

FRIDAY, 14 JUNE 2024 – MORNING

GEOGRAPHY B – COMPONENT 3
APPLIED FIELDWORK ENQUIRY

1 hour 30 minutes plus your additional time allowance

Surname

First Name(s)

Centre Number

Candidate Number

0

ADDITIONAL MATERIALS

Resource Folder. You may also require a calculator and a ruler.

INSTRUCTIONS TO CANDIDATES

Use black ink, black ball-point pen or your usual method.

You may use a pencil for graphs and diagrams only.

Write your name, centre number and candidate number in the spaces on the previous page.

Answer ALL questions.

Write your answers in the spaces provided in this booklet. Additional space is provided for some questions within the booklet (if required).

(Turn over)

If further space is required for any question, you should use the additional 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(g).

(Turn over)

**PART A: INVESTIGATING CHANGE OVER
TIME IN FIELDWORK**

Answer ALL parts of this question.

- 1 (a) Students decided to investigate if
UK weather conditions in summer are
changing.**

Study MAP 1.1 opposite.

**Tick (✓) two correct statements in the
table on the following page.
Use MAP 1.1. [2 marks]**

(Turn over)

	TICK (✓) TWO
Scotland has many of the lowest temperatures.	
The coolest places are all along the coastline.	
The highest temperatures are in Wales.	
The hottest places are inland.	
The south-east of the UK has the highest temperatures.	
The highest temperatures are in the south-west of the UK.	

(Turn over)

1 (b) Study DIAGRAM 1.2 opposite.

Give TWO strengths of this recording sheet. [2 marks]

Strength 1: _____

Strength 2: _____

(Turn over)

- 1 (c) Students collected data at Heathrow, south-east England, in July 2022.**

The data they collected is shown in GRAPHS 1.3 and 1.4 opposite.

Use GRAPH 1.3 and GRAPH 1.4.

[4 marks]

Circle the correct options in the following statements below and on the following page.

**The highest rainfall in one day is
(0.05 / 0.03 / 0.02) millimetres and the
temperature (increases / decreases /
stays the same) throughout the first
10 days of July.**

(Turn over)

The (south / north-east / south-west)
has the most days of wind.

The wind speed is the fastest from the
(south-west / south-east / south).

1 (d) Study TABLE 1.5.

**TABLE 1.5: MEAN TEMPERATURES FOR
THE UK, IN JULY, OVER TWO 10-YEAR
PERIODS**

MEAN JULY TEMPERATURE 1911 – 1921	MEAN JULY TEMPERATURE 2011 – 2021
13°C	15°C

**Calculate the percentage increase in mean
temperature for the two time periods.**

(Turn over)

9

Show your working. [2 marks]

Answer _____ **%**

(Turn over)

1 (e) Study GRAPH 1.6 opposite.

Suggest ONE conclusion about how UK summer temperatures are changing. Use data from GRAPH 1.6 in your answer. [2 marks]

(Turn over)

1 (f) This question is about your own experience of INVESTIGATING CHANGE OVER TIME in fieldwork.

You should support your answers by referring to actual examples from your own fieldwork.

(i) Give ONE reason why your primary data collection was accurate.

[2 marks]

Name of equipment or survey you used to collect your primary data:

Reason why it was accurate:

(Turn over)

1 (f)(ii) Explain why secondary data was useful in your investigation.

[4 marks]

Secondary data you used in your investigation into change over time:

(Turn over)

Why it was useful:

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(Turn over)

END OF PART A

(Turn over)

PART B: INVESTIGATING MITIGATING RISK

Answer ALL parts of this question.

2 (a) Study PHOTOGRAPH 2.1 opposite.

**Tick (✓) THREE enquiry questions
in the table on the following page
that could be chosen in an investigation
of mitigating risk in Great Yarmouth.**

[3 marks]

(Turn over)

ENQUIRY QUESTION	TICK (✓) THREE
Have retail opportunities in Great Yarmouth changed in recent years?	
To what extent are the coastal erosion management strategies effective?	
Is counter-urbanisation occurring in Great Yarmouth?	
Is Great Yarmouth a safe place to install a new wind farm?	
How do the house prices vary between north and south Great Yarmouth?	
How are residents in Great Yarmouth being affected by climate change?	

(Turn over)

2 (b) Students investigated air pollution in Luton, Bedfordshire, England.

Study MAP 2.2 opposite.

- (i) Estimate the size of the study area.
Tick (✓) ONE box. [1 mark]**

	TICK (✓) ONE
10m²	
100m²	
1km²	
10km²	

- (ii) Give a 6-figure grid reference for sample site A. [1 mark]**

(Turn over)

- 2 (c) Draw ONE line from each sampling technique, shown on the following page, to a strength of that technique.**
- [3 marks]**

**SAMPLING
TECHNIQUE****Systematic****Stratified****Random****STRENGTH
OF SAMPLING
TECHNIQUE**

Everything has an equal chance of being measured within the study area.

Measures everything in Luton.

Useful for measuring features that change within an area or along a road.

Takes account of different land uses and traffic within the study area.

(Turn over)

2 (d) Study TABLE 2.3.

TABLE 2.3: AIR POLLUTION DATA FOR TWO SAMPLE SITES IN LUTON

SAMPLE SITE A	SAMPLE SITE B
2.3	3.4
3.4	6.0
3.5	6.4
4.5	6.6
6.7	6.8
6.7	7.2
8.5	7.7
9.5	8.1
14.5	8.5

SCALE USED

**0 = no air
pollution**

**20 = high air
pollution**

(Turn over)

2 (d)(i) Complete the table below for sample site B. Use TABLE 2.3.

[2 marks]

	SITE A	SITE B
Median	6.7	
Range	12.2	

**(ii) Which graph would be suitable to present the data in TABLE 2.3?
Tick (✓) ONE. [1 mark]**

	TICK (✓) ONE
Dispersion graph	
Pie chart	
Line graph	

(Turn over)

2 (d)(iii) Give ONE reason why the graph you have chosen is suitable to present this data. [1 mark]

(Turn over)

2 (e) This question is about your own experience of INVESTIGATING MITIGATING RISK in fieldwork.

You should support your answers by referring to actual examples from your own fieldwork.

(i) Suggest ONE strength of your enquiry question. [2 marks]

Your enquiry question:

Strength:

(Turn over)

2 (e)(ii) Evaluate ONE strength and ONE weakness of your conclusions.

[4 marks]

Strength:

(Turn over)

Weakness:

(Turn over)

END OF PART B

(Turn over)

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) Study the graph on PAGE 2 of the RESOURCE FOLDER.

Tick (✓) TWO correct statements in the table on the following page. Use the graph on PAGE 2 of the RESOURCE FOLDER. [2 marks]

(Turn over)

	TICK (✓) TWO
The four years with the highest rainfall amounts occurred before 1940.	
The highest amount of rainfall fell in 2000.	
The amount of rainfall decreased from 1860 until 2000.	
The highest amount of rainfall was 1430 mm.	
The rainfall trend has increased from 1980 to 2020.	

(Turn over)

3 (b) Study GRAPH 3.1 opposite.

- (i) Tick (✓) the correct description of the trend shown in GRAPH 3.1. [1 mark]**

	TICK (✓) ONE
The UK population is fluctuating between 1995 and 2023.	
The UK population is decreasing between 1995 and 2023.	
The UK population was increasing the quickest between 1995 and 2000.	
The UK population is generally increasing between 1995 and 2023.	

(Turn over)

The UK population is projected to change at the same rate in the future.

**3 (b)(ii) Draw a line on GRAPH 3.1 to estimate the projected population growth in the UK from 2023 to 2045.
[2 marks]**

(c) More land is being used for towns and cities in the UK.

Explain why using more land for towns and cities might increase the risk of river flooding in the UK.

[6 marks]

(Turn over)

(Turn over)

3 (d) Hard engineering is one option that is used to manage river flooding.

Explain why hard engineering methods might have limitations when managing flood risk from rivers in the UK. [6 marks]

(Turn over)

(Turn over)

3 (e) Study DIAGRAM 3.2 opposite. It shows people at risk from flooding in the UK.

(i) Give TWO improvements to DIAGRAM 3.2 that would show the data more clearly.
[2 marks]

Improvement 1: _____

Improvement 2: _____

(Turn over)

- 3 (e)(ii) Give TWO additional pieces of data that could be included in DIAGRAM 3.2 to help show which people are most at risk from flooding. [2 marks]**

Additional data 1: _____

Additional data 2: _____

(Turn over)

**3 (f) Study the map on PAGE 3 of the
RESOURCE FOLDER.**

**In the table on the following page
tick (✓) THREE statements that
correctly describe the map.**

[3 marks]

(Turn over)

	TICK (✓) THREE
Most of the residential land use in Marlow is out of the flood risk area.	
The limit of the flood area is 5 km from the river.	
Globeside Business Park is at risk of flooding.	
All of the A404 main road is safe from flooding.	
The schools are outside the flood risk area.	
The greatest number of people at risk of flooding are within 100 m of the River Thames.	

(Turn over)

3 (g) Study PAGE 4 of the RESOURCE FOLDER. It shows information about how land use zoning can protect people and property against flood risk.

Land use zoning is the best way to sustainably manage river flood risk in the UK. To what extent do you agree with this statement? [12 marks]

Use the information in the exam paper, RESOURCE FOLDER and your wider geographical understanding of the UK to support your answer.

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

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(Turn over)

[illegible]

(Turn over)

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END OF PART C

END OF PAPER

(Turn over)

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

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

MAP 1.1: MEAN DAYTIME SUMMER TEMPERATURES IN THE UK BETWEEN 1991 AND 2019

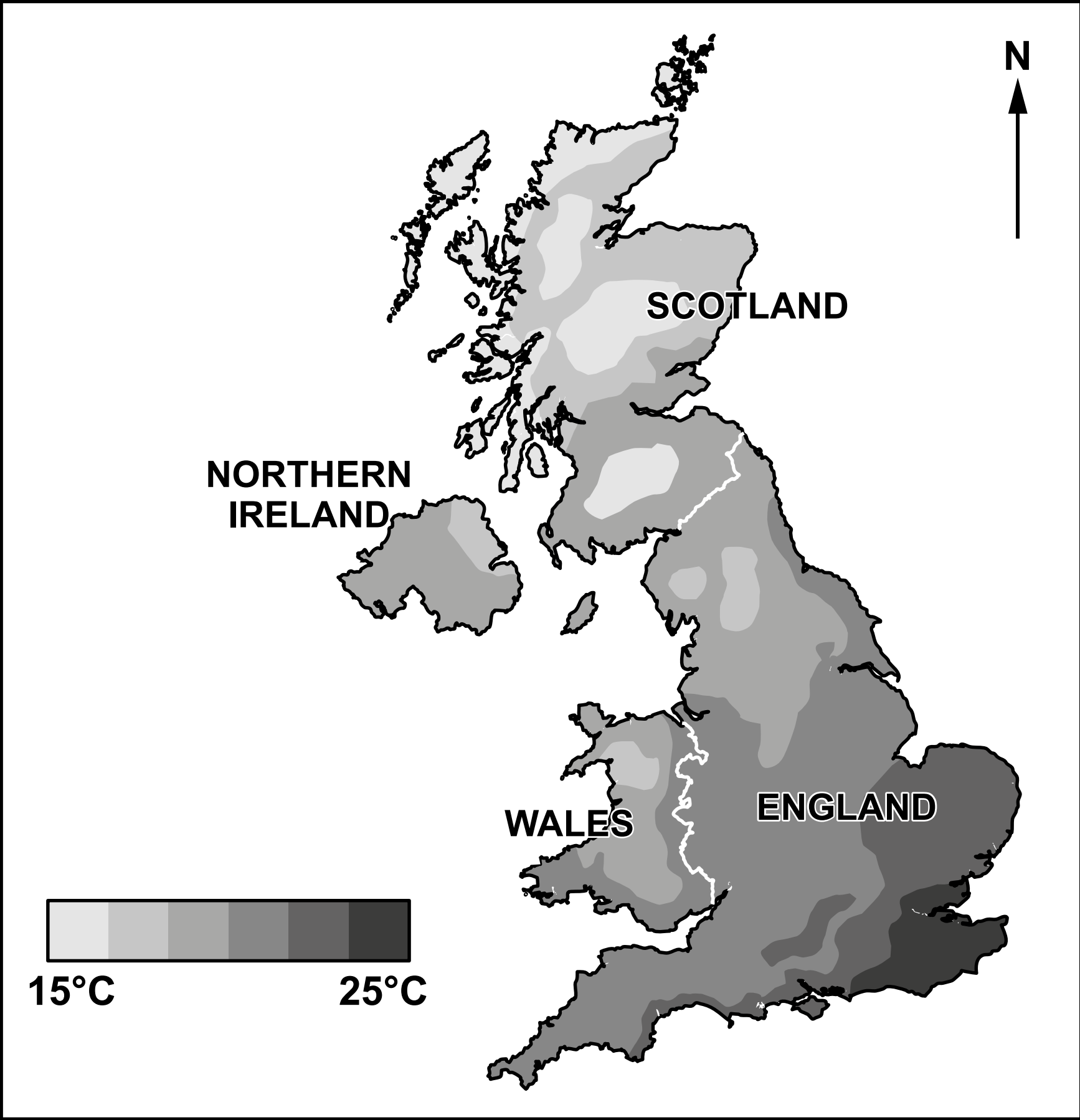
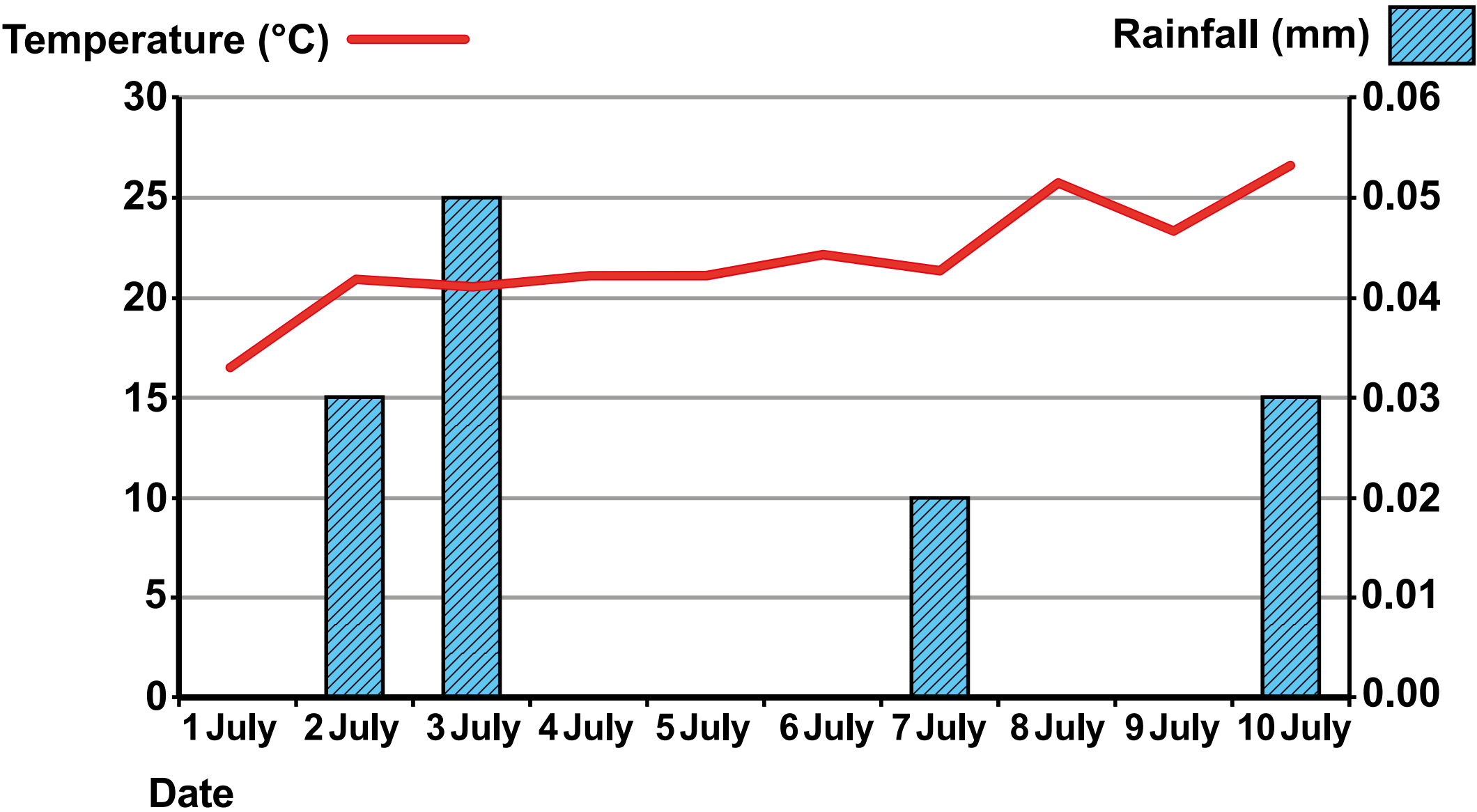


DIAGRAM 1.2: A RECORDING SHEET FOR TEMPERATURES IN JULY 2022

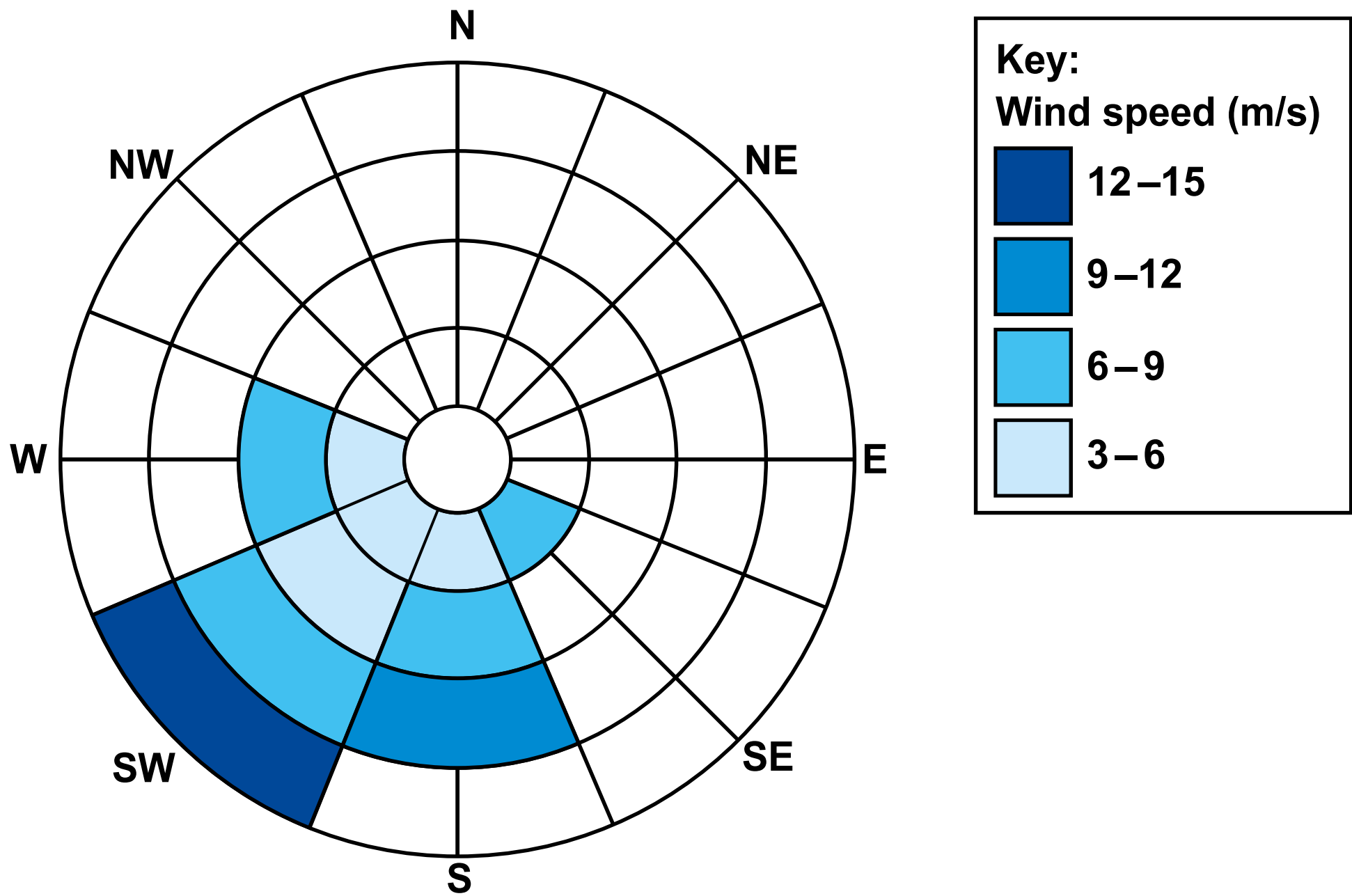
Location:

DATE	TEMPERATURE (°C)
1st July 2022	
2nd July 2022	
3rd July 2022	
4th July 2022	
5th July 2022	

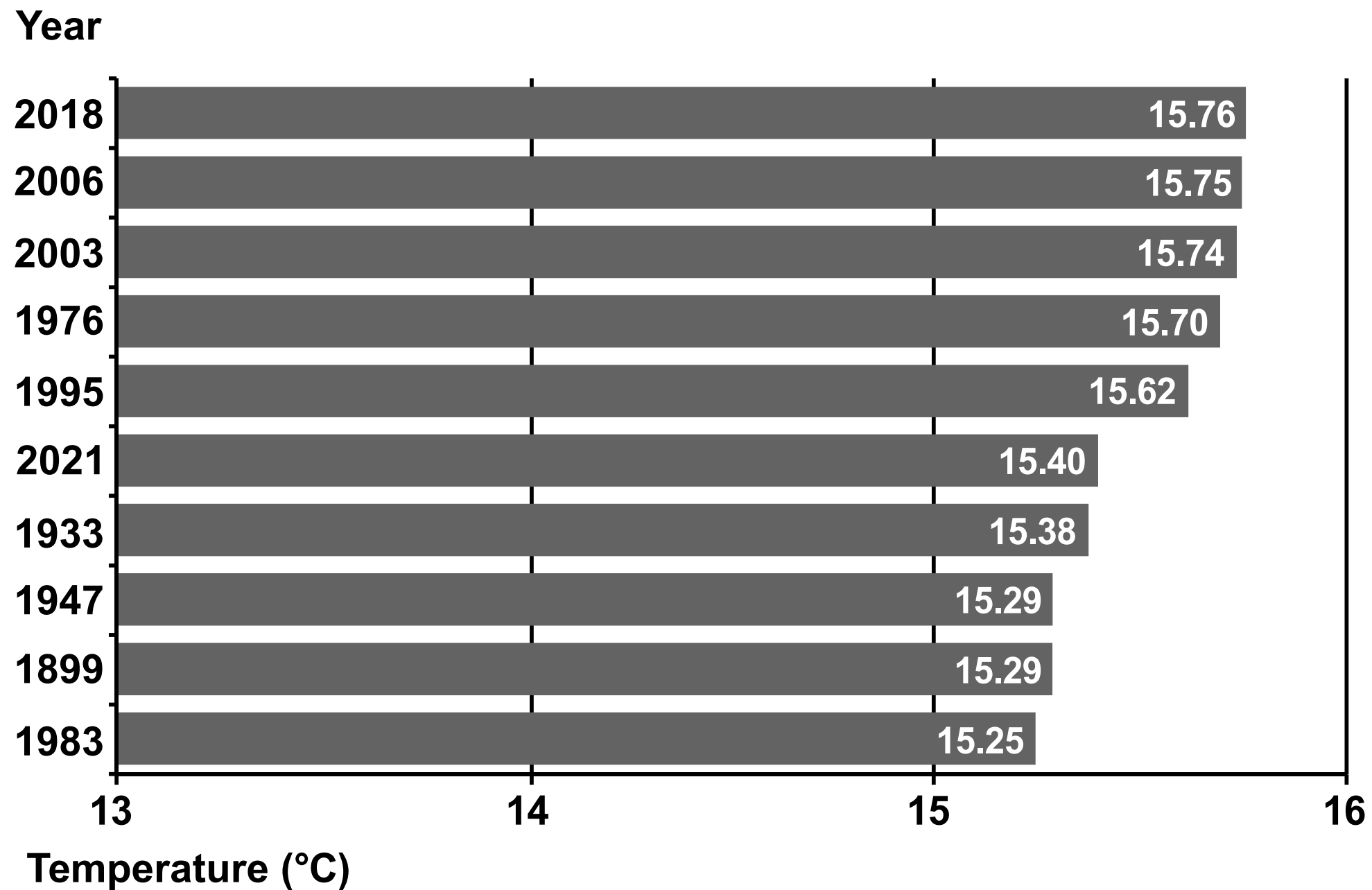
GRAPH 1.3: TEMPERATURE AND RAINFALL AT HEATHROW, JULY 2022



GRAPH 1.4: WIND SPEED AND DIRECTION AT HEATHROW FOR THE SAME 10 DAYS OF JULY 2022



GRAPH 1.6: TOP TEN WARMEST UK SUMMERS BY YEAR, EXCLUDING 2023

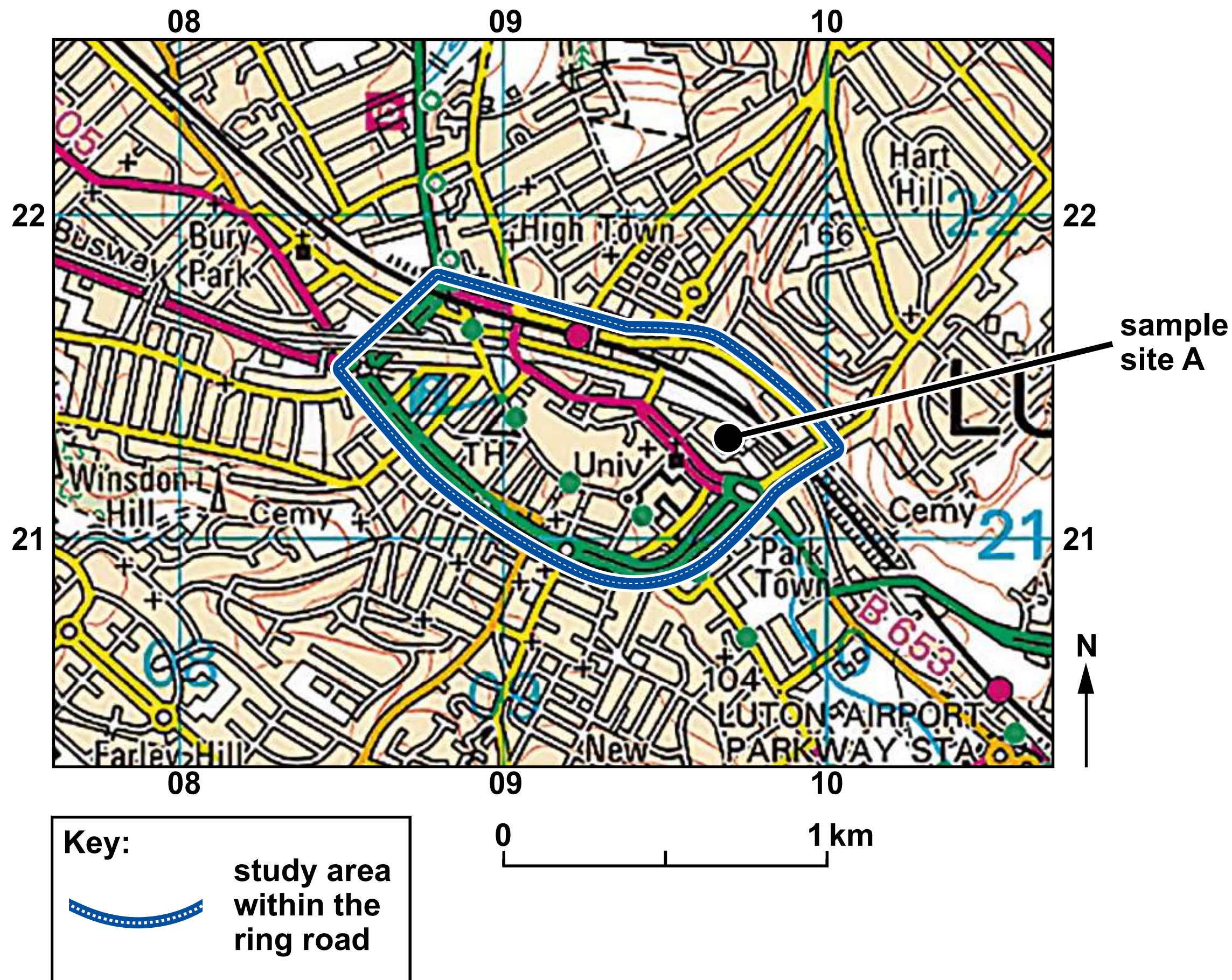


***Temperatures shown are the mean for June to August across the whole UK.**

PHOTOGRAPH 2.1: GREAT YARMOUTH, NORFOLK, EAST ENGLAND

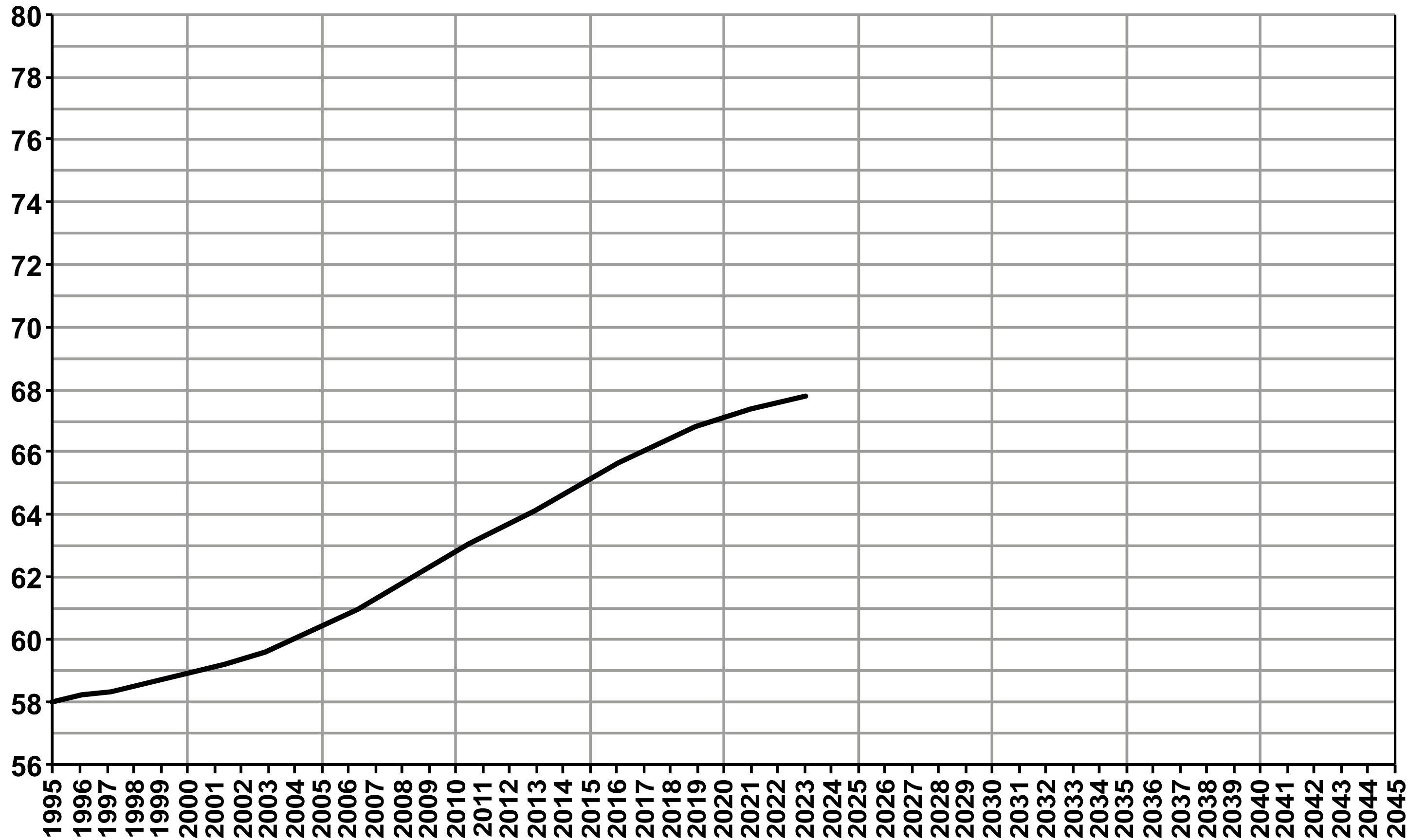


MAP 2.2: AN ORDNANCE SURVEY MAP OF CENTRAL LUTON



GRAPH 3.1: UK POPULATION CHANGE: 1995 TO 2045 (ESTIMATED)

UK population (millions)



Date (years)

DIAGRAM 3.2

