UNIVERSITY OF CAMBRIDGE INTERNATIONAL EX
International General Certificate of Secondary Educati

CANDIDATE NAME

CENTRE NUMBER | | | | | |

CAN NUMBER

2299899495

GEOGRAPHY **0460/42**

Paper 4 Alternative to Coursework **May/June 2013**

1 hour 30 minutes

Candidates answer on the Question Paper.

Additional Materials: Calculator
Ruler
Protractor

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 a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.
DO **NOT** WRITE ON ANY BARCODES.

Answer **all** questions.

The Insert contains Figs 1, 2, 3, 4 and 6 and Table 1 for Question 1, and Photographs A and B, Fig. 8 and Tables 4 and 5 for Question 2.
The Insert is **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.

For Examiner's Use	
Q1	
Q2	
Total	

This document consists of **11** printed pages, **1** blank page and **1** Insert.

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1 Some students decided to find out more about a river flood which
First they looked up some data about the rainfall for the month in

(a) Fig. 1 (Insert) shows the daily rainfall in October 2000.

(i) On which **four** dates did most rain fall?

.....

(ii) What instrument would be used to measure rainfall?

.....[1]

(iii) One student made entries in a diary on the days leading up to the river flood.

This is shown in Fig. 2 (Insert).

Explain why the river flooding occurred later than the heaviest rainfall.

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.....[2]

(b) The students decided to investigate the following hypotheses:

Hypothesis 1: *The main use of buildings on the floodplain in 2000 was manufacturing.*

Hypothesis 2: *Businesses located on the floodplain were badly affected by flooding.*

To investigate **Hypothesis 1** the students searched the internet for information.

(i) Which **one** of the following is the correct description for this type of information used in fieldwork? Circle your answer below. [1]

Primary Secondary Tertiary

(ii) The students found two maps of the area, one from 1957 and the other from 2001. These maps are shown in Fig. 3 (Insert).

Identify **two** changes that occurred between 1957 and 2001 in the area shown by the maps.

1 .....

.....

2 .....

.....[2]

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(c) The students found another map which showed the area (floodplain) in 2000. This is shown in Fig. 4 (Insert).

(i) Suggest **two** reasons why many buildings have been bui

1 .....

.....

2 .....

.....[2]

(ii) Compare the distribution of the residential and manufacturing buildings in the area affected by flooding shown on Fig. 4.

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.....[2]

(iii) Table 1 (Insert) shows the different uses of the buildings which were located on the floodplain in 2000. Use the data in Table 1 to complete the pie graph, Fig. 5 below. [2]

Uses of buildings on the floodplain in 2000

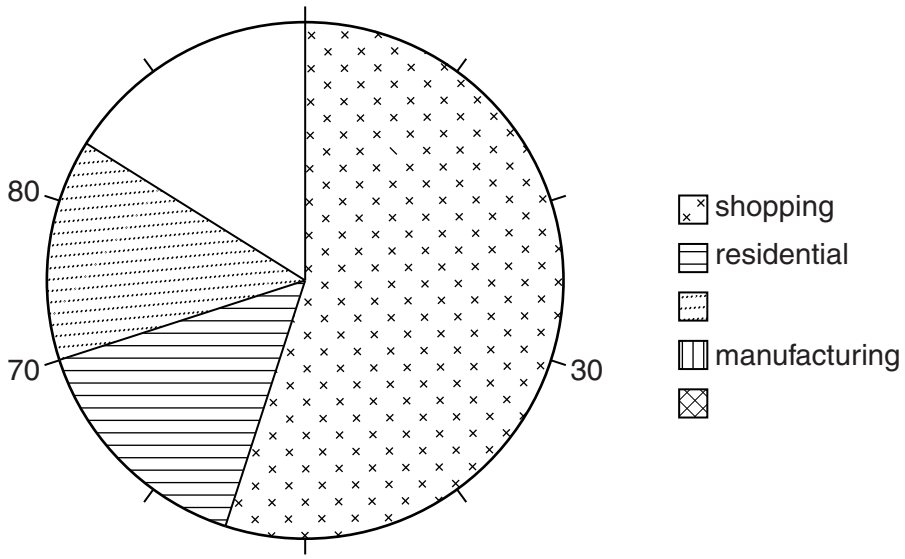


Fig. 5

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(iv) What conclusion would the students make about **Hypot**
buildings on the floodplain in 2000 was manufacturing?

Support your decision with evidence from Table 1 and Fi

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.....[3]

(d) To investigate **Hypothesis 2:** *Businesses located on the floodplain were badly affected by flooding*, the students used a questionnaire with businesses which had been flooded.

The questionnaire is shown in Fig. 6 (Insert).

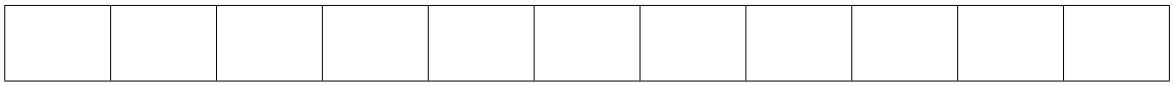
(i) The results of Question 1 from the questionnaire are shown in Table 2 below.

Table 2

Answers to Question 1:
Were you given any warning that the river might flood your business?

Answer	Number of businesses
Yes	15
No	95

Plot this information on the divided bar graph below. Include a scale on your graph.



[2]

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(ii) The results of Question 2 in the questionnaire are show

Table 3

Answers to Question 2:
How was your business affected by river flooding in O

Effects of the river flood	r
Loss of customers	
Temporary closure of the building and re-location	27
Expense of repairing the building	99
Destruction of stock and equipment	64
Increased cost of insurance	110

Use this information to complete the graph, Fig. 7 below. [1]

Effects of the river flood in October 2000

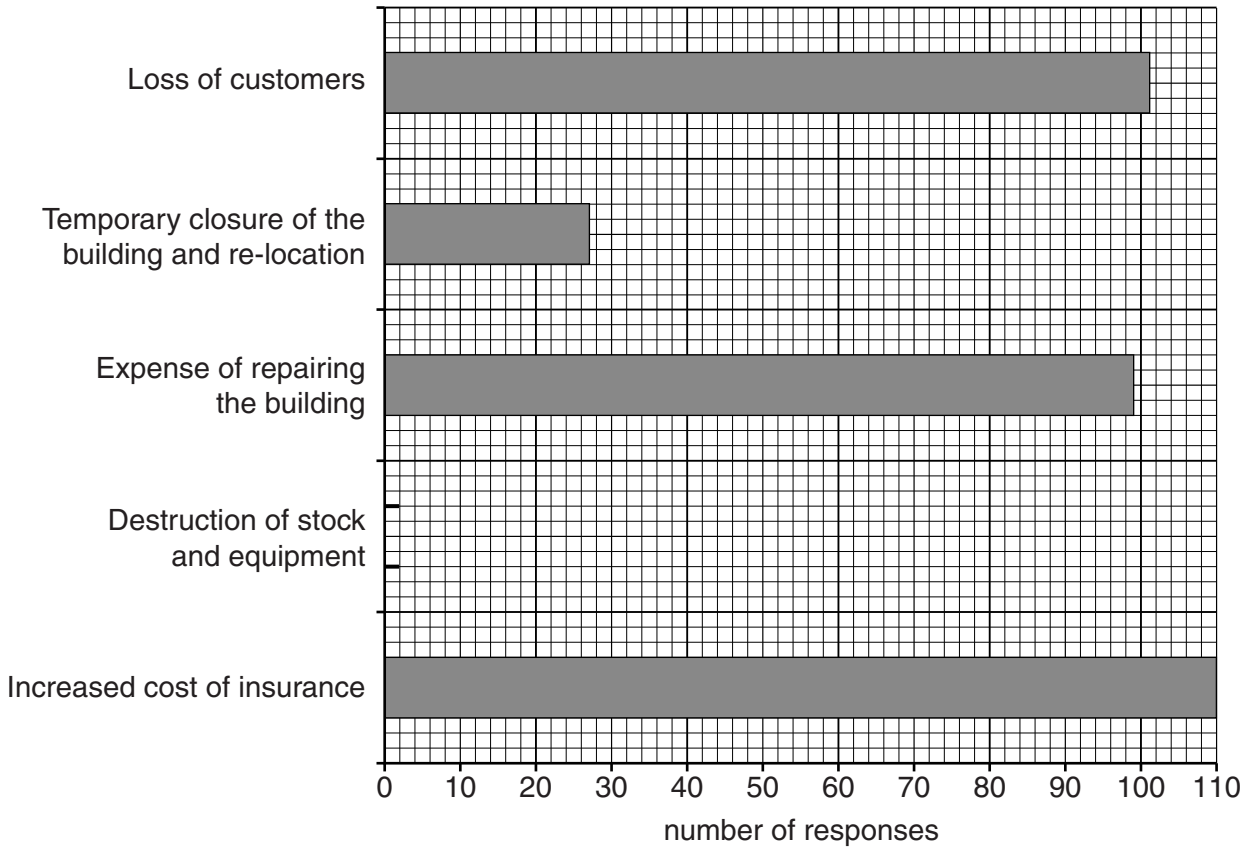


Fig. 7

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(iii) The students decided that **Hypothesis 2:** *Businesses were badly affected by flooding* was correct. Use the res 2 in the questionnaire to support their conclusion.

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.....[3]

(e) Table 1 (Insert) shows that only 20 residential properties were affected by flooding. In some countries, however, many thousands of people live on river floodplains.

Give **two** opportunities and **two** problems of living on a floodplain.

Opportunities

1 .....

.....

2 .....

.....

Problems

1 .....

.....

2 .....

.....[4]

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(f) What can be done to prevent further flooding on a river flood

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.....

.....[4]

[Total: 30 marks]

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2 Students decided to investigate the effects of tourism in their loc they chose was a hilltop with a tower. This location is shown in Fig shown in Photograph A (Insert).

(a) The hilltop and tower is a popular tourist site.

(i) Suggest why this location is a popular tourist site.

.....

(ii) Which **one** of the following buildings is most likely to be l site? Circle your answer below. [1]

hospital factory cafe shopping mall school

(b) The students decided to investigate the following hypotheses:

Hypothesis 1: *The number of people walking on the paths will increase towards the tower.*

Hypothesis 2: *Footpath erosion caused by trampling will increase towards the tower.*

To investigate **Hypothesis 1** the students did a pedestrian count at different points along two of the paths which lead to the tower.

(i) Describe how they would organise and carry out the pedestrian count.

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.....[4]

(ii) The students did the pedestrian count on two different days. Their results are shown in Table 4 (Insert).

Suggest **two** reasons why the students counted more people on the Sunday.

1 .....

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2 .....

.....[2]

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(c) The students plotted the results of their pedestrian count for in Fig. 9 below.

Results of pedestrian count (Sunday)

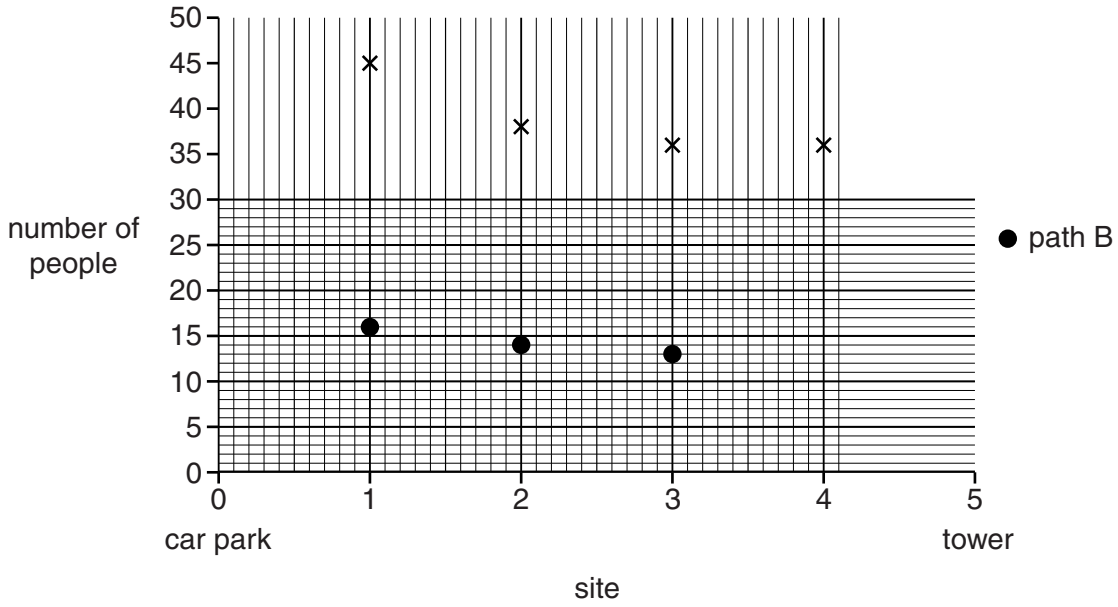


Fig. 9

(i) Complete Fig. 9 by plotting the results for sites 4 and 5 on path B. [2]

(ii) The students partially agreed with **Hypothesis 1:** *The number of people walking on the paths will increase towards the tower.* Support their decision with evidence from Fig. 9 **only**.

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.....[3]

(iii) Suggest **two** reasons for the results shown in Fig. 9.

1 .....

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2 .....

.....[2]

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(d) To investigate **Hypothesis 2:** *Footpath erosion caused b towards the tower*, the students estimated the percentage of soil at each site. They did this by using a quadrat, shown in P

(i) Describe how the students would have carried out this in

.....

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.....[3]

(ii) The students used their results shown in Table 5 (Insert) to draw graphs to show the percentage of vegetation cover and bare soil at each sampling site. These are shown in Fig. 10 below.

Use the results to complete Fig. 10 for sites 4 and 5 on path B.

Vegetation cover and bare soil

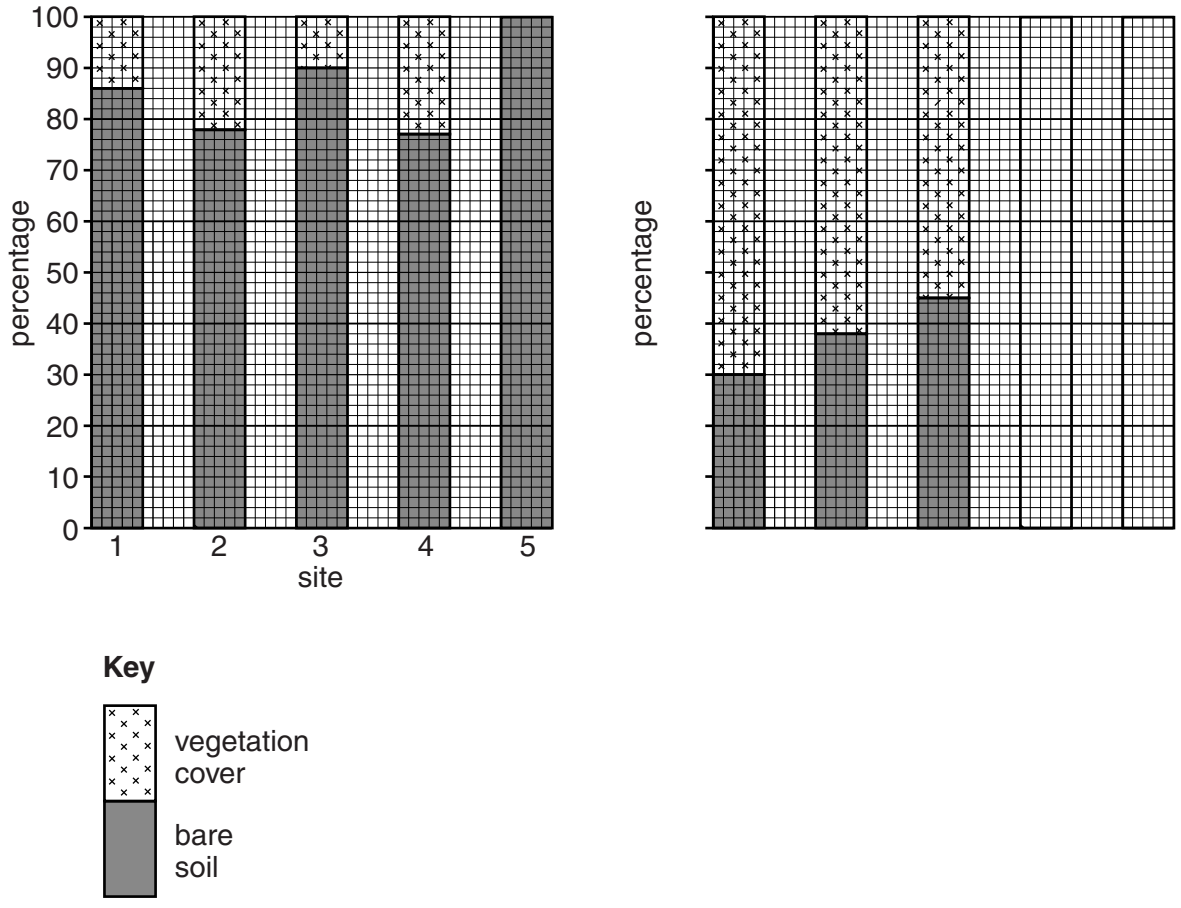


Fig. 10

[2]

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(iii) What conclusion would the students make about **Hypot** *caused by trampling will increase towards the tower?*

Consider your conclusion for each path separately and data from Fig. 10 and Table 5.

Path A .....

.....

.....

.....

Path B .....

.....

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.....[4]

(e) Suggest **three** ways that the students could have improved their investigation into both hypotheses. Look again at Fig. 8 (Insert) to help you to answer.

1 .....

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2 .....

.....

3 .....

.....[3]

(f) To extend their fieldwork the students decided to look for evidence of management strategies which were being used to protect the area from the impact of tourism.

Suggest **three** pieces of evidence that they might have found.

1 .....

.....

2 .....

.....

3 .....

.....[3]

[Total: 30 marks]

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Copyright Acknowledgements:

Question 1 Fig. 4 © www.geography.org.uk/download/GA_Luckfield_data_flood_map; 2000.
Question 2 Photograph A © www.stonemole.wordpress.org; 21 February 2009.

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