

About Cambridge

We are a welcoming City
73.8% voted against BREXIT
in Cambridge

And we are a very exciting
City



Said to be the driest city north of the
Pyrenees

Average annual rainfalls:

Cambridge 553 mm

Heidelberg 666 mm

<https://en.climate-data.org/>

A green City



The river Cam



Barges used to bring heavy goods to Cambridge, until the 17thth Century when drainage works led to the construction of Denver Sluice 50km away, so cutting off a navigable route to the sea.

The colleges required the horses pulling the barges to walk along the middle of the river.

The first crossing was where Magdalene Bridge is now.
It was on the Roman road linking London to the north.

There used to be a ducking stool there.



Ducking stools (wiki)

If the "witch" floated it was deemed that she was in league with the devil

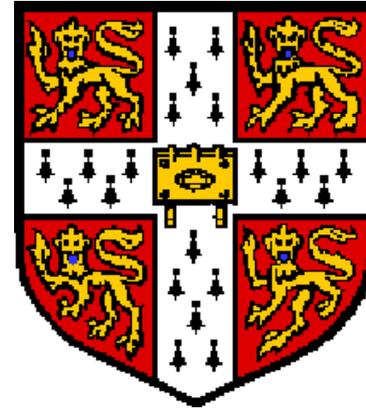
If she sank she was innocent



A city on the River Cam with a major University

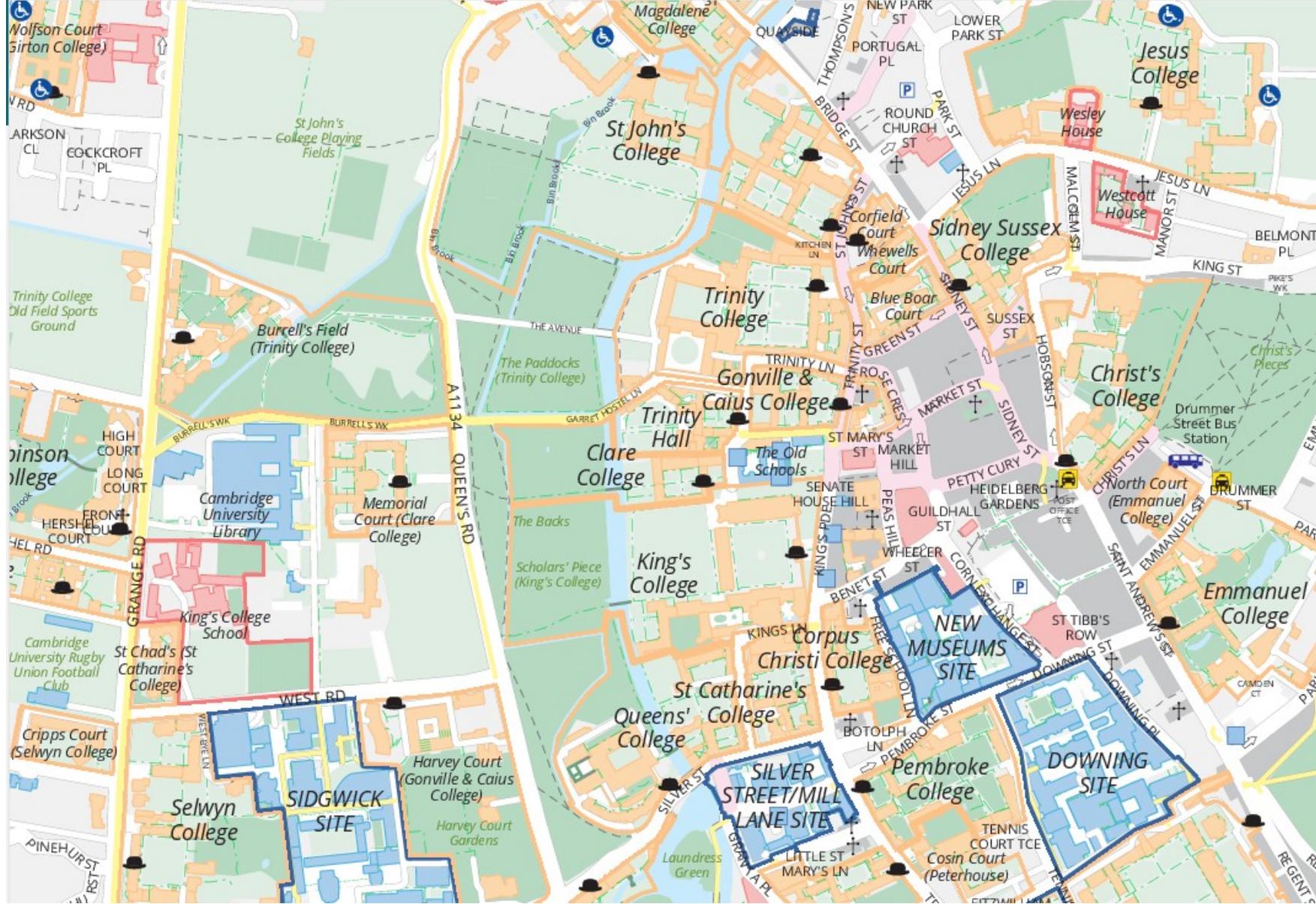


Dates back to Roman times
arms granted in 1575



Scholars came from Oxford in 1209
arms granted in 1573

The University used to exercise power over the town. Until 1893 it locked up women suspected to have a corrupting influence on the students.



The University

The University and the colleges are spread around the town

University departments: student lectures and research

31 self-governing colleges: each has its own statutes approved by the monarch

 oldest Peterhouse (1284) newest Robinson College (1977)

The colleges provide accommodation and meals, and small-group teaching

Roughly 12,000 undergraduate students + 10,000 graduate

The Market Square

Stalls have been trading at the historic market square in the city centre since the middle ages.

Great St. Mary's church was the first home of the University when scholars came from Oxford in 1209. Here lectures were given, degrees conferred and celebrations held.



Nobel prizes

- 107 have been awarded to affiliates of the University, including 33 to Trinity College
- 32 in Physics, 26 in Medicine, 25 in Chemistry, 11 in Economics

Lord Rayleigh (1904)

Paul Dirac (1933)

Frederick Sanger (1958 and 1980)

Robert Edwards (2010)

Ernest Rutherford (1906)

John Cockcroft & Ernest Walton (1951)

Francis Crick & James Watson (1962)

Gregory Winter (2018)

Robert Edwards (1925 – 2013)

A physiologist who was a pioneer in in-vitro fertilisation (IVF) along with surgeon Patrick Steptoe, which led to the birth of Louise Brown on 25 July 1978.

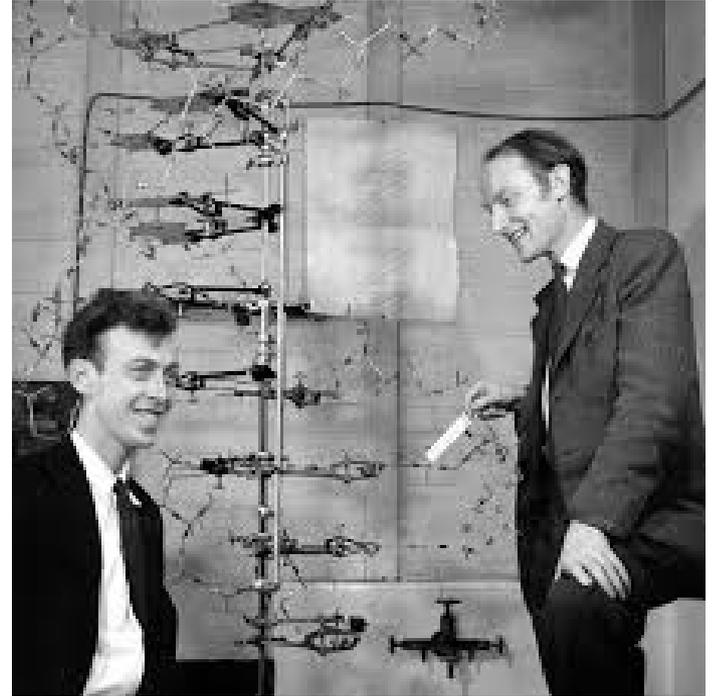
More than 250,000 IVF babies have been born in the UK alone.



Francis Crick and James Watson

Crick was a physicist who did research at the Cavendish Laboratory where with Watson (an American) he worked out the structure of DNA.

The Cavendish was close to the Eagle pub in Bene't Street, where they spent a lot of time and eventually announced their discovery.



Hinxton Genome Campus (15km from Cambridge)

Wellcome Sanger Institute – was part of the Human Genome Project

European Molecular Biology Lab – operates across six sites: Heidelberg, Barcelona, Hamburg, Grenoble, Rome and EBI Hinxton.

(Most of the world's DNA sequencing now is based on work in the University by Shankar Balasubramanian and Sir David Klenerman.)



Biomedical Campus (on the edge of the City)

Addenbrooke's Hospital
Cancer Research UK Cambridge
Laboratory of Molecular Biology
Papworth Heart & Lung Hospital
Astrazeneca ...

By locating world-leading academic and industry scientists on the same site as the teaching hospitals of the University of Cambridge, it is creating the optimum environment for the rapid and effective translation of research into routine clinical practice.



Science Park (just outside the City)

Since it was established by Trinity College in 1970, the Cambridge Science Park has played a pivotal role in the “Cambridge Phenomenon” -- the transformation of Cambridge from a market town with a world-class university to one of the leading technology hotspots in the world.

Today the 152-acre site is home to over 120 businesses ranging from spin-outs from the University of Cambridge to multinational companies seeking access to the brightest graduates and entrepreneurs from Cambridge’s diverse talent pool.



ARM

(originally Advanced RISC Machines)

RISC= Reduced Instruction Set Computing

ARM designs chips, it does not make them.

Their chip is in nearly every mobile phone in the world

ARM is the largest of our fourteen \$1bn companies

It was sold to the Japanese firm Softbank in summer 2016 for £23.4bn

Marshall of Cambridge



Family-owned firm, with its own airport just outside the City.

- Marshall Aerospace and Defence Group – maintains and converts aircraft
- Marshall Group Property – building 2500 homes and two schools on its site
- Marshall Fleet Solutions – refrigerated transport and other specialised vehicles

Also the majority shareholder in

- Marshall Motor Holdings plc – sells over 100,000 vehicles a year

Some other companies with Cambridge bases:

Huawei (just arriving)

Apple

Amazon

RAND Corporation

Microsoft

Samsung

Siemens

Nokia

Leica

Bayer Cropscience

Problems arising from economic success

Severe housing shortage

Highly congested roads

Poor public transport

Severe stress on health services

Deteriorating natural environment



House prices

Since 1967 the price of my house has increased by a factor 100

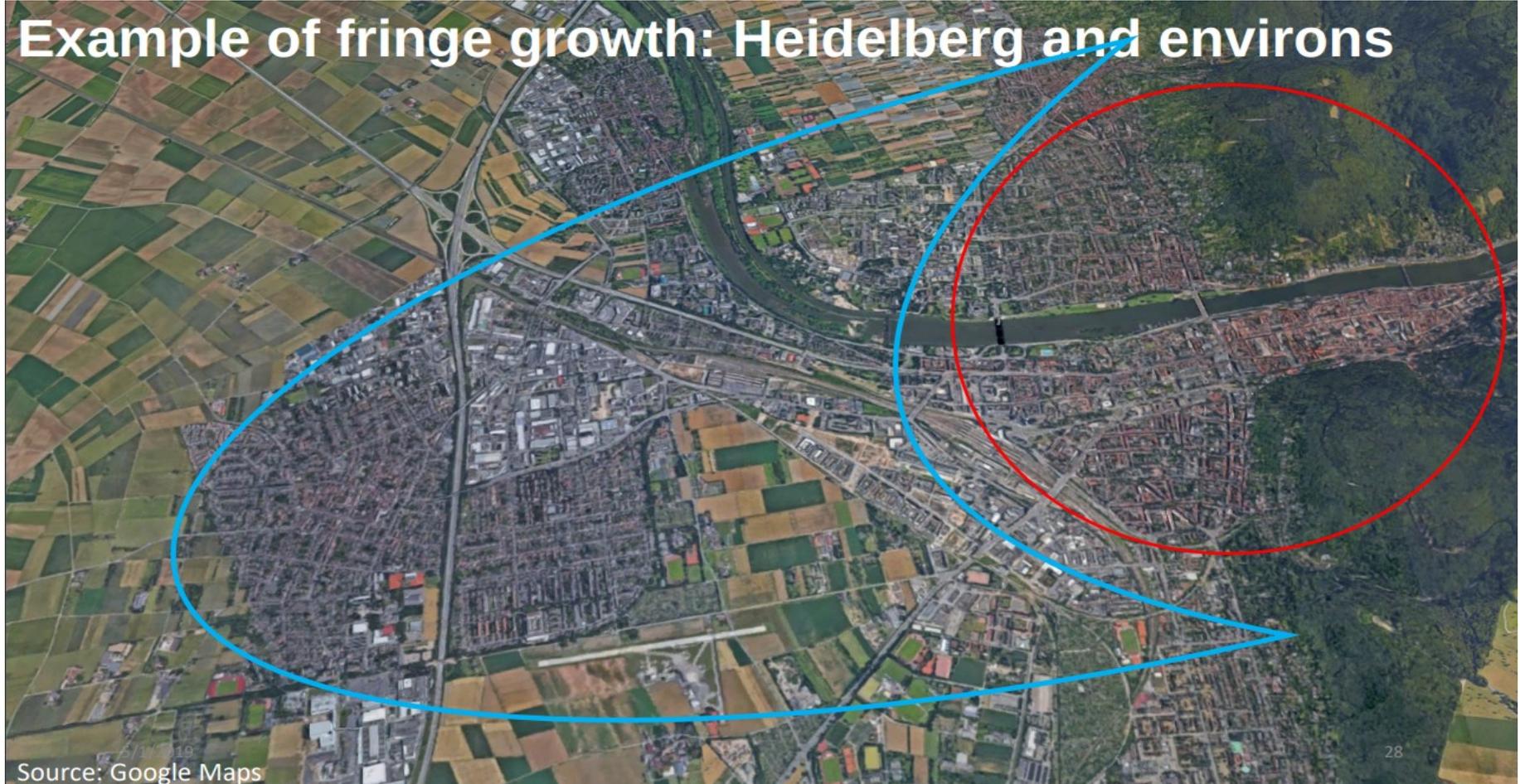
Inflation has increased by a factor 18

Average house prices in the City are 13 times average earnings
(only 5 times 20 years ago)

So 65,000 people drive into Cambridge each day

We are told that one solution is to emulate Heidelberg

Example of fringe growth: Heidelberg and environs



Cambridge University Library

Holds over 8 million items

Has a right to a free copy of everything
Published in the UK
(and has a good cafe)



EU Water Framework Directive

The quality of all waterbodies (rivers, lakes and estuaries) must reach 'good ecological status' as soon as possible (with an absolute deadline of 2027).

- Water quality decreasing due to diffuse urban and agricultural pollution and ageing sewerage.
- Declining river flows and over-abstraction of aquifers exacerbated by the planned increase in development and by increasing agriculture yields.
- Fish numbers have declined, due to droughts, floods washing fish downstream, overfishing and poaching.



Nobel Prizes since 2001 (according to wikipedia)

Rank ↕	University ↕	Total ↕	Normalized ^[Note 1] ↕	PHY ↕	CHE ↕	P/M ↕
1	Harvard University 	158	100.0	34	37	41
2	University of Cambridge 	118	74.7	34	31	30
3	University of California, Berkeley 	107	67.7	33	30	17
4	University of Chicago 	98	62.0	32	18	11
5	Columbia University 	96	60.8	33	15	22
6	Massachusetts Institute of Technology 	93	58.9	35	15	12
7	Stanford University 	83	52.5	26	13	16
8	California Institute of Technology 	73	46.2	29	17	21
9	University of Oxford 	69	43.7	14	17	18
10	Princeton University 	65	41.1	27	9	4

World university rankings 2019

QS

1		Massachusetts Institute of Technology (MIT)
2		Stanford University
3		Harvard University
4		California Institute of Technology (Caltech)
5		University of Oxford
6		University of Cambridge

The Times

1	University of Oxford United Kingdom
2	University of Cambridge United Kingdom
3	Stanford University United States Explore
4	Massachusetts Institute of Technology United States
5	California Institute of Technology United States
6	Harvard University United States

We don't always win the Boat Race

3 April 2010	Cambridge
26 March 2011	Oxford
7 April 2012	Cambridge
31 March 2013	Oxford
6 April 2014	Oxford
11 April 2015	Oxford
27 March 2016	Cambridge
2 April 2017	Oxford
24 March 2018	Cambridge
7 April 2019	Cambridge



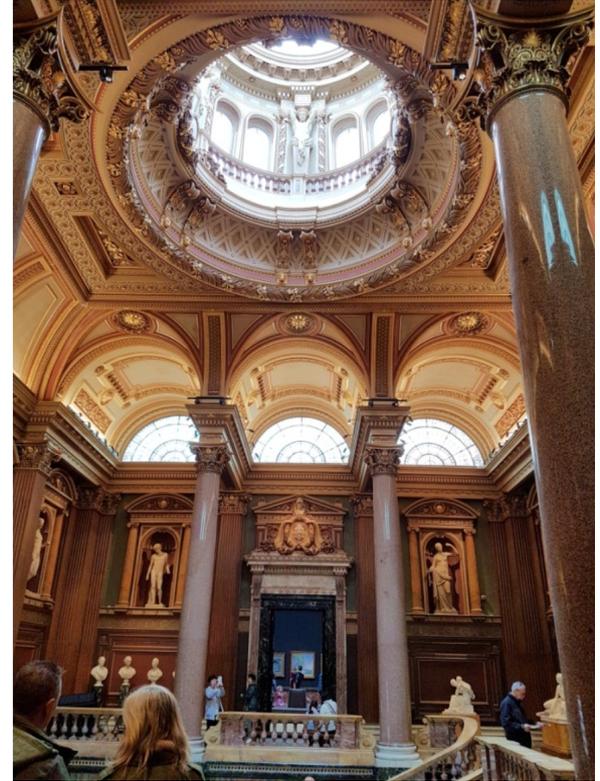
Football

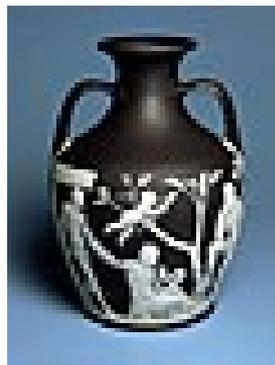
The Cambridge Rules were first played on Parker's Piece and had a "defining influence on the 1863 Football Association rules." which again were first played on Parker's Piece.



Fitzwilliam Museum

Housing over half a million objects, the Fitzwilliam has an amazing variety of beautiful artefacts and art from around the world, from Egyptian coffins to Impressionist masterpieces; illuminated manuscripts to Renaissance sculpture; rare coins to Asian arts.





(and it has a good cafe)

Some other museums

Museum of Zoology Specimens and skeletons of fossils, animals, insects and birds from around the world

Museum of Archaeology and Anthropology Archaeological and anthropological artifacts and photographs from around the world

Museum of Classical Archaeology Plaster casts of classical Greek and Roman statues and sculpture

Polar Museum History and science of Arctic and Antarctic exploration

Sedgwick Museum Fossil animals and plants, dinosaurs, and rocks and minerals

Whipple Museum of the History of Science Scientific instruments, models and displays, dating from medieval times to the present day

University Botanic Garden

16 hectares, opened in 1846

Over 8,000 plant species from all around the world, including one of the region's finest collections of trees, all set across beautifully designed and landscaped gardens and glasshouses.

(and it has a good cafe)



Christ's College



First established as God's House in 1437. Had to move because King Henry VI wanted the site to build King's College. Re-established in 1505 by the mother of King Henry VII.

Centre for Mathematical Sciences: completed 2002

