OCR

Oxford Cambridge and RSA

…day June 20XX – Morning/Afternoon

AS Level Geography
H081/01   Landscape and place

SAMPLE MARK SCHEME

Duration: 1 hour 45 minutes

MAXIMUM MARK   82

SPECIMEN

DRAFT

This document consists of 36 pages

MARKING INSTRUCTIONS

PREPARATION FOR MARKING

SCORIS

1.   Make sure that you have accessed and completed the relevant training packages for on–screen marking: *scoris assessor Online Training*; *OCR Essential Guide to Marking*.

2.   Make sure that you have read and understood the mark scheme and the question paper for this unit. These are posted on the RM Cambridge Assessment Support Portal http://www.rm.com/support/ca

3.   Log–in to scoris and mark the **required number** of practice responses ("scripts") and the **required number** of standardisation responses.

   YOU MUST MARK 10 PRACTICE AND 10 STANDARDISATION RESPONSES BEFORE YOU CAN BE APPROVED TO MARK LIVE SCRIPTS.

TRADITIONAL

Before the Standardisation meeting you must mark at least 10 scripts from several centres. For this preliminary marking you should use **pencil** and follow the **mark scheme**. Bring these **marked scripts** to the meeting.

MARKING

1.   Mark strictly to the mark scheme.

2.   Marks awarded must relate directly to the marking criteria.

3.   The schedule of dates is very important. It is essential that you meet the scoris 50% and 100% (traditional 50% Batch 1 and 100% Batch 2) deadlines. If you experience problems, you must contact your Team Leader (Supervisor) without delay.

4.   If you are in any doubt about applying the mark scheme, consult your Team Leader by telephone, email or via the scoris messaging system.

5.   Work crossed out:
      a.   where a candidate crosses out an answer and provides an alternative response, the crossed out response is not marked and gains no marks
      b.   if a candidate crosses out an answer to a whole question and makes no second attempt, and if the inclusion of the answer does not cause a rubric infringement, the assessor should attempt to mark the crossed out answer and award marks appropriately.

6.   Always check the pages (and additional objects if present) at the end of the response in case any answers have been continued there. If the candidate has continued an answer there then add a tick to confirm that the work has been seen.

7.   There is a NR (No Response) option. Award NR (No Response)
      -    if there is nothing written at all in the answer space
      -    OR if there is a comment which does not in any way relate to the question (e.g. 'can't do', 'don't know')
      -    OR if there is a mark (e.g. a dash, a question mark) which isn't an attempt at the question.
      Note: Award 0 marks – for an attempt that earns no credit (including copying out the question).

8.   The scoris **comments box** is used by your Team Leader to explain the marking of the practice responses. Please refer to these comments when checking your practice responses. **Do not use the comments box for any other reason.**
      If you have any questions or comments for your Team Leader, use telephone, email or the scoris messaging system.

9.   Assistant Examiners will send a brief report on the performance of candidates to their Team Leader (Supervisor) via email by the end of the marking period. The report should contain notes on particular strengths displayed as well as common errors or weaknesses. Constructive criticism of the question paper/mark scheme is also appreciated.

10.   **Annotations**

Annotation	Meaning

11. **Subject–specific Marking Instructions**

INTRODUCTION

Your first task as an Examiner is to become thoroughly familiar with the material on which the examination depends. This material includes:

- the specification, especially the assessment objectives
- the question paper and its rubrics
- the mark scheme.

You should ensure that you have copies of these materials.

You should ensure also that you are familiar with the administrative procedures related to the marking process. These are set out in the OCR booklet **Instructions for Examiners**. If you are examining for the first time, please read carefully **Appendix 5 Introduction to Script Marking: Notes for New Examiners**.

Please ask for help or guidance whenever you need it. Your first point of contact is your Team Leader.

USING THE MARK SCHEME

Please study this Mark Scheme carefully. The Mark Scheme is an integral part of the process that begins with the setting of the question paper and ends with the awarding of grades. Question papers and Mark Schemes are developed in association with each other so that issues of differentiation and positive achievement can be addressed from the very start.

This Mark Scheme is a working document; it is not exhaustive; it does not provide 'correct' answers. The Mark Scheme can only provide 'best guesses' about how the question will work out, and it is subject to revision after we have looked at a wide range of scripts.

The Examiners' Standardisation Meeting will ensure that the Mark Scheme covers the range of candidates' responses to the questions, and that all Examiners understand and apply the Mark Scheme in the same way. The Mark Scheme will be discussed and amended at the meeting, and administrative procedures will be confirmed. Co–ordination scripts will be issued at the meeting to exemplify aspects of candidates' responses and achievements; the co–ordination scripts then become part of this Mark Scheme.

Before the Standardisation Meeting, you should read and mark in pencil a number of scripts, in order to gain an impression of the range of responses and achievement that may be expected.

In your marking, you will encounter valid responses which are not covered by the Mark Scheme: these responses must be credited. You will encounter answers which fall outside the 'target range' of Bands for the paper which you are marking. Please mark these answers according to the marking criteria.

Please read carefully all the scripts in your allocation and make every effort to look positively for achievement throughout the ability range. Always be prepared to use the full range of marks.

LEVELS OF RESPONSE QUESTIONS:

The indicative content indicates the expected parameters for candidates' answers, but be prepared to recognise and credit unexpected approaches where they show relevance.

Using 'best–fit', decide first which set of level descriptors best describes the overall quality of the answer. Once the level is located, adjust the mark concentrating on features of the answer which make it stronger or weaker following the guidelines for refinement.

Highest mark: If clear evidence of all the qualities in the level descriptors is shown, the HIGHEST Mark should be awarded.

Lowest mark: If the answer shows the candidate to be borderline (i.e. they have achieved all the qualities of the levels below and show limited evidence of meeting the criteria of the level in question) the LOWEST mark should be awarded.

Middle mark: This mark should be used for candidates who are secure in the level. They are not 'borderline' but they have only achieved some of the qualities in the level descriptors.

Be prepared to use the full range of marks. Do not reserve (e.g.) highest level marks 'in case' something turns up of a quality you have not yet seen. If an answer gives clear evidence of the qualities described in the level descriptors, reward appropriately.

Quality of extended response will be assessed in questions marked with an (*). Quality of extended response is not attributed to any single assessment objective but instead is assessed against the entire response for the question.

	AO1	AO2	AO3	Quality of extended response
Comprehensive	A wide range of detailed and accurate knowledge that demonstrates fully developed understanding that shows full relevance to the demands of the question. Precision in the use of question terminology.	Knowledge and understanding shown is consistently applied to the context of the question, in order to form a: clear, developed and convincing analysis that is fully accurate. clear, developed and convincing interpretation that is fully accurate. detailed and substantiated evaluation that offers secure judgements leading to rational conclusions that are evidence based.	Quantitative, qualitative and/or fieldwork skills are used in a consistently appropriate and effective way and with a high degree of competence and precision.	There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.
Thorough	A range of detailed and accurate knowledge that demonstrates well developed understanding that is relevant to the demands of the question. Generally precise in the use of question terminology.	Knowledge and understanding shown is mainly applied to the context of the question, in order to form a : clear and developed analysis that shows accuracy. clear and developed interpretation that shows accuracy. detailed evaluation that offers generally secure judgements, with some link between rational conclusions and evidence.	Quantitative, qualitative and/or fieldwork skills are used in a suitable way and with a good level of competence and precision.	There is a line of reasoning presented with some structure. The information presented is in the most-part relevant and supported by some evidence.

Reasonable	Some sound knowledge that demonstrates partially developed understanding that is relevant to the demands of the question. Awareness of the meaning of the terms in the question.	Knowledge and understanding shown is partially applied to the context of the question, in order to form a: sound analysis that shows some accuracy. sound interpretation that shows some accuracy. sound evaluation that offers generalised judgements and conclusions, with limited use of evidence.	Quantitative, qualitative and/or fieldwork skills are used in a mostly suitable way with a sound level of competence but may lack precision.	The information has some relevance and is presented with limited structure. The information is supported by limited evidence.
Basic	Limited knowledge that is relevant to the topic or question with little or no development. Confusion and inability to deconstruct terminology as used in the question.	Knowledge and understanding shows limited application to the context of the question in order to form a: simple analysis that shows limited accuracy. simple interpretation that shows limited accuracy. Un-supported evaluation that offers simple conclusions.	Quantitative, qualitative and/or fieldwork skills are used inappropriately with limited competence and precision.	The information is basic and communicated in an unstructured way. The information is supported by limited evidence and the relationship to the evidence may not be clear.

Question			Answer	Marks	Guidance
1	(a)	(i)	**Using evidence from Fig. 1, compare and contrast the two sets of data.** The distributions differ in shape as Beach B is more even but Beach A is almost bi–modal (✓) There is a very similar mean (✓) The both have the same mode 100-120 mm (✓) Beach B is more skewed - negatively (✓) Beach A has more varied frequencies (5-28 mm rather than 13-27 mm) (✓)	3 AO3 x3	**AO3 – 3 marks** Compare means identifying similarities; contrast means identifying differences. Both are required for maximum marks. 3 x 1 (✓) for each valid point.
		(ii)	**Suggest reasons for the differences between the two samples in Fig. 1.** Different geology of sediment, sample A has more variation (✓) Wave energy determines geomorphic processes (e.g. rates of erosion), longshore drift and distance material travels (✓) Role of longshore or onshore drift grading material Impact of geomorphic processes on sediment size (e.g. attrition) (✓) Distance from debris source, smaller material travels a greater distance (experiencing greater erosion) (✓)	4 AO2 x4	**AO2 – 4 marks** 4 x 1 (✓) for each valid reason suggested for the differences between the two samples

Question			Answer	Marks	Guidance
			Impact of storms or tides, causing different beach levels as suggested in A (✓) Human impacts such as beach replenishment (✓) Source of sediment, whether material is from terrestrial or offshore (✓)		
	(b)		**Explain the formation of tombolos.** **Level 3 (6–8 marks)** Demonstrates **thorough** knowledge and understanding of how a tombolo is formed (AO1). This will be shown by including **well-developed** ideas about the formation of a tombolo with a **clear** appreciation that there is more than one explanation of its formation. **Level 2 (3–5 marks)** Demonstrates **reasonable** knowledge and understanding of how a tombolo is formed (AO1). This will be shown by including **developed** ideas about the formation of a tombolo with **some** appreciation that there is more than one explanation of its formation. **Level 1 (1–2 marks)** Demonstrates **basic** knowledge and understanding of how a tombolo is formed (AO1).	8 AO1 x8	**Indicative content** **AO1 – 8 marks** Knowledge and understanding of the formation of tombolos could potentially include: • longshore drift moving material along the coast and out to the island • the movement of material (such as sand, shingle, pebbles) accumulates over time forming a spit or bar, which extends to join an island • alternatively an offshore bar driven on shore by rising sea level • formation where sediment load exceeds tidal currents and the ability of waves to remove material in a complex nearshore sediment circulation system • geomorphic processes assist in the formation of the tombolo as a depositional feature • tombolos are dynamic landforms adjusting in response to tides and waves. Explanation may be helped by a labelled and/or annotated diagram(s), but there is no requirement for this.

Question			Answer	Marks	Guidance
			This will be shown by including **simple** ideas about the formation of a tombolo with **no** or **limited** appreciation that there is more than one explanation of its formation. **0 marks** No response or no response worthy of credit.		
	(c*)		**Assess the extent to which human activity has unintentionally rather than intentionally caused change within coastal landscape systems.** **AO1** **Level 3 (6–8 marks)** Demonstrates **comprehensive** knowledge and understanding of the changes in coastal landscape systems that have been caused by human activity, both intentionally and unintentionally. The answer should include **accurate place-specific** detail. Amount of place-specific detail determines credit within the level. **Level 2 (3–5 marks)** Demonstrates **thorough** knowledge and understanding of the changes in coastal landscape systems that have been caused by human activity, both intentionally and unintentionally. The answer should include some **place-specific** detail which is **partially accurate**. Amount of place-specific detail determines credit within the level.	**14** **AO1 x8** **AO2 x6**	**Indicative content** **AO1 – 8 marks** Knowledge and understanding of changes in coastal landscape systems intentionally or unintentionally caused by human activity could potentially include: • human activities causing intentional changes within coastal landscape systems e.g. coastal management (groyne construction) and / or off-shore dredging (for sands and gravels) • human activities causing unintentional changes within coastal landscape systems e.g. tourist resort development, building ports and / or power stations • port development or tourist resort development reducing input of sediment from coastal erosion along developed coastlines • breakwaters/harbour wall construction can reduce wave energy and obstruct longshore sediment movements • off-shore dredging to obtain gravel for the construction industry can lead to sediment imbalance off-shore • groyne installation can trap material being moved by longshore drift increasing beach width and depth but, also causes sediment starvation downdrift leading to increased erosion rates • credit any relevant activities and/or changes caused by human activity in coastal landscape systems.

Question	Answer	Marks	Guidance
	Level 1 (1–2 marks) Demonstrates **basic** knowledge and understanding of the changes in coastal landscape systems that have been caused by human activity, both intentionally and unintentionally. There is an attempt to include **place-specific** detail but it is **inaccurate**. **0 marks** No response or no response worthy of credit. **AO2** **Level 3 (5–6 marks)** Demonstrates **comprehensive** application of knowledge and understanding to provide clear and developed analysis that shows accuracy to provide a detailed evaluation that offers generally secure judgements, with some link between rational conclusions and evidence, of the extent of the changes that have been caused by human activity in coastal landscape systems. **Level 2 (3–4 marks)** Demonstrates **thorough** application of knowledge and understanding to provide sound analysis that shows some accuracy to provide a sound evaluation that offers generalised judgements and conclusions, with limited use of evidence, of the extent of the changes that have been caused by human activity in coastal landscape systems.		**AO2 – 6 marks** Apply knowledge and understanding to analyse and evaluate the extent to which human activity has unintentionally rather than intentionally caused change within coastal landscape systems could potentially include: • coastal landscape system with its inputs, processes and outputs includes human activities although these can disturb systems in equilibrium where inputs and outputs become imbalanced and resultant positive or negative feedback • human activities could cause changes to geomorphic processes (e.g. wave, fluvial, aeolian erosion, transportation and deposition) material (e.g. source, size, composition) and/or energy flows which in turn influence landform development as part of the coastal system • consideration of the "extent" could include scale, significance and/or range of the changes • whether intentional or unintentional changes have the greatest extent. Both cause changes (at a range of scales) within the coastal landscape systems as they disturb the system inputs (sediment), processes (rates) and outputs (landforms)

Question	Answer	Marks	Guidance
	Level 1 (1–2 marks) Demonstrates **basic** application of knowledge and understanding to provide simple analysis that shows limited accuracy to provide an un-supported evaluation that offers simple conclusions of the extent of the changes that have been caused by human activity in coastal landscape systems. **0 marks** No response or no response worthy of credit. **Quality of extended response** **Level 3** There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated by application of detailed place-specific case study evidence to support the argument where appropriate. **Level 2** There is a line of reasoning which has some structure. The information presented is in the most-part relevant and supported by application of some place-specific case study evidence where appropriate **Level 1** The response is basic and communicated in an unstructured way. The information presented is supported by limited application of place-specific case study evidence and the relationship to the evidence may not be clear.		• human activities such as groyne construction causes intentional changes within the coastal landscape system as sediment movement is interrupted and dependent on the direction of longshore drift, sediment could be starved and depositional features such as beaches and spits would be more vulnerable. However the extent of changes within the coastal landscape system would be variable over time as these are dynamic environments • human activities causing unintentional changes could be building a port area, here man-made structures will prevent natural processes from occurring and the removal of sediment will impact sediment budgets within the littoral cell. The movement of shipping vessels could increase rates of coastal erosion due to the disturbance of the water, increased velocity and disturbance of sediment • coastal landscape systems are dynamic and constantly changing naturally, human activities can exacerbate processes and enhance changes but the system has the potential to recover depending on the location, scale and type of activity • the significance of the changes to the landscape system as a whole.

Question			Answer	Marks	Guidance
2	**(a)**	**(i)**	**Using evidence from Fig. 2, compare and contrast the two sets of data.** The distributions differ in shape as the outwash plain is finer than the till sheet (✓) Till sheet has a higher mean (✓) Till sheet is uni-modal (100-120 mm) whereas outwash plain is bi-modal (0-20 mm and 20-40 mm) (✓) Till sheet has a higher mode (100-120 mm) (✓) Till sheet is more negatively skewed to higher values (✓)	**3** AO3 x3	**AO3 – 3 marks** Compare means identifying similarities; contrast means identifying differences. Both are required for maximum marks. 3 x 1 (✓) for each valid point.
		(ii)	**Suggest reasons for the differences between the two samples in Fig. 2.** Outwash is finer as sorted and eroded by water. Till is coarser as less water sorting (✓) Different geology of sediment. Till sheet (e.g. clay, sand, gravels and boulders) and Outwash plain (e.g. from boulders to silt) (✓) Outwash may have travelled some distance from source, so it is eroded via attrition (✓) Outwash is older so weathered down more (✓) Distance from glacier front, so outwash material is sorted	**4** AO2 x4	**Indicative content** **AO2 – 4 marks** 4 x 1 (✓) for each valid reason suggested for the differences between the two samples

Question			Answer	Marks	Guidance
			(✓) Till is closer to the glacier front, only finer materials can be carried far from the glacial snout as energy falls (✓)		
	(b)		**Explain the formation of kames.** **Level 3 (6–8 marks)** Demonstrates **thorough** knowledge and understanding of how kames are formed (AO1). This will be shown by including **well-developed** ideas about the formation of kames with a **clear** appreciation that there is more than one explanation of their formation. **Level 2 (3–5 marks)** Demonstrates **reasonable** knowledge and understanding of how kames are formed (AO1). This will be shown by including **developed** ideas about the formation of kames with **some** appreciation that there is more than one explanation of their formation. **Level 1 (1–2 marks)** Demonstrates **basic** knowledge and understanding of how a kame is formed (AO1). This will be shown by including **simple** ideas about the formation of kames with **no** or **limited** appreciation that there is more than one explanation of their formation. **0 marks**	8 AO1 x8	**Indicative content** **AO1 – 8 marks** Knowledge and understanding of the formation of kames could potentially include: • kames are fans formed as debris laden water flows off or through the ice where load is greater than energy • if water loses energy by falling or going into a small lake on the glacial surface so deposits occur. Repetition of this seasonally leads to bedded deposits • as ice melts, kame is left as isolated mound or as a terrace at the valley side, these often slump • hollows on the surface of a melting glacier would fill up with sediment which gradually goes down to lower levels as the ice melted, ultimately forming a mound on the surface • kames can be formed in the ice (via moulin) or by water flowing off the snout of the glacier or flanks • notion of post-glacial modification is valid. Explanation may be helped by a labelled and/or annotated diagram(s), but there is no requirement for this.

Question			Answer	Marks	Guidance
			No response or no response worthy of credit.		
	(c*)		**Assess the relative significance of the change caused by human activity within periglacial and glacial landscape systems.** **AO1** **Level 3 (6–8 marks)** Demonstrates **comprehensive** knowledge and understanding of the change caused by human activity in periglacial and glacial landscape systems. The answer should include **accurate place-specific** detail. Amount of place-specific detail determines credit within the level. **Level 2 (3–5 marks)** Demonstrates **thorough** knowledge and understanding of the change caused by human activity in periglacial and glacial landscape systems. The answer should include some **place-specific** detail which is **partially accurate**. Amount of place-specific detail determines credit within the level. **Level 1 (1–2 marks)** Demonstrates **basic** knowledge and understanding of the change caused by human activity in periglacial and glacial landscape systems. There is an attempt to include **place-specific** detail but it is **inaccurate**.	14 AO1 x8 AO2 x6	**Indicative content** **AO1 – 8 marks** Knowledge and understanding of the impact of human activity in causing change within periglacial and glacial landscape systems could potentially include: • resource extraction, such as the oil industry in Alaska • the construction of buildings and infrastructure can lead to heat generation and increased energy flow through the periglacial system • the permafrost itself can be thawed, leading to the development of thermokarst, including thaw lakes and alases • the removal of surface vegetation may also contribute to these changes • as permafrost thaws stored methane and CO_2 are released into the atmosphere store • dam construction in glacial valleys results in trapping of sediment • increases in energy levels below dams leads to higher rates of erosion • sediment loads of rivers affected by flushing • channel contraction and drying up downstream.

Question			Answer	Marks	Guidance
			0 marks No response or no response worthy of credit. **AO2** **Level 3 (5–6 marks)** Demonstrates **comprehensive** application of knowledge and understanding to provide clear and developed analysis that shows accuracy to provide a detailed evaluation that offers generally secure judgements, with some link between rational conclusions and evidence, of the relative significance of the changes caused by human activity within periglacial and glacial landscape systems. **Level 2 (3–4 marks)** Demonstrates **thorough** application of knowledge and understanding to provide sound analysis that shows some accuracy to provide a sound evaluation that offers generalised judgements and conclusions, with limited use of evidence, of the relative significance of the changes caused by human activity within periglacial and glacial landscape systems. **Level 1 (1–2 marks)** Demonstrates **basic** application of knowledge and understanding to provide simple analysis that shows limited accuracy to provide an un-supported evaluation that offers simple conclusions of the extent of the relative significance of the changes caused by human activity within periglacial and glacial landscape systems.		**AO2 – 6 marks** Apply knowledge and understanding to analyse and evaluate the significance of the change caused by human activity within periglacial and glacial landscape systems could potentially include: • periglacial and glacial landscape systems with inputs, processes and outputs includes human activities although these can disturb systems in equilibrium where inputs and outputs become imbalanced and resultant positive or negative feedback • consideration of the scale, significance and/or range of the changes e.g. periglacial areas are fragile where permafrost is easily disrupted by thawing and can lead to subsidence (thermokarst) whereas people had a limited impact on glaciers, this is increasing due to global warming • the assessment of the impact of human activity e.g. resource extraction and / or dam construction in causing change as opposed to physical impacts in the landscape system • changes may be to geomorphic processes (e.g. glacial erosion, mass movement, nivation, transport and deposition), material and/or energy flows • periglacial and glacial landscape systems are dynamic and constantly changing naturally, human activities can exacerbate processes and enhance changes but the system has the potential to recover depending on the location, scale and type of activity • consideration of the "extent" could include scale, significance and/or range of the changes

Question			Answer	Marks	Guidance
			0 marks No response or no response worthy of credit. **Quality of extended response** **Level 3** There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated by application of detailed place-specific case study evidence to support the argument where appropriate. **Level 2** There is a line of reasoning which has some structure. The information presented is in the most-part relevant and supported by application of some place-specific case study evidence where appropriate **Level 1** The response is basic and communicated in an unstructured way. The information presented is supported by limited application of place-specific case study evidence and the relationship to the evidence may not be clear.		• consideration of whether the extent of the changes is greater in periglacial or glacial systems • the significance of the changes to the landscape system as a whole.

Question			Answer	Marks	Guidance
3	(a)	(i)	**Using evidence from Fig. 3, compare and contrast the two sets of data.** The distributions differ in shape as wadi is more even and alluvial fan has smaller material (✓) The mean of the wadi data is bigger (✓) The alluvial fan data is bi-modal (0-20 mm and 20-40 mm) whereas the wadi data is uni-modal (0-20mm) (✓) The alluvial fan data is more positively skewed (✓) The alluvial fan data is more uneven with 3 groups with a frequency of 0 (✓)	3 AO3 x3	**AO3 – 3 marks** Compare means identifying similarities; contrast means identifying differences. Both are required for maximum marks. 3 x 1 (✓) for each valid point.
		(ii)	**Suggest reasons for the differences between the two samples in Fig. 3.** Different geology of materials, the larger material comprised of tougher more resistant rocks (✓) The conditions in which the alluvial fan and wadi were formed through the intensity of flow. The alluvial fan is depositional whilst the wadi is more likely to be an erosional landform (✓) Distance from source of alluvial fan or wadi. The further from the source, the energy in the water falls, only finer materials are carried (✓) Age of the alluvial fan or wadi, the older landform the	4 AO2 x4	**Indicative content** **AO2 – 4 marks** 4 x 1 (✓) for each valid reason suggested for the differences between the two samples

Question			Answer	Marks	Guidance
			finer the material can be (✓) Role of other dryland processes e.g. wind in re–sorting deposited materials (✓)		
	(b)		**Explain the formation of barchans.** **Level 3 (6–8 marks)** Demonstrates **thorough** knowledge and understanding of how barchans are formed (AO1). This will be shown by including **well-developed** ideas about the formation of barchans with a **clear** appreciation that there is more than one stage in, and/or trigger for, their formation. **Level 2 (3–5 marks)** Demonstrates **reasonable** knowledge and understanding of how barchans are formed (AO1). This will be shown by including **developed** ideas about the formation of barchans with **some** appreciation that there is more than one stage in, and/or trigger for, their formation. **Level 1 (1–2 marks)** Demonstrates **basic** knowledge and understanding of how barchans are formed (AO1). This will be shown by including **simple** ideas about the formation of barchans with **no** or **limited** appreciation that there is more than one stage in, and/or trigger for,	8 AO1 x8	**Indicative content** **AO1 – 8 marks** Knowledge and understanding of the formation of barchans could potentially include: • uniform wind direction carrying sand low down (saltation) • nucleus collecting heavier sand • idea of a critical height needed to accumulate sand and its mechanism of movement • if wind changes direction, the shape of the dune is lost • obstacles such as a bush or rock slows wind, acting as a barrier so load is greater than energy and deposition occurs • alternatively, saltating sand grains may reach a patch of soft ground and not rebound, and so are deposited • shape reflects this mono–directional wind, the horns are formed as wind is faster at the dune edges where there is less friction • dune moves down wind by rolling over on itself and sand is dropped in the still air on the far side of the dune. • formation may be related to positive feedback mechanism once deposition has commenced. Explanation may be helped by a labelled and/or annotated diagram(s), but there is no requirement for this.

Question			Answer	Marks	Guidance
			their formation. **0 marks** No response or no response worthy of credit.		
	(c*)		**Assess the relative importance of economic activity and water supply issues in causing change within dryland landscape systems.** **AO1** **Level 3 (6–8 marks)** Demonstrates **comprehensive** knowledge and understanding of the change caused by water supply issues and economic activity in dryland landscape systems. The answer should include **accurate place-specific** detail. Amount of place-specific detail determines credit within the level. **Level 2 (3–5 marks)** Demonstrates **thorough** knowledge and understanding of the change caused by water supply issues and economic activity in dryland landscape systems. The answer should include some **place-specific** detail which is **partially accurate**. Amount of place-specific detail determines credit within the level. **Level 1 (1–2 marks)** Demonstrates **basic** knowledge and understanding of the change caused by water supply issues and economic	**14** **AO1 x8** **AO2 x6**	**Indicative content** **AO1 – 8 marks** Knowledge and understanding of economic activity and water supply issues within dryland landscape systems could potentially include: • economic activities in dryland areas e.g. tourism, recreation, agriculture and the exploitation of resources (minerals) • water supply issues e.g. dam building, water abstraction, high demand from hotels (for tourism), leisure activities these affect water table levels • damage is caused to brittle, fragile cryptobiotic crusts and the sparse vegetation due to activities such as dune buggying • deposition may lead to formation of alluvial fans and bajadas • eroded sediment may then be blown to marginal areas where it accumulates as loess

Question	Answer	Marks	Guidance
	activity in dryland landscape systems. There is an attempt to include **place-specific** detail but it is **inaccurate**. **0 marks** No response or no response worthy of credit. **AO2** **Level 3 (5–6 marks)** Demonstrates **comprehensive** application of knowledge and understanding to provide clear and developed analysis that shows accuracy to provide a detailed evaluation that offers generally secure judgements, with some link between rational conclusions and evidence, of the extent to which water supply issues and economic activity have caused change within dryland landscape systems. **Level 2 (3–4 marks)** Demonstrates **thorough** application of knowledge and understanding to provide sound analysis that shows some accuracy to provide a sound evaluation that offers generalised judgements and conclusions, with limited use of evidence, of the extent to which water supply issues and economic activity have caused change within dryland landscape systems. **Level 1 (1–2 marks)** Demonstrates **basic** application of knowledge and understanding to provide simple analysis that shows		**AO2 – 6 marks** Application of knowledge and understanding to analyse and evaluate the relative importance of economic activity and water supply issues in causing change within dryland landscape systems could potentially include: • dryland landscape systems with inputs, processes and outputs includes human activities although these can disturb systems in equilibrium where inputs and outputs become imbalanced and resultant positive or negative feedback • exposed surfaces are subjected to higher erosion rates as there is no protection against aeolian erosion or flash floods causing fluvial erosion, leading to an increase in loose material in the system • dams trap sediment and reduce river load, this leads to an decrease in loose material in the system and may lead to degradation of alluvial fans and bajadas. Dams can be both an economic activity and an attempt to resolve water supply issues, their scale and the volume of water being moved causes changes in the deposition of sediment and therefore landforms. Within the land scape system both processes and outputs have been impacted by dam building • changes may be to processes, material and/or energy flows

Question	Answer	Marks	Guidance
	limited accuracy to provide an un-supported evaluation that offers simple conclusions of the extent to which water supply issues and economic activity have caused change within dryland landscape systems. **0 marks** No response or no response worthy of credit. **Quality of extended response** **Level 3** There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated by application of detailed place-specific case study evidence to support the argument where appropriate. **Level 2** There is a line of reasoning which has some structure. The information presented is in the most-part relevant and supported by application of some place-specific case study evidence where appropriate **Level 1** The response is basic and communicated in an unstructured way. The information presented is supported by limited application of place-specific case study evidence and the relationship to the evidence may not be clear.		• consideration of the "extent" could include scale, significance and/or range of the changes • consideration of whether the changes are more significant from water supply issues compared to economic activity • water supply issues could become more of a challenge to dryland landscape systems when compared to economic activity due to population increase and climate change. These challenges are contributing to land degradation, and pressure on water supplies due to farming activities • the significance of the changes to the landscape system as a whole.

Question			Answer	Marks	Guidance
4	(a)		**Explain the types of evidence that could be used to show social inequality.** Explanation could focus on a range of quantitative measures, such as: use of indices as listed in the specification e.g. housing, healthcare, education and access to services (✓) combinations of indices such as HDI (Human Development Index) (✓) evidence from population data e.g. unemployment, poverty (✓) measures that consider a wider range of social inequality such as the Happiness index (✓). But also more informal, qualitative, evidence such as: levels of pollution e.g. litter, waste and graffiti (✓) reputation and image (✓) quality of the environment e.g. amount of 'green space' (✓)	4 AO1 x4	**AO1 – 4 marks** 4 x 1 (✓) for each point explaining types of evidence that could be used to show inequality Candidates do need to ensure there is a clear focus on the social element; for example, economic indices such as Income or GNP per capita would need to be linked clearly to social inequality.
	(b)	(i)	**Using Fig. 4 state one piece of evidence which shows that this area is in need of rebranding.** The single dwelling suggests there has been clearance of older housing (✓). Derelict land, fenced-off with warning notices, suggests security problems (✓).	1 AO3 x1	**AO3 – 1 marks** 1 x 1 mark (✓) for statement which identifies evidence that the area is in need of rebranding, which is explicitly linked to the image provided in Fig.4.

Question			Answer	Marks	Guidance
			The litter and graffiti pollution is an aspect of urban blight (✓). Street lighting is limited which causes safety concerns for people at night (✓). The old factory building with hoarding around it, which is probably disused (✓). There is limited green space in this densely packed urban area (✓).		
		(ii)	**With reference to Fig.4, suggest two appropriate strategies for rebranding this area.** Market-led development by private investors such as new build housing construction or conversion of existing buildings (✓). This is appropriate for the derelict land and disused factory shown in Fig.4 following demolition or redevelopment (DEV). Flagship development of a large-scale one-off project which is multipurpose (✓). The space available in the photograph and road link would be sufficient for a mixture of housing, business and amenity development (DEV). Regeneration strategies could be basis for turning the old factory in Fig.4 (DEV) into an art gallery or another cultural event (✓). Large-scale retail development and multi-storey car park	**4** **AO2 x4**	**AO2 – 4 marks** 2x1 (✓) for appropriate strategy for rebranding the area in the resource. 2x1 (DEV) for interpreting the resource to indicate why this strategy is appropriate

26

Question			Answer	Marks	Guidance
			(✓) is a possibility on the brownfield site in the photograph (DEV).		
			A sports arena (✓) is possible given the scale of the derelict space available for redevelopment in the photograph (DEV).		
	(c)		**Using evidence from Fig. 5, suggest why government expenditure on education is unequal.** **Level 3 (5-6 marks)** Demonstrates **thorough** application of knowledge and understanding to provide a clear and developed analysis that shows accuracy to explain spatial inequality in government expenditure on education (AO2). Demonstrates **reasonable** investigation and interpretation of the resource to fully evidence why there is spatial inequality in government expenditure on education. There must be sound ideas linking resource evidence to spatial inequalities in government expenditure on education (AO3). **Level 2 (3–4 marks)** Demonstrates **reasonable** application of knowledge and understanding to provide a sound analysis that shows some accuracy to explain spatial inequality in government expenditure on education (AO2). Demonstrates **basic** investigation and interpretation of the resource to evidence why there is spatial inequality in government expenditure on education. There must be limited ideas linking resource evidence to spatial inequalities in government expenditure on education (AO3).	6 AO2 x4 AO3 x2	**Indicative content** **AO2 – 4 marks** Application of knowledge and understanding to analyse why government expenditure on education is unequal could potentially include: • number of educational establishments including schools, universities and apprenticeship schemes in each region • proportion of primary and secondary schools in a region, which is related to size and structure of school age population and the different funding at each level • number of employees in education in a region such as academic, administrative and support staff which affects expenditure on salaries and pension contributions • variation in transport to school subsidies which may also depend on differences in density and distribution of schools within a region • the level of funding for schools varies often because it is still influenced by the legacy of an unequal grant system set up in the 1980s based on how much authorities spent at that time • funding per pupil varies between regions and proportions may vary according to levels of deprivation in an area – eligibility for pupil premiums for children from disadvantaged backgrounds or those with special

Question			Answer	Marks	Guidance
			Level 1 (1–2 marks) Demonstrates **basic** application of knowledge and understanding to provide a simple analysis that shows limited accuracy to explain spatial inequality in government expenditure on education (AO2). Demonstrates **basic** investigation and interpretation of the resource to providing limited evidence why there is spatial inequality in government expenditure on education. There are limited ideas about spatial inequalities in government expenditure on education with limited or no link to resource evidence (AO3). **0 marks** No response or no response worthy of credit.		educational needs is a factor • there is weighting of funding for schools in London to allow for higher costs. **AO3 – 2 marks** Evidence from investigation and interpretation of the resource could potentially include: • highest expenditure on education is in London and the South East (£3-5 billion) – higher population / greater number of schools and higher weighting of funding. Least expenditure in North East (£1-2 billion) • other high values (over £2.4 billion) where there are large urban areas such as North West (Manchester and Merseyside), West Midlands (Birmingham / Coventry conurbation) and Yorkshire and the Humber (Leeds, Bradford, Sheffield, Hull). Urban areas with higher proportions of disadvantaged children have higher education expenditure grants • relatively low expenditure in Wales (£1-2 billion) may reflect lower population / fewer schools of the region • expenditure on education in Scotland (£2-3 billion) may reflect number of schools in large urban areas plus need to subsidise transport / keep small schools open in more remote rural / Highland and Island areas • London has double Scotland's expenditure on education despite significant differences in size of geographical area covered.

Question			Answer	Marks	Guidance
	(d*)		**'Community groups are the most important players in the placemaking process'. To what extent do you agree with this statement?** **AO1** **Level 3 (6–8 marks)** Demonstrates **comprehensive** knowledge and understanding of the role of community groups and other players in the placemaking process. The answer should include **accurate place-specific** detail. Amount of place-specific detail determines credit within the level. **Level 2 (3–5 marks)** Demonstrates **thorough** knowledge and understanding of the role of community groups and other players in the placemaking process. The answer should include some **place-specific** detail which is **partially accurate**. Amount of place-specific detail determines credit within the level. **Level 1 (1–2 marks)** Demonstrates **basic** knowledge and understanding of the role of community groups and other players in the placemaking process. There is an attempt to include **place-specific** detail but it is **inaccurate**. **0 marks** No response or no response worthy of credit.	**14** **AO1 x8** **AO2 x6**	**Indicative content** **AO1 – 8 marks** Knowledge and understanding of the roles and importance of players in the placemaking process, with community groups a focus. Community groups could potentially include: • formal community groups e.g. local resident associations, schools, churches, councils and 'friends of' groups • individual pressure groups • informal groups e.g. Neighbourhood Watch • local businesses / private companies • heritage associations • environmental organisations e.g. Friends of the Earth. Their roles in the placemaking process could potentially include: • their involvement in consultation, planning, design and management. • evidence of players working in partnership successfully • the importance of cooperation in the placemaking process • the coordination of the differing roles of other important players in the placemaking process • protection or management of an area • organising funding Other players in the place making process could potentially include: • local and national government • corporate and organisations e.g. Cambridge Ahead and Home Group • architects and planners

Question	Answer	Marks	Guidance

	AO2
	Level 3 (5–6 marks)
	Demonstrates **thorough** application of knowledge and understanding to provide clear and developed analysis that shows accuracy to provide a detailed evaluation that offers generally secure judgements, with some link between rational conclusions and evidence, of the relative importance of community groups and other players in the placemaking process.
	
	Level 2 (3–4 marks)
	Demonstrates **reasonable** application of knowledge and understanding to provide sound analysis that shows some accuracy to provide a sound evaluation that offers generalised judgements and conclusions, with limited use of evidence, of the relative importance of community groups in the placemaking process.
	
	Level 1 (1–2 marks)
	Demonstrates **basic** application of knowledge and understanding to provide simple analysis that shows limited accuracy to provide an un-supported evaluation that offers simple conclusions of the relative importance of community groups and other players in the placemaking process.
	
	0 marks
	No response or no response worthy of credit.
	
	Quality of extended response
	
	Level 3
	There is a well-developed line of reasoning which is clear and logically structured. The information presented
			AO2 – 6 marks
			Application of knowledge and understanding to analyse and evaluate whether community groups are the most important players in the placemaking process could potentially include:
			• the range and the roles of other types of groups and bodies involved in placemaking such as:
			   o governments, potentially at various scales from local councils to international like the EU
			   o large scale property developers
			   o architects
			   o large corporate groups of companies e.g. Cambridge Ahead
			   o environmental authorities
			• the role of social media and communication in the placemaking process
			• recognition that the importance of the players may vary with scale, time and type of place
			• role of community group and their importance, bottom up empowerment e.g. sponsor a park, mural neighbourhood design, street party, make over vacant land. Shad Thames Area Management Plan (STAMP) organises walking tours of Shad Thames area (London) to celebrate and highlight the rich history
			• perhaps 'all' players are key in placemaking at a variety of scales with no one more important than another
			• the placemaking process is dynamic, continuous as well as evolving and players have a role at various points in time.

Question			Answer	Marks	Guidance
			is relevant and substantiated by application of detailed place-specific case study evidence to support the argument where appropriate. **Level 2** There is a line of reasoning which has some structure. The information presented is in the most-part relevant and supported by application of some place-specific case study evidence where appropriate **Level 1** The response is basic and communicated in an unstructured way. The information presented is supported by limited application of place-specific case study evidence and the relationship to the evidence may not be clear.		

Question			Answer	Marks	Guidance
5	(a)	(i)	**Suggest a geographical question or issue that can be investigated in the area shown. Justify using map evidence.** There are a vast range of possible questions or issues that can be identified as possible in the area shown on the map. Investigations could include questions which focus on the following: • Physical – beach sediment survey (✓), measuring rate of coastal drift of material (✓) • Human – traffic survey (✓), image of place survey (✓), service areas (✓) • Physical and human – impact of relief on land use (✓) The key skill is the justification of the question or issue by linking it to map evidence such as place names, scales, distances, directions and practical considerations such as access, safety, time. • Three Cliffs Bay, exposed 2.3km bay area to complete beach survey, access via Wales coast path (DEV) • Traffic survey to be carried out in South Gate, this could be conducted north and south of the village to ensure a fair representation of patterns (DEV)	**4** **AO3 x4**	**AO3 – 4 marks** 1 x 1 (✓) mark for a valid/appropriate question or issue. 3 x 1 (DEV) marks for justification with credit per point using map evidence or practical considerations

Question			Answer	Marks	Guidance
		(ii)	**State two examples of different types of secondary data that you would use to aid the investigation suggested in (a)(i).** Population structure data from the census to study the place profile of the area (✓) Land use maps for information on local businesses (✓) Satellite images to annotate fieldwork locations (✓) Newspapers to investigate local people's attitudes to a particular issue at a point in time (✓) Previous investigations to study historical changes in the area (✓)	**2** **AO3 x2**	**AO3 – 2 marks** 2 x 1 (✓) marks for two appropriate examples of secondary data to aid the investigation suggested in question 5(a)(i). Generic answers gain no credit. It should be clear what the data is providing e.g. 'census' tells us little but 'population structure data from the census' provides the context and gains full credit. Do not credit vague sources such as 'the internet' – answer should state what aspect of the internet to gain credit.
		(iii)	**Explain one suitable method you would use to collect data for the investigation suggested in (a)(i).** **Level 3 (5–6 marks)** Demonstrates a **thorough** understanding of the method used to collect data to investigate the geographical question suggested (AO3) to explain its suitability and relevance. **Level 2 (3–4 marks)** Demonstrates a **reasonable** understanding of the method used to collect data to investigate the geographical question suggested (AO3) to explain its suitability and relevance.	**6** **AO3 x6**	**Indicative content** **AO3 – 6 marks** This is a question linked to the investigation stated in a(i) so it should be an appropriate method for collecting relevant data from the location. Method could potentially include: • sampling type (e.g. systematic, random and stratified) and size of sample • design and use of questionnaire(s) including piloting • equipment type e.g. ranging poles and clinometer and use e.g. measure beach profile across the width of the beach. Staring at low tide mark, systematically measure the angle of the beach between the two ranging poles using the clinometer

Question			Answer	Marks	Guidance
			Level 1 (1–2 marks) Demonstrates a **basic** understanding of the method used to collect data to investigate the geographical question suggested (AO3) to explain its suitability and relevance. **0 marks** No response or no response worthy of credit.		• strategies for ensuring accuracy and reliability e.g. when data recorded, how, number of times (potential for averages to be calculated) and duration If describe more than one method credit the most appropriate. If a sound method but not relevant to the chosen investigation then max top of Level 1.
	(b)		**With reference to a fieldwork investigation you have carried out, to what extent was your investigation successful?** **Level 4 (10–12 marks)** Demonstrates a **comprehensive** conclusion as to the extent to which the investigation was successful with a **comprehensive** argument to explain this level of success relating directing to the fieldwork investigation carried out. This will be shown by including **well-developed** ideas about the fieldwork investigation and how successful it was. **Level 3 (7–9 marks)** Demonstrates a **thorough** conclusion as to the extent to which the investigation was successful with a **thorough** argument to explain this level of success relating directing to the fieldwork investigation carried out. This will be shown by including **well-developed** ideas about either the fieldwork investigation or how successful	12 AO3 x12	**Indicative content** **AO3 – 12 marks** A conclusion of the relative success of the investigation with a clear reference back to the question or issue from the fieldwork investigation carried out by the candidate. Answers may also include explanation of the relative level of success or otherwise such as: • sample size / variety • repeating measurements at different times or for longer periods • using reliable or effective equipment, this could be low-tech and digital methods to give variety and to cross check data • finding further sources of data, could be secondary sources • sampling data / piloting questionnaires allowing for reflections and modifications to data collection techniques to ensure quality and accuracy of 'data' collected • willingness of people to participate in surveys and / or questionnaires, how these people were selected (sampling) and the accuracy of their responses

Question	Answer	Marks	Guidance
	it was and **developed** ideas about the other question focus. **Level 2 (4–6 marks)** Demonstrates a **reasonable** conclusion as to the extent to which the investigation was successful with a **reasonable** argument to explain this level of success relating directing to the fieldwork investigation carried out. This will be shown by including **developed** ideas about either the fieldwork investigation or how successful it was and **simple** ideas about the other question focus. **Level 1 (1–3 marks)** Demonstrates a **basic** conclusion as to the extent to which the investigation was successful with a **basic** argument to explain this level of success relating directing to the fieldwork investigation carried out. This will be shown by including **simple** ideas about the fieldwork investigation and how successful it was. **0 marks** No response or no response worthy of credit.		• organisational aspects such as better team work with allocated roles • accessibility of the site / area for data collection • use of hypothesis and / or key questions and their relevance to the data collected and ability to draw conclusions • quality of data collected and variety of analytical tools used • analytical tools and ability to construct arguments and draw conclusions

Assessment Objectives (AO) grid

Candidates answer **either** question 1, 2 or 3 **and** questions 4 and 5. This has been considered in the totals indicated below.

Question	AO1	AO2	AO3	Marks
1(a)(i)			3	3
1(a)(ii)		4		4
1(b)	8			8
1(c*)	8	6		14
2(a)(i)			3	3
2(a)(ii)		4		4
2(b)	8			8
2(c*)	8	6		14
3(a)(i)			3	3
3(a)(ii)		4		4
3(b)	8			8
3(c*)	8	6		14
4(a)	4			4
4(b)(i)			1	1
4(b)(ii)		4		4
4(c)		4	2	6
4(d*)	8	6		14
5(a)(i)			4	4
5(a)(ii)			2	2
5(a)(iii)			6	6
5(b)			12	12
Total	28	24	30	82