



# Cambridge IGCSE™

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## GEOGRAPHY

**0460/43**

Paper 4 Alternative to Coursework

**May/June 2021**

INSERT

**1 hour 30 minutes**

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### INFORMATION

- This insert contains additional resources referred to in the questions.
- You may annotate this insert and use the blank spaces for planning. **Do not write your answers** on the insert.



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This document has **12** pages. Any blank pages are indicated.

Fig. 1.1 for Question 1

## Measuring river velocity

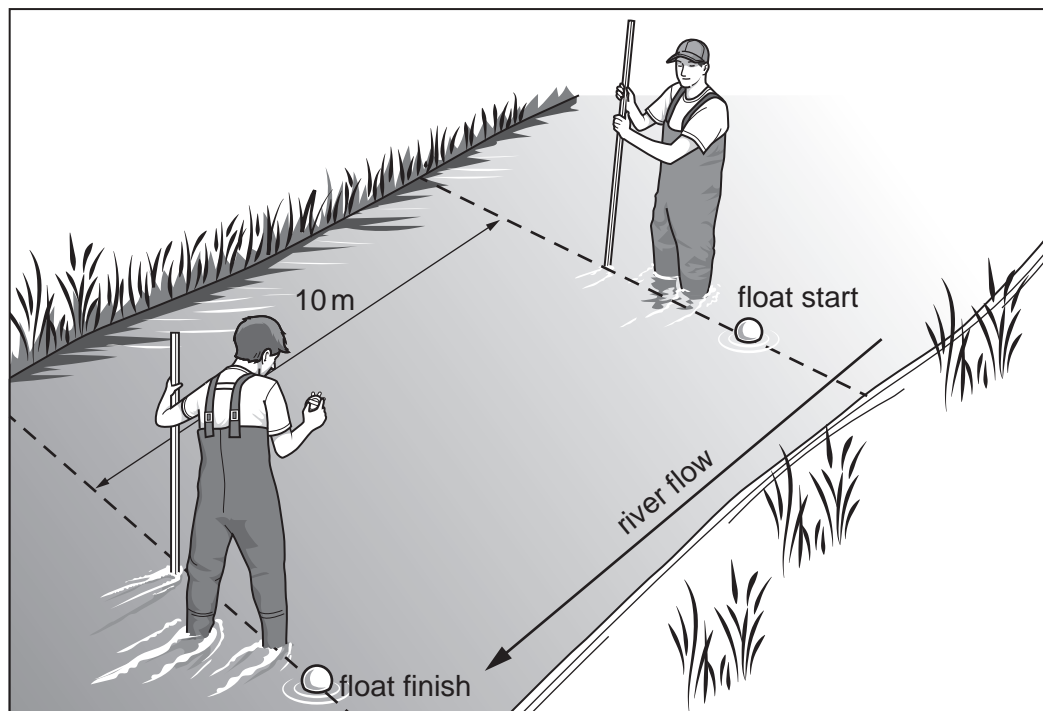


Table 1.1 for Question 1

## Results of velocity measurements

		speed of flow (m per second)			
site		left side of channel	centre of channel	right side of channel	average
upstream	1	0.65	0.73	0.90	0.76
	2	0.82	0.37	0.70	0.63
downstream	3	0.32	0.62	0.41	0.45

upstream  
 ↑↓  
 downstream

Fig. 1.2 for Question 1

## Measuring river width and depth



Table 1.3 for Question 1

## Width and depth measurements

	site	width (m)	average depth (m)
upstream	1	0.93	0.17
↕	2	2.00	0.23
downstream	3	3.45	0.31

4

Table 1.5 for Question 1

## Gradient measurements

	angle measurement (°)			
site	measurement 1	measurement 2	measurement 3	average
1	18	16	15	16.3
2	9	13	10	10.7
3	7	4	8	<b>6.3</b>



Fig. 2.1 for Question 2

The two farms

Bryn Du farm in Wales



Home Park farm in eastern England

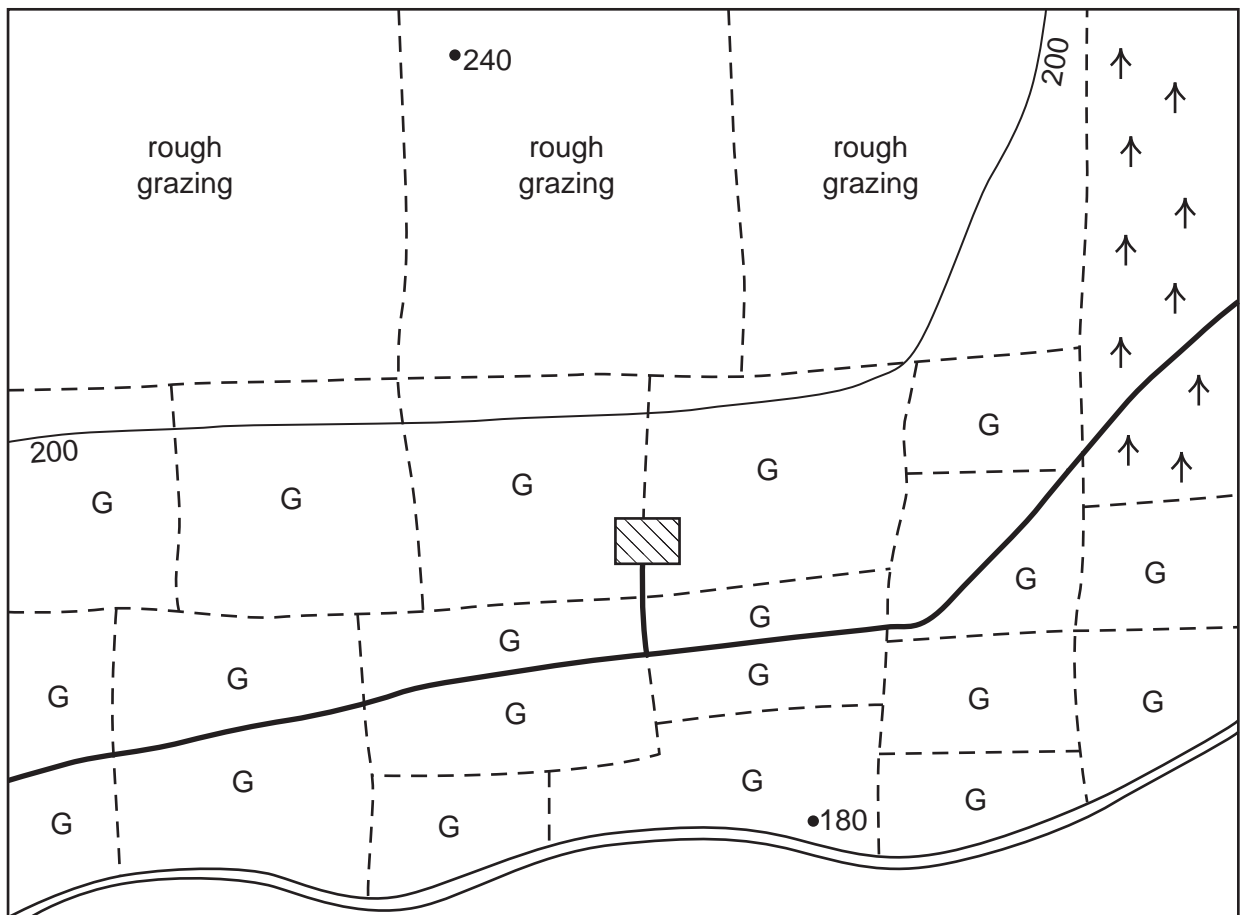


**Table 2.1 for Question 2**  
**Climate of the local areas**

	average temperature °C		annual rainfall (mm)
	January	July	
Bryn Du farm	4	16	1350
Home Park farm	5	19	550

**Fig. 2.2 for Question 2**

**Students' sketch map of part of Bryn Du farm**



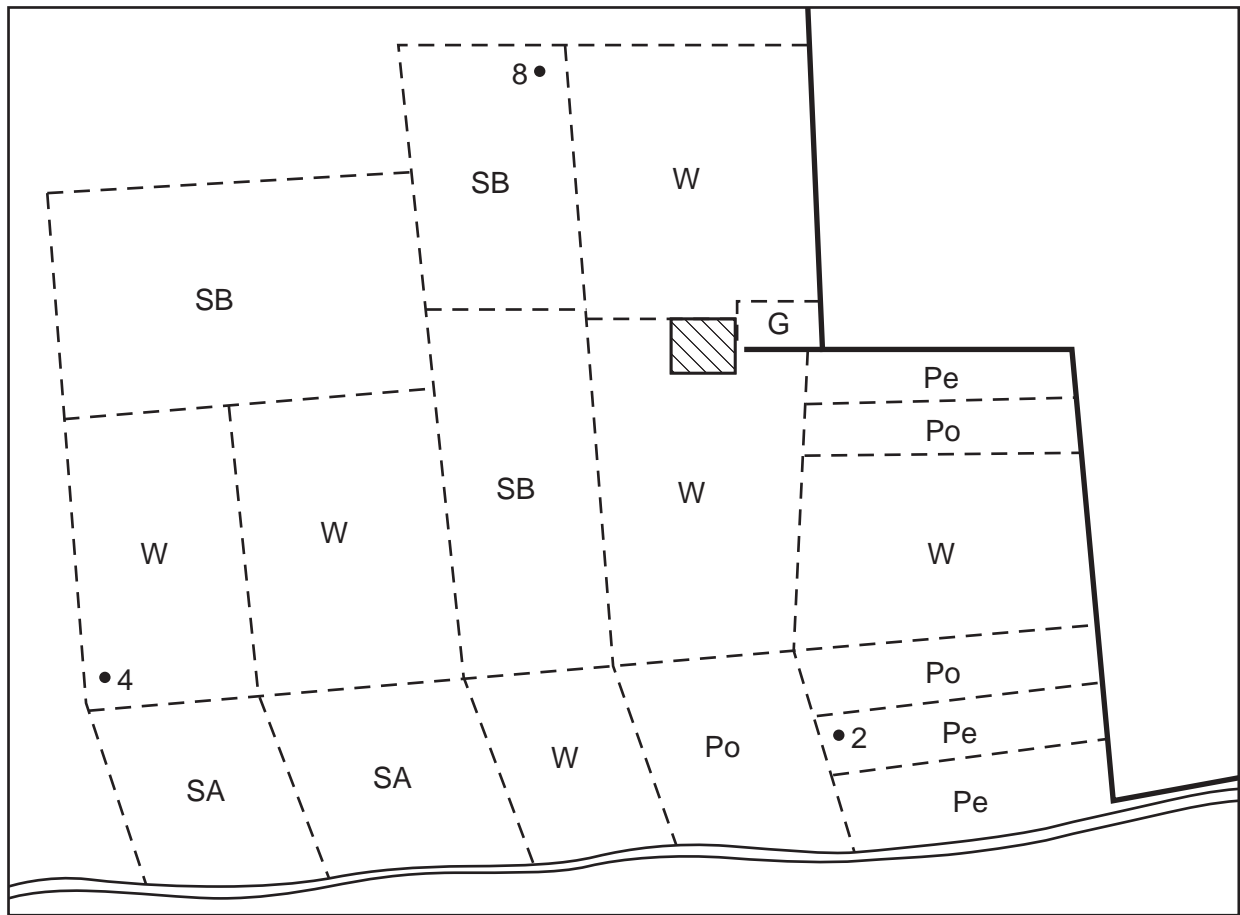
**Key**

- farmhouse and farm buildings
- woodland
- grassland
- field boundary
- 200 contour line (metres)
- 180 spot height in metres
- road
- river

not to scale


Fig. 2.3 for Question 2

Students' sketch map of Home Park farm



not to scale

**Key**


 farmhouse and farm buildings

• 4 spot height in metres

crops

 road

SB sugar beet

 drainage channel

W wheat

G grassland

Pe peas

SA set-aside

Po potatoes

Table 2.3 for Question 2

## Land use on both farms

land use	Bryn Du farm		Home Park farm	
	hectares (ha)	percentage (%)	hectares (ha)	percentage (%)
crops	0	0	253	89
grassland	83	<b>65</b>	4	1
rough grazing	35	<b>28</b>	0	0
set-aside	0	0	28	10
woodland	9	7	0	0
total	127	100	285	100

Crops grown on Home Park farm include wheat, potatoes, sugar beet and peas.

Grassland on Bryn Du farm is used for grazing and silage (to feed the cattle and sheep).

Set-aside is land on which no crops are grown to reduce over-production.

Table 2.4 for Question 2

## Cost of inputs in both farms

input	Bryn Du farm	Home Park farm
	cost (£)	cost (£)
fertiliser	1700	18 500
pesticides	1000	22 000
food for animals	12 500	0
fuel	6600	4600
labour (workers)	<b>20 000</b>	26 000
machinery	<b>68 000</b>	142 000
total	109 800	213 100



Table 2.5 for Question 2

## Outputs from the two farms

<b>output</b>	<b>Bryn Du farm</b>
number of lambs	1100
number of young cows	40
number of bales of hay	300
number of bales of silage	700
wool	3400 kg

<b>output</b>	<b>Home Park farm</b>
wheat	1100 tonnes
sugar beet	2300 tonnes
potatoes	1050 tonnes
peas	200 tonnes



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