

## **Chapter 4: Urban Issues and Challenges**

- 4.1 Global patterns of urban change
- 4.2 Factors affecting the rate of urbanisation and the emergence of mega-cities.
- 4.3 MUMBAI CASE STUDY: a major city in an LIC or NEE showing:**
  - 4.3.1 The location and importance of the city, both nationally and internationally
  - 4.3.2 Causes of growth: natural increase and migration
  - 4.3.3 Opportunities: Social AND economic
  - 4.3.4 Challenges: Social, economic AND environmental
  - 4.3.5 An example of how urban planning is improving the quality of life for the urban poor.
- 4.4 Overview of the distribution of population and the major cities in the UK.
- 4.5 LONDON case study of a major city in the UK showing:**
  - 4.5.1 The location and importance of the city in the UK and the wider world
  - 4.5.2 Impacts of national and international migration
  - 4.5.3 Opportunities: Social, economic and environmental
  - 4.5.4 Challenges: Social, economic and environmental
  - 4.5.5 An urban regeneration project – the London Olympic site
- 4.6 Features of sustainable urban living
- 4.7 Urban transport strategies: The Tyne and Wear Metro

## 4.1 The global pattern of urban change. Urban trends in different parts of the world.

Urbanisation is defined as the "**increasing proportion of people living in built environments such as towns and cities**".

The word **proportion** in this definition is very important, because it indicates that we must judge urbanisation by looking at both the numbers of people living in both rural AND urban areas. For the first time ever in the history of mankind it is now estimated that more people now live in towns and cities than in rural areas.



Figure 1 - Greater Tokyo, one of the World's great urban areas. By Chris 73 via Wikimedia Commons

### Key words

**Low income country (LIC) and high income country (HIC)** - This subdivision of countries is based on the World Bank income classifications (GNI per capita), which in 2013 were Low Income \$1,045 or below, and High Income \$12,746 or above.

**Newly emerging economies (NEEs)** - Countries that have begun to experience high rates of economic development, usually with rapid industrialisation. They differ from LICs in that they no longer rely primarily on agriculture, have made gains in infrastructure and industrial growth, and are experiencing increasing incomes and high levels of investment. E.g. Brazil, Russia, China and South Africa (the so-called BRICS countries).

**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.

### World Urbanisation rates in 2011 according to the UN.

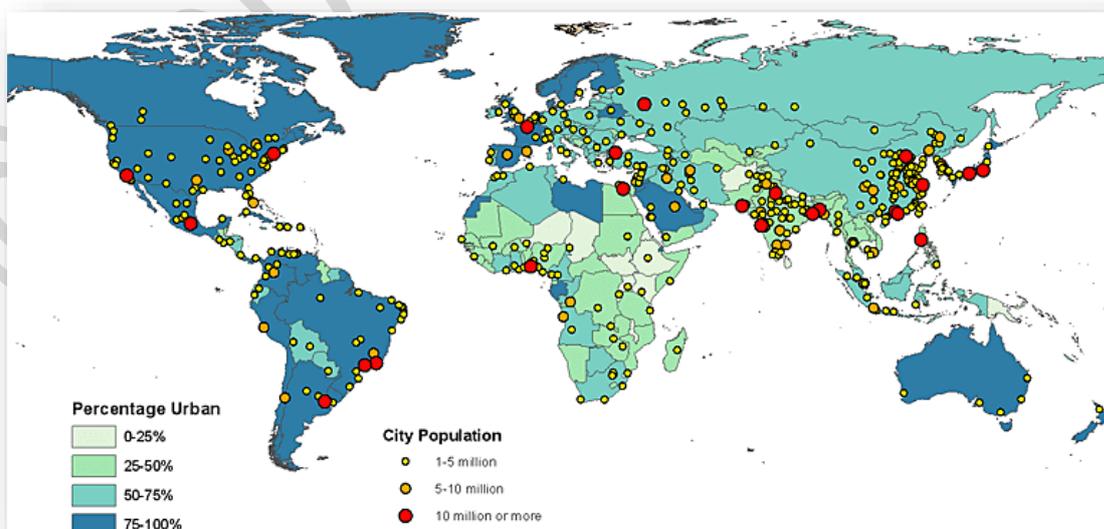


Figure 2 Image courtesy of United Nations

## PATTERNS in urbanisation

1. HICs were the first to urbanise, and generally have the largest proportion of their population living in towns and cities.
2. LICs currently have lower amounts of urbanisation, but are urbanising rapidly. Megacities, cities with over 10 million people, are almost exclusively in poorer nations.
3. Cities of World importance for commerce and trade are dominantly in HICs, regardless of size. World cities include Tokyo, London and New York.
4. Many old colonies (e.g. in South America) have high percentages of urbanisation as the colonising countries such as France and the UK favoured city growth to help administration
5. Asia has the highest number of Megacities

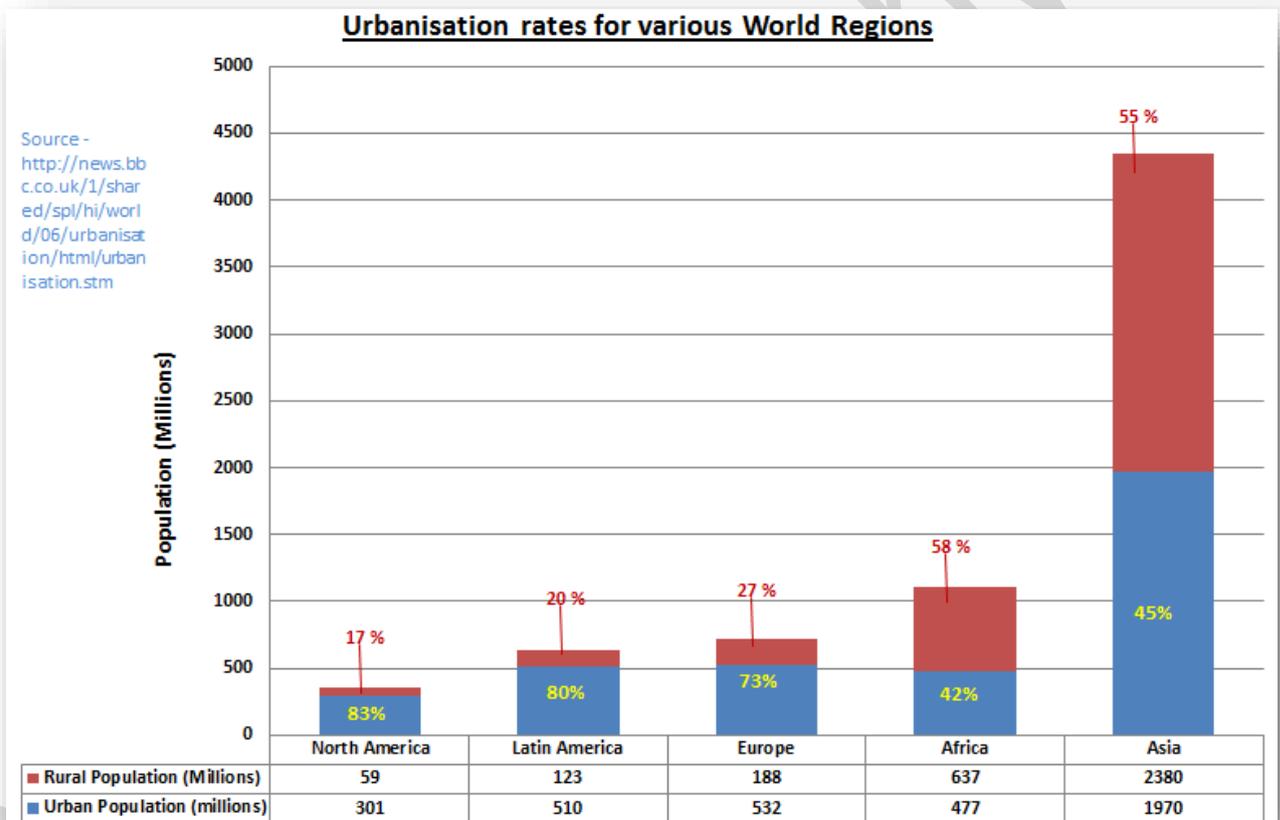
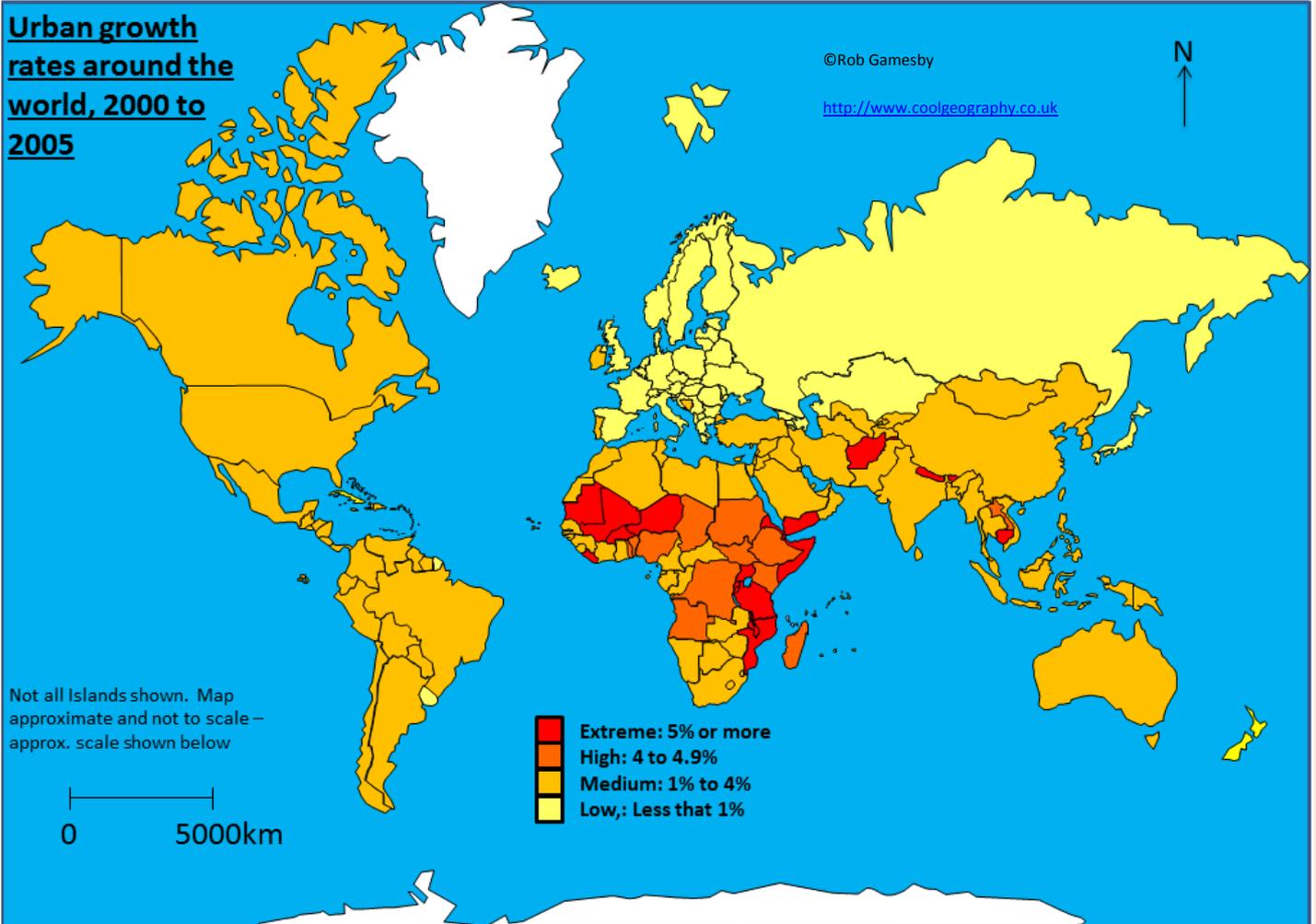


Figure 3 - World urbanisation rates

The graph shows the differences in urbanisation for various regions. Despite Asia's lower percentage of urbanisation it has a far greater number of people living in towns and cities than any other world region.

**ACTIVITIES 4.1****Study the map below on rates of Urbanisation growth**

Draw the table below. Use the map and key to complete the table

Continental area	South America	North America	Western Europe	Sub Saharan Africa	South East Asia
Average Rate of growth					

Explain the patterns on the map. Ensure that you include one area of low growth and one area of high/extreme growth.

## 4.2 Factors affecting the rate of urbanisation and the emergence of mega-cities.

Urbanisation levels are affected by 2 things – Migration and Natural increase

### FACTOR 1 - MIGRATION

**Migration** is the movement of population from one area to another. Some migrations are forced, voluntary, permanent and temporary, International and regional. The type of migration that we are principally interested in is **Rural to urban migration**, which is the **movement of people from countryside to city areas**.

This type of migration happened in HICs from the 18th Century onwards on a large scale, and has gradually slowed down. In fact in many HICs the movement of people has reversed, and people are moving from urban areas back into the countryside as they search for the quiet life (this is known as **counter-urbanisation**).

However, many LICs are experiencing massive rural to urban migration, mainly of young males, into the major cities. The major reasons for this movement can be classified **into** push and pull factors.

A **Push factor** is something that can **force or encourage people to move away** from an area. Push factors can include famine (as in Ethiopia in the 1980s), drought, flooding (as in Bangladesh, where people are becoming climate change refugees and having to move to Dhaka), a lack of employment opportunities, population growth and over population, and civil war (as in Darfur at the moment).

A **Pull factor** is one in which **encourages people to move to** an area. Pull factors include the chance of a better job, better access to education and services, and a higher standard of living.

These factors have contributed to millions of people in LICs moving to cities, creating mass URBANISATION.

### FACTOR 2 – NATURAL INCREASE

Natural Increase also has a major effect on rates of urbanisation. During the initial urbanisation phase natural increase in poorer parts of the world can increase as Death Rates fall in cities as people have;

- Better access to medical care
- Improved water supplies
- Improved sanitary conditions
- Improved wealth so improved food supply

#### Key words

**Mega-cities** - An urban area with a total population in excess of ten million people.

**Migration** - When people move from one area to another. In many LICs people move from rural to urban areas (rural-urban migration).

**Natural increase** – when birth rates are above death rates and the population increases

Whilst Birth rates take longer to fall and indeed more babies survive as infant mortality falls in cities. Also, young people move to towns and cities, which also boost the birth rate. These combined factors can fuel the rate of urbanisation.

## MEGACITIES

These 2 factors have pushed world urbanisation above 50% and have led to the emergence of hundreds of Megacities. **Megacities** are those cities that have a population **above 10 million**.

These cities have sprung up around the globe but it is clear that in recent history most of them can be found in ASIA, whereas the biggest cities used to be in Europe and North America. These cities have their own unique set of environmental, social and economic challenges, due to their sheer size and scale, and the RAPIDITY of the GROWTH. Mumbai is an example of a megacity.

### 4.3 Mumbai – a case study of a major city in a LIC or NEE

#### 4.3.1 The location and importance of the city, both nationally and internationally

Mumbai can be found in Maharashtra state in the West of India. It is not the most populous of Indian cities but it is one of the most important economically and culturally. Mumbai is a **MEGACITY**, with a population of **over 12 million** people!

Its **Geographic location** (see map) is very significant, as it is on a major **shipping route** through the Mediterranean Sea via the Suez Canal, along with other shipping routes. It also has a major airport and is connected to other Indian cities via railway and road links.



Figure 4 the location of Mumbai

#### Key words

**Economic opportunities** - Chances for people to improve their standard of living through employment.

**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.

**Informal economy** - This type of employment comprises work done without the official knowledge of the government and therefore without paying taxes. It is common in many LICs.

**Social opportunities** - Chances for people to improve their quality of life, for instance access to education and health care.

**Squatter settlement** - An area of poor-quality housing, lacking in amenities such as water supply, sewerage and electricity, which often develops spontaneously and illegally in a city in an LIC.

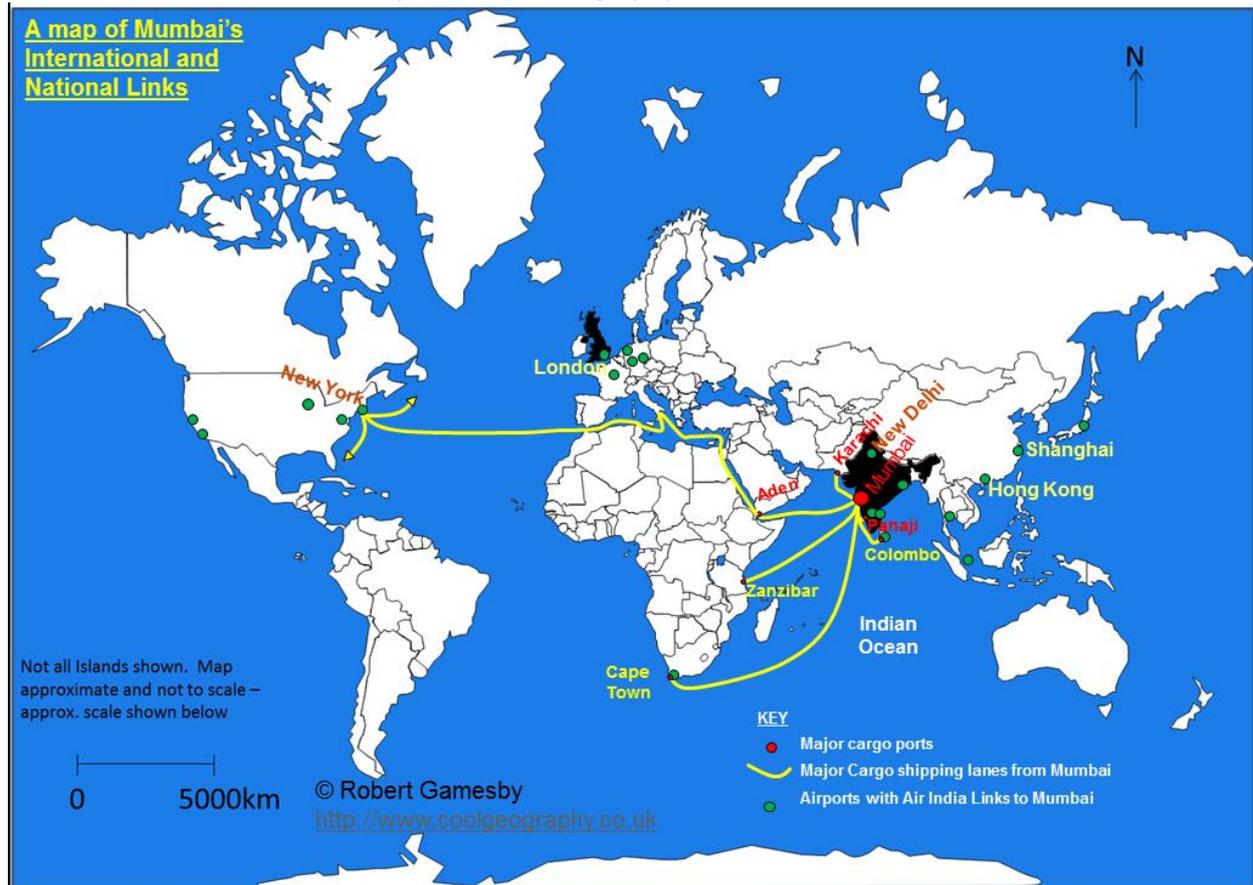


Figure 5 - Mumbai's international links

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 also 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.

#### **ACTIVITIES 4.3.1**

- Using page 8 define the following terms:
  - Migration
  - Push Factor
  - Pull Factor
  - Natural Increase
- How do migration and natural increase affect the population size of cities?
- Use the information from the past 2 pages to rank the factors about how Mumbai has grown into an order of importance. Give reasons for your ranking

	Rank out of 6
Location in West of India	
Shipping routes	
Location as a port	
Entertainment and fashion industries	
Foreign companies	
Location of Indian Banks	

### 4.3.2 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.

**Table 4.3.2** – Contrasts between Mumbai and Maharashtra state

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

### The Location of Mumbai in India

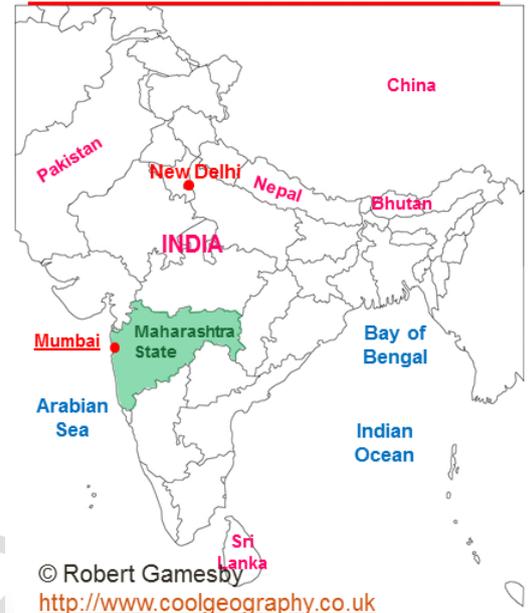


Figure 6 - The location of Mumbai in India

### POPULATION GROWTH

The population of the city has increased incredibly, as can be seen on the graph below. The issue that Mumbai has is that despite its incredible wealth by Indian standards, it still has a huge number of people living in shanty towns or slums, together with all of the associated environmental and social problems these areas have.

### CAUSES OF GROWTH

- Migration - 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

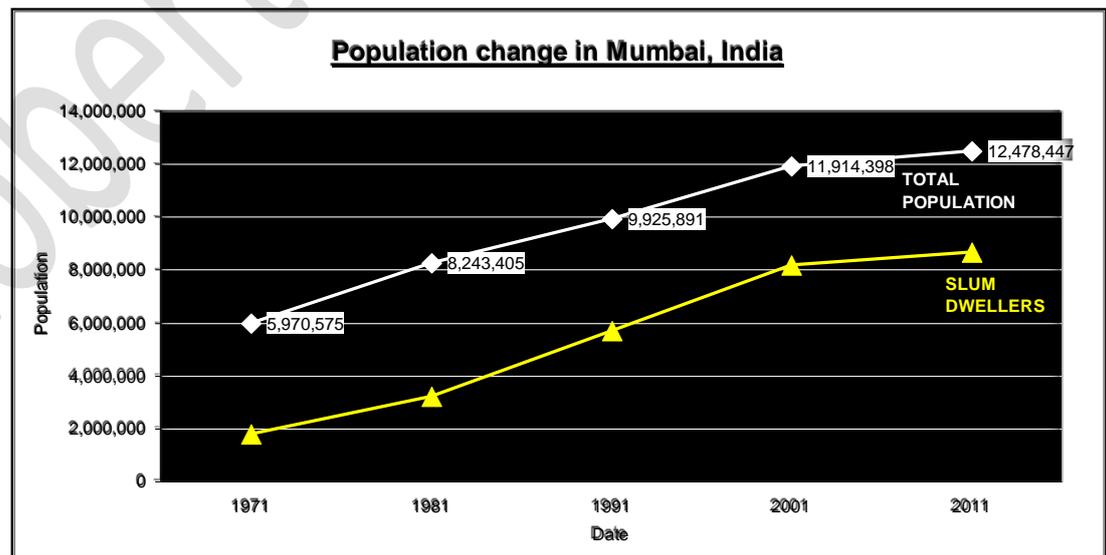


Figure 7 - population growth in Mumbai

<http://www.coolgeography.co.uk> GCSE e-book

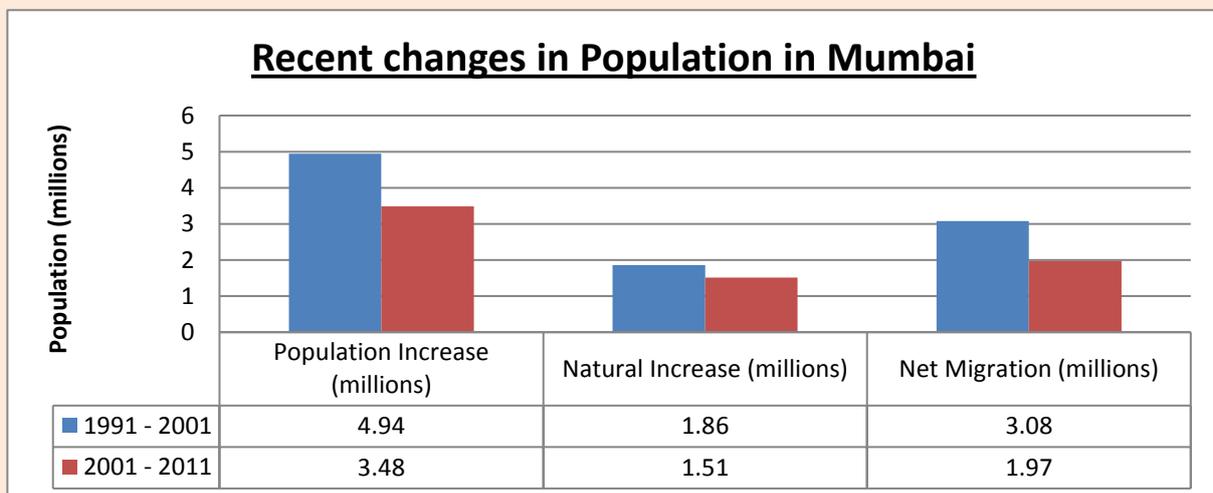
as they are totally dependent on their crops. In bad years, they can end up forced to sell up and have to migrate. In Mumbai there are job opportunities in service industries and the manufacturing industries which pay higher wages. There are also more schools, health care facilities and entertainments in Mumbai than other parts of Maharashtra state.

2. **Natural increase** – although less significant than migration in Mumbai's case (see graph below), the population of Mumbai is also increasing naturally, with significantly more births than deaths (due to high birth rates) every year.

### ACTIVITIES 4.3.2

Look at table 4.3.2 on page 11 –

1. What factors would attract migrants to Mumbai and why?
2. Which factors might stop or deter people from moving?
3. Study the graph below on causes of urban growth in Mumbai



4. Describe the patterns on the graph
5. Which factor is most important in the growth of Mumbai?
6. What has happened to the growth of Mumbai over time?

### 4.3.3 The Social and Economic Opportunities of living in Mumbai

People have moved to Mumbai because large cities like Mumbai offer more opportunities to people than rural areas can. Cities benefit from **ECONOMIES of SCALE** – it is easier and cheaper to provide the services people desire when there are lots of people.

#### Social Opportunities

These are opportunities that help people in some way or other, Mumbai offers many opportunities to people via access to various public and private services;

**Health care** – we often take health care for granted in the UK, with our free at the point of use NHS, but access to quality healthcare matters to many people. In cities like Mumbai people have easier access to a **wider range of medical services** including doctors, hospitals and nurses. Even the poor have access to basic medical services that they either would not have in the rural areas or would have to travel very long distances for.

**Education** – this is another free at the point of use service in the UK, but education is truly life changing and often taken for granted. Not in poor countries, migrants often move to cities to **have access to schools** for their children, so that their children have a much better chance in life than themselves.

**Water supply** – This is variable in Mumbai, and in Dharavi slum the water pipes are only in use 2 hours a day and there are queues for this water. However, this is **clean drinking water**, which is often not available in poorer rural areas or involves a time-consuming labour-intensive walk for (mainly) women to the local well. Having access to clean water that does not transmit parasites or cause cholera is another opportunity provided by living in an urban megacity like Mumbai.

**Energy** – some remote parts of India still have no electricity, whilst living in a large city like Mumbai allows people to live with all of the **benefits of energy and electricity**. This is another opportunity or pull factor, think of all of the opportunities that having regular energy supply offers to people.

#### Economic opportunities

The major pull factor of a city like Mumbai, like cities in LICs and NEEs across the globe, is the **opportunity for employment**. Most people around the globe want the chance to work, earn a living and provide a decent life for themselves and their families. Mumbai offers a huge range of job opportunities from the hugely attractive and often unobtainable like working for a major financial institution like a bank or in the Bollywood film industry, to the most basic such as rag pickers (people who sift through rubbish to find items of any worth).

Mumbai has many job opportunities because it alone accounts for 6% of India's GDP and 40% of its foreign trade. It is also a manufacturing hub which creates a lot of jobs, 25% of India's industrial production is in Mumbai. The port area also creates a lot of valuable jobs.

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 center of the Indian economy.



Figure 8 - the informal industry in Pondicherry, India

### The formal and informal economy

Many of the jobs in Mumbai are in the formal economy. These jobs are registered jobs where the workers' pay taxes to the government and the companies have a legal obligation to protect their workers, offer holidays and pay regular wages.

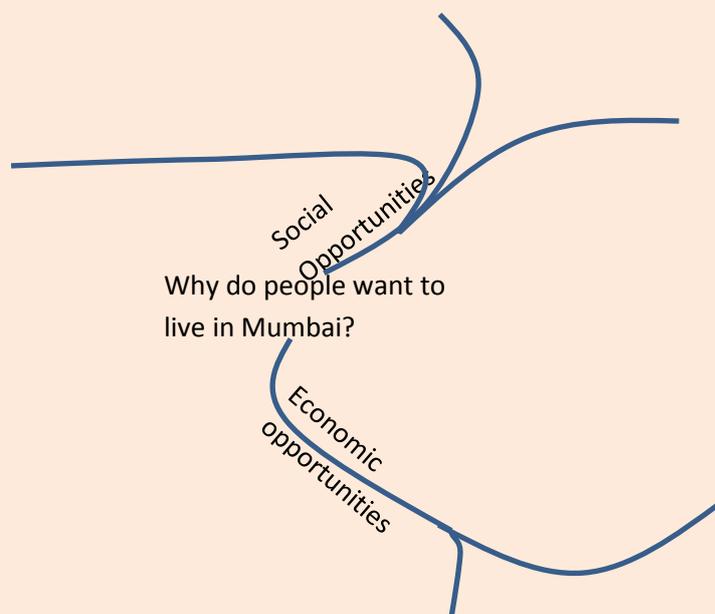
However, many of the jobs in Mumbai are also found in the **informal economy**. Here there is **no minimum wage**, the workers are **unlikely to pay taxes**, have no holiday rights and **often work in dangerous or hazardous conditions**. Jobs include rag picking, breaking up and recycling old electronic products, recycling waste, making pottery, selling items on the street etc. The key to many these jobs is that they cost little to set up, use simple tools and are labour intensive (involve lots of human work).

Despite the difficulties of the informal industry, these industries offer poor often uneducated people a foothold in the city. They can earn money and start to improve their quality of life from that point. Dharavi slum has the following positives for people

1. Informal shopping areas exist where it is possible to buy anything you might need.
2. There are also mosques catering for people's religious needs.
3. There is a pottery area of Dharavi slum which has a community centre.
4. Rooms within houses have multiple functions, including living, working and sleeping. Many daily chores are done in social spheres because people live close to one another. This helps to generate a sense of community.
5. The buildings in the pottery part of the slum are all of different heights and colours, adding interest and diversity. This is despite the enormous environmental problems with air and land pollution.
6. 85% of people have a job in the slum and work **LOCALLY**, and some have even managed to become millionaires.

#### ACTIVITIES 4.3.3

Produce a mind map that summarises all of the reasons why people would want to live in Mumbai;



### 4.3.4 Challenges in Mumbai:

#### SOCIAL AND ECONOMIC CHALLENGES

Mumbai is a city that faces many challenges and those challenges are large because of its immense size and rapid growth. Physical Geography also plays a role, as Mumbai has been limited in where it can grow because it originally grew at the southern end of an island surrounded by the Arabian Sea and 2 rivers.

The major problem in Mumbai is the growth of **squatter settlements** known in India as **SLUMS**. These slums come with many issues for people including the lack of planned access to clean water and sanitation systems, poor health, lack of education, unemployment and the prospect of crime.

One of the world's most infamous slums is Dharavi slum, which is the largest squatter settlement located in Mumbai (formally Bombay) in India. There are a million people crammed into one square mile in Dharavi. At the edge of Dharavi the newest arrivals come to make their homes on waste land next to water pipes in slum areas. They set up home illegally amongst waste on land that is not suitable for habitation. In the wet monsoon season these people have huge problems living on this low lying marginal land.

#### Challenging Conditions in the slums

In the slum people have to live with many problems;

1. **Lack of sanitation is the MAJOR ISSUE** - people have to go to the toilet in the street and there are open sewers because 500 people share one public latrine. Children play amongst sewage waste and doctors deal with **4,000 cases a day** of diphtheria and typhoid.
2. **Lack of access to clean water** – there are few water pipes in the slum and those that exist only have the supply switched on for **2 hours a day** by the city authorities. This means people have to queue for water and have **LIMITED SUPPLY**. In addition, next to the open sewers are water pipes, which can crack and take in sewage. Dharavi slum is based around this water pipe built on an old rubbish tip.
3. **Lack of legal rights** - The people have not planned this settlement and have no legal rights to the land. In addition, the slum houses have little in the way of security. Mumbai as a whole has a problem with crime, such as pick pockets and organised begging.

#### Key words

**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.

**Pollution** - The presence of chemicals, noise, dirt or other substances which have harmful or poisonous effects on an environment.

**Sanitation** - Measures designed to protect public health, including the provision of clean water and the disposal of sewage and waste.

**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.



Figure 9 - Dharavi Slum By Leonora Enking via Wikimedia Commons

<http://www.coolgeography.co.uk> GCSE e-book

4. **POOR HEALTH** – life expectancies in the squatter settlements are low because of these conditions, poor quality water, mosquitoes which thrive in nearby mangrove swamps and dangerous jobs (There are toxic wastes in the slum including hugely dangerous heavy metals) all serve to impact on people's health.
5. **UNEMPLOYMENT and POOR QUALITY WORK** - Many people have poor jobs, such as those who work to sift the rubbish in the tips where children and women sift through the rubbish for valuable waste. They have to work under the hot sun in appalling conditions. They earn around a £1 a day for their work.

Many architects and planners claim this slum could hold the solution for many of the problems of the world's largest cities.

### ENVIRONMENTAL CHALLENGES:

Mumbai has challenges to deal with protecting the natural environment and providing people with a clean environment to live in.

1. **Water pollution is a major problem in Mumbai.** A major study revealed that 77% of households suffer from poor water quality in the city. This poor water quality is leading to water borne diseases occurring in people and levels of things like total dissolved solids (TDS) and nitrates are higher than safe limits. Toxic chemicals such as arsenic and lead and disease-causing bacteria are also contributing to the alarming increase in the water contamination. Deadly waterborne diseases like cholera, jaundice, typhoid, diarrhoea are affecting people as a result.
2. **Air pollution** – Mumbai has some very dirty air including dangerous levels of Nitrous Oxides and small dust particles called particulate matter. These are both hazardous to human health and can cause things like asthma. The causes of this pollution are industry, ever increasing numbers of cars and construction dust.
3. **Waste** – Mumbai produces 7,500 metric tonnes of waste every day, a huge amount. There is no comprehensive city based system of collection and this waste poses a hazard to human health. The slum of Dharavi has a recycling zone. It is claimed that Dharavi's recycling zone could be the way forward to a sustainable future. Everything is recycled from cosmetics and plastics to computer keyboards. 23% of plastic waste gets recycled in the UK, in Dharavi it is 80%. Despite this Mumbai still has major problems getting rid of its waste.
4. **Traffic congestion** – there are more than 22 million vehicles registered in Mumbai and these contribute to both noise and air pollution, as well as lots of lost hours as people sit in traffic jams. This is despite Mumbai's renowned train system.



**ACTIVITIES 4.3.4**

Draw then complete the Case Study Crib Sheet below to cover all of the challenges facing Mumbai;

**Case study name –**

**Introduction & Location – Write a short sentence about what the case study is about and WHERE it is**

**Key facts to remember (include at least 4 – dates, names of places, figures etc.)**

**Sketch map**

**Key Geography Terminology associated with case study**

**What the case study is about in 5 sentences**

- 1.
- 2.
- 3.
- 4.
- 5.

**A Question I could be asked:**

*Common Command words to help – Describe, Compare, Contrast, Explain, Suggest why*

Is Mumbai a city of hope or despair? Justify your view

#### 4.4.5 An example of how urban planning is improving the quality of life for the urban poor.

The city authorities of Mumbai want to improve the quality of life of the people who live there. This includes the slum or squatter settlement dwellers. Current approaches across Mumbai are for whole sale **DEMOLITION of the slums** which are replaced by high rise tower blocks for people to live in. The positives and negatives of these are shown below;

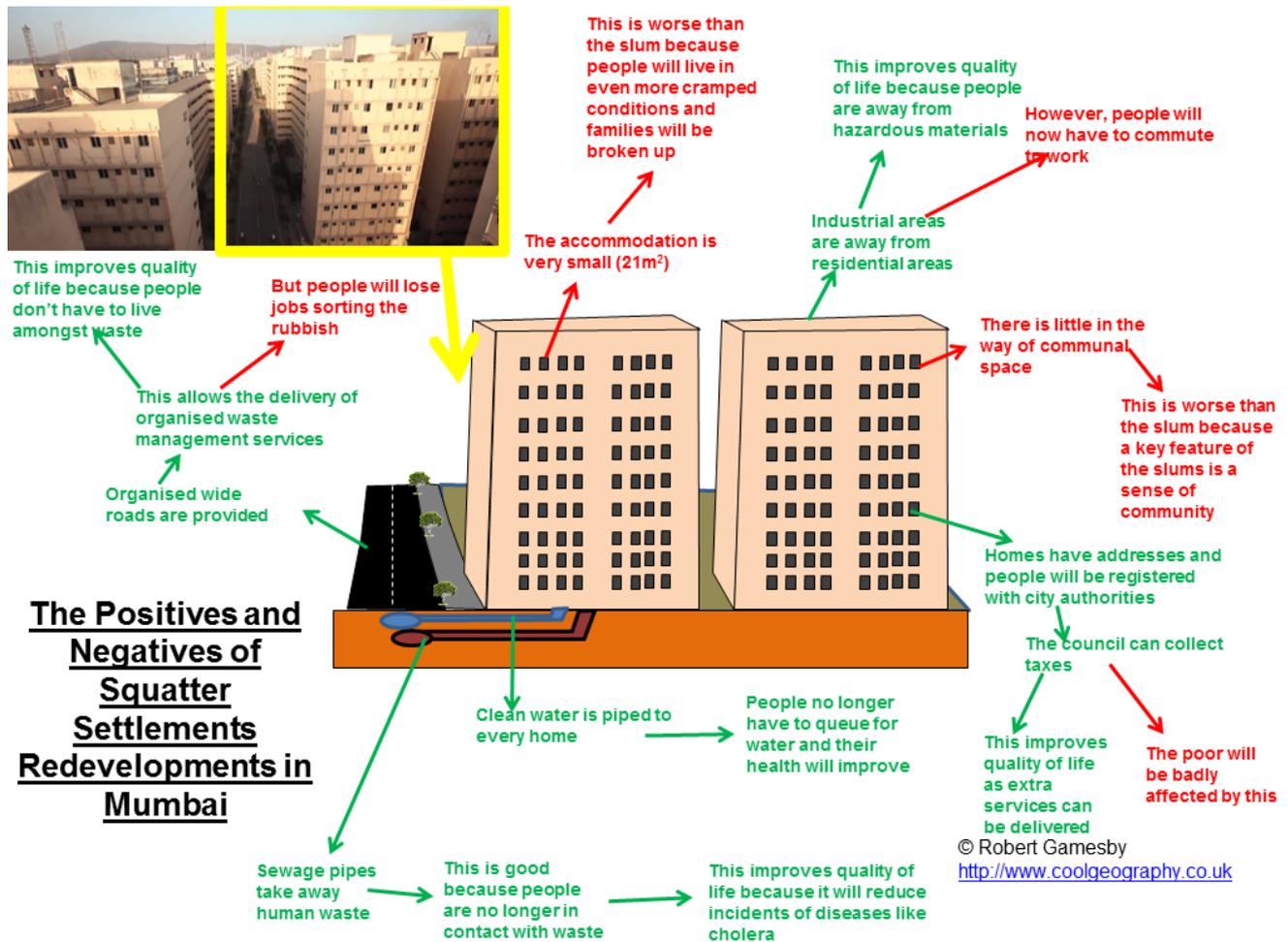


Figure 10 - High rise dwelling approach to improving the lives of squatter settlement residents

These types of redevelopment are planned for Dharavi by the **Slum Rehabilitation Authority (SRA)**. They have proposed a \$2billion development project. This threatens the recycling district and part of Dharavi. The land upon which Dharavi is built is next to Mumbai's financial district. This makes it a prime target for **redevelopment**. The people who are relocated will be put into **smaller housing** in apartment blocks. An ancient fishing village is also threatened. These areas have strong safe neighbourhoods that have low crime and communal areas. Also at risk are the local shops and markets and the community spirit which has taken generations to develop. The locals would prefer small improvements to the existing slum such as improvements in drainage. The value of land is so high that redevelopment is now a real threat. The alternative accommodation is very small, **only 21m<sup>2</sup>**.

<http://www.coolgeography.co.uk> GCSE e-book

The slum dwellers face 14 story apartments as accommodation as proposed by the cities Slum Rehabilitation Authority. This will separate communities and make people work away from where they live. Only people who have lived in the slum since 1995 will be relocated. Current redevelopment projects are densely populated and house lots of people. They are not good for the community.

### Local Based Improvements

There is an alternative to large scale redevelopment and that is to allow LOCAL people design the improvements to the slum.

The **Society for the Promotion of Area Resource Centres**, better known as SPARC, is an NGO that supports the efforts of local people to get better housing for their many members. Ideas generated from local people supported by this charity include adding an **extra floor to buildings** so that all family members can be accommodated in the same building. These flats also had 14-foot high ceilings and a single tall window so are well ventilated, bright, and less dependent on electric fans for cooling. Their loft spaces add extra room without seeming crowded, and include small spaces for bathing. Toilets are placed at the end of each of the building's four floors, and kept clean by the two or three families who use each one. These ideas only work when water is running in Dharavi.

As the National Slum Dwellers Federation has repeatedly proven, housing the poor works best, costs less and is better for the environment, when the poor themselves have a say in what is being built.



Slum rehabilitation buildings

Dharavi Slum, which could be replaced by something similar together with financial institutions

### ACTIVITIES 4.3.5

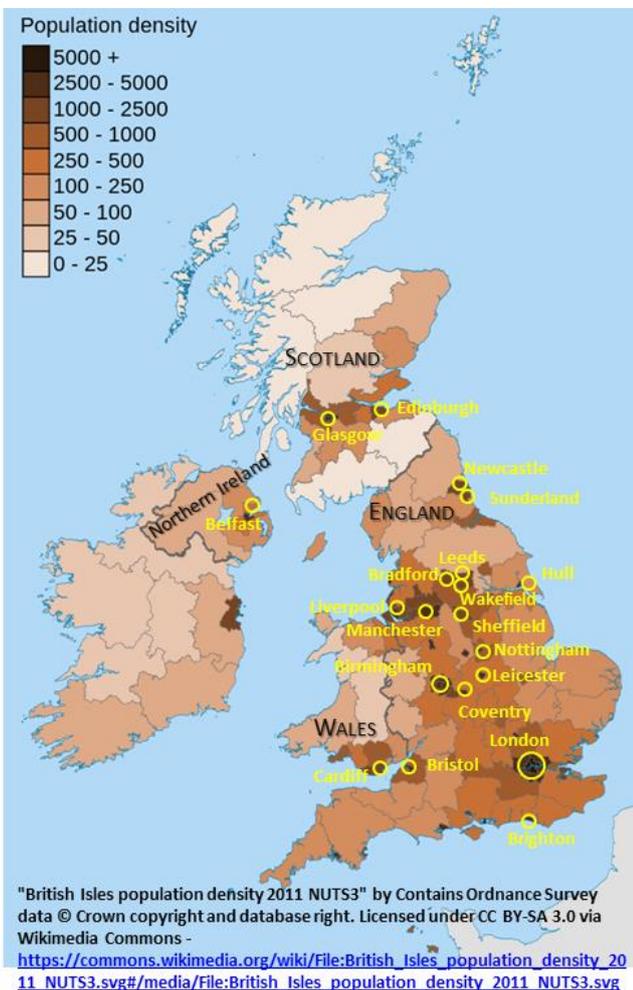
Read pages 15 and 16

Which do you prefer, the high rise tower blocks proposed by the Slum Rehabilitation Authority or Local based improvements suggested by SPARC? Justify your answer.

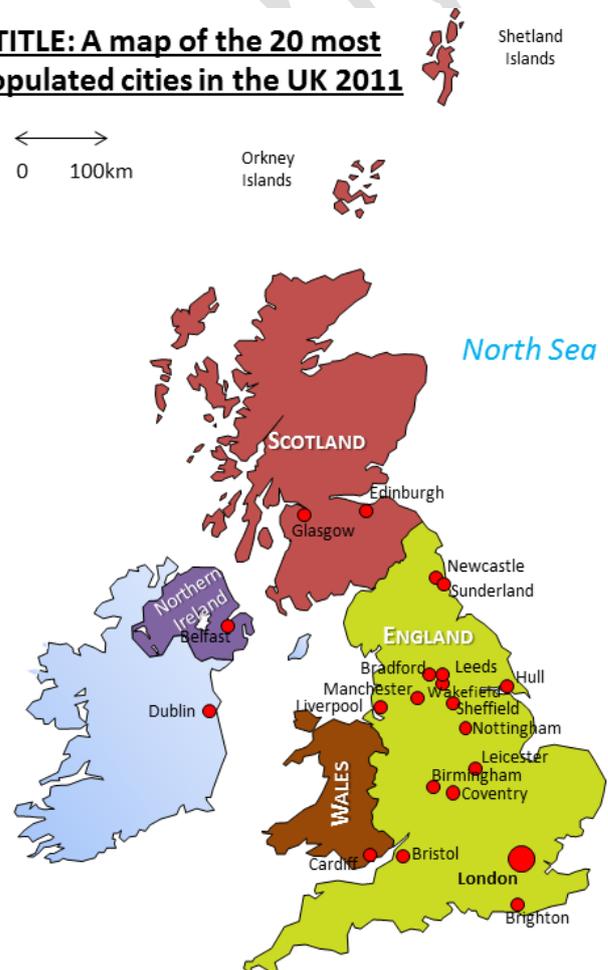
## 4.4 The distribution of population and the major cities in the UK.

The **United Kingdom** is a country with a **high level of urbanisation** and great number of large cities. It has no megacities with a population over 10 million but it does have London, the capital, with by far the biggest population at over 8 million inhabitants.

The population and cities of the UK are **not evenly distributed** (distribution just means the way in which something is spread over an area). The **population density** (a measurement of the number of people in an area calculated by dividing the number of people by the area) is also uneven. Northern Scotland and the **upland areas** of England and Wales tend to be **sparsely populated** so contain few people. The cities of the UK shown on the map, and the South East of the country are places which are **densely populated** contain many people.



**TITLE: A map of the 20 most populated cities in the UK 2011**



Across the UK the highest population densities are found in major cities and as we move North through the UK population density falls, with the exception of the Edinburgh to Glasgow corridor. The upland areas in the UK have low population density and the densest population can be found to the South East, in the area around London. It is in these areas where issues over housing shortages have been at their worst.

The cities of the UK owe their origins to many different reasons, For example, Sheffield is famous for its steel industry, Newcastle coal and then ship building.

## LONDON: A case study of a major city in the UK

### 4.4.1 The location and importance of the city in the UK and the wider world

London can stake a claim to be the world's greatest city, it is certainly one of the most **globalised, connected and influential** places on planet earth even if it isn't the largest city by area or population size.

London can be found in the South East of England, located on the River Thames which has been influential in its growth, and in the centre of the densest population of the UK. It also hosts the parliament of the UK

Within Europe, London is part of Europe's economic core, the area producing the majority of the GDP or wealth of Europe, in what is called **Europe's "hot banana"** alongside Paris, Geneva, and Milan. London also has a Global reach, through its major airports Heathrow and Gatwick, and its economic pull via the **City of London and the Stock Exchange**.

London's population has started to grow again after shrinking post World War II, and currently stands at over 8 million.

London remains an influential city both within the UK and the wider world, look at the fact file on the next page.

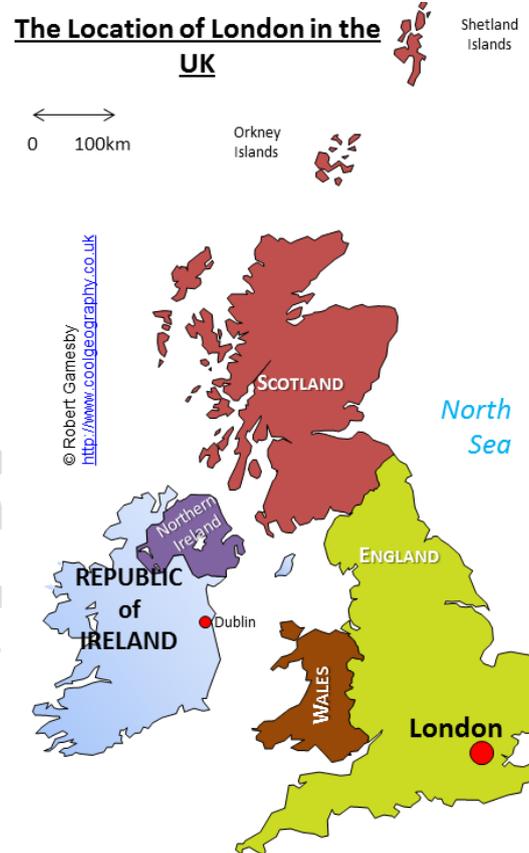


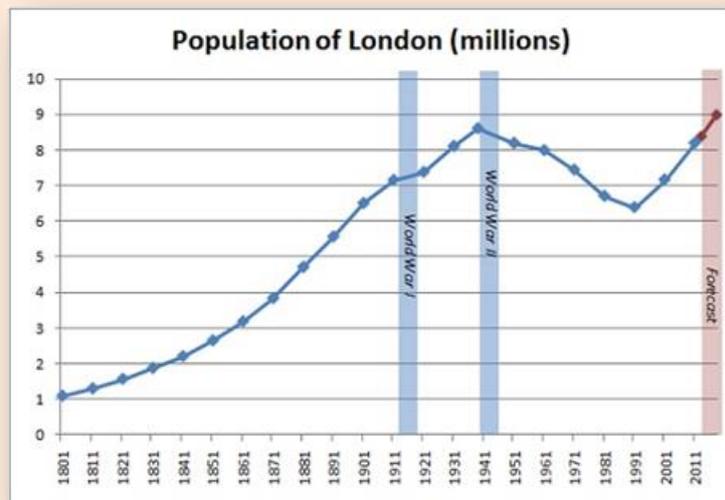
Figure 11- the location of London in the UK



Figure 12 London by Kloniwowski on Flickr

**London Fact file:**

<p><b>Location and population</b></p> <ul style="list-style-type: none"> <li>London's population is 12.5% of the UK's on just 0.6% of the land</li> <li>It is 36.5 miles west to east and 30 miles North to south</li> <li>Peak population in 1939</li> <li>It is predicted to go beyond that level soon and is currently 8.3 million</li> <li>88,000 babies were born in London in 2013</li> <li>The wider London area has a population of over 9 million people</li> <li>It is the world's 14<sup>th</sup> largest Capital city</li> <li>Tokyo is the largest with 37 million people!</li> </ul>	<p><b>Travel Hub</b></p> <ul style="list-style-type: none"> <li>Journeys by private car have fallen in London since 2000</li> <li>Public transport journeys have increased by 40% since 2000</li> <li>Half a million bike journeys are made every day in the capital</li> <li>London has several major airports including Heathrow, Gatwick, City and London Stansted</li> <li>Heathrow carried 69.4million passengers in 2011, more than all the other airports put together. It connects to cities all over the world</li> </ul>	<p><b>Tourism</b></p> <ul style="list-style-type: none"> <li>London is one of the most visited cities in the world</li> <li>London has the highest tourist spend in the world with \$21.1billion in 2011</li> <li>There are more visits there from the USA, but 2/3 of all visits are from Europeans</li> <li>The highest average total-spend came from people from the UAE at £1,625 per visitor...</li> <li>But Norwegians spend more per night a £157</li> <li>And Indian visitors spend the longest time there at 17 nights</li> </ul>
<p><b>Finance</b></p> <ul style="list-style-type: none"> <li>Londoners earn 23% more than the UK average</li> <li>Londoners spend 24% more than the average!</li> <li>The average London house price went above £500,000 in 2013 compared to a national average of £249,000</li> <li>London has the 6<sup>th</sup> largest city economy after Tokyo, New York, Los Angeles, Chicago and Paris</li> <li>London accounts for over a fifth of the Gross Value added of the UK</li> <li>London generates 22% of the UK's GDP</li> </ul>	<p><b>Education</b></p> <ul style="list-style-type: none"> <li>London has 40 higher education institutions including some of the World's top universities</li> <li>410,000 students attend these institutions</li> <li>London represents one-third of higher education institutions nationally</li> <li>And one fifth of the UK's student population</li> <li>Over ½ of Londoners have a degree</li> </ul>	<p><b>Business</b></p> <ul style="list-style-type: none"> <li>The number of businesses per 1000 population is higher in London at 75 than elsewhere in the UK at 54</li> <li>In London 11.2% of companies had a turnover of at least a million pounds compared to 9% for the rest of the UK</li> <li>London is home to 15 of the head offices of the 250 largest companies in the world</li> </ul>
<p><b>Jobs</b></p> <ul style="list-style-type: none"> <li>800,000 people commute to London for work every day</li> <li>There were 5 million jobs in London at the start of 2012</li> <li>The city's population swells by 1.3 million every day because of people going to London to work and tourism This makes London's daytime population 9.3 million</li> </ul>	<p><b>Cultural diversity</b></p> <ul style="list-style-type: none"> <li>Over 2 million Londoners do not speak English at home</li> <li>The 3 most common languages spoken at home other than English are Bengali, Urdu and Polish</li> <li>One third of Londoners were born abroad...the top 3 countries are India, Poland and Bangladesh</li> <li>36% of Londoners are from Black, Asian or minority ethnic group</li> </ul>	<p><b>Green space</b></p> <ul style="list-style-type: none"> <li>65% of London's land is either gardens, public green space or water</li> <li>223 of London's Parks and green spaces hold Green Flag awards</li> <li>London has 8 Royal Parks</li> </ul>

**ACTIVITIES 4.4.1**

- Describe what has happened to the population using the graph above.
- Using the fact file select 5 facts that prove the London is influential within the UK and 5 facts that show it is influential worldwide. You draw a table like the one below could

London is influential within the UK because...	London is influential worldwide because...

### 4.4.2 Impacts of national and international migration on the growth and character of the city

London's population is in a period of growth. It grew from just over 1 million in the 1801 census, to a peak of over 8.6 million in 1941. Following this period the population of London went into decline, slipping to just over 6 million in 1991. Since then government initiatives and a booming economy have allowed the population to grow to 8.3 million in the 2011 census, and it is predicted to continue to grow. **This can all be seen on the graph on page 17**

#### CAUSES OF GROWTH

The graph below shows that there are 3 factors at play influencing the overall size and rate of growth of London's population;

- Internal (within the UK) migration** has been **negative**; that is the numbers of people moving out of London has been greater than the number of UK residents moving in. This balance has got smaller over time.

<http://www.coolgeography.co.uk> GCSE e-book

- International net migration** has always been **positive** during the time period shown, so there have always been more foreign born people moving into London than out of it
- Natural Change** has been **positive**, so births have been above deaths and this has boosted the population size.

When the balance is taken between these 3 factors it can be seen that London's population has had a **POSITIVE BALANCE** year on year, with London gaining over 100,000 people a year between 2008 and 2013. A gain greater than the population of the city of Newcastle upon Tyne!

Internal migrants into London tend to be in the age groups 20 -30, whilst those who tend to leave are over 30 or children. This means that generally people migrate into London for work; and leave when they start having families.

Migration in particular has changed the **CHARACTER** of London. It is genuinely one of the most multicultural places on the planet with many different races, cultures and languages in evidence throughout the city.

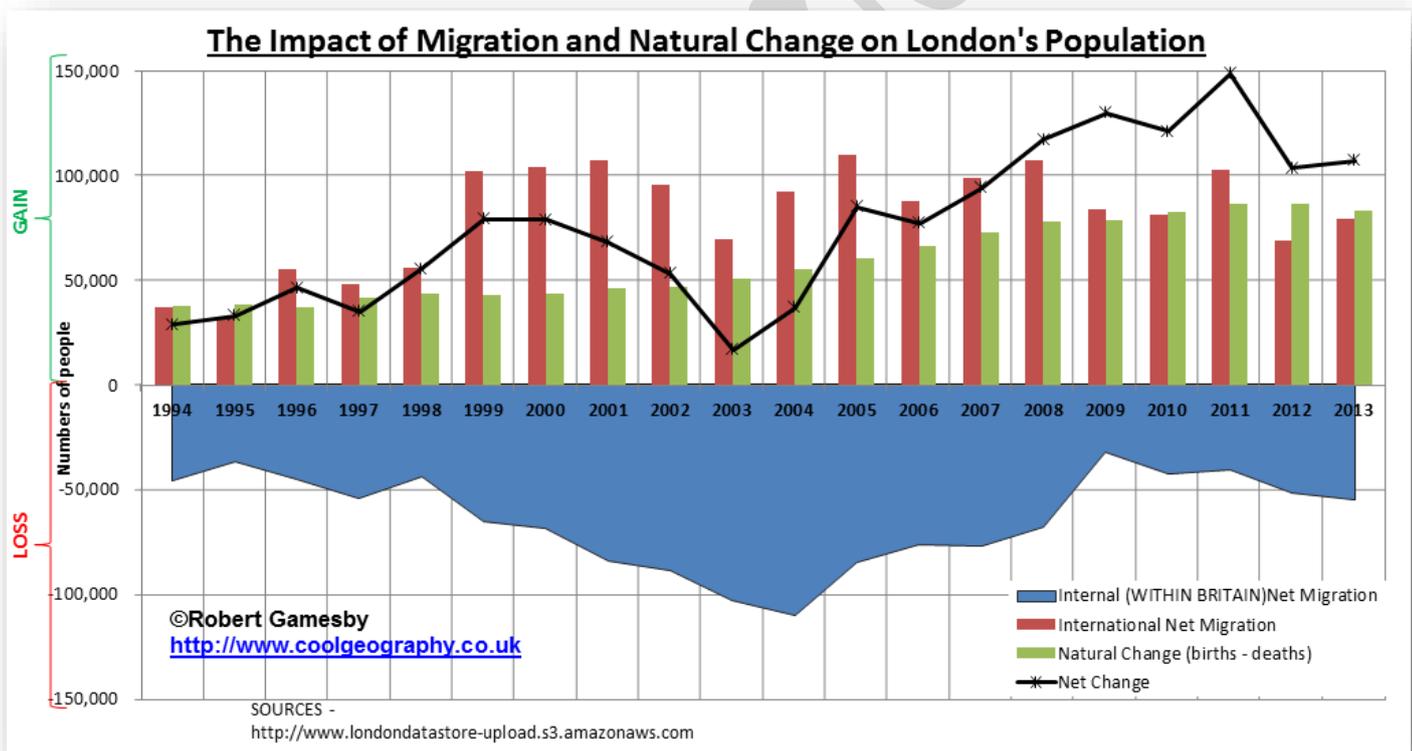


Figure 13 - Graph of the contributions to London's recent population growth

### 4.4.3 The Opportunities London Offers

London is an amazing city and it offers a huge range of OPPORTUNITIES to the people who live there or migrate there.

#### Social and Economic Opportunities:

#### OPPORTUNITY 1 - Cultural mix

The **cultural mix or multiculturalism** basically refers to a country or place that has more than one culture living together in close proximity. Multiculturalism is an issue in many HICs and can be viewed in both a positive light and as something that can pose problems that need careful management.

The increasing interconnections of our world and the ever moving populations of our planet via migration mean that most cities like London around the globe especially in HICs have huge numbers of people of all different races, religions and cultures

The UK has huge numbers of cultures and races, as well as white British people there are huge numbers of migrants from India, Pakistan, Bangladesh, Canada, USA, Kenya, Zimbabwe and other ex-British colonies. In addition, there are also lots of people from Europe and countries outside of the ex-colonies and the European Union. In addition, many of the "newer" cultures to the UK are not actually that new at all! Jamaicans and other peoples from the Western Caribbean have lived in the UK for many generations, and many Asian peoples who migrated here now have 3rd and 4th generation families living in the UK.

#### **LONDON:**

#### **The Census of 2011 revealed that;**

1. London is one of **the most diverse places** not just in Britain but on planet Earth;
2. In **three boroughs** - Newham, Brent and Tower Hamlets - **white people are now the minority.**
3. Inner London has the highest non-white population in the country, with 37 per cent of residents from an ethnic minority. In outer London, the figure falls slightly to 27 per cent.
4. **London is more diverse than any other part of the country;** with the only other area to record a figure in excess of 20 per cent is the West Midlands.

#### **ADVANTAGES**

This migration and multiculturalism has been advantageous for London. It enriches huge areas of London cultural life, from the amazing array of food that is available on nearly every high street in London to the music variety we have (the BBC's Asian Radio channel is a great example of this). Other advantages include

**A Choropleth map of % non white population across London 2011**

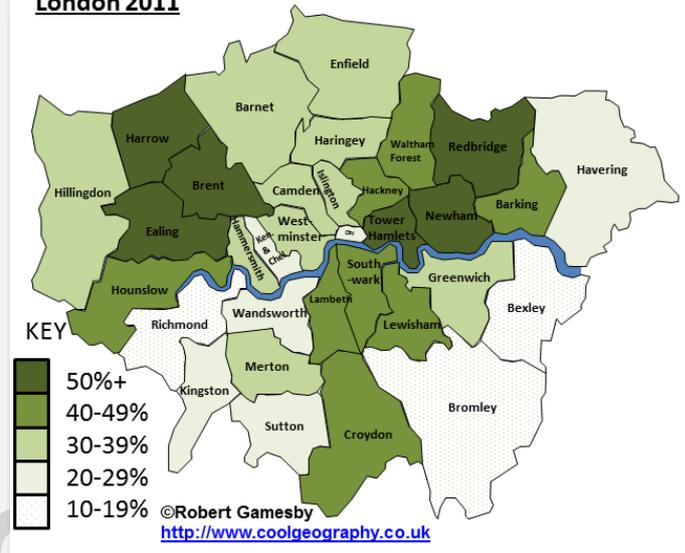


Figure 14 - Map of ethnicity across London

the great exposure people get to other religions, languages and cultural parties. The London also benefits from huge cultural events celebrating this multiculturalism, such as the Notting Hill Carnival. The cultural mix in London also highlights what a broadly tolerant and Liberal people the citizens of the London are - a fine compliment.

## CHALLENGES

A cultural mix is not without its difficulties. One of the big issues for London and other parts of the UK is **INTEGRATION**. How can we ensure that all new peoples moving to London and other parts of the UK can converse properly in English, mix with other groups and have access to all of the advantages of being a UK subject. Another issue is **ghettoes**, how can we prevent economically poorer cultural groups living in the poorest parts of our cities. Language is another issue, and many public services such as schools and hospitals have to provide language translation services.

## OPPORTUNITY 2 - Recreation and entertainment

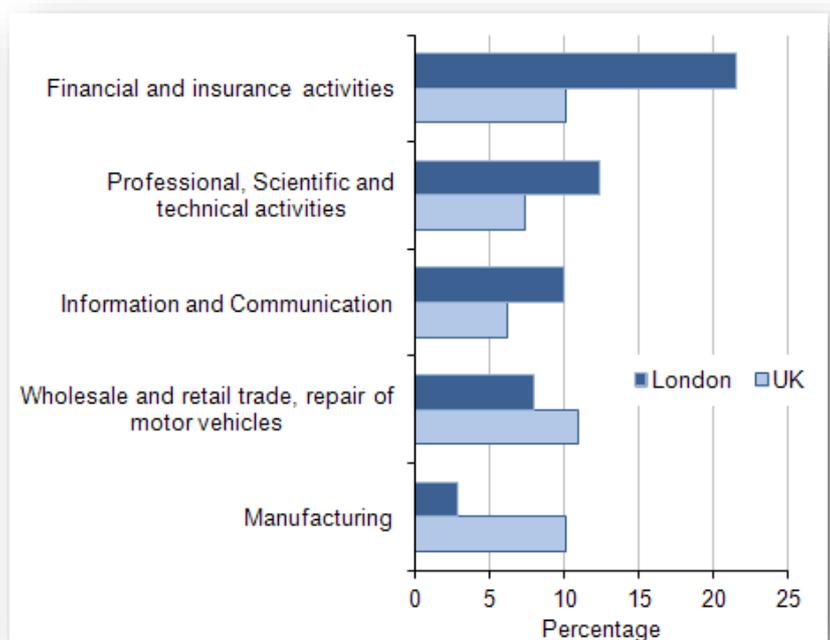
London is blessed when it comes to recreation and entertainment;

- It has a huge number of **cultural attractions** such as the British Museum, the National Gallery and the Natural History Museum.
- It has the West End where a huge number of **shows** can be seen and tourist attractions such as Buckingham Palace and the Houses of Parliament.
- On top of that London has a huge number of **concert and cinema venues** and lots of sporting events such as the Oxford-Cambridge Boat race, the Wimbledon Tennis Open, many big name football teams and even hosted the Olympics.
- Add to that the usual mix of bars, restaurants and street entertainment common of most large cities then London has a great select of recreation and entertainment.

## OPPORTUNITY 3 - Employment.

The graph shows that the economy of London is different to that of the rest of the UK. It is **dominated by financial and insurance activities**, mainly located in the City of London. Overall;

- London is by far the largest contributor to the economy among the English regions and countries of the UK.
- In 2010 London's gross value added (GVA) was over £274 billion. It represented 22 per cent of the UK total, the largest regional share.
- London was responsible for **46 per cent of the total UK GVA** from the financial and insurance activities sector.



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- London houses a major world financial centre and a range of business specialisms which attract a highly skilled workforce.
- London residents (aged 16 to 64 and working) are more likely to be employed in managerial, professional or associate professional and technical occupations, compared with the UK (54 and 43 per cent respectively in 2011).
- However the unemployment rate was one of the highest. London's employment rate was 67.5 per cent in the period October to December 2011, below the average of 70.3 per cent for the UK. The unemployment rate was 10.0 per cent compared with 8.4 per cent for the UK.

#### OPPORTUNITY 4 - Integrated transport systems

**London** has a really developed **INTEGRATED transport system**.

Integrated transport means that all of the different forms of transport can link to one another. Its transport network includes both private and public services. Public transport accounts for 25% of London's journeys.

London also serves a public transport network hub for the **whole of the UK** –many UK motorways converge on London's orbital ring road the M25, Heathrow, Gatwick and Stansted serve as major hub International air ports, busses congregate here and trains link the UK together at stations like Kings Cross and connect to Europe via **Eurostar** from St Pancras.

Transport for London controls the majority of transport in London including the **London Underground**, the iconic red London Buses, the Docklands Light Railway, and the London Over ground.

London Commuters can travel on most forms of transport using the **Oyster card**. This card is a credit-card-sized electronic ticket that can be used cheaply and topped up in stations or on line. It can be used on most forms of transport in London.

London also has an **integrated cycle network**, it is estimated that **over one million Londoners** own bicycles but as of 2008 only around 2 per cent of all journeys in London are made by bike.

#### OPPORTUNITY 5 - Environmental: urban greening

**Urban greening** means to **increase the amount and proportion of green spaces within a city**. These green spaces are essential for people's quality of life. London has made attempts to offer lots of green spaces within its urban area by;

1. Creating **ROOFTOP green spaces** - the Greater London Authority have produced a green roof map of around 700 green roofs in central London alone, covering an area of over 175,000m<sup>2</sup>. That's 17.5 hectares or



Figure 15 London bus by Oxyman (Own work) via Wikimedia Commons

#### Key words

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

**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).

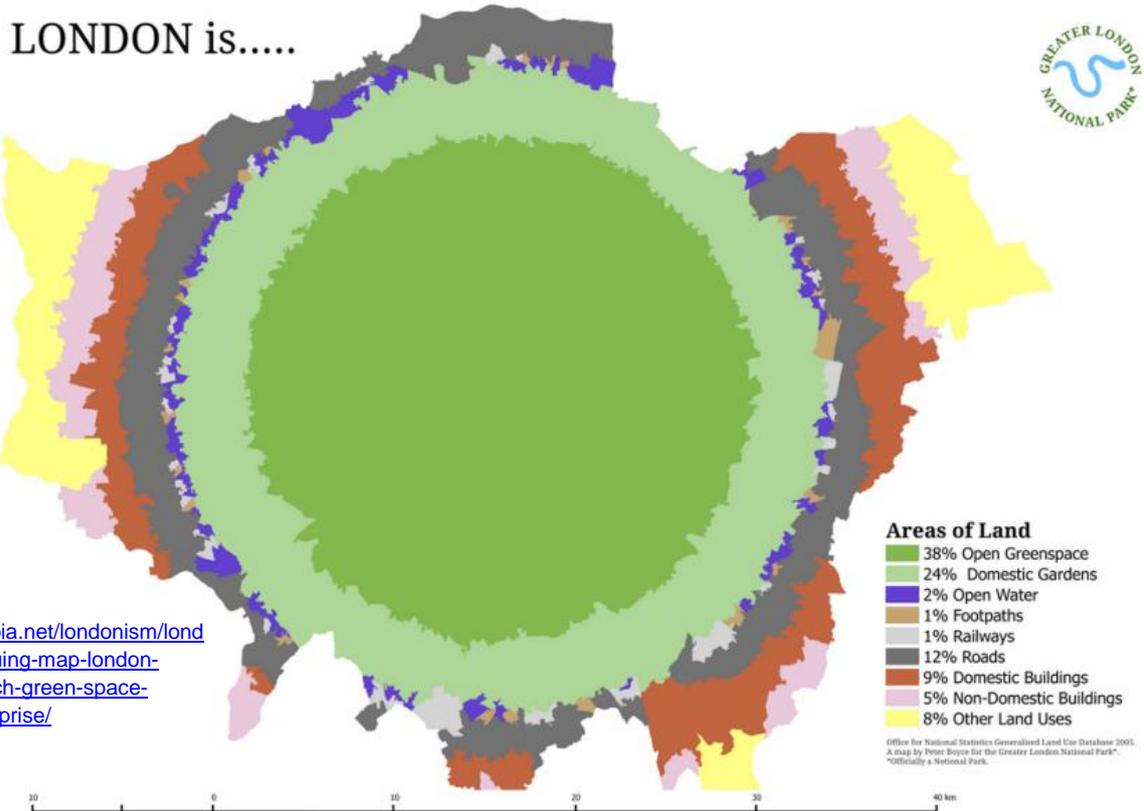


Figure 16 - SOURCE: <http://www.nhm.ac.uk/natureplus/blogs/whats-new/2012/03/12/how-green-is-your-alley>

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around 25 football pitches! These roofs are used as living spaces and spaces to grow plants.

2. Using canals, rivers and river jetties as significant water bird breeding roosts
3. Making major new building projects take into consideration urban green spaces, including the **Olympic Village**
4. Offering a **huge range of green spaces open to the public** including Hampstead Heath just 4 miles from Trafalgar Square, Burnham Beeches and Stoke Common which combine open space, wildlife habitat and recreational areas, and Queen’s Park in North London



<http://londontopia.net/londonism/london-maps-intriguing-map-london-shows-just-much-green-space-amount-will-surprise/>

**ACTIVITIES 4.4.3**

1. Look at the map above and use it to complete the table below;

Total amount of green areas in London	Total amount of BUILT environments in London

2. How does the amount of green space compare to the amount of built environments? Is this surprising?
3. Why do people live in London? Include as many opportunities in your answer as possible

### 4.5.4 The Challenges London Faces

Whilst London is a fantastic city and a great place to live and work for many reasons, it is not without its challenges. There are huge variations in wealth and access to jobs across London, and the high cost of living of London poses problems for many of the people who live there.

#### Social and Economic Challenges:

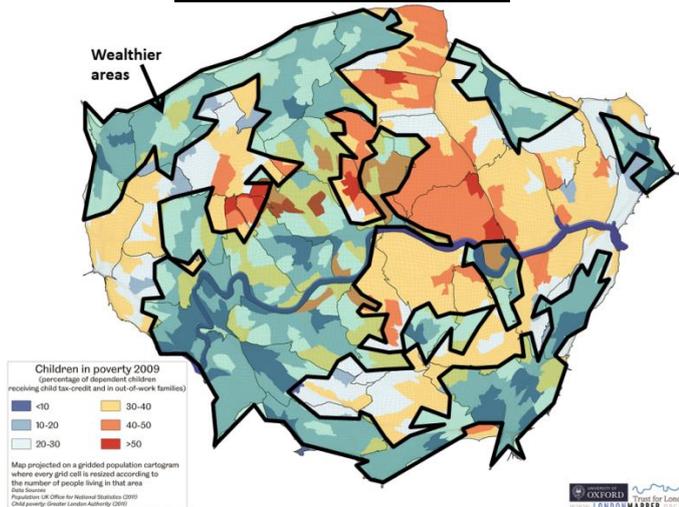
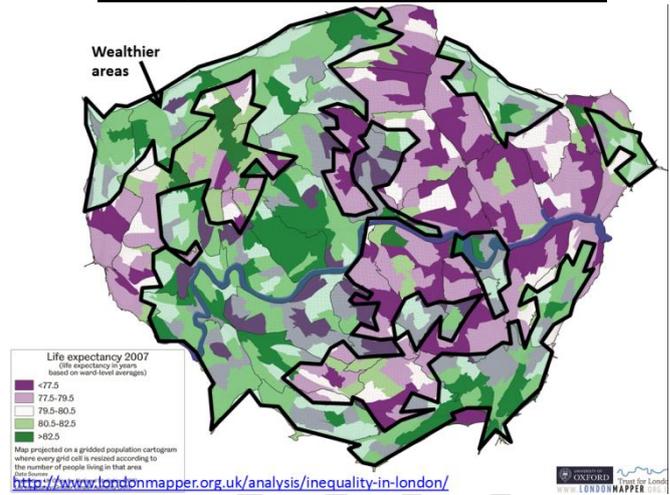
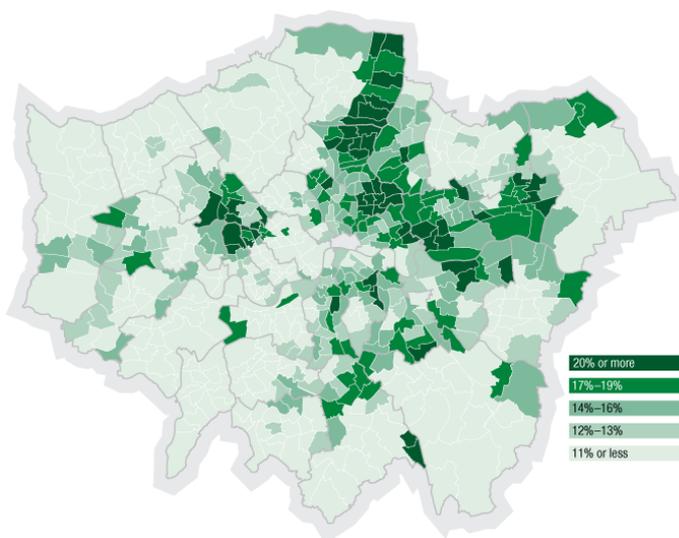
##### Challenge 1: Inequalities in Health, Housing, Education and Employment

London is an incredibly unequal city. Billionaires live in very close proximity to people who survive on less than a living wage. Indeed, incomes in London are more unequal than ANY other region of the UK, according to <http://www.londonpovertyprofile.org> ;

- 16% of Londoners are in the poorest tenth nationally, whilst 17% are in the richest tenth of people in the country
- The richest 10% of people in London have 60% of all assets whilst the poorest 80% of the population share just 20% of all asset wealth in London
- The top tenth of employees in London earn around four and a half times as much as the bottom tenth.

These huge differences in wealth result in big differences in people's access to and success with **in housing, education, health and employment**

	Trends and patterns
Housing	House prices and rents are higher in London than any other part of the country. More people in London rent than own their house and those that rent pay more than half their weekly pay in rent.  At the same time as those who live in poor quality, small rented accommodation, there are people living in some of the most expensive properties on the planet.
Education	Children across London do not get equal exam grades, but some of the school's in London's poorest boroughs are amongst the fastest improving schools in the country. Generally, the schools in the poorest areas score the lowest number of GCSE points per pupil.
Health	The people in wealthy areas tend to live longer than those in the poorer areas of London. The census 2011 showed that the % of people reporting themselves as in "Not good health" was also highest in the areas of lowest income.
Employment	Despite the huge wealth found in London unemployment remains a major issue. London's employment rate was just 67.5 per cent in the period October to December 2011, below the average of 70.3 per cent for the UK. The unemployment rate was 10.0 per cent compared with 8.4 per cent for the UK.

**Children in Poverty 2009****Life expectancy across London in 2007****% of people in ward receiving out of work benefits in November 2012**

<http://www.londonpovertyprofile.org.uk/indicators/topics/receiving-non-work-benefits/working-age-out-of-work-benefits-by-ward/>

These maps show how unequal London is for various indicators. The wealthier areas of London with higher household incomes have been overlaid on top of the maps above. Clearly there are **more children in poverty in the lower income areas**, and **life expectancies are 5 years WORSE** in the poorer areas than the richer areas. The **lowest income areas also have more people in receipt of out of work benefits**. All of these show the **INEQUALITIES** that exist in London between the rich and the poor

**Challenge 2 - Urban decline and deprivation**

**Urban decline** is the **deterioration of the inner city often caused by lack of investment and maintenance**. It is often but not exclusively accompanied by a decline in population numbers, decreasing economic performance and unemployment.

**Urban deprivation** is a **standard of living below that of the majority in a particular society that involves hardships and lack of access to resources**. Places suffering from urban deprivation have visible differences in housing and economic

**Key words**

**Dereliction** - Abandoned buildings and wasteland.

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

opportunities been the rich living alongside poor people.

Despite the large wealth found in parts of London many areas suffer from both Urban Decline and the people suffer from deprivation. It is particularly hard for the poorest people to have a decent standard of living because the prices of many things are more expensive, especially rents which account for a huge proportion of peoples incomes. The map above shows unemployment (out of work benefits) across London, and it is clear that unemployment levels are not evenly distributed or spread out. Areas like Newsham, Barking and Dagenham and Tower Hamlets have the highest unemployment rates in the capital.

This can result in a cycle of urban decline;

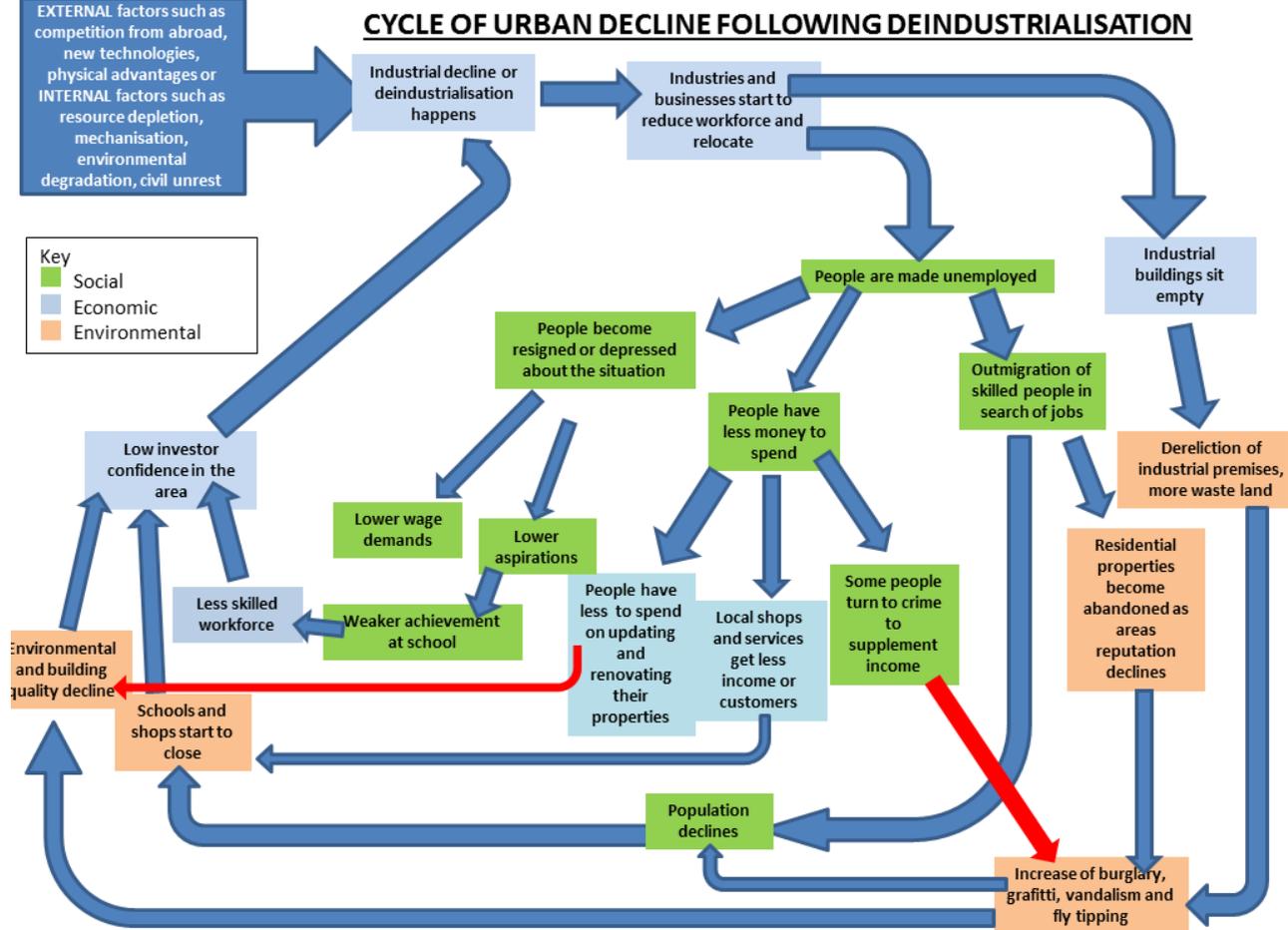


Figure 17 - cycle of urban decline

### Challenge 3 - Dereliction

There is a sizeable supply of brownfield land in London, which to date remains untapped. Figures published by the Government recently highlighted that there were some 250 hectares of brownfield sites, equivalent to an area just short of the size of Hyde Park that are not in line for development of any sort. The Olympic Park to the right for the 2012 Olympics is a good example of how derelict land can be brought back into use.

**ACTIVITIES 4.4.4****Produce a mind map with images and colour on the challenges that London faces****Environmental Challenges Facing London:****Challenge 4 - The impact of urban sprawl on the rural-urban fringe**

The edges of cities are known as the rural urban fringe. There has been increasing building in these areas because of housing pressure, despite Greenbelt legislation (laws) that are supposed to prevent building there. The growth outwards of our cities into these regions is known as **URBAN SPRAWL** and can have many impacts on these areas;

- **Extra cost to the tax payer** – the public help to pay for infrastructure such as roads and water works to allow building developments to go ahead.
- **Increased Traffic** – extra people in these areas means that cars are used more often, which means that there is more traffic on the roads, and there is also more air pollution and more accidents
- **Health Issues** – people in these areas often have to commute to work which means that they often travel by car. This can have negative impacts on people's health such as high blood pressure.
- **Environmental Issues** -sprawling cities consume land, and this displaces animals from their habitat
- **Impact on Social Lives** – people in sprawling communities can often live further from their neighbours, this can cause isolation.

**Key words**

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

**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.

**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.

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

**Challenge 5 - Building on brownfield and Greenfield sites**

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Housing is a big issue in the UK because it is a reasonably small country in terms of surface area which has a large and growing population (the ONS thinks we could hit 70 million people in 2033). To make the problem worse, population is not evenly distributed across the UK with lower densities the further north you go and the highest densities in London and the South East. The result of this has been housing shortages in the SE and high property prices and rental costs. The number of households has increased 30% since 1971 due to more people living on their own, rising life expectancy and high net levels of immigration.

**To solve this we need to build more homes, but WHERE to build them?**

**Greenbelt** - tract of open land consisting of farmland, woodland and open recreational areas surrounding urban areas. They are protected by law from new building, unless the government deems it necessary to build there.

**Greenfield site** – a term used to describe any area of land that has not been developed previously.

**Brownfield site** – an old industrial or inner city site that is cleared for a new building development.

Building in the green belt on undeveloped green field sites is a very controversial and contentious issue. Population growth in the UK, the trend towards smaller family units and the demand for people to live at the edge of the city has put incredible pressure on the countryside surrounding all of our major cities. In addition, the fact that land is cheaper and often more accessible at the edge of the city has meant that Light industry (e.g. Atmel at Silverlink), High Tech Industry (e.g. Sage at Newcastle Great Park) and retail (e.g. the Metro Centre) like to locate there.

The positives of brownfield and Greenfield sites are shown below;

Advantages of building in Greenfield sites	Advantages of building on Brownfield sites
<ol style="list-style-type: none"> <li>1) There is no need to clean up the site from previous land uses therefore can work out cheaper.</li> <li>2) Existing road networks are not in place so don't restrict planning</li> <li>3) They are often on the edges of cities where land is cheaper</li> <li>4) Planners and architects have a blank canvas to work with</li> <li>5) More space is available for gardens</li> <li>6) The edge of city countryside environment can appeal to buyers and businesses.</li> <li>7) Sites on the edge of the city are often close to major motorways providing great access</li> </ol>	<ol style="list-style-type: none"> <li>1) It is more sustainable as existing developed land is being used</li> <li>2) They stop city expansion as they are already within the city - this stops the loss of countryside and reduces journey times as the city is more compact</li> <li>3) Road networks already exist, as do electricity and gas networks, although these may need updating</li> <li>4) It is easier to gain planning permission as councils are keen to reuse the brownfield sites.</li> <li>5) The sites are closer to the CBD for shopping and job opportunities</li> </ol>

## London

Up to 50,000 new London homes are to be built on 20 brownfield sites, in a £400m scheme announced in 2014 by the Government. This includes an 85 hectare former industrial site in Enfield Meridian Water in Enfield, north London, where 5,000 homes, a new school and community facilities are to be built.

Artists impression of Enfield Meridian Water



The Brownfield site of Enfield Meridian Water



## Challenge 6 - Waste disposal and atmospheric pollution

London suffers from air pollution, mainly due to the sheer size of the city, a dense road network and high buildings. This means that central London tends to be one of the most polluted places in the UK.

London has **failed many of the standards** set by the EU and pollution can build up in London when anticyclones bring settled weather. London has problems with the following pollutants;

- **Ozone pollution** in spring and summer, this gas is a poison to the human body
- **Particulate matter** – these are tiny particles of solids or liquids suspended in the air. They come from carbon emissions from engines, small bits of metal and rubber from engine wear and braking as well as dust from road surfaces. They can come from natural sources and from building and industry. The tiny particles, referred to as PM10, can settle in the airway and deep in the lungs and cause health problems, premature death and the worsening of heart and lung disease.

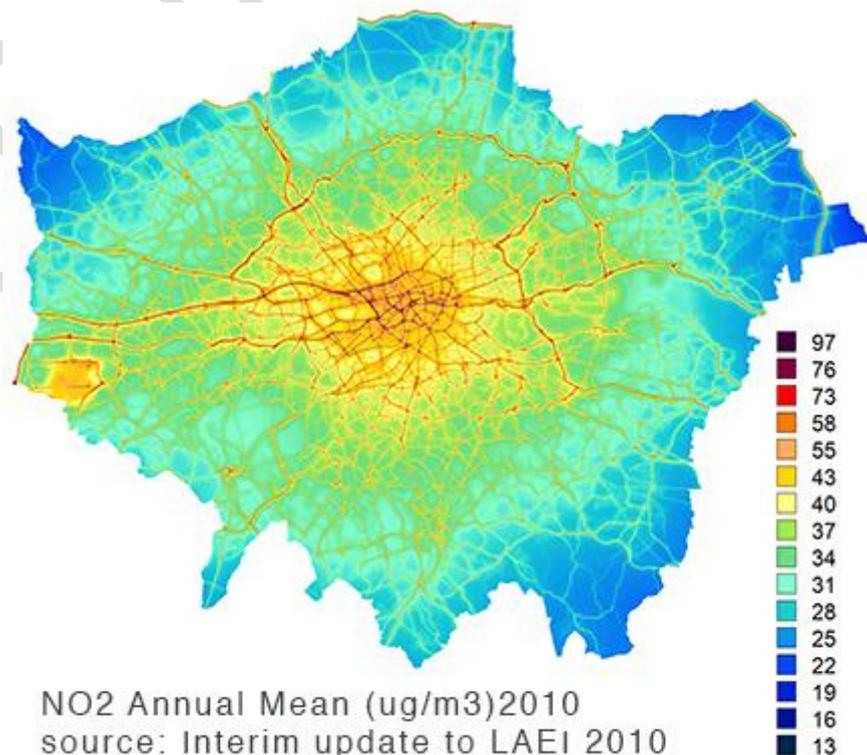


Figure 18 - <https://www.london.gov.uk/priorities/environment/breathe-better-together/air-pollution-the-facts>

<http://www.coolgeography.co.uk> GCSE e-book

- **Nitrogen Dioxide** from burning fossil fuels in cars and central heating boilers is another problem gas. It is harmful to human health giving respiratory problems such as shortness of breath and coughing. It can also lead to lung infections such as bronchitis.

### Management;

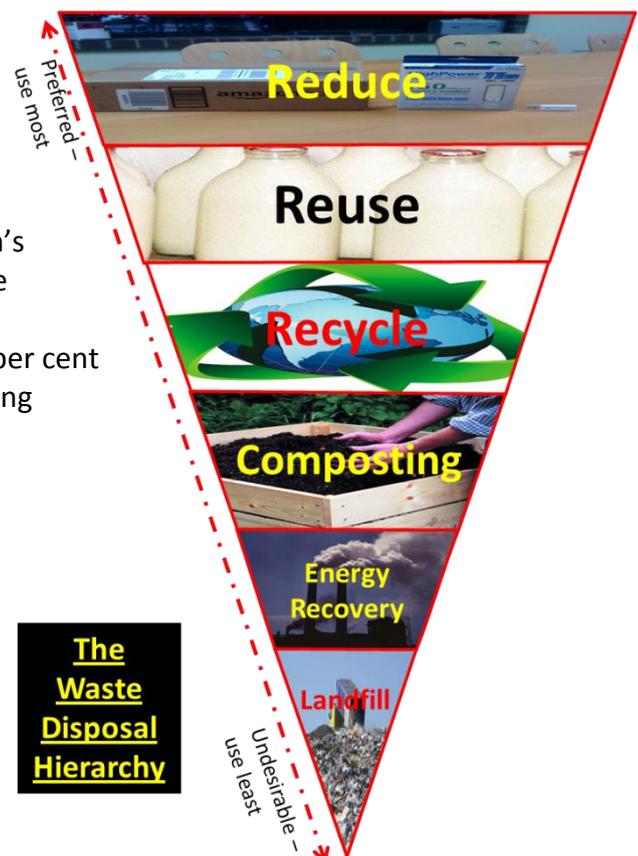
London is working hard to try and protect people and clean up the air by;

- Offering a free to download app that informs people of air quality
- Cleaning up London's bus fleet by making them less polluting
- Introducing a congestion charge in central London to reduce traffic volumes
- Set new and tighter standards for the London Low Emission Zone
- Invest record amounts of money in cycling and working with Sustrans

### Waste disposal

London also produces huge amounts of waste. It uses a mixture of recycling, landfill (where the waste is dumped into the ground and energy recovery (the waste is burnt to produce electricity) to deal with this waste. The London waste management strategy is aiming to;

1. To achieve zero municipal waste direct to landfill by 2025.
2. To reduce the amount of household waste produced from 970kg per household in 2009/10 to 790kg per household by 2031. This is equivalent to a 20 per cent reduction per household.
3. To increase London's capacity to reuse or repair municipal waste
4. To recycle or compost at least 45 per cent of municipal waste by 2015
5. To cut London's greenhouse gas emissions through the management of London's municipal waste
6. To generate as much energy as practicable from London's organic and non-recycled waste in a way that is no more polluting in carbon terms than the energy source it is replacing. This is estimated to be possible for about 40 per cent of London's municipal waste after recycling or composting targets are achieved by 2031



## 4.6 The London Olympic Park – a case study of an Urban regeneration project

The London Olympics of 2012 was a fantastic sporting spectacle and put the spotlight of the World on our capital city. Part of the aims of the Olympics was to completely transform an area of East London that is lagging behind the rest, East London. The idea was to leave a lasting legacy or impact not just for sport but for the urban area in the East of London.

### The Location of the Olympic village in London



The [London 2012 Olympic Legacy](#) was a plan to make sure that the 2012 Olympic and Paralympic Games had LONG TERM BENEFITS.

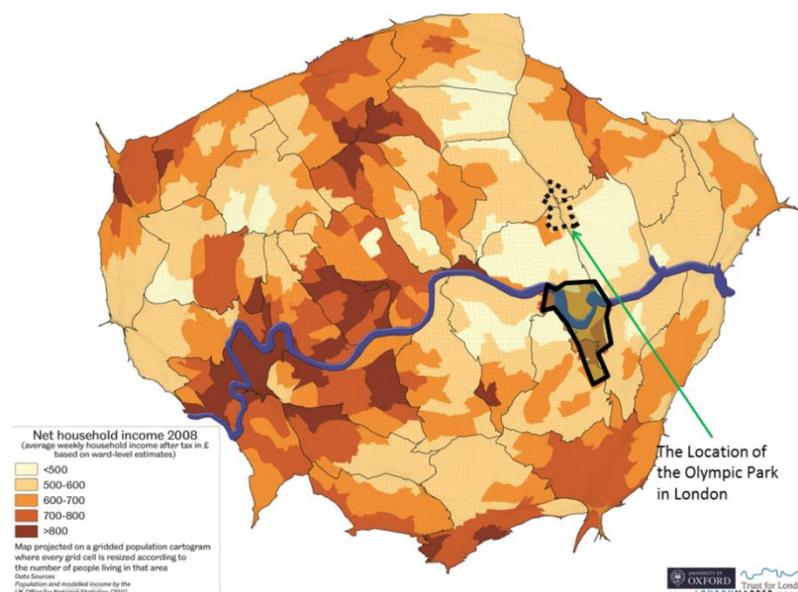
This legacy was to cover 4 main areas;

1. **Economic** – supporting new jobs and skills, encouraging trade, inward investment and tourism
2. **Sports** – continuing elite success, development of more sports facilities and encouraging participation in schools sports and wider
3. **Social and volunteering** – inspiring others to volunteer and encouraging social change
4. **Regeneration** – reuse of venues, new homes, and improved transportation.

The key for this unit is Legacy point 4 – **urban regeneration**. **Urban Regeneration is the whole sale improvement of the buildings and infrastructure of an area.**

The areas hosting the Olympics like Stratford and nearby Tower Hamlets were in dire need of regeneration as they had;

- a lot of abandoned old industrial sites,
- low achievement at school in terms of GCSE points score
- industrial wastelands,
- higher than average unemployment than the rest of London and
- higher deprivation and poverty for the people that lived there
- Lower household incomes than the London average as shown on the map opposite



**Evaluation of how the Olympics project improved social, economic and environmental conditions.**

	Pros	Cons
Socially	<p>The athletes' village has been relaunched as a housing estate called the East Village, the rooms have had kitchens added and walls knocked through. Almost half of these 2,818 new homes (40%) will be affordable. Eventually the whole Olympic Parkland will become five new neighbourhoods housing 8,000 people.</p> <p>The Olympics has helped schools in the area – there was a shortage of spaces but a new school opened in the grounds of the park. Chobham Academy will cover all levels of education.</p> <p>The aquatics centre now uses its 50m pools as facilities for the community and schools, as well as elite athletes.</p> <p>Unemployment OVERALL fell across London during the Olympic period</p>	<p>Anne Power at the London School of Economics said "The 'affordable rents' for the 2,800 new homes will be unaffordable to Newham's poorest households."</p> <p>Rushanara Ali, MP in the Olympic borough of Tower Hamlets, said: "The impact of the infrastructure investment has been really fantastic... But – and there's a big but – in my borough unemployment actually went up during the Olympics."</p> <p>During the construction of the Olympics, very few jobs were created for local people. There are still high levels of unemployment in the borough and it was a missed opportunity to train people up for work. Tower Hamlets got very little out of the Olympics. (Rushanara Ali, MP)</p> <p>Many people in the boroughs surrounding the Olympic Park remain in poverty</p> <p>Properties for poorer people had to be demolished to make way for the site, 450 Housing Association flats were torn down for example.</p>
Economic	<p>Stratford got a Tube station to help connect the area to the rest of London - Stratford is now second only to King's Cross as the most connected part of London.</p> <p>The infrastructure has been improved. As well as two Underground lines, a high-speed "javelin" train to King's Cross and the Docklands Light Railway, it may soon be a stop-off for the Eurostar to Paris.</p> <p>The Olympics brought more than £9bn of investment to east London, much of which went into transport. Lloyds TSB estimated that the Olympics will generate £10 billion in extra income for the UK economy</p> <p>ALL of the Olympic venues have been sold. The final building to be sold off was the £300m media centre, which will now primarily house Infinity – a data company who want to store information for large corporations.</p>	<p>The Olympic stadium is estimated to have cost £701 million pounds, almost 3 times the original estimate (source). This angered many local people.</p> <p>The total bill for the Olympics was £8.77 billion of tax payer's money. That was £5 billion over budget.</p> <p>Existing businesses had to move, including H. Forman and Sons, a salmon-smoking factory with 50 employees</p> <p>Rents and property prices have gone up as a result of the Games</p>
Environmentally	<p>Many of the grounds in the Olympic Park have been kept as parkland and are open to the public for use as a picnicking and play area. New green spaces and wildlife habitats were created, including ponds, woodlands, and artificial otter holes.</p> <p>The stadiums were made of at least 25% recycled materials</p> <p>The River Lea that runs through the Olympic Park was improved as has the quality of its water. Green areas were placed along the banks of the river.</p> <p>The urban wasteland of the Lower Lea Valley was cleaned up, with soil being cleaned on site.</p> <p>The Olympic Site was built largely on 560 acres of brownfield land, property that had been neglected, unused, and contaminated.</p> <p>Researchers helped choose sustainable &amp; biodiverse vegetation suited to an urban environment, including 4,000 trees, 74,000 plants and 60,000 bulbs and 300,000 wetland plants</p>	<p>Much wildlife had to be relocated; 4,000 smooth newts, 100 toads and 300 common lizards as well as fish including pikes and eels were moved by the Olympic Delivery Authority.</p> <p>Many of the materials for the stadiums and the Olympic Park came from overseas</p> <p>The games produced 3.3 million tons of CO<sub>2</sub></p>

**ACTIVITIES 4.5****The London Olympics was a success in regenerating East London. Discuss. (9 marks)****4.7 Features of sustainable urban living:**

Urban sustainability is a massive issue both in the UK and globally. It is basically to do with ensuring that cities and towns have a minimal environmental footprint (they don't pollute too much and don't consume too many natural resources) on their surrounding area, allowing local people a say so that society and communities are sustainable and making cities pleasant places to live through the provision of adequate open spaces and recreation facilities.

Indeed, a sustainable city can be defined as;

*"Improving the quality of life in a city, including ecological, cultural, political, institutional, social and economic components without leaving a burden on the future generations. A burden which is the result of a reduced natural capital and an excessive local debt."*

Urban21 conference in Berlin 2000

**You could consider the idea of urban sustainability as defined by the three "E's";**

**Economy** - Economic activity should serve the common good, be self-renewing, and build local assets and self-reliance.

**Ecology** - Human are part of nature, nature has limits, and communities are responsible for protecting and building natural assets.

**Equity** - The opportunity for full participation in all activities, benefits, and decision-making of a society.

**Energy conservation**

This is the reduction in the use of energy by;

1. Preventing use – stopping using energy for certain activities, for example, switching TVs off when not in use, not leaving on standby
2. Greater efficiency – using technologies that use less energy for the same function
3. Developing renewable sources of energy – using wind and solar power for example, rather than fossil fuels

**Key words**

**Integrated transport systems** - When different transport methods connect together, making journeys smoother and therefore public transport more appealing. Better integration should result in more demand for public transport and should see people switching from private car use to public modes of transport, which should be more sustainable. It may also lead to a fall in congestion due to less road users.

**Urban sustainability** - 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.

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

<http://www.coolgeography.co.uk> GCSE e-book

Newcastle City Council gives advice to both businesses and individual home owners on how to save energy. They have a “warm up north” scheme which tries to improve the energy efficiency of homes across the North East. Schemes include insulation, UPVC windows or doors, a new heating system or boiler and loft or cavity wall insulation. The scheme has also been installing solar panels on homes across the city.

### Water conservation

Water conservation involves is the preservation, control and development of **water** resources, both surface and groundwater, and prevention of pollution Water conservation should reduce water loss, waste and use.

It is important to conserve water because:

- 780 million people in the world lack access to clean water
- Only 1% of the world’s water supply is available for human consumption
- The demand for water is increasing
- Each Briton uses about 150 litres of tap water a day

Schemes underway in Newcastle upon Tyne to conserve water including;

1. The Hospitals in Newcastle have a water conservation policy. This includes a commitment to use efficient technology to limit water use. Water saving devices such as push taps have been installed in all new builds and refurbished buildings, and water is measured per member of staff.
2. Northumbrian Water has launched a campaign called ‘Every Drop Counts’ in 2015 aimed at reducing water use through education. They also offer free products for the garden will also be provided, including a free water butt, trigger hose guns and water saving gel for compost. The company also work hard to prevent leaks which consume huge amounts of water.
3. Newcastle University has also developed a water strategy, the target is to reduce water use to 13 cubic metres per staff and students by installing push taps, dual flush toilets and aerated showers head in their buildings to reduce water use

### Reducing and safely disposing of waste

Human beings create an incredible amount of waste, and the problem seems to be even worse within our cities. If you think about your own home, you can consider the amount of waste that needs to be dealt with. On a weekly basis you or the council needs to deal with:

- Your refuse and general waste from your bins, plastics, metals, food wastes;
- Waste water from cleaning, dishwashers, washing machines;
- Waste Water from your toilet;
- Emissions from your energy needs.



Imagine now that this needs to be repeated for thousands of people in your town, or tens of thousands/ hundreds of thousands/millions of people in your city!

This doesn't include any of the wastes from the industrial processes that take place in cities either. In HICs our cities are not growing so fast or their growth has slowed, and we have had many decades to establish organised systems to get rid of our waste. In LICs the problem is much more difficult to deal with, especially given the rapid growth of these cities and the informal nature of some of the development, where many people construct their own homes in squatter or shanty developments. One such LIC city is Cairo. All of this ties in with the issue of sustainability, can we continue to produce so much waste and not expect consequences?

### Waste Facts

- 44% of waste in the UK was recycled in 2014
- Newsham in London was worst for fly tipping and recycling rates
- WRAP estimates that around 600 million tonnes of products and materials enter the UK economy each year... only 115 million tonnes of this gets recycled.
- Nearly 25% of waste electrical and electronic equipment (WEEE) that's taken to household waste recycling centres could be re-used, worth around £200m gross a year.
- We throw away more than 7 million tonnes of food and drink every year from our homes - most of which could have been safely consumed.
- The amount of trash generated by the UK could fill Britain's largest lake, Lake Windermere, in just eight months.
- Reduce use of packaging (do apples need to be in plastic bags?) and use less plastic bags (bag for life carrier bags)

2 main options for getting rid of waste are landfill (burying the waste) and incineration (burning the waste). Landfill is used more but we are running out of sites and it can pollute the land and water sources near them. Incineration only accounts for 9% of household waste disposal but is unpopular as it can cause problems like air pollution.

### **How Newcastle has done this**

- Every household in Newcastle has recycling bins, allowing local residents to recycle cardboard, plastics, metals and glass.
- Households in Newcastle can also pay for a brown bin, into which garden waste can be put, collected and then composted
- Local tips in Newcastle also force people to separate their waste whenever possible, further increasing recycling rates.
- However, huge amounts of waste generated in Newcastle still end up in either landfill sites or incinerated.

### Providing adequate open spaces

- Greenbelts or areas where local authorities choose to restrict building around cities offers open space for recreation purposes
- Many areas in cities have designated areas of open space in the form of parks, playing fields and individual gardens.

### How Newcastle has done this

- Newcastle has a huge range of open spaces available for public use, including Jesmond Dene which was donated to the people of the city by Lord Armstrong and the Town Moor.



### 4.8 An example of how urban transport strategies are being used to reduce traffic congestion in one urban area.

#### A case study of sustainable urban living. Newcastle-upon-Tyne

Sustainability means living a life which meets your own needs without compromising the ability of future generations to meet their own needs. Newcastle-Upon Tyne is a large city in the North of England which has an unsustainable past. This city of 279 thousand people was a centre for heavy industry, ship building, coal mining and armaments works – all activities which can pose environmental problems. However, Modern Newcastle is restyling itself as a science city and a city whose economy is based upon information services and quaternary industries. A core foundation of this is environmental sustainability, and Newcastle offers a good case study of sustainable urban living. It was ranked as the UK's most sustainable city in 2009 ([source](#)).

#### Transport

Newcastle has a comprehensive public transport network, including a huge bus network and the well-known and used Tyne and Wear Metro. These are both more sustainable alternatives to the car. This network also offers park and ride facilities, such as at Four Lane Ends metro station!

In addition to this, Newcastle has a cycle network, some parts of which are off road, including through Jesmond Dene and the Wagon Way behind St Mary's school. In addition there are cycle routes running alongside the river including along the Quayside. The council also has a range of electric cars and vehicles, including those used in Jesmond Dene and Heaton Park, and the Quaylink bus service that connects Newcastle and Gateshead Quays.