in English and Maths rose from 2009 to 2011 for both subjects. Levels of progress were higher than for England as a whole.	84% (England)
14	Education: secondary[9]	✓	59.4% of Key stage 4 pupils	82.0% of Key stage 4 pupils	The proportion of Key stage 4 pupils obtaining at least 5 GCSE passes at A*-C or equivalent has increased 29% since 2004. London continues to perform better than England as a whole on this measure. However, the performance of Inner London pupils is lower than the national average. Girls also out perform boys in London.	80.5% (England)
15	Crime	✓	845,040 recorded offences (revised figure)	814,727 recorded offences	Total recorded crime levels have fallen by 3.6% since 2008-09 and are the lowest since comparable records began in 1998-99. Overall recorded crime is down but there are recent rises in burglary, street crime and sexual offences. The fear of crime is higher in London than for any other region in England and Wales.	Not available
16	Decent housing	✓	64% of homes above decent homes standard	70% of homes above decent homes standard	In 2009-10, 70% of London's homes exceeded Decent Homes Standard, a similar rate as for England as a whole. This is an improvement on the 2003 levels reported in the 2008-09 QoL report.	70% (England)
17	Life expectancy[10]	✓	82.0 women 77.4 men	83.3 women 79 men	In 2008-10, life expectancy in London for women was 83.3 years and for men 79 years. These values are an increase on 2004-06 figures and are also slightly higher than the national averages. There are, however, considerable variations in life expectancy within London, which can vary by up to 9 years between – and even within – boroughs.	82.3 women 78.2 men (UK)

Social

	Indicator	Trends	Measure in 2009 report / Baseline	Measure in 2012 report	Movement / Progress	National average for 2012 report
18	**Physical activity**	≈	20.2%	20.2%	Overall there has been no change in the percentage of Londoners participating in moderate intensity sport and active recreation since 2007-08. Participation in sport and recreation for London was lower than England as a whole (20.2% and 21.9% respectively). There is also significant variation in activity levels between boroughs.	21.9%
19	**Happiness**[11]	≈	7.41 New indicator	7.65	This is a new indicator for the QoL indicator set. London's happiness score has remained broadly stable between 2006-07 and 2010-11. However Londoners subjectively rate themselves less happy than the rest of the UK.	7.87
20	**Satisfaction with London**	✓	73%	77%	In 2011, 77% of Londoners were satisfied with the capital as a place to live. This is an improvement on satisfaction levels in 2007. Londoners' satisfaction with their neighbourhood, meanwhile, has remained fairly static over the last decade. People from higher or middle classes are more likely to be satisfied than people from lower classes.	Not available
21	**Voting**[12]	✗	45% turnout	38% turnout	Turnout for the 2012 London Mayoral and London Assembly elections was lower than in 2008. However, this was still higher than the turnout for the 2004 and 2000 elections. Furthermore, turnout in London for the General Election and for Borough elections has risen since 2002, although General Election turnout in London is lower than the national average.	Not available
22	**Volunteering**[13]	≈	23% New Indicator	24%	Levels of formal and informal volunteering in London have increased from 23% in 2008-09 to 24% in 2011-12, according to the Taking Part Survey. Levels in London are now higher than the average for England. The rise might in part be explained by the publicity in volunteering generated by the 2012 Olympic and Paralympic Games, which have involved large numbers of volunteers but have not been included in this data. The rise bucks a national downward trend. London is now performing better than the national average, although it is still behind levels in the South East, South West and East of England.	23% (England)

Economic

	Indicator	Trends[14]	Measure in 2009 report / Baseline	Measure in 2012 report	Movement / Progress	National average for 2012 report
23	**Employment rates**	≈	69% All 58% BAME	69.7% All (Jun/Aug – 2012) 58.9% BAME	Employment rates are lower in London than for the UK as a whole. There are variations in employment rates by gender and ethnicity. Rates are lower for Black, Asian & Minority Ethnic (BAME) Londoners. There is also evidence that the employment rate for London has been increasing since mid 2009. Employment rates have remained relatively stable in London, which is positive given the UK's economic performance but youth employment rates are down.	71.3% (Jun/Aug – 2012) (UK)
24	**Business survival**	✗	64% of new businesses survive 3 years later (2006); 53,120 business start ups	60% of new businesses survive 3 years later; 52,755 business start ups	One-year and three-year business survival rates are down. 60% of London businesses started in 2007 were still trading three years later. However, London has more new business start-ups than the UK average, despite falling survival rates.	63% (UK)
25	**Income inequality**	≈	16% in bottom 10% of national distribution; 18% in top 10%	15% in bottom 10% of national distribution; 18% in top 10%	There is a persistent income gap between those in the bottom 10% and those in the top 10% of household incomes in London. In 2006-07 to 2008-09, 15% of Londoners were living with disposable income in the bottom 10% of the national income distribution. 18% of Londoners were living with disposable income in the top 10% of national income distribution. London is less equal than the rest of the UK.	Not available
26	**Child poverty**	✓	41%	37%	Nearly 37% of London children continue to live in poverty. There has been a recent improvement from 41% for the three-year period 2004-05 to 2006-07 to 37% for the period 2008-09 to 2010-11. Child poverty continues to remain higher in London than the UK average and is significantly worse in Inner London than Outer London.	29% (UK)
27	**Fuel poverty**	✗	3.6% (2003)	13.3%	Fuel poverty is up from 3.6% in 2003 to 13.3% in 2009. However, this was lower than the 2009 national average of 18.4%. There are major variations in fuel poverty between London boroughs. In 2009, the highest levels of fuel poverty were in Barking and Dagenham (17%) and the lowest levels of fuel poverty were in the City of London (6%).	18.4% (UK)

Economic

	Indicator	Trends	Measure in 2009 report / Baseline	Measure in 2012 report	Movement / Progress	National average for 2012 report
28	**Housing affordability**[15,16]	≈	3.92 ratio (1997)	8.96 ratio	In 2011, the ratio of lower quartile house prices to lower quartile earnings in London was 8.96. This was below its 2008 peak of 9.32 but historically high nonetheless; affordability has more than halved in London since 1997. London homes were also 37% less affordable than the national average.	6.53 ratio (England)
29	**Gross value added**[17]	✗	£35,000 per capita (2008) New Indicator	£33,550 per capita	London's Gross Value Added per capita (GVA per capita) rose by 35% from 1997 to 2010, but declined slightly from 2008 to 2010 owing to the economic downturn. The GVA per capita in London in 2010 was 68% above that for the UK as a whole.	£19,970 per capita (UK)
30	**Carbon efficiency**	✓	231 tonnes of CO_2 per £million GVA	170 tonnes of CO_2 per £million GVA	London's economy became more carbon efficient between 2005 and 2008 and continues to be far more efficient than the UK as a whole. In 2008 carbon emissions per unit of Gross Value Added were 42% lower than 1997.	400 tonnes of CO_2 per £million GVA (UK)
31	**Low carbon and environmental jobs**[18]	≈	157,000 (2008/09) New Indicator	160,000	London has 19% market share in the sector in the UK and 0.66% of global market share. Jobs in the sector rose between 2008-09 and 2009-10 despite the economic downturn.	Not available
32	**Skills**[19]	✓	33.8% New Indicator	41.9%	41.9% of working age Londoners had Level 4+ qualifications in December 2010. This figure has risen steadily since December 2005 from 33.8%. London fares well compared to the UK as a whole: 31.2% of the UK's working population had Level 4+ qualifications at the end of 2010. There are also marked variations within London itself. The proportion of people with Level 4+ qualifications in Inner London was nearly 13 percentage points higher than in Outer London in 2010.	31.2% (UK)
33	**Innovation**[20]	✓	20% – product innovations; 9% – process innovations New Indicator	22.9% – product innovations; 13.2% – process innovations	In 2009, 22.9% of firms in London reported introducing product innovations, a rise from 20% in 2007. In the same year, 13.2% of London firms reported introducing process innovations, also a rise since 2007 when levels were at 9%. Firms in London are more likely to introduce process innovations that are new to industry as a whole (36.9%) compared to the UK (29.1%).	23.98% – product innovation; 12.6% – process innovation (UK)

Environmental Indicators

1 Air quality

2 CO_2 emissions

3 Travel to school

4 Traffic volumes

5 Areas of deficiency in access to nature by borough

6 Bird populations

7 Ecological footprint

8 Flooding

9 Household recycling

10 Waste

11 Water consumption

1. AIR QUALITY

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Tonnes of PM_{10} emitted in London	✓	✓	2008

Trend –

Summary

Emissions. The London Atmospheric Emissions Inventory (LAEI) shows an approximate 30% reduction in PM_{10} emissions since 2004, falling from 3,500 tonnes in 2004 to 2,300 tonnes in 2011 (figures rounded). Between 2008 and 2011 PM_{10} emissions fell by around 13%.

Concentrations. Air pollutant concentrations are broadly improving. In 2011 London was compliant with six of the seven local air pollutants (including PM10) assessed under EU legislation. There remains a considerable NO_2 compliance gap however, and further policy measures are required if NO_2 concentrations are to be improved and EU targets to be met.

Why is this issue important to London's quality of life?

Air quality affects human health – particularly the very young, older people and those with existing heart and lung conditions. It is estimated that the equivalent of around 4,300 deaths were attributable to long-term exposure to fine particles ($PM_{2.5}$) in London in 2008[21]. Poor air quality in London is largely the result of human activity, such as emissions from road transport, domestic and commercial gas use, industrial processes and construction. A significant amount of the pollution sources are not within London. The Mayor's Air Quality Strategy says that around 40% of NO_2 and PM_{10} pollution comes from emission sources outside London[22].

Emissions of pollutants

The headline indicator for air quality in this report measures tonnes of PM_{10} emitted within London. This is particulate matter of less than 10 microns in diameter, which is a generally accepted measure for particulate matter in the atmosphere in the UK and Europe.

Figures 1 and 1.1 display the trends for emissions of PM_{10} in London using the London Atmospheric Emissions Inventory. They show there has been an approximate 30% reduction in PM_{10} emissions since 2004, falling from 3,500 tonnes in 2004 to 2,300 tonnes in 2011 (figures rounded). Between 2008 and 2011 PM_{10} emissions fell by around 13%.

Methodological changes may have occurred between LAEI model years and therefore the years may not be directly comparable. However, the broad improving trend in PM_{10} emissions has been modelled consistently within each LAEI set. Furthermore, by cross-checking the results from the LAEI with observed concentrations and other analysis, we can confidently conclude that PM_{10} emissions have significantly reduced over the past ten years as well – including over the most recent reporting period.

Figure 1 Emissions trend in London since 2001

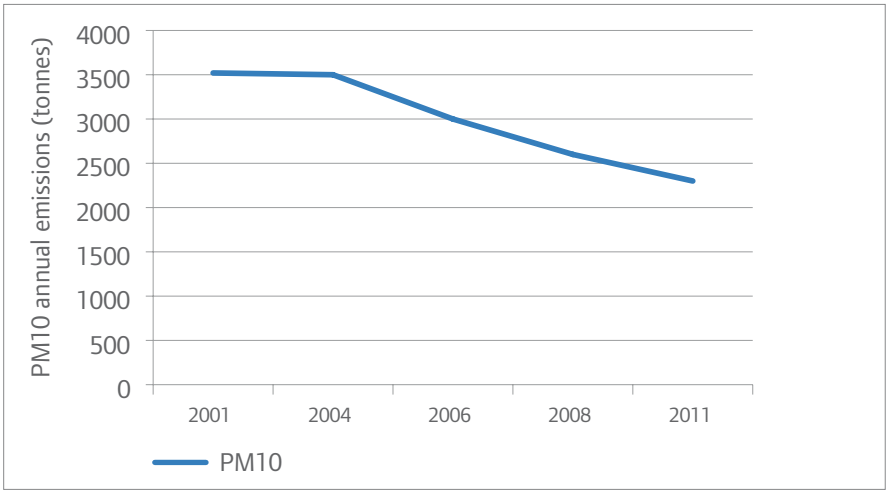
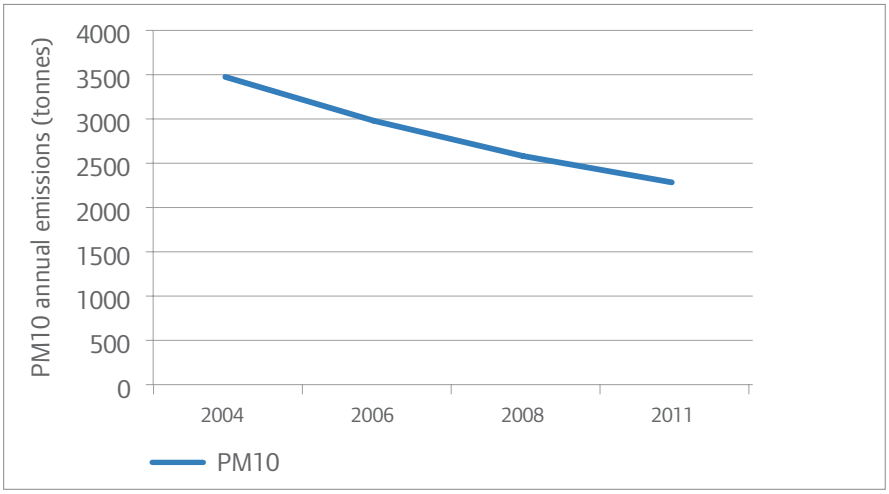


Figure 1.1 Emissions trend in London since 2004

Source: 2001 from LAEI 2001; 2004 and 2006 from LAEI 2006 as published in Travel in London report 2; 2008 from MAQS base year modelling; 2011 from MAQS 2011 baseline modelling



Concentrations of pollutants

Pollutant concentrations in London are affected by emissions in London, pollution from outside London and the UK, and other factors such as weather.

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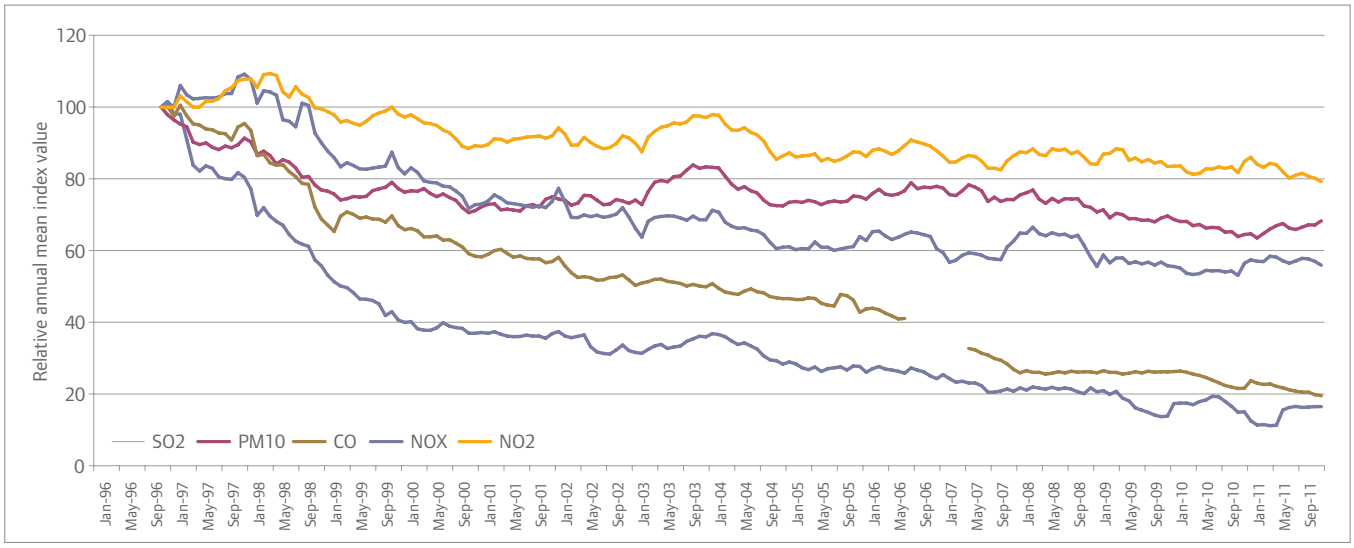
Figure 1.2. Annual mean index of ground level pollutants in London



Source: King's College London and the London Air Quality Network (www.londonair.org.uk) via Transport for London

Figure 1.2 shows the trends for mean concentrations at ground level for pollutants in London. Provisional air quality monitoring data from a number of sites in London to December 2011 show that concentrations of most pollutants have decreased since November 1996, with the exception of ozone (O_3). Ozone has decreased since the peak in early 2007 but remains well above the baseline level in 1996. Formation of ozone can take place over several hours or days and may have arisen from emissions many hundreds, or even thousands of kilometres away. For this reason ozone is not considered to be a 'local' pollutant. Sulphur dioxide (SO_2) and carbon monoxide (CO) have seen the most significant reductions during the time period; however all of the pollutants except O_3 are at least 20% down on their 1996 levels. In 2011 there was a small increase in PM_{10} concentrations. This mainly reflects unusual weather patterns with light easterly winds bringing in larger than usual quantities of European pollution[23].

The 2008 ambient air quality directive (2008/50/EC) sets legally binding limits for concentrations of major air pollutants such as PM_{10}, $PM_{2.5}$ and NO_2. These legal standards were introduced in 1999 with various dates for compliance. London is now compliant with six of these seven air pollutants.

For the daily and annual PM_{10} limit values the EU compliance date was 1 January 2005. However, the UK Government successfully applied for a time extension, which extended the deadline for compliance with the daily limit value to 11 June 2011. Defra, as the responsible national authority, recently submitted its formal assessment to the European Commission and concluded that London complied with all of the EU limit values for PM_{10} in 2011.

For the hourly and annual NO_2 limit values the EU compliance date was 1 January 2010, with the possibility of an extension to 2015. The UK Government did not apply for a time extension for London. At the time of writing, London faced a considerable NO_2 compliance gap. Most other UK and European cities are in a similar position and this reflects the Europe-wide failure of European standards to reduce emissions of NO_X/NO_2.

2. CARBON DIOXIDE EMISSIONS

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Total CO_2 emissions in London		 (2005 data)	2009

Trend (2005 to 2009)

Summary

Total CO_2 emissions in London were down from 46.1 $MtCO_2$ in 2005 to 41.6 $MtCO_2$ in 2009, a fall of nearly 11%. Per capita emissions fell by 13% over the same period.

London's CO_2 emissions in 2009 were over 7% lower than 1990 levels. Emissions will need to drop significantly further if London is to meet its CO_2 emissions reduction target of 60% on 1990 levels by 2025.

Why is this issue important to London's quality of life?

Climate change represents arguably the greatest challenge facing humanity this century. London, as a large and affluent city, emits a huge amount of CO_2, both overall and per capita. In line with the UK Climate Change Act, London's emissions will have to fall significantly this decade. The climate is already changing and this will have significant consequences for London's quality of life.

This dataset relies on a drawdown of information from the National Inventory of Greenhouse Gas emissions in order to measure end-user carbon dioxide emissions in the local area from the industrial, domestic and transport sector. Figures published previously for 2005-08 have been revised so that they are directly comparable to the 2009 figures.

Total CO_2 emissions

Figure 2 shows that London's total CO_2 emissions fell between 2005 and 2009. Emissions had remained relatively level until 2008, but dropped over 9% in 2009. This is similar to the UK pattern, where emissions have fallen from 450.9 million tonnes in 2005 to 392.9 million tonnes, with the most pronounced dip occurring between 2008 and 2009[24].

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The Gross Value Added (GVA) indicator shows that productivity in London declined by 4% between 2008 and 2009. This suggests that at least part of the drop in emissions could have been a result of a contraction in output in the London economy.

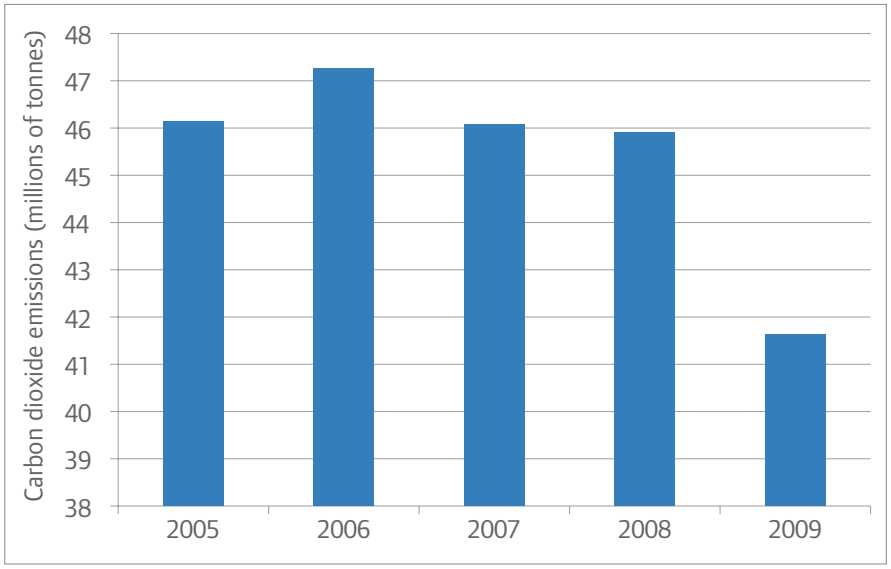


Figure 2 CO_2 emissions (millions of tonnes) for Greater London 2005-2009

Source: DECC, 2009 Carbon dioxide emissions within the scope of influence of local authorities, published 15 September 2011 http://www.decc.gov.uk/en/content/cms/statistics/local_auth/co2_las/co2_las.aspx

The Mayor's Climate Change Mitigation and Energy Strategy commits London to cutting its carbon output by 60% on 1990 levels by 2025[25]. The strategy uses the 1990 baseline value of 45.1 $MtCO_2$ for London's CO_2 emissions. London's CO_2 emissions steadily rose during the 1990s but from a peak in 2000 have steadily dropped. Emissions will need to drop significantly further if London is to meet its interim reduction targets, set out in Figure 2.1.

Per capita CO_2 emissions

Per capita CO_2 emissions have also fallen in London. As figure 2.2 shows, they fell from 6.2 tonnes per person in 2005 to 5.4 tonnes in 2009. This represents a reduction of 13%. Per capita emissions remain lower in London than for the UK as a whole. This is likely to be the result of the greater efficiency of energy use, particularly in transport, in concentrated urban areas.

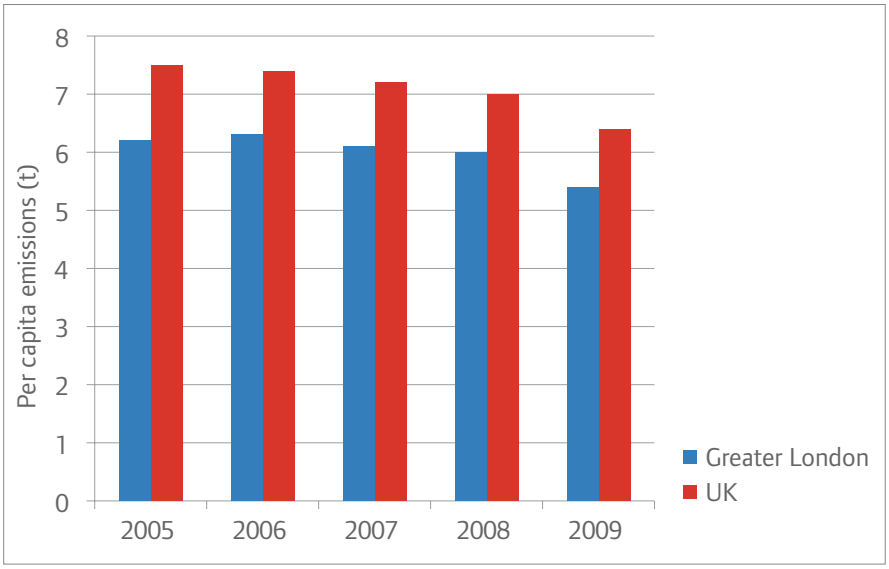
Figure 2.1 The Mayor's CO_2 emissions reduction targets in London

Source: GLA, Delivering London's Energy Future: The Mayor's Climate Change Mitigation and Energy Strategy, October 2011, http://www.london.gov.uk/who-runs-london/mayor/publication/climate-change-mitigation-energy-strategy

Target year	Target CO_2 emissions reduction on 1990 levels
2015 (interim target)	20%
2020 (interim target)	40%
2025	60%
2050	At least 80%

Figure 2.2 Per capita CO_2 emissions in London and the UK, 2005-2009

Source: DECC, 2009 Carbon dioxide emissions within the scope of influence of local authorities, published 15 September 2011 http://www.decc.gov.uk/en/content/cms/statistics/local_auth/co2_las/co2_las.aspx



Indirect emissions

This indicator, and the Mayor's CO_2 emissions reduction targets, focus on scope 1 and scope 2 emissions[26]. Scope 1 emissions refer to CO_2 emissions from the combustion of energy sources within London. Scope 2 emissions refer to CO_2 emissions associated with London's consumption of purchased electricity, irrespective of whether this electricity is generated inside or outside of Greater London's geographic boundaries.

Scope 3 emissions refer to all other indirect emissions not covered by scope 2, such as those linked with London's consumption of goods and services, its production of waste, and travel to and from the capital. If these emissions were also considered it would nearly double London's total emissions[27].

Sean Creamer

3. TRAVEL TO SCHOOL

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Proportion of 5-16 year olds travelling to school by means other than car	✓ (2001 data)	✓ (2005-06 data)	2010

Trend (2005-06 to 2009-10) 

Summary

Overall, the proportion of 5-16 year olds travelling to and from school by means other than car has increased slightly since 2005/6. The proportion of 5-16 year olds walking to and from school has continued to fall but this has been counterbalanced by the rise in the proportion of children travelling to and from school by 'other' modes, including cycling.

Why is this issue important to London's quality of life?

How children get to school is important for a variety of reasons. Increasing the proportion of children who walk or cycle to school increases physical activity amongst children, and should help to counter the growing levels of childhood obesity. The more children that are taken to school by car, the more pollution and congestion are created. A significant proportion of weekday morning peak trips are due to 'the school run'. Reducing dependence on cars for travel to school is important to keep London moving whilst also meeting the challenge of climate change and improving London's environment and the health of its communities.

The National Travel Survey collects figures on travel to school by 5-10 and 11-16 year olds in Great Britain on an annual basis. For children in the younger age-group (5-10 years), 47% of trips to and from school were made on foot in 2010, while for secondary school children this proportion was lower (36%) partly because of pupils travelling further to school. For trips to school under 1 mile in length, walking was the most prevalent mode of travel for both primary and secondary school children, accounting for 82% and 90% of trips respectively. For longer school trips, the most popular mode for primary school children was by car, with 75% of 2 to 5 mile trips, and 67% of trips over 5 miles made in this way. For secondary school pupils 50% of all trips of 2 to 5 miles in length, and 63% of trips over 5 miles, were made by bus.

In London, a slightly lower proportion of children aged 5-16 walked to school in 2009-10 (40% compared to the national average of 42%). This figure was down from 44% in 2005-06 and 50% in 2001. However, more children took the bus (30% compared to the national average of 21%) and this had increased significantly from 25% in 2005-06 and 20% in 2001. The proportion of children travelling to school by car in London stayed broadly unchanged, rising from 22% in 2001 to 26% in 2005-06 and then falling again to 23% in 2009-10. This compares to a national average of 32% in 2009-10. The proportion of children in London travelling to and from school by other modes, including cycling, increased steadily from 1% in 2001 to 4% in 2005-06 and 7% in 2009-10. This last figure compares to 4% for Great Britain as a whole.

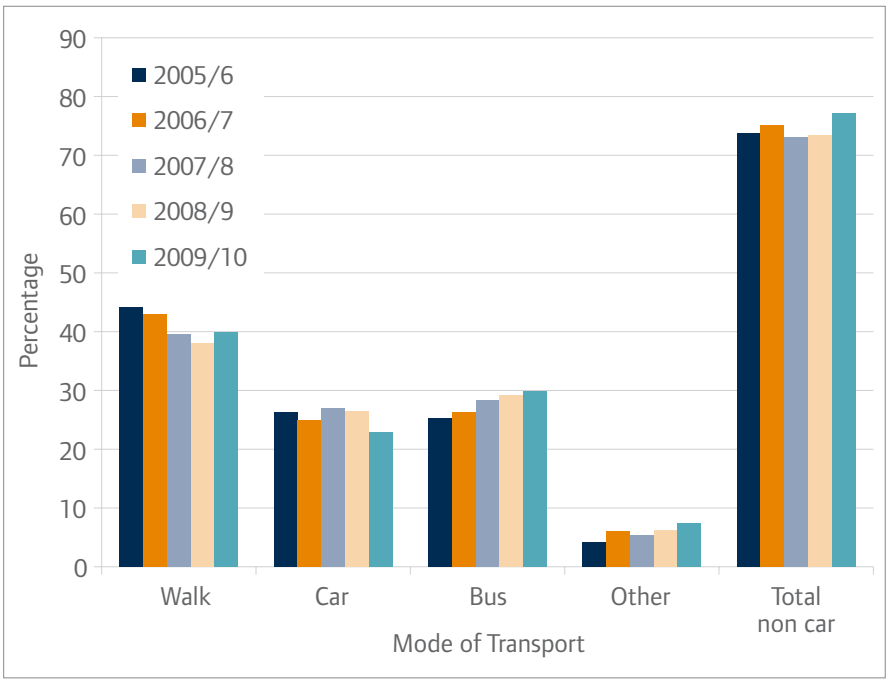
Image from the TfL Image library

The increase in bus usage and cycling for school trips in London is consistent with broader figures for overall traffic volumes. Higher bus usage would be expected in London compared to elsewhere in the UK, owing to better access to public transport. However, car use for school trips in London has not fallen as much as overall car use in the city, highlighting that travel to school is still an issue to be tackled.

Despite the trend towards increased parental choice for schools, the average journey length for London school children had not changed significantly between 2005-06 and 2009-10: from 1.2 to 1.3 miles for primary school children, and 3.0 to 2.9 miles for secondary school children. These journeys are slightly lower than the averages for Great Britain in 2009-10, which were 1.5 miles for primary school children and 3.4 miles for secondary school children.

Figure 3 Trips to and from school in London – by transport mode (%)

Source: National Travel Survey (Table NTS 9908 – Trips to and from school by main mode, region and area type: Great Britain, for 5-16 year olds).



4. TRAFFIC VOLUMES

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Levels of road traffic in London	✓ (2002 data)	✓ (2006 data)	2010

Trend (1993 to 2010) 

Summary

There was an overall decline in road traffic volumes in London of 7% from 2003 to 2010[28]. Use of public transport for passenger journeys in London has risen dramatically, increasing by 69% from 1993 to 2010, while walking and cycling levels have also increased.

Why is this issue important to London's quality of life?

Transport is closely linked to economic growth, social inclusion and environmental quality, and as such is a key quality of life indicator. Reductions in traffic volumes can help ease congestion and safety on the roads, as well as reducing vehicle emissions, which affect air quality. Reducing road traffic volumes and increasing walking and cycling benefit health and reduce the risk of obesity.

Road traffic volumes in London have declined by 3% over the period 1993 to 2010, increasing between 1993 and 1999 but reducing thereafter (see Figure 4). In comparison, traffic volumes in Great Britain as a whole continued to rise until 2007, but are now declining slightly. Traffic levels for the country as a whole were still 18% higher in 2010 than they were in 1993. So London has seen a faster decline in road traffic than the country as a whole[29].

Transport for London collect statistics on the different 'journey stages' that make up passenger journeys[30]. Typically, a person might walk to a tube station, take the underground and then walk again to reach their destination: this journey would have three separate journey stages. Transport for London's statistics confirm that the number of journey stages taken by public transport has grown dramatically, increasing by 69.1% from 1993 to 2010, while the number of stages walked or cycled has increased by 17.1% over this period. The number of journey stages by private transport (primarily car) has stabilised, reducing slightly by 2.5% between 1993 and 2010.

Image from the TfL Image library

Figure 4 Traffic volumes in Greater London (vehicle km, millions)

Source: Department for Transport, Motor vehicle traffic (vehicle kilometres) by region in Great Britain, annual from 1993 to 2010, published 2011, http://www.dft.gov.uk/statistics/series/traffic – Table TRA8904a

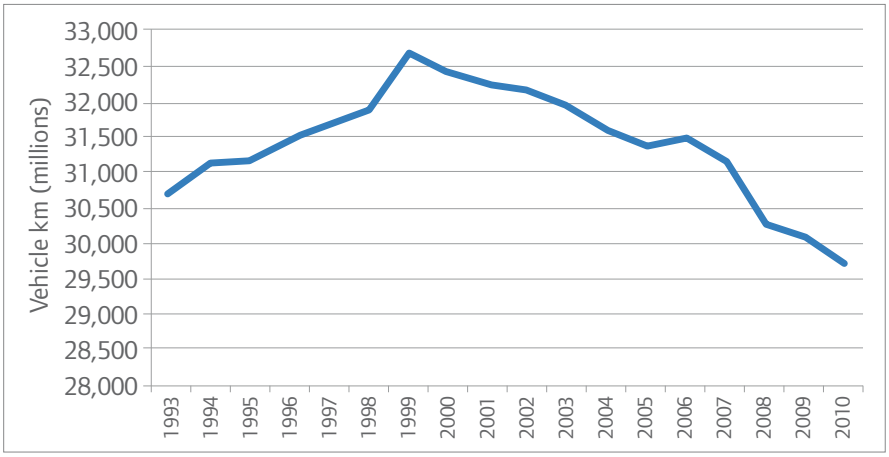
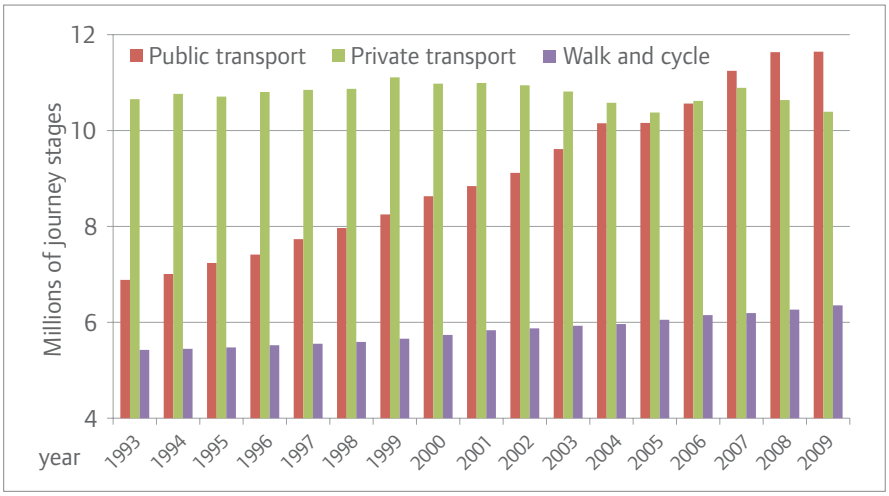


Figure 4.1 Estimated daily average number of passenger journey stages in Greater London

Source: London Datastore: Travel Patterns and Trends, London, Table 1. Aggregate travel volumes in Greater London, http://data.london.gov.uk/datastore/package/travel-patterns-and-trends-london



In 2010, Transport for London estimated that the modes of transport most commonly used for journey stages in London were car (35%), walking (21%), bus (20%), underground (10%), rail (9%) and cycling (2%)[21].

The trend towards greater use of public transport, walking and cycling in London, and the stabilisation of car travel, appears to be partly attributable to the Congestion Charge, and partly to the efforts of London Boroughs and Transport for London to encourage people to switch from car use to public transport, walking and cycling. London has not seen the increase in car travel that was observed elsewhere in Great Britain from 1993 to 2007. Economic factors may also have played a part in reducing traffic in recent years, both in London and across the UK.

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5. AREAS OF DEFICIENCY IN ACCESS TO NATURE BY BOROUGH

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Areas of deficiency in access to nature by borough	●	≈	2010

Trend not available

Summary

16% of London was identified as lying in an Area of Deficiency (AoD) in access to nature in 2010. This is reportedly a fall from 22% since 2006, although most of this change is probably the result of improvements to the accuracy of mapping in GIS.

Why is this issue important to London's quality of life?

Access to good quality green space where nature can be encountered is widely recognised as a significant factor in quality of life. Many parts of London have fine green and 'blue' (canals/waterways/wetlands) spaces where people can experience wildlife in open areas. Access to these spaces helps improve understanding of London's unique urban biodiversity and encourage greater interaction, health and wellbeing through leisure activities.

Areas of Deficiency in access to nature are defined as localities where people live more than 1km walking distance from a green space, which is designated as a Site of Importance for Nature Conservation at borough level or higher.

Greenspace Information for Greater London (GiGL) data shows that 16% of London was classified as lying in an Area of Deficiency in access to nature in 2010. This has fallen from 22% of London since 2006[32]. Figure 5 shows the distribution of AoDs across London.

Whilst some of this change can be accounted for by actual changes on the ground (e.g. improvements to the wildlife value of sites, or access to sites), GiGL reported that most is the result of improvements to the accuracy of mapping in GIS[33]. In 2006 some AoD's were estimated. Subsequent ground-survey and re-digitising of AoD between 2006-10 resulted in changes in GIS and hence in the calculated change. As a result, an amber traffic light has been awarded for this indicator, as the reduction in AoD is not solely the result of actual improvements in access to nature.

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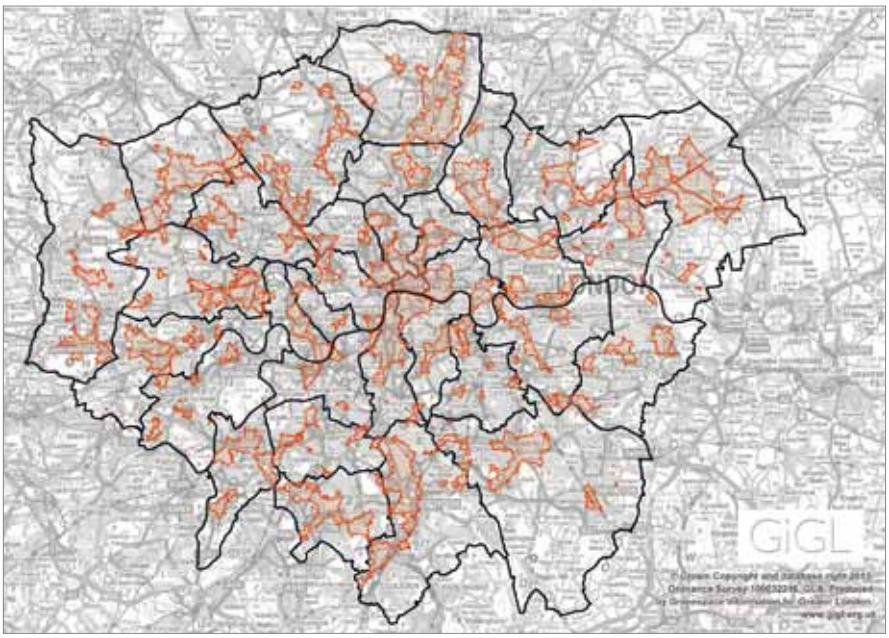
Figure 5. Areas of Deficiency in access to nature in London

Source: GiGL www.gigl.org.uk.
Key: black lines indicate borough boundaries; areas highlighted in orange indicate Areas of Deficiency to Metropolitan and Borough Level Sites of Importance for Nature Conservation



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In 2010 the GLA began supporting GiGL to develop a new GIS methodology for mapping AoD. It is expected that this new dataset will be available in 2013 but it may mean that historical trend analysis may continue to be difficult in the future[34].

Children and nature

The London Sustainable Development Commission's report, Sowing the Seeds, highlighted the importance of contact with nature for children. Natural environments help children relax, they promote adaptive processes in child development, they support learning and education, and they can nurture lifelong positive attitudes about nature and the wider environment.

The report found that initiatives to promote children's access to nature are fragmented, and that there are a number of complex issues that need to be addressed. It made twelve recommendations for policy developments and to support practice and delivery[35].

6. BIRD POPULATIONS

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Bird populations (number of species)	✓ (2002 data)	≈ (2006 data)	2008

Trend (2002 to 2008) 

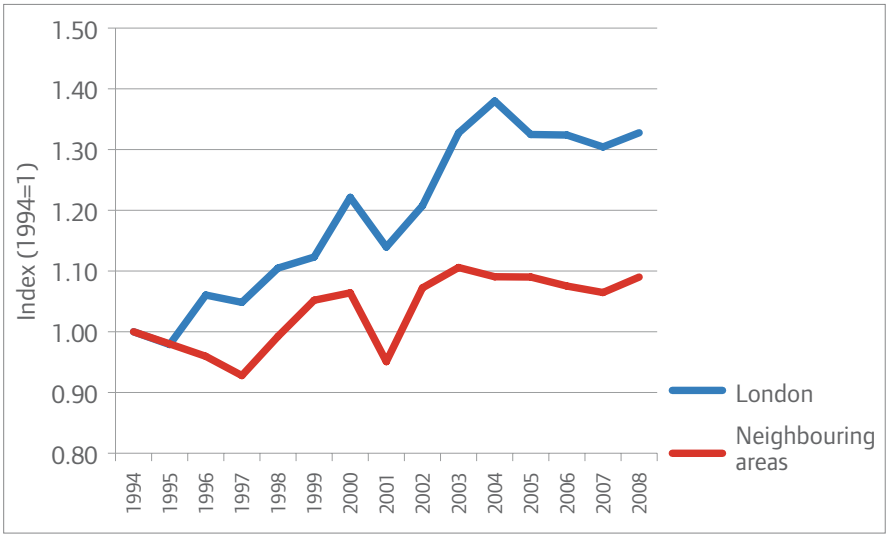
Summary
The London bird species index stood at 133 in 2008, compared with 132 in 2006.
26 of London's most common bird species were 33% more numerous in 2008 than they were in 1994.

Why is this issue important to London's quality of life?
Bird populations are a useful 'surveillance' indicator, which can help alert us to changes in the health and diversity of the natural environment. Birds are particularly sensitive to positive or adverse impacts on their surroundings. High in the food chain and highly mobile, birds reflect changes to the plants, habitats and other animals that are their food and shelter.

Figure 6 shows the trend in bird population for the 26 most common birds in the capital for the period 1992-2006 and compares it with the surrounding areas. The index for 2008 stood at 133, meaning that 26 of our most common bird species were 33% more numerous in London than they were in 1994. This is slight increase since the last QoL report, when the index was 132 (2006 figures). This is a similar pattern to bird populations in areas neighbouring London.

Figure 6. Bird species population trend, London and neighbouring areas

Source: British Trust for Ornithology, 2009 (via London Datastore, State of Environment Report for London 2011: List of data tables from the report, http://data.london.gov.uk/datafiles/environment/soe11-report-data.xls).

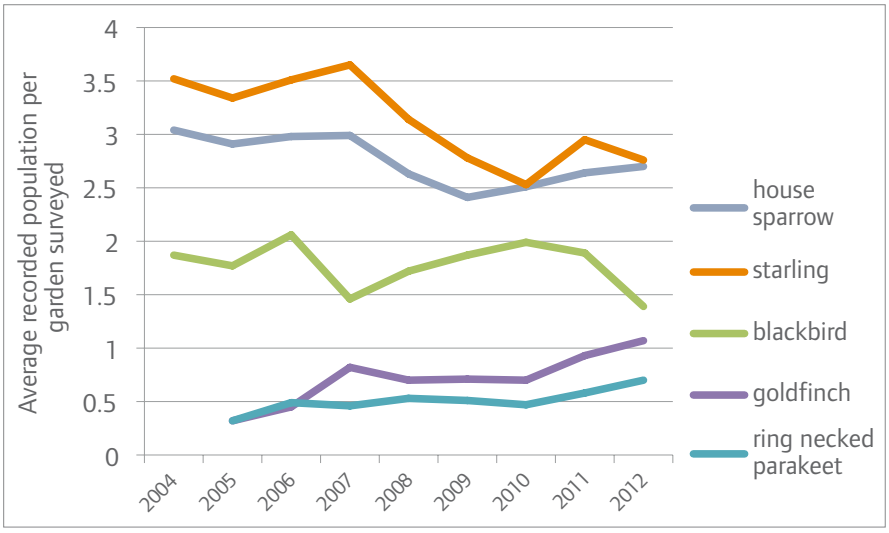


Individual species

In terms of individual species, starling, blackbird and house sparrow populations continue to decline. Goldfinch and ring-necked parakeet populations, on the other hand, have increased.

Figure 6.1 House sparrow, starling, blackbird, goldfinch and ring necked parakeet populations in London, 2004-2012

Source: RSPB Birdwatch, www.rspb.org.uk/birdwatch. Data provided by RSPB London via Environment Agency in email correspondence with author, 8 May 2012



The goldfinch increase may have more to do with the deterioration in rural conditions than any urban improvements. It is long-term trends that tell the story, however, and house sparrow numbers do appear to be leveling off after years of decline. Starlings too are down long term but the more recent falls, including that of blackbirds, may be due in part to the dry summers of the past couple of years[36].

7. ECOLOGICAL FOOTPRINT

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
London's ecological footprint	✗ (2000 data[37])	≈ (2004 data[38])	2006

Trend (1992 to 2006)

Summary

The Ecological Footprint of London residents in 2006 was 4.64 global hectares per capita, which is below the UK average. Looking at the trend from 1992 to 2006, we see that both London and the UK's footprints per capita increased in the first 10 years of this period, but have since stabilised.

Why is this issue important to London's quality of life?

Ecological Footprinting is a calculation method that estimates the demand human activities place on the planet. The Ecological Footprint of a city is defined as the area of land and sea required to supply its population with resources, and to absorb its waste products. It is helpful because it is the only indicator that illustrates sustainability in terms of the fixed limits of the planet we live on. Ecological Footprinting illustrates our demand on the natural resources of the world, but does not explain the reasons for the demand.

The average Ecological Footprint of London residents in 2006 was 4.64 global hectares (gha) per capita per year, which is slightly below the UK per capita average of 4.76 gha. London's level of consumption is well above the level that could be sustained for the global population as a whole. We would need 2.5 planets for everyone to consume the world's resources at this rate.

Figure 7 shows the trends in Ecological Footprint from 1992 to 2006, for London and the UK. There was a rising trend in the footprint of both London and the UK between 1992 and 2002, although in both cases this broadly stabilised between 2002 and 2006. More recent data is not yet available. In most years, London's footprint has been slightly lower than the UK's, but this difference has diminished and, in one year (2004), London's footprint was higher than the UK's.

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Figure 7. Ecological Footprint per capita - London and UK

Source: Data provided by Stockholm Environment Institute (York) - Impact Embedded in UK Consumer Stream: Per Capita: Total Impact: Domestic and Exports – based on REAP model: REAP_SIOT_2_3.m

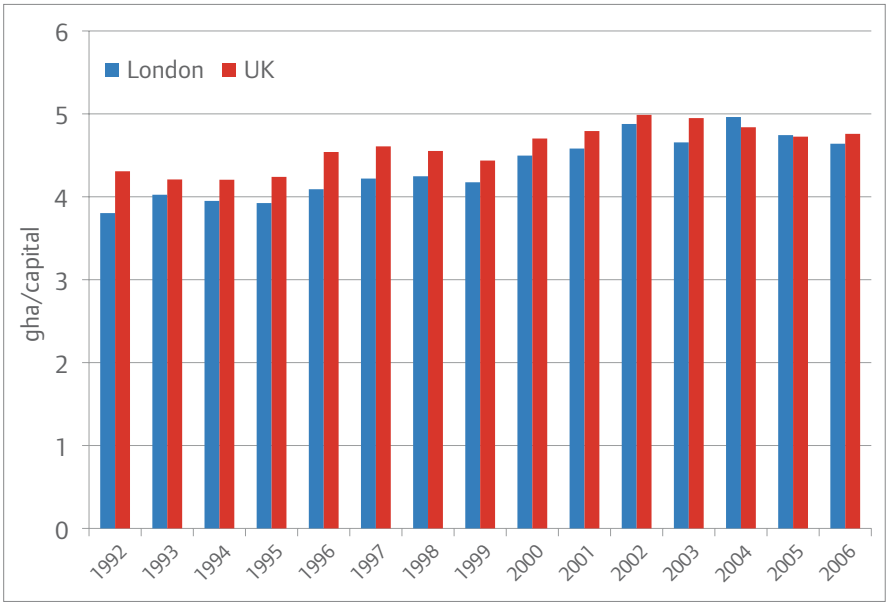
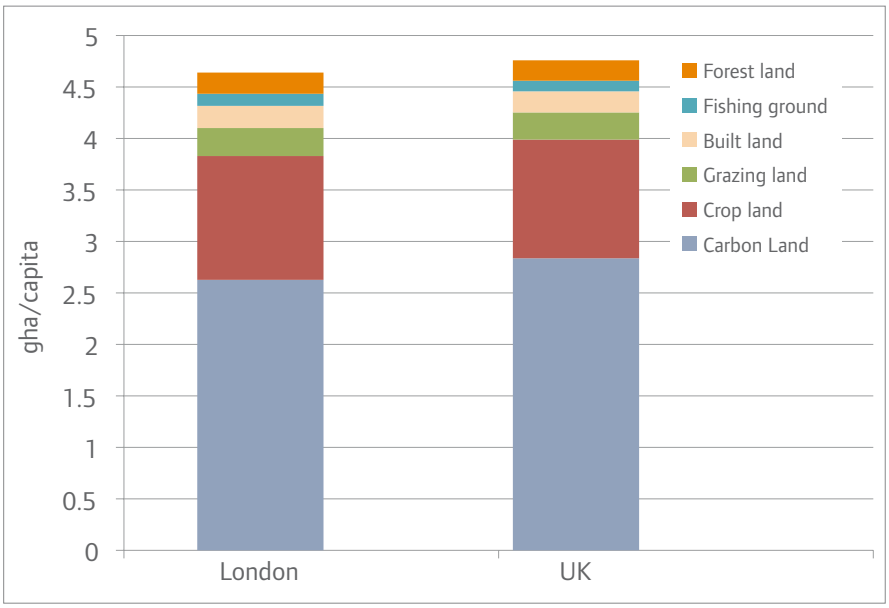


Figure 7.1 gives a breakdown of London and the UK's ecological footprint into the different categories of land required to support our consumption. The two dominant categories are the land required to absorb the carbon we produce, and the land required to grow the crops we need. The chart shows that London's residents required slightly less carbon land per capita than the average UK resident in 2006. This is likely to be due to the higher energy efficiency of urban living. However, London's rate of consumption of resources is still well above sustainable levels.

Figure 7.1. Breakdown of Ecological Footprint in 2006

Source: Data provided by Stockholm Environment Institute (York) – Impact Embedded in UK Consumer Stream: Per Capita: Total Impact: Domestic and Exports – based on REAP model: REAP_SIOT_2_3.m



8. FLOODING

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
a. Number of properties at risk	●	●	2012
b. Number of people signed up to flood warning system	●	✓ (2007 data)	2011

Trend not available

Summary
In 2012, there were over half a million properties in areas at risk from tidal and fluvial flooding within Greater London, with around 30,000 of those properties located in areas where there is a significant likelihood of flooding. Approximately 24,000 properties were registered to receive flood warnings through the Flood Warning Service in 2007. This number had increased to over 40,000 by 2011.

Why is this issue important to London's quality of life?
This indicator aims to give a sense of how well London is adapting to climate change. As London's climate changes, the probability of flooding is expected to increase. There will be wetter winters, sea level rises, and an increase in the intensity and frequency of extreme weather events. London is vulnerable to flooding from four main sources: the tidal Thames, fluvial tributaries to the Thames and the non-tidal Thames, surface water flooding from heavy rainstorms, and overflowing sewers. Flooding has negative impacts on health, particularly mental health, as a result of the stress of managing the disruption of being flooded, and clearing up afterwards.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This was a new indicator in the 2008-09 QoL report. It is now spilt into two, measuring (a) the number of properties at risk and (b) the number of people signed up to the flood warning system.

(a) The number of properties at risk

Taken from the Environment Agency's National Flood Risk Assessment (Nafra), this part of the indicator measures the number of properties in London in areas at risk of flooding from rivers or the sea. The methodology used for the measure has varied from that used for the previous QoL report, meaning the current data is not comparable with previous figures. As the data is

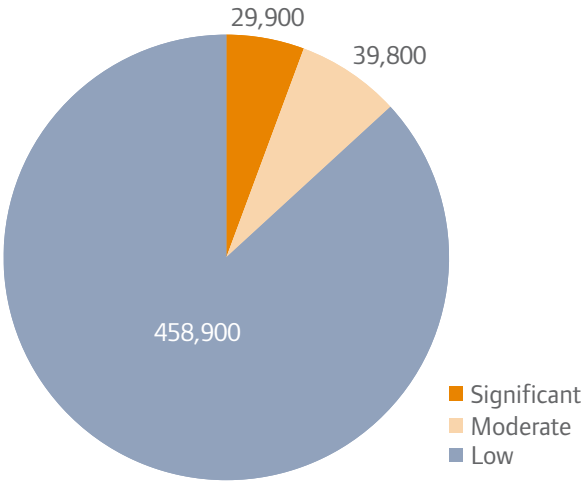
modelled, the figures provided have been rounded to the nearest hundred. Figure 8.1 shows that in 2012, over half a million properties were in areas at risk from tidal and fluvial flooding within Greater London.

Figure 8. Likelihood categories

Risk	Likelihood
Low	1 in 200 chance (or less) of a flood happening in any one year
Moderate	1 in 75 to 1 in 200 chance of a flood happening in any one year
Significant	1 in 75 chance (or more) of a flood happening in any one year

Source: National Flood Risk Assessment (Nafra), Environment Agency

Figure 8.1 Approximate number of properties in areas at risk of flooding from rivers and the sea in London (2012)



Source: National Flood Risk Assessment (Nafra), Environment Agency, August 2012

Regionally, London has the highest number of people at risk from flooding, according to the 2009 Nafra[39, 40]. However, most of these 'at risk' properties are situated in areas with a low likelihood of flooding. This is mainly a result of the major flood defences and flood defence structures in the Thames Estuary, including the Thames Barrier, which act to reduce the risk of tidal flooding.

The 2012 National Flood Risk Assessment found that the London borough of Richmond upon Thames has the highest number of properties in areas with a significant likelihood of flooding, at around 4,700 properties. These are fluvial flood risk, predominantly from the River Thames.

(b) Number of people signed up to the flood warning system

40,274 London households had signed up to receive the Environment Agency's Flood Warnings Direct (FWD) service in August 2011. This is an increase from the 24,000 properties registered in 2007. A further 192,000 are registered to receive warnings through the Extended Direct Warnings service, which was introduced to automatically register properties in areas of higher risk[41].

Whilst the increase in households registered to the service is a positive change, the sign-up rate is less than 10% of the total number of properties at risk from flooding in London. This is partly because the majority (around 70%) are in areas at risk of tidal flooding which has a low likelihood due to protection from defences such as the Thames Barrier. They receive warnings from alternative sources such as local radio.

As discussed in the previous QoL report, there is a challenge to improve awareness of flood risk and the FWD service to ensure that Londoners are adequately prepared for the expected impacts of future climate change[42].

9. HOUSEHOLD RECYCLING

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Household recycling rates	✓ (2003-04 data)	✓ (2006-07 data)	2010-11

Trend (2003-04 to 2010-11) 

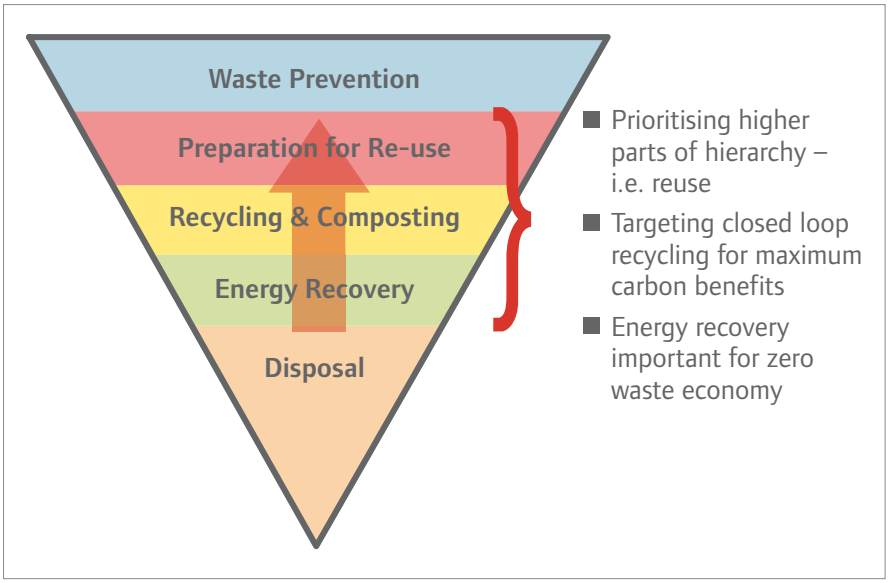
Summary
In 2010-11 London's households recycled and composted 32.5% of their waste, an increase of 9.6 percentage points since the last QoL report. At 41%, the London rate of household recycling was lower than the England average in 2010-11.

Why is this issue important to London's quality of life?
Recycling saves resources, reduces the amount of waste going to landfill, reduces air and water pollution and saves energy. By moving towards a city that reuses and recycles, rather than one which throws things away, significant new economic and employment opportunities can be created. Participation in household recycling is also an indication of people's commitment to leading more sustainable lifestyles.

The indicator shows the percentage of household waste that is recycled or composted across London's local authorities. Recycling and composting form the third level of the waste hierarchy after prevention and reuse.

Figure 9.
The waste hierarchy

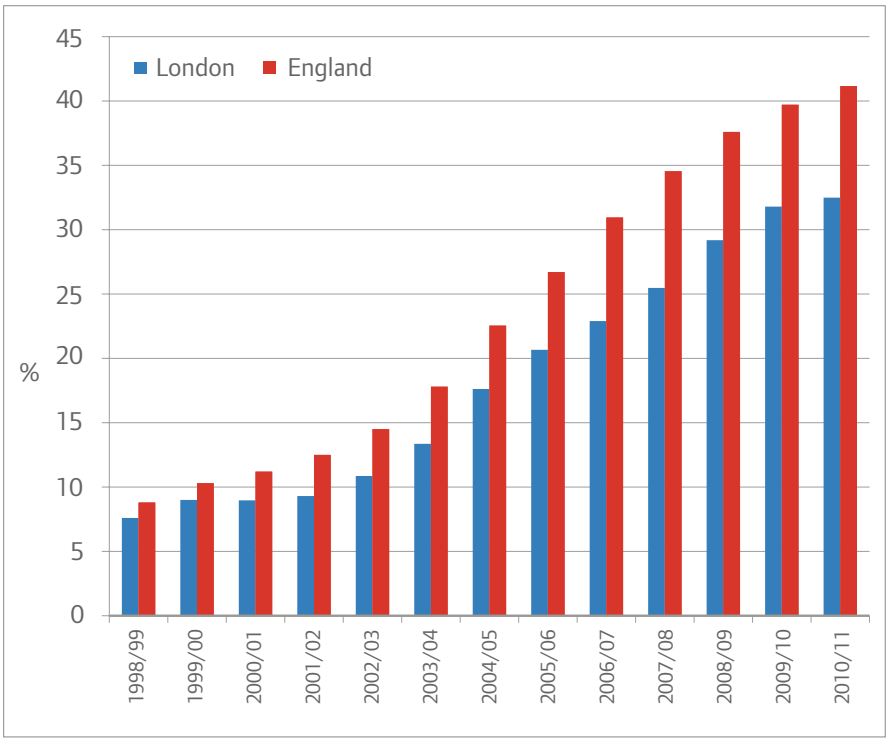
Source: Waste and Resources Action Programme (WRAP), http://www.wrap.org.uk/content/energy-recovery-maximising-value-waste-materials



In 2010-11 London's households recycled and composted 32.5% of their waste. This is an increase from 22.9% since the last QoL report. Overall, recycling rates in London have increased over the last decade, up from only 9% in 2000-01[43]. As Figure 9.1 shows, however, overall recycling rates still lag significantly behind the English average and the gap has widened, not narrowed, over the last decade.

Figure 9.1. Percentage of household recycling and composting in London, 2000-01 to 2010-11

Source: Defra, Local Authority collected waste for England – annual statistics England and the regions data downloads 2010-11, www.defra.gov.uk



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The target in the 2011 London Plan states that London should be exceeding household recycling and composting levels of 45% by 2015, 50% by 2020 and aspiring to achieve 60% by 2031.[44] To meet the 45% target a 12.5% increase is required over the next 4 years. In the previous 4 years the increase has been 7%.

There is a broad spread of recycling rates across London boroughs. In 2010-11 Bexley achieved 51% recycling and Harrow 50%. In contrast, rates in Newham were just 15% and Lewisham 18%. This may in part be explained by the greater challenges of recycling and composting in the inner city due to the larger numbers of high-rise buildings and flats.

10. WASTE

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Household waste in London	✓ (2003-04 data)	✓ (2006-07 data)	2010-11

Trend (2003-04 to 2010-11) 

Summary
In 2010-11, 3.03 million tonnes of household waste were collected in London, compared with 3.39 million tonnes in 2006-07. This reverses a previously negative trend from 2003-04 levels when 3.33 million tonnes was collected.

Why is this issue important to London's quality of life?
The amount of waste we produce currently is unsustainable. Consumption of goods by households and businesses leads to waste accumulating in landfill sites in and around London – this represents both a waste of resources and an environmental problem.

This indicator is a measure of the long-term amount of household waste collected. In the last QoL report this indicator was showing a negative trend. However, there has been a more positive trend since 2006-07, despite an increasing population in the capital. The London State of the Environment report suggests, 'this is due to behavioural change and in part reflects the recession of recent years'[45].

The total amount of local authority collected waste, of which household waste is a significant part, has also fallen – from 4.22 million tonnes in 2006-07 to 3.76 million tonnes in 2010-11[46].

Figure 10. Local authority collected waste in London 2000-2011

Source: Defra, Local Authority collected waste for England – annual statistics. England and the regions data downloads 2010-11, http://www.defra.gov.uk/statistics/environment/waste/wrfg23-wrmsannual/. r = revision has been made to the data for this year.

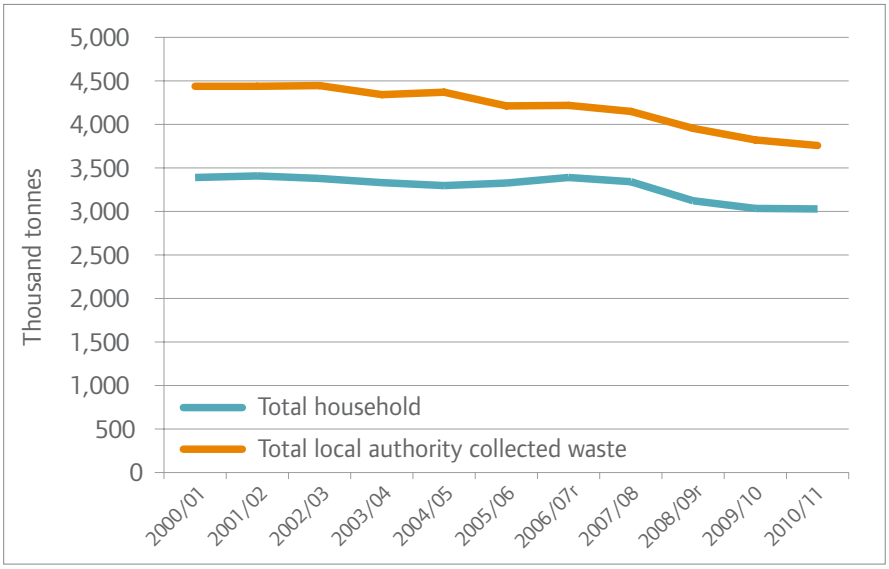
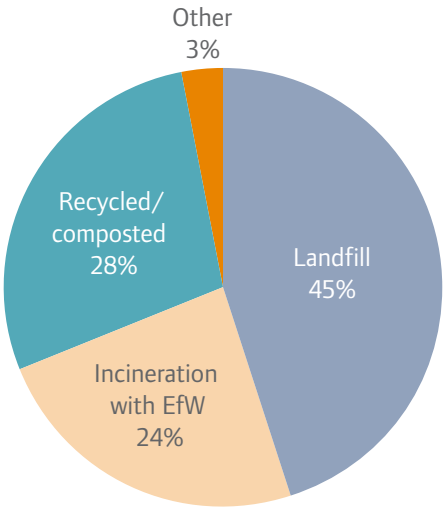


Figure 10.1 shows how London's local authority collected waste was managed in 2010-11.[47] Landfill disposal of waste declined from 72% in 2000-01 to 44.6% in 2010-11. Recycling of waste rose from 8% to 28.4% over the same period.

Figure 10.1. London's local authority collected waste 2010-11

Source: Defra, Local Authority collected waste for England – annual statistics. England and the regions data downloads 2010-11, http://www.defra.gov.uk/statistics/environment/waste/wrfg23-wrmsannual/



London performs well nationally. It produces less waste per household than any other region in England, while the total amount of waste produced each year has decreased faster in London than it has for England since 2000[48]

11. WATER CONSUMPTION (DOMESTIC)

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Per capita consumption (household) – five year mean	●	≈ (2003-08 data)[49]	2006-11

Trend (2000-01 to 2010-11) ~

Summary

The average household water consumption in London over the period 2006 to 2011 was 162 litres of water per person per day. This was around 15 litres per person per day higher than the average for England and Wales.

Why is this issue important to London's quality of life?

Nationally, London has the most people living in the driest part of the country. Monitoring domestic water consumption and the availability of water in London is therefore key to managing London's natural resources, particularly in the face of climate change. In future, changes to rainfall patterns and increasing temperatures are expected to affect river flows, and therefore water availability.

This is a new indicator for the QoL report. It measures the average volume of water that each Londoner uses every day over a five year-period, expressed as per capita consumption (pcc). Water companies use this information to balance demand for water against their available supply. The figures are taken from water company data submitted to OFWAT. Thames Water is the principal water company in London, although Veolia Water Central, Sutton and East Surrey Water, and Essex and Suffolk Water also operate in some parts of the capital.

Measuring pcc data over five-year periods smoothes out the annual fluctuations (described below) and provides a clearer picture of patterns in household water use over time. Over the latest five-year period, 2005-11, London's average pcc was 162 litres per head per day (l/h/d). Figure 11 shows that on this measure pcc has changed relatively little since 2000-05.

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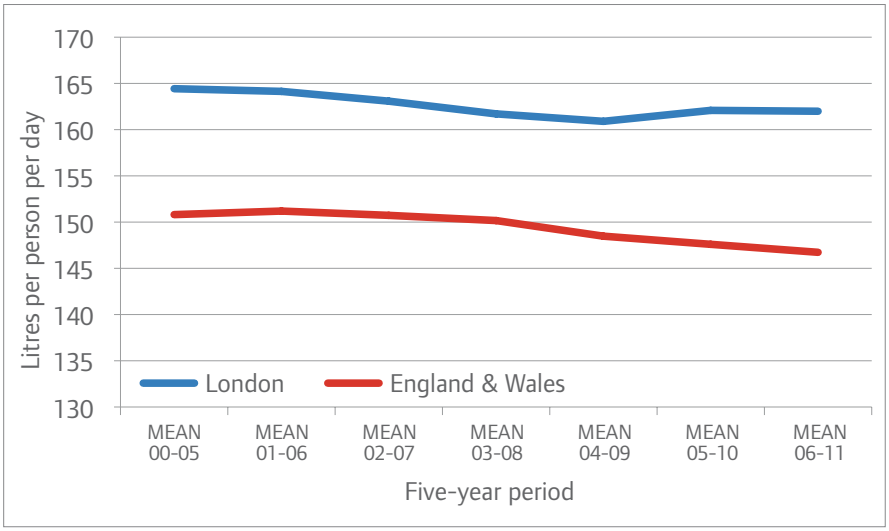
As this information is reported by water resource zone, the figures are calculated and should be considered estimates. There are many factors that can influence the rate of household water consumption, including climate. Generally, the climate in London and the South East is warmer and drier than other parts of the country, which may lead to a comparative rise in water use[50].

Figure 11. Household water consumption for London and England & Wales: five year mean

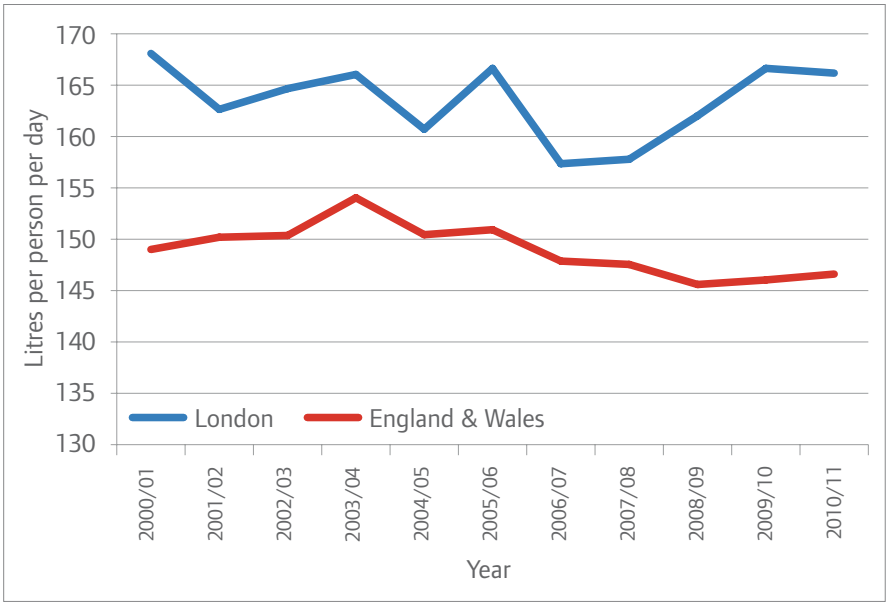
Source: Water Company Returns to OFWAT, via the Environment Agency in email a correspondence to author, 27 April 2012.



London's average pcc stood at around 166 l/h/d in 2010/11, compared to a national average of 147 l/h/d. Figure 11.1 shows that annual pcc in London has fluctuated since 2000-01. Demand dropped in 2006 as a result of a dry year with a hosepipe ban, which reduced the amount of water people used. Pcc was also lower in 2007 and 2008 due to wet summers and therefore less need for hosepipes[51].

Figure 11.1 Per capita consumption (household) for London and England & Wales, 2000-01 to 2010-11

Source: Water Company Returns to OFWAT, via the Environment Agency in email a correspondence to author, 27 April 2012.



Metering and water efficient appliances can help reduce household demand and consumption of water. OFWAT figures show that 26% of homes in London currently have a water meter installed (2009/10) compared to an average of 35% across England and Wales[52].

Social indicators

12. CHILDCARE

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Childcare places for under 8s	●	✗ (2009 data)[53]	2011

Trend from 2009 to 2011 ↘

Summary
The number of childcare places per 100 children for under 8s decreased by just over 4% from 2009 to 2011. The actual number of childcare places was higher in 2011 than it had been in 2009, but this increase has not kept pace with the rise in London's child population.

Why is this issue important to London's quality of life?
The lack of affordable childcare limits the ability of parents and caregivers to access paid employment and training. Lack of paid employment has a major effect on quality of life and is a major contributing factor to London having the highest level of child poverty in the UK (after housing costs are taken into account).

The previous measure of childcare nursery places is no longer published by Ofsted. Ofsted now publishes figures for overall day care places for under 8s (per 100 children), including nurseries, play groups, crèches and childminders. It is not clear how meaningful this indicator will be for future analysis, as changes in the underlying balance between nursery places and occasional childcare cannot be analysed.

There were 21.5 childcare places available per 100 children under 8 in London in 2011, a fall of just over 4% since 2009. This is lower than for England as a whole, which had 26.8 places available per 100 children in 2011.

Figure 12. Registered childcare places available for children under 8

	2009	2010	2011
Total places available for children under 8			
London	195,726	193,327	197,996
England	1,321,144	1,298,844	1,309,404
Total number of children under 8			
London	874,700	899,500	920,200
England	4,929,889	5,050,354	n/a
Total places available per 100 children			
London	22.4	21.5	21.5
England	26.8	25.7	n/a

Sources: Childcare places from Ofsted (Registered Childcare Providers and Places, 2008-2011 – www.ofsted.gov.uk); Population for England from ONS; population for London from GLA projections for 2011 www.data.london.gov.uk.

London has the highest childcare costs of all regions in the UK. Childminders are particularly expensive, with a cost 32% above the average for England. Nursery places for children under 2 are 23% more expensive than the average for England, and places for those over 2 are 20% more expensive. School clubs for under 8's, however, are slightly cheaper than the average for England.

Figure 12.1 Average childcare costs per week in 2011

Region/ Country	Nursery (under 2)	Nursery (2 and over)	Childminder (under 2)	Childminder (2 and over)	Out-of-school club
London	£119	£113	£119	£116	£43
England (average)	£97	£94	£90	£88	£45

Source: Daycare Trust Survey Report - Childcare cost survey 2011 (www.daycaretrust.org.uk)

13. EDUCATION: PRIMARY

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Average proportion of pupils making expected progress from Key Stage 1 to Key Stage 2, across English and Maths.		(2009 data)[54]	2010-11

Trend for London from 2009 to 2011

Summary
The proportion of pupils making expected progress from Key Stage 1 to Key Stage 2 in English and Maths rose between 2009 and 2011 for both subjects. Furthermore, levels of progress were higher in London than for England as a whole.

Why is this issue important to London's quality of life?
Education provides people with the skills they need to make a contribution to the economy and to society. Learning also makes a wider contribution to promoting active citizenship and social cohesion, and people's personal development, health and wellbeing. Education remains a high profile issue in London and is strongly connected to issues of deprivation.

The Department for Education (DfE) no longer uses 'value added' measures to compare performance from year to year[55]. The replacement indicator for primary education measures the 'proportion of pupils making expected progress from Key Stage 1 to Key Stage 2 in English and Maths'. 'Expected progress' is defined as an improvement of two Attainment Levels between Key Stage 1 and Key Stage 2.

The level of progress for London pupils improved significantly from 2009 to 2010, but then dropped back slightly in 2011. Levels of progress for London pupils, in both English and Maths, were consistently 3-4% higher than levels of progress for England[56] as a whole.

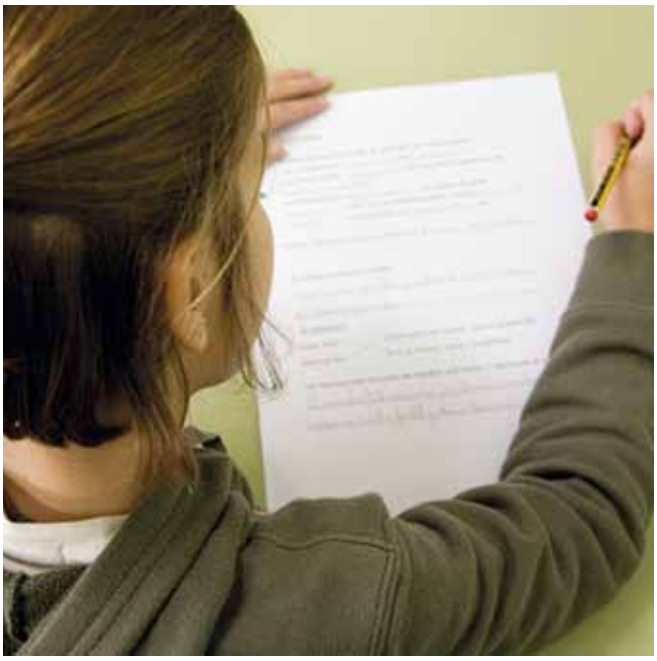


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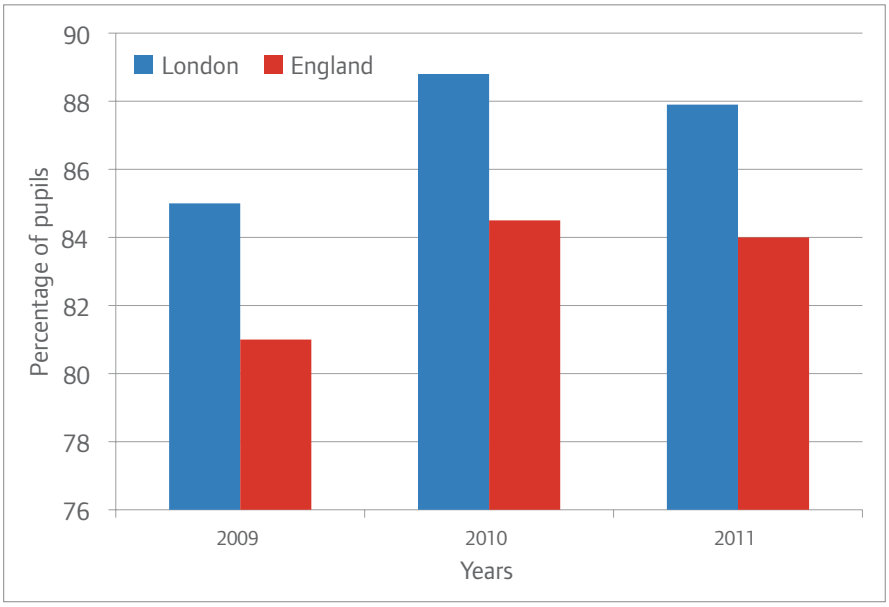
Figure 13 Percentage of pupils making expected progress in English between Key Stage 1 and Key Stage 2

DfE, National Curriculum assessments at Key Stage 2 in England 2010/2011 (revised) http://www.education.gov.uk/researchandstatistics/statistics/allstatistics/a00200453/dfe-national-curriculum-assessments-at-key-stage-2-in-england-20102011-revised Updated figures were obtained from the National Pupil Database for 2010 and 2011.



As this is an indicator of improvement rather than achievement, there is less difference between Inner and Outer London on this measure than on the secondary education indicator. In English, 86% of Inner London pupils achieved at least 2 levels of progress between Key Stages 1 and 2, compared to 84% of Outer London pupils. In Maths the figures were even closer. In 2009, 84% of Inner London pupils achieved at least 2 levels of progress, compared to 83% of Outer London pupils.

14. EDUCATION: SECONDARY

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Proportion of pupils obtaining at least 5 GCSE passes at A*-C or equivalent	✓ (2003 data)	✓ (2006 data)[57]	2010-11

Trend from 2009 to 2011

Summary
The proportion of pupils obtaining at least 5 GCSE passes at A*-C or equivalent has increased 29% since 2004. London continues to perform better than England as a whole on this measure, although the performance of Inner London pupils is lower than the national average.

Why is this issue important to London's quality of life?
Education provides people with the skills they need to make a contribution to the economy and to society. Learning also makes a wider contribution to promoting active citizenship and social cohesion. Education remains a high profile issue in London and is strongly connected to issues of deprivation.

There has been a very slight change in the published statistics for this measure. Statistics are now published for pupils by stage (i.e. Key Stage 4) rather than at age 15, which affects only a few hundred pupils a year and so has little impact on the overall figures.

Putting these two time series together, the proportion of pupils obtaining 5+A*-C Grades at GCSE level has increased from 52.9% in 2004 to 59.4% in 2006, and then again to 71.3% in 2009 and 82.0% in 2011. This represents a 29% increase since 2004.

Figure 14. Percentage of Key Stage 4 pupils achieving 5+A*-C Grades at GCSE (any subject)

Source: DfE, GCSE and Equivalent Results in England, 2010/11 (Revised) http://www.education.gov.uk/rsgateway/DB/SFR/s001056/index.shtml

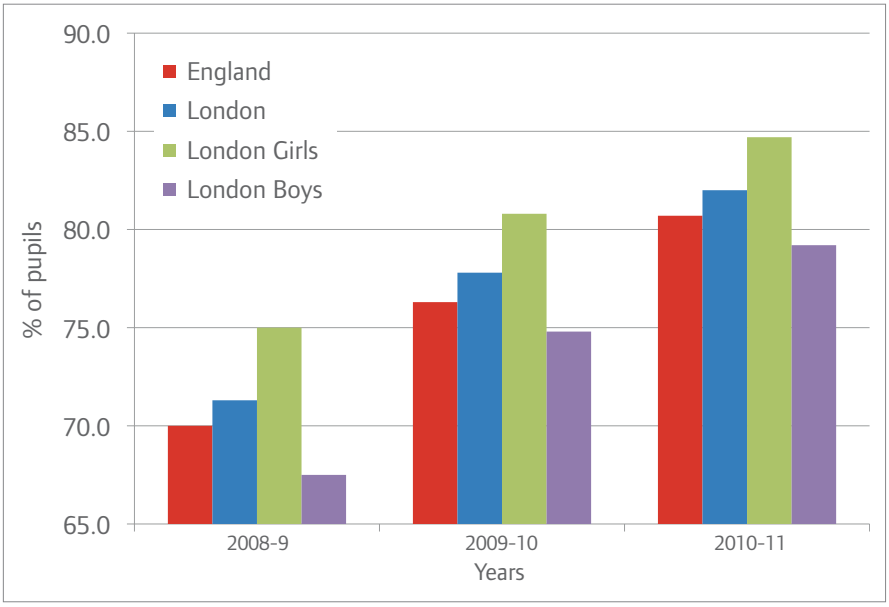


Figure 14 illustrates that girls living in London have consistently performed better at GCSE than boys living in London. This is similar to the national trend, although performances for both genders in London are better than the England average.

The DfE now sets a target in terms of the proportion of Key Stage 4 pupils achieving 5+A*-C grades at GCSE, including English and Maths. This is considerably more demanding as a target, since pupils cannot achieve this target solely on the basis of vocational GCSEs. It is therefore less open to manipulation through the choice of GCSEs taken. Consideration might be given to selecting this as the indicator for the future.

London as a whole performs better than the average for England on this measure, but there is a marked difference between the achievements of pupils living in Inner London and Outer London. The former are below the average for England, while the latter perform above the average. In all cases, there is again an upward trend in performance at GCSE from year to year.

Figure 14.1. Percentage of Key Stage 4 pupils achieving 5+ A*-C Grades at GCSE (including English and Maths)

	2007/8	2008/9	2009/10
England	48.4	50.9	55.3
London	50.7	54.0	58.0
Inner London	45.5	49.6	54.2
Outer London	53.0	56.0	59.8

Source: DfE, GCSE and Equivalent Results in England, 2010/11 (Revised) http://www.education.gov.uk/rsgateway/DB/SFR/s001056/index.shtml

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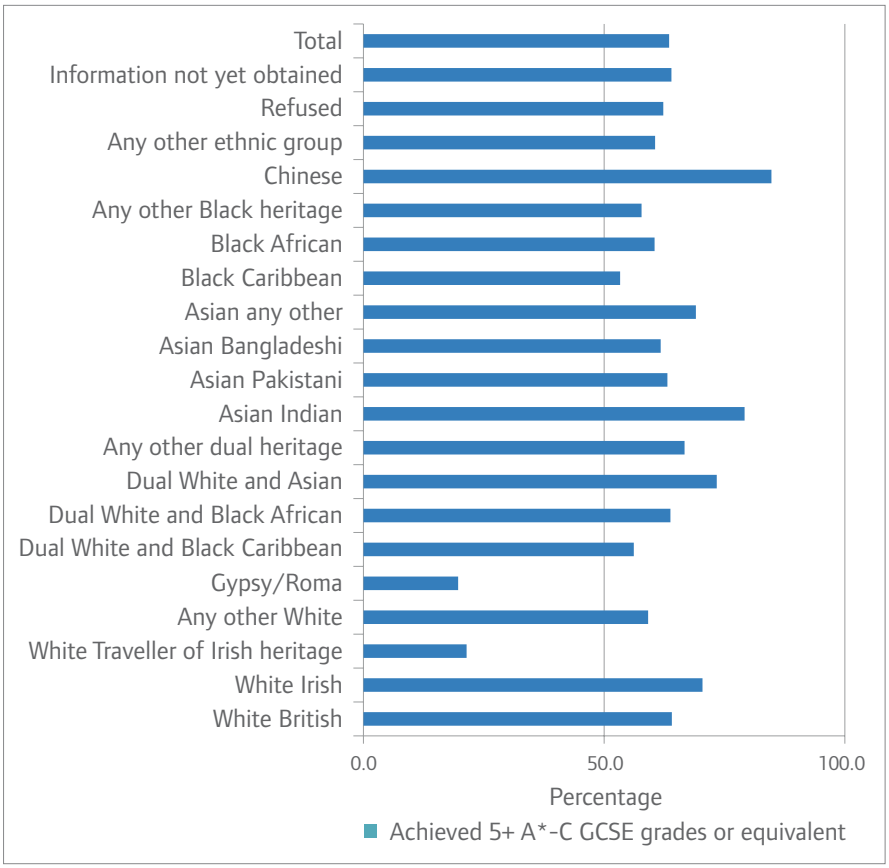
London pupils also show differences in achievement by ethnic group. The highest achieving pupils in 2008 were from Chinese and Indian ethnic groups. The lowest achieving pupils were children from Roma, Gypsy and Traveller backgrounds, followed by those from Black Caribbean ethnic groups.

Figure 14.2. Ethnic breakdown of London pupils aged 15 at the start of the school year 2008 (% achieving 5+A*-C Grades at GCSE – any subject)

Source: DfE, GCSE and Equivalent Results in England, 2010/11 (Revised) http://www.education.gov.uk/rsgateway/DB/SFR/s001056/index.shtml



15. CRIME

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Total recorded crime in London	●	✓ (2008-09 data)	2011-12

Trend (2008-09 to 2011-12) ↘

Summary
In total there were 814,727 crimes recorded by the Metropolitan Police during 2011-12. This is 3.6% lower than 2008-09 and is the lowest since comparable records started in 1998-99. The majority of Londoners are minimally affected by the fear of crime, although the fear of crime is higher in London than in any other region of England and Wales.

Why is this issue important to London's quality of life?
Crime is an important indicator of a city's quality of life. Crime harms victims mentally, physically and financially and broadly affects people's feelings of safety and trust, their daily routines, their freedom of choice and the extent to which they feel they belong to a community. Crime also imposes economic costs on society, reinforces social exclusion and can contribute towards environmental degradation.

Total recorded crime in London has steadily fallen since 2006-07, as Figure 15 shows, although there has been a rise in street crime . In 2008-09 street crimes totalled 57,971. In 2011-12 this increased to 78,246.

Most other crime categories show a year on year reduction in London since the last QoL report, with some exceptions. There has been a rise in the number of sexual offences recorded since 2006-07. Burglary has also increased since 2008-09 from 93,575 recorded offences to 96,045 in 2011-12.

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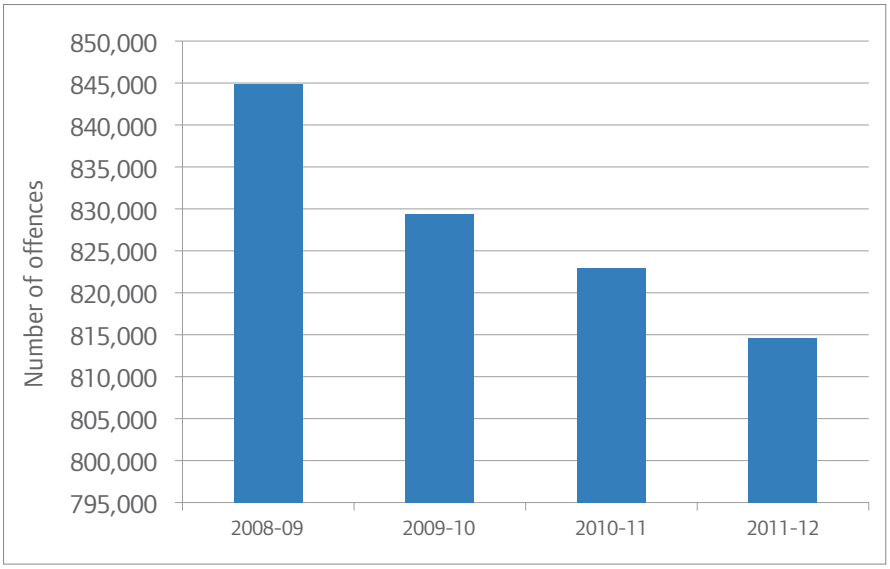
Figure 15. Total recorded crime in London between 2008-09 and 2011-12

Source: Metropolitan Police, via London Datastore, http://data.london.gov.uk/datastore/package/crime-rates-borough

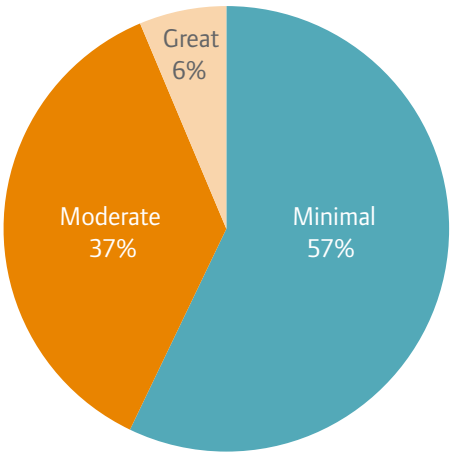


Figures on hate crime present a mixed picture. There has been a decline in both racist and religious hate crimes since 2008-09, whilst homophobic and disability-related crimes have both risen over the same period[59].

Figures from the 2010-11 British Crime Survey show that a majority of Londoners – 57% - feel their quality of life is minimally affected by the fear of crime. 6% of Londoners reported that their quality of life was greatly affected by the fear of crime, with 37% of Londoners moderately affected. In total therefore, 43% of London's population feels moderately or greatly affected by the fear of crime. This is greater than for other regions in England and Wales, where the average is 29%[60].

Figure 15.1 How much quality of life is affected by the fear of crime in London

Source: British Crime Survey, 2010-11



16. DECENT HOUSING

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Percentage of decent housing stock	✓ (2001 data)	✓ (2003 data)	2009-10

Trend not available

Summary

In 2009-10, 70% of London's homes exceeded Decent Homes Standard, a similar rate as for England as a whole. This is an improvement on the 2003 levels reported in the 2008-09 QoL report.

Why is this issue important to London's quality of life?

Housing is a fundamental aspect of a decent quality of life. Poor quality housing can harm health and is often linked to a variety of social problems.

This indicator measures the percentage of homes in London that are above the Government's 'Decent Homes Standard'. A 'decent home' is defined as one that meets the statutory minimum standard, is in a reasonable state of repair, has reasonably modern facilities and services and provides a reasonable degree of thermal comfort.

In 2009-10, 70% of London's homes were above the Government's Decent Homes Standard (figure 16). This is the same rate as for England as a whole and is not significantly different from other regions in England except the North East (where around 15% of homes are non-decent) and the South West (where around 35% fail to meet the standard).

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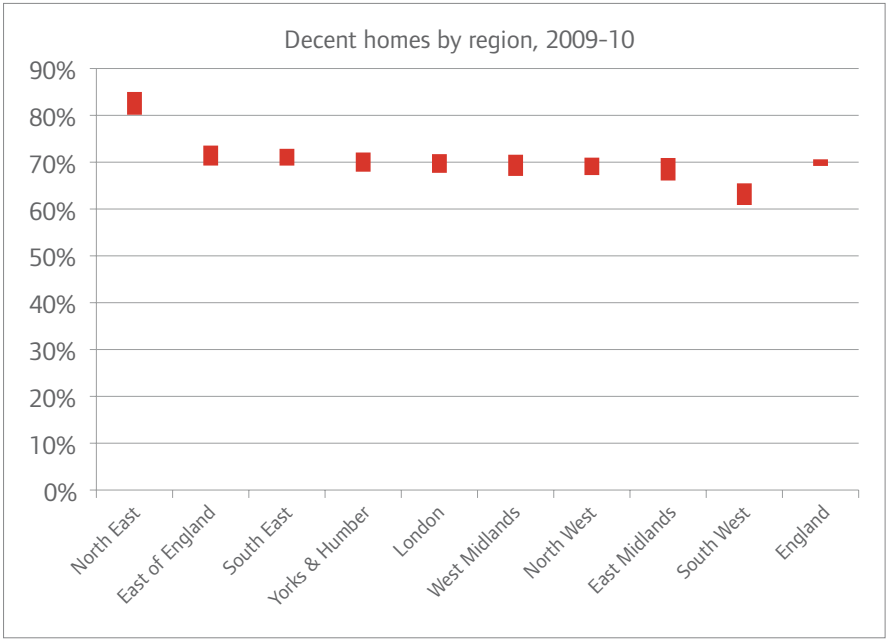
Figure 16. Percentage of homes above the Decent Homes Standard by region, 2009-10 (showing 95% confidence intervals)

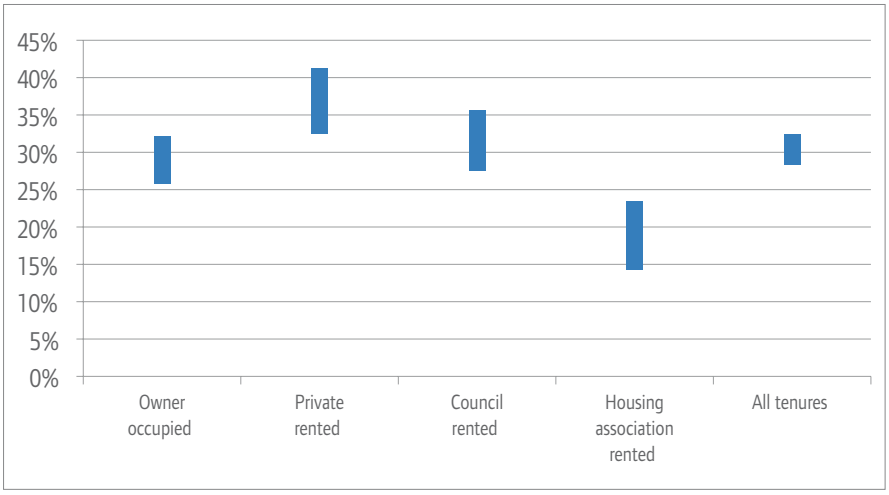
Source: GLA analysis of 2009-10 English Housing Survey data



Within London, rates of non-decency are highest in private rented homes, and lowest in housing association homes (see Figure 16.1). For the latter, this is likely to be a result of the UK Government's target set in 2000 of ensuring all social housing meets the Decent Homes standard by 2010.[61] Provisions in the Energy Act 2011 are likely to contribute to better housing standards in the future.[62]

Figure 16.1. Percentage of homes in London below the Decent Homes Standard by tenure, 2009-10 (showing 95% confidence intervals)

Source: GLA analysis of 2009-10 English Housing Survey data



The English Housing Survey 2009-10 shows an estimated 237,000 households living in overcrowded accommodation in London. This represents an increase of 37,000 since the 2008-09 QoL report[63], and 76,000 in the last decade[64]. This figure is also high compared to the rest of England. In 2009-10 7.8% of households in London were overcrowded, compared with 2.1% in the rest of England. In contrast, London also has one of the lowest levels of under-occupation[65]. Owner-occupiers comprise the majority of under-occupied households[66].

17. LIFE EXPECTANCY

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Life expectancy at birth for men (years)	✓ (2000-02 data)	✓ (2004-06 data)[67]	2008-10
Life expectancy at birth for women (years)	✓ (2000-02 data)	✓ (2004-06 data)[68]	2008-10

Trend Life expectancy, men (2000-02 to 2008-10) ↗

Trend Life expectancy, women (2000-02 to 2008-10) ↗

Summary
In 2008-10, life expectancy in London was 83.3 years for women and 79 years for men. These values are an increase on 2004-06 figures and are also slightly higher than the national averages.

Why is this issue important to London's quality of life?
Life expectancy provides an indication of the quality of life in a particular area. It is a standard measure of the health of a city's citizens and is influenced by a range of factors such as income inequality, education, housing and lifestyle.

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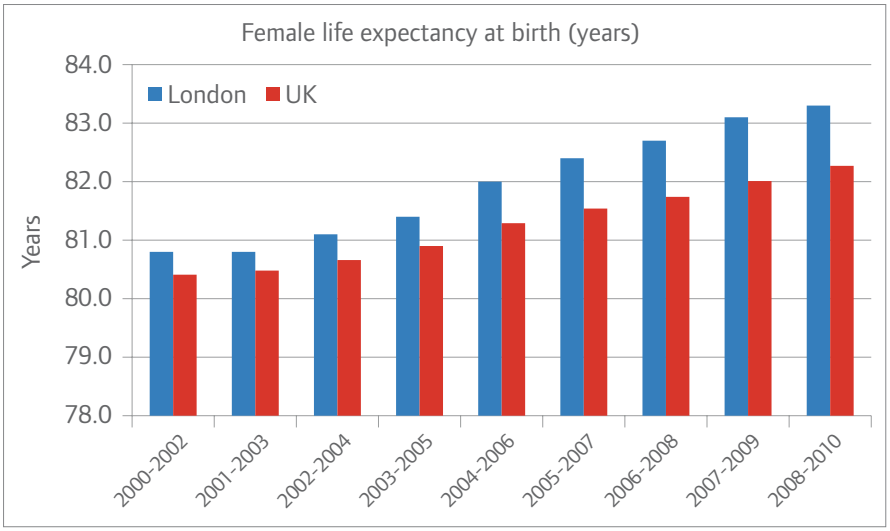
Life expectancy in London has risen slowly but steadily over the last decade for both men and women. The latest figures of 79 years for men and 83.3 years for women are an increase on those in the 2008-09 QoL report, which measured life expectancy at 77.4 years for men and 82 years for women[69].

Life expectancy has been consistently higher in London than for the UK as a whole. In 2008-10 life expectancy was 0.8 years higher for men in London and 1 year higher for women (see figure 17 for female life expectancy at birth)[70].

Figure 17. Female life expectancy at birth (years) in London and the UK

Source: Office of National Statistics, Life expectancy at birth and at age 65 for local areas in England and Wales, 2008-10, http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-223356



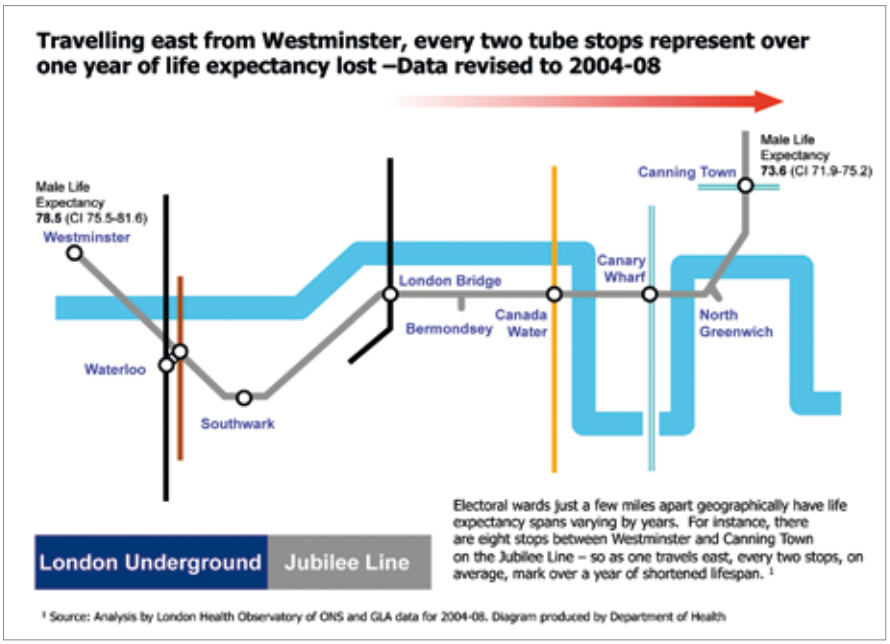
There are variations in life expectancy between different parts of London. As in the 2008-09 QoL report, Kensington and Chelsea continues to have the highest life expectancy of all local authorities in the UK at 85.1 years for men and 89.8 years for women[71].

At the other end of spectrum, men in Islington had the lowest life expectancy in London at 76 years, while women in Lambeth, Newham and Barking & Dagenham had the lowest life expectancy at 81.1 years. These figures remain well above the lowest in the UK, however. In Glasgow life expectancy is 71.6 years for men and 78 years for women[72].

Figure 17.1 highlights the differences in life expectancy that can occur across small distances in London, including within boroughs. These reflect the differentials in access to determinants of health such as good housing, education, quality employment, financial security and access to health services.

Figure 17.1. Differences in male life expectancy within a small area of London

Source: London Health Observatory http://www.lho.org.uk/viewResource.aspx?id=15463



18. PHYSICAL ACTIVITY

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Per cent of Londoners participating in moderate exercise	●	≈ (2007-08 data)	2010-11

Trend (2005-06 to 2010-11) ↘

Summary

Overall there has been no change in the percentage of Londoners participating in sport and active recreation since 2007-08. Participation in London was lower than in England as a whole (20.2% and 21.9% respectively).

Why is this issue important to London's quality of life?

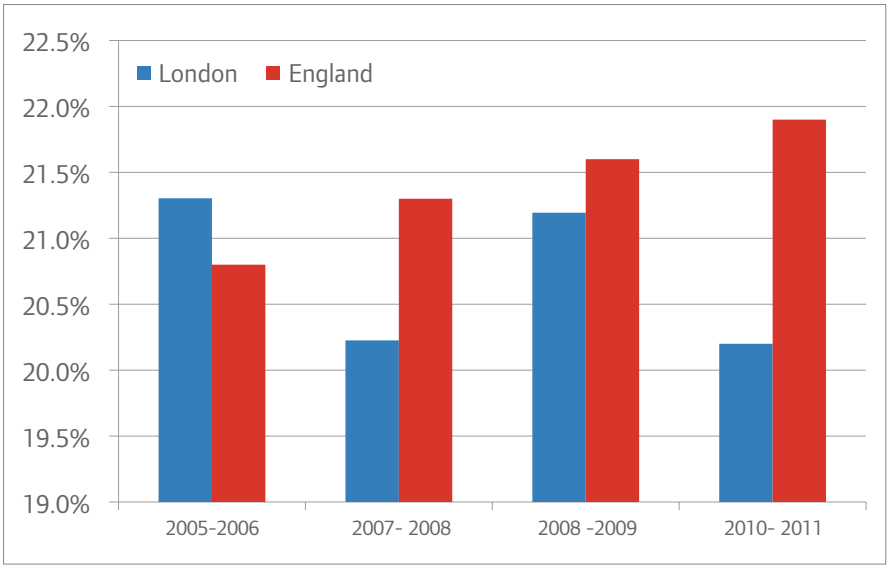
Regular exercise has been shown to have a positive impact on physical and mental health and well-being. Adults are recommended to participate in 150 minutes of moderate intensity physical activity each week. Those who are physically active are more likely to live longer with fewer health problems. Exercise can also encourage the use of public spaces, interaction with others and greater self-confidence.

This indicator measures the percentage of Londoners participating in moderate intensity sport and active recreation for 30 minutes three times a week. This is below the minimum physical activity recommended by the Chief Medical Officer of England, but does not include walking and cycling for transport.

Across England there has been a modest upward trend since 2005/6 – the English average was below the London figure in that year but is now 1.7% higher than for the capital.

Figure 18. Percentage of people participating in moderate exercise three times a week in London and England, 2005-06 to 2010-11

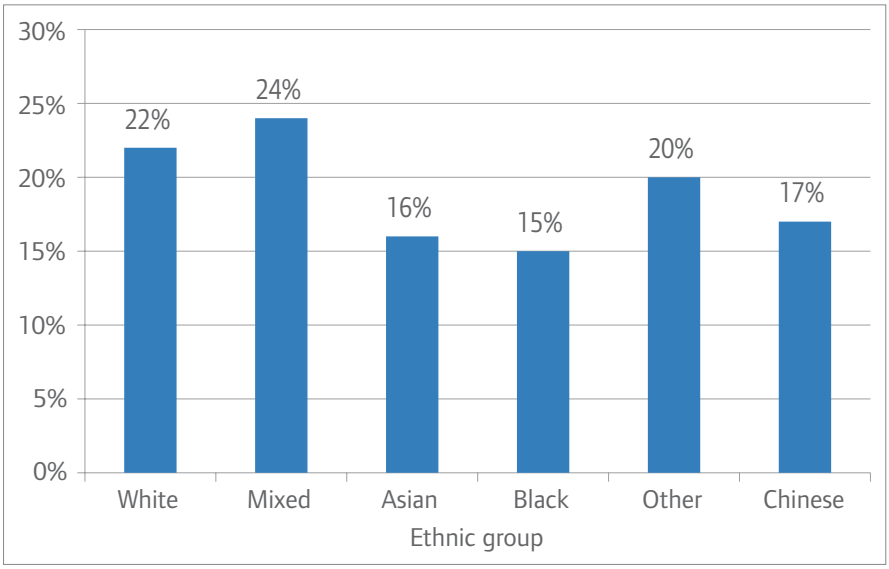
Source: Sport England, Active People Survey 5, http://www.sportengland.org/research/active_people_survey/aps5.aspx



There are also variations in level of activity between different sections of the community. In relation to ethnicity, mixed race and white people tend to be more active (24% and 22% respectively) with the lowest levels of activity among black and Asian Londoners (15% and 16%[73]).

Figure 18.1. Participation in 30 minutes of sport and active recreation three times a week by ethnicity in London

Source: Sport England, Active People Survey 5, http://www.sportengland.org/research/active_people_survey/aps5.aspx



There are also variations in terms of age. In 2009-10[74], 23% of 16-34 year olds exercised three times per week or more, but only 8.65% of over 55s did. Those with a disability also took less exercise – in 2008-09 only 7% of those with a limiting disability in London achieved the target level, far lower than for the general population.

Finally there were significant variations between London boroughs. The highest levels of activity in 2010-11 were in the City of London (26%), compared to just half that in Enfield. In general there appears to be a correlation between higher levels of physical activity and levels of affluence in boroughs.

However, a survey conducted for the GLA in November 2011[75] shows evidence that the number of people doing exercise more than 3 times a week (35%) has increased. It will be interesting to see whether the London Olympic and Paralympic Games has had any long-term impact on physical activity levels in London when this measure is revisited in the next QoL report.

The most recent figures from Sport England's annual 'Active People' survey, published in December 2012, showed that 36.5% of the London population (age 16+) participate regularly (at least once a week) in sport. This represents an increase of over 1% in the previous 12 months. Overall, there are now over 270,000 more people participating in sport in London since the bid to secure the 2012 Olympic and Paralympic Games bid was won in 2005.

19. HAPPINESS

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Self-scored happiness levels (out of 10)	○	≈ (2006-07 data)[76]	2010-11

Trend (2005-06 to 2010-11)[77] —

Summary

London's happiness score has remained broadly stable between 2006-07 and 2010-11. However Londoners subjectively rate themselves less happy than the rest of the UK.

Why is this issue important to London's quality of life?

Feeling happy is critical to an individual's quality of life. The 'happiness agenda' has become increasingly recognised as an important focus for policy-makers. A number of factors are cited as contributing to feelings of happiness, for example seeing relatives and friends regularly, being married, cohabiting or in a civil partnership, satisfaction with one's neighbourhood, and owning one's own home.[78]

This indicator is a new addition to the QoL indicator set for 2012. It measures Londoners' subjective level of happiness and is taken from the DCMS Taking Part survey. The survey asks people 'Taking all things together, how happy would you say you are?'

The average happiness score for London has increased from 7.41 in 2005-06 to 7.65 in 2010-11[79]. However, the score has remained broadly stable since 2006-07, which would have been the latest available data when the previous QoL report was produced (see Figure 19).

In 2010-11, the rest of the UK rated itself 0.22 higher in terms of happiness than London. This gap has nevertheless narrowed slightly since 2005-06 when the happiness score for rest of the UK was 0.31 higher than London[80].

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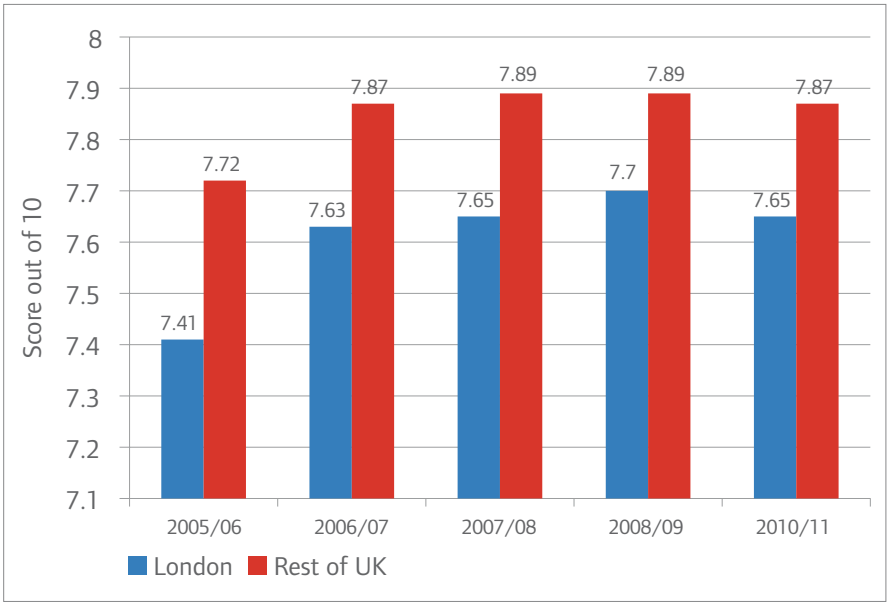
Figure 19. Satisfaction with life in London and the rest of the UK, 2005/06 to 2010/11

Source: DCMS, Taking Part Survey 2011, via the London Datastore, http://data.london.gov.uk/datastore/package/london-happiness-scores-borough (Note: there was no survey in 2009-10)



Self-reported happiness levels are different between age groups, genders and ethnicities in London. Figure 19.1 shows that those over the age of 60 rate themselves happiest, whilst those aged between 30 and 59 rate themselves the least happy[81].

Females in London judge themselves happier than London's males. This difference of 0.15 is more marked than in the rest of the UK where there is a difference of just 0.05[82]. White Londoners, meanwhile, are slightly happier than non-White Londoners. The difference is far less marked than the rest of the UK, where there is a 0.24 differential.[83]

Figure 19.1 Satisfaction with life in London and the rest of the UK, 2010/11

Source: DCMS, Taking Part Survey 2011, via the London Datastore, http://data.london.gov.uk/datastore/package/london-happiness-scores-borough (Note: there was no survey in 2009-10)

		London	Rest of UK
Age	16-29 30-59 60+	7.66 7.57 7.84	7.86 7.73 8.09
Gender	Male Female	7.57 7.72	7.84 7.89
Ethnicity	White Non-white	7.66 7.62	7.89 7.65

20. SATISFACTION WITH LIVING IN LONDON

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Percentage of Londoners satisfied with the capital as a place to live	✓ (2003 data)	✓ (2007 data)	2011

Trend (2003 to 2011) 

Summary
In 2011, 77% of Londoners were satisfied with the capital as a place to live. This is an improvement on satisfaction levels in 2007. Londoners' satisfaction with their neighbourhood, meanwhile, has remained fairly static over the last decade.

Why is this issue important to London's quality of life?
Neighbourhood well-being and a feeling of inclusion in the city you live in are an important feature of sustainable communities. This survey-based indicator is a simple and effective way to measure peoples view of their neighbourhood and of London as a whole.

The Annual London Survey 2011 revealed that nearly eight in ten Londoners (77%) report being very satisfied or fairly satisfied with the capital as a place to live, whilst just over one in ten (13%) say they are dissatisfied[84].

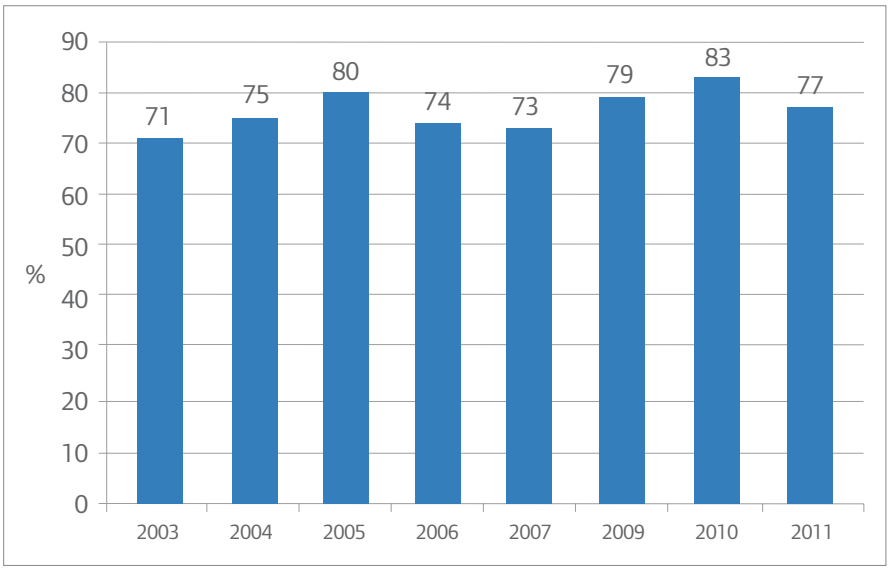
Figure 20 shows that this is an increase since the 2008-09 QoL report, which reported that 73% of Londoners were satisfied with the capital in 2007. It is also a rise of 6% compared to the 2003 satisfaction figure used in the 2004 QoL report. However, Londoners are 6% less satisfied with the capital as a place to live in 2011 than in 2010, when 83% reported being satisfied with living in London.

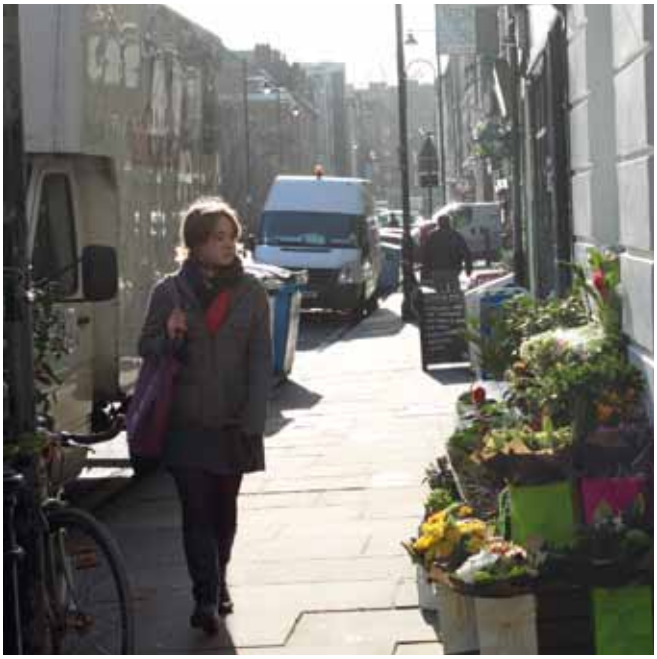
The Annual London Survey 2011 also found that:

- Those satisfied with London are more likely to be females, home-owners, people without a disability or long-term illness;
- Older residents aged 65+ or those who have lived in the capital all their life are less likely to be satisfied with London as are the unemployed and people living in social housing;
- Satisfaction with London is linked to social class; people from higher or middle class backgrounds are more likely to be satisfied than people from lower class backgrounds.

Figure 20. Trend of overall satisfaction with living in London

Source: GLA, Annual London Survey 2011, http://www.london.gov.uk/get-involved/consultations/annual-london-survey/2011





Transport and the range of shops were considered to be the best aspects of London living. Job opportunities, health services and the diversity of the people who live in London were also well-regarded. The cost of housing, traffic congestion and the cost of living were considered the main adverse issues affecting quality of life in London.

34% of the population considered education and training the top priority for improving London as a place to live. Other priorities were crime and safety (31%) and policing (24%). This differs from the 2007 survey, when people identified crime and safety (51%) as the top priority for improving London.

At the neighbourhood level, almost eight out of ten Londoners (79%) are satisfied with their neighbourhood as a place to live. More than one in ten Londoners were dissatisfied with their neighbourhood (13%). Broadly speaking, neighbourhood satisfaction has remained relatively consistent since 2001, with the exception of a peak at 86% in 2010.

There are differences in neighbourhood satisfaction across the various sub-groups of the London population, however. The Annual London Survey 2011 found that:

- Satisfaction across age groups varies; people aged over 65 years are the least satisfied (75%), followed by those aged 25 to 34 years (77%)
- More affluent households tend to be more satisfied. 86% of residents in social class AB are satisfied compared with 74% of residents in social class DE. People living in social housing report satisfaction levels of 76%, compared with 82% for home-owners
- Those in employment are likely to be more satisfied than the unemployed
- People working part-time appear to be the most satisfied (85%)
- Broadsheet readers continue to be more satisfied than tabloid readers (82% compared with 78%)
- People with a disability or long-term illness are less likely to be satisfied (71% compared with 80% of those without a disability or long-term illness)
- Londoners from ethnic minorities have become less satisfied over the last year (73% are satisfied compared with 82% of White Londoners). For Asian and other ethnic communities this is driven by an increase of those who say they are neither satisfied nor dissatisfied, but for Black communities it is driven by an increase in dissatisfaction
- The longer people have lived in London, the more disillusioned they appear to be (those living in the capital for eleven years or more are the least satisfied – 78% say they are satisfied, compared with 83% of people who have been living in London for less than five years)
- Satisfaction by constituency varies from high satisfaction in West Central (92%), to lower satisfaction at 61% in City & East and Greenwich & Lewisham

21. VOTING

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
London Mayoral Election turnout	✓ (2004 Mayoral Election	✗ (2008 Mayoral Election	2012 Mayoral Election
London Borough Elections turnout	✓ (2002 Borough Election	✓ (2006 Borough Election	2010 Borough Election
General Election turnout in London	✓ (2001 General Election	✓ (2005 General Election	2010 General Election

Trend London Mayoral Election (2000 to 2012) 

Trend London Borough Elections turnout (1998 to 2010) 

Trend General Election turnout in London (1997 to 2010) 

Summary
Turnout for the 2012 London Mayoral and London Assembly elections was lower than in 2008. However, this was still higher than the turnout for the 2004 and 2000 elections. Furthermore, turnout in London for the General Election and for Borough elections has risen since 2002, although General Election turnout in London is lower than the national average.

Why is this issue important to London's quality of life?
Good government is a key element of sustainable development. It cannot be delivered solely through individual choices, business innovation or voluntary action. In a sustainable society the public is actively involved in decision-making and has confidence that they shape policies to improve the communities in which they live and work.

Electoral turnout is used as one of the proxy measures for participation in decision-making in the LSDC's QoL indicator set. The number of people who vote (or abstain from voting) reflects satisfaction with local and national government and how effective the electorate feel their vote is. It is also an indication of the extent to which people feel connected with those who govern their affairs.

The turnout for the most recent London Mayoral and London Assembly elections is down. Turnout for the 2012 elections was 38%, 7% less than the 2008 turnout (45%). Nevertheless, 2012 turnout was higher than the turnout for 2004 (37%) and 2000 (34.4%)[86].

Tim Brown

Figure 21. Percentage of Londoners voting in General, Borough and Mayoral elections

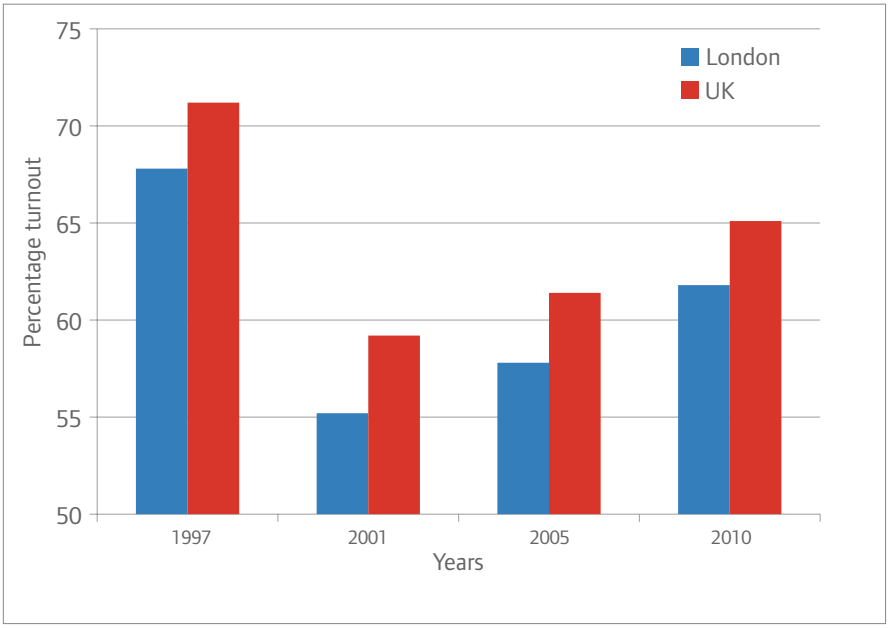
Source: London Datastore, London Elections Reports, http://data.london.gov.uk/elections; Electoral Commission, http://www.electoralcommission.org.uk

General Elections	1997	2001	2005	2010
London Only	67.8	55.2	58	61.8
UK results	71.2	59.2	61.4	65.1
Borough Elections	**1998**	**2002**	**2006**	**2010**
	34.7	31.8	37.9	61.8
Mayoral Elections	**2000**	**2004**	**2008**	**2012**
	34.4	37.0	45.0	38.0

In national and local elections the trend is more positive. The number of Londoners voting in the 2010 General Election was up 3.8% on 2005. However, as figure 21.1 shows, whilst General Election turnout in London has risen since 2001, the turnout remains much lower than it was in the 1990s. Turnout in London for General Elections is also consistently lower than the national average. In 2010, the turnout for the UK was 3.3% higher than London[87].

Figure 21.1 General Election turnout in London and the UK

Source: Electoral Commission, http://www.electoralcommission.org.uk



Turnout in the London Borough elections improved greatly in 2010. Figure 21 shows that it increased to 61.8% from 37.9% on the turnout for the 2006 elections. This continues an upward trend from the 2001 Borough elections when turnout was at 31.8%. However, this major increase in turnout in 2010 is likely to be a result of the General Election being held on the same day[88].

22. VOLUNTEERING

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Participation in formal or informal volunteering over previous 12 months	●	≈ (2008-09 data)	2011-12

Trend (2005-06 to 2011-12) 

Summary

Levels of formal and informal volunteering in London have increased from 23% in 2008-09 to 24% in 2011-12, according to the Taking Part Survey. Levels in London are now higher than the average for England. The rise might in part be explained by the publicity in volunteering generated by the 2012 Olympic and Paralympic Games, which have involved large numbers of volunteers but have not been included in this data.

Other measures of volunteering show a more mixed picture. The Citizenship Survey found that formal volunteering levels in London were down from 42% in 2005 to 32% in 2010-11, whilst a GLA/ICM poll found that volunteering of all types had increased four percentage points between 2011 and 2012.

Why is this issue important to London's quality of life?

High levels of volunteering are considered to be good indicators of healthy and well-functioning communities, where people actively participate and 'give back' to their local area. This indicator complements the electoral turnout measure to provide a fuller indication of Londoners' involvement in their community.

Data from the UK Government's Citizenship Survey has been used as the measure for this indicator since 2004. The Citizenship Survey has now been cancelled, however, an alternative measure from the Taking Part Survey has been used in its place. The latest Citizenship Survey results, together with a GLA poll on volunteering, are included here for comparison.

Taking Part survey

The Taking Part Survey provides a measure of both formal and informal volunteering[89]. Figure 22 shows that by this measure, volunteering levels have changed little in London in recent years. In 2011-12, volunteering levels were up one percentage point on 2008-09, a return to 2007/08 levels[90].

Whilst this rise is modest, it does buck the national trend. Volunteering levels in England fell from 25% in 2008-09 to 23% in 2011-12. London performed better than the national average in 2011-12, where previously it had lagged behind. Nevertheless, volunteering levels in London are still behind levels in the South East and South West, where 27% of the population had volunteered in 2011-12[90].

Figure 22. During the last 12 months have you done any voluntary work?

** This question was not asked in the 2009-10 survey so the data has been interpolated.*

Source: DCMS, Taking Part Survey, 2011-12 (via GLA, Email correspondence with author, 4 September 2012)

The rise in volunteering in London in 2011-12 may in part be due to the 2012 Olympics and Paralympics, which have involved large numbers of volunteers in the run-up to the Games. As the 2011-12 figures don't cover the period of the actual Games themselves, a further increase in London volunteering levels can be expected for 2012-13.[91]

Citizenship Survey

The measure from this Survey describes the number of Londoners who have participated in formal volunteering at least once in the last year. Formal volunteering is defined as giving unpaid help through groups, clubs or organisations to benefit other people or the environment.

Under this measure, formal volunteering in London has declined in recent years (see Figure 22.1). It shows that 32% of Londoners took part in formal volunteering at least once during a 12-month period in 2010-11. This was down from 42% in 2005, the figure used in the 2008-09 QoL report. It is also lower than for any year in the previous decade. Unlike the Taking Part survey, however, the figures are not likely to include any 'Olympic effect' as they only run to 2010-11[92].

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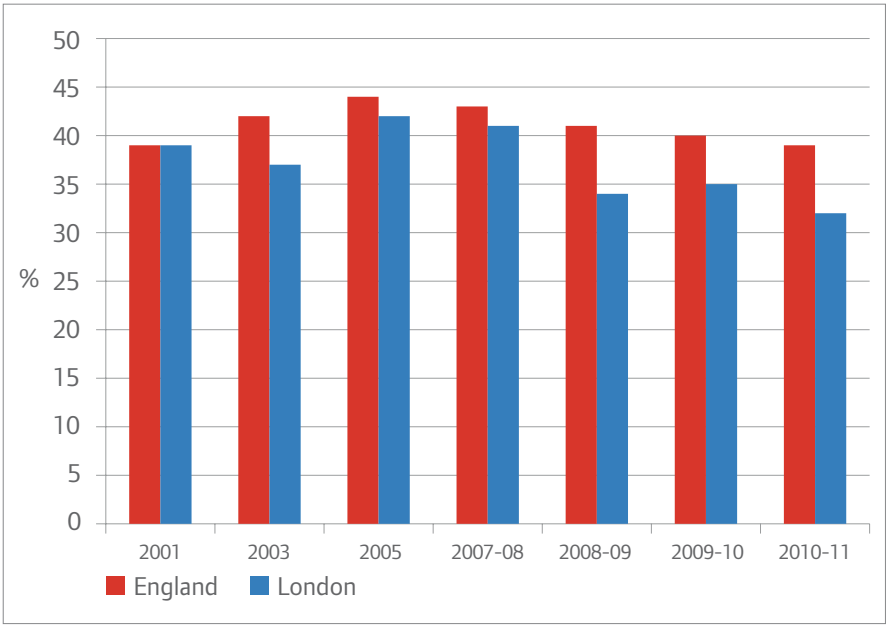
Formal volunteering was lower than the national average and the gap had widened over the last decade. In 2001, formal volunteering rates for London were the same as the national average. In 2005, the figure used in the 2008-09 QoL report, London was just 2% below the national average. In the latest year, however, London was 7% below the national average.

James O'Jenkins

Figure 22.1 Formal volunteering at least once in the last year

Source: CLG, Citizenship Survey: April 2010 – March 2011, England, http://www.communities.gov.uk/publications/corporate/statistics/citizenshipsurveyq4201011



GLA/ICM poll on Londoners' attitudes towards volunteering

A further alternative measure is the GLA/ICM poll on Londoners' attitudes towards volunteering. In this survey, respondents were asked whether they had carried out a range of activities, unpaid, to help a charity, voluntary organisation or any other type of organisation. This poll found that in 2012 58% of Londoners reported carrying out some type of volunteering in the previous 12 months. This was up from 54% in 2011.

Economic Indicators

23. Employment rates

24. Business survival

25. Income inequality

26. Child poverty

27. Fuel poverty

28. Housing affordability

29. Gross value added

30. Carbon efficiency

31. Low carbon and environmental jobs

32. Skills

33. Innovation

23. EMPLOYMENT RATES

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Employment rate	●	≈ (2006 data)	2011

Trend (2004 to 2011) 

Summary

The proportion of working-age Londoners in employment rose slightly from 68.3% in 2004 to 69.5% in 2008, and then declined slightly back to 68.1% in 2011. Employment rates for the UK as a whole remain higher than London, but most recent quarterly data indicates an improvement in London's employment rate and a narrowing of the gap between London and the national rate.

In 2010, rates in London were higher for males than females, and lower than average for Black and Minority Ethnic (BAME) Londoners. The employment rate for Londoners aged 16 to 24 fell by 5 percentage points between 2004 and 2010, despite the overall employment rate remaining broadly level.

Why is this issue important to London's quality of life?

Being in employment has an important bearing on a person's overall economic and general wellbeing. 'Employment rates' express the number of Londoners of working age in employment as a proportion of the population[93].

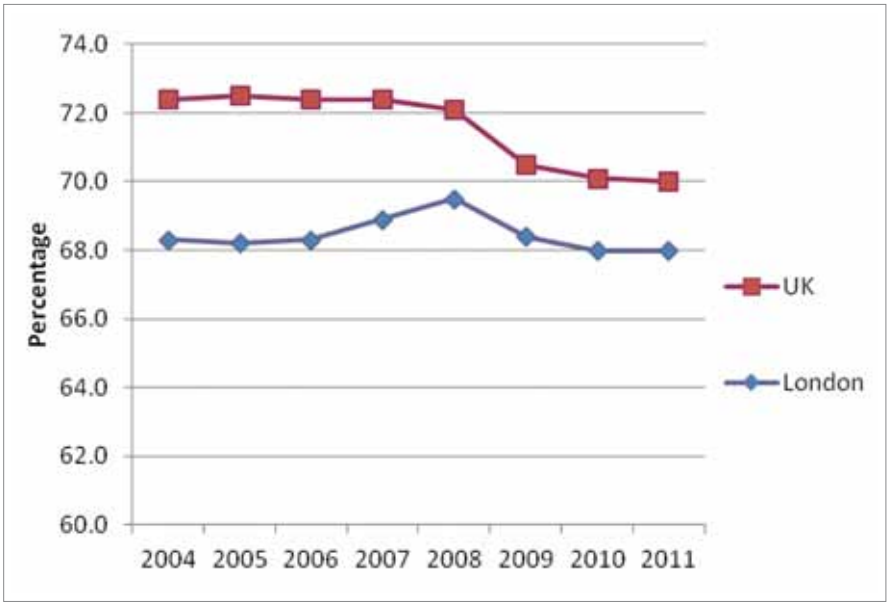
Employment rates in London and the UK

London's overall employment rate is measured as a percentage of working age residents in employment. This indicator was introduced in the 2008-09 QoL report, replacing two different labour market indicators. The employment rate rose between 2004 and 2008 but has since declined. Employment rates in London were around 68% in 2011, similar to the levels observed in 2004 and 2005. The most recent data indicates cause for optimism, however. In June-August 2012 the employment rate rose to 69.7% – an increase that helped to close the gap between London and the national rate to 1.6 percentage points. Allied to robust private sector jobs growth, the total number of jobs in London's economy has now recovered to pre-recessionary levels.

Employment rates in London remain several percentage points below those in the rest of the UK, largely due to the high proportion of students in the London population.[93] However, the chart below shows that the differential between London and the rest of the UK has shrunk in recent years. This is mainly due to the 'boom' in employment that London enjoyed before the downturn, and to the fact that London has weathered the impact of recession better than other areas. Employment rates for the UK as a whole were 4 percentage points higher than those in London in 2004, but the differential shrunk to 2 percentage points in 2011 and has narrowed again to 1.6 percentage points in mid-2012. This is shown in the table below.

Figure 23. Employment rates from 2004 to 2011

Source: Annual Population Survey (www.nomisweb.co.uk)[94]



Data for more recent months, not yet incorporated into the annual series, show that there was a decline in London's employment rates towards the end of 2011. This stood in contrast to stable employment rates for the UK as a whole, causing the gap in employment rates between London and the rest of the country to increase to 3.3 percentage points. However, consistent improvements in the first half of 2012 meant that by August 2012 this gap had been reduced to just 1.6 percentage points.

Figure 23.1. Employment rates (seasonally adjusted, three month rolling average)

	Jan-Mar 2012	Feb-Apr 2012	Mar-May 2012	Apr-Jun 2012	May-Jul 2012	Jun-Aug 2012
London	67.4	67.8	68.3	68.8	69.2	69.7
UK	70.6	70.7	70.8	71.0	71.2	71.3

Source: Labour Force Survey, as published by the London Skills and Employment Observatory: http://lseo.org.uk/data/london-data; Data file: Indicators_London_Data_v5.2.xls

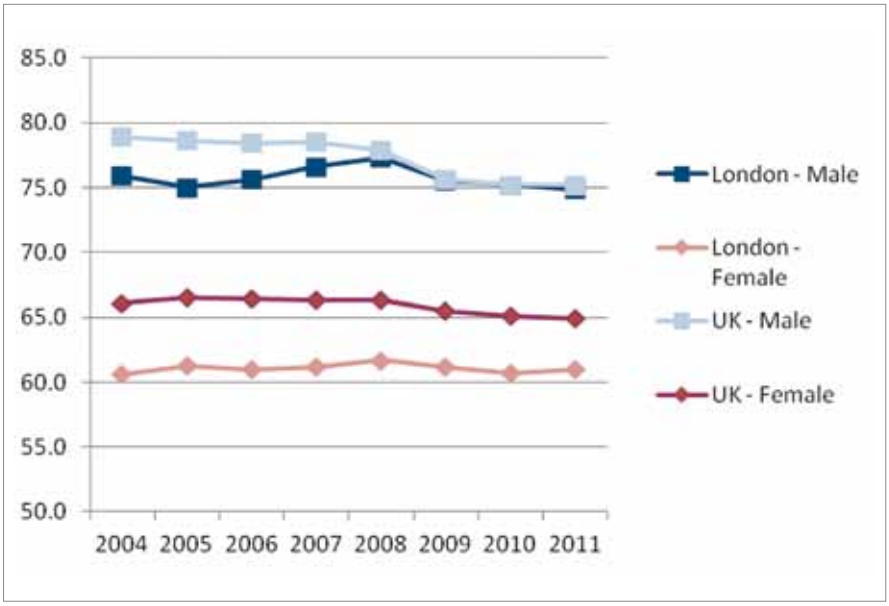
There has been a slight increase in the proportion of London employees working part-time. The proportion of employees working part-time was fairly stable at around 19-20% from 2004 to 2008, but this increased to 21% in 2009 and to nearly 22% in 2010 and 2011. This may also be an effect of the economic downturn.

Employment rates by gender

In 2010, women's employment rates across the UK were 10% lower than men's. The differential was more marked in London, where the differential was 14.7%. Men's employment rates for the UK converged with men's employment rates in London during the period 2009-2011, while the employment rates for women in the UK stood around 4.4 points higher than those for women in London in 2011.

Figure 23.2. Employment rate by gender (16-64 years)

Source: ONS, Annual Population Survey, www.nomisweb.co.uk



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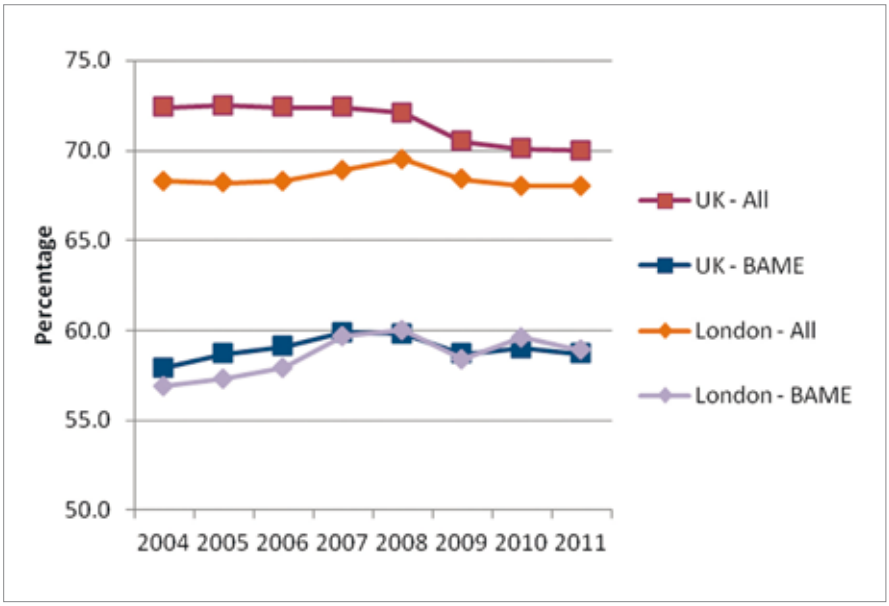
Employment differentials by ethnic group

Black, Asian and Minority Ethnic (BAME) groups tend to have lower employment rates than the White population. In 2011 BAME employment in London was 9.1% lower than the overall employment rate, while BAME employment for the UK as a whole was around 11.3% lower than the overall rate. Employment rates for BAME groups in London have increased slightly from 56.9% in 2004 to 58.9% in 2011, and have been less affected by the economic downturn than overall employment rates.

Figure 23.3. Employment rate for Black, Asian and Minority Ethnic groups (16-64 years)

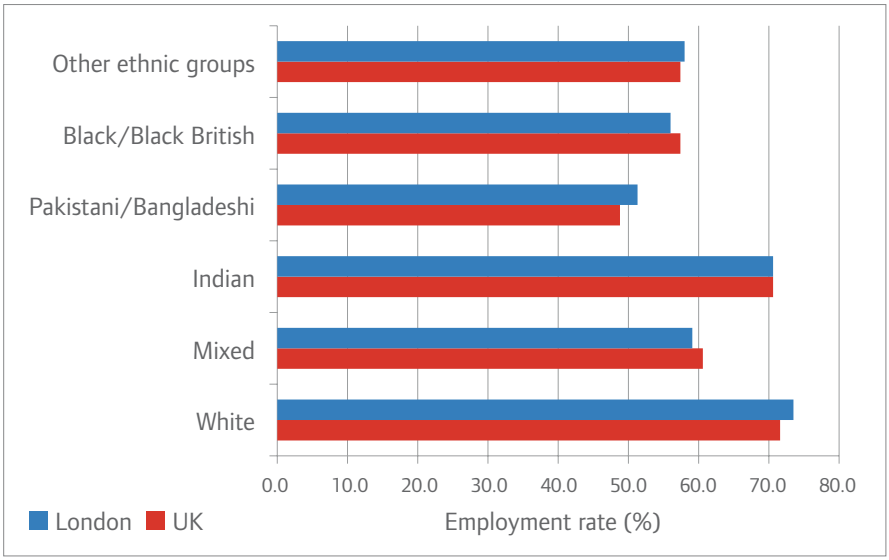
Source: ONS, Annual Population Survey, www.nomisweb.co.uk



There are significant variations between employment rates for different ethnic groups. The chart below shows that Pakistani and Bangladeshi populations had the lowest employment rates in 2011.

Figure 23.4. Employment rates by ethnic group – 2011

Source: ONS, Annual Population Survey 2011 www.nomisweb.co.uk



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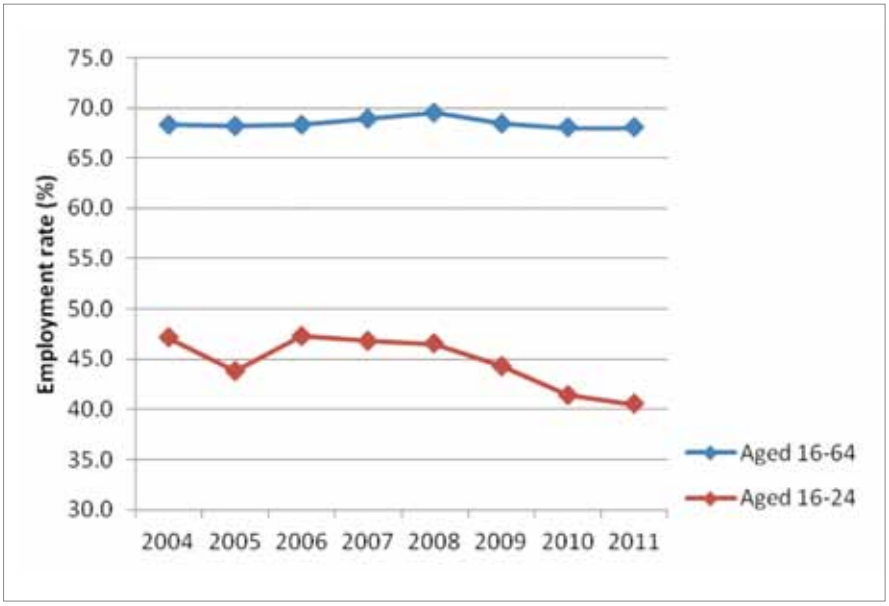
Youth employment

While the change in overall employment levels between 2004 and 2011 has been relatively slight, there have been wider variations in employment rates for young people. The employment rate for Londoners aged 16 to 24 has fallen by 6.6 percentage points, from 47.1% in 2004 to 40.5% in 2011, while the overall employment rate has not fallen significantly over this period.

The proportion of children living in workless households has actually fallen from 25.1% in 2004 to 21.1% in 2010. However, this is still above the UK figure of 16.5% for 2010 (source: Annual Population Survey).

Figure 23.5.
Youth employment rates versus overall employment rates in London

Source: ONS, Annual Population Survey (www.nomisweb.co.uk)



24. BUSINESS SURVIVAL

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Survival of London businesses after one year of trading.		 (2004 data)	2009

Trend (2004 to 2009) 

Summary

88% of London businesses started in 2009 were still trading a year later. This is a fall from 96% in 2006. The impact of the economic downturn can also be seen in 3-year survival rates. Only 60% of London businesses started in 2007 were still trading three years later, compared to nearly 64% of businesses started in 2006. New business start-up rates, however, were higher in London than for the rest of the UK in 2010.

Why is this issue important to London's quality of life?

London's business survival rate gives a broad indication of small business success within the city's economy. Small businesses help to foster entrepreneurship and innovation, which are essential in maintaining London's globally competitive position. They may also be more likely than large businesses to be based locally, and to recruit local labour. This offers London's residents the opportunity to develop their skills.

Many small businesses have faced difficulties in recent years owing to the economic downturn. Furthermore, the decline in survival of new businesses in London has been sharper than elsewhere in the UK. The one-year survival rate for both London and UK businesses in 2005 was 96%. By 2009, however, the London rate had fallen to 88%, while the rate for the UK as a whole had only fallen to 91%[95].

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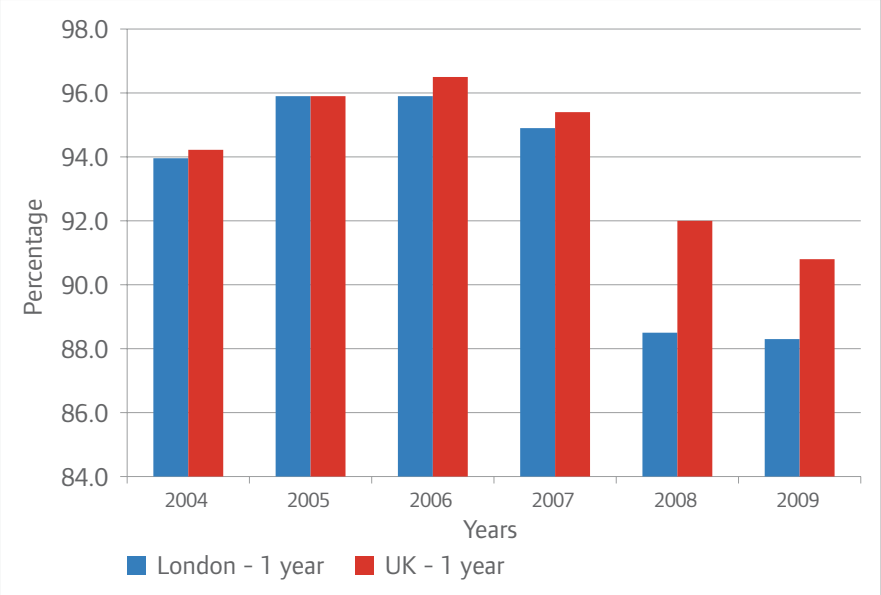
Figure 24. Percentage of new businesses still trading after 1 year

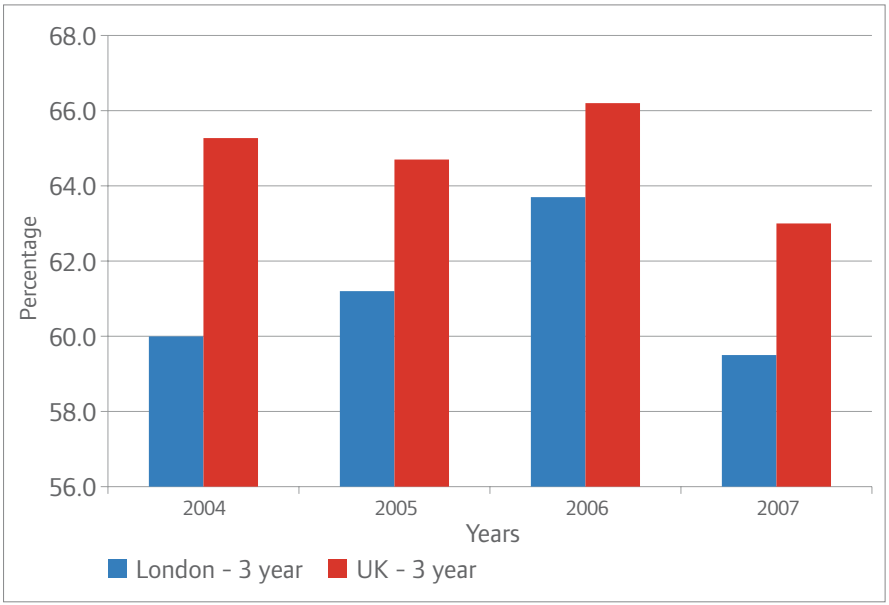
Source: ONS, Business Demography 2010, released 6 December 2011, http://www.ons.gov.uk/ons/rel/bus-register/business-demography/2010/stb---business-demography-2010.html#tab-Business-survivals



Data for 3-year survival rates of new businesses is only available up to 2007. According to the latest figures fewer new businesses in London have survived for 3 years than in the UK as a whole. The three-year survival rate for London businesses started in 2007 was 59.5%, but the rate for UK businesses was 63.0%.

Figure 24.1. Percentage of new businesses still trading after 3 years

Source: ONS, Business Demography 2010, released 6 December 2011, http://www.ons.gov.uk/ons/rel/bus-register/business-demography/2010/stb---business-demography-2010.html#tab-Business-survivals



The Business survival indicator provides a mixed measure of the health of the economy, and small businesses in particular. A high 'churn rate' of businesses can indicate high levels of dynamism and an entrepreneurial culture, whereas high business survival rates can point to stagnation of the business base. This indicator therefore needs to be taken within the context of looking at new business start-ups to give a clearer picture.

New businesses appear to have been worse hit by the economic downturn than other parts of the London economy. The employment indicator shows a less marked decline in recent years than the business survival indicator.

Whilst business survival rates have worsened, the number of new businesses remains fairly steady. Figures from ONS Business Demographics show that there were 52,755 new businesses in 2010, compared to 53,120 in 2007 in London. Furthermore, in 2010 the rate of business start-ups (that is new business as a % of all active enterprises[96]) was 13.1% in London, compared with 9.6% in the rest of the UK. Business start-ups in London per 1000 working-age population were 9.8 compared with 5.2 in the rest of the UK.

25. INCOME INEQUALITY

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Disposable income differentials in London	●	≈ (2003-04 to 2005-06 data)	2006-07 to 2008-09

Trend not available

Summary
Income inequality data shows a persistent income gap between those in the bottom 10% of household income and those in the top 10%. Between 2006-07 and 2008-09, 15% of Londoners were in the bottom tenth of the national income distribution and 18% of Londoners were in the top tenth, showing little change from the previous report.

Why is this issue important to London's quality of life?
Significant disparity in income levels indicates that wealth and resources are not spread evenly across the population. Both within the UK and internationally there is a growing debate around whether societies with a narrower gap between rich and poor tend to be happier and healthier, with better levels of achievement overall. Narrowing the gap is considered crucial for long-term sustainability. For London to be sustainable, the distribution of resources must be made more equal, so that every citizen has the ability to earn a suitable wage on which to live and maintain a good quality of life.

Income inequality is measured by calculating the percentage of Londoners in the bottom 10% and top 10% of disposable income. This was a new indicator introduced in 2005-06, when 16% of Londoners were in the bottom tenth and 18% in the top tenth – making London the least equal region of the UK.

Income inequality data shows a polarisation of the numbers of Londoners in the bottom and top 10%, but does not show a clear trend over time in the balance between very rich and very poor.

Figure 25 shows the proportion of London's population whose disposable household income is in each national decile (after deducting housing costs). It shows that the income gap has remained broadly consistent between 2000-01 to 2002-03 and 2006-07 to 2008-09[97].


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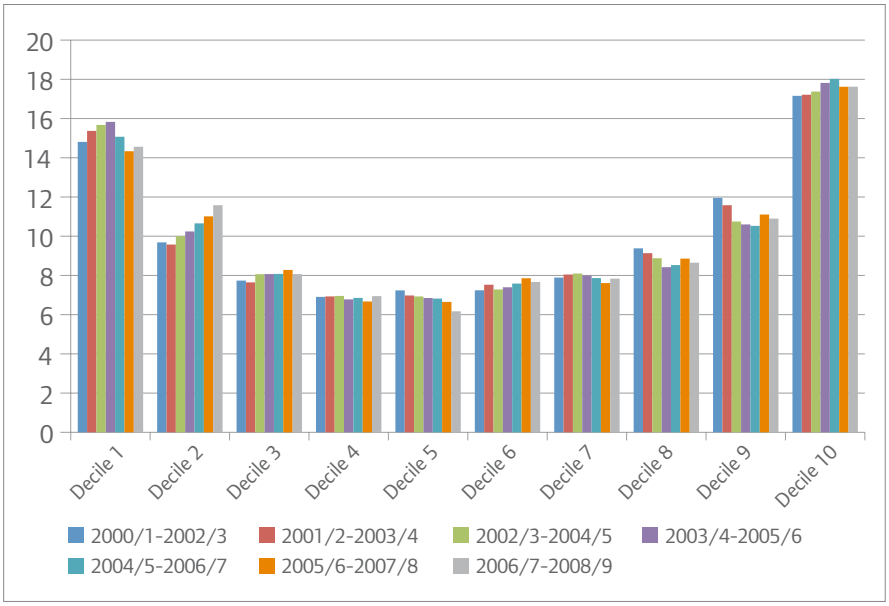
Figure 25. Decile distribution of net disposable household income for individuals (whole population) in London

Source: DWP, Households Below Average Income (HBAI), (figures provided by GLA, Email correspondence with author, March 2012)



London has a disproportionate amount of people with either very low or very high disposable incomes. 15% of Londoners are in the bottom 10% of income, and 18% of Londoners are in the top income decile.

The graph shows that since 2003/4–2005/6 there has been a slight decline in the number of Londoners in the bottom decile (16% to 15%), although the proportion of Londoners in the second from bottom decile has steadily increased since 2001/2- 2003/4 (from 10% to 12%).

At the top end of the spectrum, the number of Londoners in the top decile has remained fairly level over the last three years (18%), whilst there has been a decline in those in the second-from-top decile since 2000-01 to 2002-03 (12% to 11%).

All these changes are relatively small, however, suggesting that the considerable income gap in London has remained broadly the same since 2000-01.

26. CHILD POVERTY

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Children living in households below 60% median income	●	✓ (2004-05 to 2006-07 data)	2008-09 to 2010-11

Trend (from 3 year period 1994-95 to 1996-97, to 3 year period 2008-09 to 2010-11)

Summary

There has been a recent improvement from 41% for the three-year period 2004-05 to 2006-07 to 37% for the period 2008-09 to 2010-11.

Why is this issue important to London's quality of life?

Despite London having some of the highest earners in the UK, the high cost of living here has a major impact on incomes of parents and their ability to find and retain work. This indicator is based on the Government's official measure of 'Children Living in Income Poverty after housing costs'.[98]

Commentary on indicator

London is home to 1.6 million children and has the highest proportion of children living in poverty of all regions in the UK. The proportion living in poverty (defined as households with below 60% median income after housing costs) has fallen from 41% for the three year period 2004/5 to 2006/7 to 37% for the current three year period (2008/9 to 2010/11). This compares to an average of 29% for the UK over the more recent three-year period.

High housing costs are the main reason for London's high levels of child poverty. Figure 26 below shows that levels of child poverty are much closer to the UK average if housing costs are excluded.

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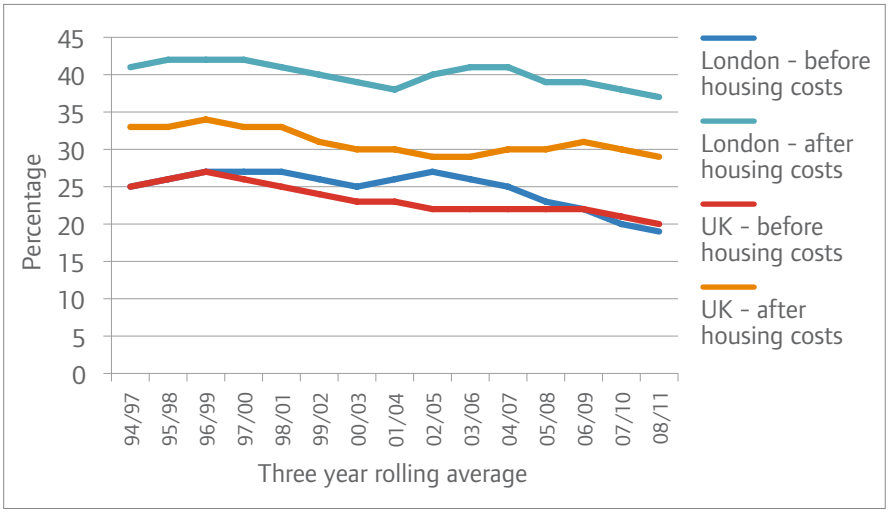
Figure 26. Percentage of children living in households with less than 60% median income

Source: DWP, Households Below Average Income (HABI), based on the DWP's Family Resources Survey http://statistics.dwp.gov.uk/asd/hbai/hbai2011/pdf_files/full_hbai12.pdf



Child poverty is significantly worse in Inner London than Outer London. The worst affected boroughs in 2008, according to data compiled by Her Majesty's Revenue and Customs (HMRC), were Tower Hamlets, Newham, Islington and Hackney[99]. Based on the HABI statistics shown above, there are 0.6 million children living in Inner London and, during the three year period 2006/7 to 2008/9, an estimated 44% of these children were living in poverty. By contrast there were 1.0 million children living in Outer London and, over the same period, an estimated 37% of these children were living in poverty.

Figure 26.1. Percentage of children falling into low-income groups (3 year average: 2005/6 to 2008/9)

Source: DWP, Households Below Average Income report, quoted in: http://www.london.gov.uk/sites/default/files/Update%2010-2010%20HBAI%202008-09.pdf)

	Before housing costs	After housing costs	All children (million)
London	22%	39%	1.6
Inner London	27%	44%	0.6
Outer London	20%	37%	1.0

The number of children living in low-income working families has grown steadily since the 1990s. The report 'London's Poverty profile 2011' by the Trust for London[100] reports that the proportion of children living in poverty in working families (as opposed to workless families) has risen from a third to more than half since the late 1990s.

27. FUEL POVERTY

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Fuel poor households in London	✗ (2003 data)	✗ (2008 data)	2009

Trend since 2003

Summary
Fuel poverty is up from 3.6% in 2003 to 13.3% in 2009. Although this is a steep rise, the figure is still lower than the national average of 18.4%. There are major variations in fuel poverty between London boroughs. In 2009, the highest levels of fuel poverty were in Barking and Dagenham (17%) and the lowest levels of fuel poverty were in the City of London (6%).

Why is this issue important to London's quality of life?
Fuel poverty is defined by the Government as the need to spend 10% or more of income on energy in order to maintain a comfortable household temperature. Fuel poverty is influenced by income, the energy efficiency of homes, and energy prices. Cold, damp homes are detrimental to physical and mental health and comfort, and also waste energy.

The upward trend in fuel poverty in London (and across the UK), since 2002 has in large part been caused by significant rises in energy bills. While the housing stock has improved this has not kept pace with energy price rises, and neither have income levels. The latest information is for 2009, and all estimates suggest that fuel poverty has continued to rise.

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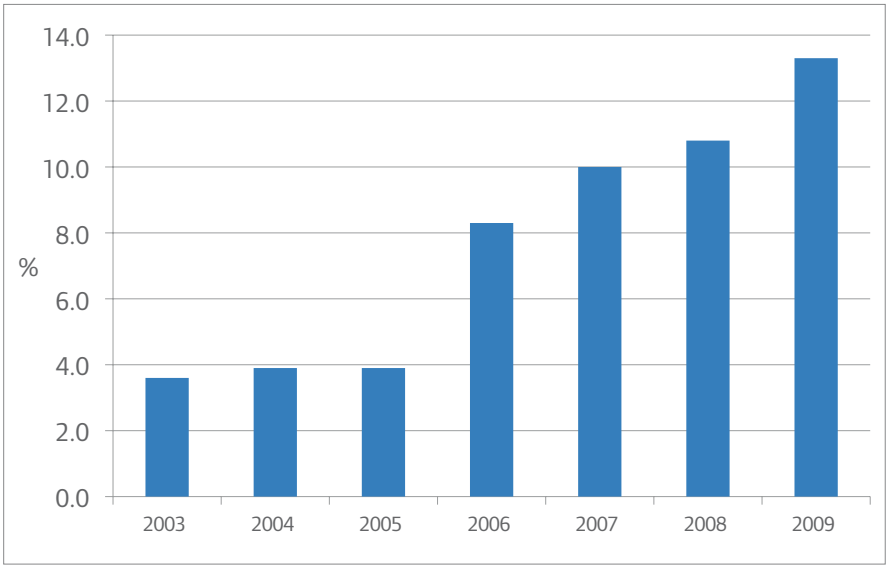
Figure 27. Estimates of fuel poverty in London, based on 'full income' measure

Source: DECC, Fuel Poverty 2010: sub-regional data, http://www.decc.gov.uk/en/content/cms/statistics/fuelpov_stats/regional/regional.aspx



As figure 27 shows, the rise in fuel poverty has been considerable. Similar increases have been seen across the UK, although fuel poverty in London appears to be consistently lower than the UK average. DECC estimates that 13.3% of London households were living in fuel poverty in 2009, compared to 18.4% of households across the UK[101]. While the milder climate in London may account for some of this difference, another significant effect is that poor households in London tend to receive more income from housing benefits, owing to their higher housing costs. This raises the level of income used in fuel poverty estimates, which are based on 'full income' estimates including benefits, and tend to understate the true level of fuel poverty in London.

In addition to these concerns, the current estimates of fuel poverty have other limitations. For instance fuel bills are estimated by a surveyor as part of the English Housing Survey (EHS), and the EHS sample size in each region is small. A new methodology for estimating fuel poverty was proposed in a Government White Paper in March 2012, based on the Hills Fuel Poverty Review[102]. The proposed new measure is not based on 'full income' estimates and might be considered in future indicator reviews, if it is taken forward as recommended in the White Paper.

Using the current estimates of fuel poverty, we find major variations between London boroughs. In 2009, the highest levels of fuel poverty were in Barking and Dagenham (17%), with levels above 15% in Newham, Waltham Forest, Hackney and Havering. In contrast, the lowest levels of fuel poverty were in the City of London (6%), Richmond (9%) and Wandsworth (10%).

The UK Government has a commitment to eliminate fuel poverty in vulnerable households by 2010, and in all households by 2016. The 2010 target has been missed and it is highly unlikely that the 2016 target will be met without a radical change in policies.

The Mayor, meanwhile, aims to 'work to help eradicate fuel poverty in London' with a variety of measures. These include increasing the uptake of energy efficiency measures in fuel poor households; increasing the provision of energy efficient affordable housing in London; increasing the income of Londoners; and encouraging government and energy companies to effectively define and target fuel poor households[103].

28. HOUSING AFFORDABILITY

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Ratio of lower quartile house prices to lower quartile earnings	✗ (2003 data)[104]	≈ (2008 data)[105, 106]	2011

Trend (1997 to 2011) 

Summary

In 2011, the ratio of lower quartile house prices to lower quartile earnings in London was 8.96. This was below its 2008 peak of 9.32 but historically high nonetheless. Affordability has more than halved in London since 1997, and London homes are also 37% less affordable than the national average.

Why is this issue important to London's quality of life?

Whilst home ownership is not a vital component of a more sustainable city, the ability of Londoners to purchase their own home nevertheless provides an indication of income equality and access to the housing market.

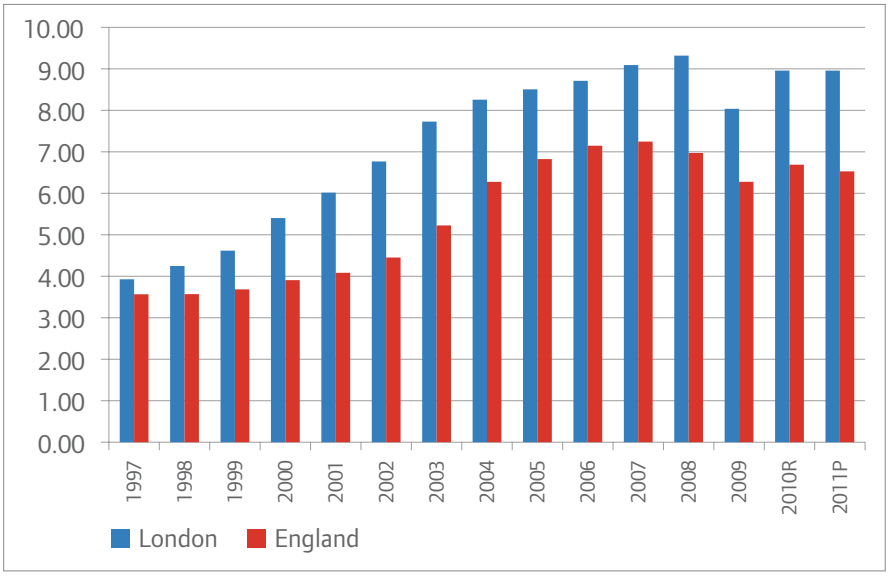
This was a new indicator for the 2008-09 QoL report. The report used the ROOF Affordability Index, which combined information on average prices paid by first-time buyers, mortgage interest rates and the average mortgage costs as a percentage of average household income[107]. Unfortunately this data is no longer available.

For this report we have therefore used the Government's preferred indicator of affordability – the ratio of lower quartile house prices to lower quartile earnings[108]. The ratio is calculated by combining data on house prices from HM Land Registry with data on gross annual pay by place of work from the Annual Survey of Hours and Earnings (ASHE)[109].

Figure 28 shows that in London the ratio of lower quartile house prices to lower quartile earnings increased year on year between 1997 and 2008 from 3.93 to 9.32. In other words, homes became more than twice as unaffordable. In 2009 the ratio decreased, most likely due to the economic slowdown. It then rose again in 2010, and in 2011 the ratio stood at 8.96. This is lower than the peak of 2008 but still historically high. Figure 28 also indicates that by this measure homes are much less affordable in London than they are for England as a whole. In 2011 the ratio for England was 6.53, meaning that London homes were 37% less affordable than the national average.

Figure 28
Ratio of lower quartile house price to lower quartile earnings in London and England from 1997 to 2011

Source: CLG, Table 576 – Ratio of lower quartile house price to lower quartile earnings by district from 1997, http://www.communities.gov.uk/housing/housingresearch/housingstatistics/housingstatisticsby/housingmarket/livetables/affordabilitytables/



(R) Figures have been revised due to revisions in ASHE data
(P) Figures for 2011 are provisional and may change when the table is updated next year to reflect revisions in ASHE data.

Housing affordability is likely to remain an issue as house prices in London continue to buck the national trend. In the third quarter of 2011, average house prices had grown in London by 3% over the previous year, while falling in every other region[110].

29. GROSS VALUE ADDED

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Gross value added per capita	✓ (2003 data)[111]	✗ (2008 data)[112]	2010

Trend for London from 1997 to 2010

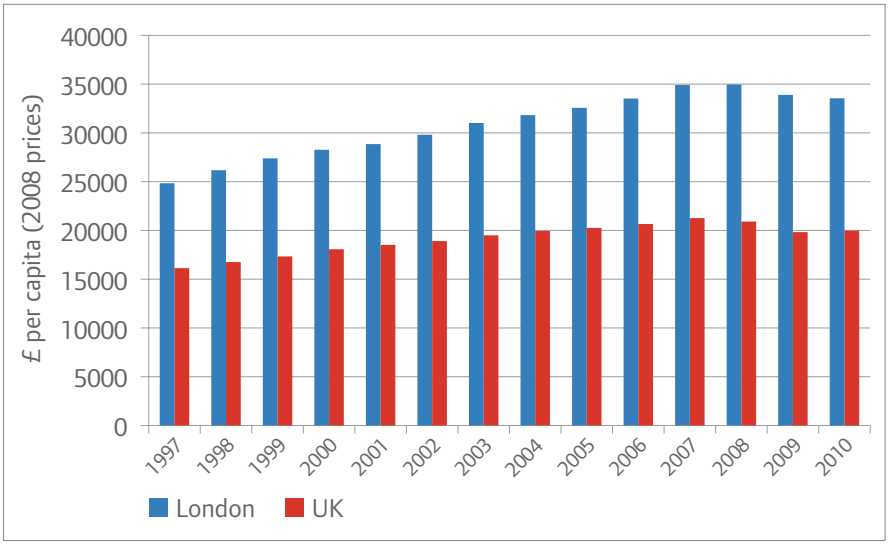
Summary
London's Gross Value Added per capita (GVA per capita) rose by 35% from 1997 to 2010, but declined slightly from 2008 to 2010 owing to the economic downturn. The GVA per capita in London in 2010 was 68% above that for the UK as a whole.

Why is this issue important to London's quality of life?
GVA per capita measures the productivity of London's economy and provides a measure of economic competitiveness. GVA is a measure of the total value of goods and services produced. It is the difference between the value of goods and services produced, and the cost of production of those goods and services. The figures have been adjusted to 2008 prices to remove the effects of inflation.

This is a new indicator for the QoL report. Between 1997 and 2008, London's GVA per capita rose by nearly 41%[113]. A short decline followed, although 2010 levels remain 35% above those of 1997. The average GVA per capita for London in 2010 was £33,550. The figure for the UK as a whole was £19,970, showing that London's economy is significantly more productive than the UK-wide economy. The differential between London and the rest of the UK has widened over the period 1997 to 2010.

Figure 29
Gross Value Added per capita (2008 prices)

Source: ONS, NUTS1 Regional GVA 1997-2010, http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-250308



Sean Creamer

The indicator shows that there has been a clear decline in London's GVA since the last report. This is not surprising given that the previous measure was made at the start of the recession. Again, London's productivity relative to the rest of the UK is significantly better and is likely to have fallen less. The squeeze on low and middle income families due to high price inflation and low wage inflation over the last four years would suggest that quality of life will have got worse for significant numbers of people.

30. CARBON EFFICIENCY

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Carbon dioxide emissions per unit of output produced	✓ (2000 data)	✓ (2005 data)	2008

Trend (1997 to 2008) 

Summary
London's carbon efficiency has improved steadily since the 1990s. In 2008 carbon emissions per unit of Gross Value Added (GVA) were 42% lower than in 1997.

Why is this issue important to London's quality of life?
Carbon Dioxide (CO_2) emissions per unit of GVA provide a measure of the 'carbon efficiency' of the London economy. Traditionally, carbon emissions have increased with economic growth. The challenge for the future is for London's economy to become more carbon efficient, so that economic growth is separated from growth in carbon emissions.

Traditionally, as the economy grows and economic activities expand, CO_2 emissions rise. In order to move London and the UK towards a low carbon economy, however, CO_2 emissions will need to be 'decoupled' from economic productivity. The purpose of this indicator, therefore, is to measure whether this decoupling is taking place and London is improving its 'carbon efficiency'.

Between 1997 and 2008, London's GVA has risen by nearly 54% on a constant price basis. Figure 30 below shows that during the same period London's CO_2 emissions have fallen slightly, by about 10%.

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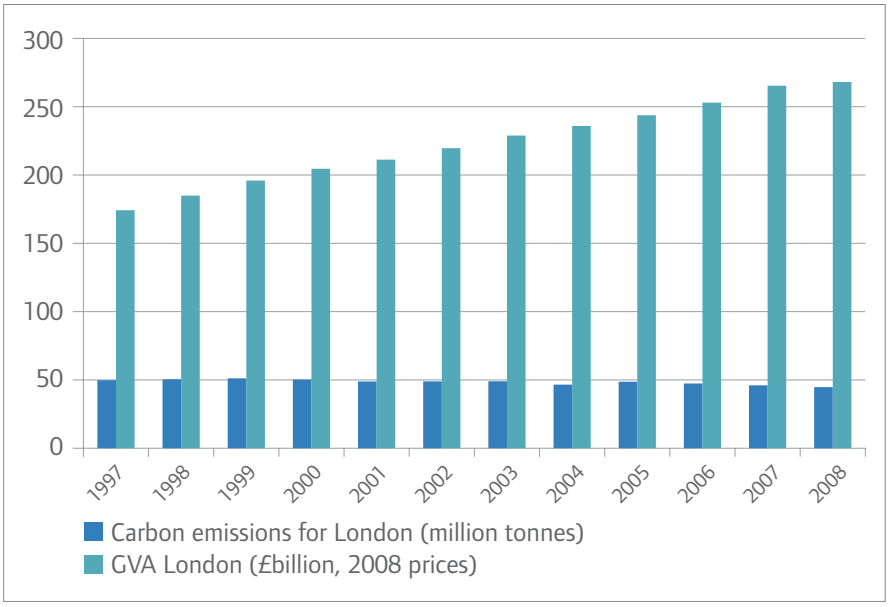
Figure 30
London CO_2 emissions and GVA (2008 prices)

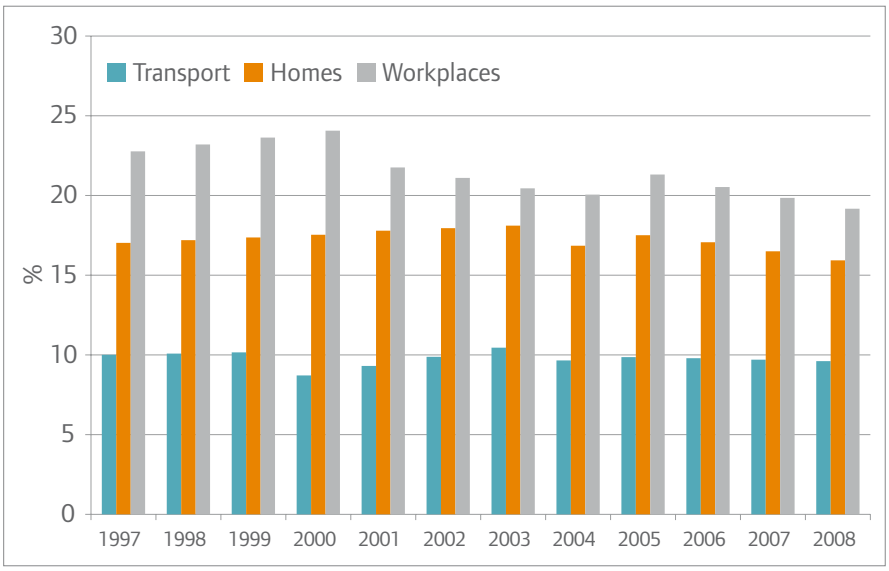
Sources: GVA – Headline workplace GVA at current basic prices (5 period moving average). http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-250308; Deflator: implied GVA deflator for the UK; carbon emissions (ONS); Carbon emissions for London: http://data.london.gov.uk/datafiles/environment/soe11-report-data.xls



The source of London's carbon dioxide emissions has varied slightly over this time. Emissions from workplaces have decreased slightly in comparison to those from homes and transport.

Figure 30.1
London's CO_2 emissions by source

Source: GLA Datastore, http://data.london.gov.uk/datafiles/environment/soe11-report-data.xls



London's carbon efficiency has steadily improved since the late 1990s. London's economy continues to be significantly more carbon-efficient than the UK economy as a whole. This is to be expected given London's urban setting and relative lack of heavy industry. Both the London and UK-wide carbon efficiency rates are improving, with the UK's efficiency improving slightly faster than London's. This may be due, at least in part, to the continued 'off-shoring' of heavy industry and manufacturing.

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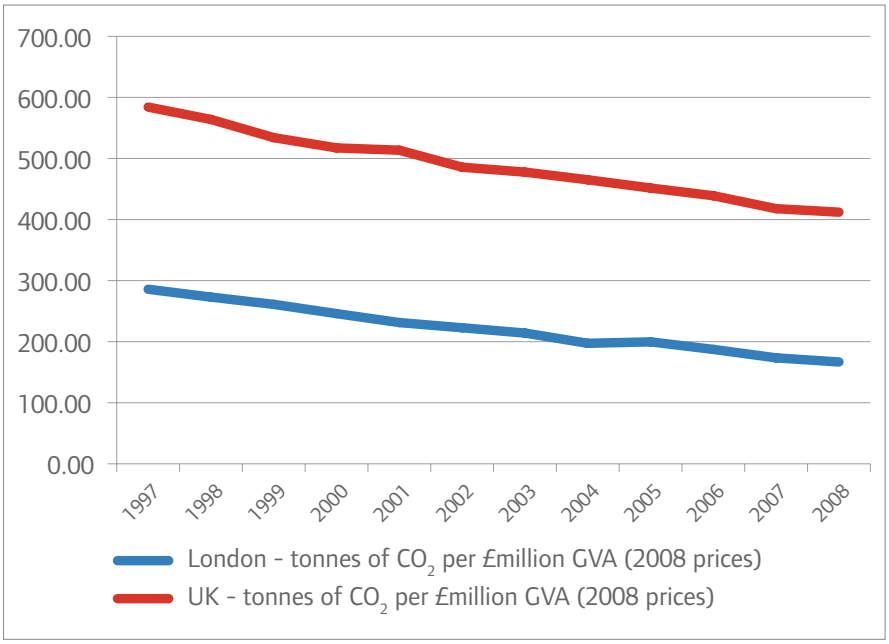
Figure 30.2
Carbon efficiency (2008 prices)

Sources: London data as for figures 50 and 51. UK GVA figures from http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-250308; UK carbon emissions from DECC - UK Emissions statistics http://www.decc.gov.uk/en/content/cms/statistics/climate_stats/gg_emissions/uk_emissions/uk_emissions.aspx



31. LOW CARBON AND ENVIRONMENTAL JOBS

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Number of jobs in Low Carbon and Environmental Goods and Services		≈ (2008-09)[114]	2009-10

Trend not available

Summary
In 2009-10, 160,000 people were employed in the low carbon and environmental goods and services (LCEGS) sector in London. The sector grew from 157,000 jobs in 2008-09, despite the economic downturn. Overall, the sector in London was worth £22,979 million in 2009-10, and is forecast to grow to £27,097 million by 2012-13.

Why is this issue important to London's quality of life?
The global economy is facing what has been described as a 'triple crunch' of economic uncertainty, climate change and high oil prices[115]. Investment in low carbon and environmental technologies can help address this threefold challenge by creating jobs, cutting carbon and creating energy security. London's position in the global economy provides an opportunity to show leadership, and take advantage of the diverse opportunities for businesses working in the LCEGS sector. The sector's global market value in 2009-10 was £3,296,000 million, and it is expected to grow further in the coming years[116].

This indicator measures jobs in London in the LCEGS sector. It uses the definition used in recent studies for the Department for Business Innovation and Skills (BIS)[117], which splits the sector into three main areas:

- Environmental goods and services: includes standard and more mature sub sectors such as waste management and air pollution control
- Renewable Energy Technologies: a mix of mature and emerging renewable technologies
- Low carbon technologies: mainly new and emerging technology areas, such as building technologies and alternative fuels, as well as carbon finance.

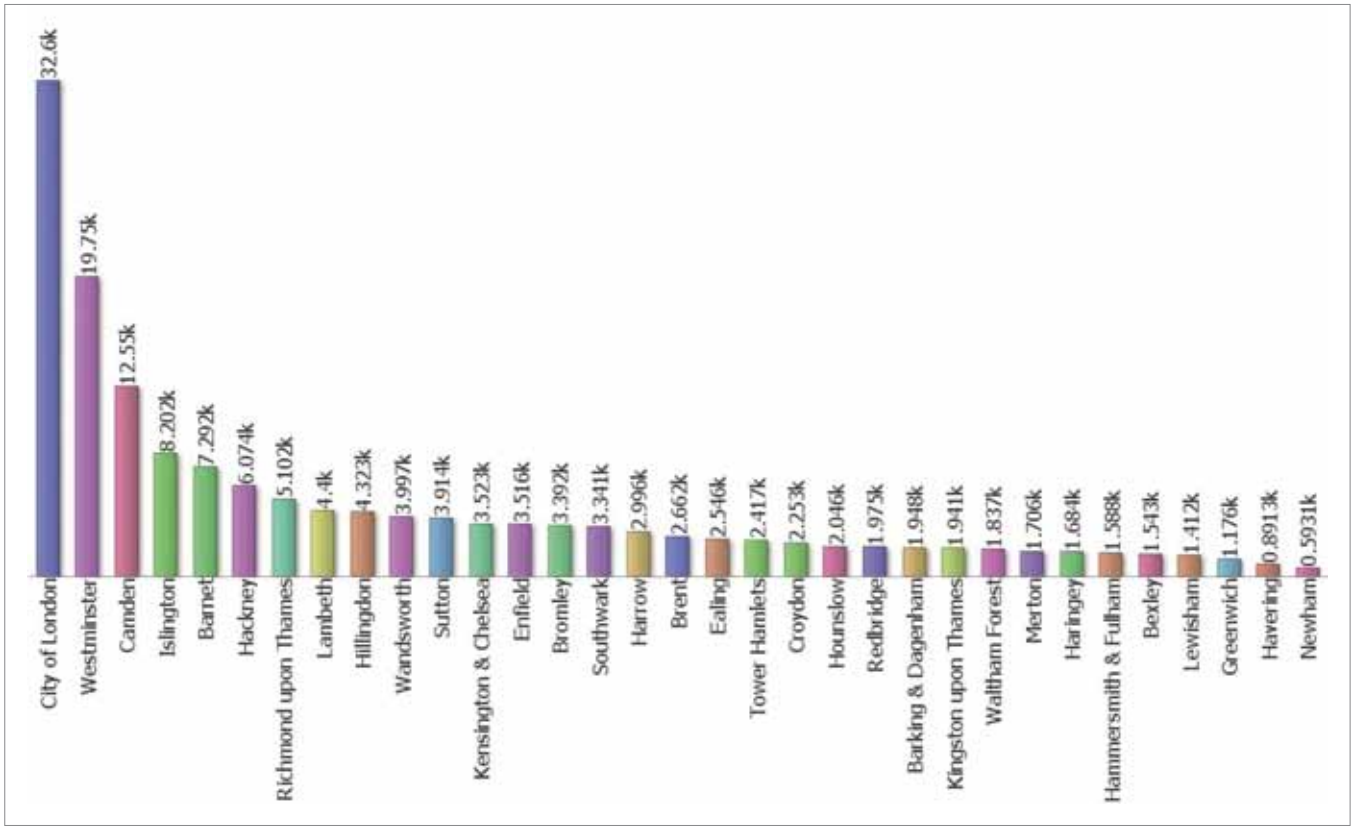
Data for this measure is taken from a study produced for the GLA by Innovas Solutions in October 2011, The London Low Carbon Market Snapshot.

The study shows that in 2009-10, 160,000 people were employed in the LCEGS sector in London. Furthermore, whilst London has recently witnessed a drop in economic productivity and little change in overall employment rates, the LCEGS sector grew from 157,000 jobs in 2008-09. These new jobs were mainly in the new emerging low carbon sector.

Figure 31 shows that the Borough with the largest share of LCEGS sector jobs was the City of London, mainly as a result of its position in

relation to low carbon finance. Westminster and Camden also had high market share, while Newham and Havering had the lowest number of jobs in the sector.

Figure 31 London boroughs ranked by employment numbers 2009-10 in LCEGS jobs



Source: Innovas Solutions Ltd, The London Low Carbon Market Snapshot, October 2011, http://www.london.gov.uk/priorities/environment/climate-change/low-carbon-economy

The overall market value of London's LCEGS sector grew from £20,929 million in 2007-08 to £22,980 million in 2009-10, faster than the rate of growth for the UK as a whole. In 2009-10 London had 19% of the UK market share (the largest share of any region) and 0.66% of global market share.

London was also the highest ranked region in 13 of the 23 LCEGS sub sectors. Performance was particularly strong in carbon finance, solar PV, geothermal and waste management when compared to the other UK regions.

The sector is expected to grow to £27,097 million by 2012-13, an 18% increase on 2009-10 levels. The Innovas report, however, posits that economic uncertainty in the UK means employment in the sector is likely to grow at a lesser rate.

32. SKILLS

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Percentage of adults (16-64) with level 4 qualifications or above	●	✓ (2008 data)[118]	2010

Trend from (2005-2010) ↗

Summary
41.9% of working age Londoners had Level 4+ qualifications in December 2010. This figure has risen steadily since the December 2005 measure of 33.8%. London fares well compared to the UK as a whole, for which the December 2010 measure was 31.2%. There are marked variations within London, however. The proportion of people with Level 4+ qualifications in Inner London was nearly 13 percentage points higher than in Outer London in 2010.

Why is this issue important to London's quality of life?
Skills are important for London's economy. As a global city, demand for advanced level skills is high. Skills help Londoners to compete for business and jobs, whilst a skilled workforce attracts potential investors and businesses to the capital. Skills also have a much wider impact on quality of life. People with higher-level skills and qualifications have access to wider employment opportunities and higher income jobs. The process of learning through adult life offers intrinsic value, and can also provide individuals with a greater understanding of the society in which they live.

This indicator is a new addition to the QoL set. The measure used is the proportion of working age people (16-64) with Level 4+ qualifications[119]. It is taken from the Office of National Statistics (ONS) Annual Population Survey.

The proportion of working age people in London with Level 4+ qualifications has risen from 33.8% to 41.9% between 2005 and 2010[120]. This trend is likely to continue for the foreseeable future. The UK has seen a large rise in the numbers of people taking degrees and other higher-level qualifications in recent decades. These people are gradually displacing people with lower levels of qualifications at the older end of the working age bracket.

Comparisons with the UK and within London are therefore potentially more meaningful than the overall trend. Figure 32 shows that, as with secondary education, London fares well when compared nationally. The capital has proportionally more people with high skills than for the UK as a whole (41.9% compared to 31.2%).

Figure 32.
Proportion of working age people in London and the UK with Level 4+ qualifications (%)

Source: ONS, Annual Population Survey, 23 Jun 11, updated 13 Jul 11, www.nomisweb.co.uk

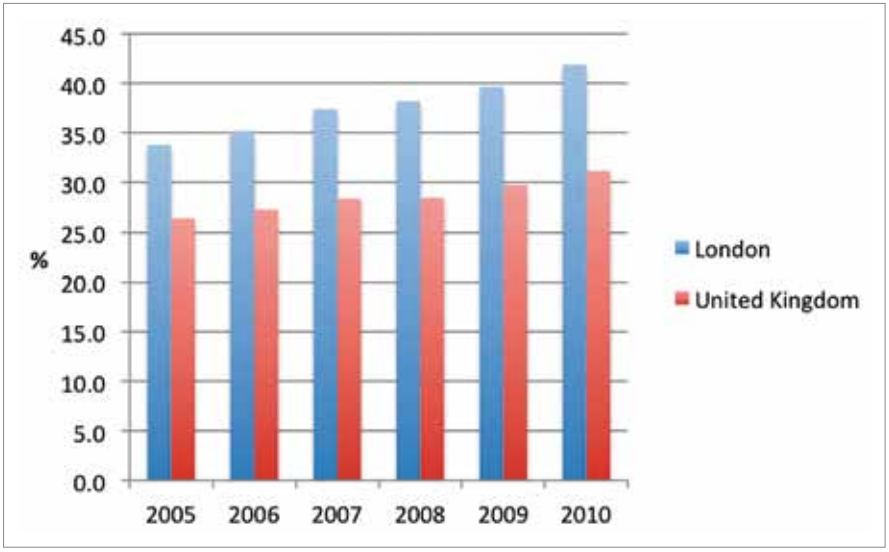
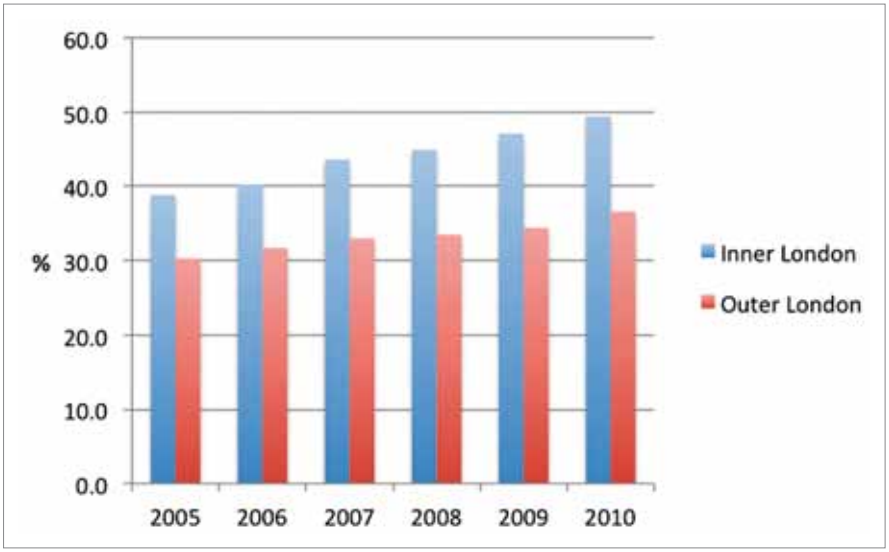


Figure 32.1 shows that variations exist within London. The proportion of working age people with Level 4+ qualifications in Inner London (49.4%) was nearly 13% higher than in Outer London (36.6%) in 2010. This disparity is even greater at borough level. In 2010, 63.6% of Wandsworth's working population had Level 4+ skills, compared to just 17.5% of Havering's working population.

Figure 32.1
Proportion of working age people in Inner London and Outer London with Level 4+ qualifications (%)

Source: ONS, Annual Population Survey, 23 Jun 11, updated 13 Jul 11, www.nomisweb.co.uk



33. INNOVATION

Measure	Change since 2004 QoL report	Change since 2008-09 QoL report	Year of data used for 2012 QoL report
Percentage of firms reporting introducing product innovations		(2007 Data)[121]	2009
Percentage of firms reporting introducing process innovations		(2007 Data)[122]	2009

Trend (2005 to 2009), product innovations

Trend (2005 to 2009), process innovations

Summary
In 2009, 22.9% of firms in London reported introducing product innovations, a rise from 20% in 2007. In the same year, 13.2% of London firms reported introducing process innovations, a rise from 9% in 2007.

Why is this issue important to London's quality of life?
Innovation is important because it supports efficiency and contributes to economic performance. It can help create new markets and increase productivity. As a result, it can also boost employment growth and income. Cities need to continue to innovate in order to maintain their position nationally and globally.

Innovation can be defined broadly as 'the exploitation of new ideas'[123]. Measuring innovation, however, is far from straightforward. Innovations, particularly service innovations, can be invisible and can arrive as the result of intangibles such as organisational change and training. They are therefore difficult to analyse and almost impossible to measure[124].

Traditional means of measuring innovation have focused on scientific research and development and assume a linear process in terms of the development of innovation. These measures include patents, journal articles, spending on scientific research, etc. What this approach ignores, however, is innovation in services and process-driven changes in manufacturing (e.g. Ford's assembly line would not have been measured this way).

Use has therefore been made of a broader approach to measuring innovation, focusing on two measures of self-reported innovation by businesses. The first measure looks at the percentage of firms reporting introducing product innovations. The second looks at the percentage of firms reporting introducing process innovations. The data for the measures is taken from the UK Innovation Survey.

Figure 33 Definitions of product innovation and process innovation

Source: Department for Business Innovation and Skills, UK Innovation Survey 2009 – statistical annex, November 2010, http://www.bis.gov.uk/policies/science/science-innovation-analysis/cis

Product innovation – bringing new and improved products to the market or into business, including both tangible goods and provision of services. The degree of innovation is shown by the distinction between products that are only new to the business, and those that are also new to the market.

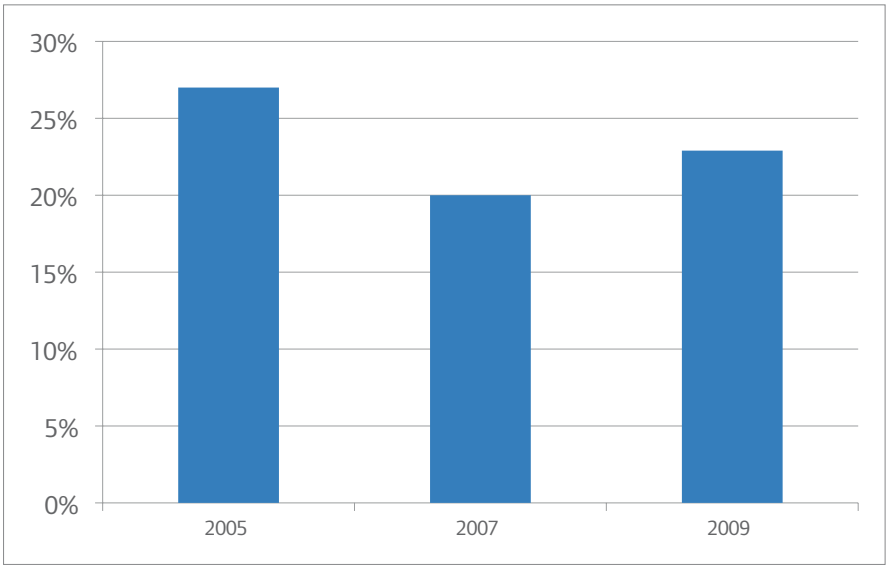
Process innovation – significant changes in the way that goods or services are produced or provided, again differentiating between processes new to the business only and those new to the industry.

Product innovation

Figure 33.1 shows that in 2009 22.9% of firms in London reported introducing product innovations. Reported product innovation has declined from 27% since 2005, but has risen since 2007 from 20%. A similar proportion of firms in London reported product innovations (22.9%) compared to the UK as a whole (23.9%).

Figure 33.1 Percentage of firms in London reporting introducing product innovations, 2005 to 2009

Source: Department for Business Innovation and Skills, UK Innovation Survey 2009 – statistical annex, November 2010, http://www.bis.gov.uk/policies/science/science-innovation-analysis/cis

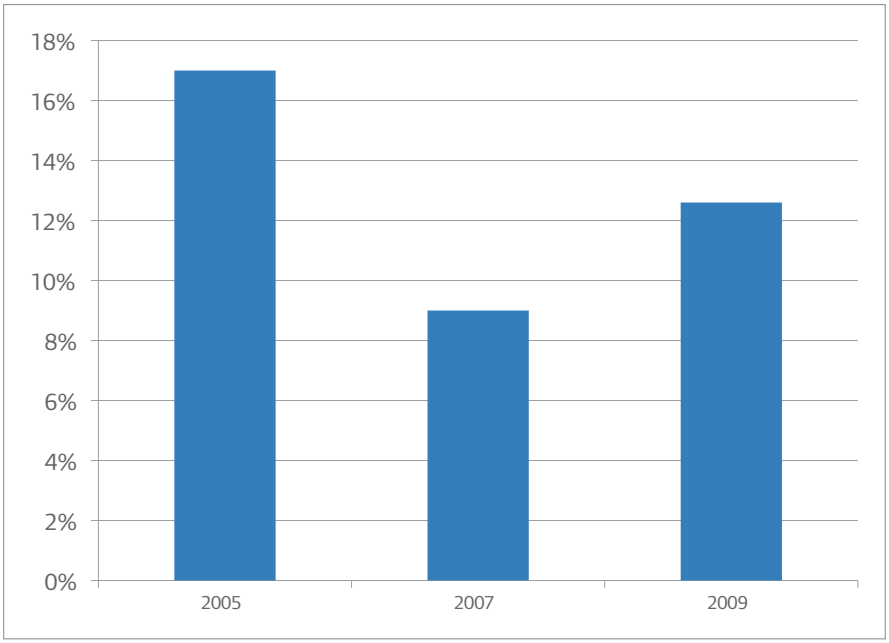


Process innovation

Figure 33.2 shows 12.6% of London firms reported introducing process innovations in 2009. As with product innovations, the number of firms introducing process innovations in London has declined since 2005, but risen since 2007. Again, a similar proportion of firms in London reported process innovations (13.2%) compared to the UK as a whole (12.6%). However, firms in London are much more likely to bring in process innovations that are new to industry as a whole (36.9%) when compared to the rest of the UK (29.1%).

Figure 33.2. Percentage of firms in London reporting introducing process innovations, 2005 to 2009

Source: Department for Business Innovation and Skills, UK Innovation Survey 2009 – statistical annex, November 2010, http://www.bis.gov.uk/policies/science/science-innovation-analysis/cis



Sean Creamer

The QoL set beyond 2012

New indicator suggestions

Amendments, revisions or data issues

International comparisons

Through the process of consultation, development and analysis of the 2012 QoL indicator set, a range of suggestions have been made about how the set might evolve in the future. In addition, the process has also highlighted a number of data issues that may require changes to the set in the future. In the tables below, we have logged these suggestions and data issues as a reference point for the Commission when it comes to developing the next iteration of the QoL set.

New indicator suggestions

There were a number of areas where Commissioners and others consulted through the research process have identified gaps in the current set, resulting in suggestions for new indicators in future QoL reports.

Topic / indicator	Comments	Source
Health outcomes	'Health outcomes' are not sufficiently addressed in the QoL set. The current set includes a number of indicators on health determinants (e.g. physical activity, air quality) and two on health outcomes (life expectancy and happiness). Suggestions for supplementary health indicators/ topics included: obesity; cancer rates; alcohol; mental health; health inequalities; and access to health services.	QoL indicator set consultation workshop (Feb 12)
Climate change adaptation	Adaptation is not adequately captured in the QoL set. There are some relevant indicators in the set, such as flooding and access to nature. Water consumption was added to the set. However, further thought is required in order to consider how adaptation is captured in the set in the future.	QoL consultation workshop
Infrastructure and population growth	London's population growth and climate pressures are likely to put pressure on London's infrastructure in the future, including issues such as access to public services, energy generation, water supply, transport and waste treatment. Consideration of infrastructure was therefore considered important in future iterations of the QoL set.	QoL consultation workshop; CAG Consultants

Topic / indicator	Comments	Source
Sustainable business	The 2008-09 QoL report included an indicator on the Mayor's Green Procurement Code. This could not be included in the 2012 set because of changes to the Code. Consideration will need to be given to how sustainable business issues are reflected in future QoL sets.	LSDC Commissioners
Community cohesion	Community cohesion has been identified as a key issue in both the 2008-09 and 2012 QoL reports. A number of existing indicators relate to the issue, such as crime, satisfaction with living in London, volunteering and income inequality. However, workshop attendees and Commissioners agreed that the QoL set might benefit from a stronger focus on community cohesion. One solution would be to develop a small basket of indicators, such as that recommended by the Commission on Integration and Cohesion: • The percentage of people who believe people from different backgrounds get on well together in their local area • The percentage of people who believe they belong to their area • The percentage of people who have meaningful interactions with people from different backgrounds • The percentage of people who feel they can influence decisions in their locality.	QoL consultation workshop; LSDC Commissioners; CAG Consultants
Noise	Noise is one of the Mayor's statutory environmental strategies. Noise from aircraft would be a particularly topical headline indicator. The Mayor clearly attaches considerable importance to aircraft noise affecting the quality of life of Londoners. GLA's noise consultants may be able to propose an indicator if nothing viable was identified.	GLA

Topic / indicator	Comments	Source
Employment and wellbeing	Job satisfaction could be more strongly emphasised in the 'happiness' section. The GLA well-being ward scores cite ONS work that includes job satisfaction and economic security in its well-being score. In terms of life satisfaction, employment has been estimated to contribute between a fifth and a quarter of the overall total. The GLA well-being ward scores include two indicators for economic security. The percentage of population claiming income support, and the percentage of children in out of work families. These could also be interesting to include as quality of life indicators, resonating with the Mayoral focus on jobs and growth.	GLA

Amendments, revisions or data issues

A number of suggestions were made for revisions to the existing indicator set. In other cases, data issues may also require amendments in the future.

Topic	Comments	Source
Access to nature	Methodological changes made historical comparison of this indicator difficult. Furthermore, strong policy implementation should mean that the figures are unlikely to differ by more than 3%. Replacement of this indicator should therefore be considered. The LSDC has suggested that an indicator could be developed from the LSDC's Sowing the Seeds work. There is also another dataset that shows areas of deficiency in access to the Public Open Space Hierarchy, as recommended by the London Plan. This dataset considers different kinds of publicly accessible open space, so has a different emphasis than the existing indicator.	LSDC Commissioners; CAG Consultants; GLA

Topic / indicator	Comments	Source
Air quality	The LSDC may wish to investigate whether they are currently using the most appropriate measure for air quality, given potential future changes in the source of trend data. Suggestions were made that PM2.5 emissions should also be considered as a headline indicator because of their significant health impacts.	CAG Consultants; GLA
Child poverty	Plans to change the definition of child poverty from one linked to average income, to one linked to a broader set of criteria, are to be outlined by the government[125]. This will need to be monitored by the LSDC for future QoL reports.	GLA
Crime	There were suggestions that fear of crime might be a better alternative to recorded crime as a headline crime measure.	QoL consultation workshop
Ecological footprint	Changes to the methodology for the existing indicator meant that London's footprint for previous years had to be recalculated. Furthermore, SEI, who own the indicator, no longer have the resources to regularly update the data. The LSDC should therefore consider how London's footprint can be reliably and consistently measured in future years.	CAG Consultants; LSDC Commissioners
Flooding	At present there are two headline data sets being used for this indicator – the number of properties at risk and the number of people signed up to the flood warning system. Commissioners believe a more important indicator is the rate at which the number of properties at risk of flooding is reduced. Methodological changes meant that no historical trend data was available for the 2012 report. The LSDC should therefore monitor the dataset to check whether it will be appropriate for use in future sets.	LSDC Commissioners
Fuel poverty	The Hills Fuel Poverty Review proposed a new measure for fuel poverty, which may require a revision to the existing QoL fuel poverty measure.	CAG Consultants; DECC

Topic / indicator	Comments	Source
GVA	There are very good arguments to suggest that GVA is a very weak measure, as it can hide huge disparities within an economy the size of London. A future approach may be to take a basket of indicators to look at economic well being	GLA
Low carbon and environmental jobs	The data used for this indicator may not be collected in future years as the GLA has yet to decide whether to re-commission the work from which it was taken. The LSDC should therefore encourage the GLA to ensure that calculation of the dataset continues.	CAG Consultants; GLA
Travel	Travel and transport issues are currently measured by two indicators: traffic volumes and travel to school. Could a single generic measure - like modal shift – replace these?	QoL consultation workshop

International comparisons

The LSDC would like to investigate the possibility of including a short comparison with other major world cities, using a limited number of indicators. CAG developed a paper exploring the options for such a set. The LSDC decided that for the 2012 QoL report, an international comparison was not viable because of compatibility issues between the indicators used by London, and those used by other cities and international QoL surveys (such as those undertaken by Mercer and PWC). As the development of a suitable indicator set may involve the creation of new indicators, or adaptations of existing ones, the LSDC will need to begin consideration in the short-term of how it develops this approach so it can be incorporated into the next QoL report.

Glossary

Term	Definition
AoDs or Areas of Deficiency in access to nature	Localities where people live further than 1km walking distance from a green space which is designated as a Site of Importance for Nature Conservation at borough level or higher.
CO	Carbon monoxide. Carbon monoxide is a colourless, odourless gas resulting from the incomplete combustion of hydrocarbon fuels. CO interferes with the blood's ability to carry oxygen to the body's tissues and results in adverse health effects.[126]
CO_2	Carbon dioxide. See also Greenhouse Gases.
Decent Homes Standard	A UK Government technical standard by which a 'decent home' is defined as one that meets the statutory minimum standard, is in reasonable state of repair, has reasonably modern facilities and services and provides a reasonable degree of thermal comfort.[127]
GCSE	General Certificate of Secondary Education.
GIS	Geographical Information System.
Greenhouse Gases (GHG)	The atmospheric gases responsible for causing global warming and climate change. The major GHGs are carbon dioxide (CO_2), methane (CH4) and nitrous oxide (N_20). Less prevalent, but very powerful greenhouse gases are hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6). They absorb thermal infra-red radiation emitted by the Earth's surface, the atmosphere and clouds.[128]
GVA	Gross Value Added - a measure of the total value of goods and services produced by the economy.
Key Stage 1	The period beginning at the same time as the school year in which the child attains the age of six and ending at the same time as the school year in which the majority of pupils in the child's class attain the age of seven.[129]
Key Stage 2	The period beginning at the same time as the school year in which the majority of pupils in the class attain the age of eight and ending at the same time as the school year in which the majority of pupils in the class attain the age of eleven.[130]
Key Stage 4	The period beginning at the same time as the school year in which the majority of pupils in the class attain the age of fifteen and ending at the same time as the school year in which the majority of pupils in the class cease to be of compulsory school age.[131]
$MtCO_2$	Million tonnes of carbon dioxide.

Term	Definition
NO_2	Nitrogen dioxide. Combustion processes emit a mixture of nitrogen oxides (NO_X), primarily nitric oxide (NO) which is quickly oxidised in the atmosphere to nitrogen dioxide (NO_2). Nitrogen dioxide has a variety of environmental and health impacts. It is a respiratory irritant which may exacerbate asthma and possibly increase susceptibility to infections. In the presence of sunlight it reacts with hydrocarbons to produce photochemical pollutants such as ozone. NO_2 can be further oxidised in air to form acidic gases, which contribute towards the generation of acid rain.[132]
O_3	Ozone. Ozone is not emitted directly into the atmosphere, but is a secondary pollutant generated following the reaction between nitrogen dioxide (NO_2), hydrocarbons and sunlight. Whereas nitrogen dioxide acts as a source of ozone, nitric oxide (NO) destroys ozone and acts as a local sink (NO_X-titration). For this reason, O_3 concentrations are not as high in urban areas (where high levels of NO are emitted from vehicles) as in rural areas. Ambient concentrations are usually highest in rural areas, particularly in hot, still and sunny weather conditions which give rise to summer 'smogs'.[133]
Pcc	The average volume of water that each person uses every day, expressed as per capita consumption.
$PM_{2.5}$	Particulate matter of less than 2.5 micrometres in diameter. Airborne PM includes a wide range of particle sizes and different chemical constituents. It consists of both primary components, which are emitted directly into the atmosphere, and secondary components, which are formed within the atmosphere as a result of chemical reactions. Of greatest concern to public health are the particles small enough to be inhaled into the deepest parts of the lung. Air Quality Objectives are in place for the protection of human health for PM_{10} and $PM_{2.5}$.[134]
PM_{10}	Particulate matter of less than 10 micrometres in diameter. See also PM2.5 above.
QoL	Quality of life.
SO_2	Sulphur dioxide. Sulphur dioxide is a corrosive, acidic gas which combines with water vapour in the atmosphere to produce acid rain. It has been implicated in the damage and destruction of vegetation and in the degradation of soils, building materials and watercourses. SO_2 in ambient air is also associated with asthma and chronic bronchitis.[135]

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3. There was a reported fall from 22% in 2006 to 16% in 2010 for this indicator. According to Greenspace Information for Greater London, most of this change is likely to be the result of improvements to the accuracy of GIS mapping. As a result of this uncertainty, and the likelihood that the majority of the reported change is not a result of improvements to access to nature, an amber traffic light has been awarded.
4. Changes to the methodology used to calculate this measure mean that the figures used in this report are not directly comparable to those used in the previous QoL report. Instead, change has been measured against the trend that the updated data shows.
5. This is a new indicator, so the trend is measured against the data that would have been available at the time of publishing the previous QoL report.
6. Change since the 2008-09 report on London's Quality of Life Indicators
7. The data used to measure this indicator has been amended since the previous QoL report. The trend is measured against the data that would have been available at the time of publishing the previous QoL report.
8. As above
9. As above.
10. This indicator measure has changed less than 3% since the previous report. As a general rule for this report, only indicator measures that have improved by 3% or more since the last report have been awarded a green traffic light. In this instance, the improvement in life expectancy since the previous report – 1.6 years for men and 1.3 years for women – was considered by the LSDC to be a 'clear improvement' despite being an increase of less than 3%.
11. This is a new indicator, so the trend is measured against the data that would have been available at the time of publishing the previous QoL report.
12. Note that this traffic light is based on turnout at the London Mayoral Elections, rather than for London Borough or General Election turnouts which both measure green.
13. A new measure for volunteering has been introduced for this report. The trend is therefore measured against the data that would have been available at the time of publishing the previous QoL report.
14. Change since the 2008-09 report on London's Quality of Life Indicators
15. The change since the baseline year of 2008 is slightly over the 3% threshold to mark 'a clear improvement', which would normally mean a green traffic light is awarded (see the 'Key' below for explanation of how traffic lights have been awarded). For this indicator, however, the Commission considers this a relatively minor improvement given the long-term trend of worsening housing affordability in London and therefore has awarded an amber traffic light to mark little change.

16. A new measure has been used for housing affordability in this QoL report. The trend has therefore been measured against the data that would have been available at the time of the previous QoL report.
17. This is a new indicator, so the trend is measured against the data that would have been available at the time of publishing the previous QoL report.
18. This is a new indicator. The trend is based on only one year of trend data as figures do not go back further than this.
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52. GLA, Environment Agency, Natural England and The Forestry Commission (2011), *London's Environment Revealed: State of the Environment Report for London, June 2011,* http://www.environment-agency.gov.uk/research/library/publications/34083.aspx
53. As the data used to measure this indicator has been amended, the trend is measured against the data that would have been available at the time of publishing the previous QoL report.
54. As the data used to measure this indicator has been amended, the trend is measured against the data that would have been available at the time of publishing the previous QoL report.

55. This is partly because it is difficult to interpret a shift in relative performance against the national picture. It is also because the methodology for calculating 'value added' has changed over time, so the scores represent something different each year.
56. Progress figures for England are for maintained schools only.
57. As the dataset used to measure this indicator is new to the QoL indicator set, the trend is measured against the data that would have been available at the time of publishing the previous QoL report.
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104. This is a new indicator, so the trend is based on the data that would have been available at the time of publishing the previous QoL reports.

105. The change since the baseline year of 2008 is slightly over the 3% threshold to mark 'a clear improvement', which would normally mean a green traffic light is awarded (see the Key for explanation of how traffic lights have been awarded). For this indicator, however, the Commission considers this a relatively minor improvement given the long-term trend of worsening housing affordability in London and therefore has awarded an amber traffic light to mark little change.

106. This is a new indicator, so the trend is based on the data that would have been available at the time of publishing the previous QoL reports.

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111. This is a new indicator, so the trend is measured against the data that would have been available at the time of publishing the previous QoL report.
112. As above.
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117. See the BIS website for further details of these studies: http://www.bis.gov.uk/policies/business-sectors/green-economy/market-intelligence/market-data
118. This is a new indicator, so the trend is measured against what would have been the latest available data at the time the previous QoL reports were published.
119. Level 4+ qualifications are qualifications considered NVQ 4 equivalent and above: e.g. HND, Degree and Higher Degree level qualifications or equivalent https://www.nomisweb.co.uk/reports/lmp/gor/2092957698/report.aspx#defs
120. ONS, *Annual Population Survey,* 23 Jun 11, updated 13 Jul 11, www.nomisweb.co.uk
121. This is a new indicator so the trend is measured against the data that would have been available at the time of the previous QoL report.
122. As above.
123. GLA Economics, *Working Paper 49: Supporting London's innovators,* by Nick Ennis and Slawek Kozdras, October 2011, p3 www.london.gov.uk
124. GLA Economics, *Working Paper 49: Supporting London's innovators,* by Nick Ennis and Slawek Kozdras, October 2011, www.london.gov.uk
125. http://news.bbc.co.uk/today/hi/today/newsid_9728000/9728442.stm
126. Defra website, *About air pollution – Glossary,* http://uk-air.defra.gov.uk/air-pollution/glossary# [accessed 5 September 2012]
127. See CLG, *A Decent Home: Definition and guidance for implementation,* June 2006, for more detail, ww.communities.gov.uk/publications/housing/decenthome
128. DECC website, *Glossary,* www.decc.gov.uk/en/content/cms/about/glossary/glossary.aspx# [accessed 5 September 2012]
129. Defined in section 82 of the Education Act 2002
130. As above.
131. As above
132. Defra website, *About air pollution – Glossary,* http://uk-air.defra.gov.uk/air-pollution/glossary# (accessed 5 September 2012)
133. As above
134. As above
135. As above

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Chinese
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Hindi
यदि आप इस दस्तावेज की प्रति अपनी भाषा में चाहते हैं, तो कृपया निम्नलिखित नंबर पर फोन करें अथवा नीचे दिये गये पते पर संपर्क करें

Vietnamese
Nếu bạn muốn có văn bản tài liệu này bằng ngôn ngữ của mình, hãy liên hệ theo số điện thoại hoặc địa chỉ dưới đây.

Bengali
আপনি যদি আপনার ভাষায় এই দলিলের প্রতিলিপি (কপি) চান, তা হলে নীচের ফোন্ নম্বরে বা ঠিকানায় অনুগ্রহ করে যোগাযোগ করুন।

Greek
Αν θέλετε να αποκτήσετε αντίγραφο του παρόντος εγγράφου στη δική σας γλώσσα, παρακαλείστε να επικοινωνήσετε τηλεφωνικά στον αριθμό αυτό ή ταχυδρομικά στην παρακάτω διεύθυνση.

Urdu
اگر آپ اِس دستاویز کی نقل اپنی زبان میں چاھتے ھیں، تو براہ کرم نیچے دئے گئے نمبر پر فون کریں یا دیئے گئے پتے پر رابطہ کریں

Turkish
Bu belgenin kendi dilinizde hazırlanmış bir nüshasını edinmek için, lütfen aşağıdaki telefon numarasını arayınız veya adrese başvurunuz.

Arabic
إذا أردت نسخة من هذه الوثيقة بلغتك، يرجى الاتصال برقم الهاتف أو مراسلة العنوان أدناه

Punjabi
ਜੇ ਤੁਹਾਨੂੰ ਇਸ ਦਸਤਾਵੇਜ਼ ਦੀ ਕਾਪੀ ਤੁਹਾਡੀ ਆਪਣੀ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੀਦੀ ਹੈ, ਤਾਂ ਹੇਠ ਲਿਖੇ ਨੰਬਰ 'ਤੇ ਫ਼ੋਨ ਕਰੋ ਜਾਂ ਹੇਠ ਲਿਖੇ ਪਤੇ 'ਤੇ ਰਾਬਤਾ ਕਰੋ:

Gujarati
જો તમને આ દસ્તાવેજની નકલ તમારી ભાષામાં જોઈતી હોય તો, કૃપા કરી આપેલ નંબર ઉપર ફોન કરો અથવા નીચેના સરનામે સંપર્ક સાધો.

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