



National  
Qualifications  
2023

**X833/77/11**

**Geography**

TUESDAY, 25 APRIL

9:00 AM – 11:30 AM

**Total marks — 50**

**Attempt ALL questions**

Marks will be given for appropriately labelled sketch-maps and diagrams.

You must use the supplementary items and tracing overlays provided for annotation or as a base for diagrams. These resources should be placed inside the front cover of your answer booklet.

You should use the atlas provided.

Write your answers clearly in the answer booklet provided. In the answer booklet you must clearly identify the question number you are attempting.

Use **blue** or **black** ink. You may use pencil for the completion of Supplementary item B — tracing overlay.

Before leaving the examination room you must give your answer booklet to the Invigilator; if you do not, you may lose all the marks for this paper.



**Total marks — 50 marks**

**Attempt ALL questions**

### Question 1 — Map interpretation

To answer this question you will need to use:

- Supplementary item A — Ordnance Survey (OS) Map Extract Amble
- Supplementary item B — tracing overlay
- Supplementary item C — photographs of the Amble area
- the atlas provided.

You should make detailed use of the whole map extract as well as using your atlas appropriately. You should also carefully read the information in the text boxes.

Northumberland County Council's strategic planning committee will approve a scheme for a new Retail Park in the Amble area if a suitable site can be found.

As well as a supermarket, the development will also include a petrol station, a drive-through coffee shop, 352 parking spaces, bicycle parking, electric car charging points, and four other retail units, of varying sizes, for local traders and local produce.

- (a) (i) On the tracing overlay (Supplementary item B) **draw** accurately to scale a suitable site for the development. The size of the site, including car parking, is to be 300 m × 150 m. 3
- (ii) **Discuss** the advantages and disadvantages of your choice of location. 8
- (iii) Study Diagram 1 (Supplementary item C)
- Explain** the socio-economic impacts the development may have on the surrounding area. 4

The Northumberland coast, north of Amble and as far as Berwick upon Tweed, is a designated Area of Outstanding Natural Beauty. With over 30 miles of beaches, the coast is spectacular and tourism is one of the main sources of income in the area. The National Geographic Traveller magazine states 'It's no secret that England's most northerly county serves up prime family holiday ingredients'.

- (b) Diagram 2 (Supplementary item C) shows tourism in the area.

**Explain** why this part of Northumberland is suitable for tourism. You should refer to the whole map extract and make use of your atlas in your answer. 5

## Question 2 — Gathering and processing techniques

### Geographical data handling

To answer this question you will need to use:

- Supplementary item D.

#### Slope Profile

A group of students are investigating the changes in soil and vegetation along a slope. They have chosen a 140 metre transect on a hillside in a rural area. To do this, they will need to produce a slope profile.

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| (a) | (i) <b>Describe</b> how students could gather the data required to draw a slope profile when they return to the classroom.  | 5 |
|     | (ii) Study Diagram 1 (Supplementary item D).<br>The students have decided to use systematic sampling to gather the data. <b>Discuss</b> the suitability of this sampling technique. | 5 |

To investigate the relationship between the angle of the slope and the average height of the plant species, students have drawn a scatter graph and calculated a Pearson's Product Moment Correlation Coefficient (PPMCC).

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| (b) | Study Diagrams 2 and 3 (Supplementary item D).  |   |
|     | (i) <b>State</b> an appropriate null hypothesis.  | 1 |
|     | (ii) Using the scatter graph <b>and</b> the result of the PPMCC calculation, <b>explain</b> the significance of the result in terms of the null hypothesis. | 4 |
|     | (iii) <b>Evaluate</b> the suitability of using the PPMCC calculation for measuring the relationship between the two variables in this data set.             | 4 |
| (c) | Referring to Diagrams 1 and 4 (Supplementary item D), <b>analyse</b> factors that could influence soil and vegetation along the slope.                      | 7 |

The students have drawn kite diagrams to show some of the vegetation types and their distribution along the slope.

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| (d) | Study Diagram 4 (Supplementary item D).<br><b>Discuss</b> the effectiveness of using kite diagrams to present this information. | 4 |
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