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Cambridge IGCSE

Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER | | | | | |

CANDIDATE NUMBER | | | | |

5044984413

GEOGRAPHY **0460/22**

Paper 2 **May/June 2015**

1 hour 30 minutes

Candidates answer on the Question Paper.

Additional Materials: Ruler
Protractor
Plain paper
Calculator

1:50 000 Survey Map Extract is enclosed with this Question Paper.

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name in the spaces provided.
Write in dark blue or black pen.
You may use an HB pencil for any diagrams or graphs.
Do not use staples, paper clips, glue or correction fluid.
DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.

The Insert contains Photographs A and B for Question 3.
The Survey Map Extract and the Insert are **not** required by the Examiner.
Sketch maps and diagrams should be drawn whenever they serve to illustrate an answer.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [ ] at the end of each question or part question.

The syllabus is approved for use in England, Wales and Northern Ireland as a Cambridge International Level 1/Level 2 Certificate.

This document consists of **15** printed pages, **1** blank page and **1** Insert.

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CAMBRIDGE International Examinations

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1 Study the map extract for Barwick Estate, Zimbabwe. The scale is 1:50 000.

(a) Fig. 1 shows some of the features in the north east part of the map extract. Study Fig. 1 and the map extract and answer the questions below.

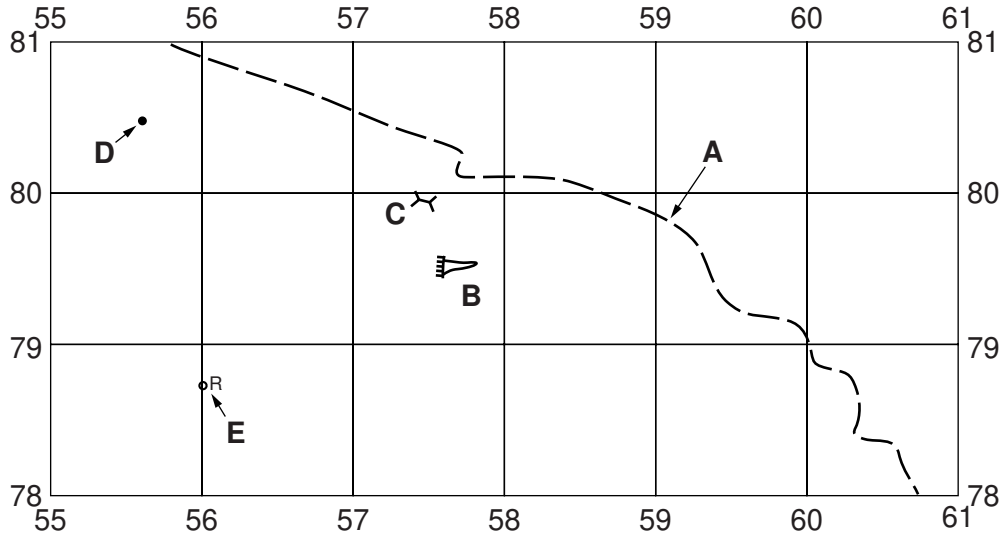

Fig. 1

Using the map extract, identify the following features shown on Fig. 1:

(i) the type of road at **A**;

.....[1]

(ii) feature **B**;

.....[1]

(iii) feature **C**;

.....[1]

(iv) the height of the land at **D**;

.....[1]

(v) feature **E**.

.....[1]

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(b) Fig. 2A shows an area at Barwick in the north west of the map extract and Fig. 2B shows an area at Jackals Loop in the south east of the map extract. Study the two areas and answer the questions below.

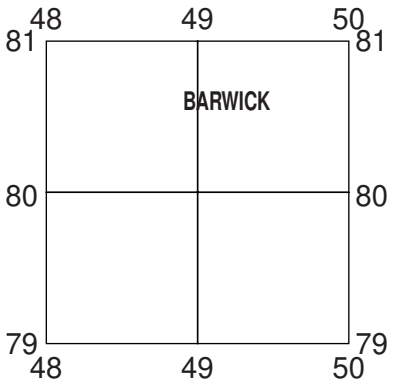

Fig. 2A

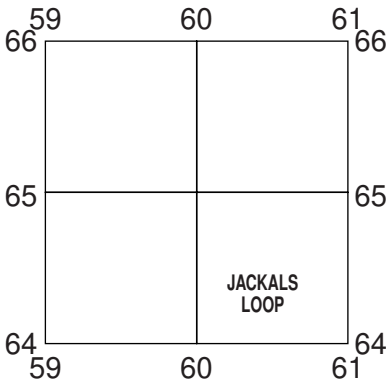

Fig. 2B

The table below compares the features of the two areas. Complete the table by putting ticks in the correct **five** boxes. Use only **one** tick for each row.

	Area in Fig. 2A (Barwick)	Area in Fig. 2B (Jackals Loop)	Both of these areas	Neither of these areas
Example: rivers			✓	
flat land				
steep land				
land over 1500 m				
bush				
tarred road				

[5]

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(c) Study Fig. 3, which shows an area drained by the Mukwadzi River in the west of the map.

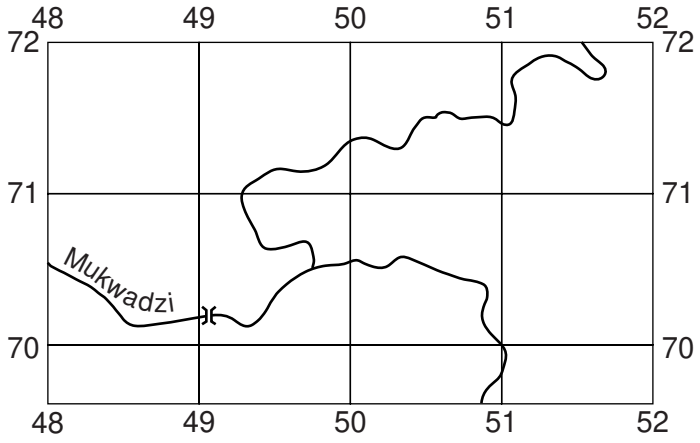

Fig. 3

(i) Describe the Mukwadzi River in the area shown on Fig. 3.

.....

.....

.....

.....

.....

.....

.....

.....[4]

(ii) Describe the width of the river's flood plain in the area shown on Fig. 3.

.....[1]

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(d) Look at the bridge over the Mukwadzi River (490701) shown on Fig. 3. A person travels from this bridge along the road to another bridge over the small river at Umvukwes View (508675).

(i) Measure the distance that the person travels. Give your answer in metres.

..... metres [1]

(ii) In which compass direction does the person travel?

..... [1]

(iii) Measure the bearing **from** the bridge over the Mukwadzi River **to** the other bridge.

..... degrees [1]

(e) Find the trigonometrical station at Gase hill in the east of the map extract. Give the six figure grid reference of the trigonometrical station.

..... [2]

[Total: 20 marks]

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2 Table 1 gives information about the settlement hierarchy in a rural area.

Table 1

Settlement	Population	Number			
		convenience stores	comparison stores	primary schools	secondary schools
A	9800	19	4	6	1
B	8100	13	6	5	1
C	5000	11	3	5	0
D	3800	6	4	2	0
E	2900	4	1	1	0
F	1800	6	3	2	0
G	1400	4	0	1	0
H	600	2	0	0	0
I	500	3	0	0	0
J	200	1	0	0	0

(a) (i) What is meant by the term *settlement hierarchy*?

.....

.....[1]

(ii) Why is settlement **A** highest in the hierarchy?

.....

.....[1]

(iii) What is unusual about the position of settlement **F** in the hierarchy?

.....

.....[1]

(b) (i) Using information from Table 1 **only**, which **one** of the four services is the highest order service?

.....[1]

(ii) Using information from Table 1, what is the minimum population needed for a settlement to have a primary school?

.....[1]

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(c) **(i)** Using information from Table 1, plot the position of settlement **C** on Fig. 4 below. [1]

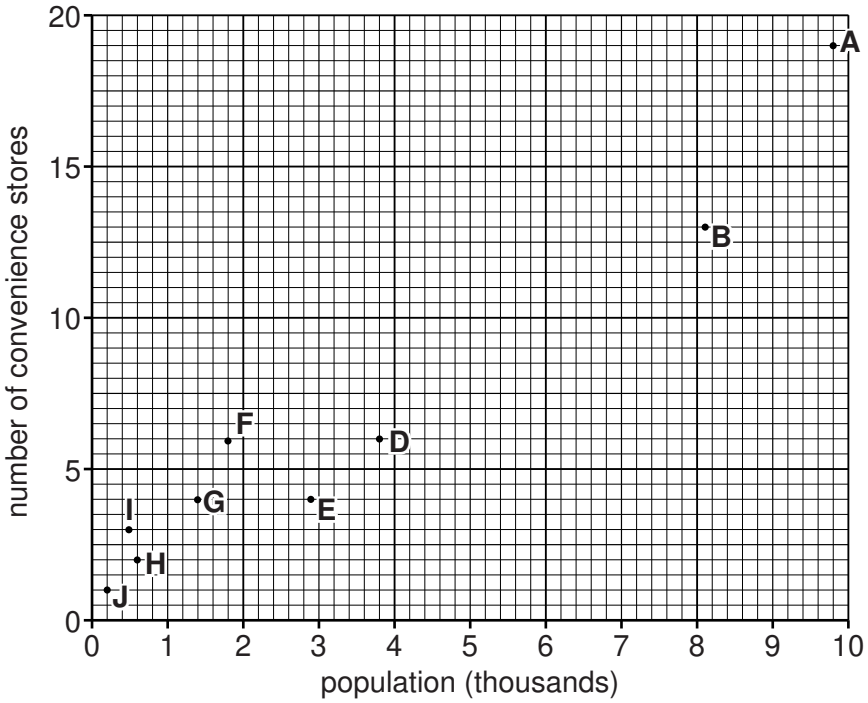

Fig. 4

(ii) Describe the relationship between population and the number of convenience stores shown on Fig. 4.

.....

.....[1]

(d) Using information from Table 1 and Fig. 4, how does the number of low order settlements differ from the number of higher order settlements?

.....

.....[1]

[Total: 8 marks]

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3 Photographs A and B (Insert) show the Ishim River at Astana in Kazakhstan at different times of the year.

(a) Using information from the photographs **only**, suggest how the flow of the river will vary in winter and summer.

Winter .....

.....

Summer .....

.....[2]

(b) Describe the features of the river and its channel shown in Photograph A.

.....

.....

.....

.....

.....

.....

.....

.....[3]

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(c) Photograph A shows that the right bank of the river has been built with stone or brick. Using Photograph A and your own knowledge, suggest why this has been done.

.....

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.....

.....

.....[3]

[Total: 8 marks]

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4 Study Figs 5 and 6, which give information about tropical storms.

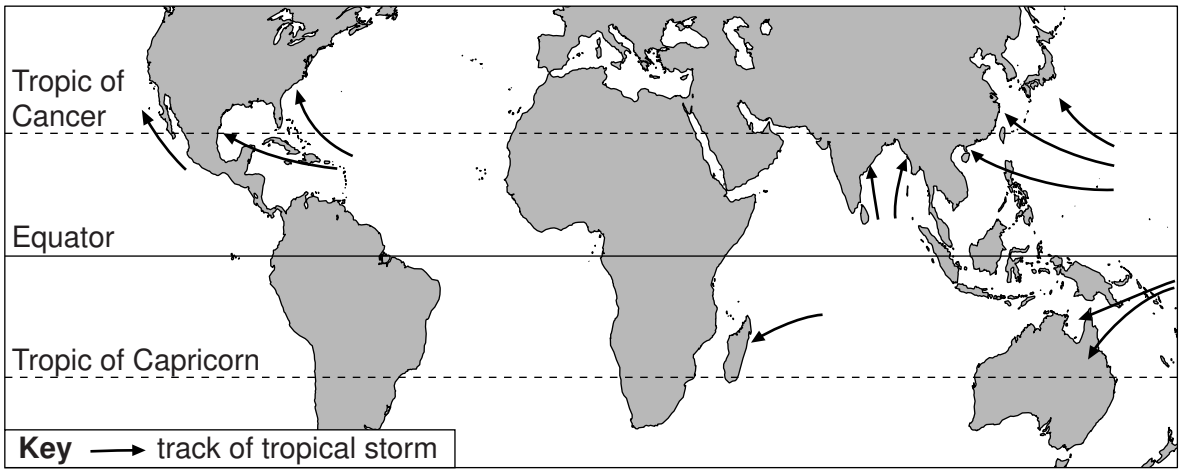
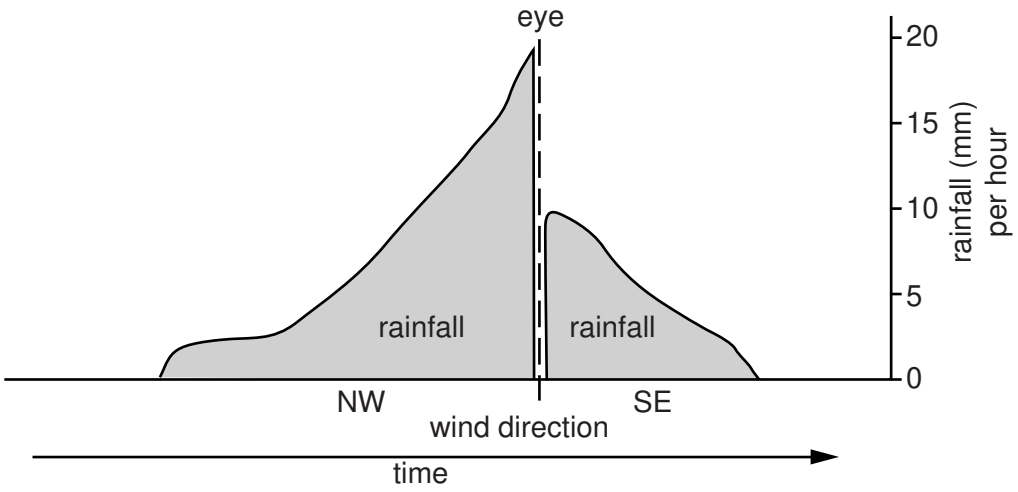


Fig. 5



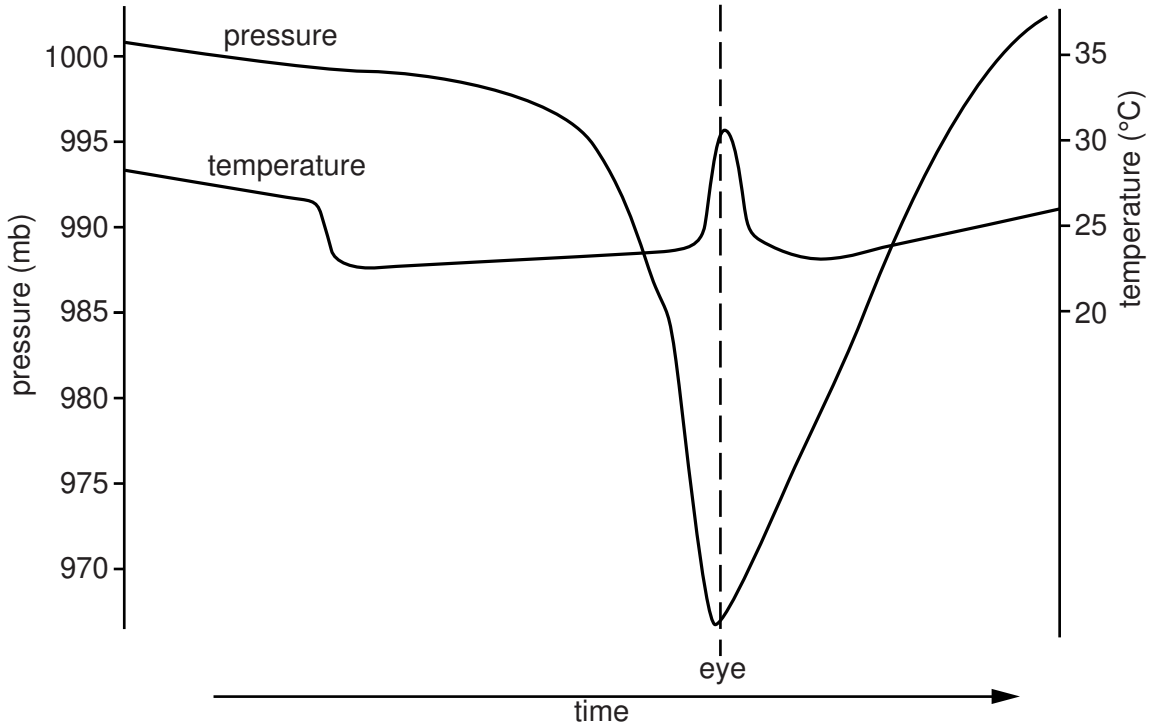


Fig. 6

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(a) Using Fig. 5, describe the general movement of tropical storms.

.....

.....

.....

.....

.....

.....[3]

(b) As a tropical storm passes, there is a time in the middle of the storm called the eye. Use Fig. 6 to describe how the following weather elements change as the eye of the storm passes.

Rainfall .....

.....

.....

Wind direction .....

.....

.....

Pressure .....

.....

.....

Temperature .....

.....

.....[5]

[Total: 8 marks]

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5 Fig. 7 shows the location of some of the main urban areas in the United Kingdom, and Figs 8 and 9 show the levels of the air pollutants nitrogen dioxide and sulfur dioxide.

Main urban areas

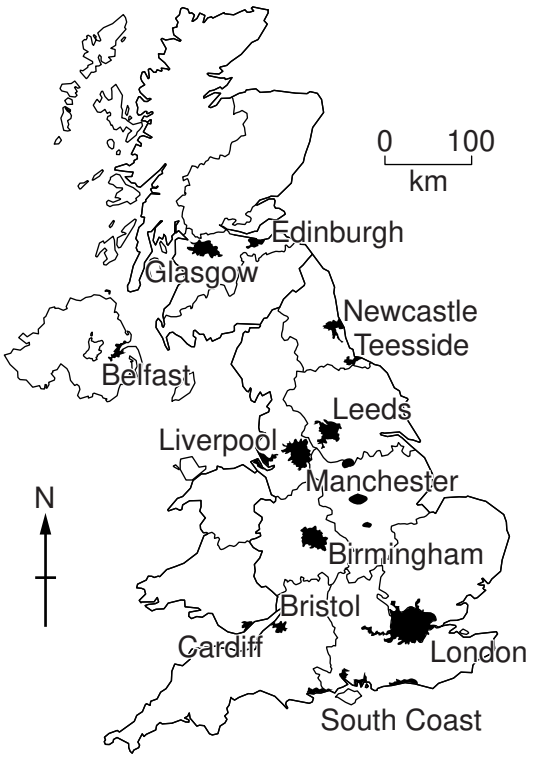

Fig. 7

Nitrogen dioxide pollution

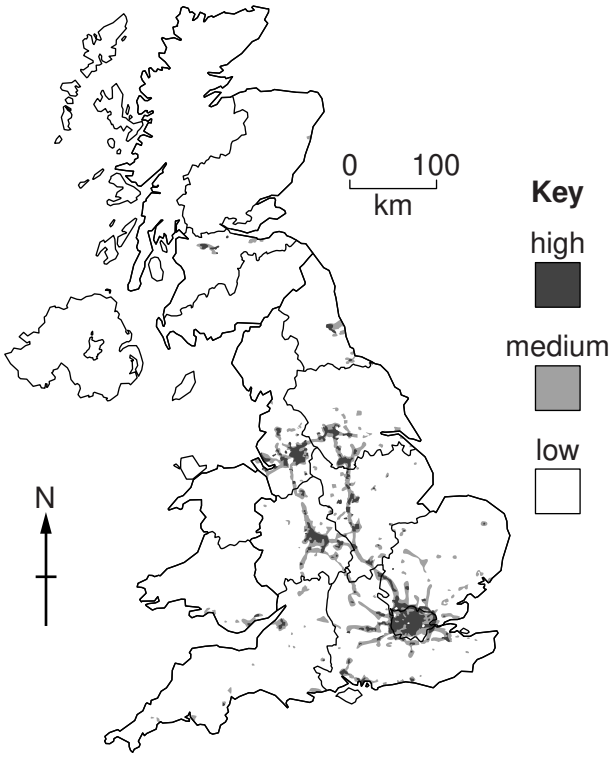

Fig. 8

Sulfur dioxide pollution

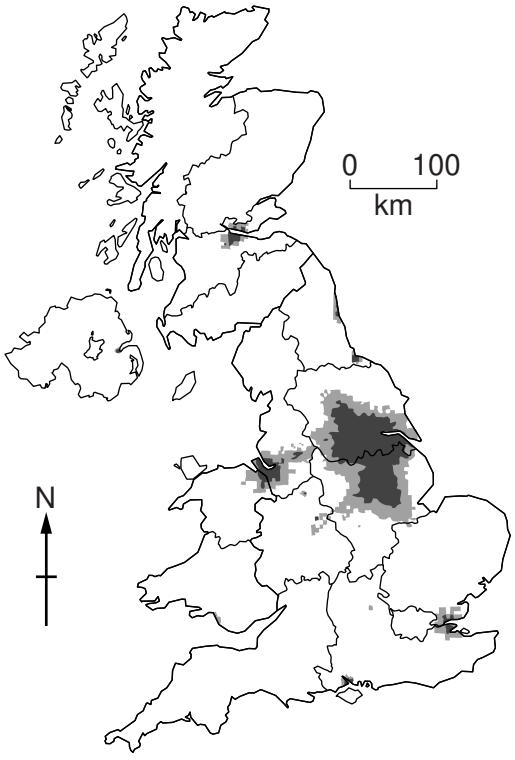

Fig. 9

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(a) Study Figs 7 and 8. Do you think that vehicles are likely to be a major source of nitrogen dioxide pollution in the United Kingdom? Give evidence from Figs 7 and 8 to support your answer.

.....

.....

.....

.....

.....

.....

.....

.....[4]

(b) **(i)** Describe the relationship between sulfur dioxide pollution shown on Fig. 9 and the distribution of urban areas shown on Fig. 7.

.....

.....

.....

.....

.....

.....[3]

(ii) Using your knowledge of pollution, suggest a likely source of the sulfur dioxide.

.....[1]

[Total: 8 marks]

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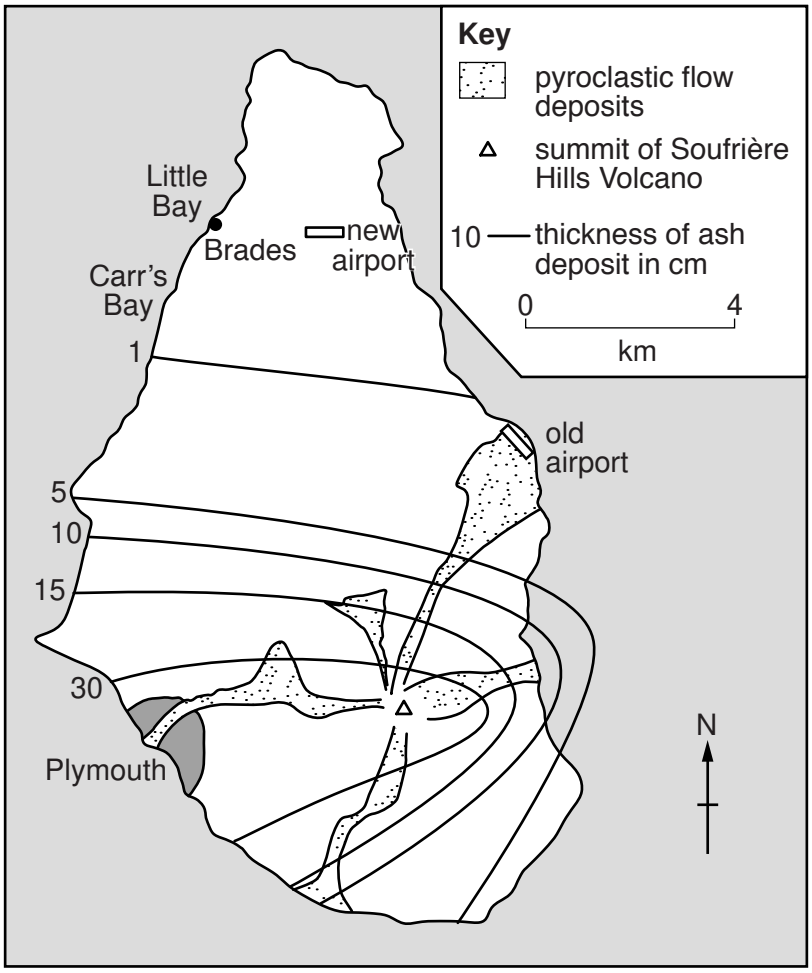
6 Fig. 10 gives information about volcanic activity on Montserrat.



A series of major eruptions occurred on Montserrat between 1995 and 1999. As a result southern Montserrat was evacuated and the capital, Plymouth, abandoned. Since then an exclusion zone surrounding the Soufrière Hills Volcano has been in place. Government offices and major commercial activity are now found in Brades and the Carr's Bay and Little Bay areas of north-west Montserrat. Montserrat's tourist industry is now undergoing a revival, with the volcano representing one of the island's main attractions. Montserrat offers a very rare opportunity to witness an active volcano from a safe distance. The exclusion zone covers the south-eastern area of the island, as well as extending four kilometres off-shore along the eastern coast. There are various points where it is possible to view the volcano and the destruction it has brought to the island.

Fig. 10

(a) Using information from Fig. 10 **only**, explain each of the following:

(i) why the decision was taken to evacuate Plymouth and make it part of the exclusion zone;

.....

.....

.....

.....[2]

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(ii) why hotel owners might think that the volcano brought both advantages and disadvantages;

.....

.....

.....

.....[2]

(iii) why people in the north of the island might think that the volcano has benefitted them.

.....

.....

.....

.....[2]

(b) Fig. 11 shows the location of Montserrat.

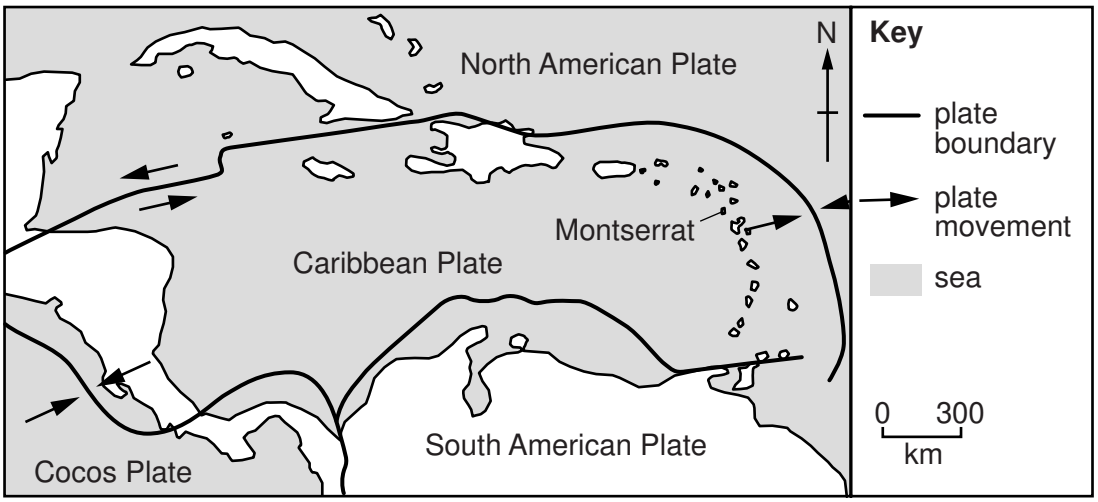

Fig. 11

Using information from Fig. 11 and your own knowledge, explain why Montserrat is a volcanic island.

.....

.....

.....

.....[2]

[Total: 8 marks]

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