



2018 MOCK COMPONENT 3

APPLIED FIELDWORK ENQUIRY

1 hour 30 minutes

Name

For examiner's use only		SPaG
Part A	18	0
Part B	18	0
Part C	36	4
Total Marks	72	4

ADDITIONAL MATERIALS

Resource folder. You will also require a calculator and a ruler.

INSTRUCTIONS TO CANDIDATES

Answer **all** of the questions in this examination paper.

Use black ink or black ball-point pen.

Write your answers in the spaces provided in this booklet.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets [] at the end of each question or part-question.

The Assessment Objective (AO) is given next to the mark for each question.

AO1 assesses knowledge

AO2 assesses understanding

AO3 assesses application of knowledge and understanding

AO4 assesses skills

You are reminded that assessment will take into account your ability to spell, punctuate and use grammar and specialist terms accurately in your answer to Part C, Question 3 (f).

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Part A: Investigating the use of transects in fieldwork

Answer all parts of this question. You should use your experience of using **transects** in fieldwork to support your answers.

1. (a) Study the photograph below.

A view across central London



Tick (✓) **two** hypotheses that could be investigated by **using a transect** in the environment shown in this photograph. [2] AO3

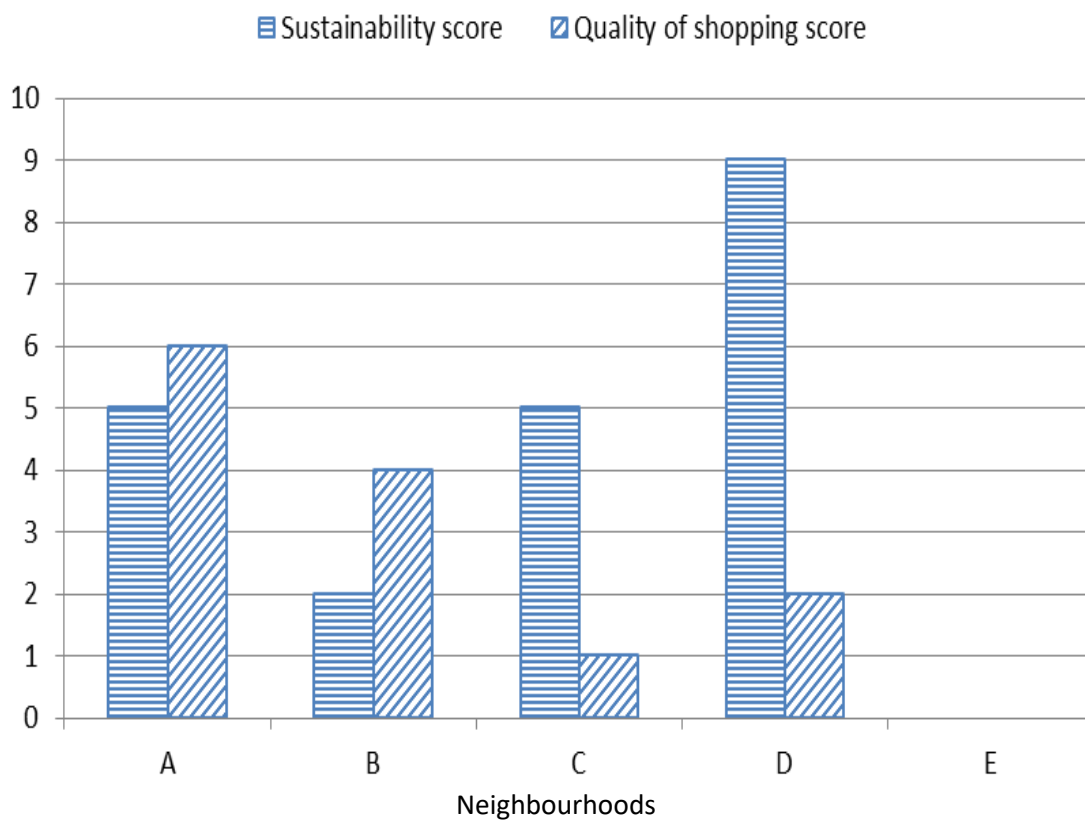
	Tick (✓) two
The risk of flooding decreases with distance from the river.	
Residents in central London are satisfied with access to leisure services.	
Flows of traffic in central London are greater between 8am and 9am than between 11am and midday.	
Buildings increase in height as you get closer to the city centre.	
Primary schools are distributed in a regular pattern across London.	

(b) Study Table 1 on page 2 of the Resource Folder.

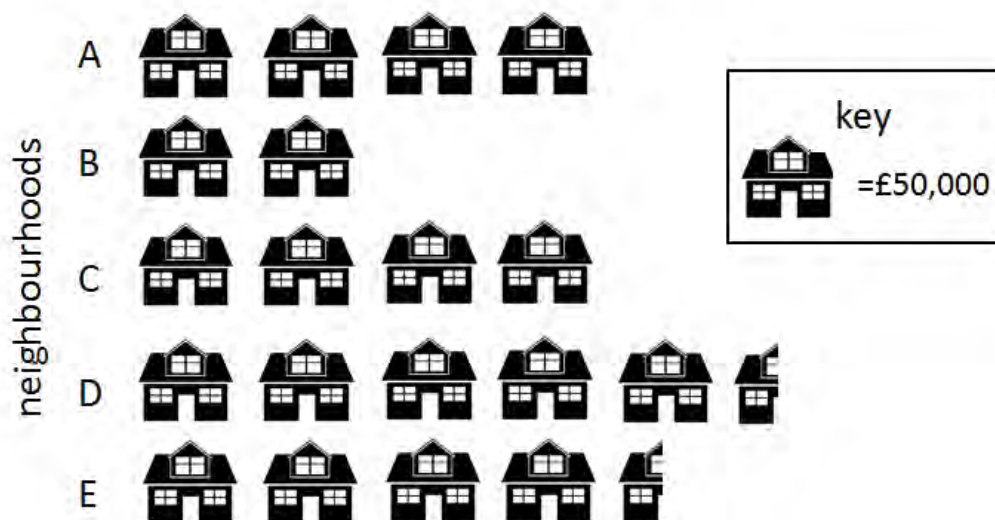
- (i) Complete the graph below. Show the sustainability score and quality of shopping score for **neighbourhood E**.

You **must** use the same style of graph used for neighbourhoods A to D.

[2] AO4



(ii) Study the pictogram below. It represents the average price of a 3 bedroom semi-detached house in each neighbourhood along the transect shown in Map 2 on page 2 of the Resource Folder.



Describe the pattern of house prices shown in this pictogram. Use the key to support your answer. [4] AO4

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(iii) Using evidence from this transect, the students reached some conclusions about the relationship (the link) between sustainable neighbourhoods, quality of shopping services and house prices. Tick (✓) **two** accurate statements in the table. [2] AO3

There is evidence that:	Tick (✓)
1. the most sustainable neighbourhoods are always found on the edge of UK cities.	
2. there is a strong link between neighbourhoods considered to be sustainable and those with good shopping services.	
3. there is a strong link between neighbourhoods which are considered to be sustainable and those with higher house prices.	
4. people are prepared to pay higher prices for houses, even if an area has poor shopping services.	
5. neighbourhoods which have no direct access to public transport have lower house prices.	

(c) Other students repeated this enquiry using **two** transects. One transect went west from the CBD on Map 1 in the Resource Folder. The second transect went north from the CBD.

Identify **one** strength and **one** possible weakness of this sampling strategy. [4] AO3

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(d) This question is about your own experience of using transects in fieldwork.

Suggest **two** ways that you could make your use of transects more reliable. [4] AO3

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End of Part A

Part B: Investigating spheres of influence

Answer all parts of this question. You should use your experience of investigating **spheres of influence** in fieldwork to support your answers.

2. (a) Study the photograph below. A group of students did their fieldwork in this location. Their aims were to investigate:
- the impacts of the road on the local area;
 - how far these impacts spread from the road.

A busy road in the Midlands



Describe **one** way that data could be collected to investigate the sphere of influence of this road. Your chosen method must take into account the students' aims. [4] AO3

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(b) Another group of students investigated the effect of new coastal defences at Borth, a small seaside town in West Wales.

Study the information on **page 3** of the **Resource Folder**.

The students used a bi-polar survey to investigate how people felt about living close to the sea. They wanted to know if the coastline had mainly positive or negative impacts on people who live nearby. Their draft survey is shown below.

Draft bi-polar survey

		+2	+1	0	-1	-2	
A	A view of the sea is essential.						A view of the sea is unnecessary.
B	The new sea defences are attractive.						The new sea defences are ugly.
C							
D							

Add **two** more pairs of bi-polar statements to rows C and D in the table that could be used to investigate the impacts of the coastline on people who live nearby. [2] AO4

(c) (i) The students wanted to question 100 residents. They used the National Census to find out the age structure of Borth. The results are shown in the table below.

Age Structure of Borth

Age of residents	Number of residents in each age group
Over 65	460
30-64	1000
Under 30	610
Total population	2070

The students used a stratified sampling strategy. They based this sample on the age structure of Borth.

In a total sample size of 100, calculate how many people should be questioned in each of the three age groups using a stratified sample. Put your answers in the table below. [4] AO4

Age of residents	Number in the sample
Over 65	
30-64	
Under 30	
Total	100

Show how you calculated the sample size for one age group in the space below.

(ii) This question is about **your own experience** of using secondary data to support your fieldwork. How useful is secondary data when investigating spheres of influence? [4] AO3

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(d) The students predicted that the coastal defences would have a positive sphere of influence for home owners. Their hypothesis was:

- House prices are higher closest to the sea.

They also realised that some houses in Borth are at sea level while others are above sea level. So they created another hypothesis:

- House prices are higher for homes that are above sea level.

Study the information on **page 4** of the **Resource Folder**.

What conclusion do you reach when you consider the evidence in these two graphs? [4] AO3

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End of Part B

Part C: The wider UK dimension

Answer **all** parts of this question. You should use your understanding of UK geography to support your answers.

3. (a) London is the UK's most important global city. Tick **two** reasons why cities such as London are described as global cities. [2] AO2

London has ...	Tick (✓) two
a much larger population than any other UK city.	
attracted migrants from many countries over the last 100 years so has a multicultural population.	
a lot of jobs so attracts commuters from all over the UK.	
some of the UK's busiest roads.	
offices of many banks and other trans national companies.	

(b) Heathrow is the UK's largest airport. It is located close to London.

Study **Map 6 on page 5** of the Resource Folder. Use this map to tick (✓) **two** true statements in the list below. [2] AO4

	Tick (✓) two
Heathrow is located outside the M25 and close to the end of the M3 and M4	
Heathrow is located inside the M25 and close to the end of the M3 and M4	
Heathrow is west of London and north-west of Birmingham	
There are 5 airports within 100km of the City of London	
Heathrow is about 30km from the City of London and 170km from Birmingham	

(c) London is connected to other parts of the UK and the rest of the world by Heathrow airport. A lot of imports and exports go through Heathrow.

Study **Table 7 on page 6** of the Resource Folder.

(i) Calculate the median value for imports/exports for these 10 airports. Show you working in the space below. [2] AO4

(ii) Give **one** reason why median is a better way than mean to express the average for this table of data. [2] AO4

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(iii) Study **Graph 8 and Graph 9 on page 6** of the Resource Folder.

Which of these graphs is the most appropriate way to represent the data in Table 7?

Explain why you have chosen this graph.

[4] AO4

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(iv) Give **one** reason why exports are important to business in the UK.

[2] AO2

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(v) Apart from imports and exports, give **one** other reason why it is important for global cities to have good transport links like airports.

[2] AO2

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(d) The UK Government thinks that Heathrow should expand. This would mean an extra runway and new airport buildings would be built. More flights would be able to take off and land. Explain why the expansion of Heathrow is likely to have positive effects on people and the economy in the South East of England. [6] AO2

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(e) Many people object to the expansion of Heathrow. They say that the airport has negative impacts for local people. One of these impacts is noise.

Study **Map 10 on page 7** of the Resource Folder. It shows the sphere of influence of noise nuisance from the airport. The size and shape of this noise nuisance has changed as aircraft engines have become quieter.

Describe how the size and shape of noise nuisance from Heathrow changed between 1974 and 2014. [4] AO4

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