Edexcel Subject Content

Topic 2: Landscape Systems, Processes and Change

2A Glaciated Landscapes and Change

**Enquiry Question 2:** What processes operate within glacier systems?

2A.6 The glacier landform system.

a. Glaciers alter landscapes through a number of processes: details of erosion, entrainment, transport and deposition.  

b. Glacial landforms develop at macro-, meso- and micro-scales with distinctive morphologies in process environments, such as subglacial, marginal, proglacial and periglacial.  

c. These landforms create a number of distinctive landscapes in upland and lowland areas that can be used to study the extent of ice cover.

**Enquiry Question 3:** How do glacial processes contribute to the formation of glacial landforms and landscapes?

2A.7 Glacial erosion creates distinctive landforms and contributes to glaciated landscapes.

a. Glacial, erosional processes (abrasion, quarrying, plucking, crushing and basal melting, combined with subaerial freeze thaw and mass movement).  

b. The processes leading to the formation of landforms associated with cirque and valley glaciers (cirques/corries (5), arêtes, pyramidal peaks, glacial troughs, truncated spurs and hanging valleys and ribbon lakes).  

c. The formation of landforms due to ice sheet scouring (roches moutonnées, knock and lochan, crag and tail) and the influence of differential geology.

2A.8 Glacial deposition creates distinctive landforms and contributes to glaciated landscapes.

a. The formation of ice contact depositional features (medial, lateral, recessional and terminal moraines and drumlins).  

b. The formation of lowland depositional features (till plains, lodgement and ablation till). (6)  

c. The assemblage of landforms can be used to reconstruct former ice extent and movement and for provenance (erratics, moraines, crag and tail, drumlin orientation). (7)

2A.9 Glacial meltwater plays a significant role in creating distinctive landforms and contributes to glaciated landscapes.

a. The processes of water movement within the glacial system (supraglacial, englacial and sub-glacial flows).  

b. Glacial and fluvioglacial deposits have different characteristics (stratification, sorting, imbrication and grading). (8)  

c. The formation of fluvioglacial landforms; ice contact features (kames and eskers and kame terraces) and proglacial features (sandurs, proglacial lakes, meltwater channels, and kettleholes).

**Enquiry Question 4:** How are glaciated landscapes used and managed today?

2A.11 There are threats facing fragile active and relict glaciated upland landscapes.

a. Glaciated landscapes face varying degrees of threat from both natural hazards (avalanches and glacial outburst floods) and human activities (leisure and tourism, reservoir construction, urbanisation).  

b. Human activity can degrade the landscape and fragile ecology of glaciated landscapes (soil erosion, trampling, landslides, deforestation).  

c. Global warming is having a major impact on glacial mass balances, which in turn risks disruption of the hydrological cycle (meltwater and river discharge, sediment yield, water quality). (9)

Guidance for integrating geographical skills - 2A Glaciated Landscapes and Change

(5) Cirque orientation analysis using large-scale maps (OS maps); calculating Spearman’s rank correlations of height of basin, size of basin and orientation and commenting on the significance of the correlation.

(6) Till fabric analysis using rose diagrams.

(7) Use of British Geological Society (BGS) glacial drift maps, Ordnance Survey (OS) maps, GIS and fieldwork results to reconstruct past ice extent and ice flow direction.

(8) Use of student t-test to analyse changes in sediment size and shape in outwash plains; central tendency analysis of both glacial and fluvioglacial deposits (comparison of size, shape and degree of sorting of clasts).

(9) Numerical analysis of mean rates of glacial recession in different global regions.
### Topic 2: Landscape Systems, Processes and Change

#### 2B Coastal Landscape and Change

**Enquiry Question 1:** Why are coastal landscapes different and what processes cause these differences?

2B.3 Rates of coastal recession and stability depend on lithology and other factors.

- **b.** Differential erosion of alternating strata in cliffs (permeable/impermeable, resistant/less resistant) produces complex cliff profiles and influences recession rates. (3)

**Enquiry Question 2:** How do characteristic coastal landforms contribute to coastal landscapes?

2B.4 Marine erosion creates distinctive coastal landforms and contributes to coastal landscapes.

- **a.** Different wave types (constructive/destructive) influence beach morphology and beach sediment profiles, which vary seasonally. (4)
- **b.** The importance of erosion processes (hydraulic action, corrosion, abrasion, attrition) is influenced by wave type, size and lithology.
- **c.** Erosion creates distinctive coastal landforms (wave cut notches, wave cut platforms, cliffs, cave-arch-stack-stump sequence).

2B.5 Sediment transport and deposition create distinctive landforms and contribute to coastal landscapes.

- **a.** Sediment transportation is influenced by angle of wave attack, tides and currents and the process of longshore drift. (5)

**Enquiry Question 4:** How can coastlines be managed to meet the needs of all players?

2B.11 There are different approaches to managing the risks associated with coastal recession and flooding.

- **a.** Hard engineering approaches (groynes, sea walls, rip rap, revetments, off-shore breakwaters) are economically costly and directly alter physical processes and systems. (8)
- **b.** Soft engineering approaches (beach nourishment, cliff regarding and drainage, dune stabilisation) attempt to work with physical systems and processes to protect coasts. (9)
- **c.** Sustainable management is designed to cope with future threats (increased storm events, rising sea levels) but its implementation can lead to local conflict.

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**Guidance for integrating geographical skills - 2B Coastal Landscapes and Change**

- (3) Field sketches of contrasting coastal landscapes.
- (4) Using measures of central tendency to classify waves into destructive and constructive wave types.
- (5) Using student t-test to investigate changes in pebble size and shape along a drift aligned beach.
- (8) Interrogation of GIS of management cells to ascertain land use values and develop cost/benefit analysis to inform the choice of coastal management strategy.
- (9) Photo interpretation of a range of approaches to management to assess environmental impact.
Enquiry Question 2: Why might regeneration be needed?

### 4A.4 Economic and social inequalities changes people's perceptions of an area.

- c. There are priorities for regeneration due to significant variations in both economic and social inequalities (gated communities, 'sink estates', commuter villages, declining rural settlements).

### 4A.5 There are significant variations in the lived experience of place and engagement with them.

- a. There are wide variations in levels of engagement in local communities (local and national election turnout, development and support for local community groups). (A: local communities vary in attitudes)
- b. Lived experience of, and attachment to, places varies according to age, ethnicity, gender, length of residence (new migrants, students) and levels of deprivation; these in turn impact on levels of engagement. (A: Attachment to places influence attitudes)
- c. Conflicts can occur among contrasting groups in communities that have different views about the priorities and strategies for regeneration, these have complex causes (lack of political engagement and representation, ethnic tensions, inequality and lack of economic opportunity). (P: Players vary attitudes(A) and may have contrasting approaches (F))

### 4A.6 There is a range of ways to evaluate the need for regeneration.

- a. The use of statistical evidence to determine the need for regeneration in your chosen local place. (5)
- b. Different media can provide contrasting evidence, questioning the need for regeneration in your chosen local place. (6)
- c. How different representations of your chosen local place could influence the perceived need for regeneration. (7)

Enquiry Question 3: How is regeneration managed?

### 4A.8 Local government policies aim to represent areas as being attractive for inward investment.

- b. Local interest groups (Chambers of Commerce, local preservation societies, trade unions) play a key role in decision-making about regeneration; there are often tensions between groups that wish to preserve urban environments and those that seek change.
- c. Urban and rural regeneration strategies include retail-led plans, tourism, leisure and sport; public/private rural diversification.

### 4A.9 Rebranding attempts to represent areas as being more attractive by changing public perception of them.

- a. Rebranding involves re-imaging places using a variety of media to improve the image of both urban and rural locations and make them more attractive for potential investors.
- b. For UK deindustrialised cities, rebranding can stress the attraction of places, creating specific place identity building on their industrial heritage; this can attract national and international tourists and visitors (8).
- c. There are a range of rural rebranding strategies in the postproduction countryside based on heritage and literary associations, farm diversification and specialised products, outdoor pursuits and adventure in both accessible and remote areas; these strategies are intended to make these places more attractive to national and international tourists and visitors.
Enquiry Question 4: How successful is regeneration?

4A.10 The success of regeneration uses a range of measures: economic, demographic, social and environmental.

a. The success of economic regeneration can be assessed using measures of income, poverty and employment (both relative and absolute changes) both within areas and by comparison to other more successful areas.

b. Social progress can be measured by reductions in inequalities both between areas and within them; social progress can also be measured by improvements in social measures of deprivation and in demographic changes (improvements in life expectancy and reductions in health deprivation).

c. Regeneration is successful if it leads to an improvement in the living environment (levels of pollution reduced, reduction in abandoned and derelict land). (9)

4A.11 Different urban stakeholders have different criteria for judging the success of urban regeneration.

a. A study of the strategies used in the regeneration of an urban place and the contested nature of these decisions within local communities. (10)

b. The changes that have taken place as a consequence of national and local strategies can be judged using a range of economic, social, demographic and environmental variables in an urban area. (F: future success depends on past decisions)

c. Different stakeholders (local and national governments, local businesses and residents) will assess success using contrasting criteria; their views will depend on the meaning and lived experiences of an urban place and the impact of change on both the reality and the image of that place.

4A.12 Different rural stakeholders have different criteria for judging the success of rural regeneration.

a. A study of the strategies used in the restructuring of a rural place and the contested nature of these decisions within local communities.

b. The changes that have taken place as a consequence of national and local strategies can be judged using a range of economic, social, demographic and environmental variables in a rural area. (F: future success depends on past decisions)

c. Different stakeholders (local and national governments, local businesses and residents) will assess success using contrasting criteria; their views will depend on the meaning and lived experiences of a rural place and the impact of change on both the reality and the image of that place.

Guidance for integrating geographical skills - 4A Regenerating Places

(5) Testing of the strength of relationships through the use of scatter graphs and Spearman’s rank correlation.

(6) Use of different newspaper sources to understand conflicting views about plans for regeneration.

(7) Evaluation of different sources (music, photography, film, art, literature) and appreciation of why they create different representations and image of a local place.

(8) Exploration of discursive/creative media sources to find out how place identity has been used as part of rebranding.

(9) The interpretation of photographic and map evidence showing “before and after” cross-sections of regenerated urban and rural places.

(10) Interrogation of blog entries and other social media to understand different views of the success of regeneration projects.
### Enquiry Question 2: How do people view diverse living spaces?

#### 4B.4 Urban places are seen differently by different groups because of their lived experience of places and their perception of those places.

- **a.** During industrialisation, urban places were perceived by some as dangerous and threatening; currently they could be seen as attractive because of their range of economic opportunities and the variety of social and leisure activities that attract young people and migrants.

- **b.** Some urban locations are perceived as undesirable or even threatening by residents and/or outsiders due to high crime rates, low environmental quality, population characteristics and reputation based on quantitative data but also due to lived experience and media representation. (2)

- **c.** Suburban and inner-city areas are perceived differently in terms of their desirability as places to live and work by contrasting demographic groups (by age, ethnicity, life cycle stage). (3). (A: attitudes may vary)

#### 4B.5 Rural places are seen differently by different groups because of their lived experience of places and their perception of those places.

- **a.** Rural places are often perceived as idyllic because of their tranquillity, natural landscapes and historical and cultural associations (Hardy’s ‘Wessex’). (4). (A: Urban and rural residents may differ in their attitude to places.)

- **b.** Some rural locations are perceived as undesirable by residents and/or outsiders because of remoteness, limited social opportunities, limited range of services, high transport costs, population characteristics and reputation based on quantitative data but also because of lived experience and media representation.

- **c.** Rural areas are viewed in different ways: from very remote areas to retirement villages and commuter villages. (A: attitudes may vary)

#### 4B.6 There is a range of ways to evaluate how people view their living spaces.

- **a.** The use of statistical evidence to determine whether people have a positive or negative image of your chosen local place. (5)

- **b.** Different media can provide contrasting evidence about the image different people have of your chosen local place.

- **c.** How different representations of your chosen local place could be used to influence the perception of cultural and demographic issues and conflict. (6)

#### 4B.8 Levels of segregation reflect cultural, economic and social variation and change over time.

- **a.** International migrants tend to live in distinctive places with ethnic segregation closely related to economic indicators (income and employment) and social indicators (health, crime and education). (7)

- **b.** Diverse living spaces in urban areas have social characteristics that reflect ethnicity and culture in terms of distinctive retail outlets, places of worship and leisure. (8)

- **c.** Experiences and perceptions of living spaces change over generations as communities have evolved economically and culturally. (A: Intergenerational attitudes and norms may change from global cultural trends)

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**Guidance for integrating geographical skills - 4B Diverse Places**

1. Use of GIS to represent and analyse crime data and to show variations in levels of crime across communities.
2. Interviews with local residents to interpret information representing cultural and demographic issues in a local place.
3. Interpretation of qualitative information (advertising copy, tourist agency material, local art exhibitions) to show both its significance and what it means about a chosen local place.
4. Testing of the strength of relationships through the use of scatter graphs and Spearman’s rank correlation.
5. Evaluation of different sources (music, photography, film, art, literature) and appreciation of why they create different representations and image of a local place.
6. Use of indexes to measure ethnic and cultural diversity.
7. Interpretation of photographic map evidence showing ‘before and after’ cross-sections.
### Appendix 2: Fieldwork Skills

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<tbody>
<tr>
<td>1</td>
<td>Identify appropriate field research questions, based on their knowledge and understanding of relevant aspects of physical and human geography.</td>
<td>✓</td>
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<td>2</td>
<td>Undertake informed and critical questioning of data sources, analytical methodologies, data reporting and presentation, including the ability to identify sources of error in data and to identify the misuse of data.</td>
<td>✓</td>
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<td>3</td>
<td>Understand how to observe and record phenomena in the field and be able to devise and justify practical approaches taken in the field, (including frequency/timing of observation, sampling, and data collection approaches).</td>
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<td>4</td>
<td>Demonstrate knowledge and understanding of how to select practical field methodologies (primary) appropriate to their investigation.</td>
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<td>5</td>
<td>Demonstrate knowledge and understanding of implementing chosen methodologies to collect data/information of good quality that is relevant to the topic of investigation.</td>
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<td>6</td>
<td>Demonstrate knowledge and understanding of the techniques appropriate for analysing field data and information and for representing results, including GIS, and show ability to select suitable quantitative or qualitative approaches and to apply them.</td>
<td>✓</td>
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<td>7</td>
<td>Apply existing knowledge and concepts to identify, order and understand field observations.</td>
<td>✓</td>
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<td>8</td>
<td>Show the ability to present and write a coherent analysis of fieldwork findings and results in order to justify conclusions as well as to interpret meaning from the investigation, including the significance of any measurement or other errors.</td>
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