



GEO.SK8 Issue Evaluation: Interpreting Resources and Reaching a Justified Decision

AQA 8035 • Calculators not allowed • about 50 minutes

Total Marks

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Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Show all your working.

- 1** The resources booklet concerns Rivermere, a fictional riverside town. Using the booklet, name the river that flows through Rivermere as shown on the map in Figure 1.

(Total for Question 1 is 1 mark)

- 2** Using Figure 1 map of Rivermere, state whether Proposed Site A is on the floodplain or on higher ground near the old mill.

(Total for Question 2 is 1 mark)

- 3** Using Figure 1, identify ONE sensitive environmental feature that is close to Proposed Site A or Site B and give its label from the map.

(Total for Question 3 is 2 marks)

- 4** Figure 2 is a table in the resources booklet comparing two flood-management options for Rivermere. Using Table data, state the initial construction cost (in thousands of pounds) of Option A.

(Total for Question 4 is 2 marks)

- 5 Using the Table in Figure 2, calculate the absolute difference in the number of houses protected between Option A and Option B.

(Total for Question 5 is 2 marks)

- 6 Figure 2 gives an environmental impact score for each option on a scale 1 (low impact) to 10 (high impact). Using the Table, state which option has the lower environmental impact score and give the two scores.

(Total for Question 6 is 2 marks)

- 7 Using the map in Figure 1 and the Table in Figure 2, give ONE advantage and ONE disadvantage of choosing Option A (the diversion channel on the floodplain) for Rivermere.

(Total for Question 7 is 3 marks)

- 8 Using the Table in Figure 2, state ONE social benefit (other than houses protected) provided by Option B and give the value shown.

(Total for Question 8 is 3 marks)

- 9 Figure 1 shows a public footpath that links Site B to the town centre and a cycle route planned along the river. Using Figure 1, give TWO reasons why Site B may be better for community access than Site A.

(Total for Question 9 is 2 marks)

- 10** Using the Table in Figure 2, calculate the cost per house protected for Option B. Give your answer in pounds, rounded to the nearest whole pound. (Table gives initial construction cost in thousands of pounds and houses protected.)

(Total for Question 10 is 2 marks)

- 11** Using the map and Table, explain ONE environmental advantage of choosing Option B (the raised bank away from the marshes) and ONE economic disadvantage of Option B. Use evidence from the resources booklet to support your points.

(Total for Question 11 is 3 marks)

- 12** The town council is concerned about long-term maintenance costs. Using Figure 2, give ONE piece of evidence about the predicted annual maintenance cost for each option.

(Total for Question 12 is 2 marks)

- 13** Using the resources booklet, suggest TWO reasons why the town council might choose Option B despite it protecting fewer houses than Option A. Use evidence from the map or Table.

(Total for Question 13 is 2 marks)

- 14** The council must consider both community access and environmental protection. Using Figure 1 and Figure 2, explain how the two options differ in their likely effects on recreational access to the river and on wildlife habitat. Support your explanation with specific evidence from the resources booklet.

(Total for Question 14 is 4 marks)

- 15** Use the resources provided in the Rivermere booklet (Figure 1 map, Figure 2 Table and accompanying notes) to answer the question below.

'Using the resources provided, evaluate the two flood-management options for Rivermere and justify which one the town council should choose.'

(Total for Question 15 is 12 marks)

Mark scheme · GEO.SK8 Issue Evaluation: Interpreting Resources and Reaching a Justified Decision

Question 1

- **B1** River Cheriton
- **Answer: River Cheriton.**

Question 2

- **B1** on the floodplain
- **Answer: Proposed Site A is on the floodplain.**

Question 3

- **B1** identification of a sensitive feature, e.g. 'SSSI' or 'woodland' or 'wetland', oe
- **B1** correct map label cited, e.g. 'SSSI (Rivermere Marshes)' or 'Ancient Woodland', oe
- **Answer: SSSI, labelled 'Rivermere Marshes'.**

Question 4

- **M1** reading the cost value from Table: 1,200 (thousand pounds) seen, oe
- **A1** 1,200 thousand pounds (i.e. £1,200,000) cao
- **Answer: 1,200 thousand pounds, i.e. £1,200,000.**

Question 5

- **M1** calculation shown, e.g. 480 - 320 or 320 - 480 seen, oe
- **A1** 160 houses cao
- **Answer: 160 houses.**

Question 6

- **B1** Option B has the lower score
- **B1** scores given, e.g. Option A = 7 and Option B = 4, oe
- **Answer: Option B has the lower environmental impact score. Option A = 7, Option B = 4.**

Question 7

- **B1** advantage, e.g. protects a larger number of houses (480) or reduces flood risk to the town centre, with evidence from Table or map, oe
- **B1** disadvantage, e.g. high environmental impact on floodplain habitats near Rivermere Marshes or disturbance to an SSSI, with map reference, oe
- **B1** clear linkage between the evidence and the stated advantage or disadvantage, oe
- **Answer: Advantage: Option A would protect more houses (480), reducing flood risk to a larger part of the town. Disadvantage: building a diversion channel on the floodplain could damage floodplain habitats close to the Rivermere Marshes SSSI.**

Question 8

- **B1** identification of a social benefit listed in the Table, e.g. new footpaths, recreational area, or community facilities, oe
- **B1** value given correctly from Table, e.g. 25 new jobs, or 'new footpaths length 1.2 km', oe
- **B1** linking phrase that shows the student used the Table to find the value, oe
- **Answer: For example, Option B provides 25 new jobs for the local community (value shown in the Table).**

Question 9

- **B1** reason 1, e.g. Site B is adjacent to the public footpath linking to town centre, oe
- **B1** reason 2, e.g. Site B has direct access to the planned cycle route along the river, oe
- **Answer: Site B is next to the public footpath linking to the town centre, making it more walkable for residents; it also has direct access to the planned cycle route along the river, improving sustainable access.**

Question 10

- **M1** calculation shown, e.g. (cost in thousands x 1000) / number of houses, oe
- **A1** 3,125 pounds cao
- **Answer: £3,125.**

Question 11

- **B1** environmental advantage, e.g. less disturbance to the Rivermere Marshes SSSI or floodplain habitats, linked to map location of marshes, oe
- **B1** economic disadvantage, e.g. Option B protects fewer houses (320) so cost per house is higher or less overall protection, linked to Table figures, oe
- **B1** explicit use of evidence from the resources to support both points, oe
- **Answer: Environmental advantage: Option B keeps defences away from the Rivermere Marshes SSSI on the floodplain, so it causes less damage to sensitive habitats. Economic disadvantage: Option B protects fewer houses (320), raising the cost per house and giving less overall protection compared with Option A (evidence from the Table).**

Question 12

- **B1** evidence for Option A maintenance cost from Table, e.g. 'Option A maintenance = £25 thousand per year' or similar, oe
- **B1** evidence for Option B maintenance cost from Table, e.g. 'Option B maintenance = £8 thousand per year' or similar, oe
- **Answer: Option A maintenance cost: £25 thousand per year. Option B maintenance cost: £8 thousand per year.**

Question 13

- **B1** reason 1, e.g. lower environmental impact score and protection of the SSSI/ancient woodland, with Table or map evidence, oe
- **B1** reason 2, e.g. lower annual maintenance costs reducing long-term council spending, supported by Table figure, oe
- **Answer: Because Option B has a lower environmental impact score and avoids harming the Rivermere Marshes SSSI, and because it has lower annual maintenance costs (£8k vs £25k), reducing long-term spending.**

Question 14

- **B1** point about recreational access for Option A or B, e.g. Option A may include a riverside walkway or allow improved access to water, linked to Table or map, oe
- **B1** point about recreational access for the other option, e.g. Site B already links to a footpath and cycle route so Option B enhances community access, linked to map, oe
- **B1** point about wildlife habitat for Option A or B, e.g. Option A on floodplain may damage marsh habitats and SSSI, linked to map and environmental impact score, oe
- **B1** point about wildlife habitat for the other option, e.g. Option B avoids marshes reducing habitat damage though may still affect riverside trees, with evidence, oe
- **Answer: Recreational access: Option B sits beside the existing footpath and planned cycle route in Figure 1, so it supports easy community access; Option A, built on the floodplain, might provide riverside walks but could be less connected to the town centre. Wildlife habitat: Option A on the floodplain risks damaging the Rivermere Marshes SSSI and floodplain habitat (Table shows higher environmental impact score), whereas Option B keeps defences away from the marshes and so has a lower impact on key habitats.**

Question 15

- **Level 1** (1-3): A few simple points about the pros and cons of the options are made, with limited use of the resources. The response may give an undeveloped judgement with little evidence.
- **Level 2** (4-6): A balanced evaluation that uses the resources to compare benefits and drawbacks of both options, with some supporting evidence. A conclusion is given, but the justification may be limited.
- **Level 3** (7-9): A detailed, well-supported evaluation using specific evidence from the map and Table to weigh environmental, social and economic factors. A clear, justified decision is reached that considers trade-offs and long-term implications.
- **Indicative content:**
 - Use Table figures: construction costs, houses protected (480 for A, 320 for B), environmental impact scores (Option A = 7, Option B = 4), maintenance costs (Option A = £25k/yr, Option B = £8k/yr), social benefits such as jobs or new footpaths shown for Option B.
 - Use map evidence: Option A is on the floodplain adjacent to Rivermere Marshes SSSI and could damage sensitive habitats; Site B links to the public footpath and cycle route, improving community access and leisure.
 - Economic factors: Option A protects more homes, potentially reducing flood damage costs for more residents, but has higher initial cost and higher maintenance. Option B has lower initial and maintenance costs but protects fewer houses and so may leave some properties more vulnerable.
 - Environmental factors: Option B has a lower environmental impact score and avoids the SSSI, supporting wildlife protection and long-term ecosystem services; Option A risks habitat loss and disturbance to the marshes.
 - Social factors: Option B may bring community benefits such as new jobs and improved access, as shown in the Table; Option A may provide greater peace of mind to more homeowners by protecting more houses.
 - Weighing trade-offs: consider long-term maintenance budgets, the value of the SSSI and ecosystem services, community access and wellbeing, and the number of properties protected when making a justified choice.
 - A high-scoring response should reach a clear decision, for example recommending Option B if protecting habitats and long-term costs are prioritised, or recommending Option A if protecting the maximum number of homes is judged to be the priority, and should explain why other factors were less decisive.