

3.2.3 Contemporary urban environments

This optional section of our specification focuses on urban growth and change which are seemingly ubiquitous processes and present significant environmental and social challenges for human populations. The section examines these processes and challenges and the issues associated with them, in particular the potential for environmental sustainability and social cohesion. Engaging with these themes in a range of urban settings from contrasting areas of the world affords the opportunity for students to appreciate human diversity and develop awareness and insight into profound questions of opportunity, equity and sustainability. Study of this section offers the opportunity to exercise and develop observation skills, measurement and geospatial mapping skills, together with data manipulation and statistical skills, including those associated with and arising from fieldwork.

3.2.3.1 Urbanisation

Urbanisation and its importance in human affairs. Global patterns of urbanisation since 1945. Urbanisation, suburbanisation, counter-urbanisation, urban resurgence. The emergence of megacities and world cities and their role in global and regional economies.

Economic, social, technological, political and demographic processes associated with urbanisation and urban growth.

Urban change: deindustrialisation, decentralisation, rise of service economy. Urban policy and regeneration in Britain since 1979.

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3.2.3.2 Urban forms

Contemporary characteristics of mega/world cities. Urban characteristics in contrasting settings. Physical and human factors in urban forms. Spatial patterns of land use, economic inequality, social segregation and cultural diversity in contrasting urban areas, and the factors that influence them.

New urban landscapes: town centre mixed developments, cultural and heritage quarters, fortress developments, gentrified areas, edge cities. The concept of the post-modern western city.

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3.2.3.3 Social and economic issues associated with urbanisation

Issues associated with economic inequality, social segregation and cultural diversity in contrasting urban areas.

Strategies to manage these issues.

3.2.3.4 Urban climate

The impact of urban forms and processes on local climate and weather.

Urban temperatures: the urban heat island effect. Precipitation: frequency and intensity. Fogs and thunderstorms in urban environments. Wind: the effects of urban structures and layout on wind speed, direction and frequency. Air quality: particulate and photo-chemical pollution.

Pollution reduction policies.

3.2.3.5 Urban drainage

Urban precipitation, surfaces and catchment characteristics; impacts on drainage basin storage areas; urban water cycle: water movement through urban catchments as measured by hydrographs.

Issues associated with catchment management in urban areas. The development of sustainable urban drainage systems (SUDS).

River restoration and conservation in damaged urban catchments with reference to a specific project. Reasons for and aims of the project; attitudes and contributions of parties involved; project activities and evaluation of project outcomes.

3.2.3.6 Urban waste and its disposal

Urban physical waste generation: sources of waste - industrial and commercial activity, personal consumption. Relation of waste components and waste streams to economic characteristics, lifestyles and attitudes. The environmental impacts of alternative approaches to waste disposal: unregulated, recycling, recovery, incineration, burial, submergence and trade.

Comparison of incineration and landfill approaches to waste disposal in relation to a specified urban area.

3.2.3.7 Other contemporary urban environmental issues

Environmental problems in contrasting urban areas: atmospheric pollution, water pollution and dereliction.

Strategies to manage these environmental problems.

3.2.3.8 Sustainable urban development

Impact of urban areas on local and global environments. Ecological footprint of major urban areas. Dimensions of sustainability: natural, physical, social and economic. Nature and features of sustainable cities. Concept of liveability.

Contemporary opportunities and challenges in developing more sustainable cities. Strategies for developing more sustainable cities.

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3.2.3.9a Case studies London, England

Case studies of two contrasting urban areas to illustrate and analyse key themes set out above, to include:

- patterns of economic and social well-being
- the nature and impact of physical environmental conditions

with particular reference to the implications for environmental sustainability, the character of the study areas and the experience and attitudes of their populations.

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3.2.3.9b Case studies Mumbai, India

Case studies of two contrasting urban areas to illustrate and analyse key themes set out above, to include:

- patterns of economic and social well-being
- the nature and impact of physical environmental conditions

with particular reference to the implications for environmental sustainability, the character of the study areas and the experience and attitudes of their populations.

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3.2.3.9c Case studies Rio, Brazil

Case studies of two contrasting urban areas to illustrate and analyse key themes set out above, to include:

- patterns of economic and social well-being
- the nature and impact of physical environmental conditions

with particular reference to the implications for environmental sustainability, the character of the study areas and the experience and attitudes of their populations.