



Climate Change Resource: Part 1

Canals and Rivers in England and Wales

canalrivertrust.org.uk/stem

Canals and rivers play an important role

For our communities



For our wellbeing



For nature

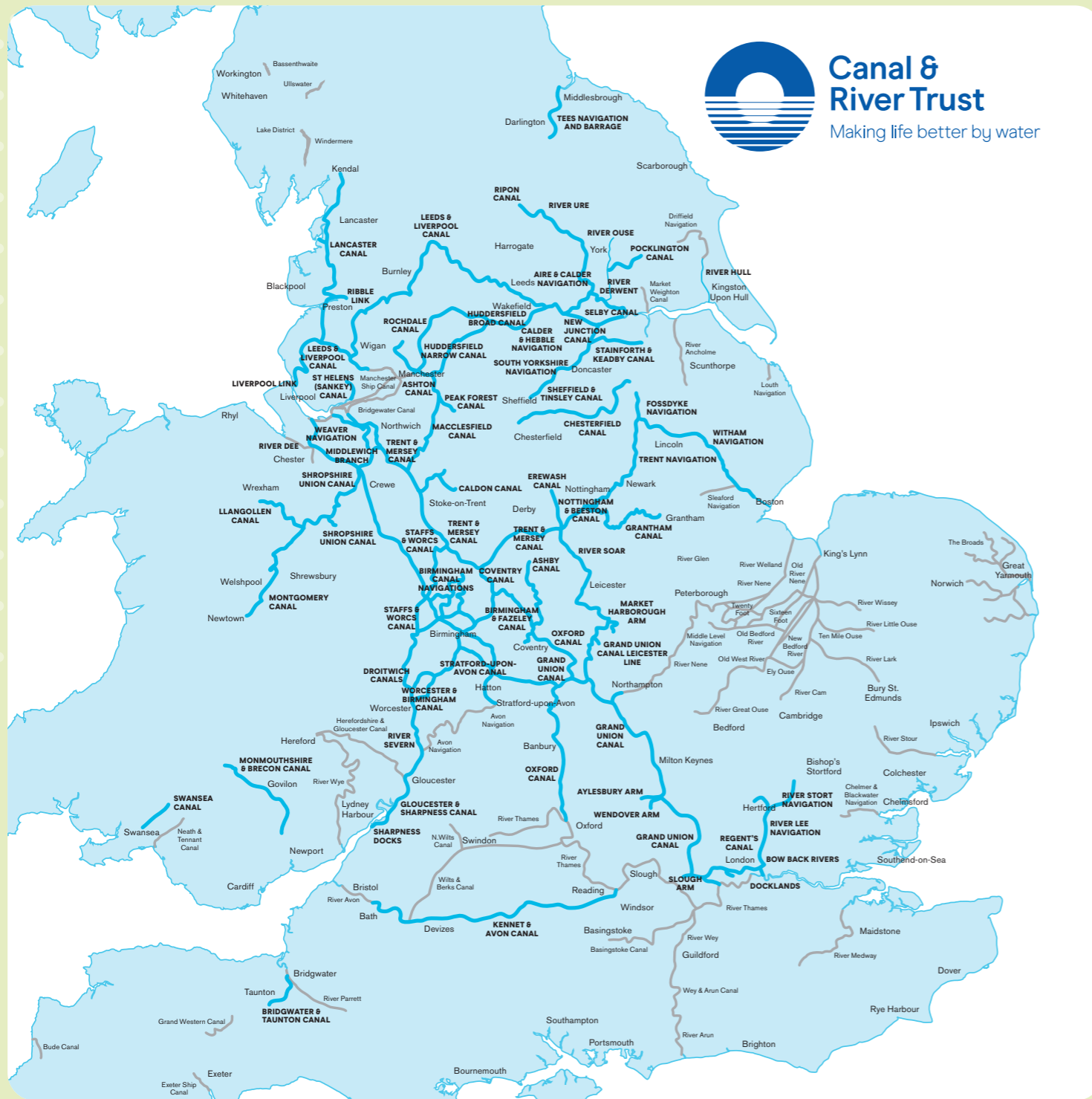


For history (heritage)











The network of canals and rivers managed by the Canal & Trust includes:

- 1,588 miles of canals
- 465 miles of rivers/feeders
- 71 reservoirs
- 1,710 miles of towpaths
- 279 Aqueducts
- 2,949 Bridges
- 55 tunnels
- 1,582 locks
- 795 weirs
- 2,706 listed buildings
- 46 ancient monuments
- 69 Pumping stations
- 6 Historic battlefields
- 4 World Heritage Sites
- 63 Sites of Special Scientific Interest (SSSI)
- 1,600 employees

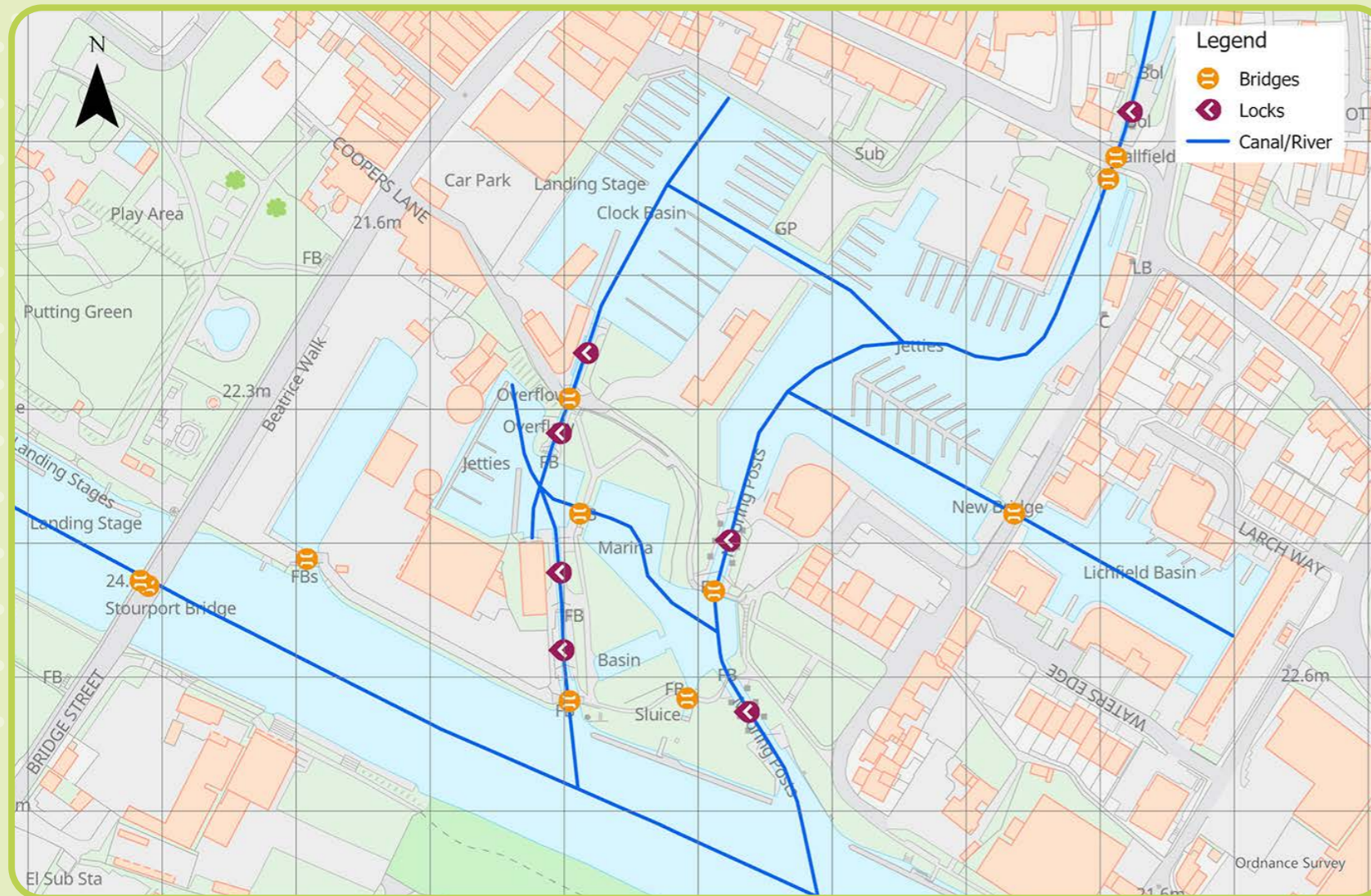


- Find your school on the map
- Is there a canal or river near to your school?
- What is the name of the canal or river nearest to your school?
- Use the key to help you find other water features nearby

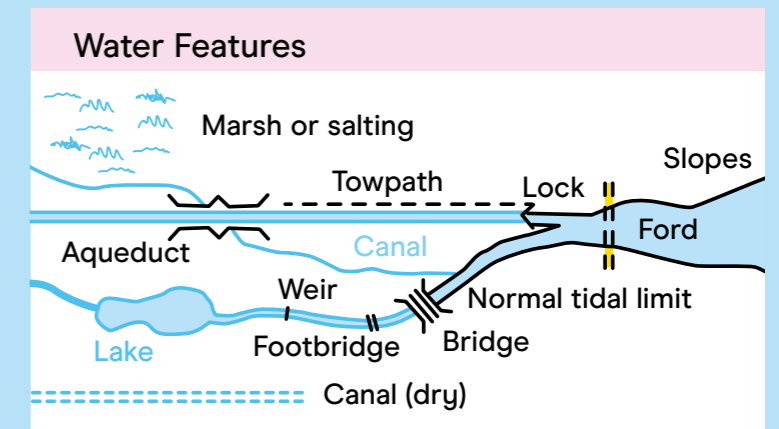
Key:

- | | | | |
|---|---------------|---|-----------------------------|
|  | your location |  | locks |
|  | access points |  | refuse disposal |
|  | aqueducts |  | bridges |
|  | elsan point |  | pump out
(user operated) |

Click the map to explore the network of canals and rivers in England and Wales



This is how water features are shown on an Ordnance Survey map



Look at the OS map example. Find grid references for:

- A river
- A lock on a canal
- A bridge
- The part of the canal or river that is nearest your school

Canal or river? What are the differences?



Which statements describe canals and which describe rivers?

Rivers are
natural



Canals are
man-made



1. Chooses its own path
2. Built to be navigated
3. Stronger currents and can be fast flowing
4. Rarely suffer from drought or flood water
5. Use locks or lifts to move boats uphill
6. Grows from a source

7. Flows downhill and increases in size
8. Not always navigable
9. You can choose its path
10. Can suffer from droughts and floods
11. Weaker currents except near locks
12. The right size for boats




Canals and rivers working together



How are canals filled with water?

- Nearby streams and rivers ('feeders') are redirected to the canal
- Reservoirs store water
- Water is pumped from underground

Key:

-  lock
-  river
-  canal

The evolution of canals - a brief history



Courtesy of National Waterways Archive, Canal & River Trust



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Photo © Roger D Kidd (cc-by-sa/2.0)

1750s to 1830s

Canals were built to join up industrial towns, to move coal and goods more quickly

Created a network joining four main rivers in England

1850s to 1970s

The growth of railways and road transport led to decline of the canal transport industry

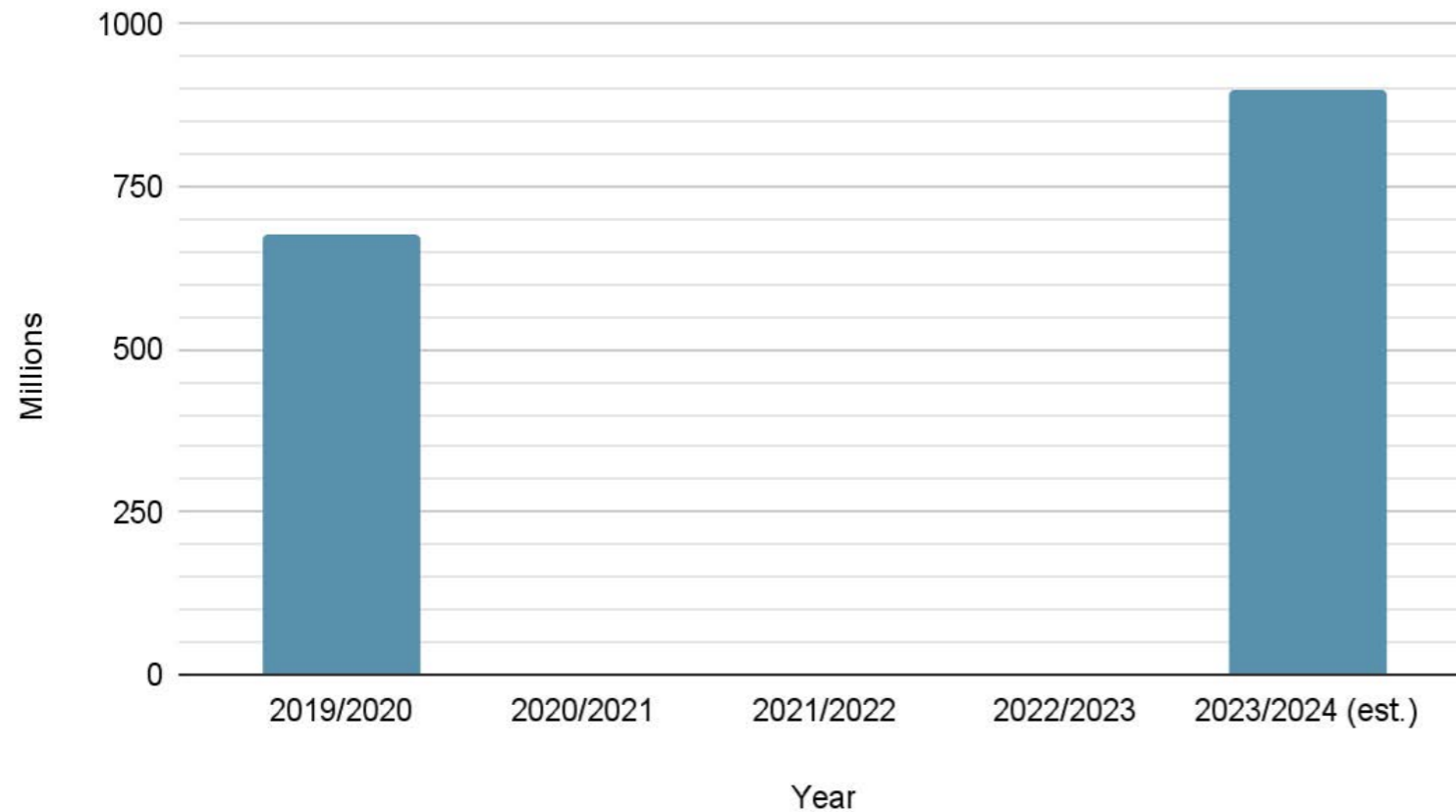
The network fell into disrepair

1980s - today

Regeneration of the canal network, primarily for leisure and recreation. Restoration work has allowed nature to thrive and protected heritage buildings

The roles of canals today - visitor numbers

Number of visits to waterways 2019-2024



Plot the missing figures

- What do you notice?
- What factors might have affected the results?

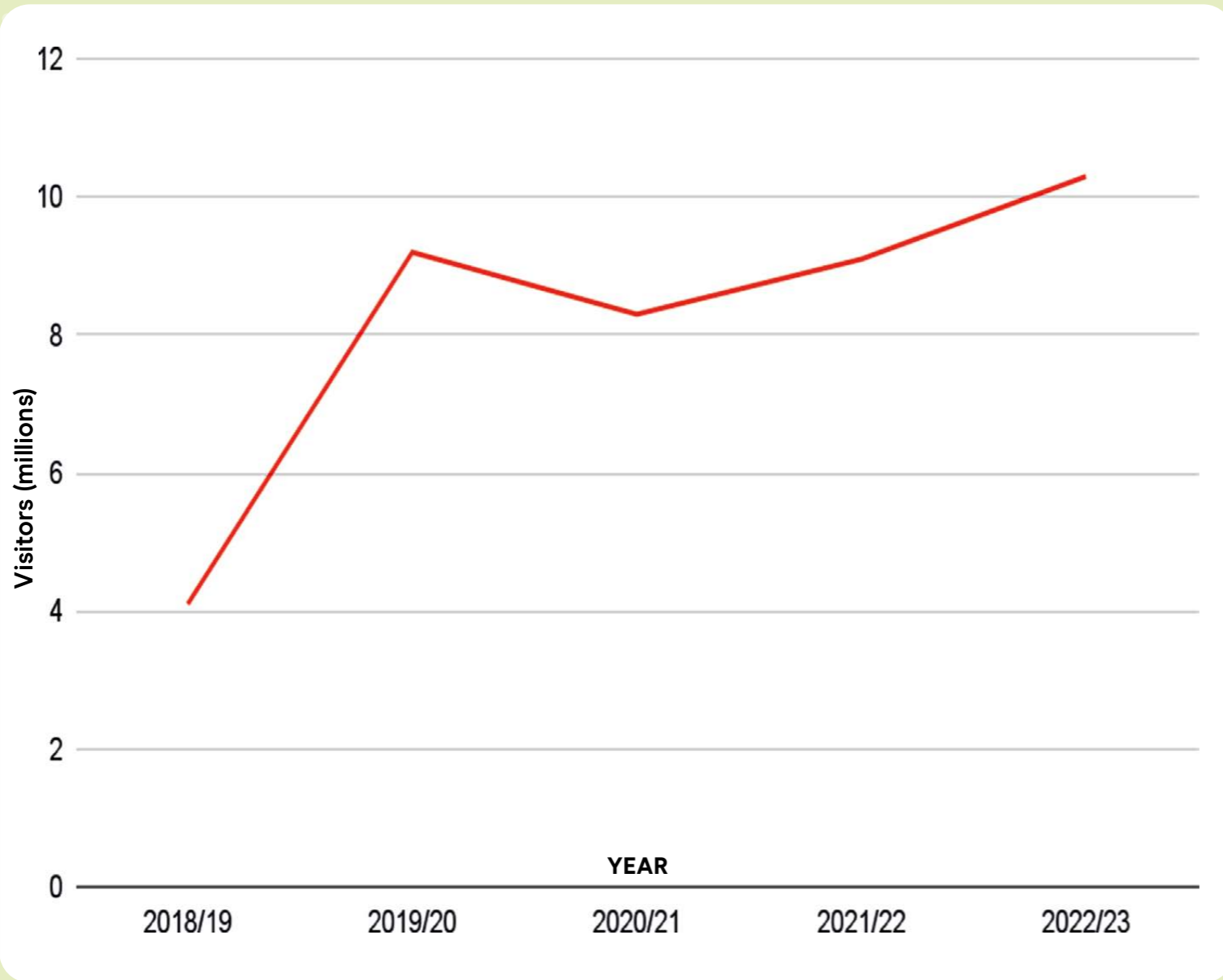
Extension:

What is the mean number of visitors from 2019-2023

Number of visits to waterways 2019-2024

2019/2020	677 million
2020/2021	743 million
2021/2022	786 million
2022/2023	888 million
2023/2024	900 million (estimate)

Number of regular visitors 2018 - 2023



What data presentation technique has been used?

What are the benefits of this data presentation technique?

Draw a line of best fit. What do you notice?

Number of regular visitors each fortnight (from monthly surveys)

2018/2019	4.1 million
2019/2020	9.2 million
2020/2021	8.3 million
2021/2022	9.1 million
2022/2023	10.3 million

Use of network by activity type 2019/20

Reason for visit	Visits/year	% of visits
Boating (with engine)	30.6m	5%
Boating (without engine)	17.2m	3%
Visited attraction	47.9m	7%
Fishing	13.9m	2%
Communting	128.6m	19%
Cycling	55.3m	8%
Jogging	66.4m	10%
Walking with a dog	111m	16%
Walking without a dog	114.8m	17%
Other	91.1m	13%

Which reason to visit is the highest?

Which reason to visit is the lowest?

Suggest an alternative way of presenting the data shown in this table

Reasons for visiting canals: 2022/23



Have you visited a canal or river? What did you do when you were there?

List the three most popular things people like to do when they visit a canal or river

If there are 10.3 million users, how many visit a waterside attraction?

Active



Supports utility infrastructure with:
1576km of electricity cables, 1302km of gas mains and 659km of telecom cables under towpaths.

Happiness



Health and wellbeing benefits:
Estimated welfare benefit of over £4bn.
Calculated cost saving to the NHS of £1.1bn a year.
Estimated £2.9bn benefit value to mental health and wellbeing.

Regeneration: community



Support over 80,000 jobs.
Contributes £1.5bn to national, regional, and local economies.