



Mark Scheme (Results)

November 2020

Pearson Edexcel GCSE
In Geography A (1GA0)
Paper 03: Geographical Investigations:
Fieldwork and UK Challenges

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Autumn 2020

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General Marking Guidance

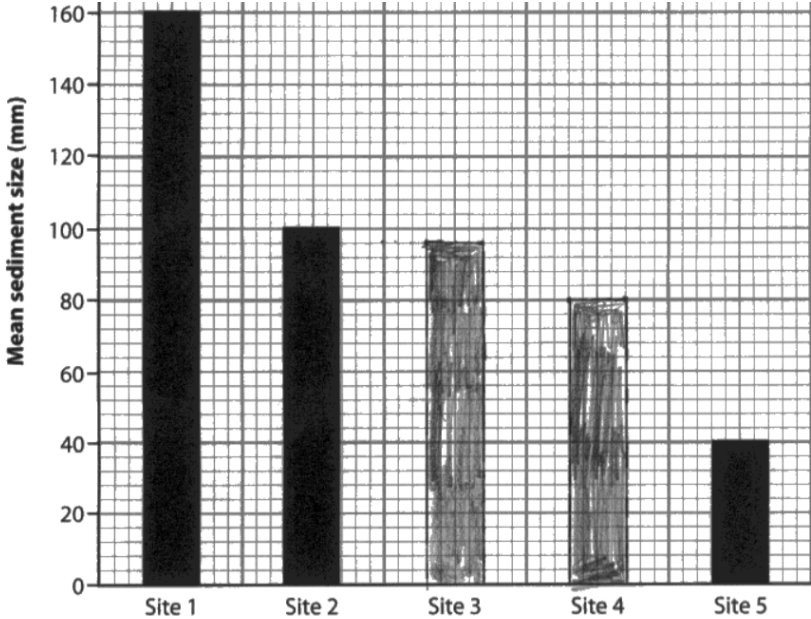
- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

| Question Number | Answer | Mark |
|-----------------|---|------|
| 1(a) (i) | <p>1 mark for identification of the method and a further mark for describing how the method is used, up to a maximum of 2 marks.</p> <p>Using a measuring tape (1) the students record the measurement by placing it from one side of river channel bank to the other (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|---|------|
| 1(a) (ii) | <p>1 mark for a disadvantage and a further mark for development of the disadvantage, up to a maximum of 2 marks.</p> <p>When placing the tape measure across the river channel it may have not been taut (1) this could have resulted in an inaccurate reading of the true river channel width (1).</p> <p>When placing the tape measure across the river channel it may have got caught in the flow of the water (1) this may have resulted in an inaccurate reading of the true river channel width (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question Number | Answer | Mark |
|-----------------|---|------|
| 1(b) (i) | <p>Award 1 mark for the correct process of calculating the mean – adding up the values and dividing by 5. (1)</p> <p>Award the 2nd mark for the correct answer to two decimal places – 3.65m (1)</p> | (2) |

| Question number | Answer | Mark |
|-----------------|--|------|
| 1(b) (ii) | <p>Award 1 mark for identification of a conclusion and further mark for an explanation of the conclusion, up to a maximum of 2 marks.</p> <p>The width of the river increases downstream (1) possibly because of erosion processes such as hydraulic action and abrasion (1).</p> <p>The depth of the river increases downstream (1) possibly because of erosion processes such as hydraulic action and abrasion (1).</p> <p>The velocity of the river increases downstream (1) possibly because erosion processes create a smoother river channel causing less friction against the bed and the banks (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark | | | | | | | | | | | | |
|-----------------|---|------|-------------------------|--------|-----|--------|-----|--------|----|--------|----|--------|----|-----|
| 1(c) | <p>One mark for each correctly plotted bar;</p>  <table border="1" data-bbox="427 1193 1241 1809"> <caption>Mean sediment size (mm) by Site</caption> <thead> <tr> <th>Site</th> <th>Mean sediment size (mm)</th> </tr> </thead> <tbody> <tr> <td>Site 1</td> <td>160</td> </tr> <tr> <td>Site 2</td> <td>100</td> </tr> <tr> <td>Site 3</td> <td>95</td> </tr> <tr> <td>Site 4</td> <td>80</td> </tr> <tr> <td>Site 5</td> <td>40</td> </tr> </tbody> </table> | Site | Mean sediment size (mm) | Site 1 | 160 | Site 2 | 100 | Site 3 | 95 | Site 4 | 80 | Site 5 | 40 | (2) |
| Site | Mean sediment size (mm) | | | | | | | | | | | | | |
| Site 1 | 160 | | | | | | | | | | | | | |
| Site 2 | 100 | | | | | | | | | | | | | |
| Site 3 | 95 | | | | | | | | | | | | | |
| Site 4 | 80 | | | | | | | | | | | | | |
| Site 5 | 40 | | | | | | | | | | | | | |

| Question number | Indicative content |
|-----------------|--|
| 1(d) | <p style="text-align: center;">AO3 (4 marks)/AO4 (4 marks)</p> <p>This question requires candidates to draw on evidence from their own fieldwork investigation to evaluate the effectiveness of the different techniques used to present their fieldwork data.</p> <p>Candidates should consider the positive and negatives of the data presentation techniques used. Therefore, examiners should expect to see evidence of this through candidates making specific references to their own river fieldwork.</p> <p>Candidates may demonstrate AO3 and AO4 through the following examples:</p> <ul style="list-style-type: none"> • There is evidence of the candidate's own fieldwork investigation presentation technique(s) used with clear links to the data presented. For example, possible data presentation technique(s) linked to a river study might include: <ul style="list-style-type: none"> - <i>Channel profiles</i> - <i>Divided bar charts on rock angularity</i> - <i>Line graphs for velocity</i> <p style="text-align: center;">(AO4.1d – communicating findings)</p> • There is evidence of consideration in relation to the appropriateness and complexity of completing certain techniques in terms of time, accuracy and reliability. For example, candidates may refer to the following in their response: <ul style="list-style-type: none"> - <i>For my river investigation, I produced river channel profiles of the River Conwy for each of the three sites surveyed. I decided to produce the river channel profiles on separate graphs and overlay these on an OS map, which provided a clear representation of the changes to the width and depth of the river channel downstream. This primary data supported our initial expectations based on river theories and our pre-fieldwork secondary research.</i> <p style="text-align: center;">(AO3.1d – making judgements)</p> |

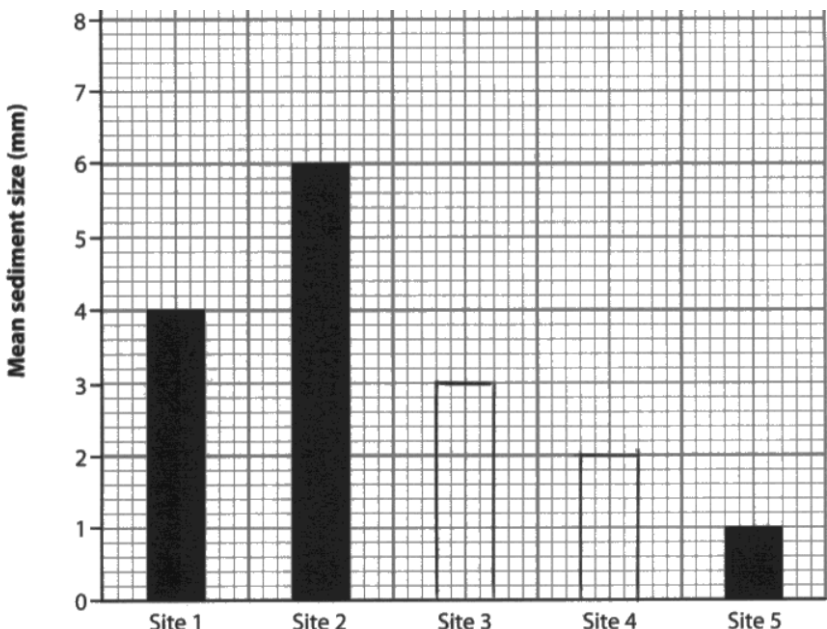
| Level | Mark | Descriptor |
|---------|------|--|
| | 0 | No acceptable response. |
| Level 1 | 1-3 | <ul style="list-style-type: none"> Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4) |
| Level 2 | 4-6 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity, using relevant geographical terminology occasionally. (AO4) |
| Level 3 | 7-8 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4) |

| Question Number | Answer | Mark |
|-----------------|--|------|
| 2(a) (i) | <p>1 mark for identification of the method and a further mark for describing how the method is used, up to a maximum of 2 marks.</p> <p>Using a clinometer (1) the students record the gradient at each change of slope up the beach (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|---|------|
| 2(a) (ii) | <p>1 mark for a disadvantage and a further mark for the development of the disadvantage, up to a maximum of 2 marks.</p> <p>When using a clinometer, it can be difficult to read the angle (1) this could have resulted in an inaccurate angle recorded altering the true profile of the beach (1).</p> <p>When using ranging poles, the reference point is difficult to accurately line up (1) this may have resulted in an inaccurate reading taken from the clinometer (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question Number | Answer | Mark |
|-----------------|--|------|
| 2(b) (i) | <p>Award 1 mark for the correct process of calculating the mean – adding up the values and dividing by 5. (1)</p> <p>Award the 2nd mark for the correct answer to two decimal places – 3.2mm (1)</p> | (2) |

| Question number | Answer | Mark |
|-----------------|--|------|
| 2(b) (ii) | <p>Award 1 mark for identification of a conclusion and further mark for an explanation of the conclusion, up to a maximum of 2 marks.</p> <p>As you travel across the stretch of the beach the average sediment size decreases (1) because the process of attrition causing sediment to become smaller and rounder (1).</p> <p>As you travel across the stretch of the beach the width increases (1) because sediment is transported along the coastline by longshore drift and deposited (1)</p> <p>As you travel across the stretch of the beach the gradient increases (1) because sediment is deposited further towards the backshore (1)</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark | | | | | | | | | | | | |
|-----------------|--|------|-------------------------|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|-----|
| 2(c) | <p>One mark for each correctly plotted bar;</p>  <table border="1" data-bbox="430 1344 1260 1971"> <caption>Mean sediment size (mm) at five sites</caption> <thead> <tr> <th>Site</th> <th>Mean sediment size (mm)</th> </tr> </thead> <tbody> <tr> <td>Site 1</td> <td>4.0</td> </tr> <tr> <td>Site 2</td> <td>6.0</td> </tr> <tr> <td>Site 3</td> <td>3.0</td> </tr> <tr> <td>Site 4</td> <td>2.0</td> </tr> <tr> <td>Site 5</td> <td>1.0</td> </tr> </tbody> </table> | Site | Mean sediment size (mm) | Site 1 | 4.0 | Site 2 | 6.0 | Site 3 | 3.0 | Site 4 | 2.0 | Site 5 | 1.0 | (2) |
| Site | Mean sediment size (mm) | | | | | | | | | | | | | |
| Site 1 | 4.0 | | | | | | | | | | | | | |
| Site 2 | 6.0 | | | | | | | | | | | | | |
| Site 3 | 3.0 | | | | | | | | | | | | | |
| Site 4 | 2.0 | | | | | | | | | | | | | |
| Site 5 | 1.0 | | | | | | | | | | | | | |

| Question number | Indicative content |
|-----------------|--|
| 2(d) | <p style="text-align: center;">AO3 (4 marks)/AO4 (4 marks)</p> <p>This question requires candidates to draw on evidence from their own fieldwork investigation to evaluate the effectiveness of the different techniques used to present their fieldwork data.</p> <p>Candidates should consider the positive and negatives of the data presentation techniques used. Therefore, examiners should expect to see evidence of this through candidates making specific references to their own coastal fieldwork.</p> <p>Candidates may demonstrate AO3 and AO4 through the following examples:</p> <ul style="list-style-type: none"> • There is evidence of the candidate's own fieldwork investigation presentation technique(s) used with clear links to the data presented. For example, possible data presentation technique(s) linked to a coastal study might include: <ul style="list-style-type: none"> - <i>Beach profiles</i> - <i>Proportional circles for sediment</i> - <i>Groyne height comparison graph</i> <p style="text-align: center;">(AO4.1d – communicating findings)</p> • There is evidence of consideration in relation to the appropriateness and complexity of completing certain techniques in terms of time, accuracy and reliability. For example, candidates may refer to the following in their response: <ul style="list-style-type: none"> - <i>For my coastal investigation, I produced beach profiles at 200m along Formby beach. I decided to overlay the beach profiles on a Google map, which provided a clear representation of the changes to the width and gradient of the beach along the coast. This primary data supported our initial expectations based on coastal processes and our pre-fieldwork secondary research.</i> <p style="text-align: center;">(AO3.1d – making judgements)</p> |

| Level | Mark | Descriptor |
|---------|------|--|
| | 0 | No acceptable response. |
| Level 1 | 1-3 | <ul style="list-style-type: none"> Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4) |
| Level 2 | 4-6 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some clarity, using relevant geographical terminology occasionally. (AO4) |
| Level 3 | 7-8 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4) |

| Question number | Answer | Mark |
|-----------------|--|------|
| 3(a)(i) | <p>No credit for naming a qualitative method.</p> <p>Award 1 mark for identification of a reason for using the qualitative technique and a further mark for an explanation of the reason, up to a maximum of 2 marks.</p> <p>Gathering qualitative data through open-ended questions allowed the respondent to provide an in-depth view on the quality of the environment (1) with a clear justification of the reasons for their views (1)</p> <p>Using a questionnaire provided us with the opportunity to reach many people on our fieldwork collection day (1) which we could then use to make comparisons between people's views on the quality of the environment (1)</p> <p>Other acceptable responses might be: field sketches, photographs</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|---|------|
| 3(a)(ii) | <p>No credit for naming a qualitative method.</p> <p>Award 1 mark for identification of a disadvantage of a qualitative technique and a further mark for an explanation of the disadvantage, up to a maximum of 2 marks.</p> <p>Respondents may be embarrassed to provide a truthful answer (1) this could result in an inaccurate representation of people's opinions (1).</p> <p>The restrictions on time available for the data collection resulted in a small sample size (1) this means the data may not be fully representative of people's opinions (1).</p> <p>The drawing of the landscape through a field sketch may not fully be representative of the observed scene (1) because it often requires a degree of graphical sophistication (1)</p> <p>Other acceptable responses might be: photographs</p> | (2) |

| | | |
|--|---|--|
| | Accept any other appropriate response. | |
|--|---|--|

| Question number | Answer | Mark |
|-----------------|--|------------|
| 3(b) | <p>Award 1 mark for identification of an appropriate risk</p> <p>Causing offence to the locals (1)</p> <p>Getting lost (1)</p> <p>Do not accept the identification of the hazard without some indication of why it is a risk: lots of cars on the road</p> <p>Accept any other appropriate response.</p> | (1) |

| Question Number | Answer | Mark |
|-----------------|---|------------|
| 3 (c) | <p>No credit for naming the sampling strategy.</p> <p>1 mark for identification of an advantage of a sampling strategy linked to an urban study and a further mark for an explanation of the advantage, up to a maximum of 2 marks.</p> <p>Candidates may refer to one of the following sampling strategies: random, systematic or stratified.</p> <p>Random sampling meant that every member of the population in Chester has an equal chance of being included in the study (1) This is a big advantage, because a truly random sample will be more representative of the population (1).</p> <p>Systematic provided a good coverage of the three streets of the urban area I sampled (1) because specific components related to the study can be recorded (1).</p> | (2) |

| | | |
|--|---|--|
| | Accept any other appropriate response. | |
|--|---|--|

| Question Number | Answer | Mark |
|------------------------|---|-------------|
| 3(d) | <p>No credit for naming the secondary data.</p> <p>Award 1 mark for identification of a point and further mark(s) for an explanation, up to a maximum of 3 marks.</p> <p>It provided an overview of the demographics and socio-economic statistics (1) which informed the choice of survey sites (1) allowing us to investigate the reasons for changes in central/ inner urban areas (1)</p> <p>Accept any other appropriate response.</p> | (3) |

| Question number | Indicative content |
|------------------------|---|
| 3(e) | <p style="text-align: center;">AO3 (4 marks)/AO4 (4 marks)</p> <p>This question requires candidates to assess the conclusions that might be drawn from the data presented in Figures 3a and 3b.</p> <p>The question the students were investigating in Figure 3a and 3b was:</p> <p>'To what extent are there significant differences between land use and the quality of the environment in these two areas?'</p> <p>Candidates may demonstrate AO3 and AO4 through the following examples:</p> <ul style="list-style-type: none"> The pie charts demonstrate a change in the land use from predominantly shops and offices to residential as the students moved from the CBD at location 1 to the inner urban area at location 2. For example, the percentage of land use for shops decreased from 60% to 20%, whereas residential increasing from 10% to 40%. (AO4.1d – communicating findings). This is supportive of the expected changes to land use moving away from the CBD because the city centre is where we would |

| | |
|--|--|
| | <p>normally expect to see the high street, consisting of shops and offices. (AO3.1d - making judgements).</p> <ul style="list-style-type: none"> The radial charts demonstrate a change in the environmental quality with an overall improvement as the students moved from the CBD at location 1 to the inner urban area at location 2. In particular, the building conditions and green spaces shows a positive improvement. For example, in location 1 the building conditions were rated 4, compared with a rating of 6 in location 2. (AO4.1d - communicating findings). This supports what we would expect to see moving away from the CBD because the buildings in the CBD are often the oldest in construction and the density of buildings is at its highest, reducing the percentage of green space. (AO3.1d - making judgements). |
|--|--|

| Level | Mark | Descriptor |
|---------|------|--|
| | 0 | No acceptable response. |
| Level 1 | 1-3 | <ul style="list-style-type: none"> Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4) |
| Level 2 | 4-6 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) Some aspects of the enquiry process are supported by the use of geographical skills. Communicates fieldwork findings with some |

| | | |
|---------|-----|---|
| | | clarity, using relevant geographical terminology occasionally. (AO4) |
| Level 3 | 7-8 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4) |

| Question number | Answer | Mark |
|-----------------|--|------|
| 4(a)(i) | <p>No credit for naming a qualitative method.</p> <p>Award 1 mark for identification of a reason for using the qualitative technique and a further mark for an explanation of the reason, up to a maximum of 2 marks</p> <p>Gathering qualitative data through open-ended questions allowed the respondent to provide an in-depth view on the quality of the environment (1) with a clear justification of the reasons for their views (1)</p> <p>Using a questionnaire provided us with the opportunity to reach many people on our fieldwork collection day (1) which we could then use to make comparisons between people's views on the quality of the environment (1)</p> <p>Other acceptable responses might be: land use mapping</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|---|------|
| 4(a)(ii) | No credit for naming a qualitative method. | (2) |

| | | |
|--|--|--|
| | <p>Award 1 mark for identification of a disadvantage of a qualitative technique and a further mark for an explanation of the disadvantage, up to a maximum of 2 marks.</p> <p>Respondents may provide a false answer (1) this could result in an inaccurate representation of people's opinions (1).</p> <p>The restrictions on time available for the data collection resulted in a small sample size (1) this means the data may not be fully representative of people's opinions (1).</p> <p>The drawing of the landscape through a field sketch may not fully be representative of the observed scene (1) because it often requires a degree of graphical sophistication (1)</p> <p>Other acceptable responses might be: photographs</p> <p>Accept any other appropriate response.</p> | |
|--|--|--|

| Question number | Answer | Mark |
|-----------------|--|------|
| 4(b) | <p>Award 1 mark for identification of an appropriate risk</p> <p>Causing offence to the locals (1)</p> <p>Getting lost (1)</p> <p>Do not accept the identification of the hazard without some indication of why it is a risk: lots of cars on the road</p> <p>Accept any other appropriate response.</p> | (1) |

| Question Number | Answer | Mark |
|-----------------|--|------|
| 4(c) | <p>No credit for naming the sampling strategy.</p> <p>1 mark for identification of an advantage of a sampling strategy linked to an rural study and a further mark for an explanation of the advantage, up to a maximum of 2 marks.</p> <p>Candidates may refer to one of the following strategies: random, systematic or stratified.</p> <p>Simple random sampling meant that every member of the population in Castleton had an equal chance of being included in the study (1) This is a big advantage, because a truly random sample will be more representative of the population (1).</p> <p>Systematic sampling provided a good coverage of the three streets of the village I sampled (1) because specific components related to the study can be recorded (1).</p> <p>Accept any other appropriate response.</p> | (2) |

| Question Number | Answer | Mark |
|-----------------|--|------|
| 4(d) | <p>No credit for naming the secondary data.</p> <p>Award 1 mark for identification of a point and further mark(s) for an explanation, up to a maximum of 3 marks.</p> <p>It provided an overview of the demographics and socio-economic statistics (1) which informed the choice of survey sites (1) allowing us to investigate the reasons for changes in rural settlements (1)</p> <p>Accept any other appropriate response.</p> | (3) |

| Question number | Indicative content |
|-----------------|---|
| 4(e) | <p style="text-align: center;">AO3 (4 marks)/AO4 (4 marks)</p> <p>This question requires candidates to assess the conclusions that might be drawn from the data presented in Figures 4a and 4b.</p> <p>The question the students were investigating in Figure 4a and 4b was:</p> <p>'To what extent has the new housing development had an impact on the quality of the environment and services in the settlement?'</p> <p>Candidates may demonstrate AO3 and AO4 through the following examples:</p> <ul style="list-style-type: none"> • The pie charts demonstrate a change in the land use from predominantly shops and offices to residential as the students moved from the CBD at location 1 to the inner urban area at location 2. For example, the percentage of land use for shops decreased from 60% to 20%, whereas residential increasing from 10% to 40%. (AO4.1d - communicating findings). This is supportive of the expected changes to land use moving away from the CBD because the city centre is where we would normally expect to see the high street, consisting of shops and offices. (AO3.1d - making judgements). • The radial charts demonstrate a decline in aspects of the environmental quality after the housing development. For example, before the housing development the location had a larger percentage of green space rated at a score of 4, compared with a rating of 2 after the development. (AO4.1d - communicating findings). This supports what we would expect to with the construction of the housing development, which is further supported by a decline in the air quality. This would be caused by the construction of the houses and the increased traffic flow once the new housing development was complete. (AO3.1d - making judgements). |

| Level | Mark | Descriptor |
|---------|------|--|
| | 0 | No acceptable response. |
| Level 1 | 1-3 | <ul style="list-style-type: none"> Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) Few aspects of the enquiry process are supported by the use of geographical skills to obtain information, which has limited relevance and accuracy. Communicates generic fieldwork findings and uses limited relevant geographical terminology. (AO4) |
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| Level 3 | 7-8 | <ul style="list-style-type: none"> Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) All aspects of the enquiry process are supported by the use of geographical skills. Communicates enquiry-specific fieldwork findings with clarity, and uses relevant geographical terminology consistently. (AO4) |

| Question number | Answer | Mark |
|-----------------|------------------|------|
| 5(a) | D 5000 megawatts | (1) |

| Question number | Answer | Mark |
|-----------------|--|------|
| 5(b) | <p>Award 1 mark for each point identified, up to a maximum of 2 marks:</p> <p>Increased risk of flooding (1)</p> <p>Increased risk of droughts (1)</p> <p>Stress on wildlife habitats (1)</p> <p>Invasive plant species (1)</p> <p>Decline in tree and plant species (1)</p> <p>Decline/ rise in crop yields (1)</p> <p>Rising sea levels (1)</p> <p>Accept any other appropriate response.</p> | (2) |

| Question number | Answer | Mark |
|-----------------|--|------|
| 5(c) | <p>Award 1 mark for the correct process of calculating the percentage increase – subtracting the original values, dividing by 1.9 and x 100. (1)</p> <p>Award the 2nd mark for the correct answer to the nearest whole number – 200% (1)</p> | (2) |

| Question number | Answer | Mark |
|-----------------|---|------|
| 5(d) | <p>Award 1 mark for each identification of an impact and a further mark for explanation of each impact, up to a maximum of 4 marks.</p> | (4) |

| | | |
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| | <p>Increased temperatures and reduced rainfall can lead to an increased risk of drought (1) leading to a reduction in crop yields (1)</p> <p>Increased temperatures and reduced rainfall can lead to an increased risk of drought (1) leading to water shortages for domestic consumption (1)</p> <p>Accept any other appropriate response.</p> | |
|--|--|--|

| Question number | Answer | Mark |
|-----------------|---|------|
| 5(e) | <p>Award 1 mark for a point based on a UK sustainable transport scheme and a further mark(s) for explanation of the scheme, up to a maximum of 3 marks.</p> <p>Accept a local or national transport scheme</p> <p>London's Santander bike scheme provides citizens with an option to not use vehicles (1) and allowing a faster commute around the city (1) contributing towards reducing carbon emissions (1).</p> <p>Park and ride schemes have been set up outside of the main city (1) to reduce the number of private vehicles entering the city (1) this improves the quality of the air (1).</p> <p>Accept any other appropriate response.</p> | (3) |

| Question number | Indicative content |
|-----------------|--|
| 5(g) | <p>AO2</p> <ul style="list-style-type: none"> • The UK's climate has changed with average temperatures increasing over the last 100 years. • It is likely that these average temperature changes witnessed in the last 100 years will continue to rise. • Responses to climate change at a local scale involve communities implementing strategies that will reduce carbon and ecological footprints. • Responses to climate change at a national scale involve governments working to meet targets set by global agreements like those agreed by World Leaders at The Paris Agreement on the 12th December 2015. <p>AO3</p> <ul style="list-style-type: none"> • The changes to the UK's average temperatures have increased the challenges for access to water resources in recent years, which means organisations and governments need to plan appropriately to respond to these changes in rainfall to ensure demands continue to be met in the various regions of the UK. • The relative changes to the annual mean temperature over a 30-year period is creating challenges including; wetter summers, warmer seas, rising sea levels and increased periods of extreme weather. • Climate change mapping and predictions from scientist are important to enable individuals, organisations and governments to plan appropriate responses to reduce the potential impact of the anticipated changes. • Annual average daily temperatures in the UK have increased with a 1.3°C change, over a 30-year period. • Whilst local changes may illustrate an active contribution towards reducing the further degradation of <p>AO4</p> <ul style="list-style-type: none"> • Figure 5a illustrates the UK's increased investment in the use of renewable energy resources like wind power as a national scale response with cumulative installed capacity increasing from less than 1000 MW in 2004 to 5000 MW in 2014. • The community food enterprises in Figure 5c, demonstrate the role of local-scale responses in reducing the impacts of climate change, linked to the production and consumption of food as one of the highest contributors towards greenhouse gas emissions (18.9%). The implementation of community food enterprises could be a possible solution in driving change relating to the |

| Question number | Indicative content |
|-----------------|--|
| | <p>food industry in improving its efficiency to reduce carbon emissions.</p> <ul style="list-style-type: none">• Figure 5d demonstrates a local scale response led by several organisations to promote an eco-village that aims to reduce people's carbon and ecological footprints. The project has several sustainable features, such as locally sourced construction materials to reduce transportation requirements, reduced water consumption and a car sharing club.• Both Figures 5c and 5d illustrate the role local-scale responses can contribute to climate change. However, these responses along will not provide the necessary halt in our changing climate. Therefore, a combination of strategies at local, national and global scale will be key important in tackling the challenges of climate change in the UK. |

| Level | Mark | Descriptor |
|---------|------|--|
| | 0 | No acceptable response. |
| Level 1 | 1–4 | <ul style="list-style-type: none"> • Demonstrates isolated elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Attempts to apply understanding to deconstruct information but understanding and connections are flawed. An unbalanced or incomplete argument that provides limited synthesis of understanding. Judgements are supported by limited evidence. (AO3) • Uses some geographical skills to obtain information with limited relevance and accuracy, which supports few aspects of the argument. (AO4) |
| Level 2 | 5–8 | <ul style="list-style-type: none"> • Demonstrates elements of understanding of concepts and the interrelationship between places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide some logical connections between concepts. An imbalanced argument that synthesises mostly relevant understanding, but not entirely coherently, leading to judgements that are supported by evidence occasionally. (AO3) • Uses geographical skills to obtain accurate information that supports some aspects of the argument. (AO4) |
| Level 3 | 9–12 | <ul style="list-style-type: none"> • Demonstrates accurate understanding of concepts and the interrelationship of places, environments and processes. (AO2) • Applies understanding to deconstruct information and provide logical connections between concepts throughout. A balanced, well-developed argument that synthesises relevant understanding coherently, leading to judgements that are supported by evidence throughout. (AO3) • Uses geographical skills to obtain accurate information that supports all aspects of the argument. (AO4) |

| Marks for SPGST | | |
|-----------------|-------|---|
| Performance | Marks | Descriptor |
| SPaG 0 | 0 | <p><i>No marks awarded:</i></p> <ul style="list-style-type: none"> • Learners write nothing. • Learner's response does not relate to the question. • Learner's achievement in SPaG does not reach the threshold performance level, for example errors in spelling, punctuation and grammar severely hinder meaning. |
| SPaG 1 | 1 | <p><i>Threshold performance:</i></p> <ul style="list-style-type: none"> • Learners spell and punctuate with reasonable accuracy. • Learners use rules of grammar with some control of meaning and any errors do not significantly hinder meaning overall. • Learners use a limited range of specialist terms as appropriate. |
| SPaG 2 | 2–3 | <p><i>Intermediate performance:</i></p> <ul style="list-style-type: none"> • Learners spell and punctuate with considerable accuracy. • Learners use rules of grammar with general control of meaning overall. • Learners use a good range of specialist terms as appropriate. |
| SPaG 3 | 4 | <p><i>High performance:</i></p> <ul style="list-style-type: none"> • Learners spell and punctuate with consistent accuracy. • Learners use rules of grammar with effective control of meaning overall. • Learners use a wide range of specialist terms as appropriate. |

