Key:
Trend improving ✓
Trend deteriorating X

Topic 1: Greenhouse Gases

Defra Sustainable Development Indicators[1]

National Indicator: UK greenhouse gas emissions
Change since 1990: ✓
Change since 2007: ✓

Baseline

In the UK in 2011 GHG emissions amounted to 553.1MtCO_2e. This is a 29% reduction from 1990 where 774.8MtCO_2e was released. Between 2000 and 2011, GHG emissions reduced by 22%. It should be noted that these amounts include emissions from land use, land use change and forestry[2].

UK Emissions from transport

Table 1 below shows that the contribution of emissions from transport to overall UK emissions has remained broadly flat between 1990 and 2009. However, domestic emissions from transport increased by 8% between 1990 and 2007, they then fell by 8% between 2007 and 2009[3]. Within transport, the trend over the past 20 years shows emissions reducing from cars and taxis matched by increasing emissions from larger vehicles such as vans, buses and HGVs.

	MtCO_2e Released 1990[3]	**% contribution to UK overall emissions in 1990 [4]**	**MtCO_2e Released 2009**	**% contribution to UK overall emissions in 2009[4]**
Cars and taxis	73.1	9.4%	70.9	12.3%
HGVs and light vans	33.4	4.3%	36.3	6.3%
Buses and coaches	3.8	0.5%	5.3	0.9%

1 Department of Environment and Rural Affairs (Defra), 2013.*Sustainable development indicators* [Online]. Available athttps://www.gov.uk/government/uploads/system/uploads/attachment_data/file/223992/0_SDIs_final__2_.pdf (Accessed: 07/08/2013).

2 Webb, N., Broomfield, M., Cardenas, L., MacCarthy, J., Murrells, T., Pang, Y., Passant, N., Thistlethwaite, G. and Thomson, A., 2013. *UK Greenhouse Gas Inventory, 1990-2011* [Online]. Published: April 2013, AEA, Oxfordshire. Available at: http://uk-air.defra.gov.uk/reports/ (Accessed: 30/08/13).

3 Department for Transport, n.d.*Factsheets: UK transport greenhouse gas emissions* [Online]. Available at: http://assets.dft.gov.uk/statistics/series/energy-and-environment/climatechangefactsheets.pdf (Accessed: 30/08/13).

4 Note: total CO_2e emissions used to calculate percentages have been taken from UK Greenhouse Gas Inventory 1990-2011 (above).In 2009, total emissions = 576.6MtCO_2e.

Key:
Trend improving ✓
Trend deteriorating X

Other vehicles using the road	0.9	0.1%	1.0	0.2%
Rail	1.6	0.2%	2.1	0.4%
TOTAL	112.8	14.5%	115.6	20.1%

Table 1 Contribution of emissions from transport to overall UK emissions

Projections from DECC indicate that total GHG emissions in the UK will have reduced by 47% of the 1990 baseline levels by 2030. On the basis of existing policies, emissions from transport will have reduced by 17% in 2030 compared to the 1990 baseline levels[5].

[5] DECC, 2012. *Updated energy and emissions projections 2012* [Online]. Available at: http://www.gov.uk/ (Accessed: 07/08/2013).

Key:
Trend improving ✓
Trend deteriorating X

Topic 2: Local Air Quality

Defra Sustainable Development Indicators[1]

National Indicator: Air quality*
NOx Concentrations
Change since 2004: ✓
PM10 Concentrations
Change since 1996: ✓

Baseline

As of 2013, there are 734 Air Quality Management Areas (AQMAs) within 254 Local Authorities in the UK. This has increased since 2008 when the UK had 223 Local Authorities with AQMAs[6].

NOx concentrations have reduced between 1 and 2% annually between 2004 and 2009, however reductions have been greatest in the vicinity of motorways with reductions of around 3.5% annually. NO_2 concentrations have decreased around 0.5-1% during the same time period[7].

Roadside PM10 concentrations have reduced from around 35μgm^{-3} in 1996 to approximately 22μgm^{-3} in 2012[8].

The EU's 2008 Ambient Air Quality Directive sets limit values for certain pollutants. The limit value for annual mean concentrations of both NO_2 and PM_{10} is 40μg/m³. These objectives, which were meant to be achieved by 2010, have been set with health effects in mind. Annual mean concentrations of NO_2 alongside busy urban roads and alongside some major strategic roads can be significantly higher than this, however.

There are 11 railway routes[9] which are heavily served by diesel passenger trains and therefore negatively impact air quality as a result of NO_2 and SO_2 emissions[10]. Research has shown that air quality in close proximity to diesel railway lines is similar to that of a busy road[10]. As of 2008, 35 local authorities with heavy traffic of diesel passenger trains had an estimated annual mean background NO_2 concentration greater than 25μgm^{-3}.

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6 Air Quality Archive, 2008. *Local Air Quality Management: AQ Management Areas List* [Online]. Available at: http://webarchive.nationalarchives.gov.uk/ (Accessed: 07/08/2013).
7 King's College London, University of Leeds & AEA, 2011.*Trends in NOx and NO_2 emissions and ambient measurements in the UK* [Online]. Available at: http://uk-air.defra.gov.uk/reports/ (Accessed: 07/08/2013).
8 Defra, 2013.*Air quality statistics in the UK 1987-2012* [Online]. Available at: http://www.gov.uk/ (Accessed: 07/08/2013).
9 Paddington to Swansea, Swindon to Taunton, Bristol Temple Meads to Bristol Parkway, Rugby to Birmingham New Street, Manchester Piccadilly to Wigan, Crewe to Gretna, Manchester to Crewe, Liverpool Lime Street to Allerton, Sheffield to Wincobank Junction, Leeds to Bradford and Glasgow to Edinburgh
10 Defra, 2009.*Local Air Quality Management Technical Guidance LAQM.TG(09)*. Published: Defra: London, February 2009.

Key:
Trend improving ✓
Trend deteriorating X

DfT forecasts the impact of changing traffic demand, policy and technological advancement on NOx emissions from road transport in the National Transport Model. Road transport NOx and PM10 emissions from 2010-2040 are forecast to fall substantially by 62% and 93% respectively as taken from the 2013 Road Transport Forecasts[11].

The forecasts assume no further emission reducing policies for road transport beyond those announced to meet the first three carbon budgets and expectations in the uptake of Ultra Low Emission Vehicles. Future policy measures to reduce environmental impact of road traffic, for example to support uptake of cleaner vehicles, would further reduce NOx and PM10 emissions.

The NTM forecasts a continuing downward trend in NOx and PM10 emissions until 2025, in line with historical precedent and deployment of new vehicle EURO standards. After 2025, PM10 and NOx emissions are projected to plateau, at significantly lower levels than those observed in 2010.

[11] The forecasts assume around 400 lane miles of capacity have been added to the existing network by 2020 based on the Spending Review 2010, Growth Review 2011 and the announcement in May 2012 of six schemes designed to ensure the maintenance of a "pipeline" of future Highways Agency.

Key:
Trend improving ✓
Trend deteriorating X

Topic 3: Climatic Factors

Defra Sustainable Development Indicators[1]

National Indicator: N/A
Change since 1950: X
Changes since 1970: X
Note: climate is the weather conditions in an area over a long period of time and therefore changes occur over longer periods of time.

Baseline

- Temperature in England has increased between 1 and 1.7°C since the mid-20th Century[12]
- Seasonal rainfall has changed little in the past fifty years[12]
- Sea surface temperature has increased over the past thirty years by 0.7°C[12]
- Sea levels around the UK rose by approximately 1mmyr^{-1} in the 20th Century[12]

The strategic road network has already experienced problems and benefits on the network due to a changing climate. Table 2below gives examples of the impacts of these changes[13]:

Climatic Change	Outcome	Impact on Asset
Increase in average temperature	Reduction of fog days Reduction of icy days	Less need for warning signs Reduction in winter maintenance
Increase in winter precipitation	Greater snowfall Fluvial/pluvial flooding	Need enhanced severe winter weather capability Drainage capacity tested
Increased wind speed	Wind speed exceeding operational limits	Integrity of structures and signs/signals
Sea level rise	Higher frequency of storm surges	Flooding of coastal assets

Table 2 Impacts of changing climate on the strategic road network

It is predicted that the changes in climate in conjunction with extreme weather events will impact on the rail system. Major impacts on the rail system as a result of these changes include: track buckling and resultant speed restrictions; reduction in productivity of maintenance workers; passenger heat stress; sag of overhead line equipment; increased flooding and storm surge increases[14].

[12] Defra, 2012.*UK Climate Projections: Key findings for observed data* [Online]. Available at: http://ukclimateprojections.defra.gov.uk/21809 (Accessed: 13/08/2013).
[13] Highways Agency, 2011.*Climate change risk assessment* [Online].Published: August 2011. Available at: http://assets.highways.gov.uk/about-us/climate-change/HA_Climate_Change_Risk_Assessment_August_2011_v2.pdf (Accessed: 13/08/2013).

Key:
Trend improving ✓
Trend deteriorating X

Climate change projections
It is predicted that by 2080, mean daily temperatures during the summer and winter will increase by 2.8-5.4°C and 1.5-2.5°C respectively. Southern England will see the greatest increases. Precipitation increases will be greatest during the winter in western England with increases of up to 33% whilst precipitation during the summer will decrease by a maximum of 40% in parts of southern England[15].

[14] Network Rail, 2011.*Network Rail Climate Change Adaptation Report* [Online] Published: 30th April 2011. Available at: http://archive.defra.gov.uk/environment/climate/documents/adapt-reports/06road-rail/network-rail.pdf (Accessed: 13/08/2013).
[15] UK Climate Projections 09, 2012.*Online climate change projections report summary* [Online]. Available at: http://ukclimateprojections.defra.gov.uk/22628 (Accessed: 04/09/13).

Key:
Trend improving ✓
Trend deteriorating X

Topic 4: Flood Risk

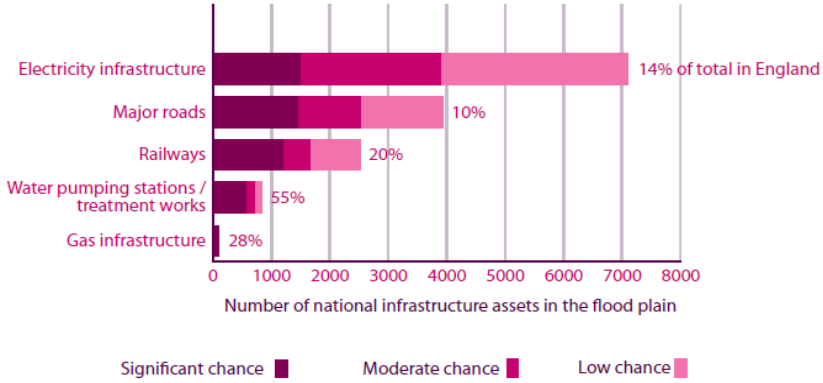
National Indicator: N/A

Proportion of new dwellings built within areas of high flood risk*
Change since 1989: X

Baseline

The National Flood Risk Assessment shows that a sizeable part of important infrastructure and public services are at risk of flooding. Boththe road and rail network have experienced the impact of serious flood events, for example, during the floods of 2007, there were 10,000 people trapped on the M5 motorway and many others stranded on the rail network. In total, around 10% of major roads and 20% of railways are at risk of flooding[16].

Transport and utilities infrastructure:



(Note: the figures shown for roads and railways relate to network lengths in km.)

[16] Environment Agency, 2009.*Flooding in England: A national assessment of flood risk* [Online]. Available at: http://www.environment-agency.gov.uk/research/library/publications (Accessed: 13/08/2013)

Key:
Trend improving ✓
Trend deteriorating X

Figure 1 (above) National infrastructure assets in flood risk areas[17]

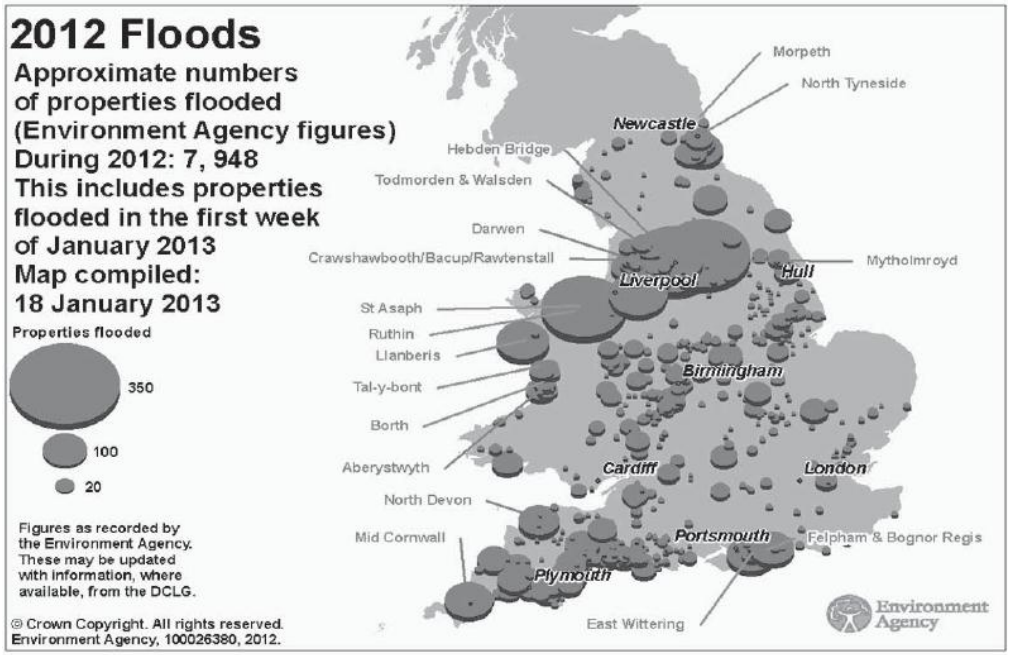


Figure 2 (right) Provisional figure for properties flooded in 2012[18]

More than 5.5 million (one in six) properties in England and Wales are at risk of flooding from all water sources. Over 2 million properties are at risk of flooding from rivers or the sea and nearly 3 million are susceptible to surface water flooding alone. A million properties are threatened by both. Climate change is predicted to increase the likelihood of sea and river flooding and coastal erosion. Changing rainfall patterns and some new building developments are likely to make flooding from surface water more frequent.

[17] Environment Agency, 2009.*Investing for the Future.Flood and coastal risk management in England* [Online]. Available at: http://cdn.environment-agency.gov.uk/geho0609bqdf-e-e.pdf (Accessed: 19/09/2013).

[18] House of Commons Environment, Food and Rural Affairs Committee, 2013.*Managing Flood Risk: Third Report of Session 2013-14* [Online]. Available at: http://www.publications.parliament.uk/ (Accessed: 19/09/2013).

Key:
Trend improving ✓
Trend deteriorating X

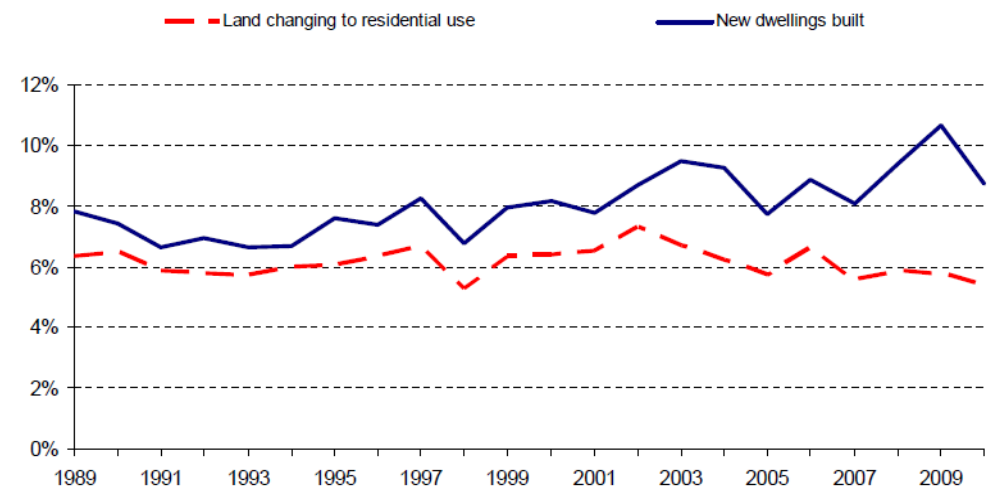


Figure 3 Proportion of new dwellings built and land changing to residential use within areas of high flood risk, 1989 to 2010[19]

[19] Office of National Statistics, 2011. Land Use Change Statistics in England: 2010 provisional estimates. Available at: www.gov.uk (Accessed: 20/09/2013).

Key:
Trend improving ✓
Trend deteriorating X

Topic 5: Geological Assets

Defra Sustainable Development Indicators[1]

National Indicator: Natural Resource Use
Raw material consumption – Construction Materials
Change since 2000:✓
Change since 2006: ✓
Raw material consumption – Non-Construction Materials
Change since 2000:✓
Change since 2006: ✓

Baseline

Minerals are non–renewable natural resources that are vital for the construction, manufacturing and energy industries. Many industrial minerals used in industrial and manufacturing processes may only be reused as construction fill. A significant exception is glass, which may be melted for use in glass or crushed for use as a road construction aggregate. Land permitted for mineral extraction in the UK accounts for about 0.3% of the total land area in the UK.

Domestic extraction fell 4.1% between 2010 and 2011 to 428.4 million tonnes. This is mainly due to a reduction in domestic extraction of fossil fuels[20]. Between 2010 and 2011 domestic extraction of fossil fuels fell 16.6% to 115.6 million tonnes. This is the lowest level since the data collection began in 1990.

Domestic extraction of fossil fuels has been declining since 1999. Between 1999 and 2011 it has fallen 57.7%. Figure 4 below shows the trend in fuel production in the UK between 1980 and 2011[21]:

[20] Office for National Statistics (2013).UK Environmental Accounts 2013 [Online]. Available at: http://www.ons.gov.uk/ons/rel/environmental/uk-environmental-accounts/2013/stb-ukea-2013.html#tab-Material-Flows(Accessed: 27/08/2013).

[21] Department of Energy and Climate Change, 2012.*Energy in Brief 2012* [Online]. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/65898/5942-uk-energy-in-brief-2012.pdf (Accessed: 06/09/2013).

Key:
Trend improving ✓
Trend deteriorating X

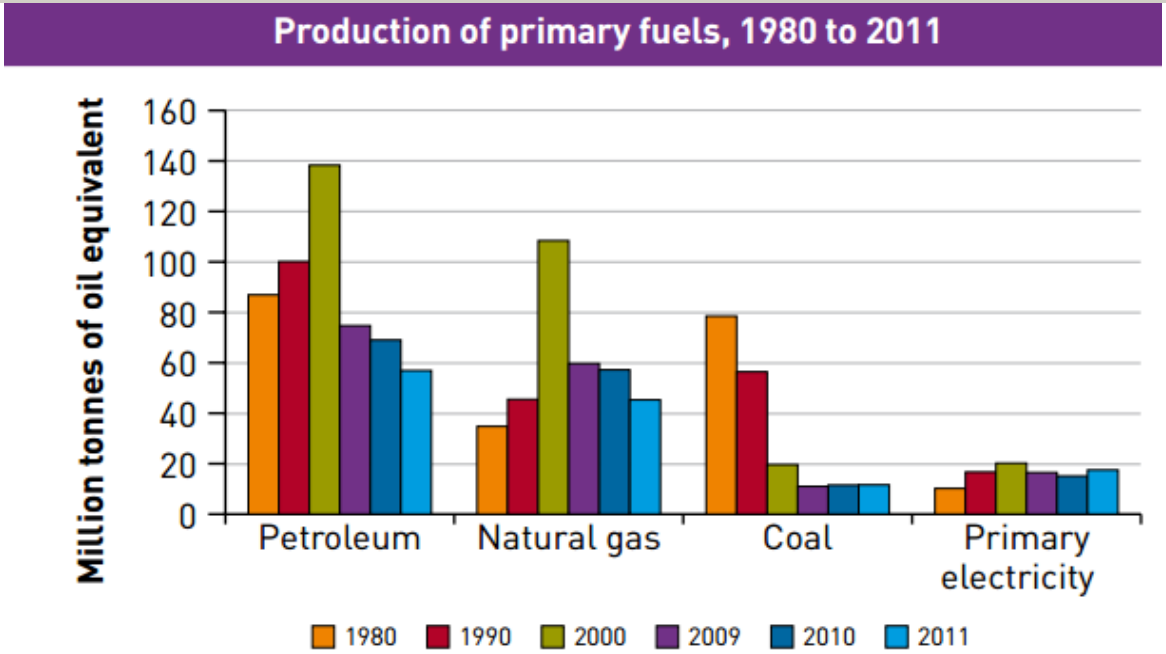


Figure 4 Trend in fuel production in the UK between 1980 and 2011

Minerals themselves require transportation once extracted as shown in Figure 5 below[22]:

[22] British Geological Survey, n.d.*Raw Materials for Construction – Sources and Impacts* [Online]. Available at: http://www.bgs.ac.uk/downloads/directDownload.cfm?id=1303&noexcl=true&t=Raw%20materials%20for%20construction%20%2D%20sources%20and%20impac(Accessed: 27/08/2013).

Key:
Trend improving ✓
Trend deteriorating X

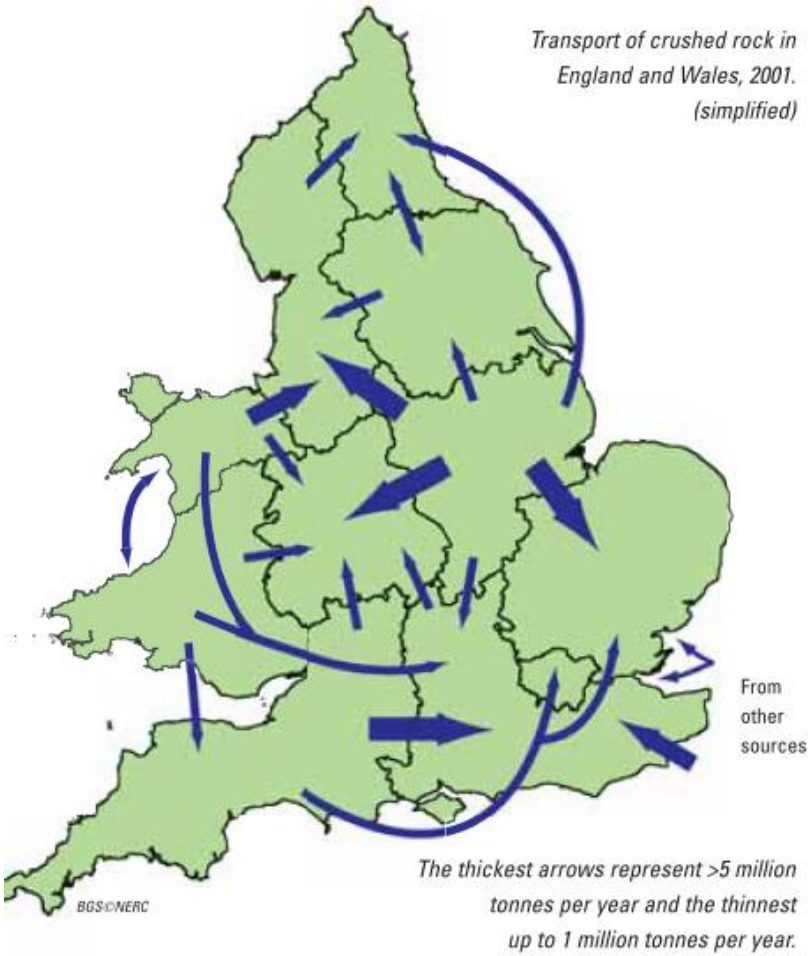


Figure 5 Diagrammatic representation of the transport of minerals in England and Wales

Key:
Trend improving ✓
Trend deteriorating X

Topic 6: Soil

Defra Sustainable Development Indicators[1]

National Indicator: N/A
Change since 2000: X

Baseline

Soil is a non-renewable resource. It is vulnerable to erosion, degradation and sealing.

Soil Sealing[23]

Urban development and construction of transport infrastructure are the main causes of almost irreversible net soil loss and sealing[24]. Most sealed soils perform only the platform for construction function of soil, i.e. supporting buildings. Soil sealing prevents the soil from performing other functions such as food and fibre production or the ecological functions of soil, including storage of carbon and as a habitat. There is currently no monitoring of the levels of soil sealing, however the European Environment Agency has estimated that by 2065, 3.34% of UK soil will be sealed (as a percentage of total land area)[25].

Soil quality

Soil nutrient balances provide a method for estimating the annual nutrient loadings of nitrogen and phosphorus to agricultural soils. They give an indication of the potential risk associated with losses of nutrients to the environment; losses which can impact on air and water quality and on climate change. The balances do not estimate the actual losses of nutrients to the environment, but significant nutrient surpluses are directly linked with losses to the environment[26]. Provisional estimates show that the nitrogen balance for the UK had decreased by 17% compared to levels in 2000 and the phosphorus balance has fallen by 25% over the same time period.

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[23] Soil sealing is the covering of the soil surface with an impervious material or the changing of its nature so that the soil becomes impermeable. The soil is no longer able to perform the range of functions associated with it.

[24] Defra, 2006. The Environment: Quality and safety: Land: Soil: Built environment: Soil sealing [Online]. Available at: http://archive.defra.gov.uk/environment/quality/land/soil/built-environ/soil-sealing.htm (Accessed: 18/09/2013).

[25] European Environment Agency, 2010.*EEA fast track service precursor on land monitoring – Degree of soil sealing* [Online]. Available at: http://www.eea.europa.eu/data-and-maps/data/eea-fast-track-service-precursor-on-land-monitoring-degree-of-soil-sealing-100m-1(Accessed: 27/08/2013).

[26] Defra. 2013.*Soil Nutrient Balances: UK Provisional Estimates for 2012* [Online]. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/225281/SN_GNB_UK_July2013.pdf (Accessed: 27/08/2013).

Key:
Trend improving ✓
Trend deteriorating X

Topic 7: Noise

Defra Sustainable Development Indicators[1]

National Indicator: Percentage of the population affected by noise
Change since 2006/07: -

Baseline

Limited national-level data is available with regards to noise levels. As required by the Environmental Noise (England) Regulations 2006, Defra have produced noise maps for major roads which have more than six million vehicle passages a year, major railways which have more than 60,000 train passages a year, major airports with more than 50,000 movements, excluding training on light aircraft and first round agglomerations – urban areas (with a population of more than 250,000 and a certain population density) which takes into account road, rail, aircraft and industrial premises[27].

Defra estimate that over 9 million people (based on 2001 Census data) are affected by noise levels (Lden)[28] of over 55dB as a result of major roads in England. Furthermore, 153,000 people (based on 2001 Census data) are affected by noise levels (Lden) of over 55dB as a result of railway lines. Table 3 below gives additional detail[29,30].

	Major Roads		Major Railways	
Noise Level (L_{den})	**Number of dwellings**	**Number of people**	**Number of dwellings**	**Number of people**
≥ 55dB	4,207,000	9,679,000	69,000	153,000
≥ 60dB	2,097,000	4,845,000	38,000	84,000
≥ 65dB	736,000	1,715,000	19,000	42,000
≥ 70dB	196,000	456,000	7,000	14,000
≥□75dB	31,0□0	74,000	1,000	2,000

Table 3 Number of people and dwellings affected by noise from major roads and railways

In 1990 and 2000, the Buildings Research Establishment (BRE) carried out a national study of environmental noise levels key findings from the research are as follows[31]:

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[27] Defra, n.d.*Noise Mapping England: Maps and charts* [Online]. Available at: http://services.defra.gov.uk/wps/portal/noise (Accessed: 18/09/2013).
[28] Lden is the 24 hour equivalent continuous noise level calculated for an annual period
[29] Defra, 2010.*Noise Action Plan Major Roads (outside first round agglomerations)* [Online]. Published: March 2010, Defra: London. Available at: http://archive.defra.gov.uk/environment/quality/noise/environment/documents/actionplan/noiseaction-major-roads.pdf (Accessed: 02/09/13). Note: Revise Noise Action Plans are currently out for consultation.
[30] Defra, 2010.*Noise Action Plan Major Railways (outside first round agglomerations)* [Online]. Published: March 2010, Defra: London. Available at: http://archive.defra.gov.uk/environment/quality/noise/environment/documents/actionplan/noiseaction-major-rail.pdf (Accessed: 02/09/13). Note: Revised Noise Action Plans are currently out for consultation.
[31] Buildings Research Establishment, 2002.*The UK National Noise Incidence Survey* [Online]. Available at: http://www.bre.co.uk/pdf/NIS.pdf(Accessed: 28/08/2013).

Key:
Trend improving ✓
Trend deteriorating X

- Average noise levels measured by LAeq and LA10 indicators during the day-time decreased between 1990 and 2000;
- Average noise levels measured by the LA90 indicator during the night-time increased between 1990 and 2000;
- The majority of the UK population were found to be exposed to noise levels above those contained in the WHO Guidelines for Community Noise; and
- More people thought that the road traffic noise at their home had got worse between 1995 and 2000 than thought that it had got better.

Key:
Trend improving ✓
Trend deteriorating X

Topic 8: Biodiversity

Defra Sustainable Development Indicators[1]

National Indicator: Priority Species and Habitats
Number of priority species and habitats that are stable or increasing
Change since 2002: ✓

Baseline

England has a high diversity of habitats and many distinctive species, reflecting its geographical position. Many are of European or world-wide importance; for example:

- England has globally important populations of breeding seabirds and wintering waders and wildfowl, and 18% of the world's heathland;
- England possesses important populations of bats and oceanic lichens, and more than half the European species of bryophytes including one moss not recorded anywhere else in the world;
- England is rich in veteran trees in ancient woodland and parklands;
- England has more chalk rivers than any other country in Europe and over half the European resource of chalk coasts;
- Nearly 20% of Europe's Atlantic and North Sea estuaries are in England.[32]

Sites of Special Scientific Interest (SSSIs)[33]

There are over 4,100 Sites of Special Scientific Interest (SSSIs) in England, covering around 8% of the country's land area. More than 70% of these sites (by area) are internationally important for their wildlife and designated as Special Protection Areas (SPAs), Special Areas of Conservation (SACs), or Ramsar sites.

[32] Natural England, 2013.England's Biodiversity. Available at: http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/englands/default.aspx (Accessed on: 29/08/13).
[33] Natural England, 2013.Sites of Special Scientific Interest. Available at: http://www.naturalengland.org.uk/ourwork/conservation/designations/sssi/ (Accessed on: 29/08/2013).

Key:
Trend improving ✓
Trend deteriorating X

Special Protection Areas (SPAs) in the UK as of 5 July 2013[34]

	Classified SPAs		Potential SPAs
Country	Number of sites	Site are (ha)	Number of sites
England	81	1,054,353	0
England/Scotland	1	43,637	0
England/Wales	3	209,247	0
Northern Ireland	16	114,052	0
Scotland	152	1,205,988	1
Wales	17	123,058	0
United Kingdom	270	2,750,335	1

Table 4 SPAs in the UK

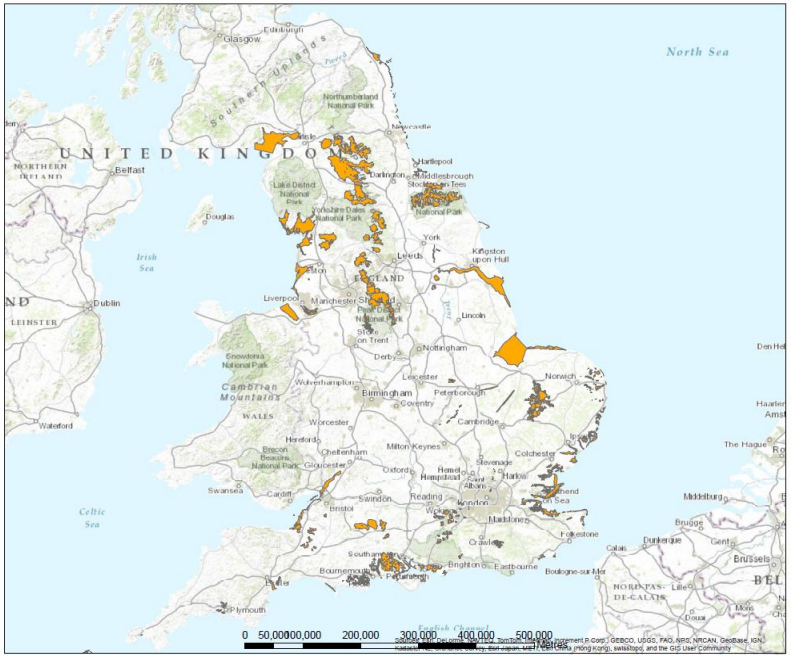

Figure 6 Location of Special Protection Areas in England

[34] Joint Nature Conservation Committee, 2013.*Classified and Potential Special Protection Areas (SPAs) in the UK* [Online]. Available at: http://jncc.defra.gov.uk/page-1399 (Accessed: 28/08/2013).

Key:
Trend improving ✓
Trend deteriorating X

Special Areas of Conservation/Sites of Community Importance in the UK as of 21 August 2013[35]

	Special Area of Conservation (SAC)	Sites of Community Importance (SCI)	Candidate SACs	All submitted SAC (SAC, SCI and CSAC)	
Country	No.	No.	No.	No.	Area (ha)
England	230	9	1	240	1,068,414
England/Scotland	3	0	0	3	112,564
England/Wales	7	0	0	7	95,132
England/Offshore	0	2	0	2	231,394
Northern Ireland	54	1	2	57	85,831
Scotland	236	1	1	238	939,727
Scotland/Offshore	0	0	2	2	182,231
Wales	85	0	0	85	590,864
UK Offshore Waters	0	10	6	16	4,707,365
UK Total	615	23	12	650	8,013,523

Table 5 SACs and SCIs in the UK

[35] Joint Nature Conservation Committee, 2013.*Special Areas of Conservation (SACs)* [Online]. Available at: http://jncc.defra.gov.uk/page-23(Accessed: 28/08/2013).

Key:
Trend improving ✓
Trend deteriorating X

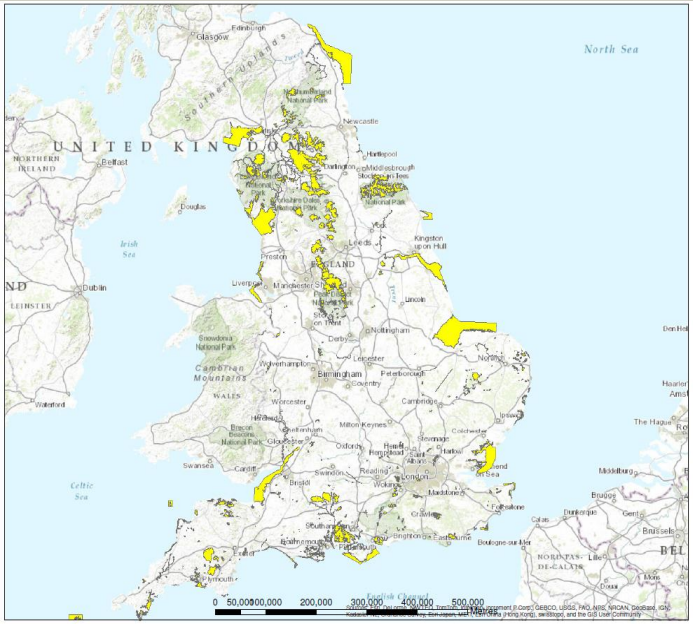

Figure 7 Location of Special Areas of Conservation in England

UK Ramsar Sites[36]

	Designated		Proposed
Country	Number of sites	Area (ha)	Number of sites
England	67	318,570	2
England/Scotland	1	43,637	0
England/Wales	3	40,553	0
Northern Ireland	20	88,152	3
Scotland	50	283,083	0
Wales	7	11,366	0
United Kingdom	148	785,361	5

Table 6 Ramsar Sites in the UK

[36] Joint Nature Conservation Committee, 2013.*UK Ramsar Sites* [Online]. Available at: http://jncc.defra.gov.uk/page-1388(Accessed: 28/08/2013).

Key:
Trend improving ✓
Trend deteriorating X

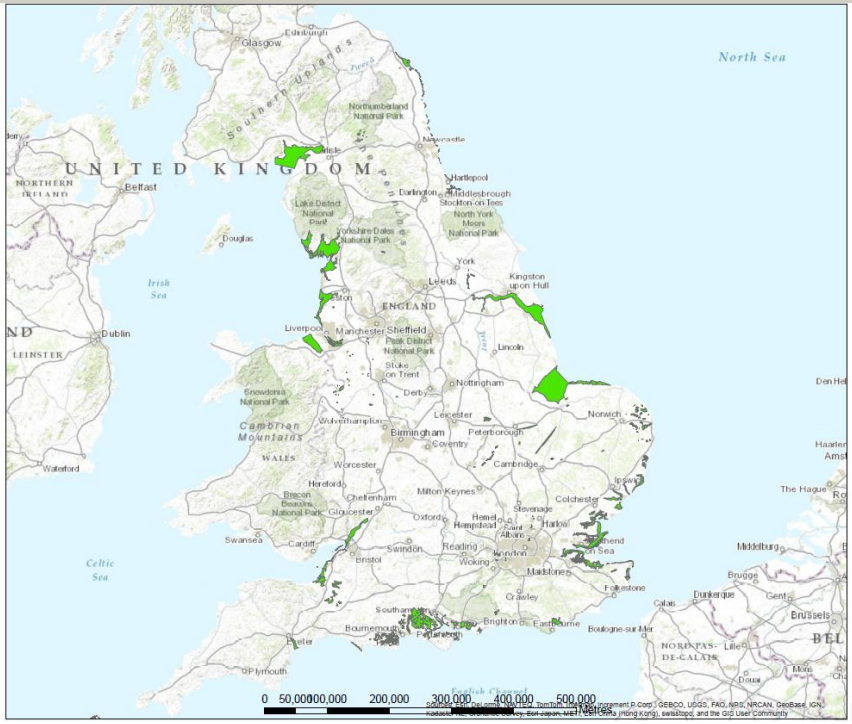

Figure 8 Location of Ramsar sites in England

National Nature Reserves (NNRs)[37]

There are currently 224 NNRs in England with a total area of over 94,400 hectares, which is approximately 0.6% of the country's land surface. The largest is The Wash NNR covering almost 8,800 hectares, whilst Horn Park Quarry in Dorset is the smallest at 0.32 hectares. There are 3 Biosphere Reserves[38] which are also classified as NNRs. They are:

- Braunton Burrows National Nature Reserve, North Devon;
- Moor House - Upper Teesdale Biosphere Reserve, Cumbria and Durham;
- North Norfolk Coast Biosphere Reserve, Norfolk.

[37] Natural England, 2013.*National Nature Reserves* [Online]. Available at: http://www.naturalengland.org.uk/ourwork/conservation/designations/nnr/default.aspx(Accessed: 28/08/2013).

[38] Natural England, 2013.*Biosphere Reserves* [Online]. Available at: http://www.naturalengland.org.uk/ourwork/conservation/designations/biosphererereserves/default.aspx (Accessed: 29/08/2013).

Key:
Trend improving ✓
Trend deteriorating X

Figure 9 Location of National Nature Reserves in England

Local Nature Reserves (LNRs)[39]

There are more than 1500 LNRs in England. They range from windswept coastal headlands, ancient woodlands and flower-rich meadows to former inner city railways, abandoned landfill sites and industrial areas now re-colonised by wildlife. In total they cover about 35,000 ha.

Ancient Woodland[40]

Ancient woodland in England is a scarce resource, covering approximately 3% of the country's land area. It has been estimated that

[39] Natural England, 2013.*Local Nature Reserves* [Online]. Available at: http://www.naturalengland.org.uk/ourwork/conservation/designations/lnr/ (Accessed: 28/08/2013).
[40] Natural England, 2012.*Standing Advice for Ancient Woodland* [Online]. Available at: http://www.naturalengland.org.uk/Images/standing-advice-ancient-woodland_tcm6-32633.pdf (Accessed: 29/08/2013).

Key:
Trend improving ✓
Trend deteriorating X

between 1930 and the production of the ancient woodland inventories in the 1980s, some 7% of the remaining ancient woodland in England and Wales was permanently cleared. England is also one of the least wooded countries in Europe, with woodland covering approximately 8.5% of the land surface, compared with an average of 40% in the European Union countries. Of England's woodland resource, a third is ancient woodland. The South East is particularly important for its woodland cover, being the most heavily wooded region in England, containing 40% of the country's ancient woodland.

Key:
Trend improving ✓
Trend deteriorating X

Topic 9: Water

Defra Sustainable Development Indicators[1]

National Indicator: Water Quality*
Change since 1990: Biological Quality ✓
Chemical Quality ✓

National Indicator: Estimated direct actual abstractions from on-tidal surface waters and groundwaters
Change since 1991: ✓
Change since 2006: ✓

Baseline

Water quality

Water quality has improved significantly over the last two decades. This is underlined by the following key indicators[41]:

- In 2008, 72% of English rivers were classified as 'good' or 'excellent' for biological quality. This is an improvement from 55% in 1990; and
- In 2008, 79% of English rivers were at excellent or good quality, up from 55% in 1990.

The above indicators were a part of the General Quality Assessment, however a new measurement scheme was brought in under the Water Framework Directive (WFD) which reports on over 30 measures, grouped into ecological status (including biology and 'elements' such as phosphorus and pH) and chemical status (priority substances). The WFD also covers estuaries, coastal waters, groundwater and lakes as well as rivers. Table 7 below shows the status of assessed water bodies in England under the WFD in 2009 and 2012[42]:

[41] Environment Agency, 2013.*Planning and research: Planning: Planning Policy: Water quality*[Online]. Available at: http://www.environment-agency.gov.uk/research/planning/34383.aspx(Accessed: 28/08/2013).
[42] HM Government, 2013.*Water Framework Directive – Surface water classification status and objectives* [Online]. Available at: http://data.gov.uk/dataset/wfd-surface-water-classification-status-and-objectives (Accessed: 06/09/2013).

Key:
Trend improving ✓
Trend deteriorating X

	2009 (number)	2012 (number)
	Surface Water	
High	5	3
Good	1,532	1,456
Moderate	3,542	3,224
Bad	121	107
Poor	7	1,023
Not Yet Assessed	2	113

Table 7 Status of assessed water bodies in England

Using the WFD system, results for assessed rivers in England and Wales show that for overall ecological classification 26% of rivers are good or better, 60% are moderate, 12% are poor and 2%are bad. Results for all assessed surface water bodies show that 29% meet good ecological status or better, which includes 36% of lakes and 27% of estuaries and coastal waters. Results for assessed groundwaters show that 65% meet good quantitative status (in relation to groundwater abstraction pressures) and 59% meet good status for chemicals. These figures include the ecological potential where water bodies are artificial or heavily modified.

Diffuse Pollution

Diffuse water pollution is a serious problem in some parts of England and Wales. It is caused by many small or scattered sources. It represents a widespread and long-term threat to the ecology of lakes, rivers and coastal waters, and to the quality of groundwater and the costs of water supplies. Diffuse pollution is responsible for 49% of the pollution related to failing water bodies under the Water Framework Directive.

The SRN only makes up 3% of the total road network in England, although it is the most heavily trafficked. Over the last 10 years the HA has undertaken research into the nature and extent of diffuse pollution leaving the highway network, particularly taking into account its duty not to pollute and the requirements of the Water Framework Directive. There are various pollutants which can be found in highway runoff, including soluble metals and hydrocarbons, and the HA has in the region of 25,000 outfalls to watercourses from the SRN.

Water Availability

Water availability is monitored by the Environment Agency through Catchment Abstraction Management Strategies (CAMS). CAMS show how much freshwater resource is reliably available, how much the environment needs and the amount of water that can be licensed for abstraction Figure 10 below shows the volumes of water abstracted (note: units are million litres per day) and the use of this water[43].

[43] Environment Agency, n.d.*The Case for Change – Current and Future Water Availability* [Online]. Available at: http://cdn.environment-agency.gov.uk/geho1111bvep-e-e.pdf(Accessed: 28/08/2013).

Key:
Trend improving ✓
Trend deteriorating X

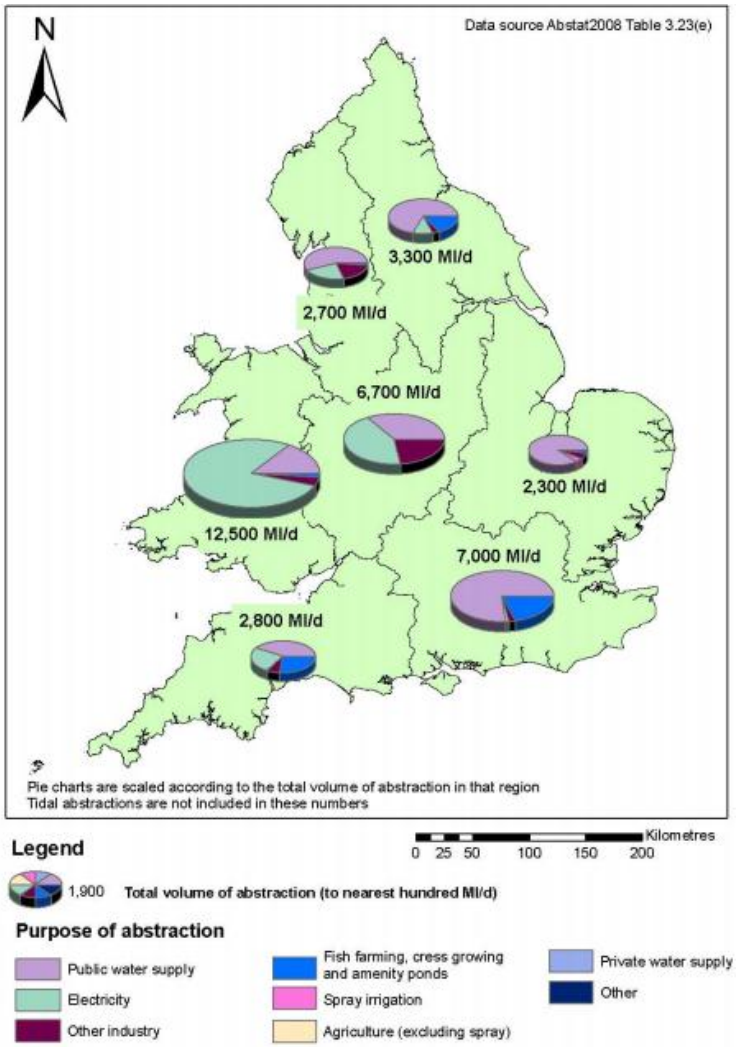

Figure 10 Amount of water abstracted in England in 2008[43]

Key:
Trend improving ✓
Trend deteriorating X

Topic 10: Heritage Assets

Defra Sustainable Development Indicators[1]

National Indicator: N/A
Change since 2002: ✓

Baseline

In summary, England has the following historic assets (2012 data from Heritage Counts[44], also shown on Figures 11-14 below[45]):18 World Heritage Sites in England (an increase of 4 since 2002)[46], 19,759 Scheduled Monuments (an increase of 412 since 2002), 1,617 Registered Parks and Gardens (an increase of 126 since 2002), 43 registered battlefields, 5 Areas of Archaeological Importance (Canterbury, Chester, Exeter, Hereford and York)[47] and 375,588 Listed Buildings (an increase of 4,856 since 2002).

[44] English Heritage,2012. *Heritage Counts England: Tenth Anniversary Edition 2012* [Online]. Available at: http://hc.english-heritage.org.uk/content/pub/2012/hc-2012-england.pdf(Accessed: 28/08/2013).

[45] Figures 11 to 14Contain, or are based upon, English Heritage's National Heritage List for England data © English Heritage and Contain Ordnance Survey data © Crown copyright and database right 2012

[46] UNESCO, 2013.*Culture: World Heritage Centre: The List: World Heritage List* [Online]. Available at: http://whc.unesco.org/en/list(Accessed: 28/08/2013).

[47] English Heritage, n.d.*Professional: Advice: Guide to Heritage Protection* [Online]. Available at: http://www.english-heritage.org.uk/professional/advice/hpg/has/archaeologicalimportance/(Accessed: 29/08/2013).

Key:
Trend improving ✓
Trend deteriorating X

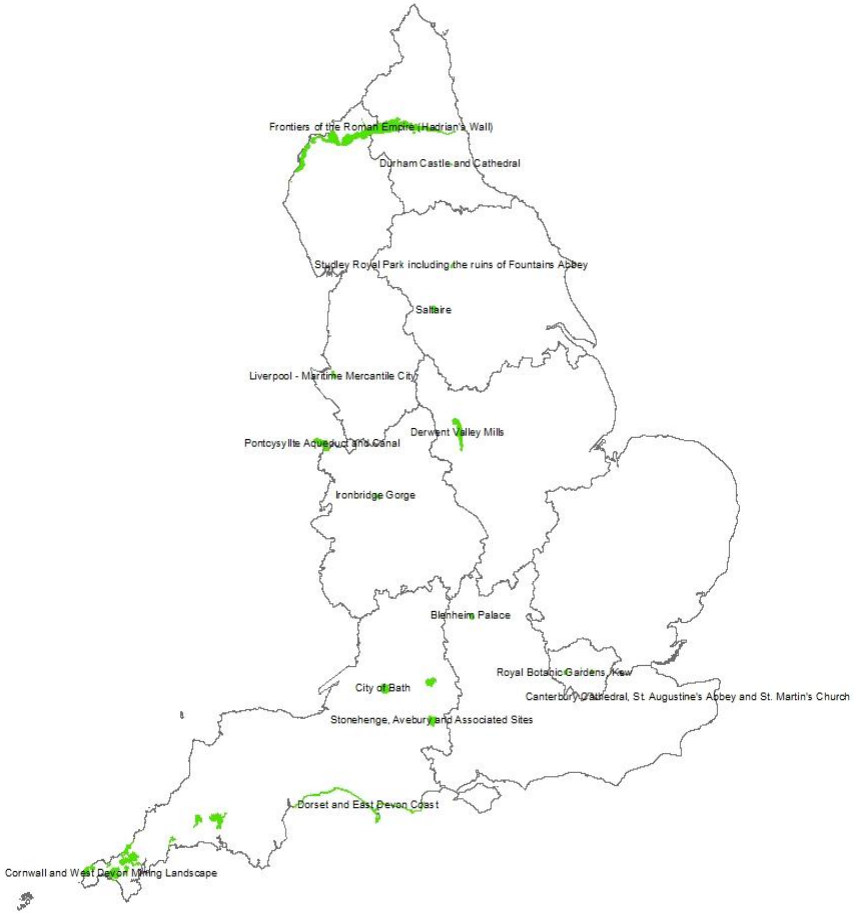

Figure 11 Location of World Heritage Sites

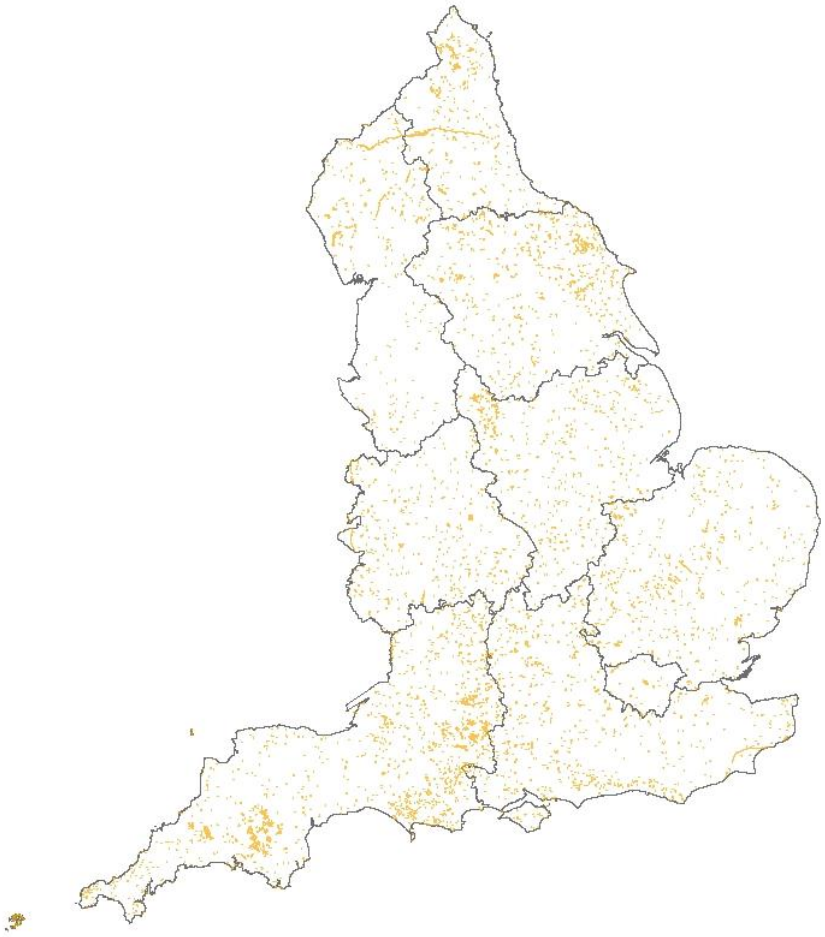

Figure 12 Location of Scheduled Ancient Monuments

Key:
Trend improving ✓
Trend deteriorating X

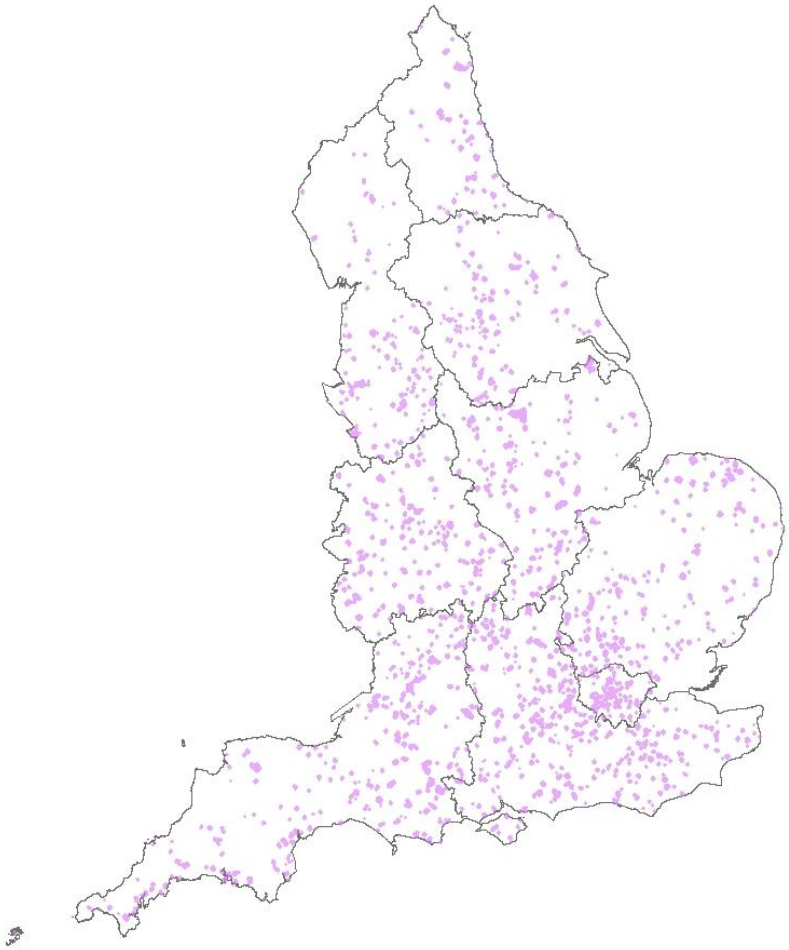

Figure 13 Location of Registered Parks and Gardens

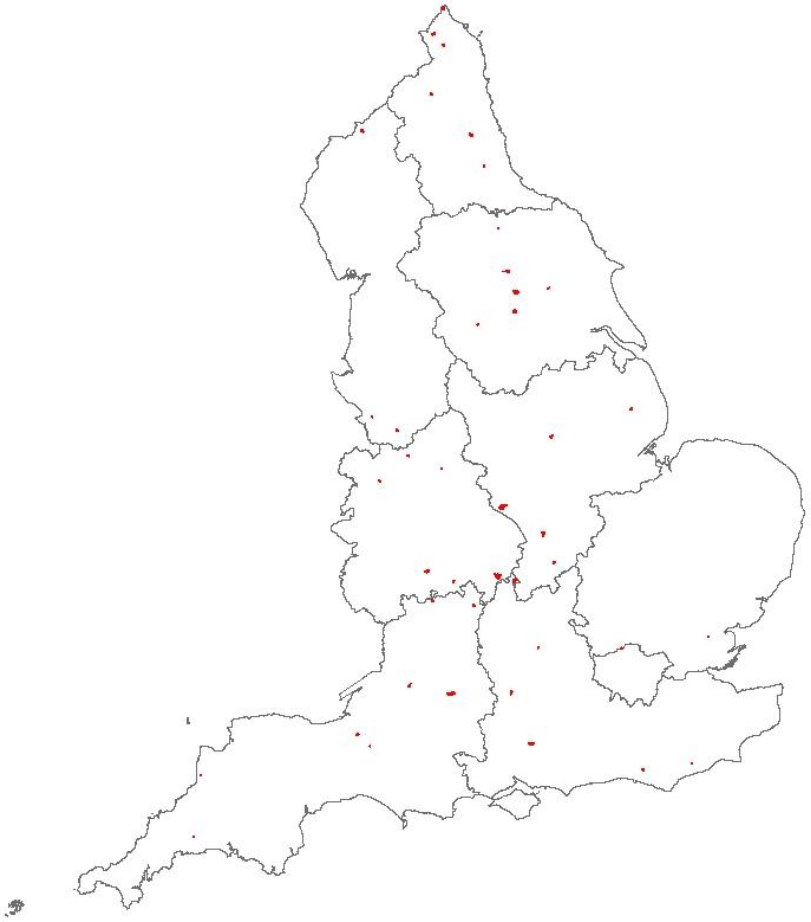

Figure 14 Location of Registered Battlefields

Key:
Trend improving ✓
Trend deteriorating X

Topic 11: Landscape / Seascape

Defra Sustainable Development Indicator[1]

National Indicator: N/A
Character of English Landscape*
Change since 1990: X
Change since 2000: ✓

Baseline

Landscape throughout England has undergone dramatic change as a result of climate, natural processes, agriculture, housing and development needs. It provides a range of natural services such as soil, water, air and biodiversity as well as cultural services. Limited national-level data is available with regards to a national landscape baseline. However, in terms of landscape character (where there are 159 landscape character areas), the period 1999-2003[48] showed that:

- Existing landscape character is being maintained in 51% of England's landscapes;
- A further 10% of existing character is being enhanced;
- 20% of England's landscapes are showing signs of neglect, with past loss of character not being reversed; and
- 19% of new landscape characteristics are emerging.

The above indicators suggest that the character of English landscape is being sustained, as they present an improvement on the 1990-1998 baseline which stated that 36 per cent of England's character areas were stable and 64% were showing signs of neglect[49].

Designations[50]

- There are 9 National Parks in England, plus the Norfolk and Suffolk Broads, which have the equivalent status. This has increased since 2009 with the designation of the South Downs National Park;

[48] Natural England, 2006.*Landscape: England's landscapes: Landscape character: Countryside quality counts* [Online]. Available at: http://www.naturalengland.org.uk/ourwork/landscape/englands/character/cqc/default.aspx (Accessed: 18/09/2013).
[49] Natural England, 2010. Green Belts: A greener future NE196 [Online]. Available at: http://publications.naturalengland.org.uk/publication/38005 (Accessed: 18/09/2013).
[50] Natural England, n.d.*Our Work: Conservation: Designations* [Online]. Available at: http://www.naturalengland.org.uk/ourwork/conservation/designations/default.aspx(Accessed: 29/08/2013).

Key:
Trend improving ✓
Trend deteriorating X

- There are 33 Areas of Outstanding Natural Beauty (AONB) within England. This has decreased from 34 in 2009 as a result of the revocation of the Sussex Downs AONB when the South Downs National Park designation order came in to effect; and
- There are 32 designated Heritage Coasts covering 33% of the English Coastline.

Light Pollution

Urban areas produce the most light pollution with satellite measurements of artificial light at night showing all the main urban areas of Greater London, Birmingham, Merseyside and Tyneside saturating the night sky with artificial lighting. Devon, Cornwall and the North West are the only areas in England showing very low light pollution[51].

[51] CPRE, n.d.*What we do: Countryside: Dark skies* [Online]. Available at: http://www.cpre.org.uk/what-we-do/countryside/dark-skies(Accessed: 29/08/2013).

Key:
Trend improving ✓
Trend deteriorating X

Topic 12: Access to the Transport System and Services

Defra Sustainable Development Indicators[1]

National Indicator: Proportion of urban trips under 5 miles taken by walking or cycling in England
Change since 2002: ✓
National Indicator: Proportion of urban trips under 5 miles taken by public transport in England
Change since 2002: X[52]

Baseline

Use of strategic road network and rail
Between 2000 and 2012, traffic volume (vehicle miles) on the strategic road network increased from 75.2 million miles to 84.7million miles, an increase of approximately 12.6% (taking into account the detrunking programme which reduced the size of the SRN by a third)[53]. Traffic in England is forecast to increase by 45.6% on the strategic road network between 2010 and 2040, according to National Transport Model forecasts[54]. Non-SRN traffic is forecast to grow by 41.5% between 2010 and 2040[55].

Passenger km on the railway network increased from 40.9 billion km in 2003/04 to 56.9 billion km in 2011/12. Since the privatisation of the rail network in the 1980s, passenger numbers have doubled and freight traffic has increased by 60%. This makes the rail network one of the busiest mixed use networks in the world. It is predicted that passenger demand for rail travel will increase by 14% and freight will increase by 22% by 2018[80].

In London, overall train passenger crowding across both morning and evening peak periods was lower in 2012 than in 2011. However, over 100,000 passengers had to stand at trains' busiest points in the morning peak, a fifth of the overall total. First Great Western had the highest level of passengers in excess of capacity (PiXC) of any London & South East operator with 7.1 per cent across both peaks, but this was a fall from the previous year following an increase in capacity provided at Paddington. The highest PiXC levels outside London in

[52] Department for Transport, 2013. Proportion of urban trips under 5 miles by main mode: England, 2002 to 2012. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/209549/nts9909.xls (Accessed on: 28/11/2013).
[53] Department for Transport, 2013.*Action for Roads* [Online]. Available at: https://www.gov.uk/ (Accessed: 17/09/2013).
[54] Department for Transport, 2013.*Road Transport Forecasts 2013* [Online]. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/212474/road-transport-forecasts-2013.pdf(Accessed: 29/08/13).
[55] Department for Transport, 2012.*Annual Road Traffic Estimates: Great Britain 2012*. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/208950/road-traffic-statistics-2012.pdf (Accessed: 19/08/2013)

Key:
Trend improving ✓
Trend deteriorating X

the 2012 statistics were at Leeds, Manchester and Sheffield, which all had just over 2 per cent PiXC in the morning peak and between 1 and 2 per cent PiXC in the afternoon peak[56].

The main trunk between Old Oak Common and Birmingham Interchange would be used by 240,000 passengers per day from 2036. Table 8 below shows the percentage of people predicted to change their modes of transport in favour of using HS2[57]:

Passengers using HS2, 2036 (forecast)	
Switch from classic rail	69%
New trips	26%
Shift from air	1%
Shift from car	4%
Total	100%

Table 8 Percentage of people predicted to change modes of transport for HS2

With the construction of HS2, the following journey times are expected between London and other cities in England and Scotland[58]:

	London		**Birmingham**	
	Current (minutes)	**HS2 (minutes)**	**Current (minutes)**	**HS2 (minutes)**
Birmingham	81	49	-	-
Nottingham	104	68	73	36
Sheffield Midland	125	79	71	48
Leeds	132	83	118	57
York	113	84	130	63
Newcastle	172	139	194	127
Manchester Piccadilly	128	68	88	41
Crewe	90	55	Not available	
Liverpool	128	96	Not available	
Edinburgh	263	218	241	194
Glasgow	248	218	237	202

Table 9 Predicted journey times using HS2

On the principal and main routes in England, 283 railway stations have step free access to all station platforms out of a total of 387 stations[59].

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[56] Department for Transport, 2012.*Rail passenger numbers and crowding on weekdays in major cities in England and Wales: 2012.* Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/224941/rail-passengers-crowding-2012.pdf (Accessed on: 19/08/2013).

[57] HS2 Ltd, 2013. The Economic Case for HS2. Available at: http://assets.hs2.org.uk/sites/default/files/inserts/S%26A%201_Economic%20case_0.pdf (Accessed: 28/11/13).

[58] HS2 Ltd, 2013. The Strategic Case for HS2. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/260525/strategic-case.pdf (Accessed: 28/11/2013).

[59] National Rail, 2012. Step-Free Access Map. Available at: http://www.disabledpersons-railcard.co.uk/clientfiles/File/ATOC%20Large%20Scale%20Map%20-%20September%202012.pdf (Accessed on: 29/11/2013).

Key:
Trend improving ✓
Trend deteriorating X

Trips by main mode

Over the long term there has been an increase in total passenger distance travelled driven mainly by an increase in the distance travelled by road, and in particular by cars, vans and taxis, although there have been small falls since 2007[60]. Analysis has shown that on average, a walking trip is 0.7 miles long, most cycle trips are 2-5 miles long with 12% of adults cycling once a week[61]. Furthermore around 70% of car trips are 1-10 miles long and 9% of adults travel by train at least once a week. In terms of long distance trips (over 50 miles), 80% of these are made by car and 13% are made by rail. It is thought that the key barriers to travelling by train for regular journeys are cost, time and inconvenient routes/station locations[61].

Journey purpose[62]

Figure 15 below shows the main purpose of travel and by which modes of transport in Great Britain in 2011.

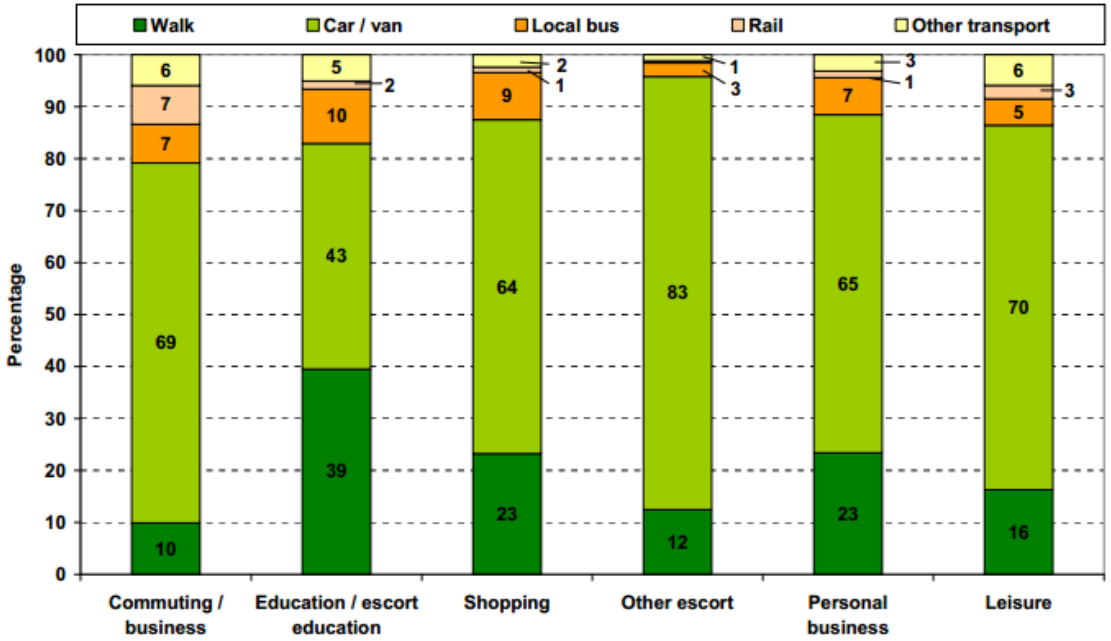

Figure 15 Purpose of travel and by which modes of transport in Great Britain in 2011

Access to a car

[60] Department for Transport, 2011.*Transport statistics for Great Britain 2012* [Online]. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/36545/Transport_statistics_great_britain_-_2012_summary.pdf (Accessed: 28/11/13).
[61] Department for Transport, 2013. *Door to door: A strategy for improving sustainable transport integration*. Published: March 2013, DfT: London.
[62] Department for Transport, 2012. *National Travel Survey 2011* [Online]. Available at: https://www.gov.uk/government/(Accessed: 04/09/2013).

Key:
Trend improving ✓
Trend deteriorating X

The proportion of households in Great Britain which did not have access to a car fell from 38% in 1985/86, to 30% in 1995/97, and to 25% in 2005. It has remained at this level up to 2010[63]. The number of cars and vans available to households in England and Wales increased from 23.9 million in 2001 to 27.3 million in 2011[64]. In 2001 there were on average 1.1 cars per household whereas in 2011 there were 1.2 cars per household. London was the only region in 2011 with fewer cars and vans (2.7 million) than households (3.3 million).

Rural Access

Figures from Defra's Statistical Digest of Rural England underline the importance of transport in rural areas and the challenges rural residents face:

- people living in Villages and Dispersed areas travel 10,000 miles per year on average, compared to 6,400 miles per year in urban areas.
- in 2009 42% of households in the most rural areas had a regular bus service close by compared to 96% of urban households.
- when travel as both a car driver and passenger are taken together 87% of travel in villages and dispersed areas is made by car compared to 77% in urban areas and 79% in England as a whole.
- on average, expenditure on transport accounts for 17.7% of total expenditure for rural residents compared with 14.5% for urban residents[65].

In addition, the number of households with good transport access to key services or work has declined for town/fringe areas from 86% of households in 2007 to 83% in 2011; over the same period the figures for villages decreased from 52% to 27% and for hamlet/isolated dwellings decreased from 41% to 29%[66].

[63] Department for Transport, 2010. National Travel Survey: 2010. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/8933/nts2010-02.pdfc (Accessed on: 28/11/2013).
[64] Office for National Statistics, 2011. 2011 Census: Key Statistics for England and Wales, March 2011. Available at: http://www.ons.gov.uk/ons/rel/census/2011-census/key-statistics-for-local-authorities-in-england-and-wales/stb-2011-census-key-statistics-for-england-and-wales.html (Accessed on: 28/11/2013).
[65] Defra, 2013. Statistical Digest of Rural England, February 2013.
[66] Department for Transport, 2013. Households with good transport access to key services or work, England, 2007-2011, Rural Services Network online, Travel time to Key Services.

Key:
Trend improving ✓
Trend deteriorating X

Topic 13: Crime

Defra Sustainable Development Indicators[1]

National Indicator: N/A
Change since 1990: ✓
Change since 2002: ✓

Baseline

Crime
The Crime Survey for England and Wales (CSEW) shows that recorded crimes have reduced between 1990 and 2013, from approximately 4,500 to 3,900. Reported crime levels 2013 the lowest they've been since 1990. Levels of crime peaked between 2002 and 2004 with 6,000 reported crimes each year. The CSEW also gives estimates of crime i.e. including those that they believe are not reported. This trend also shows that levels of crime have decreased since 1990 from approximately 14,000 crimes per year to 8,500 in 2012/13[67].

The number of motoring offences decreased in England and Wales between 2003 and 2010 from 661,809 to 522,527. There were various outcomes from these offences, with the primary result being fines. In 2003, 2.6% of offenders were taken into immediate custody, whereas in 2010, this reduced to 0.7%[68]. Motoring offences include the following: using hand held mobile phones, driving whilst under the influence of alcohol or drugs, speeding and careless driving[69].

British Transport Police recorded an increase in the number of crimes on railways in England[70] between 2003/04 and 2012/13 from 58,992 to 67,433 respectively[71]. This is an increase of around 14%. They also showed an increase in crime by 2.5% between 2010/11 and 2012/13[72].

Fear of crime

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67 Office for National Statistics, 2013.*Crime Survey for England and Wales* [Online]. Available at: http://www.ons.gov.uk/ons/rel/crime-stats/crime-statistics/ (Accessed: 02/09/13).
68 Ministry of Justice, 2011.*Criminal Justice Statistics Quarterly Update to December 2010* [Online]. Published: 26 May 2011. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/217704/criminal-stats-quarterly-dec10.pdf(Accessed: 29/08/13).
69 The AA, 2012.*Common motoring offences and their enforcement* [Online]. Available at: http://www.theaa.com/motoring_advice/legal-advice/motoring-offences.html(Accessed: 29/08/13).
70 It should be noted that these numbers exclude figures for London Underground and Docklands Light Railway.
71 British Transport Police, 2004.*Statistical Bulletin 2003/04* [Online]. Available at: http://www.btp.police.uk/pdf/Statistical-bulletin-2003-04.pdf(Accessed: 29/08/13).
72 British Transport Police, 2013.*Statistical Bulletin 2012/13* [Online]. Available at: http://www.btp.police.uk/PDF/Statistical-Bulletin-2013.pdf(Accessed:29/08/13).

Key:
Trend improving ✓
Trend deteriorating X

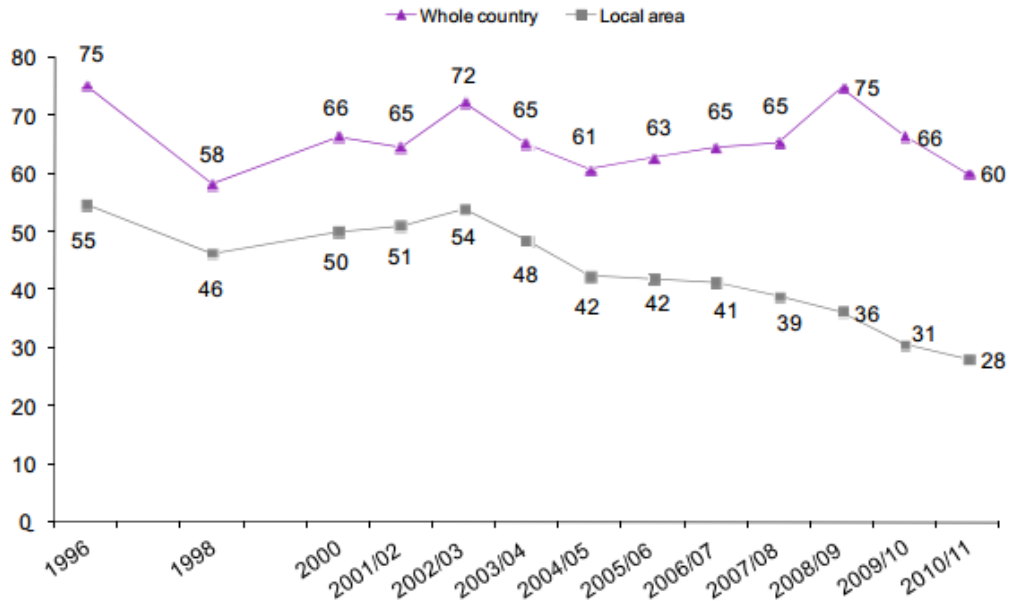

Figure 16 Percentage of people who believe crime is increasing

The British Crime Survey shows that since 1996, the proportion of adults who through crime had increased locally has decreased, however this perception did increase slightly between 1998 and 2003. Figure 16 below shows the percentage of people who believe crime is increasing both in their local area and nationally[73].

[73] Home Office, 2011.*Crime in England and Wales 2010/11* [Online]. Available at: https://www.gov.uk/ (Accessed: 04/09/13).

Key:
Trend improving ✓
Trend deteriorating X

Topic 14: Economy

Defra Sustainable Development Indicators[1]

National Indicator: Gross Domestic Product (GDP)
Change from 1994 to 2012: ✓
Change from 2007 to 2014: X[74]

Baseline

GDP
The UK's GDP increased by 0.2% from 2011 to 2012[75]. The Office of Budget Responsibility's Fiscal Sustainability Report (2013) states that their long-term central projection assumes economic productivity growth will average 2.2% a year on an output per worker basis, in line with the average rate over the past 40 years[76].

Unemployment[77]
Official labour market statistics shows that unemployment rate in England decreased from 10.4% in 1993 to 7.9% in 2012 (these figures are an average of quarterly statistics). Figure 17 Monthly UK unemployment rates (age 16+) from January 1993 to June 2013

shows the unemployment trend in England and the UK between 1993 and 2013.

[74] Office for National Statistics, 2011. Gross Domestic Product (O) – Gross Domestic Product by Gross Value Added industry of output. http://www.ons.gov.uk/ons/datasets-and-tables/data-selector.html?cdid=ABMI&dataset=gdpo&table-id=SGDP (Accessed on: 28/11/2013).
[75] Office for Budget Responsibility, 2013.*Economic and Fiscal Outlook* [Online].Published: March 2013. Available at: http://budgetresponsibility.org.uk/wordpress/docs/March-2013-EFO-44734674673453.pdf(Accessed: 18/09/13).
[76] Office for Budget Responsibility, 2013.*Fiscal Sustainability Report* [Online].Published: July 2013. Available at: http://cdn.budgetresponsibility.independent.gov.uk/2013-FSR_OBR_web.pdf (Accessed: 20/09/2013).
[77] Office for National Statistics, 2013.*Nomis official labour market statistics: Economically active time series* [Online]. Available at: https://www.nomisweb.co.uk/ (Accessed: 03/09/13).

Key:
Trend improving ✓
Trend deteriorating X

Figure 17 Monthly UK unemployment rates (age 16+) from January 1993 to June 2013

Average earnings by residence – Gross weekly pay[78]

In April 2012, the median gross weekly earnings for full-time employees in the UK were £506, up 1.5% from £498 in 2011. The median gross weekly earnings for full-time employees were highest in London, at £653, and lowest in Wales, at £453.

Economic impacts of the National Networks

The strategic road network is the largest physical asset owned by central government with an estimated value of £99 billion[79]. The SRN comprises 2% of all roads in England however these roads carry 33% of all traffic and 65% of lorry traffic. Furthermore, 66% of journeys to work are made by car. It is estimated that more than one million jobs are associated with road transport[53]. Road accidents cost the economy £15 billion per year whilst congestion on the strategic road network costs £2 billion per year. The transport network in England provides businesses with a means to trade, it provides access to labour and reaches retail markets.

The strategic road network gives access to goods and service and it is estimated that over 1 million jobs are associated with the network. A survey conducted by EEF (The Manufacturers Organisation) shows that more than 60% of overseas investors said that good road

[78] Office for National Statistics, 2012. *Annual Survey of Hours and Earnings, 2012 Provisional Results*. Available at: http://www.ons.gov.uk/ons/dcp171778_286243.pdf (Accessed on 28/11/2013).

[79] Cook, A., 2011. *A fresh start for the strategic road network* [Online]. Published: November 2011, Department for Transport: London. Available at: http://assets.dft.gov.uk/publications/strategic-roads-network/strategic-road-network.pdf (Accessed: 03/09/13).

Key:
Trend improving ✓
Trend deteriorating X

transport is critical or important to investment decisions[53]. It has been estimated that congestion on the whole road network costs the economy £19 billion every year. This is due to increase as traffic levels are predicted to increase between 22% and 71% by 2040[80]. It has been predicted that by 2040, almost a quarter of all travel time could be spent stuck in traffic which amounts to 70 hours stuck in traffic for each household per year, 100 million working days lost and a cost of £14 billion to the freight industry[53].

Network Rail has estimated that the value of the rail infrastructure in England is £35 billion[81]. Between 1995/96 and 2008/09, the number of passenger journeys on rail routes increased by 67% and the volume of freight moved by rail increased by 59%. It is estimated that access to the rail network increases productivity and the density of employment[82]. It is estimated that HS2 will deliver over £70 billion of benefits to the UK economy[58]. It is also expected that the faster journey times into central London will enable employers to access the skills base they require, further increase job opportunities[62].

[80] HM Treasury, 2013. *Investing in Britain's Future*. Stationary Office: London, UK. Published: June 2013.
[81] Network Rail Infrastructure Ltd, 2011. *Driving an efficient railway: Network Rail's full year results* [Online]. Available at: http://www.networkrail.co.uk/ (Accessed: 04/09/13).
[82] Network Rail, n.d.*Prioritising investment to support our economy* [Online]. Available at: http://www.networkrailmediacentre.co.uk/imagelibrary/downloadMedia.ashx?MediaDetailsID=3812 (Accessed: 30/08/13).

Key:
Trend improving ✓
Trend deteriorating X

Topic 15: Health and Wellbeing

Defra Sustainable Development Indicators[1]

National Indicator: Healthy Life Expectancy at Birth (Males and Females)
Change since 200-02: ✓
Change since 2003-05:✓

National Indicator: Wellbeing*
Change since 2011: - (data only available since 2011)

Baseline

General health of the population
Data from the 2001 and 2011[83] Census for general health in regions across England is presented below in Table 10. This is shown in percentage of the population of the region[84].

	Good Health		Fair Health		Not Good Health	
	2001	**2011**	**2001**	**2011**	**2001**	**2011**
North East	64.3	77.3	23.7	15.2	12.0	7.5
North West	66.9	79.3	22.2	13.9	11.0	6.8
Yorkshire & the Humber	67.0	80.0	22.7	14.0	10.3	6.0
East Midlands	67.6	80.4	23.3	14.0	9.1	5.5
West Midlands	67.2	79.9	23.1	14.0	9.7	6.1
East	70.4	82.4	22.0	12.9	7.6	4.6
London	70.8	83.8	20.9	11.2	8.3	4.9
South East	71.5	83.6	21.4	12.0	7.1	4.4
South West	68.9	81.5	22.6	13.4	8.5	5.1

Table 10 General health of the population

Use of healthy modes of transport
Data from 2010/11 shows that on average 11% of adults cycle for at least half an hour at least once a month (although this varies

[83] ONS, 2013.*2011 Census: General Health, Local Authorities England and Wales* [Online]. Available at: http://www.ons.gov.uk/ons/index.html (Accessed:30/08/13).
[84] Note, for the 2001 Census only three categories were included, Good Health, Fairly Good Health and Not Good Health whereas in the 2011 Census, 5 categories were included. For the purposes of the baseline, the 2011 categories have been combined in order to compare with 2001 Census data. Very good health and good health combined into good health, fair health not changed and bad health and very bad health combined into not good health.

Key:
Trend improving ✓
Trend deteriorating X

between different areas from 4% to 35%). 16% of these cycles for utility purposes i.e. to get from place to place. For the same time period, it was found that 71% of adults walk for at least half an hour at least once a month, 23% of whom do so for utility purposes[85].

In 2012, 66% of people travelled by car for their average trip, 9% used public transport and 24% either walked or cycled. Data shows that the average number of car/van trips has reduced by 7% between 1995/97 and 2012. The number of people making trips by walking has decreased by approximately 30%[60].

Health impacts from transport

Defra estimate that over 9 million people are affected by noise levels (L_{den})[86] of over 55dB as a result of major roads in England. Furthermore, 153,000 people are affected by noise levels (L_{den}) of over 55dB as a result of railway lines. Table 11 below gives additional detail [29, 30].

	Major Roads		Major Railways	
Noise Level (L_{den})	**Number of dwellings**	**Number of people**	**Number of dwellings**	**Number of people**
≥ □5dB	4□207,000	9,679,000	69,000	153000
≥ 60dB	□,097,000	4,845,000	38□000	84,00
≥ 65dB	736,000	1,715,000	19,000	42,000
≥ 70dB	196,000	456,000	7,000	14,000
≥ 75dB	31,□□	74,000	1,000	2,000

Table 11 Number of people and dwellings affected by noise from major roads and railways

In terms of air quality, NO_2 can irritate the airways of the lungs and increase the symptoms of those suffering from lung diseases and particulates can be carried deep into the lungs where they can cause inflammation and a worsening of heart and lung diseases. There is strong evidence of a link between traffic related pollution and a worsening of lung conditions such as asthma. Research also suggests that traffic-generated air pollutants play a role in the development of asthma and chronic obstructive lung disease[87].

National Wellbeing

In 2011, 71.1% of those aged over 16 rated their happiness as medium/high. This had marginally decreased to 70.5% in 2012[88].

[85] Department for Transport, 2012.*Local area walking and cycling statistics: England 2010/11* [Online]. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/9105/local-area-walking-and-cycling-2010-11.pdf(Accessed: 30/08/13).

[86] Lden is the 24 hour equivalent continuous noise level calculated for an annual period

[87] Health Effects Institute, 2010. *Special Report 17. Traffic related air pollution: A critical review of the literature on emissions, exposure and health effects*. Published: January 2010, Health Effects Institute: Boston.

[88] Office for National Statistics, 2011 and 2013.*Measuring National Well-being, Personal Well-being* [Online]. Available at: http://www.ons.gov.uk/ (Accessed: 04/09/13).

Key:
Trend improving ✓
Trend deteriorating X

Topic16: Social Exclusion

Defra Sustainable Development Indicators[1]

National Indicator: N/A*
Change since 2007: X

Baseline

Table 12 below presents a regional breakdown of deprivation in England based on DCLG's Index of Multiple Deprivation for 2010. This index is the weighted sum of 38 indicators grouped into seven categories (Income, Employment, Health and Disability, Education Skills and Training, Barriers to Housing and Other Services, Crime and Living Environment)[89]. It shows the percentage of the total number of Lower larger Super Output Areas (LSOAs)[90] in the region which experience certain levels of deprivation i.e. 12% of all LSOAs in the North East are within the 1% most deprived within England. The North West has the highest level of deprivation, with over half of all LSOAs in the 1% most deprived in the country. Overall, the East, South East and South West have the lowest levels of deprivation.

	Level of deprivation			
	1% most deprived	**5% most deprived**	**10% most deprived**	**20% most deprived**
North East	12%	10%	9%	8%
North West	52%	35%	28%	22%
Yorkshire & the Humber	17%	18%	17%	14%
East Midlands	5%	5%	6%	7%
West Midlands	9%	17%	17%	15%
East	2%	2%	3%	4%
London	0%	7%	12%	19%
South East	3%	4%	4%	6%
South West	2%	3%	4%	4%

Table 12 Regional breakdown of deprivation based on the DCLG's Index of Multiple Deprivation for 2010

Between 2007 and 2010, the north east, north west and London saw a reduction in the number of LSOAs being the most deprived. The largest reductions have been in London (80 LSOAs, -17%) while the West Midlands (36 LSOAs, 7%) and the South East (29 LSOAs, 31%) have experienced the largest increases in the number of LSOAs qualifying as the most deprived.

Figure 17 below show selected transport components of RPI, since 1987. Since 1987 the rail fares component of RPI has seen an average annual real terms increase of 1.5%. Annual changes in rail fares have been similar to fares for buses and coaches. Motoring expenditure has increased at a slower rate than public transport fares, with increases closer to that of the general price level. However, there have

[89] Communities and Local Government, 2011.*The English Indices of Multiple Deprivation 2010* [Online]. Available at: https://www.gov.uk/government/ (Accessed: 30/08/13).
[90] LSOAs are geographical areas which have a population of between 1,000 and 3,000 people and between 400 and 1,200 households.

Key:
Trend improving ✓
Trend deteriorating X

been differences amongst specific elements of motoring expenditure. For instance, the real terms cost of purchasing a motor vehicle decreased by 60% between 1987 and 2012, whilst vehicle tax and insurance has more than doubled[91].

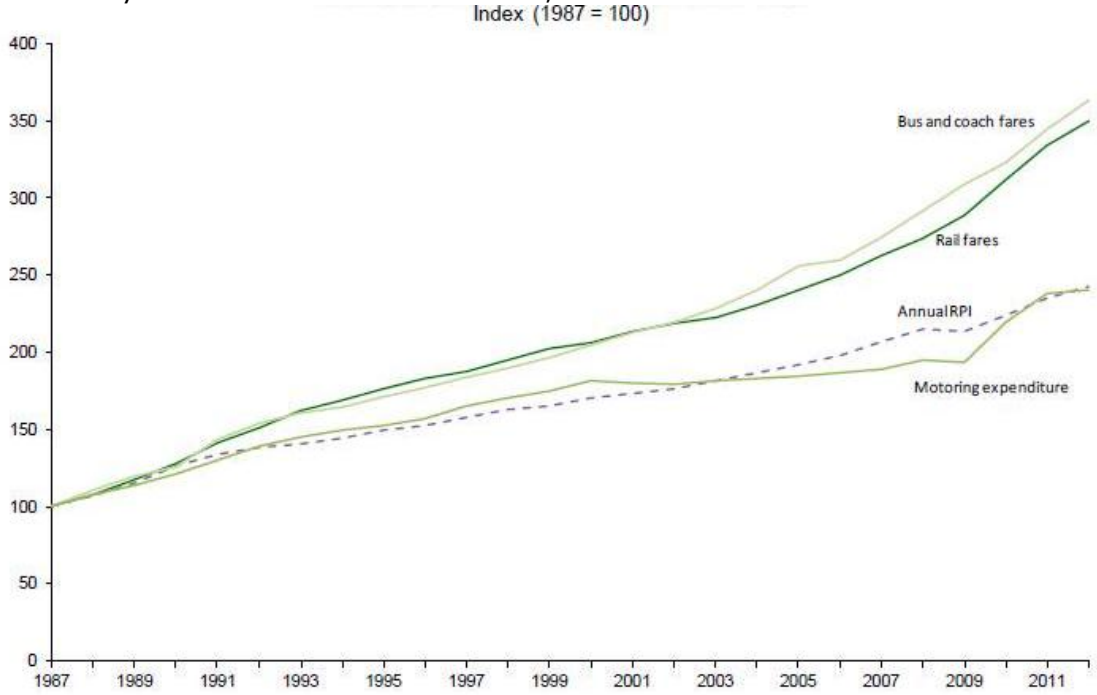

Figure 17 Selected transport components of RPI since 1987

On the principal and main routes in England, 283 railway stations have step free access to all station platforms out of a total of 387 stations[59].

HS2 will increase connectivity between some of the most deprived areas in Birmingham and London. Table 9 Predicted journey times using HS2outlines current travel times and predicted times.

[91] House of Commons, 2013.*Railways: fare statistics. Standard note SN/SG/6384* [Online]. Available at: https://www.gov.uk/government (Accessed: 30/08/13).

Key:
Trend improving ✓
Trend deteriorating X

Topic 17: Energy Consumption by Sector

Defra Sustainable Development Indicators[1]

National Indicator: N/A
Change since 1990: ✓

Baseline

Energy consumption by sector[92]

By 1990, industrial consumption had fallen to 24% (from 40% in 1970) of total final energy consumption in the UK, whilst transport consumption had risen to 31% (18% in 1970). The decreasing trend in industrial consumption continued and in 2012 was 17% of total final energy consumption in the UK, with transport consumption responsible for 36% and domestic 29%.

Provisional estimates for 2012 indicate that 64.1 million tonnes of oil equivalent (mtoe) were consumed for heating purposes, 47% of total final energy consumption, with weather related factors being the driver for the change. 57% of total final energy consumption was attributed to the domestic sector, 19% to the service sector and 24% to the industrial sector.

Transport sector energy consumption by sector between 1990 and 2011[92]

Energy consumption by the transport sector increased by 5.4 mtoe (11%) between 1990 and 2011. The increase seen between 1990 and 2011 was largely driven by the air transport sector which showed an increase in consumption of 5.5 mtoe. There were also increases in consumption for road freight transport (2.2 mtoe); whilst the rail transport sector decreased by 0.1 mtoe, and road passenger transport fell by 1.2 mtoe.

Since 1990, the industry and domestic sectors have seen an increase in energy consumption for transport. Transport energy consumption for domestic purposes increased by 13% to 34.7 mtoe in 2011 and consumption for industrial purposes by 10% (to 13.1 mtoe). The services sector saw an increase of 4% to 6.3 mtoe.

In 2011, it was estimated that 64% of all transport energy demand was from the domestic sector, 24% from the industrial sector and

[92] Department of Energy and Climate Change, 2013.*Energy Consumption in the UK (2013) Transport Energy Consumption* [Online]. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/65952/chapter_2__transport_factsheet.pdf (Accessed: 20/08/2013).

Key:
Trend improving ✓
Trend deteriorating X

12% from the services sector. The ratio between the three sectors has varied very little since 1990.

Road Transport fuel consumption

In 2011, consumption of road transport fuels in the United Kingdom was 34,186 thousand tonnes of fuel. Consumption of fuel used for road transport purposes decreased from 34,882 thousand tonnes of fuel in 2010 (a decrease of 2%) and from 36,958 thousand tonnes of fuel in 2005 (a decrease of 8%).

Percentage of road transport fuel consumption by vehicle type, 2011[93]

	Percentage of road transport fuel consumption (%)						
	Petrol cars	Diesel cars	HGV	Diesel LGV	Buses	Petrol LGV	Motorcycles
United Kingdom	37.3	22.4	21.4	13.7	4.0	0.7	0.5

Table 13 Percentage of road transport fuel consumption by vehicle type

[93] Department of Energy and Climate Change, 2013.Sub-national road transport fuel consumption statistics 2011. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/208389/sub_national_road_transport_fuel_consumption_2011_factsheet.pdf (Accessed on: 04/09/2013).

Key:
Trend improving ✓
Trend deteriorating X

Topic 18: Land

Defra Sustainable Development Indicators[1]

National Indicator: Land Use and Development*
Change since 2000: -[94]

Baseline

Land Use by type, England, 2000 to 2012[1]

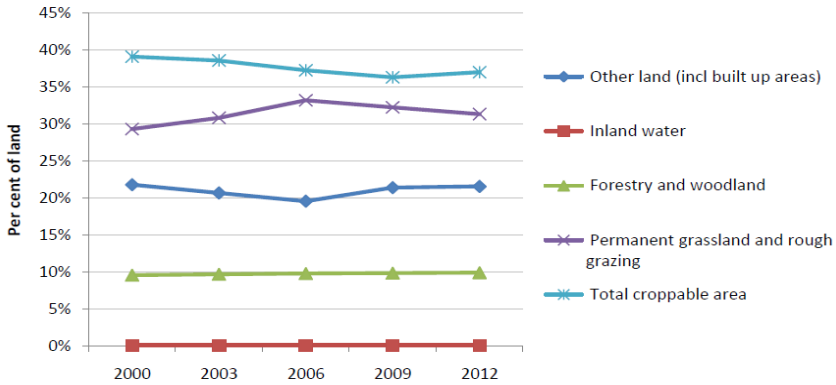

Figure 18 Change in land use in England between 2000 and 2012

An increase in land used for permanent grassland and rough grazing between 2000 and 2006 coincided with a decrease in croppable area and land used for other purposes. 'Other land' includes urban land and land used for other purposes, e.g. transport and recreation, non-agricultural, semi-natural and non-commercial agricultural purposes.

In 2012 over 78%of land in England was used for commercial agricultural purposes or forestry and woodland.

Previously-developed Brownfield Land (2009)[95]

[94] Percentage of land use types has remained relatively stable between 2000 and 2012.

Key:
Trend improving ✓
Trend deteriorating X

Region	Previously developed land that is unused or may be available for redevelopment (hectares)
North East	4,570
North West	11,490
Yorkshire and The Humber	7,480
East Midlands	5,950
West Midlands	4,900
East of England	6,830
London	3,730
South East	10,000
South West	6,960
England	**61,920**

Table 14 Amount of previously undeveloped land that may be available for redevelopment

HS2[96]

- The London to Birmingham line will be around 140 miles long;
- The line from Birmingham to Manchester will be around 95 miles long;
- The line from Birmingham to Leeds will be around 116 miles long;
- The total network (Phase One: between London and Birmingham and linked to HS1; and Phase Two: links to Manchester and Leeds; and a Heathrow spur) will be around 330 miles of track;
- More than half the Phase One route will be in cuttings or tunnels.

[95] National Land Use Database, 2009.*Table 1 - Previously-developed land by land type and Government Office Region*[Online]. Available at: http://www.homesandcommunities.co.uk/nlud-pdl-results-and-analysis(Accessed: 21/08/2013).

[96] HS2, 2013.*Route, trains and cost* [Online]. Available at: http://www.hs2.org.uk/about-hs2/facts-figures/route-trains-cost (Accessed: 04/09/2013).

Key:
Trend improving ✓
Trend deteriorating X

Topic 19: Waste

Defra Sustainable Development Indicators[1]

National Indicator: Waste Disposal and Recycling
Proportion of household waste recycled
Change since 2001: ✓
Change since 2007: -

Baseline

Municipal waste arisings[97]

In 2011/12, 43% of household waste was recycled. Although this is the highest recycling rate recorded for England, the rate of increase has been levelling off, with 2011/12 being the lowest year on year increase for ten years. Household waste generation was 22.9 million tonnes, continuing the year on year fall seen since 2007/8. This amounts to 431kg of waste per person.

Local Authorities recycled, composted or reused 10.7 million tonnes of the waste they collected. This amounted to more than was landfilled for the first time since records began, although an increase in incineration may have partly accounted for the change in landfill.

Commercial and industrial waste arisings (2010)[98]

Total commercial and industrial (C&I) waste generation in England, in 2009, was estimated to be 47.9 million tonnes; with transport and storage accounting for 2.2 million tonnes of the total. This is a decrease of 29% from 67.9 million tonnes since the last national survey of business waste in 2002/3.

52% (25.0 million tonnes) of C&I waste was recycled or reused in England in 2009, compared to 42% in 2002/3. A total of 11.3 million tonnes, or 24%, of C&I waste was sent to landfill in 2009, compared to 41% in 2002/3.

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97 Defra, 2012. *Local Authority collected waste management statistics for England – Final annual results 2011/12* [Online]. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/85918/mwb201112_statsrelease.pdf (Accessed: 21/08/2013).

98 Department of Environment Food and Rural Affairs (Defra), 2011.*Survey of commercial and industrial waste arisings 2010 – revised final results*. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/85947/ci-statistics-release.pdf (Accessed: 21/08/2013).

Key:
Trend improving ✓
Trend deteriorating X

Construction and Demolition Waste[99]

In 2010, it is estimated that 47,356,104 tonnes of construction and demolition waste arisings was produced in England. This is a significant decrease from two years prior in 2008, where 58,093,480 tonnes of construction and demolition waste was produced.

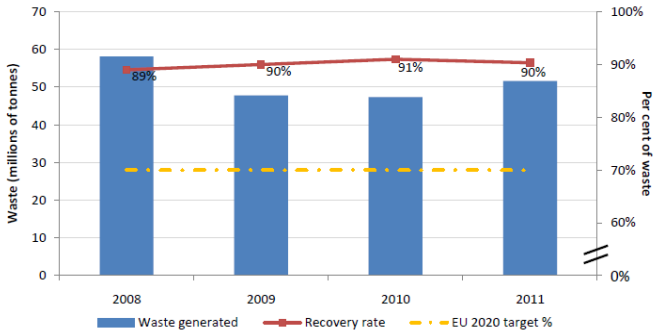

Figure 19 Construction and demolition waste recovery rate, England, 2008 to 2011[1]

[99] Department for Environment Food and Rural Affairs, *2012.Construction and Demolition Waste*. Available at: https://www.gov.uk/government/publications/construction-and-demolition-waste (Accessed: 04/09/2013).

Key:
Trend improving ✓
Trend deteriorating X

Topic 20: Accidents and Safety

Defra Sustainable Development Indicators[1]

National Indicator: N/A
Change since 1990: ✓
Change since 2000: ✓

Baseline

Traffic and reported road casualties[100]

In 2012 there were a total of 195,723 reported road casualties of all severities, 42% lower than in 1990. A total of 1,754 people were killed, 66% lower than in 1990, 23,039 were seriously injured (down 57%) and 170,930 were slightly injured (down 38%). Between 1990 and 2012 traffic grew by 19%.

Together, car occupants and bus users account for 50% of deaths whilst vulnerable road users (pedestrians, pedal cyclists and motorcyclists) account for the other half of deaths, but only 31% of all reported casualties (however, this discrepancy might relate to a greater rate of underreporting of slightly injured pedestrian and pedal cyclist casualties in comparison with other road user types).

Most fatalities occur on rural roads, 40% occurred on rural A roads with a further 22% on other rural roads although together they only account for 42% of traffic. Only 6% of fatalities occurred on motorways, although they account for 20% of traffic. The strategic road network in England, which carries around 33% of traffic, accounts for about 15% of all fatalities, 7% of serious injuries and 10% of slight injuries in reported road accidents in England.

Child casualties (0-15) account for 3.5% of all deaths and just over 9% of all reported casualties.

In 2012, there were 28.3 road deaths per million population in the UK, putting the UK ahead of every other country aside from Malta and Iceland.

[100] Department for Transport, 2011.*Department for Transport Statistics* [Online]. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/11759/tsgb-2011-complete.pdf (Accessed: 19/08/2013).

Key:
Trend improving ✓
Trend deteriorating X

Table 15 below shows the number of casualties on roads in Great Britain between 1990 and 2012.

		Casualties								
		Killed (number)					Injured (thousands)			Total casualties
	Accidents	Pedestrians	Pedal cyclists	Motor cyclists	All other road users	Total killed	Serious	Slight	Total injured	
Year	'000	no.	no.	no.	no.	no.	'000	'000	'000	'000
1990	258	1,694	256	659	2,608	5,217	60	275	336	341
1995	231	1,038	213	445	1,925	3,621	46	262	307	311
2000	234	857	127	605	1,820	3,409	38	279	317	320
2005	199	671	148	569	1,813	3,201	29	239	268	271
2010	154	405	111	403	931	1,850	23	184	207	209
2012	-	420	118	328	888	1,754	23	171	194	196

Table 15 Number of casualties on roads in Great Britain

Rail accidents[101]

There were no train accidents resulting in passenger or workforce fatalities during 2012/13. This is the sixth year in succession with no such fatalities.

Fifty-five people died as a result of other incidents. Four were passengers, two were members of the workforce and the remaining 49 were members of the public, 39 of whom were engaged in acts of trespass.

Over the last 50 years, the number of train accidents resulting in fatalities to passengers and/or members of the workforce has reduced significantly.

Based on a ten-year moving average, the current rate of train accidents with passenger or workforce on-board fatalities is 0.3 per year. This is the lowest level achieved to date.

A further 238 people died as a result of suicide or suspected suicide. This is the same number as the previous year, and remains the joint highest number recorded over the past decade.

[101] RSSB, 2013.Annual Safety Performance Report 2012/13.*A reference guide to safety trends on GB railways* [Online]. Available at: http://www.rssb.co.uk/SPR/REPORTS/Documents/ASPR_2012-13_FullReport.pdf (Accessed: 19/09/2013).

Key:
Trend improving ✓
Trend deteriorating X

Topic 21: Material Assets

Defra Sustainable Development Indicators[1]

National Indicator: N/A
Investment in material assets*
Change since 1990: ✓

Baseline

Location of Strategic Road Network[102]

England is well-served by trunk roads and motorways, particularly in the south east around London which is served by the M25 which links with several other motorways including the M40 and the M1. Birmingham is a key node in the trunk road network being served by the M5, the M42, the M6 and the M40. The only motorway serving the south west of England is the M5, which begins in Birmingham and terminates at Exeter. Motorway and trunk road access is generally more limited in the southwest compared to other parts of England.

Location of strategic rail links[103]

England is generally well connected by rail links connecting most major towns and cities. Rail links are more extensive in and around urban areas such as London, Birmingham, Liverpool, Manchester, Sheffield and Leeds.

[102] Highways Agency, 2013.*Network Map*. Available at: http://www.highways.gov.uk/wp-content/uploads/2012/07/Highways_Agency_Network_Map_-_November_2011.gif?9d7bd4 (Accessed: 20/09/2013).

[103] National Rail, 2013.National Rail Network [Online]. Available at: http://www.nationalrail.co.uk/css/OfficialNationalRailmaplarge.pdf(Accessed: 04/09/2013).

Key:
Trend improving ✓
Trend deteriorating X

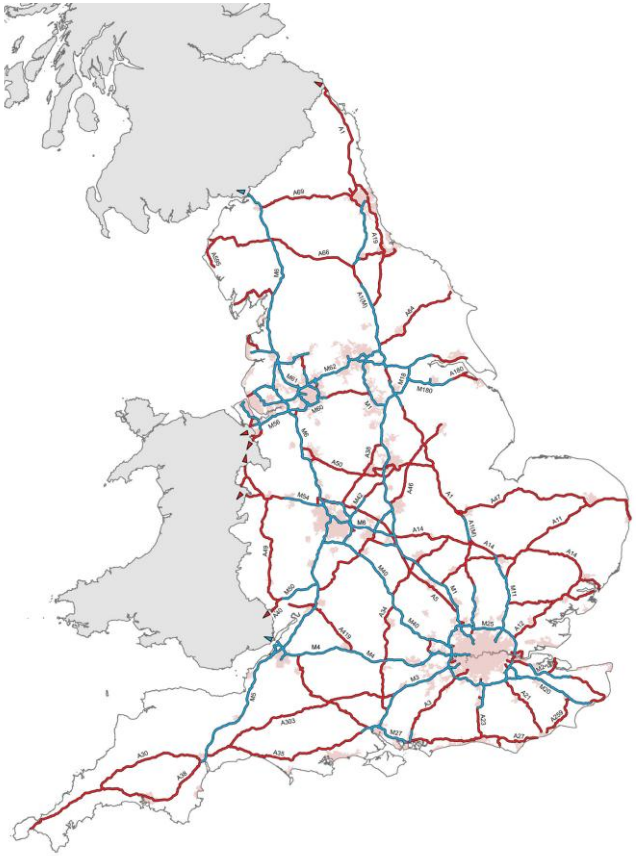

Figure 20 Location of Strategic Road Network

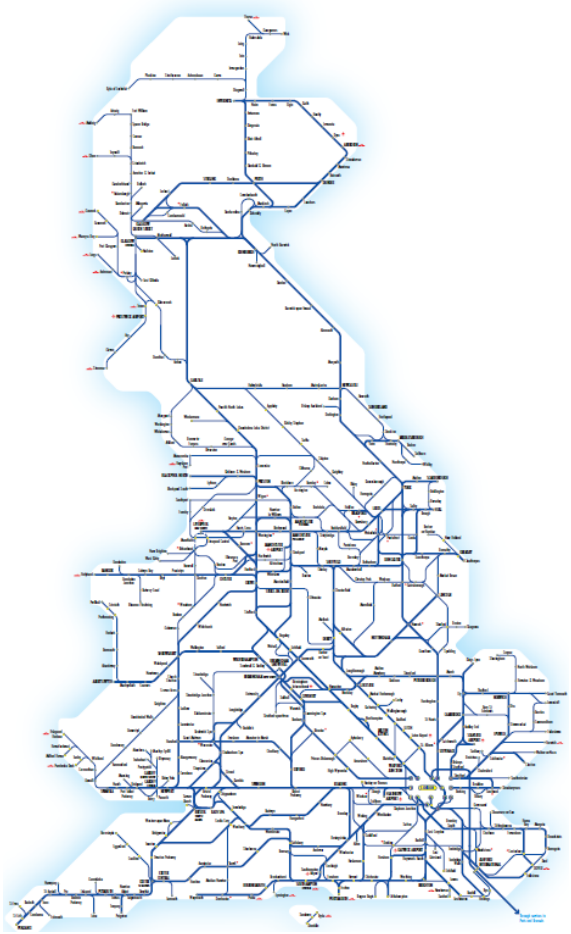

Figure 21 Location of National Rail Network

Key:
Trend improving ✓
Trend deteriorating X

Location of airports

England's busiest airports with regards to air transport movements are: Heathrow; Gatwick; Manchester; Stansted; Birmingham; Luton; London City; East Midlands International; Bristol and Newcastle[104].

Location of ports[105]

Top UK ports by tonnage in 2010 were: Grimsby and Immingham; London; Milford Haven; Southampton; Tees and Hartlepool; Forth; Liverpool; Felixstowe; Dover and Medway.

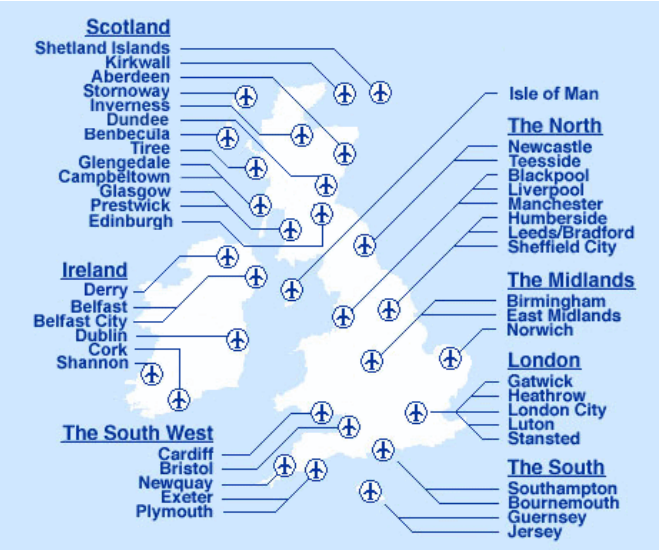

Figure 22 Location of the UK's major airports[106]

Figure 23 Location of UK Major Ports

[104] Department for Transport, 2013.*Air traffic by type of service, operator and airport: United Kingdom, 2002-2012. Table AVI0102a (TSGB0202a)* [Online]. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/9675/avi0102.xls (Accessed: 20/09/2013).
[105] Department for Transport, 2012.*Factsheet – Maritime Statistics* [Online]. Available at: http://assets.dft.gov.uk/statistics/series/ports/maritimefactsheet.pdf (Accessed: 29/08/2013).
[106] Google, 2013.*Google Images*. Available at: https://www.google.co.uk/imghp?hl=en&tab=wi (Accessed: 20/09/2013).

Key:
Trend improving ✓
Trend deteriorating X

HS2[107]

High Speed Two (HS2) is a new high speed railway proposed by Government to connect major cities in Britain. When completed, it will provide a new link between London, the Midlands and the North.

It is proposed that HS2 be developed in two phases. Phase One would link London, Birmingham and the West Coast Main Line north of Lichfield, extending approximately 230km (143 miles). Phase Two would in due course extend to Leeds and to Manchester, with connections onto the West Coast Main Line south of Wigan and the East Coast Main Line south of York.

[107] Arup and URS, 2013.*HS2 Phase 1 Draft Environmental Statement – Non-Technical Summary* [Online]. Available at: http://assets.hs2.org.uk/sites/default/files/pdf/es_maps_docs/Non-Technical%20Summary.pdf (Accessed: 27/08/2013).

Key:
Trend improving ✓
Trend deteriorating X

Topic 22: Population

Defra Sustainable Development Indicators[1]

National Indicator: Population Demographics*
Change since 1990: ✓

Baseline

Population[108]

The population of the United Kingdom was estimated to be 63.7 million in mid-2012 which was nearly 420,000 higher than the mid-2011 estimate. The population of the UK has continued to increase since 1990 (57,237,493) and from 2000 (58,886,065)[109]. The estimated population of England in mid-2012 was 53.5 million people.

A quarter of the growth in population of the UK occurred in London where the population grew by 104,000 in the year to mid-2012. London, the South East, and East of England accounted for over half (53%) of the growth seen across the UK in the year.

[108] Office for National Statistics, 2013.*Annual Mid-year Population Estimates, 2011 and 2012* [Online]. Available at: http://www.ons.gov.uk/ons/dcp171778_320900.pdf (Accessed: 19/08/2013).

[109] Office for National Statistics, 2013.*Population for UK, England and Wales, Scotland and Northern Ireland, Population Estimates Timeseries 1971 to Current Year* [Online]. Available at: http://www.ons.gov.uk/ons/rel/pop-estimate/population-estimates-for-uk--england-and-wales--scotland-and-northern-ireland/population-estimates-timeseries-1971-to-current-year/index.html (Accessed: 04/09/2013).

Key:
Trend improving ✓
Trend deteriorating X

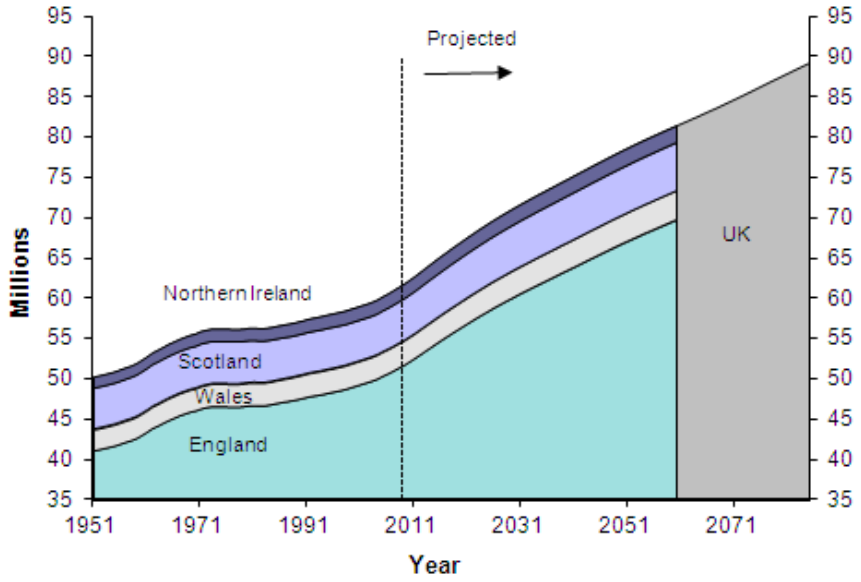

Figure 24 Actual and projected population of the United Kingdom and constituent countries, 1951-2085[110]

Location of major settlements

London is the capital city of England and the United Kingdom, located in the south-east of England on the River Thames. With over 8 million residents(2012), London is the most populous region, urban zone and metropolitan area in the UK. Key settlements in the south west include Bristol, Exeter and Plymouth (all coastal locations). Brighton, Southampton, Portsmouth and Bournemouth are also major settlements along the south coast.

The Birmingham conurbation is a significant area of population in the Midlands. The main concentration of settlements in the northwest stretches between Manchester and Liverpool. Large settlements in the east and northeast include Leicester, Nottingham, Derby, Sheffield, Leeds, York, Hull, Sunderland and Newcastle upon Tyne.

[110] Office for National Statistics, 2012.*Chapter 2: Results, 2010-based NPP Reference Volume* [Online]. Available at: http://www.ons.gov.uk/ons/dcp171776_253934.pdf (Accessed: 18/09/2013).

Key:
Trend improving ✓
Trend deteriorating X

Topic 23: Equality

Defra Sustainable Development Indicators[1]

National Indicator: N/A
Income Inequality
Change since 1990: ✓
Change since 2000: -

Baseline

Longer-term trends in income inequality[111]

Income inequality, as measured by the Gini coefficient, increased considerably during the 1980s, but since then the changes have been smaller in scale. For all households, the 1980s were characterised by a large increase in inequality of disposable income, particularly during the second half of that decade. Following that rise, inequality of disposable income reduced slowly from 1990 until the mid-1990s, although it did not fully reverse the rise seen in the previous decade. In the late 1990s, income inequality rose slightly before falling once again in the early 2000s.

In recent years the trend has been broadly flat, though the most recent figures have shown a fall in inequality. The Gini coefficient for disposable income in 2011/12 was 32.3%, a fall from its 2010/11 value of 33.7%, and the lowest level since 1986.

Working age with disabilities[112]

There are over 11 million people with a limiting long term illness, impairment or disability in the UK. The proportion of disabled people differs by age group: in 2010/11, 6% (0.8 million) of children were disabled compared to 15% (5.4 million) of adults of working age and 45% (5.3 million) of adults over State Pension age (note: State Pension age changed from 2010/11 and so the definition of both State Pension age and Working age is not consistent over time).

[111] Office for National Statistics, 2013.*The Effects of Taxes and Benefits on Household Income, 2011/12* [Online]. Available at: http://www.ons.gov.uk/ons/dcp171778_317365.pdf (Accessed: 19/09/2013).
[112] Department for Work and Pensions, 2012.*Family Resources Survey United Kingdom, 2010/2011* [Online]. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/222839/frs_2010_11_report.pdf (Accessed: 19/08/2013).

Key:
Trend improving ✓
Trend deteriorating X

Young Adults Not in Employment, Education or Training[113]

There were 1.09 million young people (aged from 16 to 24) in the UK who were Not in Education, Employment or Training (NEET), up 21,000 from October to December 2012 but down 101,000 from a year earlier. The percentage of all young people in the UK who were NEET was 15.1%, up 0.3 percentage points from October to December 2012 but down 1.3 percentage points from the previous year.

Pensioner Poverty[114]

In 2010/11, an estimated 14% of pensioners in the UK were living on less than 60% of equivalised contemporary median income after housing costs. This is compared to 28% in 1999/2000 (Figure 25).

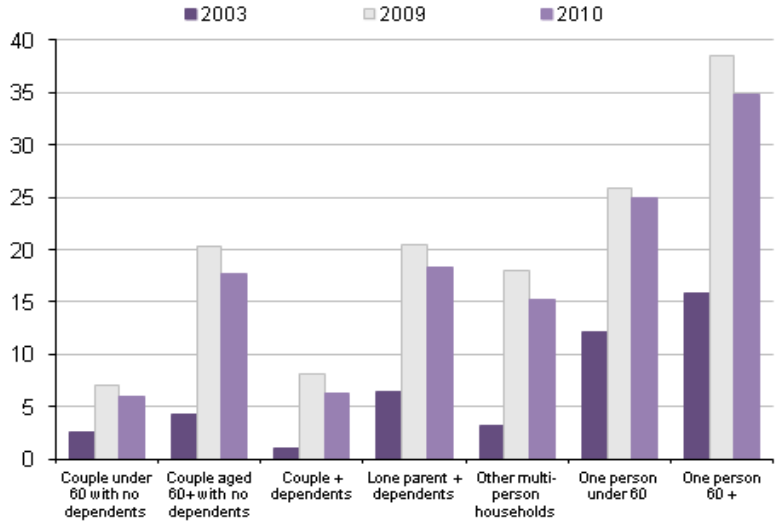

Figure 25 Percentage of pensioners in the UK living on less than 60% of equivalised contemporary median income after housing costs

In 2010/11 around 9% of pensioners were classified as being materially deprived. Material deprivation refers to whether people have access to common necessities.

[113] Office for National Statistics, 2013.*Young People Not in Education, Employment or Training (NEET), May 2013* [Online]. Available at: http://www.ons.gov.uk/ons/dcp171778_312021.pdf (Accessed: 03/09/2013).

[114] Office for National Statistics, 2012.*Pension Trends – Chapter 13: Inequalities and Poverty in Retirement, 2012 Edition* [Online]. Available at: http://www.ons.gov.uk/ons/dcp171766_278836.pdf (Accessed: 03/09/2013).

Key:
Trend improving ✓
Trend deteriorating X

Childhood Poverty[115]

In 1998/99 the estimated number of children in the UK living in relative income poverty was 3.4 million. The 2010 target was to reduce this number to 1.7 million by 2010/11.

The 2010/11 Households Below Average Income results released on June 14 2012 revealed that there were 2.3 million children in relative income poverty.

Environmental Equality[116]

People in the most deprived 10% of areas in England often experience the worst air quality, and tend to be more exposed to emissions from transport and industry than the average. Transport tends to be the main contributor to poor air quality in most Air Quality Management Areas, and the cause of respiratory illness and deaths amongst vulnerable groups such as young children. These groups are least likely to live in areas of high car ownership.

[115] Department for Work and Pensions; Department for Education, 2012.*Child Poverty in the UK: The report on the 2010 target*[Online]. Available at: http://media.education.gov.uk/assets/files/pdf/c/child%20poverty%20in%20the%20uk%20the%20report%20on%20the%202010%20target.pdf (Accessed: 03/09/2013).

[116] Environment Agency, 2013.*Addressing environmental inequalities* [Online]. Available at: http://www.environment-agency.gov.uk/research/library/position/41189.aspx (Accessed on: 04/09/2013).