Surname	Centre Number	Candidate Number
Other Names		0

GCSE

S19-C112U30-1

C112U30-1

THURSDAY, 13 JUNE 2019 – MORNING

GEOGRAPHY B – Component 3

Applied Fieldwork Enquiry

1 hour 30 minutes

For Examiner's use only		
	Maximum Mark	**Awarded Mark**
Part A	**18**	
Part B	**18**	
Part C	**36**	
SPaG	**4**	
Total Marks	**76**	

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01

ADDITIONAL MATERIALS

Resource folder. You may 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. Do not use gel pen. Do not use correction fluid.

Write your name, centre number and candidate number in the spaces at the top of this page.

Write your answers in the spaces provided in this booklet.

If additional space is required you should use the lined page(s) at the end of this booklet. The question number(s) should be clearly shown.

INFORMATION FOR CANDIDATES

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

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 *(e)*.

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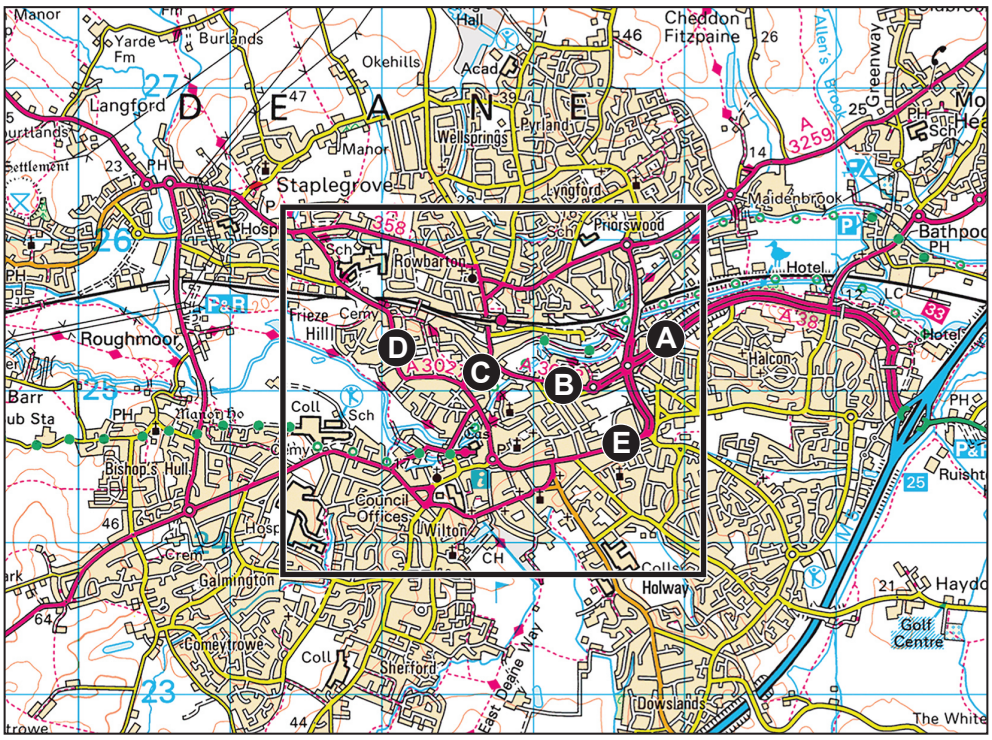
Part A: Investigating flows in fieldwork

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

1. *(a)* Study **Map 1.1** below. It shows survey points where students collected data on traffic flows in Taunton, a town in Somerset.

Map 1.1 - Traffic survey points in Taunton



= area of town centre

The students collected data on the number and types of traffic on a Monday morning.

(i) Suggest **two** ways the students could improve their data collection of traffic flows. [2]

Way 1 .....

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Way 2 .....

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Some results for one traffic survey point are shown in **Table 1.2** below.

Table 1.2 - Types of traffic at one survey point

Type of traffic	**Vehicle count at 7.30 am** (counted for one minute)	**Vehicle count at 8.30 am** (counted for one minute)
Motorcycles	2	3
Cars	10	25
Buses / Coaches	5	9
Vans	8	5

(ii) Calculate the percentage increase in the number of **cars** between the 7.30 am count and the 8.30 am count. Show your working. [2]

Answer ..... %

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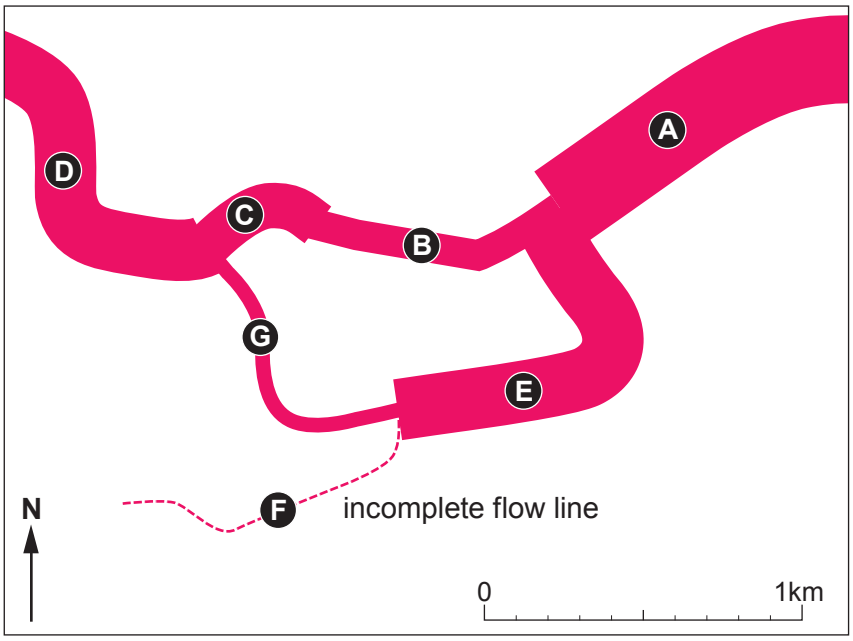
(b) One student presented their traffic count results on the flow line **Map 1.3** below.

Map 1.3 - Flow line map showing traffic flows in Taunton



Vehicle count per minute	Flowline width (mm)
41+	10
31-40	8
21-30	6
11-20	4
0-10	2

(i) Study **Map 1.3**. What is the vehicle count for survey **point B**? [1]

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(ii) The vehicle count at survey **point F** was 37 vehicles per minute. How wide should the flow line be for survey **point F**? Tick (✓) **one** box only. [1]

Flowline width (mm)	Tick (✓) **one**
4	
6	
8	

(iii) Suggest **two** ways that **Map 1.3** could be improved. [2]

Way 1 .....

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Way 2 .....

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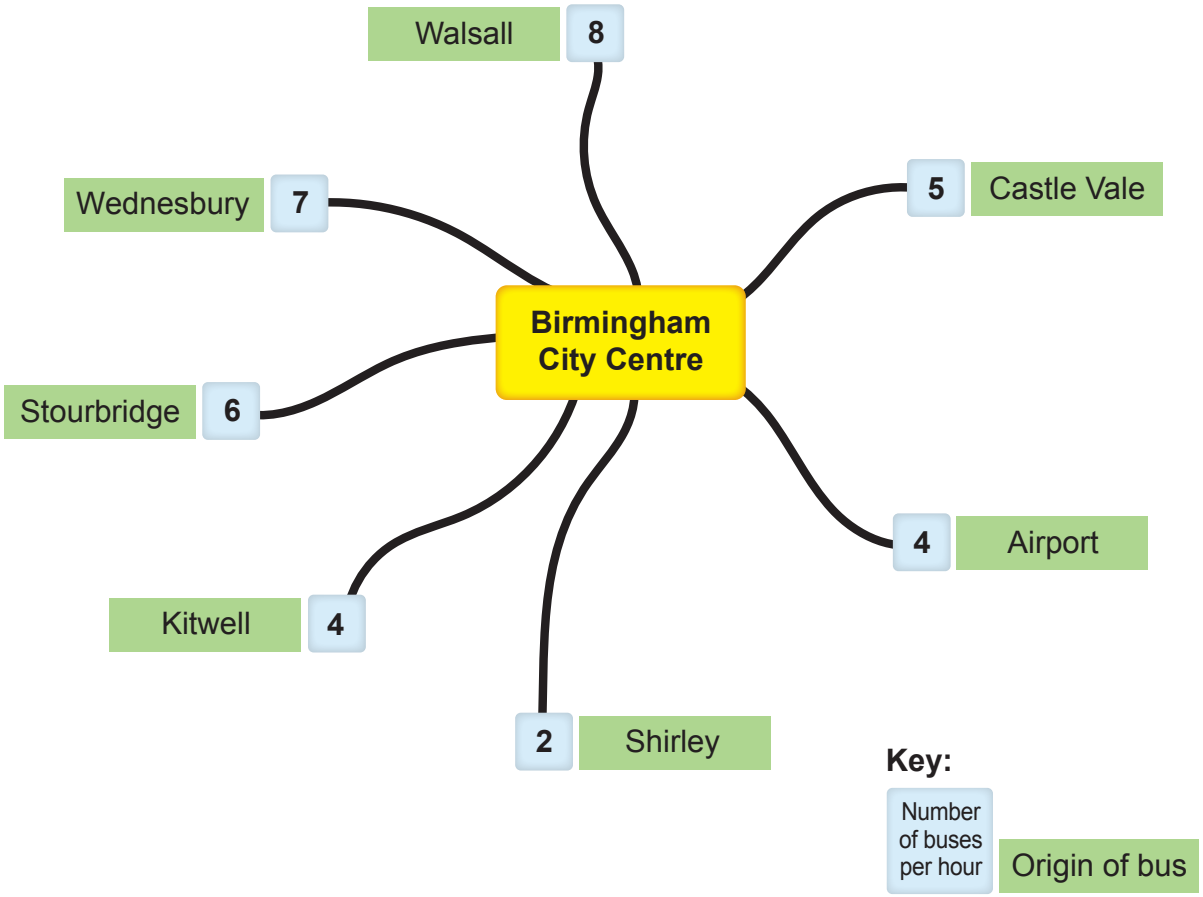
(c) Students in another school investigated commuter flows into the city of Birmingham. They used **secondary data** about bus routes. This information is shown on **Map 1.4** below.

Map 1.4 - All bus routes into Birmingham city centre during Monday to Friday before 9.30 am



What are the limitations of this **secondary data** in understanding commuter flows into Birmingham? [4]

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(d) This question is about your **own** fieldwork experience of collecting data about **geographical flows**.

Evaluate the strengths and weaknesses of **one** method you used to present your data on geographical flows. [6]

The data presentation method I used was: .....

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End of Part A

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Part B: Investigating mitigating risk in fieldwork

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

2. *(a)* A group of students decided to investigate mitigating risk of flooding in Bewdley, a small town on the River Severn. Study **Photograph 2.1** below.

Photograph 2.1 - A flood event in Bewdley

(i) **Tick (✓) two** enquiry questions that could be chosen in an investigation of **mitigating risk** in **this** location. [2]

Enquiry question	Tick (✓) two
How effective are the flood defences at protecting the houses?	
To what extent did people feel prepared to deal with the flood event?	
To what extent does the geology contribute to a flood event?	
Is hard engineering more effective than soft engineering in coastal locations?	

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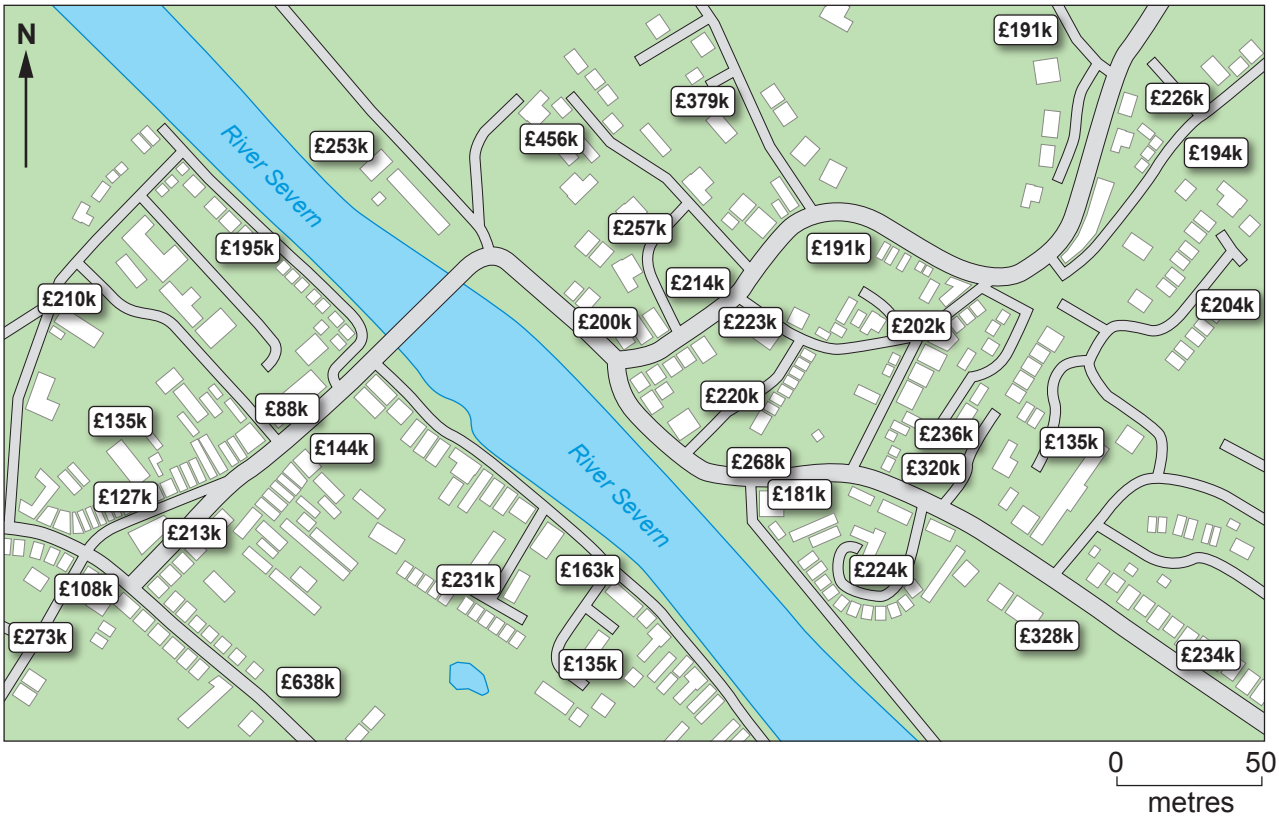
The students used a website to get data of the house prices in Bewdley. The information is shown on **Map 2.2** below.

Map 2.2 - Average house prices in Bewdley



(ii) Suggest **two** reasons why the river can affect house prices. [4]

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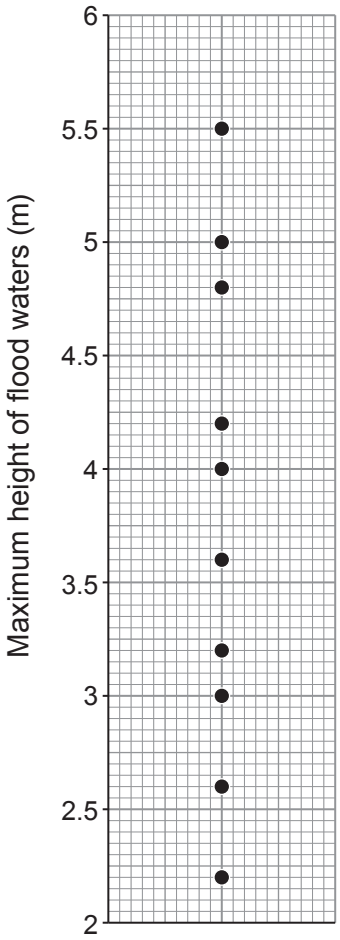
(b) Secondary data was used to find out the height of flood water in the last 11 flood events. The data is shown in **Table 2.3** and **Graph 2.4** below.

Table 2.3

Year of flood event in Bewdley	Maximum height of flood waters (m)
1995	3
1998	4.2
2000	5.5
2001	2.2
2002	3.6
2007	4.5
2010	3.2
2011	4.8
2013	4
2014	5
2015	2.6

Graph 2.4 - Graph to show maximum height of flood waters



(i) Complete **Graph 2.4** by plotting the result for 2007. [1]

(ii) **Tick (✓)** a box below for the **one** student who has the correct values for the range and median. [2]

	Range	Median	Tick (✓) one box
Student A	3.3	5	
Student B	3.3	4	
Student C	4.3	4	
Student D	4.3	5	

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(iii) Calculate the inter-quartile range. Show your working. [2]

Inter-quartile range .....

(iv) Give **one** reason why you might use the inter-quartile range rather than the range when assessing flood risk. [1]

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(c) This question is about your **own** experience of investigating **mitigating risk** in fieldwork.

Aim of your investigation: .....

Evaluate the reliability of your conclusions. *You should support your answer by referring to actual examples from your own fieldwork.* [6]

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End of Part B

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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)* The UK experienced many floods in 2015. Study **Maps 3.1** on **page 2** of the **Resource Folder**. The maps show river flow rates in the UK in November and December of 2015.

(i) **Tick (✓) three** correct statements about **Maps 3.1** in the box below. [3]

	Tick (✓) three
The number of rivers with exceptionally high flow increases between November 2015 and December 2015.	
In December 2015 there were more than 10 rivers with record high flows.	
Most rivers in Wales in November 2015 had a below normal flow.	
The rivers in northern Scotland have the highest flow rates in November 2015.	
All rivers in eastern England have lower flow rates than western England.	
The rivers with a normal range of flow are located mainly in southern England.	

(ii) The UK experiences frequent flooding. Give **one** reason why parts of the UK are at risk of river flooding. [2]

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(b) Land in the UK can be categorised into different uses as shown in **Table 3.2** below.

Table 3.2 - Land use in the UK

Land Use	Area (Thousand hectares)	Percentage
Agricultural	16000	64
Forestry	3000	12
Urban		22
Water	500	2

(i) Complete **Table 3.2** by calculating the area (thousand hectares) of urban land use in the UK. Show your working. [2]

Answer ..... thousand hectares

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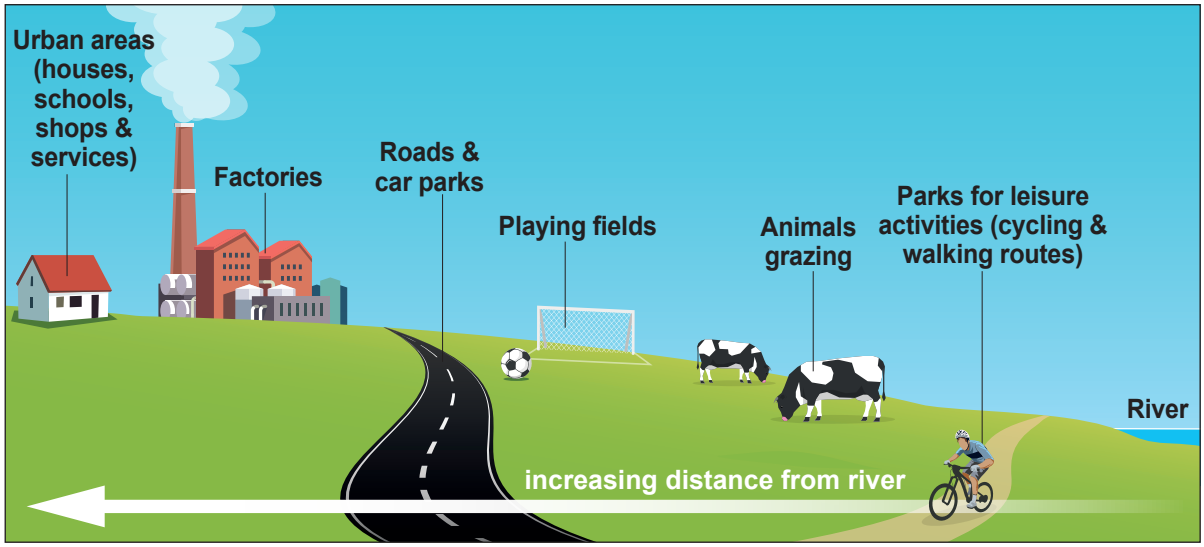
Study **Diagram 3.3** below. The amount of urban land in the UK is increasing. This creates pressure to use floodplains.

Diagram 3.3 - Land use zoning on a floodplain



(ii) Give **two** reasons why land use zoning on floodplains is used to reduce flood risk. [4]

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(c) Keswick in the north of England is an area at high risk of flooding.

Study **Photograph 3.4** below which shows a flood management strategy in Keswick.

Photograph 3.4 - An example of flood defences on the River Derwent in Keswick

(i) Explain why the choice of different flood management strategies, like the one in Keswick, could cause conflicting views between groups of people? [6]

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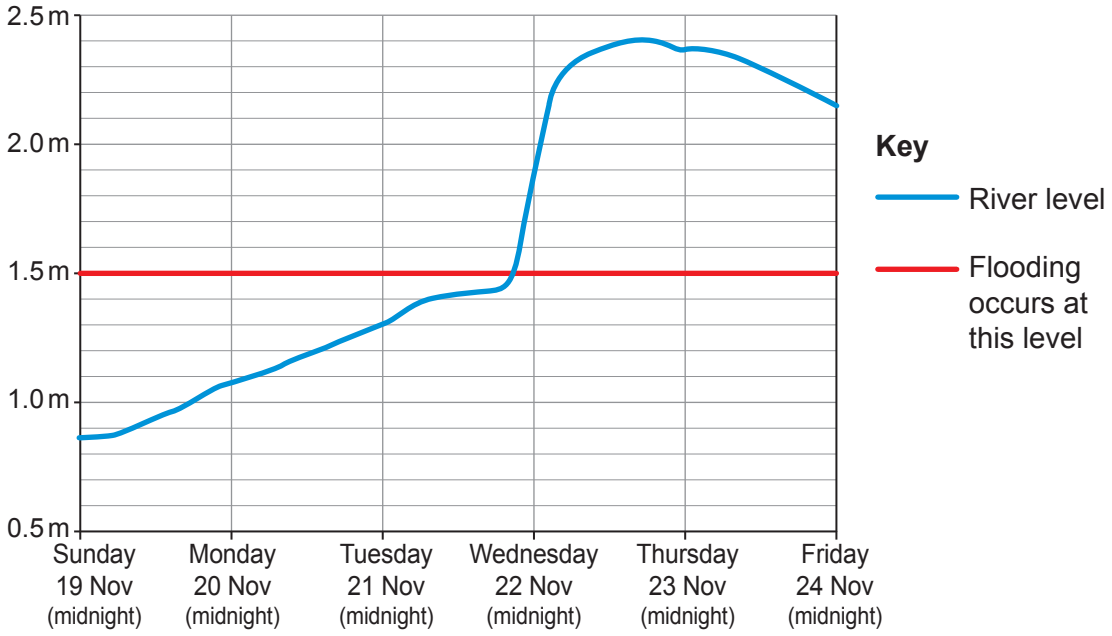
Keswick experienced flooding in November of 2017. Study **Graph 3.5** below.

Graph 3.5 - River levels for the River Derwent at Keswick in 2017



(ii) Complete the sentences below by adding the correct information from the box. [4]

Tuesday 21st	Wednesday 22nd	0.6
0.8	1.5	2.5
2.4	Thursday 23rd	2.0

The River Derwent first flooded on ..... November. When it first flooded the River Derwent was at ..... metres. The highest level that the River Derwent reached was ..... During Tuesday the River Derwent rose by ..... metres.

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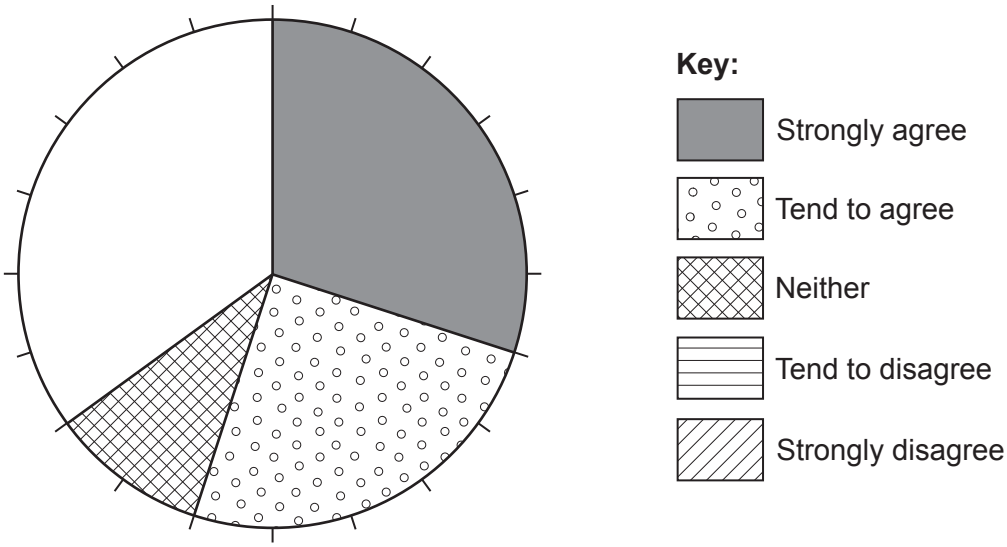
(d) In 2017 a national survey asked UK households whether they agreed with the following statement:

'I believe the area where I live is at risk of flooding.'

The results are shown below

Strongly agree	Tend to agree	Neither	Tend to disagree	Strongly disagree
30	25	10	15	20

(i) Use the data in the table to complete the remaining parts of the pie chart. [2]



(ii) What is the total percentage of people that agree the area they live is at risk of flooding. [1]

..... %

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(e) Study the information on **page 3** of the **Resource Folder**. It shows three strategies to manage flooding.

1. **Slowing the flow**
2. **Containing the flow**
3. **Supporting communities**

Which strategy do you think is the most sustainable way to manage the future flood risk in the UK? Justify your decision.

Use the information in the **Resource Folder** and your wider geographical understanding to support your answer. [12]

Your ability to spell, punctuate and use grammar and specialist terms accurately will be assessed in your answer to this question. [4]

My chosen strategy is : .....

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End of Part C

END OF PAPER

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Question number	Additional page, if required. Write the question number(s) in the left-hand margin.	Examiner only

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