



Annotating the map for the
University of Cambridge

David Earl

A new map for the University of Cambridge

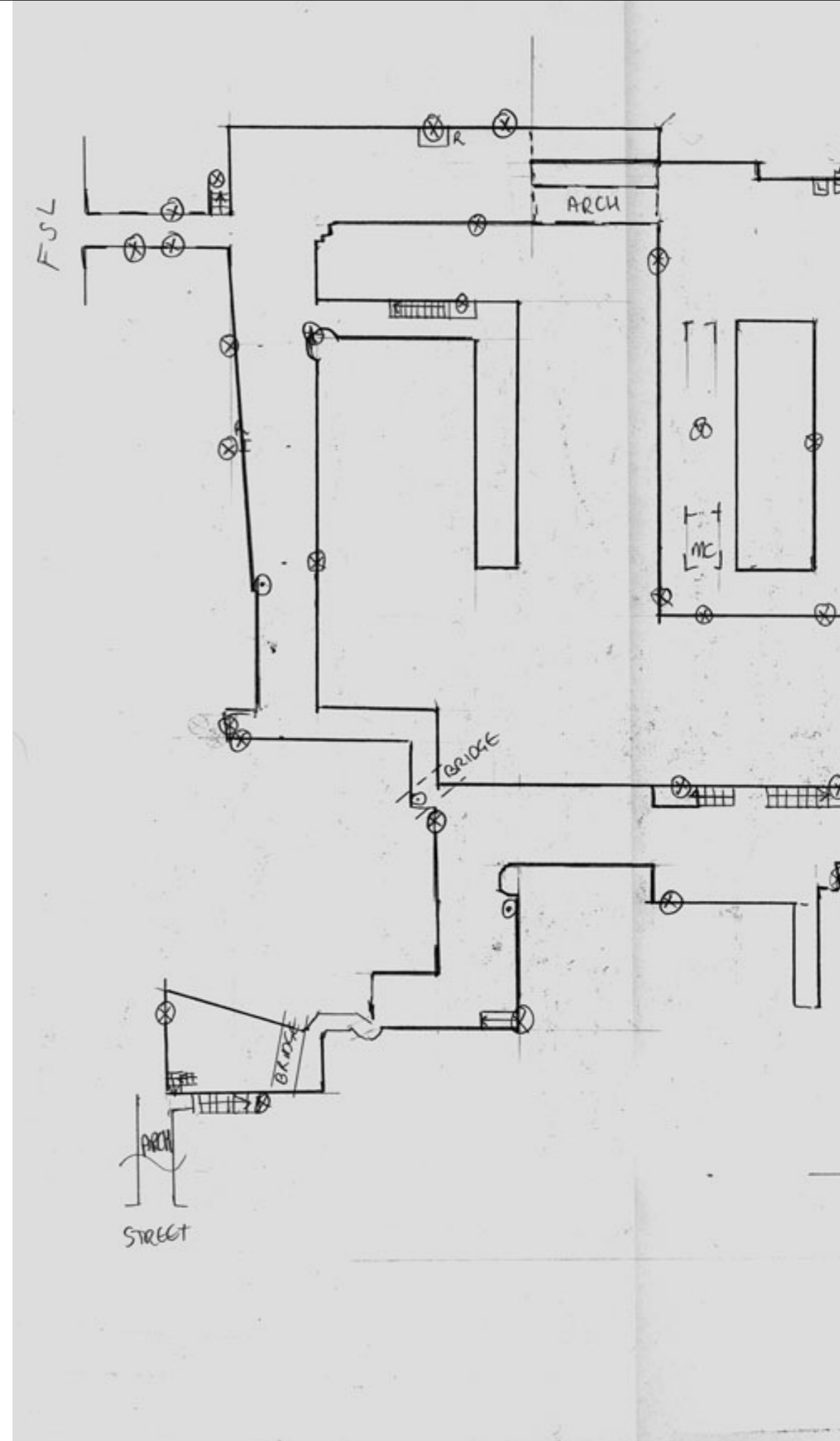
Background: about me

Context: about the University

History: what it replaced

Process: how it was done

Annotation



Setting the scene: Cambridge

A city of about 120,000, about 100km north of London

Roughly circular

Old centre enclosed by a loop of the River Cam to north and west

New city enclosed north and west by M11 and A14

Surrounded by green belt and necklace villages

Dominated by the University, especially centre and west



University of Cambridge

Central and western Cambridge,
expanding northward

17,000 students, 9,000 staff

31 independent colleges, some as
large as a campus university

700 properties on 10 sites and
woven through the city

Cambridge Biomedical Campus
(Addenbrookes)

Fits in an 8km square





A diverse, growing, rabbit-warren of buildings spanning 800 years and 60 sq km

Until 2011...

Adobe Illustrator + hand edited XML index files

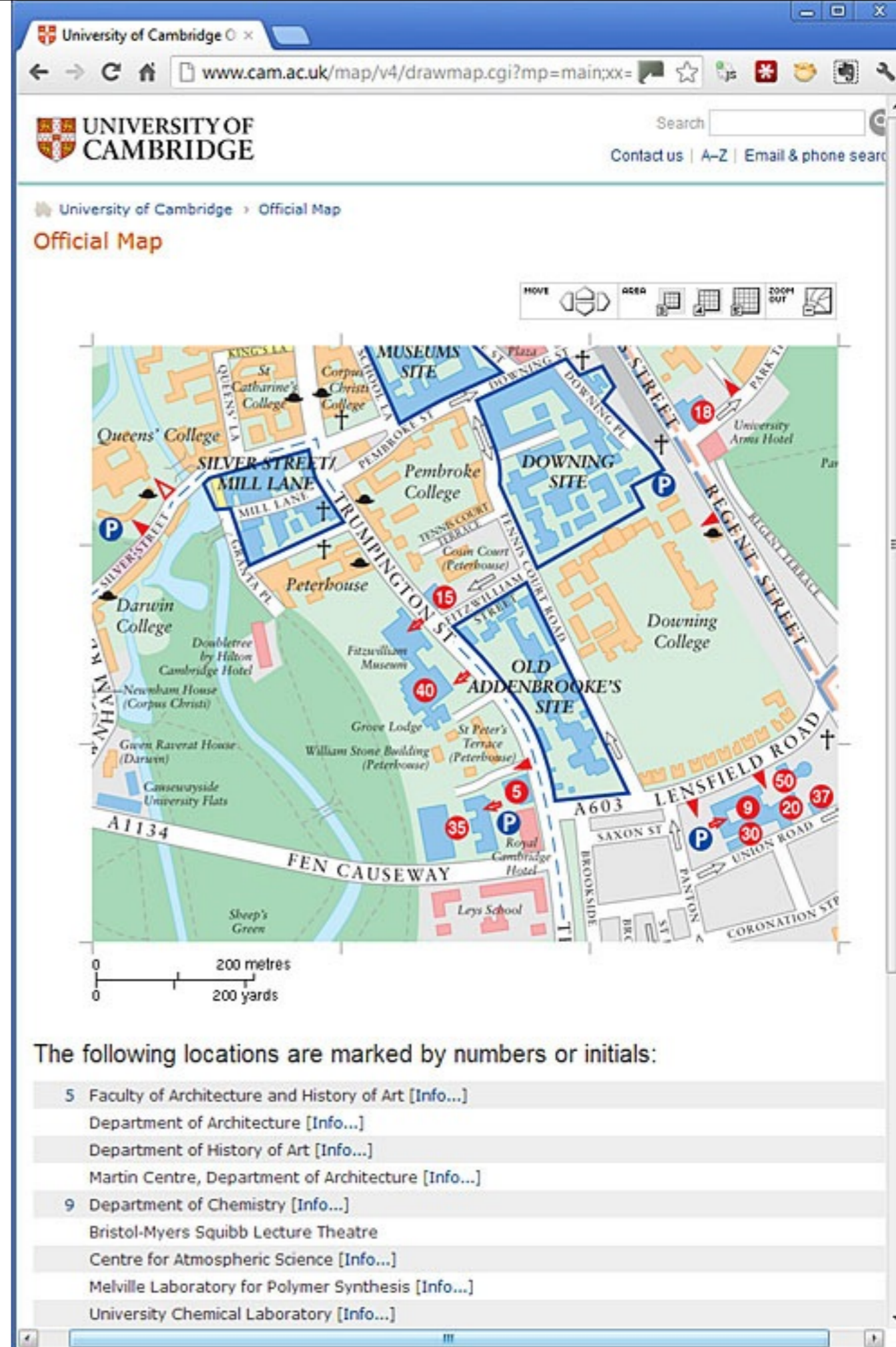
Indexed by pixel co-ordinates

Not suitable for expansion

Out of date technology:
non-'slippy' map, no real zoom

Complex manual paper map

... But overlay some data



University of Cambridge

www.cam.ac.uk/map/v4/drawmap.cgi?mp=main;xx=

UNIVERSITY OF CAMBRIDGE

Search

Contact us | A-Z | Email & phone search

University of Cambridge > Official Map

Official Map

MOVE

ACED

ZOOM OUT

0 200 metres
0 200 yards

The following locations are marked by numbers or initials:

- 5 Faculty of Architecture and History of Art [Info...]
Department of Architecture [Info...]
Department of History of Art [Info...]
Martin Centre, Department of Architecture [Info...]
- 9 Department of Chemistry [Info...]
Bristol-Myers Squibb Lecture Theatre
Centre for Atmospheric Science [Info...]
Melville Laboratory for Polymer Synthesis [Info...]
University Chemical Laboratory [Info...]



2011: new OSM-based map
commissioned, comprising...

Methodology and taxonomy

Survey

Support, management,
training and documentation

'Responsive' web site
with 'slippy' map and incremental index

Paper map

... And later, personal annotation and
private data overlays

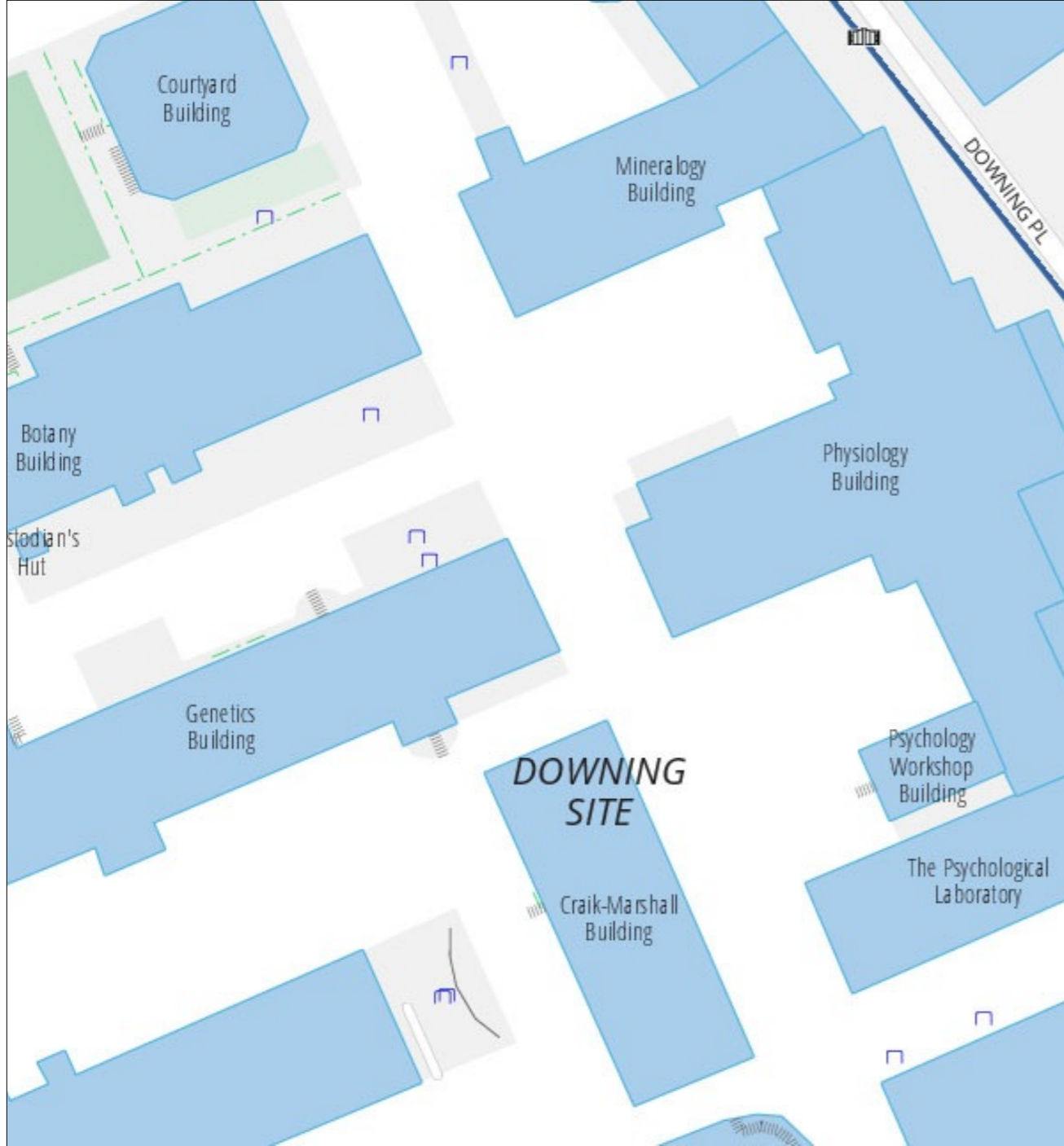
The online map

<http://map.cam.ac.uk>

The screenshot shows a web browser window displaying the University of Cambridge online map. The browser's address bar shows the URL map.cam.ac.uk. The page header includes the University of Cambridge logo and the text "University map / Search with more than one result". The main heading is "University map". Below this, there are navigation controls: "Help & key", "More", and zoom in (+) and zoom out (-) buttons. A search bar contains the text "fre". To the left of the map, a list of search results is displayed, each with a red circular icon containing a number:

- 1 Department of French, Sidgwick Avenue
- 2 De Freville Avenue
- 3 Free School Lane
- 4 French's Road

The map itself shows a portion of Cambridge, with several buildings highlighted in blue and marked with red numbers 1 through 4. A scale bar indicates 1km. At the bottom left, there is a logo for UCS (University Computing Service) and a copyright notice: "This map is provided and managed by the University Computing Service. Privacy & cookie policy | About the map, help & key. Map base data copyright © OpenStreetMap contributors (including University of Cambridge), licensed ODbL1.0. Map presentation copyright © 2012-2013 University of Cambridge."



Survey

OSM street pattern complete

University at variable quality

~45 days

5-10m accuracy

Upload using JOSM

GPS impractical

Laser measure, notes, photos

Satellite images and issues...

Geography

Site/college

Entrance

Building

Entrance

Street

Non-uni
feature

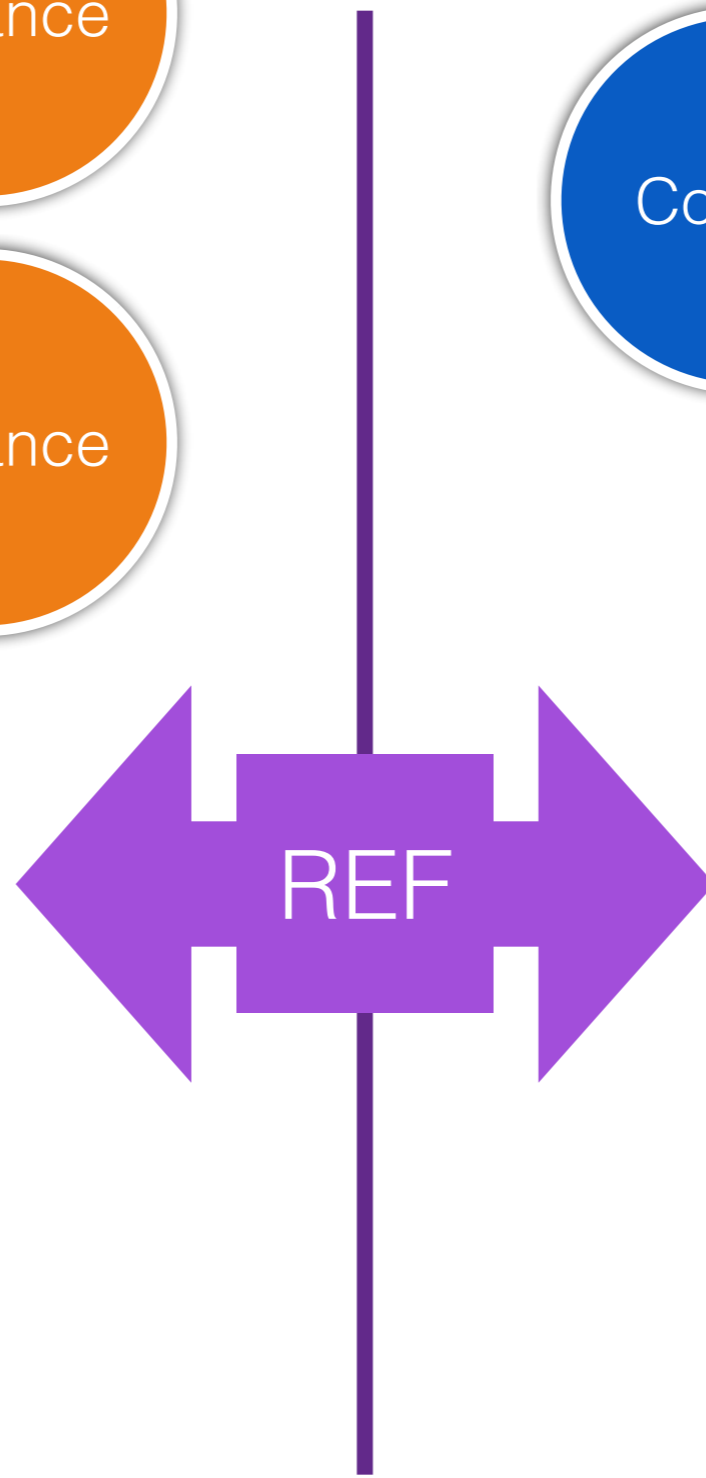
Organisation

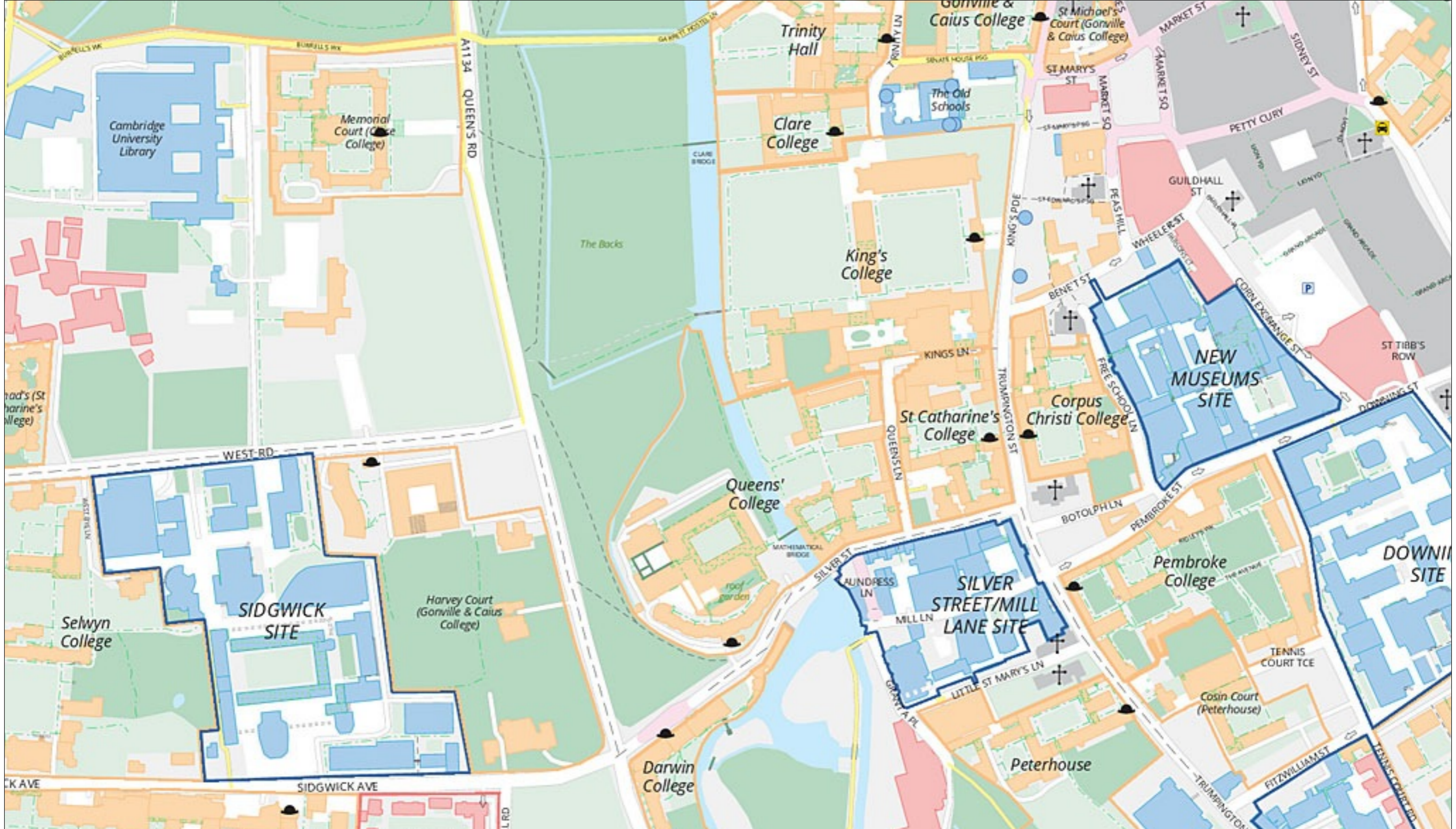
College

Faculty

Department

Non-
academic
etc





Rendering

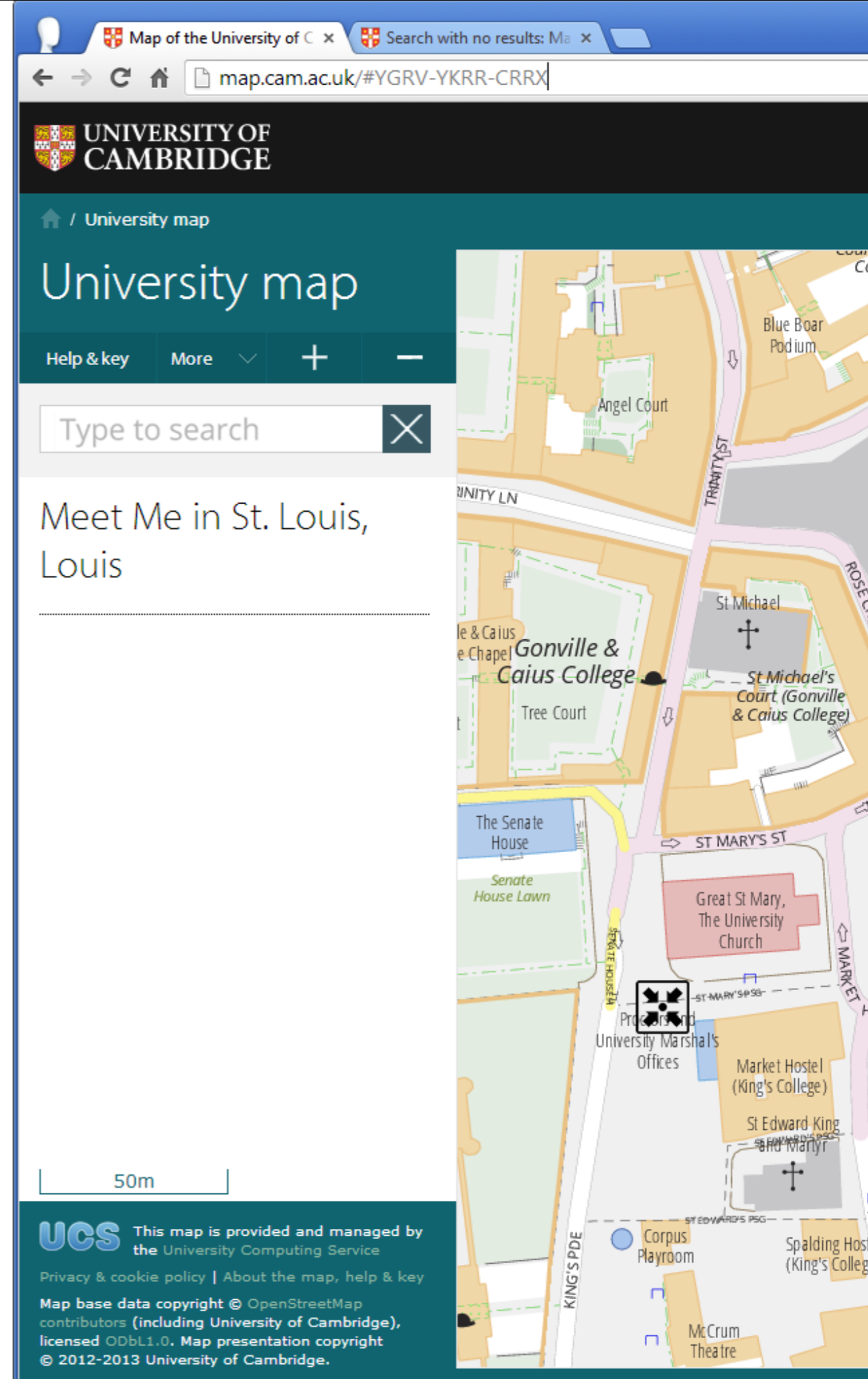
House style; semi-manual

Annotation: rationale

Ephemera (meeting places, routes...)

Semi-permanence (series of events...)

Permanent (additional detail, specialist information)



Annotation: methodology

Dynamic mashup

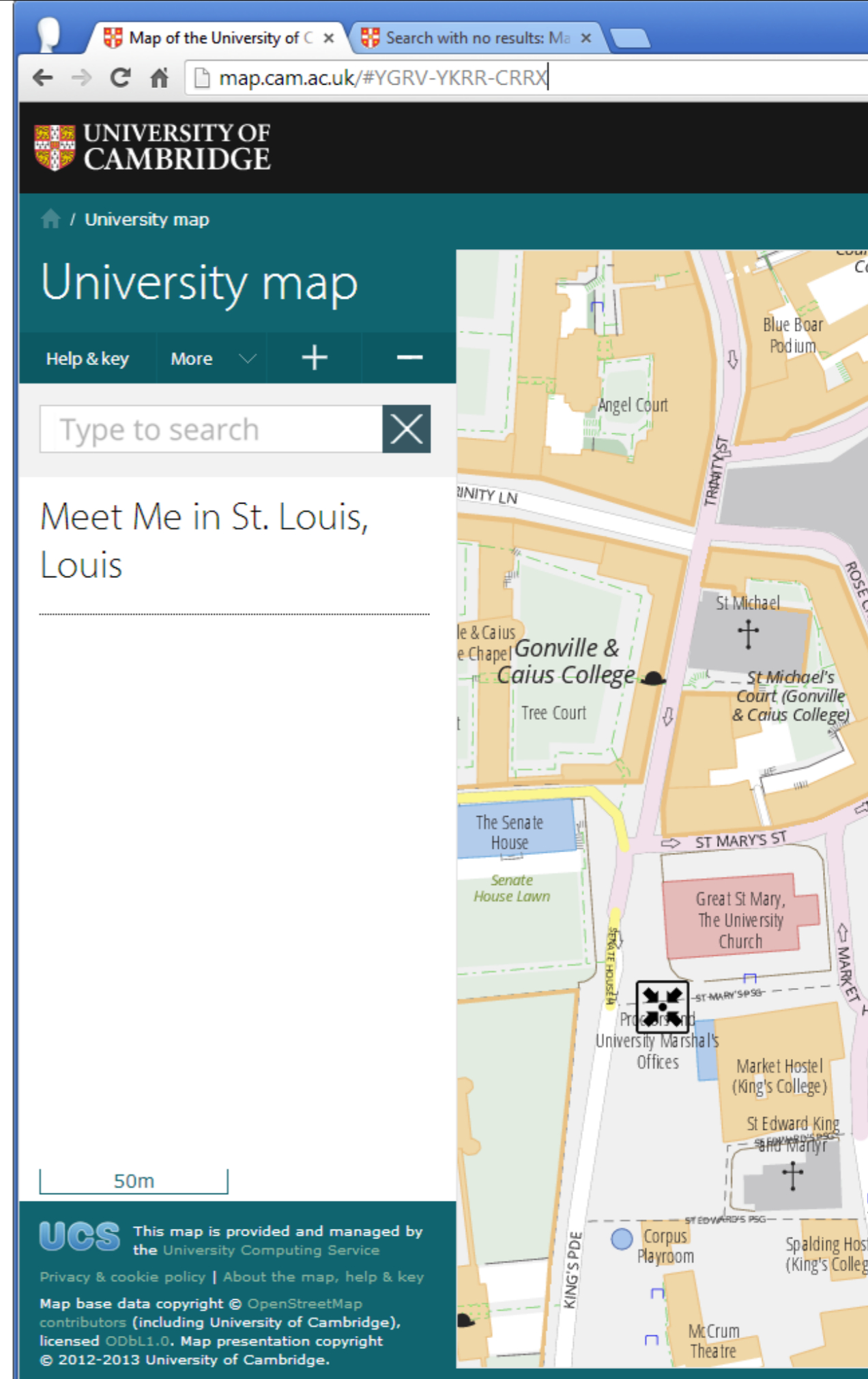
- no central server necessary
- scripted or manual

UCam - Geo - JSON

Rendering (HTML, SVG, VML)

Interactive editor

Conversion of old map
markers



Map of the University of Cambridge

map.cam.ac.uk/overlay/#52.203204,0.122897,17

UNIVERSITY OF CAMBRIDGE

University map / Annotate the map

University map

Help & key More + -

Data Feature Point Undo

Save

Save with the map (requires Raven login, see [terms & conditions](#)):

Save

Or, download to a file, for permanent use from your own server or web site (consider saving to University personal web pages, a Dropbox folder or other cloud file sharing service):

Download file

Or, copy data from here (PC: CTRL+C, Mac: Clover+C) and paste it as required:

```
{ "type": "FeatureCollection",  
  "features": [  
    { "type": "Feature", "geometr
```

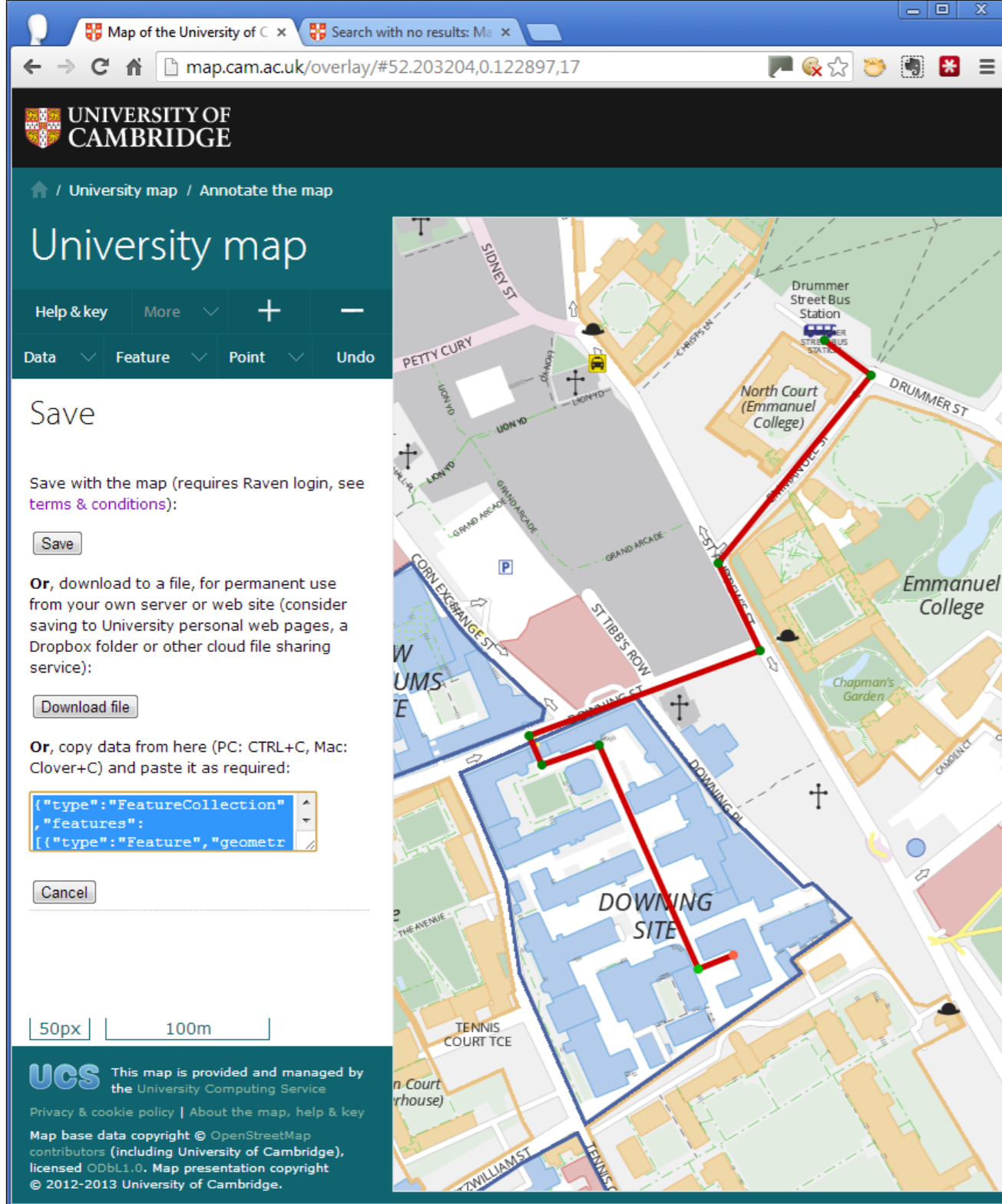
Cancel

50px 100m

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Privacy & cookie policy | About the map, help & key

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Annotation: features

points

(with images and/or text)

poly-lines (colour, width...)

areas

(colour, transparency...)

undo-redo

move, insert, z-ordering

save/load text or file

Map of the University of Cambridge

map.cam.ac.uk/overlay/#52.203204,0.122897,17

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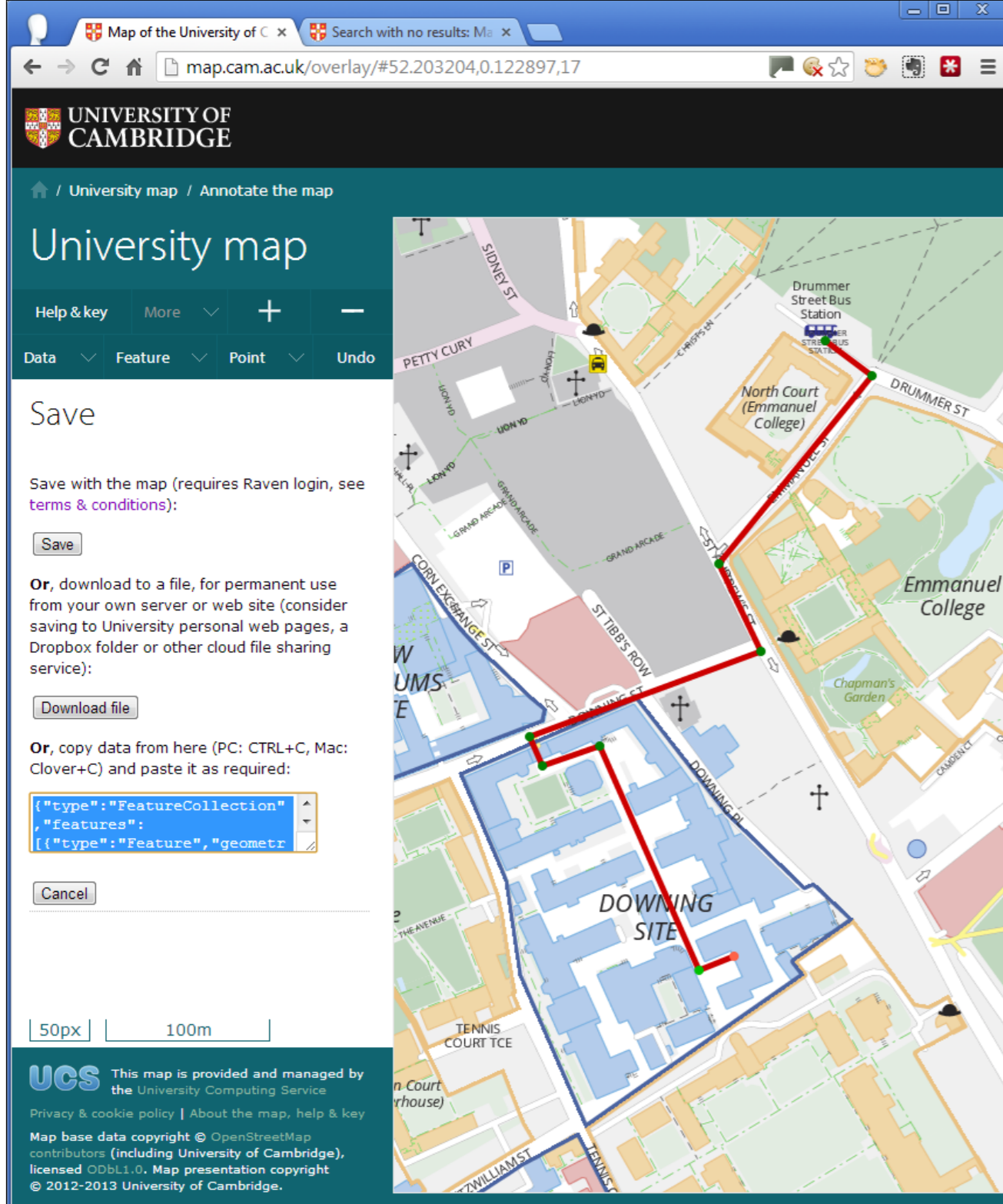
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Annotation: implementation

Javascript x 2

JQuery

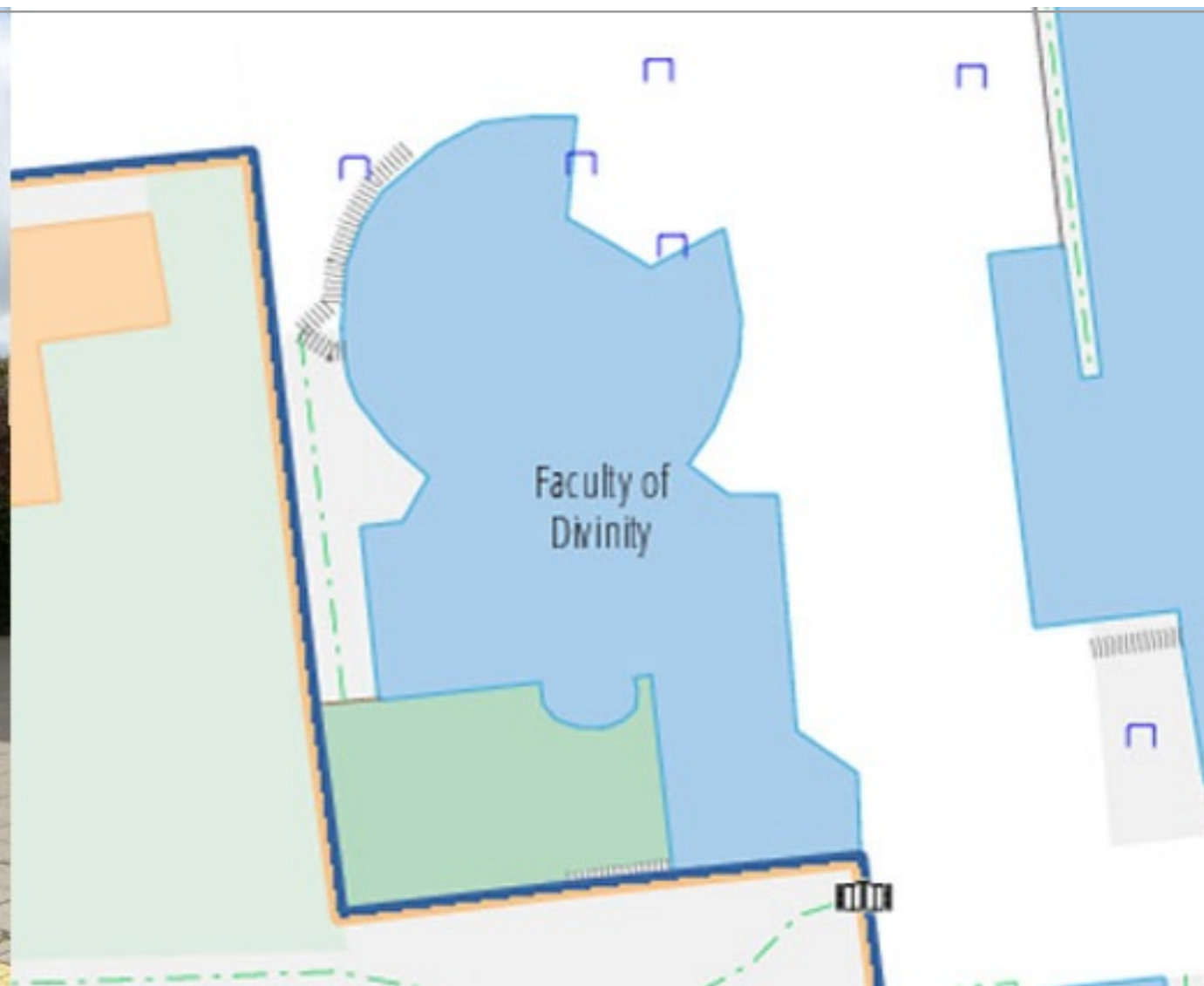
RaphaëlJS (or other
graphics, e.g. Leaflet)

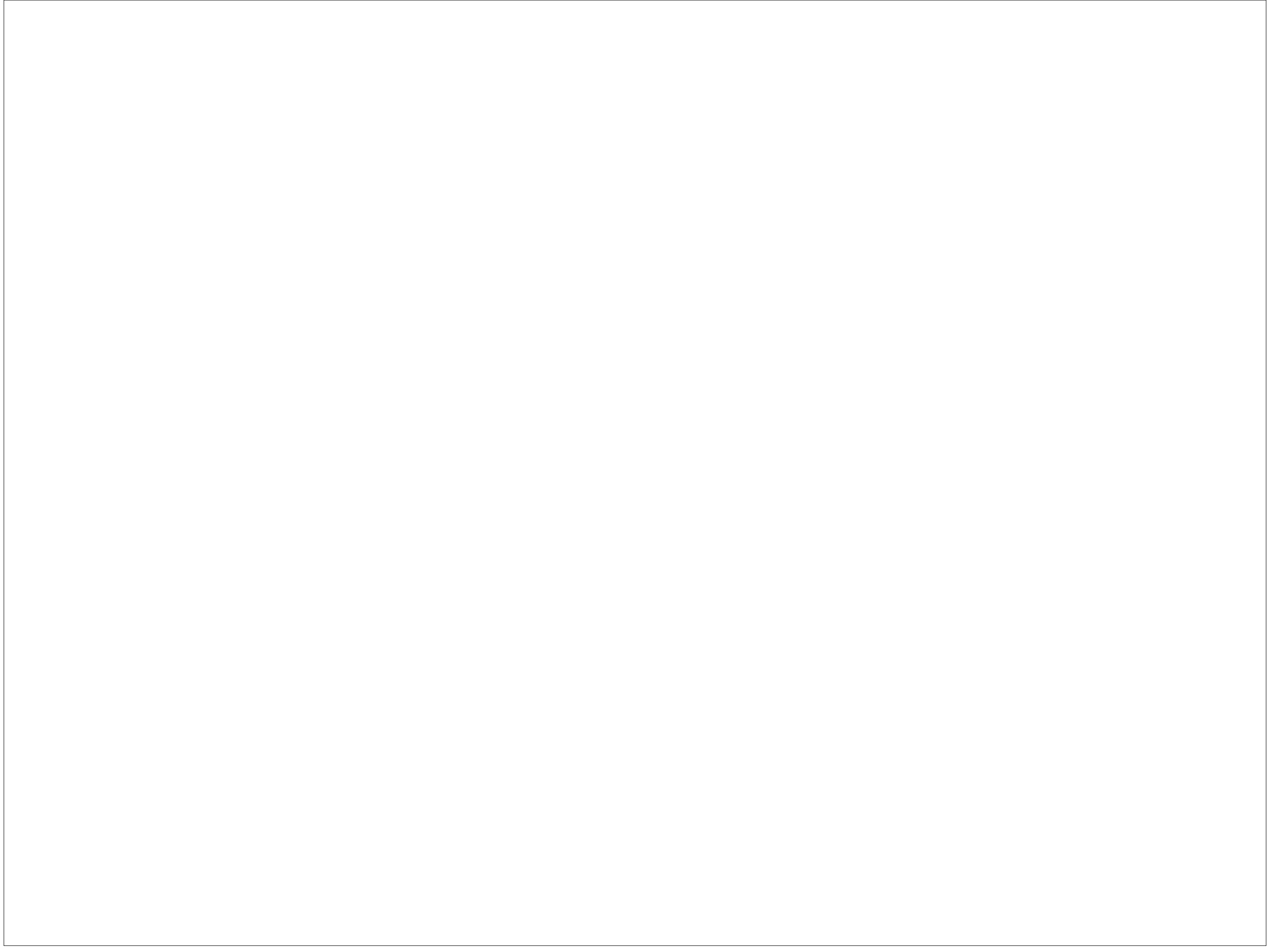
tiny server component

A new map

for the University of Cambridge
with OpenStreetMap at its heart
and annotation at its fingertips

David Earl david@frankieandshadow.com



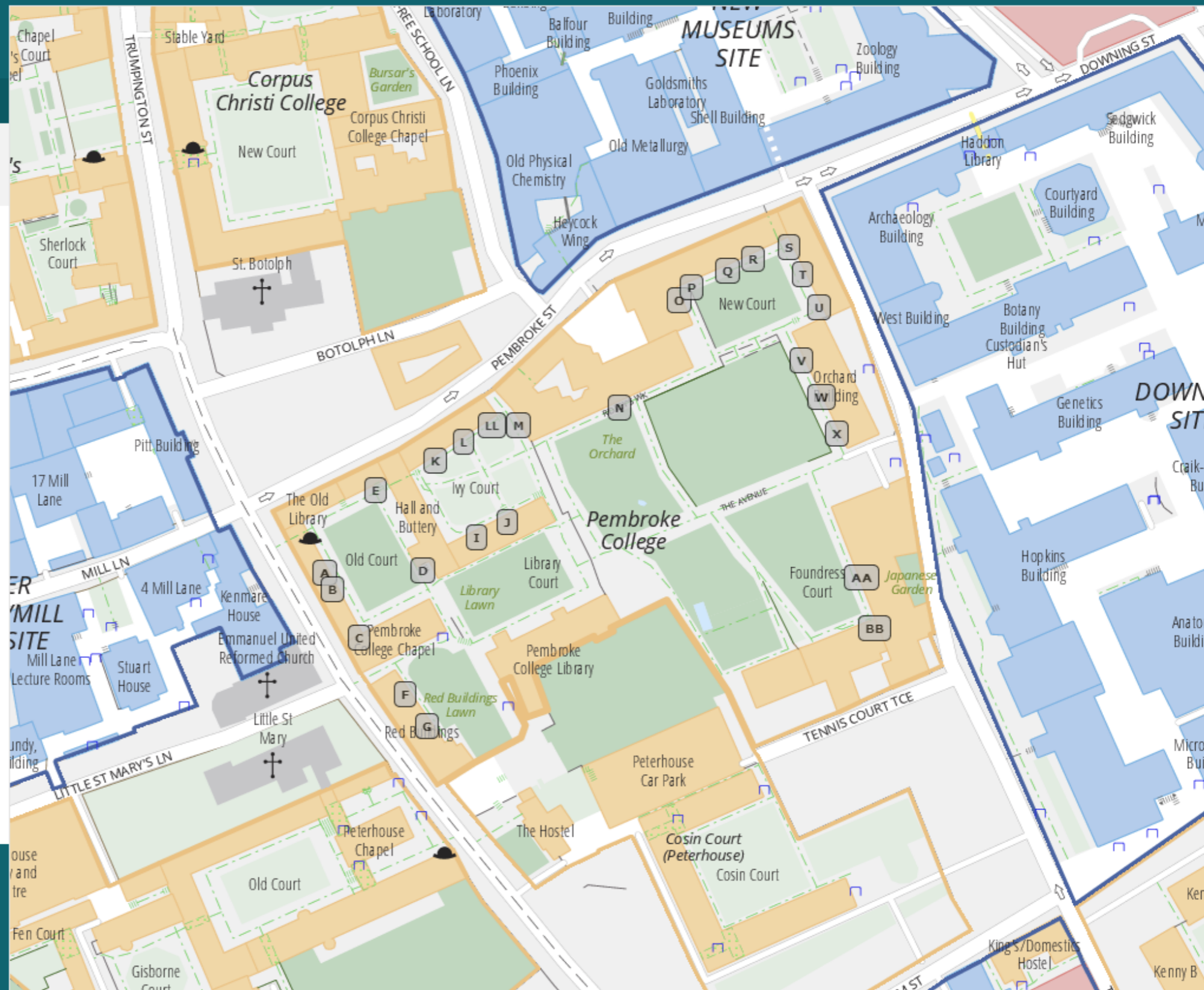


University map

Help & key More + -

Type to search

Pembroke College staircases



50m

University map

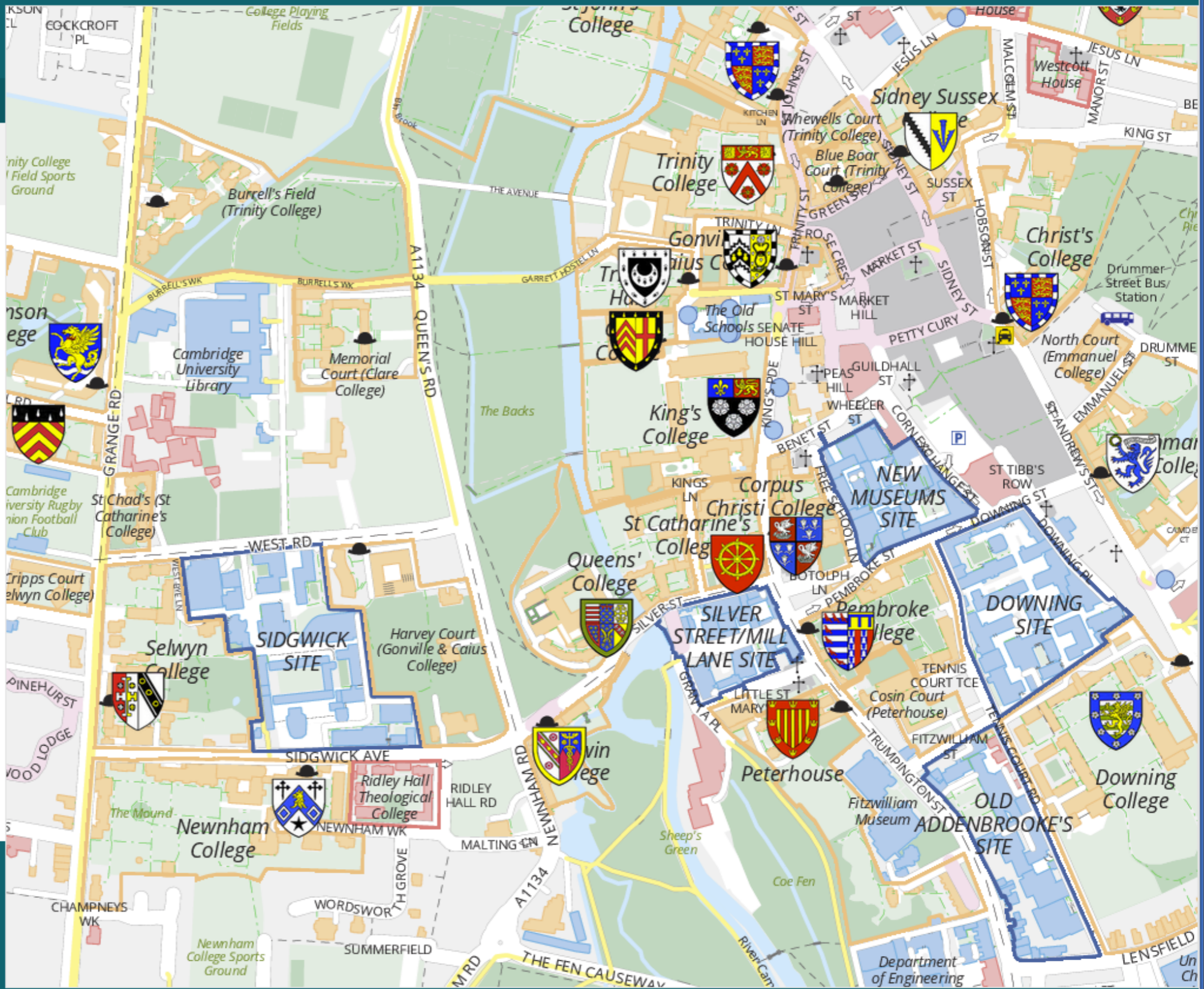
Help & key More + -

Type to search

The College Armorial

Click a shield to go to the corresponding college website

200m





University map / Annotate the map

University map

Help & key More + -
Data Feature Point Undo

Annotate the map beta

Quick start hints

Description

Heading:

To be added to your page in this panel (styled like 'Annotate the map' above).

Further information:

Message to the recipient to be displayed below the heading in this panel. Links (starting 'http...') will be live.

50px 100m

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University map

Help & key More + -
Data Feature Point Undo

Line style

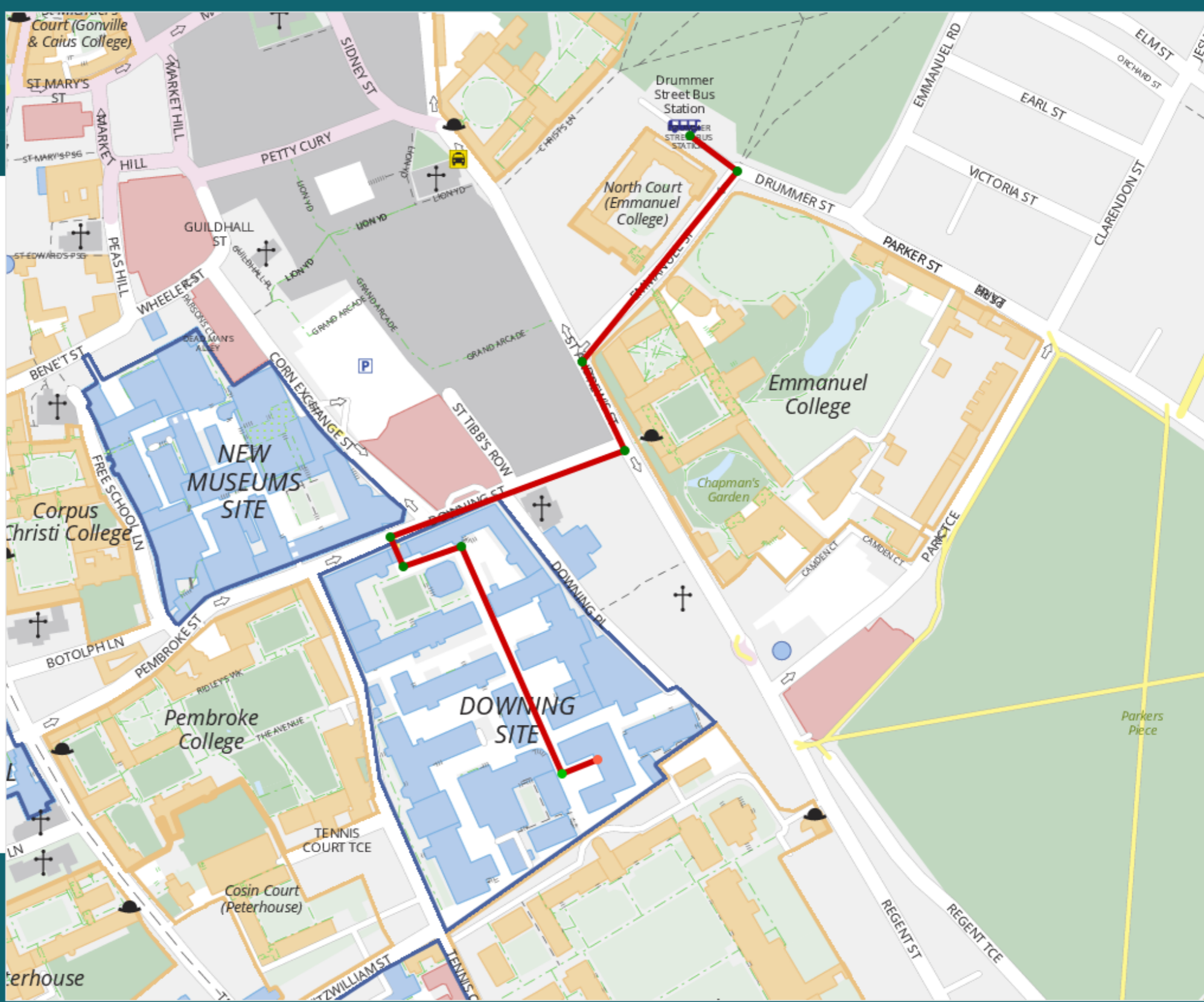
Colour and width

Line colour:

Line width: px

Details

50px 100m



University map

Help & key More + -
Data Feature Point Undo

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Cancel

50px 100m

