

GCSE

AQA 

Geography



Paper 2 Section A:
Urban Issues and Challenges

Name:

Class:

Course information

Your GCSE Geography course (AQA 8035) culminates in three exams. The basic information that you need to know is in dot points below. More detail is shown at the bottom.

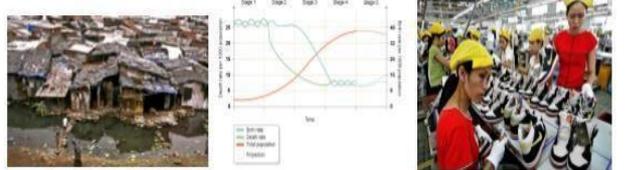
Paper 1: Living with the physical environment

- The physical geography one!
- Worth 35%
- 1hr 30mins

Physical stuff like this...



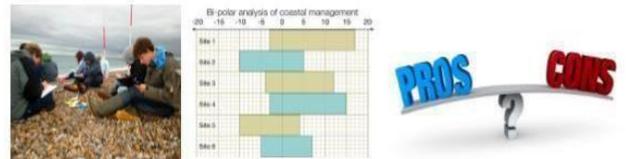
Human/economic stuff like this...



Paper 1: Challenges in the human environment

- The human/economic one!
- Worth 35%
- 1hr 30mins

Skills stuff like this...



Paper 3: Geographical applications

- The skills one!
- Worth 30%
- 1hr 15mins

Paper 1: Living with the physical environment	+	Paper 2: Challenges in the human environment	+	Paper 3: Geographical applications
<p>What's assessed</p> <p>3.1.1 The challenge of natural hazards, 3.1.2 The living world, 3.1.3 Physical landscapes in the UK, 3.4 Geographical skills</p>		<p>What's assessed</p> <p>3.2.1 Urban issues and challenges, 3.2.2 The changing economic world, 3.2.3 The challenge of resource management, 3.4 Geographical skills</p>		<p>What's assessed</p> <p>3.3.1 Issue evaluation, 3.3.2 Fieldwork, 3.4 Geographical skills</p>
<p>How it's assessed</p> <ul style="list-style-type: none"> • Written exam: 1 hour 30 minutes • 88 marks (including 3 marks for spelling, punctuation, grammar and specialist terminology (SPaG)) • 35 % of GCSE 		<p>How it's assessed</p> <ul style="list-style-type: none"> • Written exam: 1 hour 30 minutes • 88 marks (including 3 marks for SPaG) • 35 % of GCSE 		<p>How it's assessed</p> <ul style="list-style-type: none"> • Written exam: 1 hour 15 minutes • 76 marks (including 6 marks for SPaG) • 30 % of GCSE • Pre-release resources booklet made available 12 weeks before Paper 3 exam
<p>Questions</p> <ul style="list-style-type: none"> • Section A: answer all questions (33 marks) • Section B: answer all questions (25 marks) • Section C: answer any two questions from questions 3, 4 and 5 (30 marks) • Question types: multiple-choice, short answer, levels of response, extended prose 		<p>Questions</p> <ul style="list-style-type: none"> • Section A: answer all questions (33 marks) • Section B: answer all questions (30 marks) • Section C: answer question 3 and one from questions 4, 5 or 6 (25 marks) • Question types: multiple-choice, short answer, levels of response, extended prose 		<p>Questions</p> <ul style="list-style-type: none"> • Section A: answer all questions (37 marks) • Section B: answer all questions (39 marks) • Question types: multiple-choice, short answer, levels of response, extended prose

Command words

When you read a question (in this booklet and in the exams), underline the command word/s (the ones that tell you what to do!).

Assess (or **Evaluate**): make a judgement about something

Tip: The higher mark questions on case studies and examples often have an assess/evaluate element, so it's smart to go back over your case studies/examples and figure out **what your opinions are**, and **why you have these opinions** (evidence). But remember- assess and evaluate questions can appear throughout all three papers.



Example question: 'The effects of and responses to tectonic hazards vary in areas of contrasting levels of wealth.' Assess the extent to which this is true, referring to examples that you have studied. (9)

Example answer:

Tectonic hazard type: earthquake

Primary impacts mainly vary because of the types of buildings in HICs and LICs. For example, an earthquake in a HIC like the L'Aquila earthquake in Italy in 2009 destroys many expensive buildings, meaning that rebuilding is more expensive in HICs. In L'Aquila damages cost \$16 billion, compared to \$450 million in Nepal in 2015. Poorly constructed buildings also cause more deaths in LICs due to building collapse. In Nepal nearly 9000 were killed compared to 309 in L'Aquila.

The secondary effects vary even more than the primary. HICs have strong economies so they can rebuild and repair quickly. In Nepal, thousands of people still live in 'temporary' refugee camps two after the event. In L'Aquila, 65,000 people were made homeless compared to 3.5 million in Nepal, but far more people in Italy had insurance to minimise ongoing impacts. Also, if a country has enough money to rebuild damaged ports, roads and airports, it can continue to trade. This reduces the economic impacts of an earthquake.

Responses to an earthquake are mainly determined by a country's level of wealth. Immediate and long-term responses are costly, and many LICs such as Nepal must rely on donations and aid. This is unreliable, and while large donations may be given soon after the quake, this may 'dry up' as hazards strike elsewhere. This can mean that immediate responses are prioritised, such as food and medical supplies, while rebuilding and creating employment opportunities may not occur for a long time in poorer regions.

Read through the model answer above. Circle the main judgement/claim that is made in each paragraph, then underline the evidence that is used to justify the judgement.

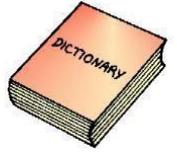
Define: you need to say what the term means

Tip: These are usually worth 1 or 2 marks, so don't over-complicate it! Keep it simple, but avoid simply re-stating the term as part of the definition. For example, if you're asked to **define 'development gap'**, don't say 'it's a gap in development'! A bit more detail is needed.

Example answers:

'Development gap' refers to the differences in levels of wealth and quality of life that exist across the world. (2)

'Development gap' refers to the disparity that exists both within and between nations, for example variations in GNI per head. (2)



Describe: write about what it is like

Tips: Describe questions will often (not always) require you to describe something from a figure (e.g. a map, table or photograph), so study the resource properly if this is the case.



Example question: Describe **two** environmental challenges caused by urban growth in an LIC or NEE. (2)

Example answer:

Challenge 1: Insufficient sanitation infrastructure can result in people dumping human waste into rivers.

Challenge 1: Increased emissions from traffic can add to air pollution.

Discuss : give both sides of an argument

Tip: You do not need to present a point of view here (unless asked directly to do so), but you do need to outline both views (and ideally, the reasons for those views). For example, if a question was '**TNCs bring more advantages than disadvantages to the LICs and NEEs in which they operate.**' **Discuss.** (6 marks), you would need to outline the supporting view and the opposing view.



Example answer:

TNCs and host governments agree that TNCs bring more advantages than disadvantages to the LICs and NEEs in which they operate, primarily because TNCs pay taxes to the government and generate thousands of jobs. These jobs may raise incomes and quality of life, and lead to greater spending which strengthens local economies. However, environmentalists disagree because TNCs are often not forced to follow regulations that protect water, soil and air from pollution. Human rights activists may disagree as workers are often exploited by TNCs, e.g. in 'sweatshops'. Some economists disagree, arguing that the majority of profits go to the TNC rather than being spent in the LIC/NEE.

Can you see the two 'sides' that are discussed in this answer?

Explain : offer reason/s

Tip: Focus on 'why' something is the way it is! For example, if the question is **Explain why tropical storms form over warm water**, you need to offer reasons why!



Example answer:

Warm water leads to mass evaporation, where water vapour rises. When the vapour meets the cool air above, it condenses and forms cloud. The rising warm air creates a low-pressure system which attracts the winds that join smaller clouds together and move the storm cloud at high speed. As the cloud moves over warm water, more rising vapour condenses and joins the cloud, generating huge amounts of energy. Once the storm is moving at 74mph+ it is officially a tropical storm.

*Go through the answer above and identify the reasons that have been given!

Justify: give evidence for, or defend a decision

Tip: This command term tends to arise where you are asked to make a decision, so think about where that will happen in the exams! It is likely to appear in the case study or example questions in Papers 1 and 2. In Paper 3, you will need to justify your recommendation in the Issue Evaluation, and in the Fieldwork section you will often need to justify why you have chosen particular data collection or presentation techniques.



Example question: Justify **one** of your primary data collection techniques. (3)

Example answer:

Primary data collection technique: Perception analysis

Justification: Conducting perception analysis of residents and local business owners nearby to the business park enabled me to investigate the economic impacts of the business park on the local area because it helped me to gather data on locals' views on how job opportunities, wages and how the local economy had changed.

Example question: Justify the statistical techniques you used to analyse your data.

(4)

Example answer: I used percentage increase and decrease to compare residents' and local business owners' views on how economic opportunities had changed as a result of the development of the business park. This was an appropriate technique because I had collected data from different numbers of residents and business owners, meaning that the raw data results were not easily comparable. Because percentages show proportion, I could reliably compare the data from the two groups of people to see whether there were differences in their views of the business park's

impacts. From this I could infer where the benefits of the business spark were felt.

Outline : give the main points

Tip: Focus on giving the basic/central information. If you are asked to outline **one** thing (*example A below*), be sure to do that! (writing about more than one factor/issue when you've been asked to write about only one is a waste of time as you'll only be credited for one idea). You may be asked to outline **more than one** impacts/challenges (*example B below*). In that case, ensure that you make distinct (clearly different) points.

Example question A: Outline **one** change in UK farming practices since the 1960's. (2)

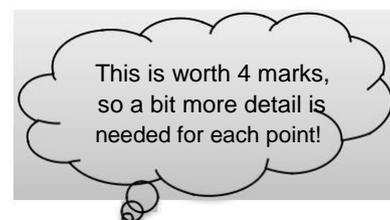
Example answer: Farming in the UK has undergone industrialisation since the 1960's (1 mark), meaning that farm sizes, chemical use and crop yields have increased (1 mark).

Example question B: Outline **two** environmental impacts of deforestation. (4)

Example answer:

Impact 1: Deforestation releases the carbon dioxide captured by trees into the atmosphere (1 mark), meaning that more of the sun's radiation becomes trapped which contributes to climate change (1 mark).

Impact 2: Deforestation causes habitat destruction (1 mark), which can threaten the survival of species, leaving them endangered or even causing extinction (1 mark).



Suggest : offer an idea. You may be asked to suggest a reason or to suggest what an effect may be.

Tips: Take clues from the resources provided, if there are any. If not, don't panic- you can make an educated guess. If the question is worth 2 marks, you should offer an idea and then add some detail. For example, if the question asks you to '**Suggest and explain one reason why the death rate decreases as a country develops**', you would need to say more than 'the country can afford better healthcare' (that'd only get you 1 mark).



Example answers: As a country develops, the government can invest more money into healthcare (one reason has been suggested here). This means that more people can access medication needed to prevent sickness and death (and here is the added detail for the 2nd mark!).

As a country develops, people can afford better nutrition (1 mark). This means that fewer people die from preventable conditions such as malnutrition (1 mark).

An additional support resource is below. Geography exams almost always ask you to describe and/or explain **distribution**, but many students get confused about what they need to do so they lose unnecessary marks. This should help.

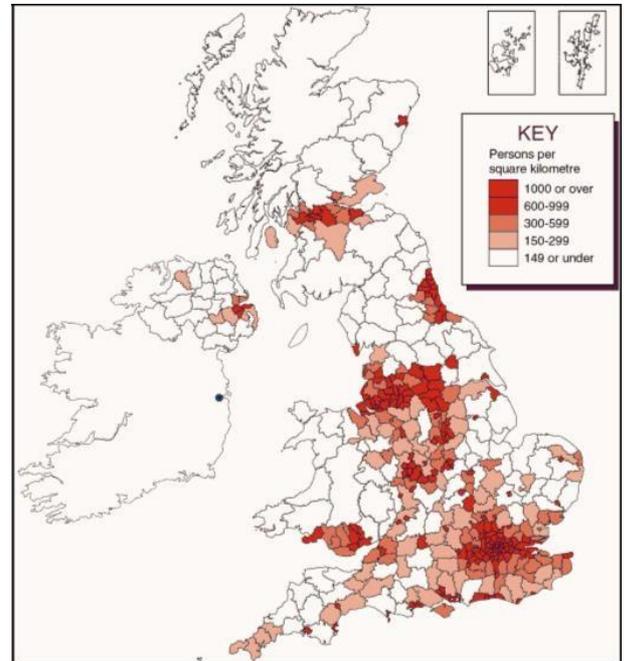
Distribution: where something exists or occurs/ how it is spread out across a place.

If you are asked to describe the distribution, you need to say **where** something is.

For example: **Using Figure 1, describe the distribution of the UK's population. (4)**

Example answer:

The UK's population is concentrated in England, especially the south-east in London and surrounding counties, where the population is generally 1000+ people per km². Dense populations also exist in S.Wales and SW.Scotland. Populations are sparse (less than 140 people per km²) in N.Scotland, central and N.Wales, central and western Northern Ireland and the north-west of England.



If you are asked to explain the distribution, you need to say **why** it is spread in that way. *Example question:* Explain the distribution of the UK's population as shown in **Figure 1** (4). *Example answer:*

London is the centre for financial and other key UK industries, meaning that it provides many opportunities and jobs which encourages people to live there. Historically, the centre and north of England had many industrial areas, which established cities such as Manchester and Birmingham. Cold and mountainous places (e.g. N.Scotland and N.Wales) are more difficult to inhabit than the flatter lowland areas (e.g. SE.England), making them sparsely populated.

Paper 2- Challenges in the human environment

Key Idea	Specification Content
A growing percentage of the world's population lives in urban areas.	The global pattern of urban change. Urban trends in different parts of the world including HICs and LICs. Factors affecting the rate of urbanisation – migration (push–pull theory), natural increase. The emergence of megacities.
Urban growth creates opportunities and challenges for cities in LICs and NEEs.	<p>A case study of a major city in an LIC or NEE to illustrate:</p> <ul style="list-style-type: none"> • the location and importance of the city, regionally, nationally and internationally • causes of growth: natural increase and migration • how urban growth has created opportunities: <ul style="list-style-type: none"> • social: access to services – health and education; access to resources – water supply, energy • economic: how urban industrial areas can be a stimulus for economic development • how urban growth has created challenges: <ul style="list-style-type: none"> • managing urban growth – slums, squatter settlements • providing clean water, sanitation systems and energy • providing access to services – health and education • reducing unemployment and crime • managing environmental issues – waste disposal, air and water pollution, traffic congestion. <p>An example of how urban planning is improving the quality of life for the urban poor.</p>
Urban change in cities in the UK leads to a variety of social, economic and environmental opportunities and challenges.	<p>Overview of the distribution of population and the major cities in the UK.</p> <p>A case study of a major city in the UK to illustrate:</p> <ul style="list-style-type: none"> • the location and importance of the city in the UK and the wider world • impacts of national and international migration on the growth and character of the city • how urban change has created opportunities: <ul style="list-style-type: none"> • social and economic: cultural mix, recreation and entertainment, employment, integrated transport systems • environmental: urban greening • how urban change has created challenges: <ul style="list-style-type: none"> • social and economic: urban deprivation, inequalities in housing, education, health and employment • environmental: dereliction, building on brownfield and greenfield sites, waste disposal • the impact of urban sprawl on the rural–urban fringe, and the growth of commuter settlements. <p>An example of an urban regeneration project to show:</p> <ul style="list-style-type: none"> • reasons why the area needed regeneration • the main features of the project.
Urban sustainability requires management of resources and transport.	<p>Features of sustainable urban living:</p> <ul style="list-style-type: none"> • water and energy conservation • waste recycling • creating green space. <p>How urban transport strategies are used to reduce traffic congestion.</p>

Glossary

Air pollution – The presence of chemicals and particles in the air that can be harmful to people or the environment.

Baby-boomer – Someone who was born during a ‘baby boom’, which is a time of unusually high births.

Brownfield site – Land that has been used, abandoned and now awaits some new use. Commonly found across urban areas, particularly in the inner city.

Business Park – Purpose-built area of offices and warehouses, often at the edge of a city and close to a main road.

Carbon neutral – A development that results in no net release of carbon dioxide into the atmosphere.

Capacity – In terms of transport, the number of people or amount of goods that can be carried by a network or hub, for instance, the number of people passing through a particular airport in a certain time.

CBD – Central business district (in a town or city), the area of a town/city where most shops and businesses are located.

Commuter settlement – Towns where a significant proportion of residents work elsewhere.

Conurbation – Extensive urban areas resulting from the expansion of several towns or cities so that they merge together but maintain their separate identities. For example, the West Midlands conurbation includes cities of Birmingham, Coventry and Wolverhampton, as well as many large towns, including Sutton Coldfield, Dudley, Walsall and West Bromwich.

Counter-urbanisation – Movement out of cities back into the countryside.

Culturally diverse – Having a variety of cultural/ethnic groups within a society.

Dereliction – Land and buildings that have fallen into disuse.

Ecological footprint – The area of land or sea needed to produce all the resources a city uses and to dispose of its waste.

Economic impact – The effect on an event on the wealth of an area or community.

Economic migrant – Someone who migrates with the main purpose of finding work or escaping poverty.

Economic opportunities/development – Chances for people to improve their living standards through employment.

Environmental impact – The effect of an event on the landscape and ecology of the surrounding area.

Formal economy – This refers to the type of employment where people work to receive a regular wage and are assured certain rights, e.g. paid holidays, sickness leave. Wages are taxed.

Green belt – Green open space or land around cities on which there are strict planning controls to prevent urban development in the countryside, and further building development is not allowed.

Greenfield site – a plot of land, often in a rural or on the edge of an urban area, that has not yet been subject to any building development.

Green space – Parks and vegetated areas and walkways.

HIC – A higher income country is defined by the World Bank as a country with a gross national income per capita above US\$12 735 in 2014.

Inequalities – Differences between poverty and wealth, as well as in peoples’ wellbeing and access to things like jobs, housing and education. Inequalities may occur in housing provision, access to services, access to open land, safety and security.

Informal economy (or informal employment) – This type of employment comprises work done without the official knowledge of the government and therefore without paying taxes. It is common in many low-income countries.

Infrastructure – The framework of transport and energy networks, including roads, railways, ports and airports, plus energy distribution.

Integrated transport system – Where all parts of the transport system link together to make journeys more efficient and therefore make public transport more appealing and therefore, it should be more sustainable.

Land use conflicts – Disagreements which arise when different users of the land do not agree on how it should be used.

LIC - a lower income country is defined by the World Bank as a country with a gross national income per capita below US\$1,045 in 2014.

Megacity – An urban area with a total population in excess of 10 million people.

Migration – The movement of people from one place to another. In many LICs it is from rural to urban areas.

Mixed land use – A mixture of uses such as business, leisure, residential.

Multiculturalism – Describes the existence, acceptance, and/or promotion of multiple cultural traditions within a single place.

Multiplier effect – the ‘snowballing’ of economic activity, for example, if new jobs are created this gives people more money to spend which means that more workers are needed to supply the goods and work in the shops.

Newly emerging economies (NEEs) – Countries in the process of changing from an LIC (lower income country) to a highly developed, more complex economy.

Pollution – The presence of chemicals, noise, dirt or other substances that have harmful or poisonous effects on an environment.

Population census – an official count of the population. In the UK there is a census every 10 years, the last census was in 2011.

Population density – Number of people per square kilometre (a measure of crowdedness).

Poverty line – The minimum amount of money needed to be able to live.

Public transport – Shared methods of travelling, such as buses, trams and trains.

Quality of life – The wide range of human needs that should be met alongside income growth. It can include the standard of health, comfort and happiness experienced by an individual or group.

Rate of urbanisation – The percentage increases in the urban population.

Regeneration – Improving the economic, social and environmental conditions of previously run-down areas.

Rural-urban fringe – a zone of transition between the built-up area and the countryside, where there is often competition for land use. It is a zone of mixed land uses, from out-of-town shopping centres and golf courses to farmland and motorways.

Rural-urban migration – Movement of people from the countryside to the cities

Services – Another term for tertiary industries, the economic activities that provide various services – commercial (shops and banks), professional (solicitors and dentists), social (schools and hospitals), entertainment (restaurants and cinemas), and personal (hairdressers and fitness trainers).

Situation – The general area or surroundings.

Smog – A mixture of smoke and fog that can be dangerous to human health.

Social deprivation – The degree to which an individual or an area is deprived of services, decent housing, adequate income and local employment.

Social impact – The effect of an event on the lives of people or a community.

Social opportunities – Chances for people to improve their quality of life through services like education and healthcare.

Spatial – Linked to a location or place.

Squatter settlements – Illegal settlements where people have no legal rights over the land on which they live. It is an area of poor-quality housing, lacking in amenities such as water supply, sewerage and electricity, which often develop spontaneously and illegally in a city in a low-income country.

Suburbs – largely residential (housing) areas in the outer part of a city.

Sustainability – Actions and forms of progress that meet the needs of today without harming future needs.

Sustainable development – Development that meets the needs of the present without limiting the ability of future generations to meet their own needs.

Sustainable management – Management that meets the needs of the present without compromising the ability of future generations to meet their own needs; it takes into account the environment, the needs of present and future generations and the economy.

Sustainable urban living – A sustainable city is one in which there is minimal damage to the environment, the economic base is sound with resources allocated fairly and jobs secure, and there is a strong sense of community, with local people involved in decisions made. Sustainable urban living includes several aims including the use of renewable resources, energy efficiency, use of public transport, accessible resources and services.

Traffic congestion – Occurs when there is too great a volume of traffic for roads to cope with, so traffic jams form and traffic slows to a crawl.

Transport hub – Connecting point for transport links.

Urban greening – The process of increasing and preserving open space such as public parks and gardens in urban areas.

Urban deprivation – An area with a standard of living below that of the majority of people. It involves hardship and a lack of access to resources. They have visible differences in housing and economic opportunities.

Urbanisation – The process by which an increasing percentage of a country's population comes to live in towns and cities. Rapid urbanisation is a feature of many LICs and NEEs.

Urban regeneration – The revival of old parts of the built-up area by either installing modern facilities in old buildings (known as renewal) or opting for redevelopment (i.e. demolishing existing buildings and starting afresh).

Urban slums – Poor areas lacking in services; they are often called 'shanty towns' but also have localised names such as 'favalas' in Brazil, 'barriades' in Peru and 'bustees' in India.

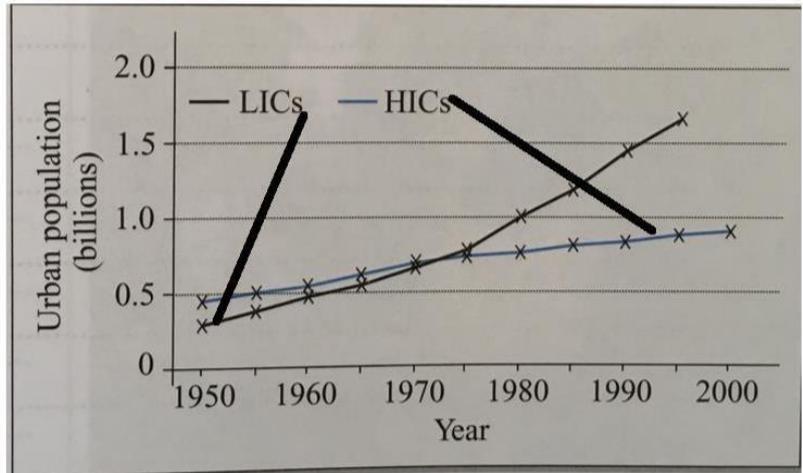
Urban sprawl – The unplanned growth of urban areas into the surrounding countryside.

Waste recycling – The process of extracting and reusing useful substances found in waste.

Key idea: A growing percentage of the world's population lives in urban areas.

1. Complete the graph to show that the urban population of LICs in 2000 was 2 billion
2. Describe the trends shown on the graph.

Aim to use descriptive language e.g. increasing/decreasing, slow, steady, rapid, exponential, equal, overtake, data and numbers.



3. The paragraph below is about urban growth in HICs and LICs. Using the vocabulary provided, fill in the blank spaces. **Vocabulary:** *development, rural, minimally, already, slow, varies, manufacturing, China, Germany, proportion, 50%, Industrial Revolution, World Bank, Ethiopia, highest, trebled.*

Urbanisation refers to the growth in the _____ (percentage) of a country's population living in urban areas. Urbanisation is happening all over the world, and over _____ of the world's population now live in urban areas (and this is increasing). However, urbanisation is happening at different rates in places at different levels of _____.

In high-income countries (HICs) like _____, urbanisation happened during the _____ (in the 19th Century) meaning that today, most people _____ live in urban areas. This means that rates of urban growth are _____ in HICs because almost everybody in the country already lives there! (For example, in Germany, between 1960 and 2016 the proportion of people living in urban areas rose _____ from 71% to 76%.) In LICs such as _____, urbanisation is happening more rapidly. LICs are less economically developed, meaning that it is only in recent years that many LICs have begun to develop industries such as _____ in the urban areas, which encourages people to move from _____ areas in search of work. Consequently, urban growth rates are _____ in LICs. (For example, in Ethiopia, between 1960 and 2016 the proportion of people living in urban areas more than _____, from 6% to 20%) (_____ data). Newly emerging economies (NEEs) are countries where economic growth is happening rapidly, e.g. Brazil, _____, and Nigeria. In these countries, urban growth _____.

Migration affects the rate of urbanisation, and **push-pull theory** helps to explain this. For each of the factors below, say whether it is **push** or **pull**, and **explain** how it causes migration. An example has been done for you.

Remember: a push factor is something that encourages someone to **leave** an area; a pull factor is something that encourages someone to **move to** an area

Factor	Push or pull?	How does it cause migration?	Common in HICs, LICs or both?
Natural disasters			
Mechanisation of agriculture			
Family members living abroad			
Better employment opportunities			
Desertification			
Improved quality of life			
Improved health care and education			
Conflict or war			

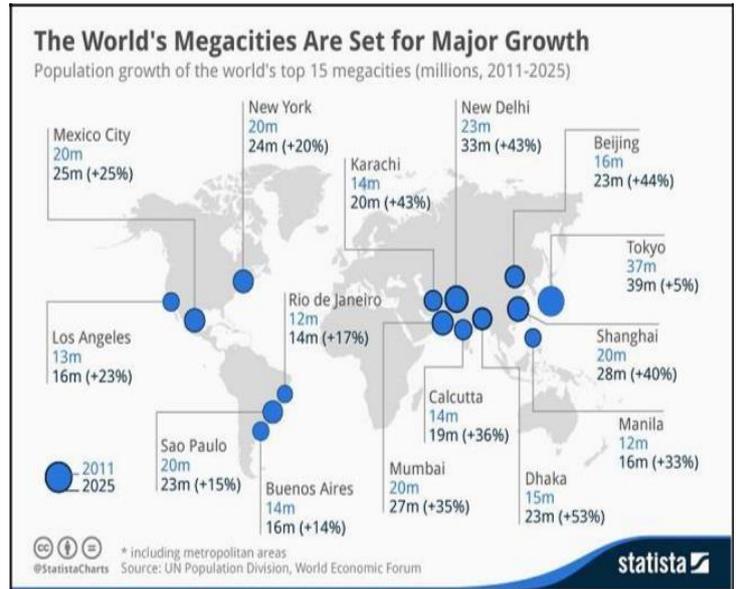
Define 'natural increase'.

What is the minimum population required for a city to be classed as a **megacity**?

Study the map showing the world's largest megacities. Using the map, answer questions 7a-7c.

Which megacity is predicted to have the greatest **overall** population increase by 2025?

Which megacity is predicted to have the greatest **rate** of urban growth of the fifteen megacities shown?



Which region is predicted to experience the greatest urban growth by 2025? Shade **one** oval.

- i. North America
- ii. Europe
- iii. Asia

Explain how natural increase leads to the growth of megacities.

Key idea: Urban growth creates opportunities and challenges for cities in LICs and NEEs.

The specification says that you need to use '*an example of how urban planning is improving the quality of life for the urban poor.*' Make sure your example is based in an LIC or NEE.



Importance of Mumbai, a city within a LIC (Low Income Country)

Key Questions

- What is the importance of Mumbai's city, regionally, nationally and internationally?
- What is more important to Mumbai's growth, natural increase or migration?

The Importance of the city, both nationally and internationally

Mumbai is a city of contrasts, being one of the richest cities in Asia but also home to some of the world's poorest people. It accounts for 6% of India's GDP, 40 % of foreign trade, and 25% of

industrial production. In total, the city creates US\$10 billion in corporate taxes and its per-capita income is higher than the national average

It is the entertainment, fashion and commercial centre of India. It is also one of the world's top 10 centres of commerce in terms of global financial flow. It also has the headquarters of a number of Indian financial institutions such as the Bombay Stock Exchange and the Reserve Bank of India, and numerous Indian companies such as the Tata Group. Most of these offices are located in downtown South Mumbai which is the nerve centre of the Indian economy.

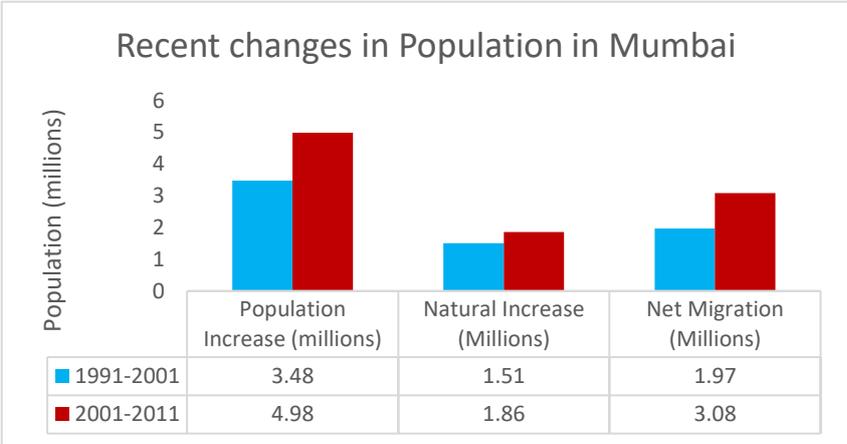
Many foreign companies also have their branches in the South Bombay area. Mumbai is the world's 29th largest city by GDP.

The causes of growth: natural increase and migration

Mumbai is in Maharashtra state, but there are differences between the 2 as is evident in the table below.

	Maharashtra State	Mumbai
GDP per head (US \$)	1,660	2,845
Life expectancy	68.4	52.6 (men) and 58.1 (women)
Infant Mortality	28	26
Literacy rate	82.9%	90.81%
Birth rate	17.6	20.1
Death rate	6.7	6.0

38% of migrants to Mumbai come from Maharashtra state together with many others from other poor regions. Maharashtra state is more rural than Mumbai and half of the population works in farming. Farming has undergone massive changes in India in recent decades. Increased use of machinery has forced people out of work, and changes to farming have forced people with small farms to sell up to larger land owners. Small scale farmers are also vulnerable to bad harvests and poor weather as they are totally dependent on their crops. In bad years, they can end up forced to sell up and have to migrate. In Mumbai there are job opportunities in service industries and the manufacturing industries which pay higher wages. There are also more schools, health care facilities and entertainments in Mumbai than other parts of Maharashtra state.



1. Answer two of the questions below. Remember to highlight it in the correct colour.

a) What are the advantages of this site for Mumbai's growth? (3 marks)

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Economic Reliable and higher income
Access to education
Access to healthcare
Community spirit
More people

Skim through the article below and highlight the advantages of Dharavi. Use two colours, one for economic advantages, and a second for social advantages.

A look inside Dharavi – The biggest Slum in the world (Mumbai)

Out of the 21 million people that live in Mumbai, a whopping 62% (or approx. 13 million people) live in the various slums around the city. Most of these slum dwellers survive on less than \$1USD per day and spend their entire days working long hours in the blistering sun, using rivers as toilets, sleeping on sidewalks and scraping to find shelter under bridges.

When I was in Mumbai, I took a 3 hour guided walking tour of the biggest slum in Asia and one of the largest in the world. It's called Dharavi. Seeing life unfold inside of Dharavi was the most eye-

opening and real experience that I've had throughout all of my travels. It's so densely populated that it felt like being a city within a city, filled with narrow dirty alleys, open sewers and more trash than you can possibly imagine. Before I explain to you what was going through my head when I was inside Dharavi, I will first give you some facts about the slum that will put things into perspective.

- About 1 million people live within 1 square mile, making it the most densely populated area on planet earth
- The average wage is between \$1-2USD per day
- Dharavi is the most productive slum in the world. It's over a billion dollar industry
- There is an average of 1 toilet per 1,450 people
- 60% of the families have lived in Dharavi for 60+ years
- The average life span is under 60 years old, due to disease and health concerns
- The slum is divided into communities by religion, with 60% Hindu, 33% Muslim and 6% Christian and 1% other
- Many businesses generate million dollar incomes (USD)
- Only men are allowed to work in the factories

What surprised me the most about Dharavi was how incredibly organized the slum was. Dharavi is by far the most productive slum in the world, with the annual turnover of business valued at \$1 billion USD per year. The slum produces goods that are exported all around India and the world. When I finally looked beyond the stereotype of it being the "largest slum," I began to realize a successful settlement with a vibrant community and economy. The people are as hard-working as I've ever seen, and life wasn't so bad for the people who call this place home.

The slum is split up between the **industrial part** and the **residential part**.

The industrial part is chaotic, hot, dirty and smelly. There are over 7,000 different businesses and 15,000 single-room factories in the slum that are filled with thousands of citizens working their butt off without air conditioning. When I was walking through the industrial part, I only saw men. The most common businesses in the industrial part are pottery, leather, plastic and steel. But there are several smaller industries that reuse EVERYTHING to produce something else. I'm talking about every kind of material that you can think of is somehow reused in Dharavi. You know all of that waste that we throw away in the West? It all ends up in a place like Dharavi and reproduced into a new product. It was amazing to see this happening with my own two eyes. I'm not just talking about paper, plastic, leather, aluminum and glass. Those are the obvious things. I saw factories that were using parts of old-school cassette tapes from the 90s. I saw workers extracting pieces from beat-up VHS movie tapes (remember those). I even saw one entire factory that was dedicated to reusing the leftover bars of soap at hotels and remade into clothes. It was truly amazing to see how hard these people work, and how much they save from all of our waste.

The work environment for nearly all people is extremely hazardous and unsafe, which leads to diseases and fatalities. During the tour, they took us into a room where workers were burning coal over a running fire and I could hardly breathe; I had to stick my nose under my shirt to gasp

for air. It must have been 150 degrees Fahrenheit inside the room, and the workers didn't even wear a mask because they couldn't afford one. Their lungs must've been completely black. Perhaps the most unique characteristics of Dharavi is the extremely close work-place relationship. Every square inch of land is used to produce something. They don't waste any space. And all of the work is done by hand which is moving opposite of the hi-tech society that we live in today. It's almost like time doesn't pass in Dharavi. I picture the slum being the exact same 30-40 years ago.

The second part of the tour took us through the **residential part** of the slum. I learned that the residents of Dharavi are made up people from all over India, who migrated from rural regions as well as locals from the Maharashtra state. The entire residential area lacks any sort of infrastructure such as roads, public conveniences and toilets. It was, by far, the dirtiest and most hectic living conditions that I'd ever seen. The residential area is also the only place in Dharavi where I saw women, and most of them were housewives.

The housing areas were split by religion. All of the Islamic people conquered one area, while the Hindus has a different section and the Christians has their territory. The slum has numerous temples and churches to serve members of each religion in their respected areas. Each home and living area is extremely crowded and small. As I was peeking into houses, I saw some tiny rooms with up to 8 people living inside. The rooms were so tiny that when all 8 people were laying down side-by-side, their bodies were covering the entire width of the floor space. And nobody had any pillows, mattresses or blankets. No kitchens, living rooms, or toilets either. There is, on average, **1 toilet for every 1,450 people** living in the slum. To me, this is the craziest fact about Dharavi that really puts things into perspective. Most people use the alleys and the river as a toilet.

Our tour guide told us that about 90% of all housing units in Dharavi are illegal. There are hundreds of thousands of makeshift homes, that are so fragile that they can collapse at any time by the weight above it.

Nothing that I saw around the homes were clean. Pipes were broken and pouring dirty water into the kitchens and the streets. Kids were walking barefoot on top of dumpsters. Stray dogs and goats and cows were pooping on people's doorsteps. Mothers were doing laundry on the dusty sidewalks. People were drinking contaminated water. Everywhere.

But somehow, despite all of this, life in Dharavi just worked. And it worked well. It's hard for me to convince you that living in Dharavi isn't so bad for the people who live there. But it's true. The slum locals don't know any difference, because they've never seen the outside world. They only know and understand life in Dharavi. Once you see and experience the slum, and then you will understand what I'm talking about.

To be quite honest with you, if I was a poor person living in Mumbai, then I would definitely choose to live in Dharavi as opposed to any other slum. Especially in this expensive city and financial district of India, where rent prices are among the highest in the world. The rooms in Dharavi are

very cheap (as low as \$3USD per month) and each room is equipped with electricity and gas stoves for cooking – which are provided by the government. Many rooms have TV's as well. The slum is also centrally located in the city between Mumbai's two main suburban rail lines, so many people who live in Dharavi can easily commute to work. Our tour guide told us that 20% of Dharavi's population is made up of government officials like police officers and fire fighters, due to the affordability of homes. As for now, Dharavi will keep pumping on, producing things in bulk and establishing itself as the most productive slum in the world.

a. Complete the table below to summarise the social and economic opportunities in Dharavi.

Economic advantages	Social advantages

Challenges created by urban growth in an LIC: Mumbai, India

Complete the table adding the correct information about the following categories:

- *Growth of squatter settlements*
- *Clean water, sanitation systems and energy*
- *Access to services*
- *Unemployment and crime*
- *Environmental issues.*

Select a task to complete from the following:

- a) Describe the different challenges that Mumbai face. (4 marks)
- b) Explain why urban planners face challenges in Mumbai. (6 marks)
- c) Compare the different challenges Mumbai face. (6 marks)
- d) Evaluate the challenges Mumbai face. (9 marks)

Mumbai challenges

Challenge	Description	Main cause	Challenge: How will this change if growth continues?
Growth of squatter settlements			
Clean water, sanitation systems and energy			
Access to services			
Unemployment and crime			
Environmental issues			

Urban planning and management in an LIC – Improvements in Mumbai

Problem	Management Solutions	Impacts on Quality of Life	Challenge – Evaluate the management value
Transport & infrastructure			
Crime & safety			
Employment			
Water & sanitation			
Quality of housing			
Health & education			

CONDENSE A CASE STUDY OF A MAJOR CITY IN AN LIC OR NEE

My example: _____

Map showing the location of the major city (either a sketch map or a printed map).

Why is the city important? (You should discuss its importance within the country and within the world more broadly).

Which migration factors are contributing to the city's growth? (Push-pull factors, try to include statistics and place – specific detail).

How is natural increase contributing to the city's growth? (how and why has natural increase changed in recent decades).

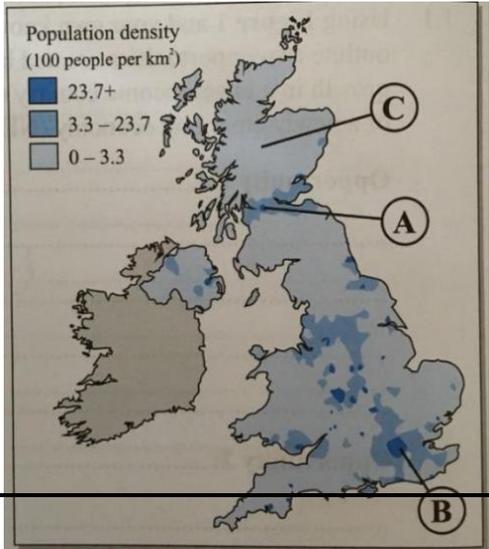
What are the opportunities resulting from urban growth? (social opportunities e.g access to services and resources + economic opportunities?)

What are the challenges resulting from urban growth? (managing urban growth, service and resource provision? Environmental, social and economic)

Key idea: Urban change in cities in the UK leads to a variety of social, economic and environmental opportunities and challenges.

Study **Figure 1**, a map showing the population density of the UK.

Describe population distribution in the UK.



Name the cities labelled **A** and **B** on the map, and state which countries each city is located in.

A: The city is _____ and is located in the country of _____

B: The city is _____ and is located in the country of _____

Suggest why the population density in areas **B** and **C** vary so much.

13. **ISSUE EVALUATION- MAKING LINKS BETWEEN TOPICS...** Think back to the 'physical' topics of paper 1 (e.g. River landscapes in the UK and Glacial landscapes in the UK). Which links can you draw between the issue of population density in the UK and the physical topics you've already studied? Make notes next to the dot points below. An example has been done for you.

- In Ecosystems I learnt that the south-east of England has a lot of lowland areas that are affected by development and population increases (e.g. marshland areas east of London and in East Anglia etc.). This links to urban growth and UK cities because it is the spread of people and industries that puts these ecosystems at risk.

Birmingham lies near the geographical centre of England and it is at the centre of the West Midlands conurbation. There have been and continue to be many opportunities for Birmingham to develop into a leading city within the UK and the wider world:

A Multicultural society

A rich cultural heritage and has seen the development of successful multi-cultural communities. Evidence of this can be seen throughout the city with ethnic restaurants and cultural events as well as in specific locations. One example of this is skill-related businesses in areas such as the Jewellery Quarter and the Polish Catholic Centre, built in Digbeth in 1947. Over the years migrants have added to Birmingham's growing prosperity and sense of tolerance and have helped to shape the city.

Birmingham grew as a free trade city and drew people from the surrounding areas. However, this city has continued to grow with people coming to the city to work, adding to the economic growth and cultural growth of this settlement. Over the years migrants have added to the city's growing prosperity and sense of tolerance that have helped to shape the city. As a result, Birmingham has grown to become one of the most **culturally diverse** cities in the UK. In 2015, the city had a population of 1.1 million drawn from 187 nations.

Immigration has had a profound impact upon Birmingham: an age profile which makes it Europe's 'youngest city'; it has one of the highest proportions of migrants from other parts of the UK and a significant proportion of foreign migrants from a range of countries; there are a wide range of socio-cultural and recreational/entertainment opportunities.

A Transport Hub with National and International links

Birmingham is a major transport hub. There are direct links to many cities in the UK. For example, New Street station is the busiest station outside of London (over 34 million people used the station in 2014); and Birmingham airport has become a major global communications hub (9 million customers in 2014) offers flights to a wide range of business and leisure destinations.

A Hive of Economic Activity

There are five universities in Birmingham and over 50,000 students. Birmingham is a young, dynamic city which offers a wide range of social and economic opportunities. It has the largest number of businesses and new business start-ups outside of London, offering a huge range of job opportunities, including retail, leisure and technology. There are around 31,000 companies in Birmingham, including 200 law firms and 50 major property services. Large employers include Jaguar Landrover, Deutsche Bank and the BBC. The excellent transport infrastructure with rail links to all major UK cities and an international airport puts Birmingham at the heart of the country.

Not only is Birmingham a great place to learn and work, it also is a great place to live. In addition there are a wide range of sporting and music venues. A number of the old, city centre areas have now been regenerated. The city has the most Michelin starred restaurants outside of London offering cuisines from around the world.

A CASE STUDY OF A MAJOR CITY IN THE UK

My example: _____

<p>Identify the location of the major UK city on the map.</p>	<p>Why is the city important? (You should discuss its importance within the UK and the wider world.)</p>
<p>What are the impacts of <u>national and international migration</u> on the growth of the city? (Try to use statistics.)</p>	<p>What are the impacts of <u>national and international migration</u> on the character of the city?</p>
<p>What are the opportunities resulting from the urban growth? (e.g. <u>soc/ec opps</u> such as cultural mix, recreation and entertainment, employment, integrated transport systems, and <u>environmental opps</u> like urban greening?)</p>	<p>What are the challenges resulting from the urban growth? (<u>soc/ec</u> e.g. urban deprivation & inequalities; <u>environmental</u> e.g. dereliction, waste disposal; and the impact of urban sprawl etc.)</p>

15. **Outline** some of the problems experienced by the environment as a result of the growth of commuter settlements.

Importance of Birmingham, a city within a HIC (High Income Country)

Key Questions:

Why are people migrating to Birmingham?

How has migration shaped the character of Birmingham?

Key facts

- Nearly 35 million people visited Birmingham in 2015.
- Visitors to Birmingham brought in over £35 billion.
- Over 60,000 people work in the leisure and tourism industry in Birmingham.
- The number of visitors to Birmingham from south-east Asia has risen rapidly in the last 10 years.

Watch the video about types of people that have migrated to Birmingham

<https://www.youtube.com/watch?v=9ymaW6x1kEA>

a) Which groups of people have migrated to Birmingham?

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b) Why have they migrated to this city?

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c) What role does Birmingham play as a transport hub?

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d) How does transport allow the city of Birmingham to grow both nationally and internationally?

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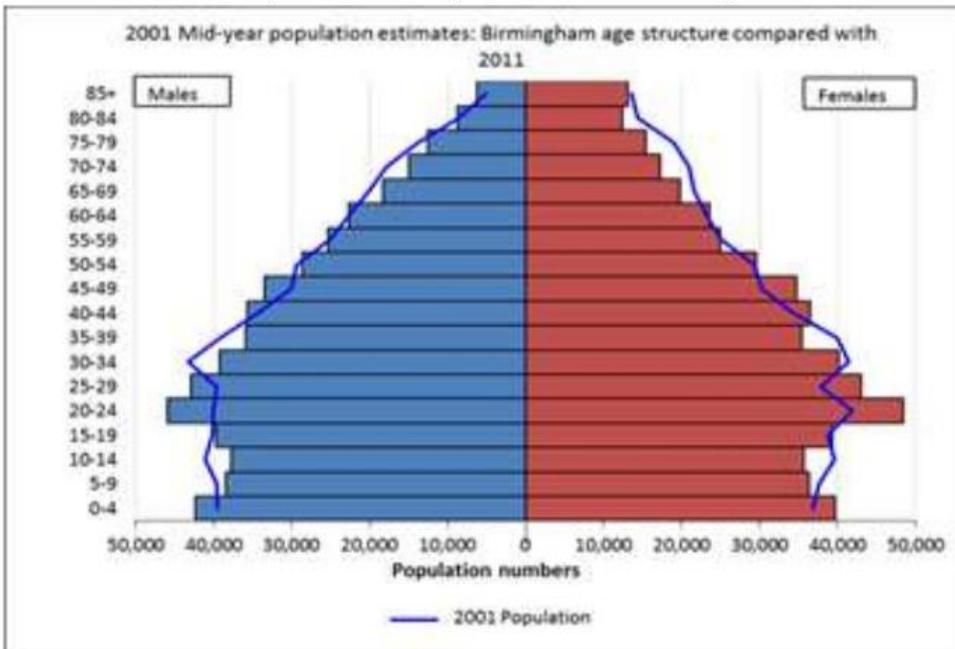
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Study the population pyramid for Birmingham.

Population Pyramid - Birmingham



a) What is the main age group of people living in Birmingham? Why is this group higher than younger age bands?

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b) Why do you think there is a high percentage of elderly people in Birmingham?

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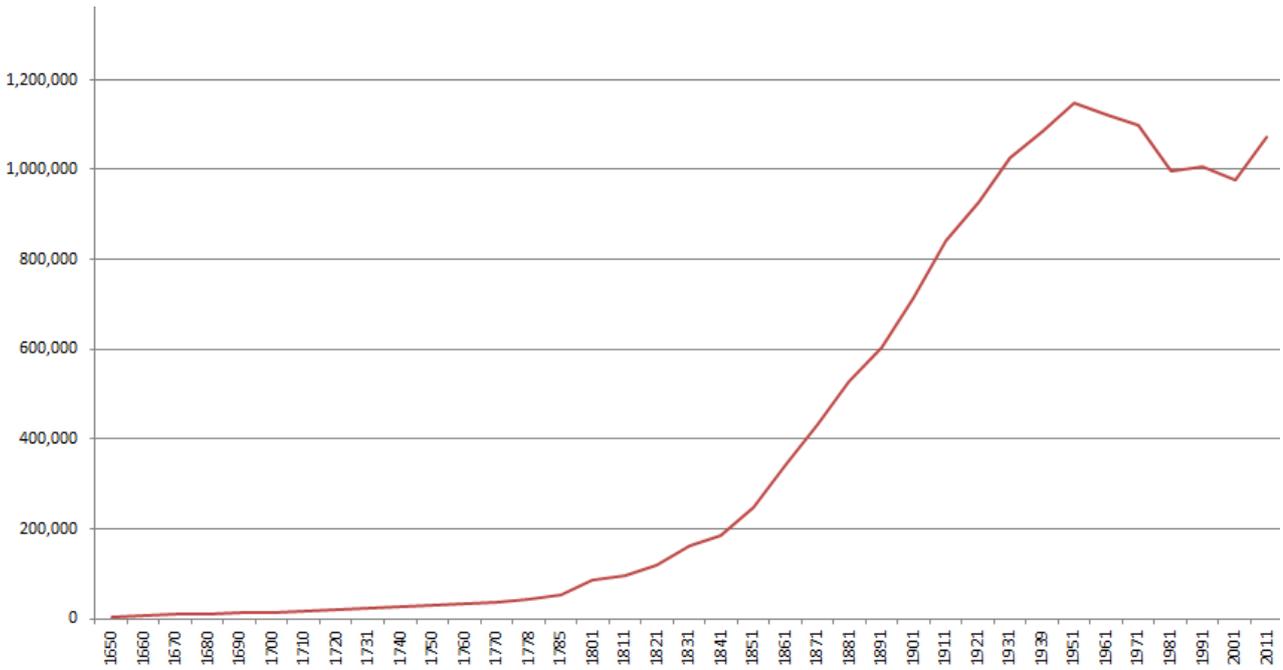
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1. Study the line graph on the next page.
A graph to show the changes in population in Birmingham (1650-2011)



a) Describe the changes in population between 1650- 2011.

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b) Give reasons for the changes in population.

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c) What has happened to the population of Birmingham between 2001 and 2011?

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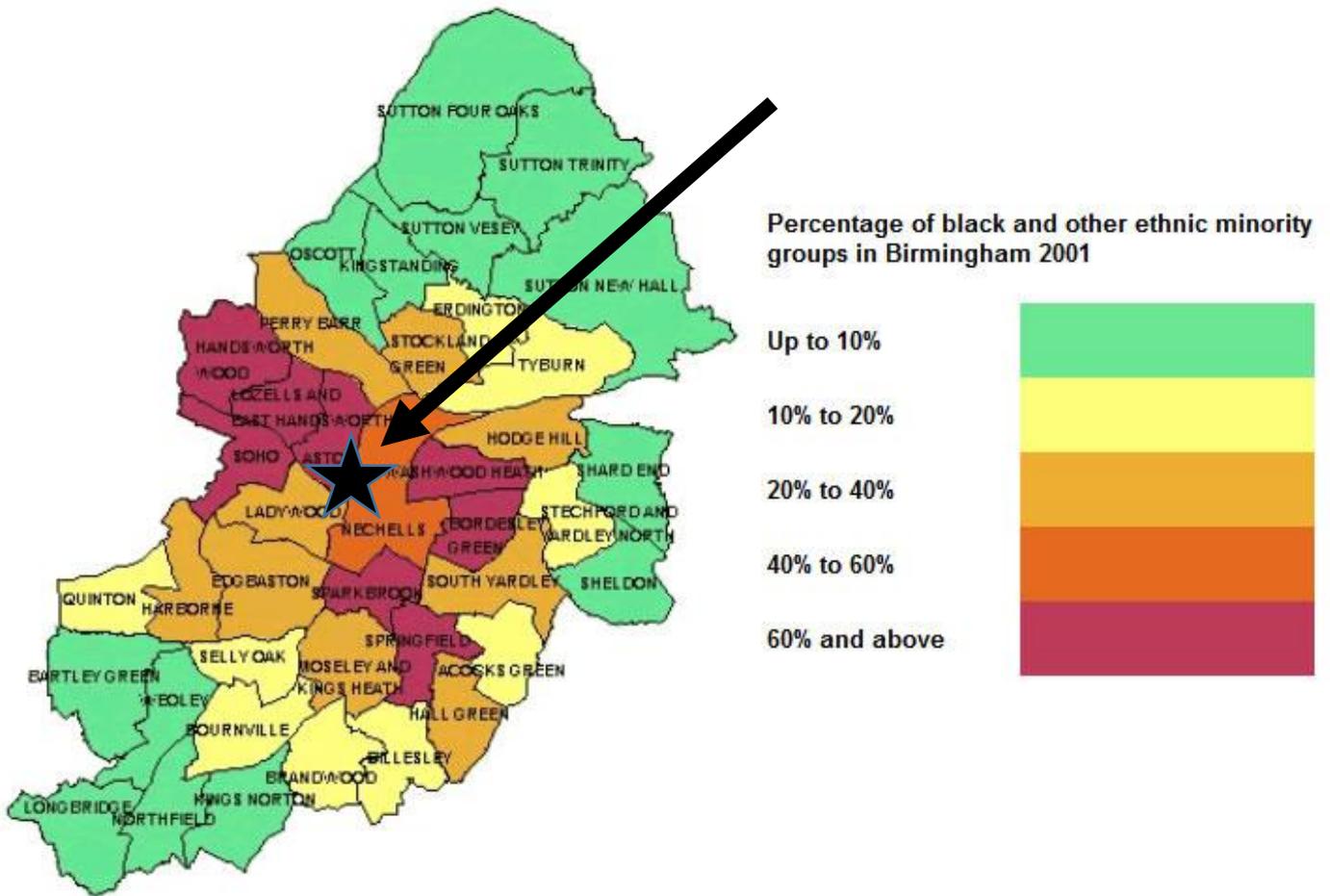
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Study the choropleth map of Birmingham, see next page

A choropleth map to show the percentage of black and or ethnic minority groups in Birmingham, 2001.



a) Describe the distribution of black and other ethnic minority groups in Birmingham.

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b) Why are black and other ethnic minority groups more concentrated in the wards nearest Birmingham city?

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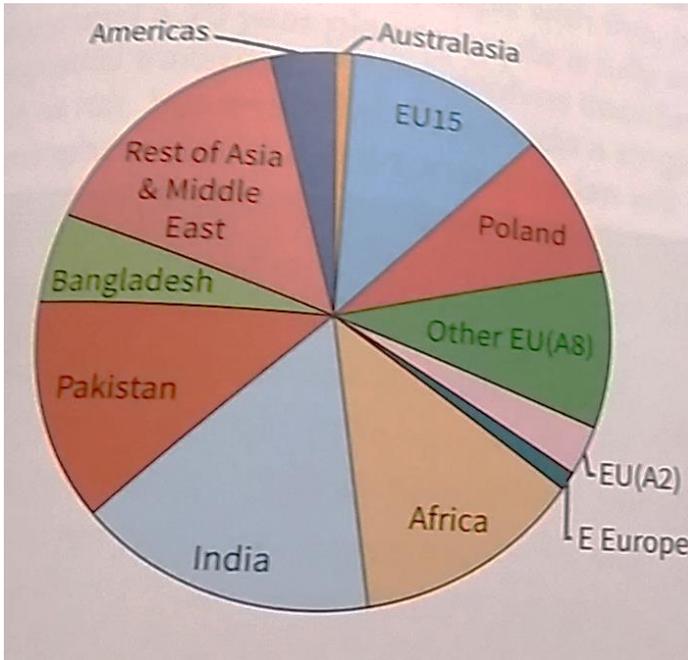
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Study the pie chart. It outlines the origin of migrants to Birmingham.



European Union (EU) included first 15 member states

Other EU (AS) includes tahtes that joined EU in 2004 except Portugal

E. Europe includes all other European states including Russia & Turkey, in south-eastern Europe and Asia

Rest of Asia and Middle East includes all countries in Asia, except India, Pakistan and Bangladesh

EU(A2) Bulgaria and Romania.

a) Describe the origin of migrants to Birmingham.

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b) Why do people leave their places of origin. (Push factors)

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c) Why do people move to Birmingham? (Pull factors)

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d) What benefits do migrants bring to Birmingham?

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Growth and character of Birmingham (Migration)

Read through the following information and complete activities 1-3.

Birmingham – Impacts of National and International Migration

Birmingham is one of the most culturally diverse cities in the UK. In 2015, the city had a population of 1.1 million drawn from 187 nations. Birmingham has:

- An age profile which makes it Europe's 'youngest city'.
- One of the highest proportions of migrants from other parts of the UK.
- A significant proportion of foreign migrants from a wide range of countries
- A wide range of socio-cultural and recreational/entertainment opportunities.

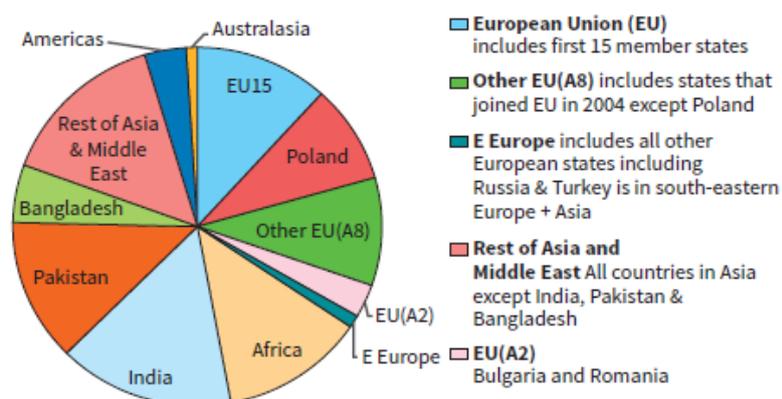


Figure 11.16 Pie chart showing the country of origin of immigrants in Birmingham in 2009.

Migration

Birmingham grew as a free-trade city and drew in people from surrounding countryside, nearby cities and increasingly further afield. Migrants continue to come to the city to work and add to the economic and cultural growth of the city.

Birmingham has become home to many people fleeing persecution and conflict over the last 200 years. Jewish people fled persecution in Tsarist Russia in the late 19th century, and again fled the Nazi holocaust in the 1930s. The first Jewish migrants like many refugees relied on personal resources and mutual support: they survived by street selling and small-scale trading but over time a more prosperous community developed which contributed to and benefited from Birmingham's growing prosperity and increasing toleration. Jewish and Polish refugees arrived in Birmingham before and during the 2nd world war with Germany. Many had faced internment and extraordinary journeys before arriving in England. The Polish Catholic Association was formed in 1947 and built a Centre from individual contributions which stands in Digbeth today. Since 1990 the pace of migration changed and people fleeing conflict and persecution in Africa and Asia were more likely to reach Europe. Today refugees have endured persecution, torture, and imprisonment because of conflict in their home country. They come from Sudan, Ethiopia, Iraq, Iran, Afghanistan, Somalia,

The specification says that you need to use **'an example of an urban regeneration project'** to show reasons for regeneration and the features of the project. Make sure your example is based in the UK.



18.

Birmingham City Masterplan 2010

1. Watch the following clip to visualise Birmingham's City Masterplan: <https://youtu.be/6fh7JB-LwCQ>

Aim: To create a world class city.

- To expand the city core area by over 25%.
- To bring £2.1 billion to the economy each year.
- To create 50,000 new jobs
- To provide over 1.5 million square metres of new floorspace.

Identified five areas for regeneration, the Big City Plan

- £600 million to transform **Birmingham New Street Station** in the centre to support wider regeneration. It includes improving the physical environment of the area, a large concourse with more commercial facilities and a new John Lewis store creating 650 jobs.
- **Westside** area developed to include mixed-use office/commercial space, a new library of Birmingham and a 4* hotel with 250 bedrooms.
- **Snow Hill**, area to the north, has been redeveloped by improving public spaces and transport links, building up to 4000 new homes, creation of 10,000 jobs and provision of 200,000 m² office space.
- **Eastside (Curzon Street)** area will be redeveloped as the HS2 (High Speed 2) station will be built. Birmingham City University will be redeveloped along with a city park and recreational facilities, 2000 new homes and a 600,000 m² new business space will be developed, and over 30,000 jobs will be created.
- A £1 billion mixed land use regeneration project will be developed at **Southern Gateway**. This will include the development of retail markets, 1000 new homes, city centre park/walkways, leisure/recreation facilities and creation of 3000 jobs.

Longbridge Regeneration Plan

2. Watch the following clip to learn about 'The Longbridge Regeneration Plan':

<https://youtu.be/zxCWbLB8UNg>

- a) Which car manufacture plant was located on the site? _____
- b) When did the car factory at Longbridge close? _____
- c) How many people were made unemployed? _____
- d) How many people were employed in 1965? _____
- e) How many people are employed today? _____
- f) What does the new development include?
 - i. A technology park, including an _____ centre suited to small technology businesses, for example, _____ website design company
 - ii. A £70 million town centre with a number of large stores, including _____ and _____

- iii. A £66 million learning facility/College, _____
- iv. _____ new homes suited to different age ranges
- v. Hotel and leisure developments, including restaurants and cafes
- vi. Large industrial distribution centre buildings (warehouses), within easy read of the local rail networks.
- vii. The creation of _____ new jobs as a result of the redevelopment.

Summary

1. Why are regeneration projects needed in some areas?

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2. Why are regeneration projects called 'mixed-use' projects?

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3. Suggest why planners are trying to encourage people to live in city centres?

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Complete the template below to help you remember your urban regeneration project example.

AN EXAMPLE OF AN URBAN REGENERATION PROJECT	
My example: _____	
Why did the area need regeneration? (Try to identify soc/ec/en issues and include statistics.)	What did the project involve?

Key idea: Urban sustainability requires management of resources and transport.

Read through article on HS2 and answer the questions.

Birmingham to invest £900m in HS2 regeneration

14 SEPTEMBER 2016



The plan for the new Curzon Street HS2 station

Birmingham is ploughing almost £1bn into regenerating the area around the planned HS2 Curzon Street Station, in a scheme that will create 4,000 homes. It is the first time that a local authority has used the arrival of HS2 to push forward regeneration. The Curzon Investment Plan will take place over 30 years, and will lead to the creation of several new neighbourhoods across 141 hectares, 36,000 jobs, as well as the development of the new Curzon Street HS2 Station.

Sustainable development -

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How can we create sustainable cities?

Complete the next page using the information sheets around the room. Add as much detail, including real-life examples, as you can.

Conserving the Historic Environment.

HOW are old buildings conserved? Some examples are...

Reducing and safely disposing of waste.

HOW: YOU, local and national solutions.



Sustainable city – an urban area where local people have a way of life that will last a long time. The environment is not damaged and the economic and social fabric are able to stand the test of time.

Providing an efficient public transport system and involving local people.

HOW to get people to use the bus': why are local people so important?

Providing open spaces.

HOW to do this Green belt; urban sprawl; national park; brownfield site. What are they? How do they provide urban spaces.

Sustainable city: Curitiba, Brazil (LIC)

Watch the clip and read the information on the following page:

<https://www.youtube.com/watch?v=ClqWDaZeajY>

1. Define sustainable urban living.

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2. Why is including local people important in achieving sustainable urban living?

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3. Describe five ways in which a city can be made sustainable.

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4. How does Curitiba achieve sustainable urban living?

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5. How is Curitiba reducing car use?

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6. How is Curitiba increasing open space?

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7. How is Curitiba increasing recycling?

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8. Describe how Curitiba is achieving sustainability?

Socially:

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Economically:

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Environmentally:

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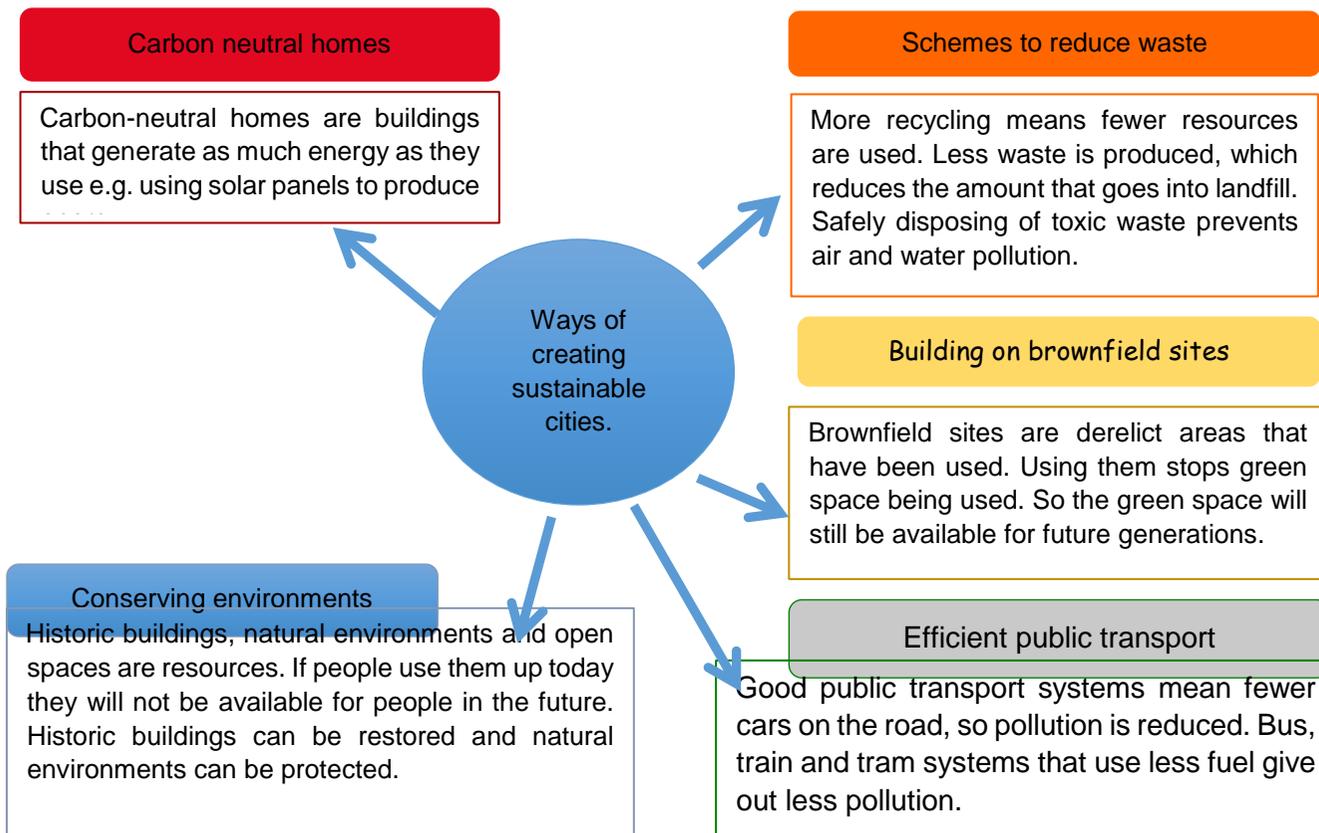
Sustainable cities

Urban areas need to become more sustainable.

Sustainable living means allowing the people living now have the things they need without reducing the ability of people in the future to meet their needs.

Basically it means behaving in a way that does not irreversibly damage the environment or use up resources faster than they can be replaced.

Big cities need so many resources that it is unlikely that they would be truly ever sustainable. But things can be done to make them more sustainable. Involving local people in the schemes means that they are much more likely to succeed.



Where?

Curitiba is a city in southern Brazil.

What?

The overall aims of its planners are to improve the environment, reduce pollution and waste, and improve the quality of life of residents.

How?

The city has a budget of \$600 million to spend every year. Curitiba is moving towards sustainability in different ways:

1. Reducing car use

There is a good bus system, used by more than 1.4m a day. The same cheap fare is paid for all journeys helping poorer residents.

There are over 200km of bike paths in the city.

The bus system and bike paths are so popular that car use is 25% than the national average. The city has one of the lowest air pollution levels in Brazil.

2. Plenty of open spaces and conserved natural environments

Green space increased from 0.5m squared per person to 52m squared per person.

It has over 1000 parks and natural areas. Many of these are in areas prone to flooding so the land remains useful.

Residents have planted 1.5m trees.

Builders get tax breaks if their projects include green space.

3. Good recycling schemes

70% of rubbish is recycled. Paper recycling saves 1200 trees per day.

Residents are given food and bus tickets for recycling in areas where rubbish collection is difficult.

Why?

Curitiba has been very successful in its aim to be sustainable.

The reduction in car use has created less pollution. Green space means that people in the future will still have them.

The higher level of recycling uses less resources. The city is a nice place to live 99% of the residents say they are happy.

9. How successful has Curitiba been in achieving sustainable urban living?

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Sustainable Cities: BEDZED

‘Sustainable communities are places where people want to live and work, now and in the future. They meet the diverse needs of existing and future residents, are sensitive to their environment, and contribute to a high quality of life. They are safe and inclusive, well planned, built and run, and offer equality of opportunity and good services for all.’

1. Can you reduce this definition into a) 10 words? b) 5 words?

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Beddington Zero Energy Development (BedZED) is an environmentally friendly development in Hackbridge, London, England. It is in the London Borough of Sutton, 2 miles (3 km) north-east of the town of Sutton.

The aims of the BedZED development were:

- No use of fossil fuels
- 50% reduction of the energies used for transport
- 60% reduction of the domestic energy compared to the average British households
- 90% reduction of the heating needs
- Usage of renewable energies
- 30% reduction of water consumption
- Reduce waste and encourage recycling
- Use construction materials from local providers (located within less than a 60 km radius)

- Development of local resources (farmer network for local food)
- Develop biodiversity in the natural areas

BedZED claims to be the UK's largest sustainable community. Built in 2002, it has 82 homes designed to provide ordinary people with a high quality of life while living within their share of the earth's resources. It was built on a brownfield site on previously industrial land. Fifty per cent of houses are for private sale or rent, 25% for shared ownership and 25% social housing for rent.

In a BedZED home, energy use for heating and hot water is reduced 81% by simple things like south-facing windows and triple glazing. Electricity consumption is reduced 45% by low-energy lighting and appliances

BedZED walls are thicker than average, with insulation between the bricks to prevent energy loss. The building materials have used less energy to make and, where possible, are locally produced.

A distinctive feature of the buildings is the wind cowls on the roofs. These cowls ventilate the houses and recover heat from the air coming out. The roofs are covered by solar panels (to generate electricity) and plants (for insulation and a habitat for wildlife).

People separate their waste in their kitchens to make recycling and composting easier. Sixty per cent of waste is recycled, three times the UK average. Residents encourage each other to recycle.

BedZED has a green transport plan to reduce car mileage. There is a car-sharing club and electric car charging points. Good public transport links and cycle storage spaces are also provided.

Attitudes towards BedZed

Watch the following video clips and explain how BedZED;

<https://www.youtube.com/watch?v=FWHQVGZPFZI>

1. ...caters for 3 different groups of people

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2. ...reduces carbon emissions

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3. ...reduces people's use of cars

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4. ...also has disadvantages

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Traffic Management Strategies

Key Questions

- What are the main problems due to traffic congestion?
- What strategies can be used to reduce traffic congestion?
- Which strategies are the most appropriate for a HIC?

1. What problems do you think occur due to traffic congestion? Categorise your ideas into social, economic and environmental

Social	Economic	Environment

2. Why is the CBD the most congested part of a city?

3. How can the impacts of traffic be reduced?

Solutions to reduce road traffic

Solution	Carrot/Stick approach	Description of the strategy	Advantage(s)	Disadvantage(s)	Rank 1 (best) to 8 (worst)
Ring road					
Boris Bikes					
Congestion Charge					
Parking Permits					
Pedestrianised streets					
Park and Ride					
Cycle Lanes					

Traffic management strategies from around the world

Greater Manchester

Problem

65% of journey times to work are by car. However, during morning rush hour, 61% of journeys are made by public transport rather than by using a car.

What have they done?

1. Metro from Sale and Altrincham in the South to Manchester City Centre – trams are a sustainable method of travel that encourages cleaner and healthier towns and cities. They are relatively quiet as they are powered by electricity, and the 'trams' improve air quality as they emit no local air pollution.
2. Currently 25,000 people choose to cycle to work
3. 'Vantage' hybrid buses transport passengers from the Tyldesley and Walkden to the city centre from the West of the city. They are low carbon emitting buses.
4. A new electric vehicle charging point network and pay as you go programme has been installed with over 250 charging bays installed at key locations.

Successes?

Transport is still responsible for 27% of direct CO₂ emissions and it is a significant contributor to poor air quality, which indicators show may be worsening in some areas.

Freiburg	Beijing	Singapore
What have they done?	What have they done?	What have they done?
Successes?	Successes?	Successes?

Strategy	Sustainable (S) or Unsustainable (U)	Reason/s
City A has rapidly growing water needs. The government decides to transport water from the sparsely populated farming regions to use in the densely populated south.		
City B has rapidly growing water needs. The government offer subsidies so that people and councils that install rainwater tanks do not have to pay the full cost of installation.		
The population of City C generates a lot of waste. The government decides to build three new recycling plants to turn the waste into new products.		
One of the councils in City D has approved the building of a business centre on one of its main parks. It'll generate many jobs, but it will remove children's play areas and habitats for urban wildlife.		

20. Select one of the strategies to the right and **assess** the contribution that it can make towards sustainable urban living.

