



Distribution of UK population and cities

The UK's population is unevenly distributed. In 2014, more than 80 per cent of people in the UK were living in urban areas.

15 UK population distribution

In 2016, the population of the UK was estimated to be 65.6 million people.

Factors affecting population density

Factors affecting population density can be categorised as physical or human. **Physical factors** that favour a higher population density include a temperate climate and low-lying, flat, fertile land. **Human factors** that favour a higher population density include availability of jobs, transport links and quality of services such as healthcare and education.

Population density in UK cities

The **highest population density** in the UK is in the south-east of England, particularly in and around London. The other areas of high population density are located around the UK's capital cities (Belfast, Cardiff and Edinburgh) as well as major cities like Birmingham, Liverpool and Manchester. The **lowest population density** is in the Scottish Highlands.

The area around the River Clyde in **Glasgow** was the centre of the Scottish shipbuilding industry, and employed tens of thousands of workers at its peak in the early 20th century. The area in and around Glasgow were also extensively mined for coal, as late as the early 20th century, and communities developed around the mines.

Skye, an island in north-west Scotland, is remote and experiences harsh weather conditions. It has a very low population density.

Edinburgh has the lowest population density of any UK capital city. This is likely to be influenced by physical factors including the area's high relief and cool climate.

The Northern Irish capital, **Belfast**, has a very high population density due to its cultural attractions and employment opportunities.

Manchester has one of the highest population densities in the UK. Since the Industrial Revolution in the late 18th and early 19th centuries, large numbers of people have come to the city for work. The population of Manchester continues to grow rapidly.

Liverpool is very densely populated largely due to its use as a port. The Liverpool One provides jobs and makes it more attractive for people to live there.

Birmingham is centrally located in the UK, with excellent transport links; it has a very high population density.

Snowdonia National Park is a mountainous rural area with restricted development, and has a very low population density.

Swansea has one of the highest population densities in Wales due to a wide variety of cultural attractions and employment opportunities.

London's strategic position has enabled it to grow as the UK's main administrative and political city, and parts of London have the highest population density of anywhere in the UK.



Figure 1 Population density in the UK, mid-2013

5 Exam-style practice Grades 2-4

Study **Figure 1**. Describe the distribution of the UK's population.

[3 marks]



Made a start



Feeling confident



Exam ready



Expanding London: opportunities

You may need to answer a question about a major city in the UK using a case study that you have studied. This case study looks at the urban growth in London and the opportunities it has created.

2

Case study

The location and importance of London

London is the UK's most populous city, as well as one of the world's most economically influential cities, with a population of more than 8.6 million people in 2015. It is located in the south-east of the UK near to a number of large airports, such as Heathrow. It is in a central global location (physically and in terms of time zone), which is ideal for business people who travel regularly to the east and west.

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Opportunities in London

Business

- London generates 22 per cent of the UK's GDP, even though it accounts for only 12.5 per cent of the UK population.
- In 2013, it was estimated that houses in London's top 10 boroughs were worth more than those in Northern Ireland, Scotland and Wales combined.
- In 2015, London had over 200,000 start-up companies, and hosted 17 of the largest businesses in the world in 2016.
- London has the second best global air connections in the world after Dubai.
- London is one of the world's top business centres, attracting highly skilled workers from across the globe.

Social and economic

- The city has a huge variety of recreational opportunities, including West End theatre shows, countless shopping centres and restaurants, and world-class sporting events. All of these entertainment options create thousands of jobs.
- It is well connected with an **integrated transport system**, including the Underground, buses, Tramlink, Docklands Light Railway, London River Services and the London Overground.

Environmental

- London has an ambitious **urban greening programme**, which includes the aim of being the first 'National Park City'.
- London includes eight royal parks, 8 million trees, 30,000 allotments, 3 million gardens and two National Nature Reserves.
- 47 per cent of the city consists of green space.
- Other urban greening opportunities include nest boxes, rain gardens, green roofs, and river jetties used for bird roosts.

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The impacts of migration on London's growth and character

There is rapid population growth: one-third of 335,000 net migrants to Britain in 2015 went to London.

Migration is adding to the number of skilled workers competing for jobs. Between 2000 and 2011, European migrants have made a net contribution of £20 billion to UK public finances.

There is social and racial tension between some migrants and locals.

Population growth has led to housing shortages, which the government are struggling to address.

Increased migration is putting more pressure on London's schools, with a shortage of both primary and secondary school places.

London is one of the most culturally diverse cities in the UK, with 37 per cent of residents born abroad. Migrants have introduced different types of foods, entertainment and clothing.

Impacts of migration

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Exam-style practice

Grade 5

Using a case study city you have studied, outline **two** ways its location creates opportunities.

[4 marks]





Expanding London: challenges

You may need to answer a question about a major city in the UK using a case study that you have studied. This case study looks at the urban growth in London and the challenges it has created.

15

Challenges of urban growth

Housing

- Rising housing costs reduce living standards as a larger proportion of income is used on housing.
- The gap between the richest and the poorest has increased; those who already own property see it rise considerably in value, but it is becoming more difficult for other people to buy their first property.

Education

- By 2031, it is predicted that London will have 300,000 more 4–15 year olds than it does today. The city is already struggling to provide enough school places.

Healthcare

- Inconsistencies in the quality of healthcare within London have led to some hospitals having long waiting lists.

Job opportunities

- London's unemployment rate has fallen in recent years, reaching 5.8 per cent January–March 2016, but it is still higher than the UK average, which was 5.1 per cent for the same period.

Inequality

- Urban deprivation: an independent study in 2015 found that, after considering housing costs, 27 per cent of Londoners live in poverty compared with 20 per cent for the rest of England.
- The poorest places tend to be in the eastern boroughs; but, recently, deprivation levels have been rising in the outer boroughs as affordable housing in inner London becomes harder to find.

Environmental

- The average household recycling rate for the city in 2016 was 32 per cent, which was the lowest in England.
- Many buildings became **derelict** following deindustrialisation, especially in East London.
- Development of **brownfield sites** can be expensive because old buildings have to be demolished, and land cleared.
- Urban sprawl is putting increasing pressure on London's **rural-urban fringe**. In March 2015, a report found that over 86,000 new houses were planned for greenbelt land around London.
- Increasing London house prices have contributed towards the rise in the number of commuter settlements around London, especially in Hertfordshire and Kent. Here house prices are also rising quickly, but they remain more affordable than London.

5

Named example

Lower Lea Valley Redevelopment Project

You need to know the main features of a urban redevelopment project and why it was needed.

The Lower Lea Valley, a deprived part of East London, was selected as the key location for the Olympic Park. There were high rates of unemployment, a poor public health record and derelict industrial buildings.

- 👍 The 500-acre Olympic Park employed people both before and after construction.
- 👍 80 per cent of soil contaminated with industrial waste was washed and reused.
- 👍 The urban wasteland of the Lower Lea Valley was cleaned and 9000 new homes were built.
- 👍 Accessibility was increased through new land bridges built across rivers, roads and railways.

2

Worked example

Grades 4–6

Explain how urban sprawl affects commuter settlements and the rural-urban fringe. [4 marks]

The rural-urban fringe is an area of mixed land uses, such as space for retail parks, farmland and golf courses. Urban sprawl increases competition for land in the rural-urban fringe, as new housing developments push up house and land prices in the areas around large cities. This can result in green spaces, such as agricultural land and large gardens in the rural-urban fringe, being sold off for houses to be built on them.

As major cities grow, house and land prices tend to increase, which can lead to an increase in the number of commuter settlements. These are towns and villages situated near major cities, where a large proportion of the population commute into the city for work. House prices often remain more affordable in commuter settlements than in the city. As a city expands, new commuter settlements may form...

5

Exam-style practice

Grades 4–6

For an urban regeneration project you have studied, explain the reasons why the area needed regeneration. [4 marks]



Made a start



Feeling confident



Exam ready

Urban sustainability

Sustainable urban living involves managing resources, such as energy, to meet today's needs whilst protecting the needs of future generations and the environment.

5

Creating green space



Figure 1 'Gardens by the Bay' in Singapore is a sustainable green space in an urban area. It is home to 18 'supertrees', 11 of which have sustainable functions, such as harvesting solar energy for lighting.

Green spaces are areas partly or entirely covered by grass, trees or other vegetation. There are many benefits of green spaces in urban environments.

- Green spaces are characterised by their recreational and aesthetic appeal. They have a positive impact on people's mental and physical health.
- They are ideal habitats for wildlife and plants.
- They provide suitable environments for urban food production.
- Carbon emissions are reduced because plants absorb carbon dioxide during photosynthesis.

5

Worked example

Grade 4

Explain how **one** urban transport strategy has been used to reduce traffic congestion. [3 marks]

Stockholm's peak time congestion charge is an example of an urban transport strategy that has helped to reduce congestion. Road users are charged for entering certain parts of the city between 06.30 and 18.30, which has contributed to a 22 per cent reduction in the number of vehicles entering the city centre.

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Waste recycling

Recycling and reusing materials conserves natural resources and reduces waste production. In turn, this conserves energy and reduces pollution.

Sweden has one of the best household **waste recycling** systems in the world, with only 1 per cent of household waste ending up in a rubbish dump. Recycling stations are situated no more than 300 metres from any residential area, allowing Swedes to separate all recyclable waste in their homes and deposit it in special containers in their block of flats or drop it off at a recycling station.

In 2015, nearly 2.3 million tonnes of household waste was burnt and converted into energy. The 32 incineration plants produce heat for 810,000 households and electricity for 250,000 private houses.

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Conserving energy and water

Sustainable urban living involves conserving two resources which are essential for human life: energy and water.

- Cities can conserve water by recycling water used for washing and drinking for use in energy production.
- Singapore is a **water-stressed city**, which means that demand for water exceeds supply. It has made its water use sustainable by desalination, reclaiming water from sewers and treating it so it is safe to drink, and by efficiently catching and storing rainwater.
- Cities can conserve energy by renovating old buildings to improve their energy efficiency, installing solar panels to generate electricity, and by including high levels of insulation in new housing developments to reduce the amount of energy needed to heat them.

Other suitable answers include:

- Hangzhou's public cycling system is one of the world's largest bike-sharing systems, with over 80,000 bikes and several thousand service points to date. This has helped to reduce the volume of traffic in the Chinese city.
- Copenhagen has an online ticketing system for its bike share scheme, Bicyklen, which also has touchscreens integrated into the bikes. The system is hugely popular, with 50 per cent of commuters using the bikes. This has contributed to Copenhagen's goal of being carbon neutral by 2025.

10

Exam-style practice

Grades 5–9

Assess the importance of managing resources and transport to create sustainable urban living.

[9 marks] [+ 3 SPaG marks]