Section A - Landscape Systems

Choose **one** option and answer **all** parts of the question in the option.

Option A – Coastal Landscapes

- 1 (a) Fig. 1 shows sediment size of beach material collected on two beaches.
 - (i) Using evidence from Fig. 1, compare and contrast the two sets of data.

[3]

(ii) Suggest reasons for the differences between the two samples in Fig. 1.

[4]

(b) Explain the formation of tombolos.

[8]

(c)* Assess the extent to which human activity has unintentionally rather than intentionally caused change within coastal landscape systems.

[14]

OR

Option B – Glaciated Landscapes

- 2 (a) Fig. 2 shows sediment size of material collected from a till sheet and from an outwash plain.
 - (i) Using evidence from Fig. 2, compare and contrast the two sets of data.

[3]

(ii) Suggest reasons for the differences between the two samples in Fig. 2.

[4]

(b) Explain the formation of kames.

[8]

(c)* Assess the relative significance of the change caused by human activity within **periglacial** and **glacial** landscape systems.

[14]

OR

Option C – Dryland Landscapes

- 3 (a) Fig. 3 shows sediment size of material collected from an alluvial fan and from a wadi.
 - (i) Using evidence from **Fig. 3**, compare and contrast the two sets of data.

[3]

(ii) Suggest reasons for the differences between the two samples in Fig. 3.

[4]

(b) Explain the formation of barchans.

[8]

(c)* Assess the relative importance of **economic activity** and **water supply issues** in causing change within dryland landscape systems.

[14]

Section B – Changing Spaces; Making Places

Answer all questions.

4	(a)	Explain the types of evidence that could be used to show social inequality.	
			[4]
	(b)	Fig. 4 shows an inner city area in the UK.	
		(i) Using Fig. 4 state one piece of evidence which shows that this area is in need of rebranding.	
			[1]
		(ii) With reference to Fig.4, suggest two appropriate strategies for rebranding this area.	
			[4]
	(c)	Using evidence from Fig. 5, suggest why government expenditure on education is unequ	ıal.
			[6]
	(d)*	'Community groups are the most important players in the placemaking process.' To what extent do you agree with this statement?	
			[14]

Section C - Fieldwork

Answer all questions.

- 5 (a) Study **Fig. 6**, an OS map extract of an area in which it is proposed to carry out an AS level geography investigation.
 - (i) Suggest a geographical question or issue that can be investigated in the area shown. Justify using map evidence.

[4]

(ii) State **two** examples of different types of secondary data that you would use to aid the investigation suggested in (a)(i).

[2]

(iii) Explain **one** suitable method you would use to collect data for the investigation suggested in (a)(i).

[6]

(b) With reference to a fieldwork investigation you have carried out, to what extent was your investigation successful?

[12]





AS Level Geography H081/01 Landscape and place Sample Resource Booklet

Time allowed: 1 hour 45 minutes

INFORMATION FOR CANDIDATES

- The questions tell you which resources you need to use.
- This document consists of 8 pages. Any blank pages are indicated.

INSTRUCTIONS TO EXAMS OFFICER/INVIGILATOR

• Do not send this Resource Booklet for marking, it should be retained in the centre or recycled. Please contact OCR copyright should you wish to re-use this document.

CONTENTS OF RESOURCE BOOKLET

- Fig. 1 Sediment size of beach material collected on two beaches
- Fig. 2 Sediment size of material collected from a till sheet and from an outwash plain
- Fig. 3 Sediment size of material collected from an alluvial fan and from a wadi
- Fig. 4 An inner city area in the UK
- Fig. 5 Total government expenditure on education in the UK by region, 2015
- Fig. 6 An OS map extract of an area in which it is proposed to carry out an AS level geographical investigation

Fig. 1 - Sediment size of beach material collected on two beaches

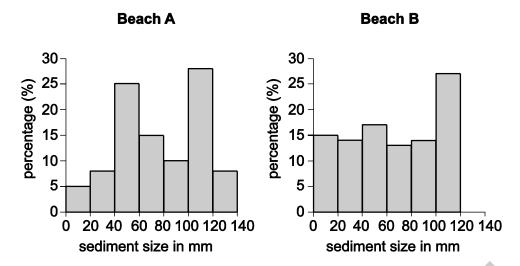


Fig. 2 - Sediment size of material collected from a till sheet and from an outwash plain

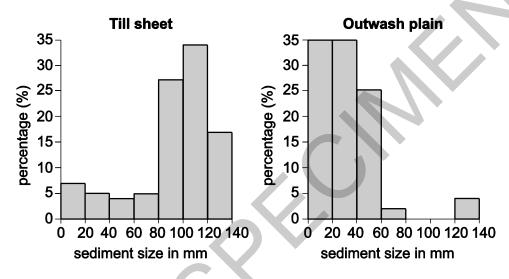


Fig. 3 - Sediment size of material collected from an alluvial fan and from a wadi

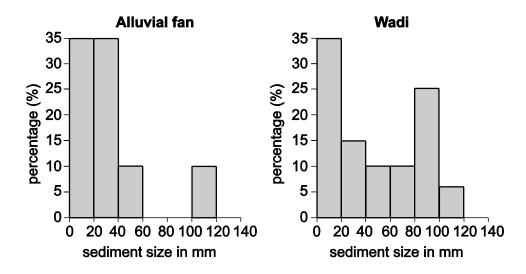
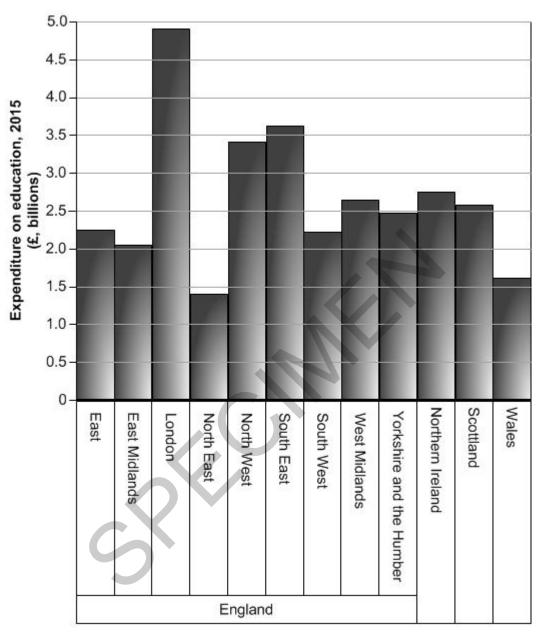


Fig. 4 – An inner city area in the UK



Fig.5 – Total government expenditure on education in the UK by region, 2015.

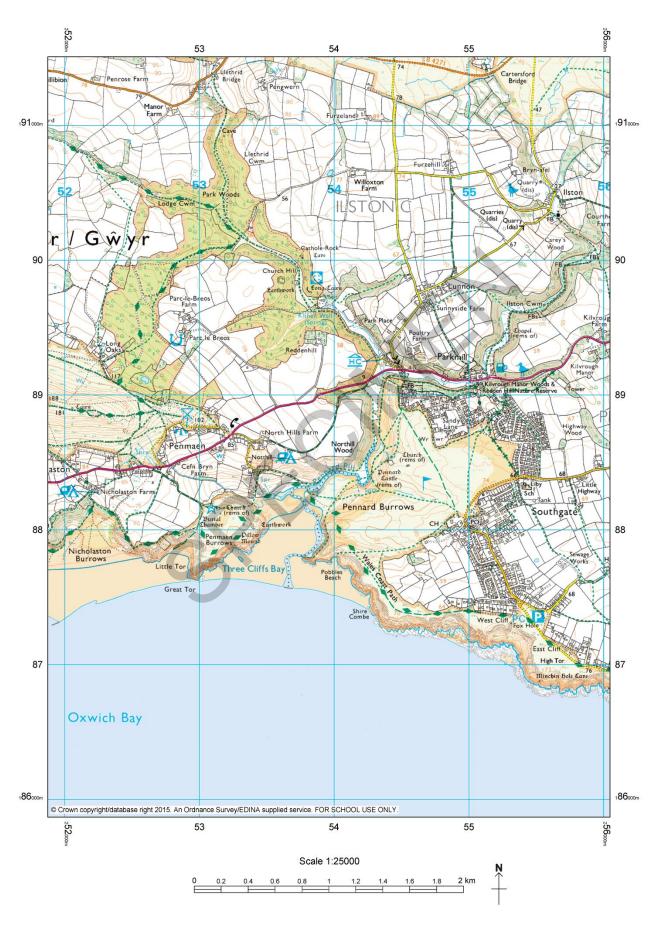


Regions of the UK

TURN OVER



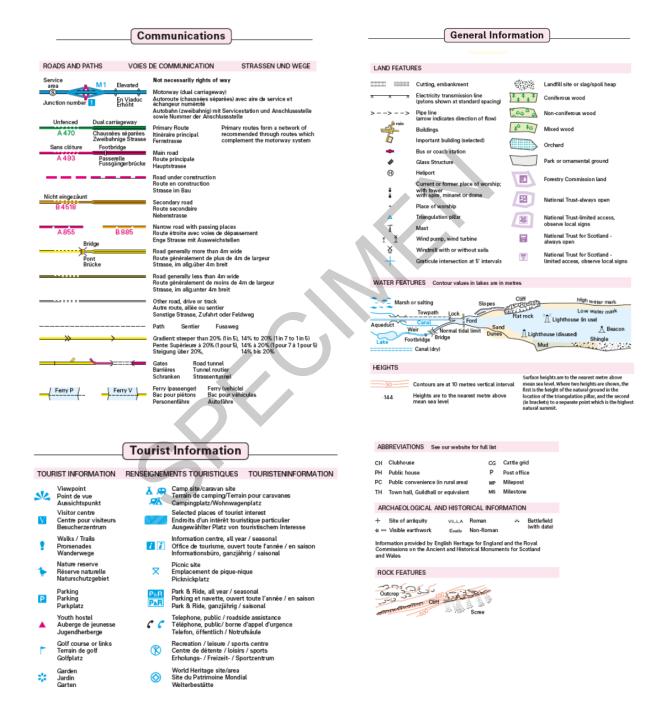
Fig. 6 - An OS map extract of an area in which it is proposed to carry out an AS level geographical investigation



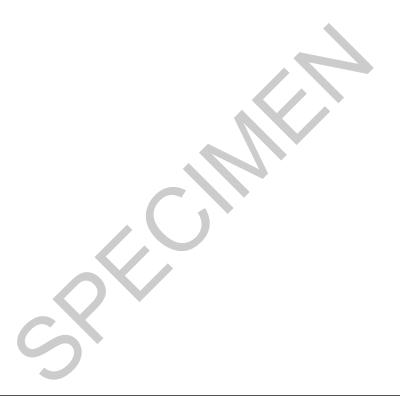
Key to Fig. 6 OS map extract



OS Landranger / 1:50 000 Scale Colour Raster



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Copyright Information:

Fig. 4: © Phil Willis / Alamy Stock Photo. www.alamy.com

Fig. 5: From Open Knowledge Foundation, accessed Nov 2015, reproduced under licensed under a Creative Commons Attribution 4.0 International License.. http://wheredoesmymoneygo.org/

Fig. 6: Ordnance Survey Map Extract © Crown copyright (2015), Ordnance Survey (GV-157636)

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...day June 20XX - Morning/Afternoon

AS Level Geography H081/01 Landscape and place

SAMPLE MARK SCHEME

Duration: 1 hour 45 minutes

MAXIMUM MARK 82

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.
- 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.

- 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.	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.
		sound interpretation that shows some accuracy. sound evaluation that offers generalised judgements and conclusions, with limited use of 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.

(Questi	ion	Answer	Marks	Guidance
1	(a)	(ii)	Answer 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) (✓) Suggest reasons for the differences between the two samples in Fig. 1. Different geology of sediment, sample A has more variation (✓)	Marks 3 A03 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. AO2 – 4 marks 4 x 1 (✓) for each valid reason suggested for the differences between the two samples

Question	Answer	Marks	Guidance
Question (b)	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 (✓) 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.	Marks 8 AO1 x8	Indicative content AO1 – 8 marks Knowledge and understanding of the formation of tombolos could potentially include: Iongshore 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 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).		 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
Question (c*)	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. 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	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
	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.		

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 .		
	is maccurate.		
	0 marks		
	No response or no response worthy of credit.		
		\	AO2 – 6 marks
	AO2		Apply knowledge and understanding to analyse and evaluate the
	Level 3 (5–6 marks)		extent to which human activity has unintentionally rather than
	Demonstrates comprehensive application of knowledge		intentionally caused change within coastal landscape systems
	and understanding to provide clear and developed		could potentially include:
	analysis that shows accuracy to provide a detailed		coastal landscape system with its inputs, processes and
	evaluation that offers generally secure judgements, with		outputs includes human activities although these can disturb systems in equilibrium where inputs and outputs
	some link between rational conclusions and evidence, of		become imbalanced and resultant positive or negative
	the extent of the changes that have been caused by		feedback
	human activity in coastal landscape systems. Level 2 (3–4 marks)		human activities could cause changes to geomorphic
			processes (e.g. wave, fluvial, aeolian erosion,
	Demonstrates thorough application of knowledge and		transportation and deposition) material (e.g. source, size, composition) and/or energy flows which in turn influence
	understanding to provide sound analysis that shows		landform development as part of the coastal system
	some accuracy to provide a sound evaluation that offers		consideration of the "extent" could include scale,
	generalised judgements and conclusions, with limited		significance and/or range of the changes
	use of evidence, of the extent of the changes that have		whether intentional or unintentional changes have the
	been caused by human activity in coastal landscape		greatest extent. Both cause changes (at a range of
	systems.		scales) within the coastal landscape systems as they
	3,5155.		disturb the system inputs (sediment), processes (rates) and outputs (landforms)

Question Answer	Marks	Guidance
Level 1 (1–2 marks) Demonstrates basic application of knowledge ar understanding to provide simple analysis that sh limited accuracy to provide an un-supported eval that offers simple conclusions of the extent of the changes that have been caused by human activity coastal landscape systems. O marks	nd ows luation ety in	• 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.

Q	Question		Answer	Marks	Guidance
2	(a)	(i)	Using evidence from Fig. 2, compare and contrast the two sets of data.	3 AO3 x3	AO3 – 3 marks Compare means identifying similarities; contrast means identifying differences. Both are required for maximum marks.
			The distributions differ in shape as the outwash plain is finer than the till sheet (\checkmark)		3 x 1 (✓) for each valid point.
			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 (✓)		
		(ii)	Suggest reasons for the differences between the two	4 AO2 x4	Indicative content
			samples in Fig. 2.	AGE A4	AO2 – 4 marks 4 x 1 (✓) for each valid reason suggested for the differences
			Outwash is finer as sorted and eroded by water. Till is coarser as less water sorting (\checkmark)		between the two samples
			Different geology of sediment. Till sheet (e.g. clay, sand, gravels and boulders) and Outwash plain (e.g. from boulders to silt) (\checkmark)		
			Outwash may have travelled some distance from source, so it is eroded via attrition (\checkmark)		
			Outwash is older so weathered down more (✓)		
			Distance from glacier front, so outwash material is sorted		

Question	Answer	Marks	Guidance
Question (b)	Answer (✓) Till is closer to the glacier front, only finer materials can be carried far from the glacial snout as energy falls (✓) 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.	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
	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		 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.		
Question (c*)	1 11 0 11 0 1	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
	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.		 these changes as permafrost thaws stored methane and CO₂ 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
Question	O 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	Marks	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,

Question	Answer	Marks	Guidance
	0 marks No response or no response worthy of credit.		 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.
	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.		

G	uesti	on	Answer	Marks	Guidance
3	(a)	(i)	Using evidence from Fig. 3, compare and contrast	3	AO3 – 3 marks
			the two sets of data.	AO3 x3	Compare means identifying similarities; contrast means identifying differences. Both are required for maximum marks.
			The distributions differ in shape as wadi is more even and alluvial fan has smaller material (✓)		3 x 1 (✓) for each valid point.
			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) (\checkmark)		
			The alluvial fan data is more positively skewed (✓)		
			The alluvial fan data is more uneven with 3 groups with a frequency of 0 (✓)		
		(ii)	Suggest reasons for the differences between the two	4	Indicative content
			samples in Fig. 3.	AO2 x4	AO2 – 4 marks
			Different geology of materials, the larger material comprised of tougher more resistant rocks (✓)		4 x 1 (✓) for each valid reason suggested for the differences between the two samples
			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 (\checkmark)		
			Distance from source of alluvial fan or wadi. The further from the source, the energy in the water falls, only finer materials are carried (\checkmark)		
			Age of the alluvial fan or wadi, the older landform the		

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	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.
	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,	diagram(s) but there is no requirement for t	Explanation may be helped by a labelled and/or annotated diagram(s), but there is no requirement for this.

Question	Answer	Marks	Guidance
Question (c*)	their formation. O marks No response or no response worthy of credit. Assess the relative importance of economic activity and water supply issues in causing change within	Marks 14 AO1 x8	Indicative content AO1 – 8 marks
	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	AO2 x6	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		AO2 – 6 marks
	Level 3 (5–6 marks)		Application of knowledge and understanding to analyse and
	Demonstrates comprehensive application of knowledge		evaluate the relative importance of economic activity and water
	and understanding to provide clear and developed	\	supply issues in causing change within dryland landscape
	analysis that shows accuracy to provide a detailed		systems could potentially include:
	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		 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
	systems.		exposed surfaces are subjected to higher erosion rates
	Level 0 (0, 4 montes)		as there is no protection against aeolian erosion or flash
	Level 2 (3–4 marks)		floods causing fluvial erosion, leading to an increase in
	Demonstrates thorough application of knowledge and understanding to provide sound analysis that shows		 loose material in the system dams trap sediment and reduce river load, this leads to
	some accuracy to provide a sound evaluation that offers		an decrease in loose material in the system and may lead
	generalised judgements and conclusions, with limited		to degradation of alluvial fans and bajadas. Dams can be
	use of evidence, of the extent to which water supply		both an economic activity and an attempt to resolve water
	issues and economic activity have caused change within		supply issues, their scale and the volume of water being moved causes changes in the deposition of sediment and
	dryland landscape systems.		therefore landforms. Within the land scape system both processes and outputs have been impacted by dam
	Level 1 (1–2 marks)		building
	Demonstrates basic application of knowledge and		changes may be to processes, material and/or energy
	understanding to provide simple analysis that shows		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. O 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
Question 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'	Marks 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 (\checkmark) .		
	Street lighting is limited which causes safety concerns for people at night (✓).		
	The old factory building with hoarding around it, which is probably disused (\checkmark).		
	There is limited green space in this densely packed urban area (✓).		
(ii)	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).	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
	Regeneration strategies could be basis for turning the old factory in Fig.4 (DEV) into an art gallery or another cultural event (\checkmark).		
	Large-scale retail development and multi-storey car park		

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). O 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) ther 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	14	Indicative content
	A00 v0	AO1 – 8 marks	
		AO2 x6	Knowledge and understanding of the roles and importance of
	404		players in the placemaking process, with community groups a
	AO1 Level 3 (6–8 marks)		focus.
	Demonstrates comprehensive knowledge and		
	understanding of the role of community groups and other		Community groups could potentially include:
	players in the placemaking process.		 formal community groups e.g. local resident associations,
			schools, churches, councils and 'friends of' groups
	The answer should include accurate place-specific		individual pressure groups
	detail. Amount of place-specific detail determines credit		 informal groups e.g. Neighbourhood Watch
	within the level.		local businesses / private companies
			heritage associations
	Level 2 (3–5 marks)		environmental organisations e.g. Friends of the Earth.
	Demonstrates thorough knowledge and understanding		
	of the role of community groups and other players in the		Their roles in the placemaking process could potentially include:
	placemaking process.		their involvement in consultation, planning, design and management
	The answer should include some place-specific detail		management.evidence of players working in partnership successfully
	which is partially accurate . Amount of place-specific		the importance of cooperation in the placemaking
	detail determines credit within the level.		process
	detail determines credit within the level.		the coordination of the differing roles of other important
	Level 1 (1–2 marks)		players in the placemaking process
	Demonstrates basic knowledge and understanding of		 protection or management of an area
	the role of community groups and other players in the		organising funding
	placemaking process.		
			Other players in the place making process could potentially
	There is an attempt to include place-specific detail but it		include:
	is inaccurate.		local and national government corporate and organizations of Cambridge Ahead and
			 corporate and organisations e.g. Cambridge Ahead and Home Group
	0 marks		architects and planners
	No response or no response worthy of credit.		

Question	Answer	Marks	Guidance
	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. O 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: • governments, potentially at various scales from local councils to international like the EU • large scale property developers • architects • large corporate groups of companies e.g. Cambridge Ahead • 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.		

Ques	stion	Answer	Marks	Guidance
5 (a)	(i)	Suggest a geographical question or issue that can be investigated in the area shown. Justify using map evidence.	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
		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)		

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