

Topic 3

Contemporary urban environments

Urbanisation

1 Urbanisation is the process by which an increasing proportion of a country's population (1 mark) lives in urban areas such as towns and cities (1 mark).

2

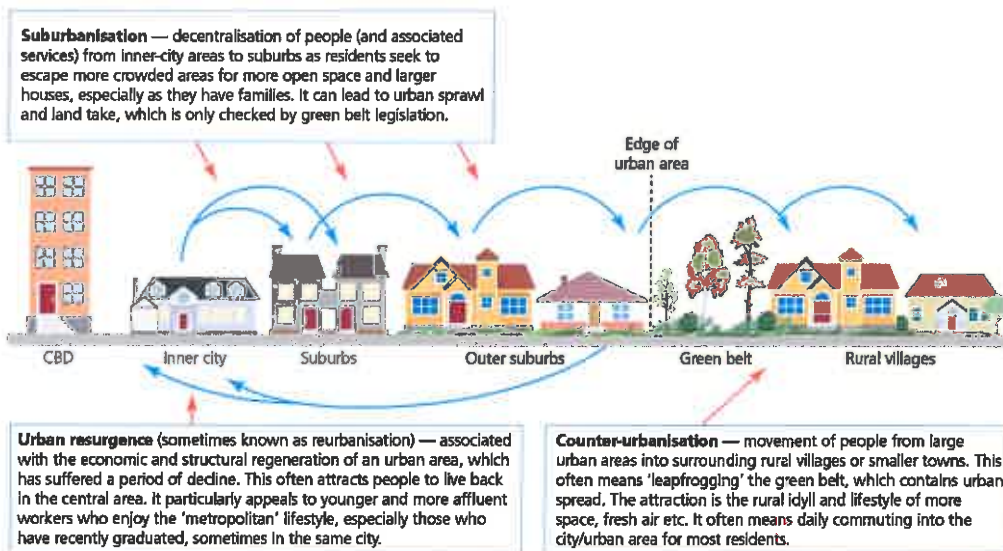
- The levels of urbanisation are higher in the more developed continents of North America, Europe and Oceania.
- In these three continents the levels of urbanisation are above the global average.
- Levels of urbanisation in the less developed continents of Asia and Africa are lower and below the global average, especially in Africa where they are only half the levels of urbanisation in the Americas.
- Latin America and the Caribbean appear to be slightly anomalous as the levels of urbanisation are higher than in Europe, a generally more developed region.
- Latin American and Caribbean countries are developing quickly but generally less quickly than parts of Asia.
- To reach the high levels of urbanisation in Latin America suggests that the pattern is more longstanding and less to do with recent development than a longer tradition of urban living.

3

- The two main causes of urbanisation are natural population growth and migration into urban areas from rural areas.
- Rural to urban migration is often cited as the main cause of urbanisation in developing countries, where urbanisation is the predominant process taking place.
- Rural to urban migration in parts of Asia, Africa and Latin America is usually a result of a combination of push and pull factors.
- Push factors tend to be unemployment and lack of opportunities, particularly for agricultural workers as a result of mechanisation or land reform.
- Pull factors are that urban areas are perceived to have better employment opportunities and the chance of increasing income and standard of living, especially for younger people.

- As most migrants to urban areas in developing countries are younger people of childbearing age, this affects the population structure and has a secondary impact on natural increase as birth rates will be much higher than death rates, given this structure.
- In more developed countries, although there is an element of younger people moving to towns and cities for education opportunities, the main direction of movement is from central to urban fringe areas.

4



5 A city or urban conurbation with a population of more than 10 million people.

6

- Megacities have a multi-functional infrastructure offering the best medical, legal and entertainment facilities in a country — they provide numerous opportunities in employment, education and healthcare.
- International financial services, banking, insurance, accountancy, real estate and marketing; stock exchanges and major financial institutions
- Many are the headquarters of large TNCs.
- Media and communication centres for global networks
- High quality educational institutions and universities are located there — centres of research and innovation
- Decision-making influence and power on a regional and international level; often the seat of government
- Megacities become 'cores' for development in countries or continental regions or 'hubs' in a global network/framework of global economic activity.

- They attract most investment and become centres for financial exchange and major service industries (sometimes manufacturing industry in developing countries).
- They produce, on average, two to three times more GDP than other cities.
- *On a regional basis* they can be a force for good or have a negative effect:
 - As a core area, development can spread out into peripheral areas to help the region develop.
 - They can draw in investment, resources and people from the surrounding area, which prevents regional development — this is more often the case in lower income countries where it is difficult to grow the economy beyond megacities.
- *On a global basis* — they interact and sometimes compete with other megacities for business but can trigger development of poorer regions by attracting investment and technology.

7 Decentralisation in urban development is the process of redistributing and dispersing people (1 mark) and functions (1 mark) away from the centre of the urban area (1 mark) towards the outskirts. This can mean that the central business district (CBD) loses some investment, influence and power (1 mark). Suburbanisation is a decentralising process (1 mark).

8

- Deindustrialisation is a process of economic and social change caused by the transfer and reduction of a country's or a region's heavy industry and manufacturing capacity.
- As richer economies develop, the proportionate contribution of the secondary (manufacturing) sector declines (numbers employed and output) but is largely replaced by the growth of the tertiary (services) sector, particularly retail, personal services and finance.
- One of the impacts in urban areas is high levels of structural unemployment with skilled and semi-skilled industrial workers having skills for jobs which have been lost.
- Structural unemployment can be long term until the workforce retrain and gains new skills for service industries.
- Many industrial sites are closed and fall into disrepair or become derelict. They are difficult to sell as no other industrialists need them.
- Many sites are demolished or restructured and designated for other uses.
- These are known as brownfield sites and make good locations for new industries such as retail, science or business parks.
- In the UK, these sites are also preferred for new house building to prevent the use of green-belt designated land or greenfield sites, and thus reducing urban sprawl.

9 Urban Development Corporations (1980s):

- These were effective in attracting new businesses to rundown areas and improving the urban environment.
- By the mid-1990s, they had attracted over £12 billion in private-sector investment and created 190,000 jobs nationally.
- The property-led approach did little to tackle social problems.
- Local people complained they had little involvement in the process. For example, in the London Docklands, locals did not tend to benefit from the new housing and jobs created.

City Challenge (1990s):

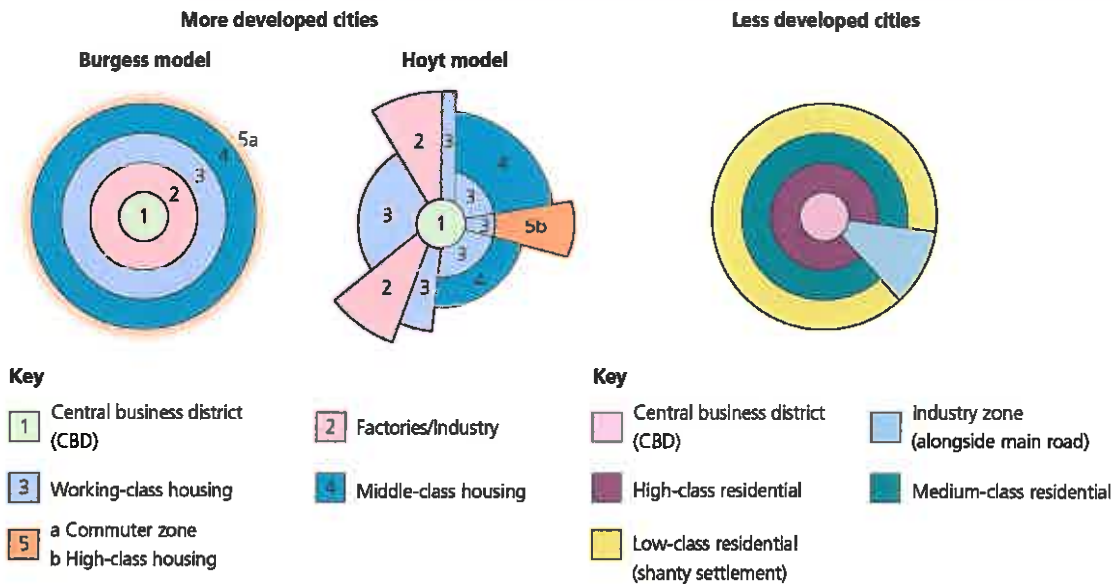
- The fact that local authorities had to bid for funding was judged to have resulted in more successful regeneration schemes.
- City Challenge gave equal importance to buildings, people and values.
- 1997 data revealed that City Challenge had improved over 40,000 houses, created 53,000 jobs and reclaimed 2,000 ha derelict land.
- Resources were thinly spread over large areas.
- Areas which had received government funding from previous schemes were now reliant on a bidding process. Many failed to secure funding because of unsuccessful bids rather than lack of genuine need.
- Money was wasted in preparing bids by local authorities that did not win funding.

New Deal for Communities (2000s):

- Between 2002 and 2008 NDC areas saw an improvement in 32 of 36 core indicators spanning crime, education, health, unemployment, community, housing and the physical environment.
- Evidence found that gaps at both national and local authority levels had generally narrowed.
- The NDC strategy delivered greater positive change for place- rather than people-related outcomes.
- Relatively little net change was achieved for education and worklessness.

Urban forms

10 Would expect to see Burges, Hoyt (or Mann for UK) models of urban morphology in more developed cities. For model typical of less developed city, see the right-hand diagram below.



11

- Both have central business districts with similar functions.
- Both have industrial zones:
 - Industrial zones in older more developed industrial cities tend to form around the city centre, in the inner city, mixed with low-class residential areas (workers). Burgess called this the zone of transition. These have suffered with deindustrialisation.
 - More recently in growing developed cities and in less developed countries, industrial zones tend to follow lines of communication such as major roads, railway or rivers.
- Residential zones are almost reversed:
 - In less developed cities, higher-class housing is often close to the city centre, either in a zone around the centre or in a line/direction developing on one side of the city. The outskirts of the cities and any unoccupied land near rivers or railways are often used for squatter settlements.
 - In high income cities, the inner-city zone is often occupied by lower-class residential areas and the outskirts and fringes are often occupied by better quality housing — though urban resurgence has meant that some high-class apartment-style properties are located centrally.
 - Medium-class residential zones often occupy the zone between the inner city and the fringes in both.

12 Physical

- Topography — depending on the history and original function of the urban areas — city centres can be in a valley near a bridging point (e.g. London) or at the top of a hill in former defensive sites (e.g. Edinburgh). Higher-class residential areas tend to be

on higher ground in developed cities, though higher/steep ground is sometimes used for squatter settlements in less developed cities.

- Natural coastal inlets — often developed as natural ports and become central to the city's activities (e.g. Portsmouth).
- Wind direction — in industrial times, higher-class residential areas tended to be on the upwind side of the city so they received less air pollution etc. For example, many UK industrial cities have better-class housing on the west side and lower-class housing on the east side because of prevailing southwesterly winds (e.g. Glasgow, Nottingham, Sheffield, London).

Human

- Land values — land values have been seen as being highest near the city centre, which is why it was used for business functions. More space could be afforded as you moved out from the city centre, which is why larger housing is often found there (in developed cities).
- Migration — different waves of migration may bring people of different nationalities. Migrants tend to settle and congregate near to people of the same nationality, culture or religion for both security and support network purposes. This can lead to spatial segregation and the development of 'quarters' or 'ghettos'.
- Agglomeration — many similar industries and certain functions tend to locate near to each other. This could be because certain resources are needed (e.g. water) or certain skills are available or there are cost savings (economies) to be gained in either a collaborative or competitive atmosphere (e.g. Jewellery Quarter in Birmingham, Covent Garden in London).

13

a Town centre mixed developments

- A wider range of leisure facilities including cinemas, theatres, cafés, wine bars, restaurants and other cultural and meeting places
- The availability of spaces, including gardens and squares or plazas
- The promotion of street entertainment
- Developing nightlife, such as 'clubbing'
- Developing flagship attractions
- Constructing new offices, apartments, hotels and conference centres to raise the status of the CBD for business and encourage tourists to remain near the city centre
- Encouraging residential areas to return to city centres by providing flats, redeveloping old buildings (a form of gentrification) or building new up-market apartments

b Edge cities

- Self-contained settlements which have emerged beyond the original city boundary and developed as cities in their own right
- Largely the result of urban sprawl, especially in the USA where there is more space and no green belt to prevent sprawl
- Develop close to major roads or airports — car ownership in North America means there is a greater willingness to travel long distances to work and more internal flights are taken.
- Shops, offices and other business functions become decentralised from the original city.
- Have a wide range of amenities including schools, shopping malls and entertainment facilities, meaning residents may rarely go back to the original core city.
- Linked to social segregation where the wealthy have moved to these new fringe/suburban cities, leaving the more disadvantaged in the old city core

c Fortress landscapes

- Parts of urban areas designed around security, protection, surveillance and exclusion
- Strategies have been adopted to reduce crime in urban hotspots such as the city centre and inner city estates:
 - Greater use of closed-circuit television (CCTV)
 - Railings and fencing around private spaces and properties
 - 'Mosquito' alarms, which emit a high-pitched sound heard only by young people, to discourage loitering around certain buildings
 - Effective use of street lighting
 - Speed bumps to prevent joyriding
- Use of guards or the electronic control of access into housing complexes is also a feature of fortress landscapes, especially in the USA and South Africa.

14

- A more fragmented urban form comprising independent settlements (such as edge cities), economies, societies and cultures
- A greater emphasis on producer services and knowledge-based industries rather than industrial mass production
- Eclectic and varied architecture (as seen in the London cityscape)
- Spectacular flagship developments
- Greater ethnic diversity but heightened economic, social and cultural inequalities and polarisation

Social and economic issues associated with urbanisation

15

- Economic inequality is the difference between levels of living standards, income etc. across the whole economic distribution.
- Inequality exists in all urban areas and enormous contrasts in wealth can be found over relatively small distances.
- Housing developers, builders and planners tend to build housing on blocks of land with a particular market in mind.
- The requirement to include a proportion of affordable or social housing may affect house prices in some areas but wealthier groups can choose where they live, paying premium prices for houses well away from poor areas.
- Changing environments mean that houses built for one purpose are now unsuitable. For example, larger family villas built in Victorian and Edwardian times are now too big for the average UK family. Many have been converted into multi-let apartments.
- Conversely, former poor areas are being gentrified. The 'right to buy' legislation of the 1980s transformed many council estates in the UK, as houses were bought by their occupants and improved.
- Living in poorer areas may often mean poorer facilities such as less successful schools. If exam results are not as good it is harder to find careers that will help lift people out of poverty, so the inequality in deprived areas is reinforced.

16 Social segregation

- Urban social exclusion refers to the problems faced by residents in areas of multiple deprivation, such as inner cities.
- Issues of social segregation have been compounded by deindustrialisation when unemployment becomes a major problem.
- Movement of more skilled residents from deprived areas has left behind a population who are older, less skilled and poor.
- People are excluded from full participation in society by their social and physical circumstances and cannot access employment because of poor education, or obtain decent housing because of poverty.
- They often suffer from poor health and high levels of crime may be prevalent in an unattractive physical environment.
- Social segregation can also be based on ethnicity, when ethnic communities become isolated from wider society, as they maintain their own language and beliefs and limit their interaction with others.

- Social segregation can cause lack of social cohesion and in extreme cases lead to civil unrest.

Cultural diversity

- Cultural diversity results largely from immigration. Immigrants are more likely to choose to live in urban areas for the following reasons:
 - Cities tend to offer a greater range of employment opportunities.
 - Cities are the first point of entry into the country for many immigrants.
 - Cities tend to house earlier immigrant groups with the same ethnicity.
 - Established cultural diversity in cities means there are specialist ethnic shops and religious centres located there.
- Cultural diversity can put extra pressure on already stretched urban services.
- Where language differences exist, local authorities may need to provide English lessons or bilingual literature.
- Hospitals may need to cater for specific illnesses.
- Schools need to give extra language support and may alter their curriculum and holiday patterns to cater for different ethnic groups.
- Variations in educational attainment have also been noted and it is the responsibility of local authorities to ensure that all children have the same opportunities.

Urban climate

17 A microclimate is a small-scale variation (1 mark) in temperature, precipitation, humidity, wind speed and evaporation (1 for any) occurring in a particular environment (1 mark) such as an urban area.

18

- Surfaces in the city tend to be less reflective than those in rural areas (1 mark) — materials such as bricks, concrete and tarmac have a much lower albedo (1 mark), acting like rock and absorbing heat.
- Air pollution from vehicles and industry increases cloud cover, creating a pollution dome (1 mark) and trapping heat within the urban area (1 mark).
- Water falling on surfaces is removed more quickly so there is less evapotranspiration (1 mark), giving more energy to heat the atmosphere (1 mark).
- Heat is generated in urban areas by buildings, vehicles and industries (1 mark).
- All the above factors lead to a phenomena known as an Urban Heat Island (UHI) (1 mark).

19 Increased frequency and intensity of weather phenomena in urban areas

| Weather type | Reasons for increased frequency, intensity in urban areas) |
|----------------------------|--|
| Precipitation (3 marks) | <ul style="list-style-type: none"> • Higher urban temperatures encourage the development of lower pressure over cities in relation to the surrounding area. • As ground surfaces are heated, rapid evapotranspiration occurs, resulting in cumulus cloud and convectional weather patterns. • High-rise buildings and a mixture of building heights induce air turbulence and promote increased vertical motion. • Low pressure caused by rising air, draws surface winds in from the surrounding rural area. • Urban pollution can increase cloud formation and rainfall. • Cities may also produce large amounts of water vapour from industrial sources and power stations. |
| Thunderstorms (3 marks) | <ul style="list-style-type: none"> • The urban heat island generates convection. • Thunderstorms are produced by convectional uplift under conditions of extreme instability. • The updraught of air through the central area of the towering cloud causes rapid cooling and condensation. • There are more pollutants for water droplets to form around and these, together with hail and super-cooled water, coalesce during collisions in the air. |
| Fog (3 marks) | <ul style="list-style-type: none"> • Occurrence of fog is associated with industrialisation in urban areas. • Higher levels of pollution, especially from burning fossil fuels, include particles. • Particles in pollutants act as condensation nuclei, encouraging fog formation. • Usually occurs under high pressure conditions during the night as temperatures fall. |

20

- The surface area of cities is uneven because of the varying height of the buildings — winds are affected by the size and shape of the buildings.
- Buildings exert a powerful frictional drag on the air moving around them and this can cause changes in wind speed and direction.
- Average wind speeds are lower in cities than in the surrounding areas and they are also lower in city centres than in suburbs.

There are a number of possible effects:

- The frictional drag on air moving over and around buildings creates turbulence, giving rapid and abrupt changes in both wind direction and speed.
- In the lee of the building there is a zone of lower pressure, causing vortices behind it.
- High-rise buildings slow air movement but they also channel air in one direction into the gaps between them, especially on long straight streets (e.g. New York's 5th Avenue). This channelling effect increases the speed of the wind.
- Similarly, if the gap between buildings gets increasingly narrow, this 'funnels' the wind causing a build-up of pressure known as the Venturi effect, which can cause major problems due to the speed and strength of the wind.
- Winds in such places can be so powerful that they make buildings sway and can blow passing pedestrians off their feet.
- On calm and clear nights when the urban heat island effect is at its greatest, convectional processes can draw in strong localised winds from cooler surrounding areas. In recent years the UHI effect has been accentuated when a city overheats during the day time in summer. Increasing use of AC units make it far worse.

Urban drainage

21

- a** Rural areas contain more natural surfaces such as forests, grassland, farmland and wetlands, which intercept precipitation (1 mark) and allow it to infiltrate more slowly into the ground (1 mark), whereas urban surfaces tend to be impermeable (1 mark), which prevents rainfall from infiltrating (1 mark).
- b**
- Impermeable surfaces mean that there will be rapid surface runoff with little infiltration.
 - Groundwater and soil water levels are reduced, so base level flows are also reduced.
 - Urban areas are designed to shed water quickly.
 - Sloping roofs, rounded guttering and cambered roads all contribute to the rapid movement of water away from the surface to prevent flooding.
 - Water usage is higher and intensified in urban areas. Sewage drainage systems dispose of water quickly.
 - Rainwater runoff is directed into underground storm drainage systems, which act like a high density drainage system.
 - When the water leaves the storm drains and empties into streams, these fill rapidly.
 - Urban areas are more likely to have flooded rivers after heavy rainfall.

- Discharge is 'flashy', with a high peak and a short lag time and steep rising and falling limbs.

22

- This is a new approach to managing rainfall using natural processes in the landscape to reduce flooding, control flooding and provide amenity areas for the community.
- Roof water is collected in water butts for use in gardens or flows to grass channels called swales. It then travels onto grass basins where it is stored in ponds before release into local ditches.
- Rain falling on roads or paths soaks through a permeable tarmac or block paving where it is filtered and stored in the stone below, or it flows into grass channels that have a stone filter drain underneath before it joins the rest of the SUDS system.
- Usually there will only be a little water in the detention ponds and the swales when the rainfall is light.
- If it rains heavily the swales and basins fill for a short period, protecting those areas downstream.
- Water is collected, cleaned and stored in the local landscape, providing an attractive place for recreation and wildlife conservation.

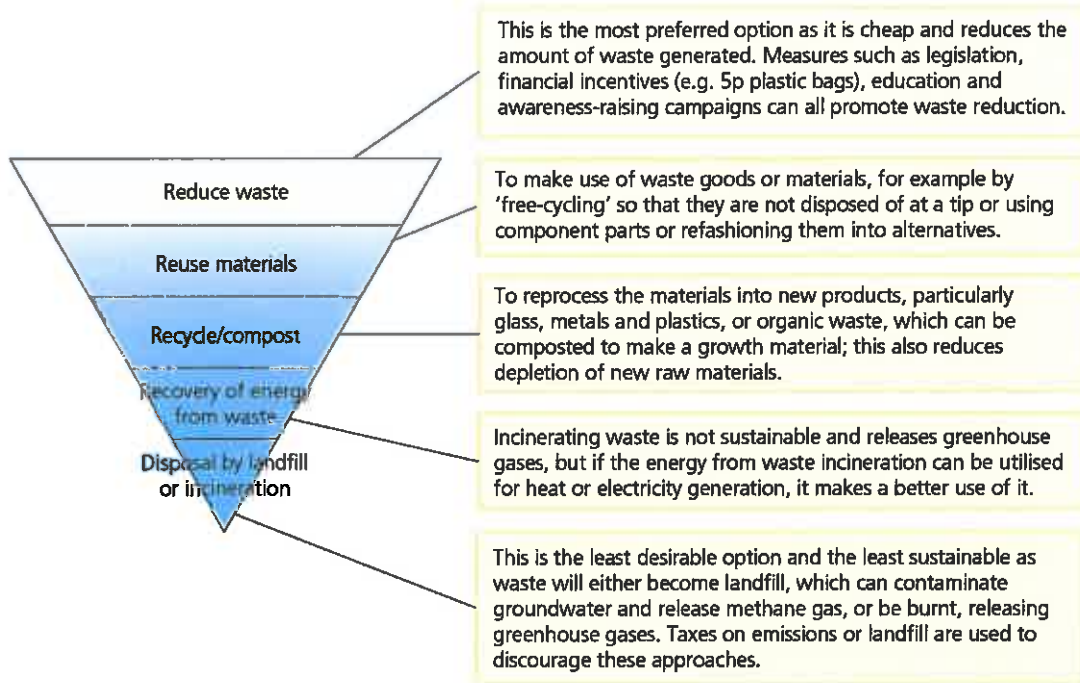
Credit will be given for examples where used (e.g. Bispham, Blackpool).

Urban waste and its disposal

23

- There is a projected growth of urban waste generation across all income levels, indicating that waste will continue to be a problem in urban areas for the foreseeable future.
- The largest projected increase will be in the lower middle income group, whose waste levels will increase by 2.5 times. This may reflect the growing population and affluence in these countries and higher levels of consumption in areas where the infrastructure to deal with extra waste has not been developed.
- By 2025, this group are projected to have the highest levels, larger than higher income groups.
- The lowest income groups have the lowest levels of waste in both periods but show the highest proportional increase of nearly three times, again perhaps reflecting some growing affluence.
- The high income group has the highest levels of waste generated in 2010 but the projected increase by 2025 is relatively small. This may reflect a relatively small growth in population but could also suggest a change in lifestyles where recycling or reducing waste occurs.

24



25

| Type of disposal | Advantages | Disadvantages |
|------------------|---|---|
| Landfill | <ul style="list-style-type: none"> Facilities are properly sited with necessary controls Different types of waste accepted and ordered | <ul style="list-style-type: none"> Unightly Often opposed by neighbouring residents Potential leaching of chemicals threatens groundwater supply Decaying matter produces methane, a strong greenhouse gas which is also explosive High transportation costs |
| Incineration | <ul style="list-style-type: none"> Can reduce volume of waste needing disposal by 90% Can inactivate disease agents Can reduce toxicity of waste Can be used to produce energy Incinerator 'bottom ash' can be recycled as a secondary aggregate | <ul style="list-style-type: none"> Expensive Not all waste is combustible Poses challenges of air pollution and incinerator 'bottom ash' disposal Capacity limitations Unpopular with local residents |

Other contemporary urban environmental issues

26

- Dereliction is the state of becoming abandoned and dilapidated.
- It is associated with former industrial sites, especially after deindustrialisation, often in inner cities. It may affect nearby services such as pubs and shops which also become vacant.
- Dereliction has negative impacts:
 - Crime and vandalism rates in derelict areas are higher.
 - Nearby house values fall.
 - It leads to out-migration of residents.
 - It can pose risks to health (e.g. contamination from former industrial sites).
- High costs are involved in urban renewal and reversing fortunes of such areas.

27

- Surface runoff from streets carrying oil, heavy metals and other contaminants from motor vehicles
- Industrial waste
- Untreated or poorly treated sewage, which is low in dissolved oxygen and high in pollutants such as nitrates, phosphorus and bacteria, which can lead to eutrophication. Treated sewage can still be high in nitrates.
- Rubbish dumps, toxic waste, chemical and fuel storage, which can all leak pollutants
- Intentional dumping of hazardous substances
- Air pollution can lead to acid rain, nitrate deposition and ammonium deposition, which can alter the water chemistry of an area.
- Other consequences include the death of aquatic wildlife, degradation of ecosystems, human health risks and additional water treatment costs

28 Managing air pollution

- Clean air acts — introduction of smoke-free zones
- Vehicle control and public transport:
 - Incentives to reduce vehicle emissions

- To encourage use of public transport, cycling or car sharing
- Congestion charges/low emission zones (e.g. London)
- Road tax linked to vehicle emissions
- Park and ride to reduce urban congestion
- Zoning of industry — to be located downwind of city centres

Credit will be given for examples.

Managing water pollution

- Ideally pollutants are prevented from ever entering water courses in the first place but the reality is that potential pollutants are treated before they are discharged.
- Water-treatment facilities and wastewater plants
- Regulations aimed at ‘point source’ polluters such as industries which discharge water pollution into receiving waters or sewer systems that flow into treatment plants
- Low-impact development is a management approach that can help to reduce storm water runoff, primarily through the use of vegetation and permeable surfaces to allow infiltration of water into the ground.
- Legislation, regulation and enforcement
- Education and awareness
- Use of appropriate technologies

Credit will be given for examples.

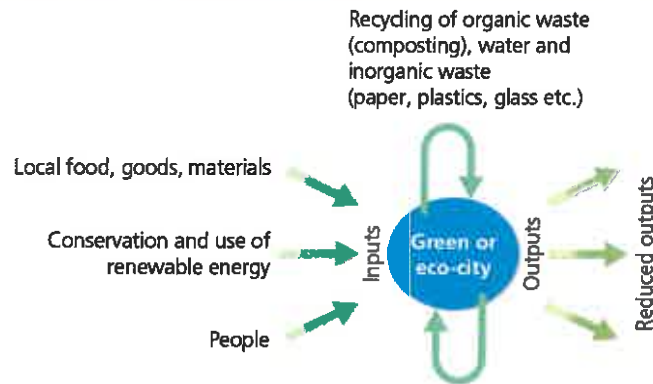
Sustainable urban development

29

a



b



30 Liveability is the characteristics of urban areas which make life more comfortable and endurable (1 mark) for city dwellers. It may include amenities such as parks and green space (1 mark) or more socioeconomic features such as job opportunities, political stability and feeling safe/secure (1 mark). It is linked to social welfare/wellbeing (1 mark) and is measured by the Global Liveability Ranking (1 mark).

31

- There should be some assessment of the success of any strategies used or referred to in improving sustainability. Credit to be given for named examples to support strategies.
- Investment in infrastructure such as:
 - roads, dedicated fast transit public transport lanes (e.g. Curitiba)
 - electricity supply (from renewable sources), water, sewers
 - waste management — better collection and recycling and energy recovery
 - schools and healthcare services
- Provision of green spaces to benefit public health and liveability
- More sustainable and affordable housing, e.g. low carbon housing developments such as BEDZED
- Adopting a local currency — has the benefit of serving local people and keeping the money within the local economy (e.g. Bristol pound)
- Participation of a range of city stakeholders including transport, police and other emergency services, healthcare, business groups, residents in local planning decisions
- Risk evaluation and strategies — measures to evaluate the greatest risks and hazards and install schemes to mitigate them (e.g. flood barriers)

Exam-style questions (AS, Paper 1)

1 (AO1) (1 mark)

Answer = A

- 2 Award 1 mark for each relevant point with extra mark(s) for developed points (d). (AO1) (3 marks)
- Government-led regeneration schemes (1 mark)
 - Redevelopment by private companies attracts investment into central areas (1 mark).
 - City living more attractive (1 mark); people live closer to work; entertainment and leisure facilities (1 mark) (d).
 - Gentrification — areas become more fashionable (1 mark) with independent shops, bars etc.
 - Major festivals or sporting events can act as a catalyst (1 mark) for regeneration and investment.
 - Any of the above may have a positive multiplier effect on the area (1 mark) (d).
- 3 (AO2, AO3) Level 2 (4–6 marks); Level 1 (1–3 marks)
- Increase in projected number of megacities globally reflecting increased urbanisation
 - All continents/regions, with the exception of Oceania are projected to have 'grown' new megacities over the 25-year period.
 - On a global scale there has been a general shift in distribution eastwards and southwards.
 - There is now a greater proportion of megacities in south and east Asia than there was before, reflecting the rapid growth in development of China and India and associated urbanisation.
 - Africa and South America are projected to gain two new megacities each, which doubles the amount overall for these two continents.
 - Europe also gains two new megacities in the west (London and Paris) and a further one in the east, if metropolitan Istanbul is regarded as being in Europe rather than Asia.
 - North America only gains one megacity in the midwest USA (probably Chicago).
- 4 (AO1, AO2) Level 3 (7–9 marks); Level 2 (4–6 marks); Level 1 (1–3 marks)

Economic impacts

- Unemployment; reduced job opportunities
- Closure of businesses/industries
- Increased population receiving state and council tax benefits
- Loss of income to the local authority — inability to provide services
- De-multiplier effect — service sector declines as local population have less disposable income — sets off a spiral of decline; failure to attract investment

- Fall in property prices

Social impacts

- Higher levels of poverty and deprivation
- Out-migration
- Higher crime levels
- Increased health problems due to poor diet, alcoholism, drug abuse etc.

Environmental problems

- Dereliction of buildings and land
- Residue pollution from 'dirty' industries — may last
- Deterioration of infrastructure and reduced maintenance of social housing and public buildings due to lack of funds
- May be some positive impacts such as reduced noise, pollution and congestion

5 (AO1, AO2) Level 4 (16–20) marks; Level 3 (11–15 marks); Level 2 (6–10 marks); Level 1 (1–5 marks)

Named example: e.g. Cheonggyecheon River Project in Seoul, South Korea

Indicative content:

- Reasons for the project — what issues/problems with the urban catchment? E.g. lack of sustainability, dereliction, pollution etc.
- Aims of the project — what was the purpose? E.g. to improve conservation, recreation, sustainability, environmental quality, improving drainage
- Describe the work carried out to restore the river and its surrounding area, e.g. bridging points, zoning etc. — include costs and impacts of project if available; was relocation of residents or businesses necessary? (Temporary or permanent?)
- Evaluate by discussing the positive and negative outcomes of the project:
 - Economic costs and benefits — incomes for local businesses; residential values etc.
 - Social costs and benefits of project — popularity with residents; increased use of area
 - Changes in liveability index; consideration for all groups (e.g. disabled)
- Environmental costs and benefits — habitat change, loss during project work; gains on completion; changes in pollution levels (water and air) as a result of the project

Conclude with evaluation of overall success or otherwise of project.

Exam-style questions (A-level, Paper 2)

6 (AO1) (1 mark)

Answer = D

7 (AO2, AO3) Level 2 (4–6 marks); Level 1 (1–3 marks)

- All regions of the world have increased their levels of urbanisation since 1950 and this trend is projected to continue until 2050.
- The rates of change have varied between the regions and continents.
- Africa and Asia show the most rapid urbanisation over the 100-year period.
- Africa has mirrored the world average rate of urban growth but has stayed below it, starting at 15% in 1950 and projected to rise to 58% by 2050.
- Asia's rate of urbanisation was very similar to Africa but has accelerated at a slightly higher rate since the turn of the millennium and is predicted to reach 63%, just lower than the global average by 2050.
- Oceania shows the least change over the whole period, starting with just over 60% of its population living in urban areas, rising to about 70% by the end of the twentieth century and is projected to be at around 72% by 2050.
- North America and Europe both show a constant steady growth in urbanisation, running almost parallel with each other; North America starting and finishing at a higher point (65% to 88%) than Europe (52% to 82%).
- Latin America and the Caribbean has always had the highest rates of urbanisation of the developing regions and this accelerated further until recently, reaching around 80% by 2015 (higher than Europe) but the rate is projected to slow a little, reaching 86% by 2050.

8 (AO1, AO2) Level 3 (7–9 marks); Level 2 (4–6 marks); Level 1 (1–3 marks)

- Climate change is expected to result in an increase in the intensity of the UHI effect in many urban areas.
- Health — during extreme UHI events, cases of heat stroke, asthma and organ damage increase; it can cause an increase in deaths.
- Vulnerable groups such as the elderly and infants are most at risk from health-related impacts.
- Liveability — in summer months, conditions on transport systems and in buildings can become uncomfortable.
- Higher pollution levels result from the hot, anticyclonic weather conditions.
- Increased water consumption by households and businesses places extra strain on the water supply and may lead to water use restrictions.
- Increased pressure on energy supply as it is needed for air conditioning and cooling.

- Higher temperatures can mean:
 - earlier flowering time for plants and prolonged growing season, which can affect people with allergies
 - prolonged survival and higher reproduction rates of insect pests
- There will be increased risk of chemical weathering on historical buildings and monuments.

9 (AO1, AO2) Level 4 (16–20) marks; Level 3 (11–15) marks; Level 2 (6–10) marks; Level 1 (1–5) marks)

This is an opinion-based answer, which means you must form and express a view as to the validity of the statement after examining the evidence on all sides.

Indicative content:

- Managing social and economic issues focuses on the reduction of poverty, inequality, segregation and social exclusion.
- Strategies for managing economic and social issues include:
 - supporting low-skilled workers with education and training to extend their abilities and develop employment potential
 - giving access to more affordable housing
 - providing more and better quality public transport so people can access all parts of the city/urban area for different reasons — employment, recreation etc.
 - enforcing a living wage or providing a subsidy (e.g. China; London)
 - providing good quality inner city schools that are well funded and supported by government
 - introducing the idea of a 'Fairness Commission' to reduce inequality (e.g. Sheffield)
- Environmental problems include air and water pollution, waste management, drainage, environmental health and in some cases dereliction.
- Managing these problems can involve a variety of measures used in combination, including:
 - legislation such as clean air acts
 - controls such as congestion charges
 - zoning of industry
 - SUDS
 - river restoration

- water treatment facilities
- regulating point source pollution
- more sustainable waste management
- Indirectly, managing environmental problems and enforcing minimum environmental standards can also contribute to solving social issues such as poor health.
- Establishing environment standards might be suggested as the forefront of an 'integrated approach' where a focus on improving the built and natural environment in urban areas reaps social and economic benefits for all citizens.
- You need to assess the relative difficulty in applying the two sets of measures discussed to urban areas studied.
- Come to a conclusion:
 - Links between the two sets of strategies
 - Management of social and economic issues is more challenging because you are dealing with people — individuals do not always respond as expected to incentives.
 - Environmental issues are slightly easier — dealing with materials and processes more than people.