

**Geography B**

General Certificate of Secondary Education

Unit **B561/01**: Sustainable Decision Making (SDM)

**Mark Scheme for June 2011**

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All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the Report on the Examination.

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

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Question			Expected Answer	Mark	Rationale/Additional Guidance
1	(a)	(i)	<p><b>Which coastal protection method has the longest lifespan?</b></p> <p>Rip-rap (120 yrs)</p>	[1]	Point marked
		(ii)	<p><b>Which method is the most expensive per metre?</b></p> <p>Sea walls</p>	[1]	Point marked
1	(b)	(i)	<p><b>Gabions are a cheap coastal protection method. Describe how gabions protect the coast.</b></p> <p>They stabilise cliff bases They absorb wave energy</p>	[2]	2 x 1 mark Lift from resource expected and allowed
		(ii)	<p><b>Give <u>two</u> reasons why they are only a short term measure.</b></p> <p>They only last 5-10 years/they don't last long Easily damaged Cages rust</p>	[2]	2 x 1 mark Lift from resource expected and allowed
2	(a)		<p><b>Complete the table by showing the amount of erosion at Y between 1999 and 2006.</b></p> <p>70 (metres)</p> <p>65 – 75 m = 2 marks 60 – 64 or 76 – 80 = 1 mark</p> <p>&lt;60 or &gt;80 = 0 marks</p>	[2]	See accuracy range for 2, 1 or 0 marks

Question	Expected Answer	Mark	Rationale/Additional Guidance
(b)	<p><b>Suggest why the amount of erosion at Happisburgh is different at X and Y.</b></p> <p>2 x 1 mark for valid reasons or 1 mark for reason with a further mark for development</p> <p>Eg            There are defences at Site X ✓            Site Y is beyond the last groyne ✓</p> <p>There are groynes and/or a revetment at Site X ✓            Which provides extra protection for that site leading to less erosion (dev)            Or Site Y is beyond the last groyne ✓ meaning that little beach material is carried along to it to help form a protective beach (dev)            There are coastal defences at site X ✓ as there are houses at this site which need protecting (dev)</p>	[2]	<p>Can be 2 x 1 or 1 plus 1 development</p> <p>There are groynes and revetments at site X, there are none at site Y ✓ – 1 mark max</p> <p>Can accept ‘defences’ – does not have to mention specific types</p>
<b>Section A Total</b>		<b>[10]</b>	

Question	Expected Answer	Mark	Rationale/Additional Guidance												
3	<p><b>Coastal erosion happens at Happisburgh. Stakeholders have different opinions on coastal protection. Identify <u>one</u> stakeholder who is in favour of coastal protection and <u>one</u> who is against it. Explain their reasons in your own words.</b></p> <p><b>In favour eg Beach Road resident</b></p> <p>Beach Road is closer to the sea, so is more under threat of erosion ✓                      They are more likely to lose their houses, if no protection is put in place (dev).                      Their houses are now worthless because of the threat of erosion (dev).</p> <p><b>Against eg Resident of Stalham</b></p> <p>Stalham is away from the coast, so won't suffer from erosion ✓                      They won't want money spent on coastal defences that could be spent on things like hospitals and schools in the area (dev).                      The value of the property in Happisburgh is low anyway, it would cost more to defend it than the cost of the property (dev).</p>	[6]	<p>2 x 1 mark for correctly recognising one stakeholder in favour and one against</p> <table border="1" data-bbox="1355 303 2060 518"> <thead> <tr> <th data-bbox="1355 303 1736 335">In Favour</th> <th data-bbox="1736 303 2060 335">Against</th> </tr> </thead> <tbody> <tr> <td data-bbox="1355 335 1736 367">Councillor</td> <td data-bbox="1736 335 2060 367">Sea Palling Resident</td> </tr> <tr> <td data-bbox="1355 367 1736 399">Beach Road Resident</td> <td data-bbox="1736 367 2060 399">Environment Manager</td> </tr> <tr> <td data-bbox="1355 399 1736 430">Historian</td> <td data-bbox="1736 399 2060 430">Stalham Resident</td> </tr> <tr> <td data-bbox="1355 430 1736 462">Farmer</td> <td data-bbox="1736 430 2060 462"></td> </tr> <tr> <td data-bbox="1355 462 1736 518">Holiday Park Owner</td> <td data-bbox="1736 462 2060 518"></td> </tr> </tbody> </table> <p>These labels are the minimum that can be accepted. Resident alone not accepted.</p> <p>2 x 1 mark for reason (can be copied)</p> <p>2 x 1 mark for development                      Development mark has to be candidate's own work</p>	In Favour	Against	Councillor	Sea Palling Resident	Beach Road Resident	Environment Manager	Historian	Stalham Resident	Farmer		Holiday Park Owner	
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Question		Expected Answer	Mark	Rationale/Additional Guidance
4	(a)	<p><b>Identify <u>one</u> place where the plans for coastal management change over time. What is the long term plan for this location?</b></p> <p><b>Place:</b> Bacton Long term: Allow retreat through managed realignment</p> <p>Sea Palling Long term: Hold the line with a view to managed realignment</p>	[2]	<p>1 mark for location 1 mark for identification of long term plan (can be in candidate's own words eg for Bacton – Managed retreat)</p> <p>No mark if short or medium term information for a location added to answer Eg Bacton ✓ – hold the line/hold the line/managed retreat – does not get long term plan identification mark</p>
	(b)	<p><b>Suggest reasons why short term coastal management plans are not the same in all places in North Norfolk.</b></p> <p><b>Level 3 (5-6 marks)</b> Sound explanation of reasons for different plans along the coastline with clear focus on short term plans at different locations. Written work is legible and spelling, grammar and punctuation are accurate. Meaning is communicated very clearly.</p> <p><b>Level 2 (3-4 marks)</b> Some explanation of reasons for different plans along the coastline. May mix short term and longer term plans or focus only on a single site. Written work is legible and spelling, grammar and punctuation are mostly accurate. Meaning is communicated with limited clarity.</p> <p><b>Level 1 (1-2 marks)</b> Limited explanation of reasons for different plans or description of different plans along the coastline with no reasons. Written work contains mistakes in spelling, grammar and punctuation, which sometimes hinder communication.</p>	[6]	<p>Examiners are reminded that quality of written communication is integral within the level descriptors. QWC will reflect how clearly ideas and concepts are expressed, but should not restrict candidates from reaching L2–L3.</p> <p>Max level 2 if no mention of specific sites in North Norfolk</p> <p>A developed point will give an explanation as to why the plans are different in different places.</p> <p>Actual comparison is not required for L3 but any candidate making comparisons such as in the example below should be able to access L3.</p> <p>At Cromer the plan is to hold the line but at Trimmingham the plan is to allow retreat. This is because Cromer is the biggest settlement along the coast and so will have many more houses and services that are worth protecting.</p>
<b>Section B Total</b>			<b>[14]</b>	

Question	Expected Answer	Mark	Rationale/Additional Guidance
5 (a)	<p><b>Choose <u>one</u> of the above options and give reasons to explain why you think this would be the best way to manage the coastline at Happisburgh.</b></p> <p><b>Level 3 (5-6 marks)</b> Good reasons with clear development/explanation of ideas. Written work is clearly legible and spelling, punctuation and grammar are accurate. Meaning is communicated very clearly.</p> <p><b>Level 2 (3-4 marks)</b> Some reasons with some development/explanation of ideas. Written work is legible and spelling, punctuation and grammar are mostly accurate. Meaning is communicated clearly.</p> <p><b>Level 1 (1-2 marks)</b> Simple response with little or no development/explanation of ideas. Written work contains mistakes in spelling, punctuation and grammar, which sometimes hinder communication.</p>	[6]	<p>Levels marked. For suggested content see table on page 7. This is not intended to be definitive.</p> <p>Credit can be given throughout Q5 for relative cost of different methods with development marks for comparison.</p> <p>There are no wrong options – any option with appropriate explanation is acceptable.</p>
(b)	<p><b>Suggest a possible disadvantage of your chosen option.</b></p> <p>Gives a disadvantage of the chosen option.</p> <p>1 mark for disadvantage, 2 marks for development.</p>	[3]	<p>Point marked. Use dev to indicate developed ideas.</p> <p>Disadvantage  Dev</p> <p>Dev</p> <p>Disadvantage  Dev → Dev</p> <p>Allow use of correct figures from resources for one development point (where relevant).</p>

Question	Expected Answer	Mark	Rationale/Additional Guidance
(c)	<p><b>Give a possible advantage of <u>each</u> of the other <u>two</u> options.</b></p> <p>Gives advantage for each of the other two options. 1 mark for advantage, one mark for development. Maximum two marks per advantage.</p>	<b>[4]</b>	<p>Point marked.</p> <p>Advantage → Dev</p> <p>Allow use of correct figures from resources for development.</p>
(d)	<p><b>Select <u>one</u> of your rejected options and suggest why it is <u>not</u> sustainable.</b></p> <p>Gives reason/s for rejecting the option based on sustainability.</p>	<b>[3]</b>	<p>Point marked.</p> <p>Reason  Dev</p> <p>Reason → Dev → Dev</p> <p>Allow 2 separate Reasons without development for max 2 marks.</p> <p>Do not credit anything that is clearly not to do with sustainability.</p> <p>Allow use of correct figures from resources for development.</p>
<b>Section B Total</b>		<b>[16]</b>	



	ADVANTAGES	DISADVANTAGES
Indicative content (credit other valid responses)		
<p><b>OPTION 1</b> Build a new sea wall and use rip-rap and rock armour at the base of the cliff</p>	<ul style="list-style-type: none"> <li>• Protects cliff-line at its present position</li> <li>• Protects people's homes, farm land and livelihoods</li> <li>• Will protect beach and so tourists will still visit and town will still make money from tourist industry</li> <li>• Etc</li> </ul>	<ul style="list-style-type: none"> <li>• High cost of hard engineering methods</li> <li>• Need for constant maintenance of sea walls and rock armour and extra cost of this</li> <li>• Ugly – may put people off visiting and so town won't make income from tourists</li> <li>• Etc</li> </ul>
<p><b>OPTION 2</b> Use beach replenishment and repair and maintain the existing groynes and revetments</p>	<ul style="list-style-type: none"> <li>• Much less invasive than just hard engineering methods</li> <li>• Allows beach to build up – forming a natural defence against wave damage</li> <li>• A bigger beach, that looks natural, may attract more tourists, increasing income from the tourist industry</li> <li>• Etc</li> </ul>	<ul style="list-style-type: none"> <li>• Need constant and costly maintenance</li> <li>• Soft engineering processes don't always work – beach material may be removed by winter storms and have to start all over again, so costly</li> <li>• High cost of maintenance of existing defences and on-going costs of beach replenishment</li> <li>• Etc</li> </ul>
<p><b>OPTION 3</b> Use managed retreat of the coast and give people compensation for their losses</p>	<ul style="list-style-type: none"> <li>• People who live on the shore line are able to buy a new home, away from area likely to erode</li> <li>• Dangerous buildings can then be removed, making the beach a safer place for tourists</li> <li>• Cheaper as no costs for building sea defences</li> <li>• Etc</li> </ul>	<ul style="list-style-type: none"> <li>• High cost of compensation/ Who should get the compensation</li> <li>• Loss of beach will affect tourist industry</li> <li>• Much of this region is made of similar material and may erode – who knows where the coast will have eroded to before equilibrium is achieved?</li> <li>• Etc</li> </ul>

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