



# OpenStreetMap

#27-jmckl

John McKerrell  
[john@mckerrell.net](mailto:john@mckerrell.net)

Senior Software Developer - Multimap.com

# Why OSM?

- Geodata isn't
  - Free
  - Open
  - Current
- Wiki is obvious next step
- It's just *fun*





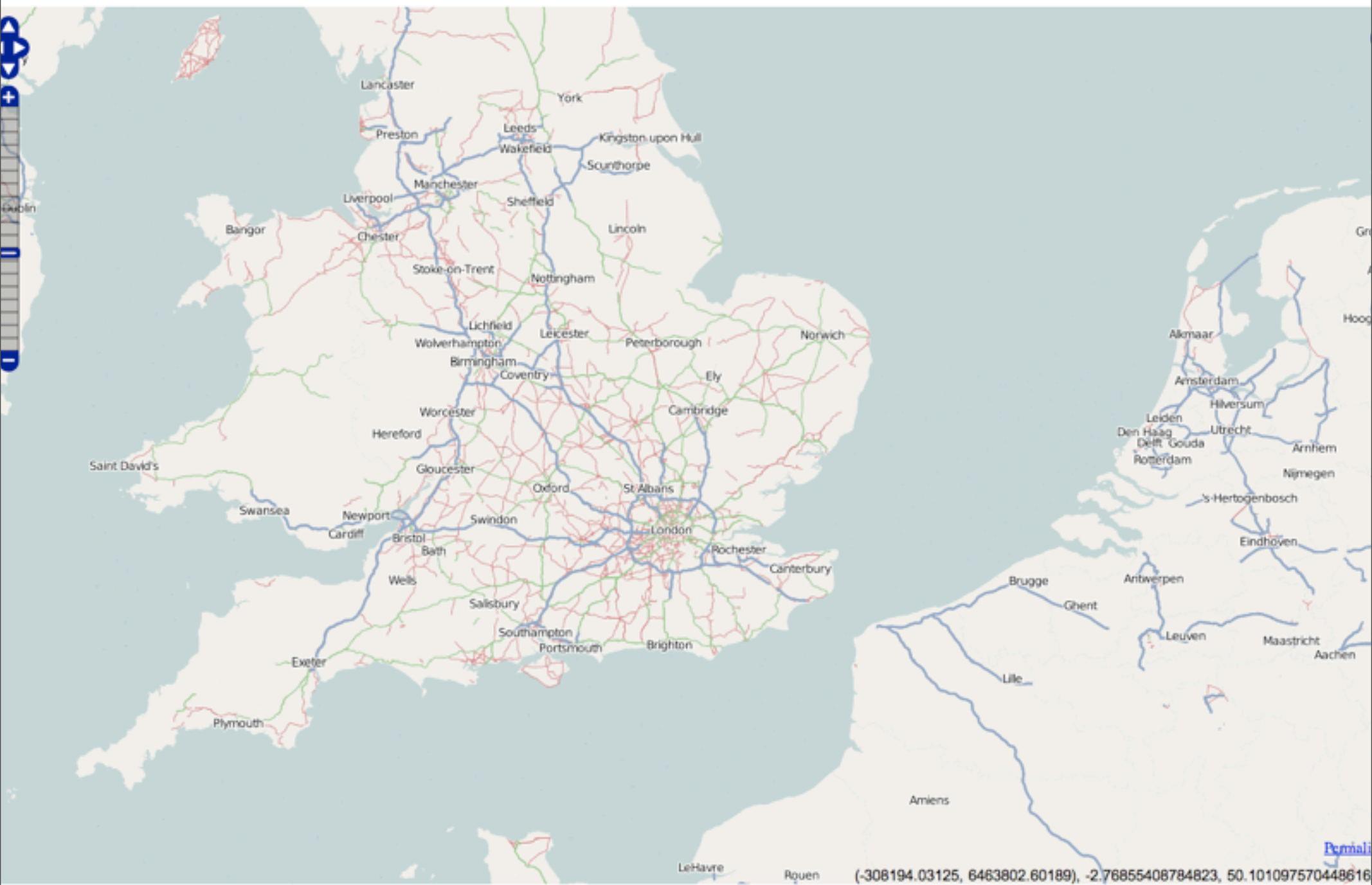
We make beautiful maps

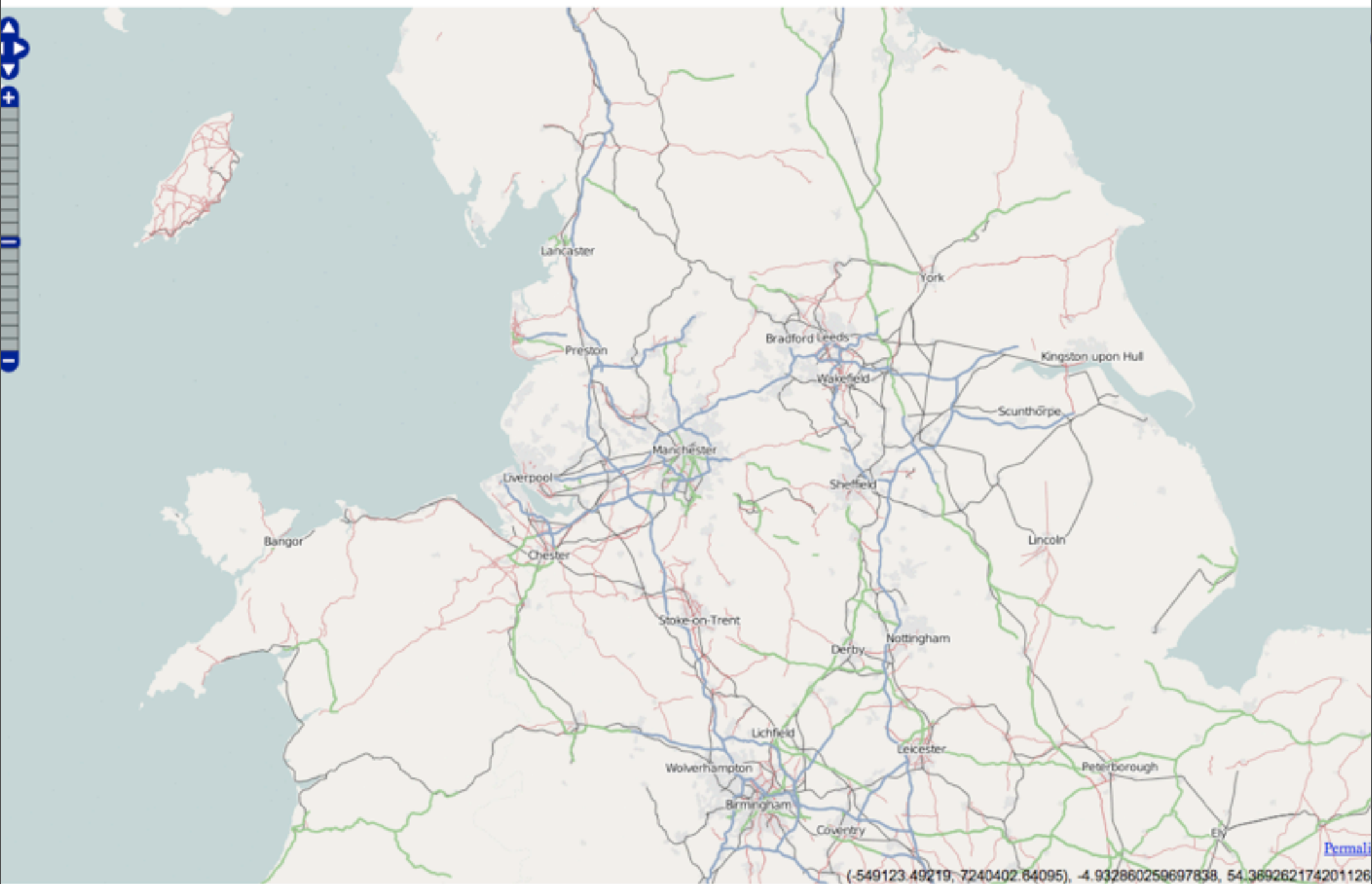


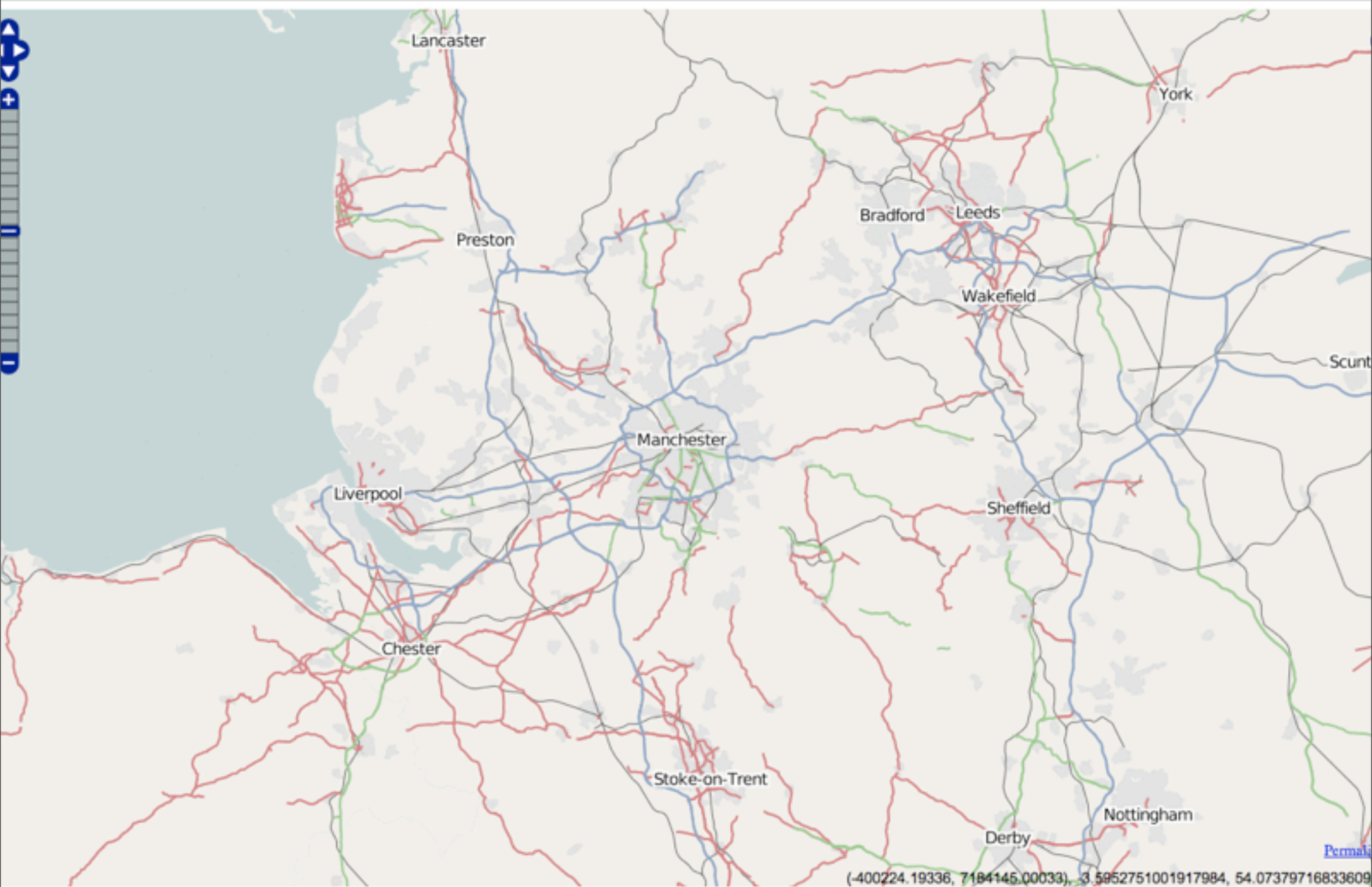


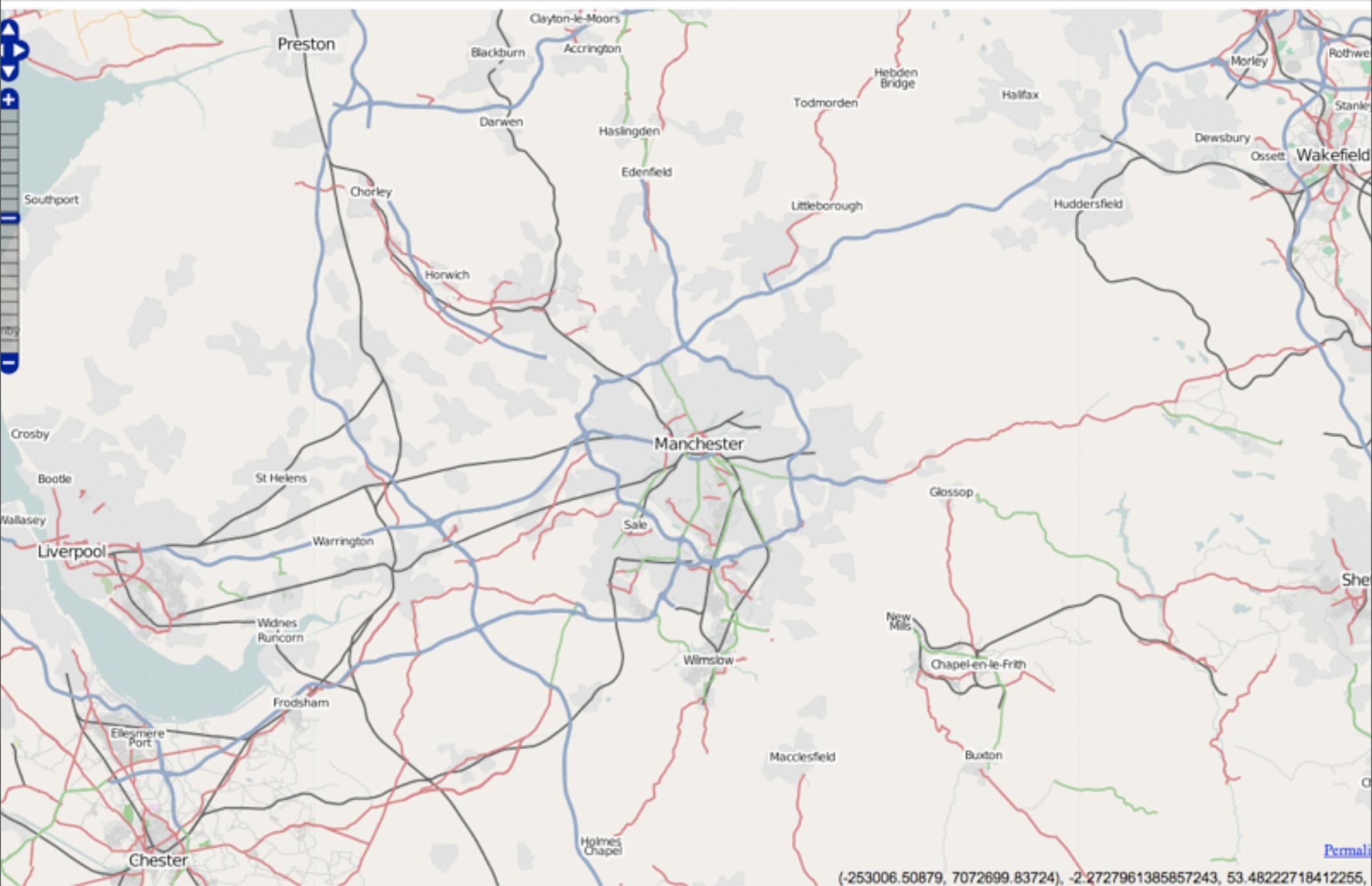
...which we give away

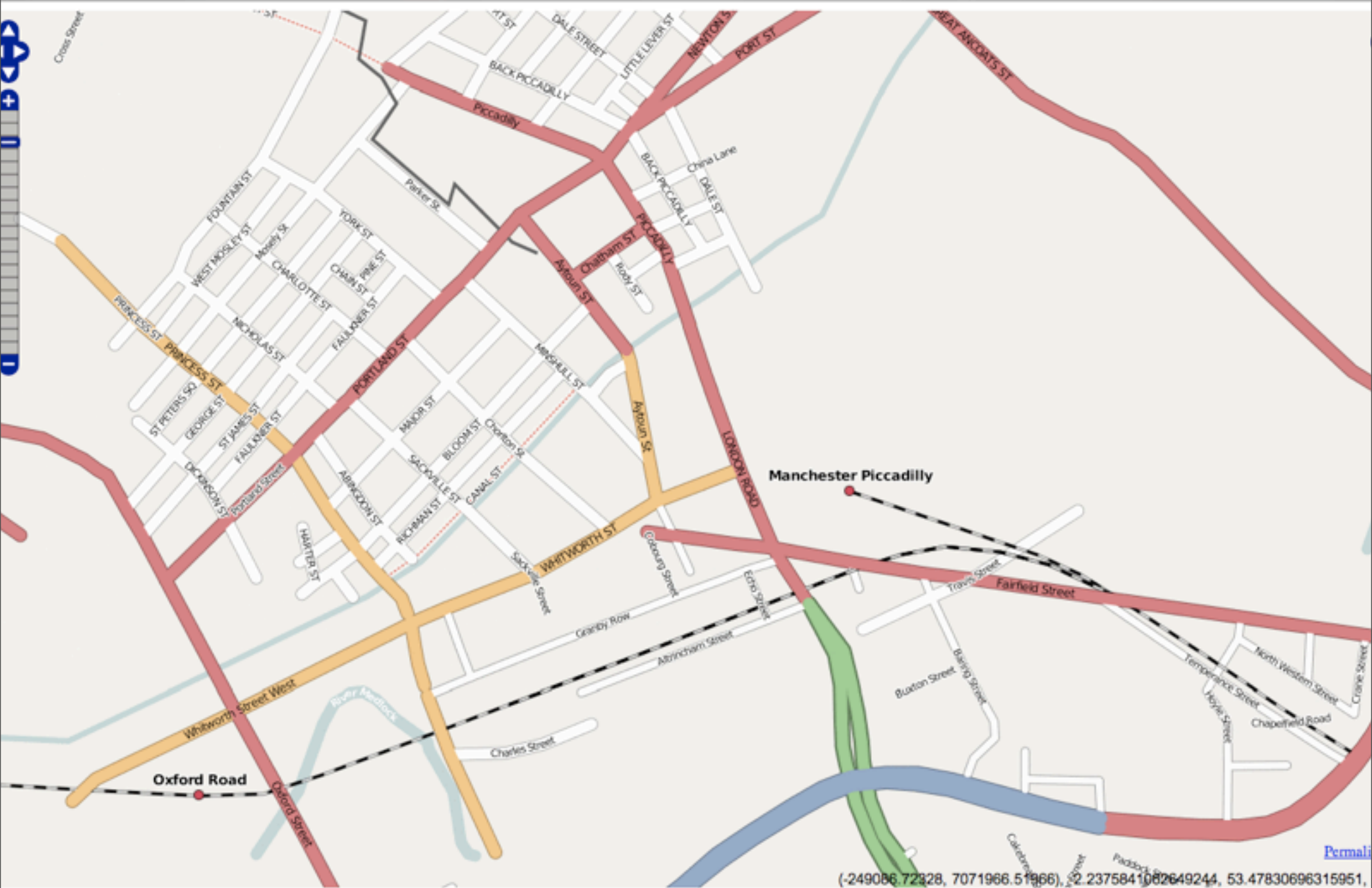


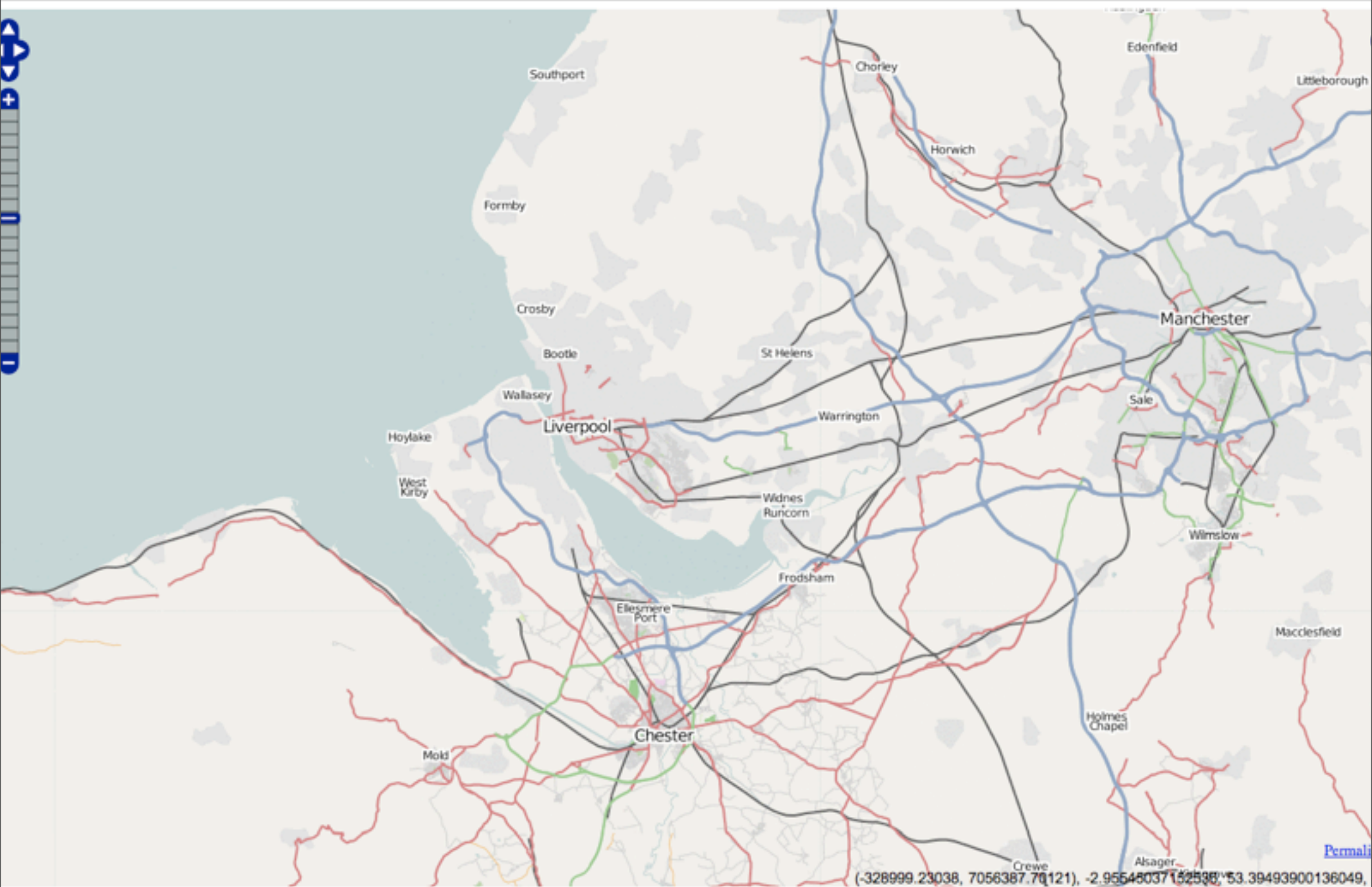


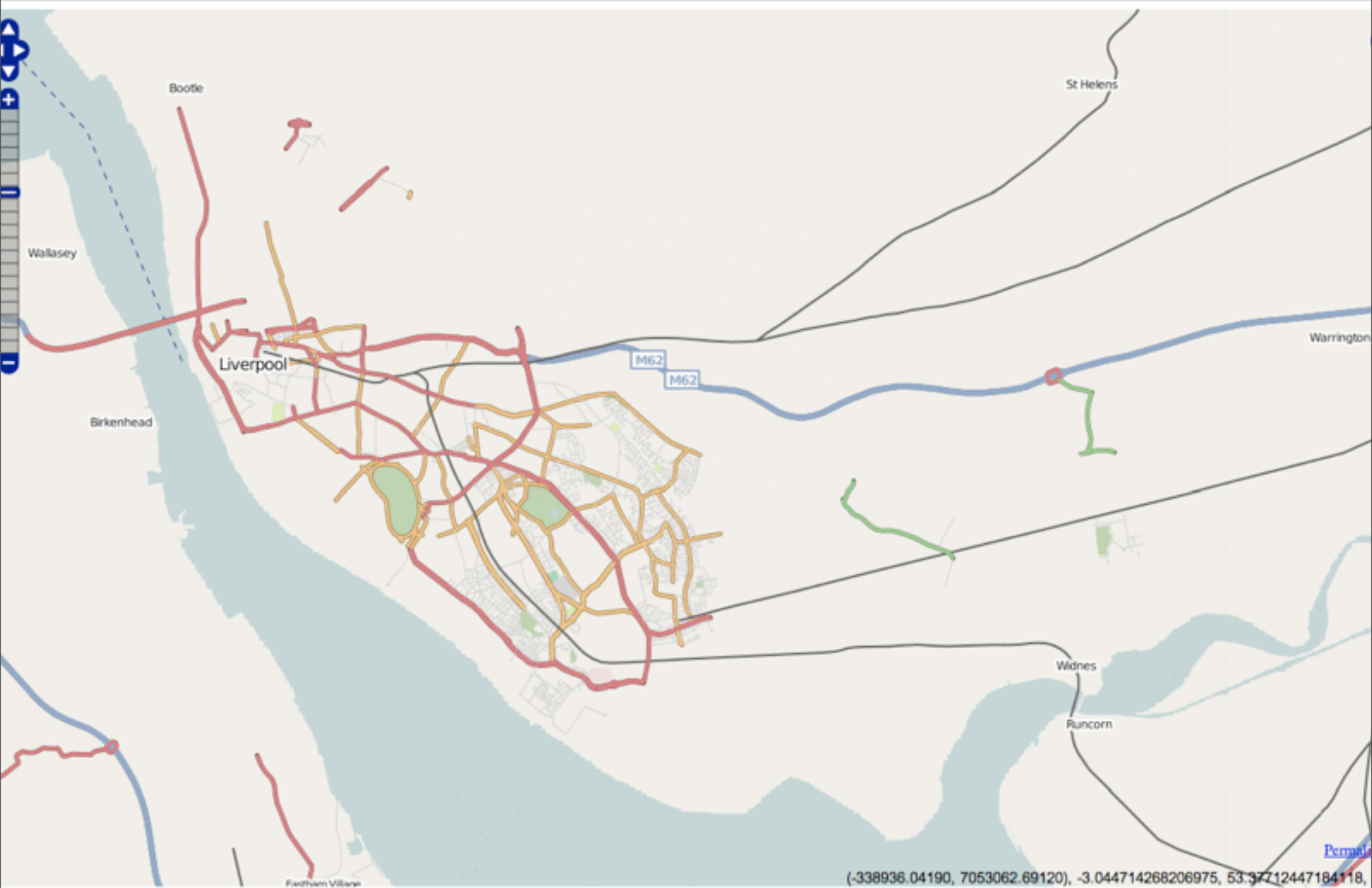






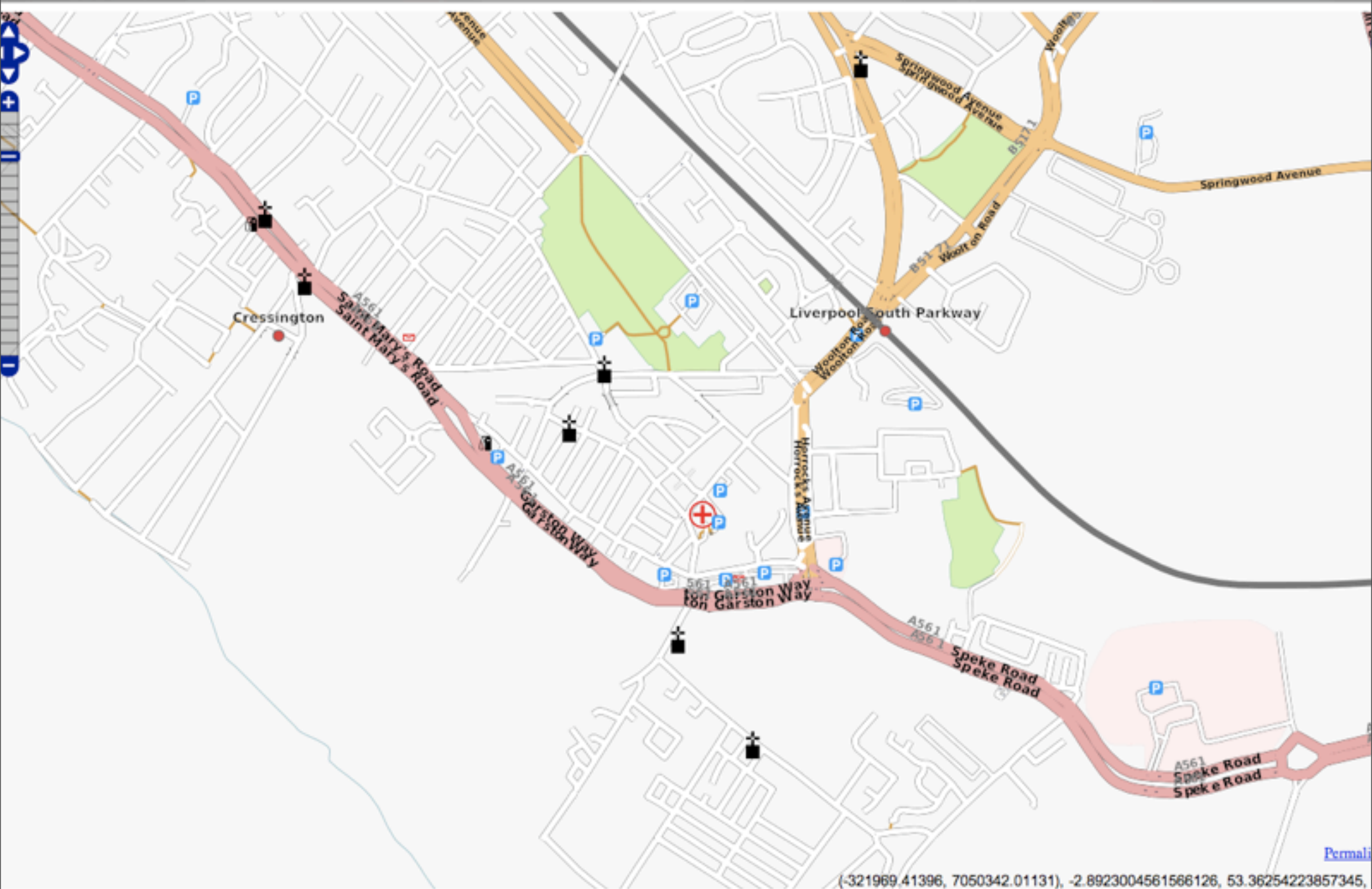




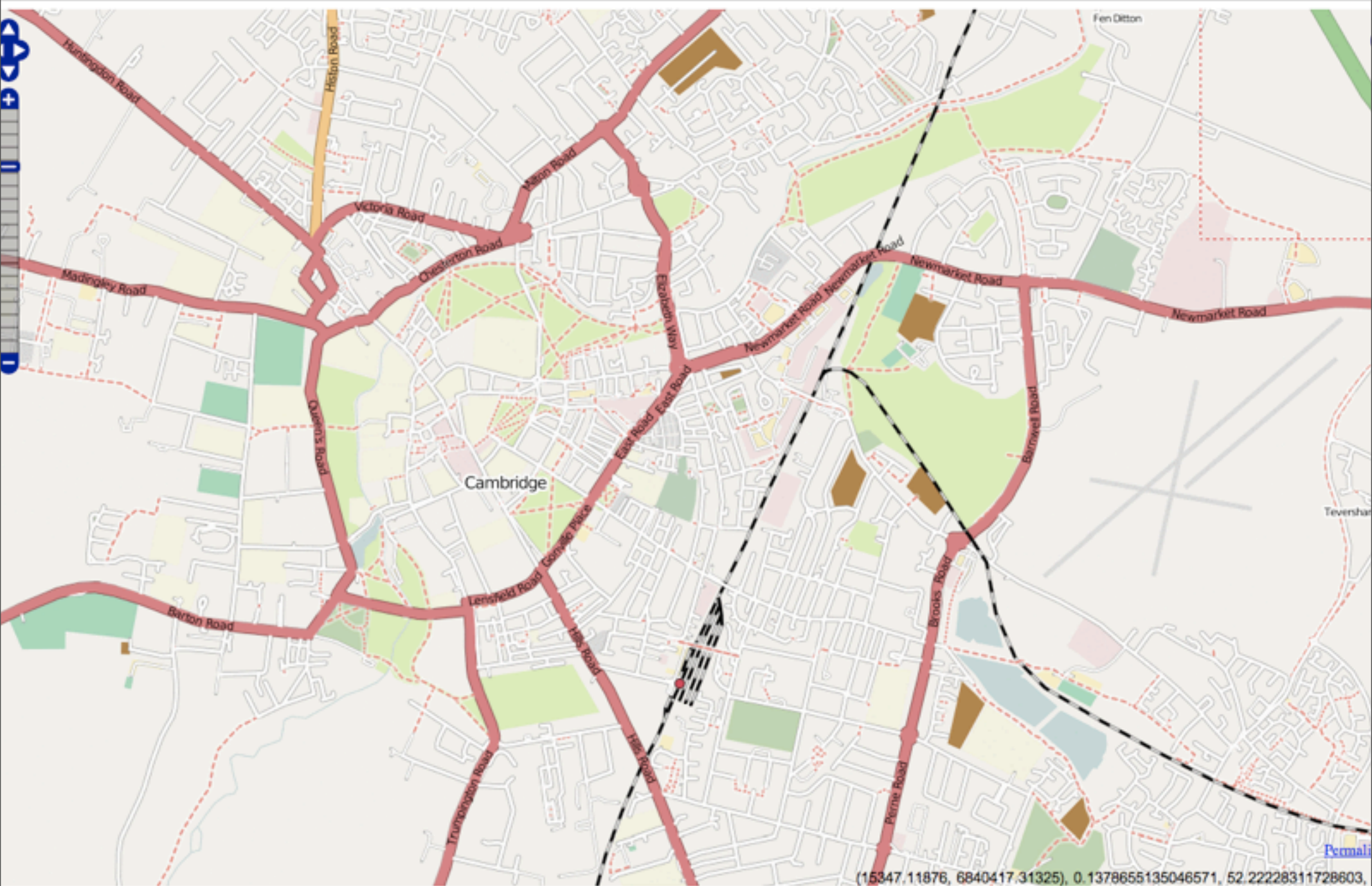


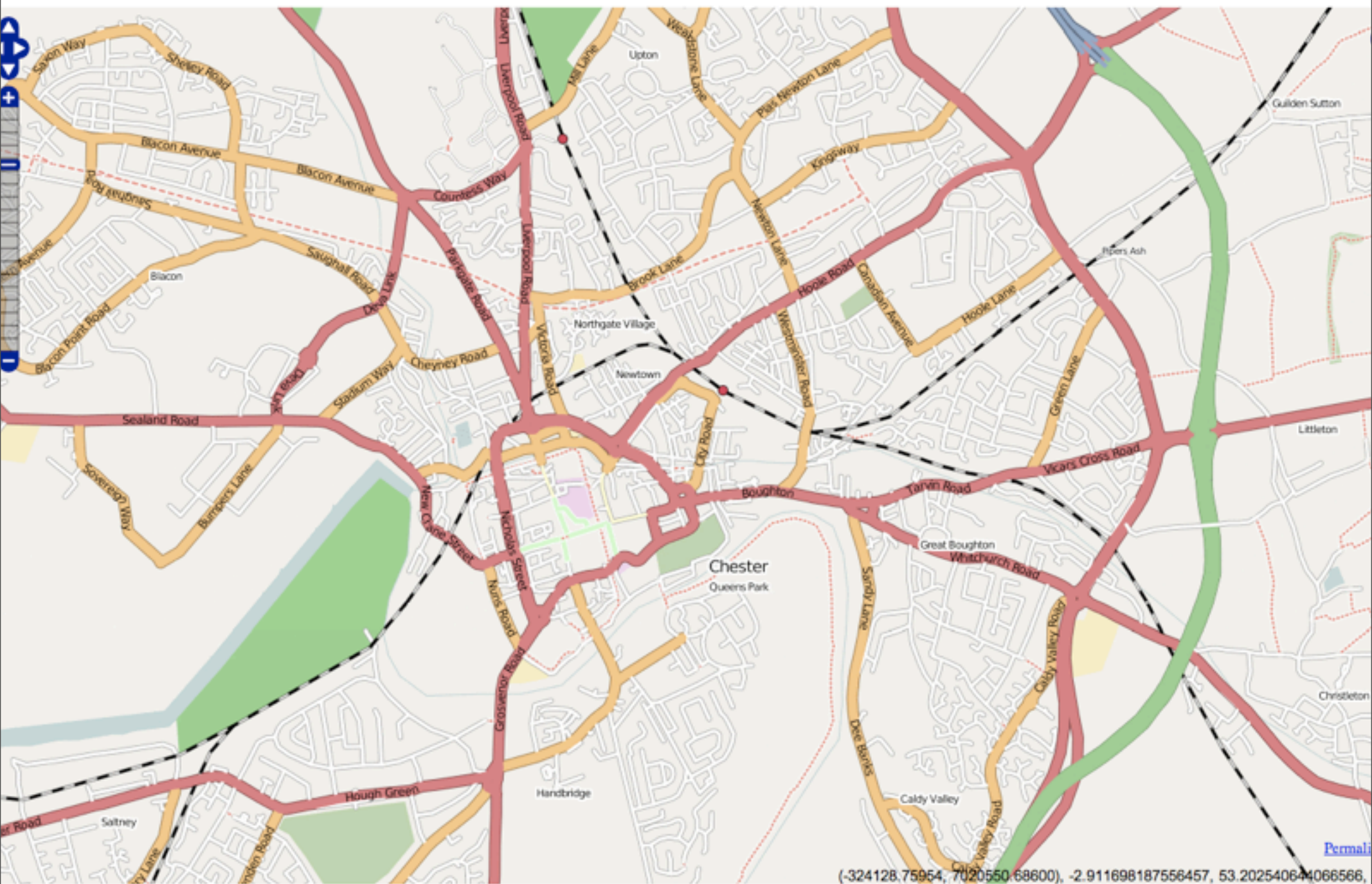














# Some Quotes



# Quote 1

“It’s absolutely possible for a bunch of smart guys with the technology we have today to capture street networks, and potentially the major roads of the UK and minor roads”

Ed Parsons, ex-CTO Ordnance Survey



# Quote 2

“If you don’t make [lower-resolution mapping data] publicly available, there will be people with their cars and GPS devices, driving around with their laptops .. They will be cataloguing every lane, and enjoying it, driving 4×4s behind your farm at the dead of night. There will, if necessary, be a grass-roots remapping.”

Tim Berners-Lee



# Quote 3

“You could have a community capability where you took the GPS data of people driving around and started to see, oh, there’s a new road that we don’t have, a new route .. And so that data eventually should just come from the community with the right software infrastructure.”

Bill Gates



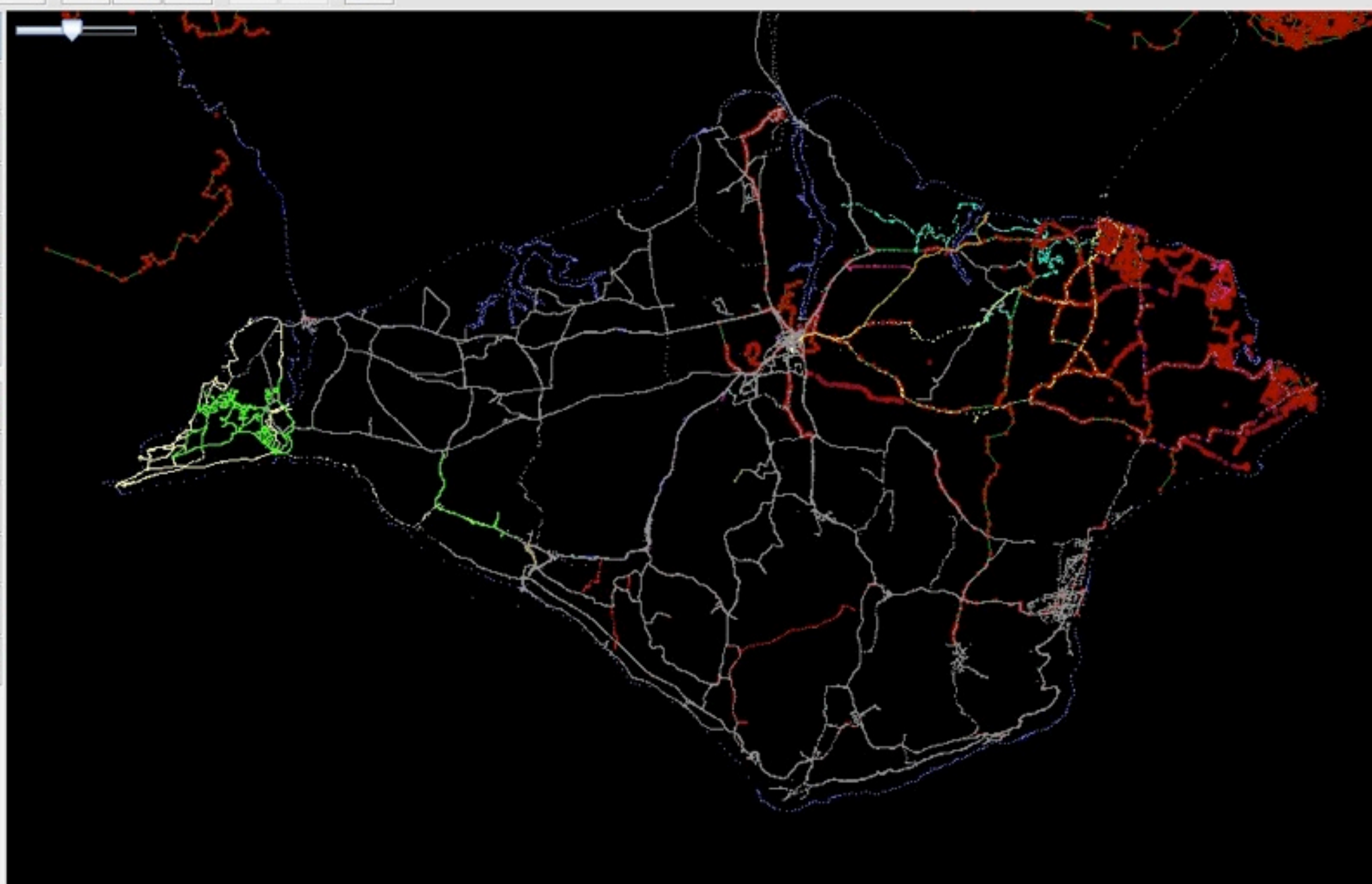
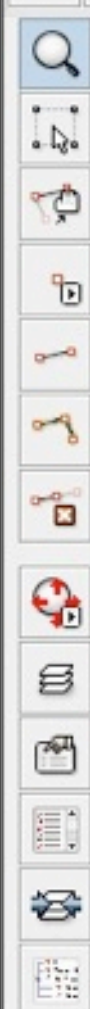
# Workshops

## Or, Map as Party

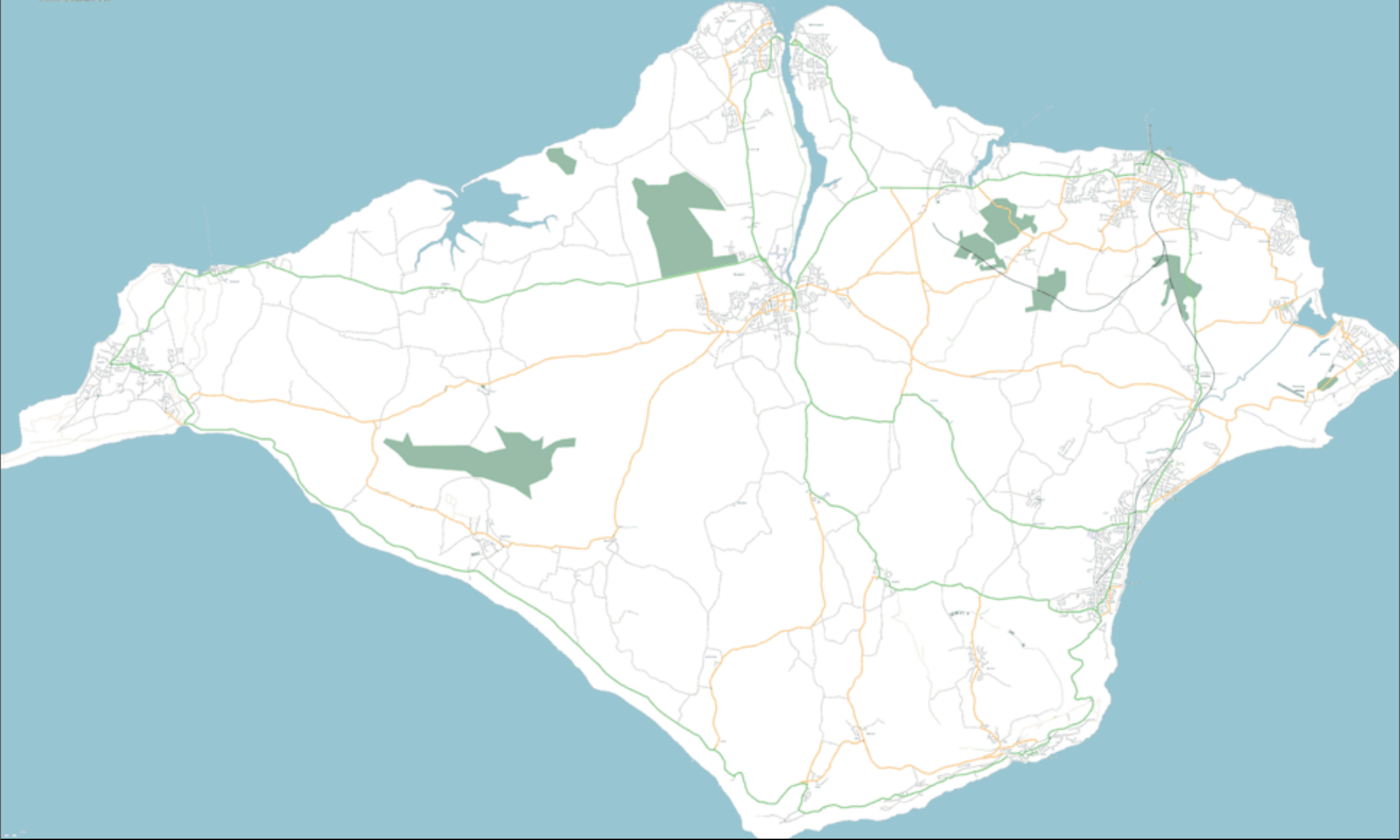








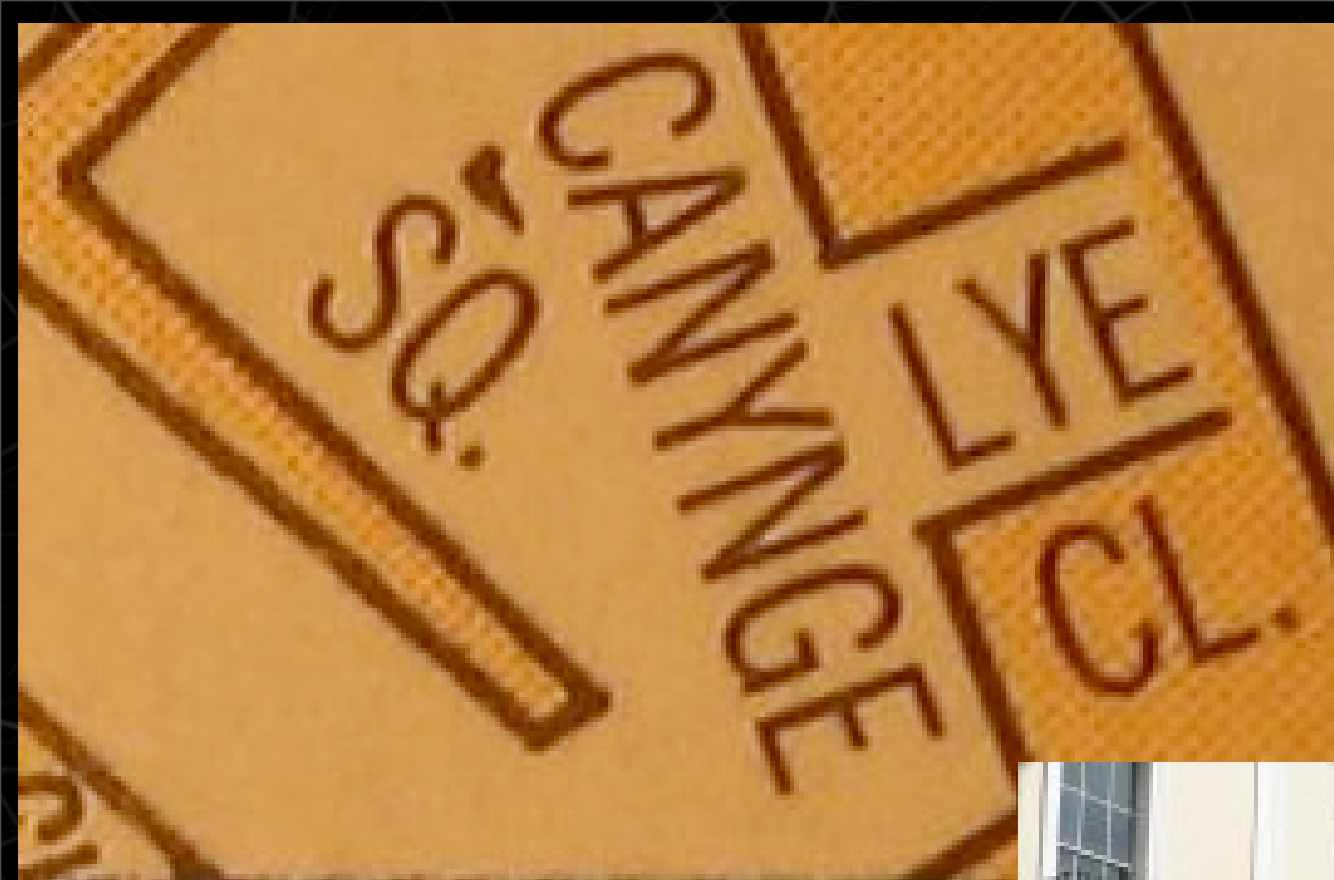
Object





# Fallout





# A-Z

Norman Dennison, director of Geographers' A-Z Map Company, confirms that Lye Close is a lie, which will now be removed. "The idea is to put something on the map to protect copyright," he says. "We try to put it in an area or a part of a road which would not be misleading to the ordinary person in the street. They have been put in out-of-the-way places."



# Using OSM



OpenStreetMap



The Free Wiki World Map

[Help & Wiki](#)  
[News blog](#)  
[Shop](#)

## User

display name:

[View](#)[Edit](#)[GPS traces](#)Welcome [steve@asklater.com](#) [Logout](#)

# Your GPS Traces

[see traces from all users](#)

## Editing the trace mc-steve-4.gpx



filename: mc-steve-4.gpx

uploaded: 2006-05-13 16:24:51

description: tags:

OpenStreetMap



The Free Wiki World Map

[Help & Wiki](#)  
[News blog](#)  
[Shop](#)

## tags

[mapchester](#)  
[manchester](#)  
[uk](#)  
[loW](#)  
[isleofwight](#)  
[isle\\_of\\_wight](#)  
[workshop1](#)  
[Isleofwight](#)  
[lewisham](#)  
[wandsworth](#)  
[bloomsbury](#)  
[london](#)  
[M25](#)  
[M1](#)  
[M40](#)  
[horsham](#)  
[guildford](#)  
[A248](#)  
[A25](#)  
[A2003](#)  
[A281](#)  
[test](#)  
[littlehaven](#)[View](#) [Edit](#) [GPS traces](#)Welcome [steve@asklater.com](#) [Logout](#)

# Your GPS Traces

[see traces from all users](#)upload GPX file:  no file selecteddescription: tags: public? ☒ | [help](#)Showing page 0 (1 - 20 of 33) | [next page](#)

		Public?	Delete?
	<a href="#">mc-steve-12.gpx</a> ... (2,099 points) ... on 14-May <a href="#">more</a> / <a href="#">map</a> <i>ava taking two trams in manchester</i> by <a href="#">SteveC</a> in: <a href="#">mapchester</a> <a href="#">manchester</a> <a href="#">uk</a>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<a href="#">mc-steve-11.gpx</a> ... (2,783 points) ... on 14-May <a href="#">more</a> / <a href="#">map</a> <i>conor &amp; anne walking mapchester sunday</i> by <a href="#">SteveC</a> in: <a href="#">mapchester</a> <a href="#">manchester</a> <a href="#">uk</a>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<a href="#">mc-steve-10.gpx</a> ... (2,307 points) ... on 14-May <a href="#">more</a> / <a href="#">map</a> <i>chris &amp; ben sunday mapschester</i> by <a href="#">SteveC</a> in: <a href="#">mapchester</a> <a href="#">manchester</a> <a href="#">uk</a>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<a href="#">mc-steve-9.gpx</a> ... (3,435 points) ... on 14-May <a href="#">more</a> / <a href="#">map</a> <i>mapchester chris and lesley sunday afternoon</i> by <a href="#">SteveC</a> in: <a href="#">mapchester</a> <a href="#">manchester</a> <a href="#">uk</a>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<a href="#">mc-steve-8.gpx</a> ... (3,196 points) ... on 14-May <a href="#">more</a> / <a href="#">map</a> <i>drew &amp; karen saturday eve sunday morn</i> by <a href="#">SteveC</a> in: <a href="#">mapchester</a> <a href="#">manchester</a> <a href="#">uk</a>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<a href="#">mc-steve-7.gpx</a> ... (5,175 points) ... on 14-May <a href="#">more</a> / <a href="#">map</a> <i>chris sunday morning</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>



# Data Model

- Nodes
  - Single point on the earth - Latitude and Longitude
- Segments
  - Pair of nodes connected to make a single line
- Way
  - Ordered list of segments which together make up a long line or an enclosed area



# Data Model

- Tags
  - Nodes/Segments/Ways can have key=value pairs attached to describe their properties.
  - Example node tags:
    - amenity=place\_of\_worship, religion=buddhist
    - amenity=post\_box
  - Example way tags:
    - highway=primary
    - oneway=yes



## OpenStreetMap



The Free Wiki World Map

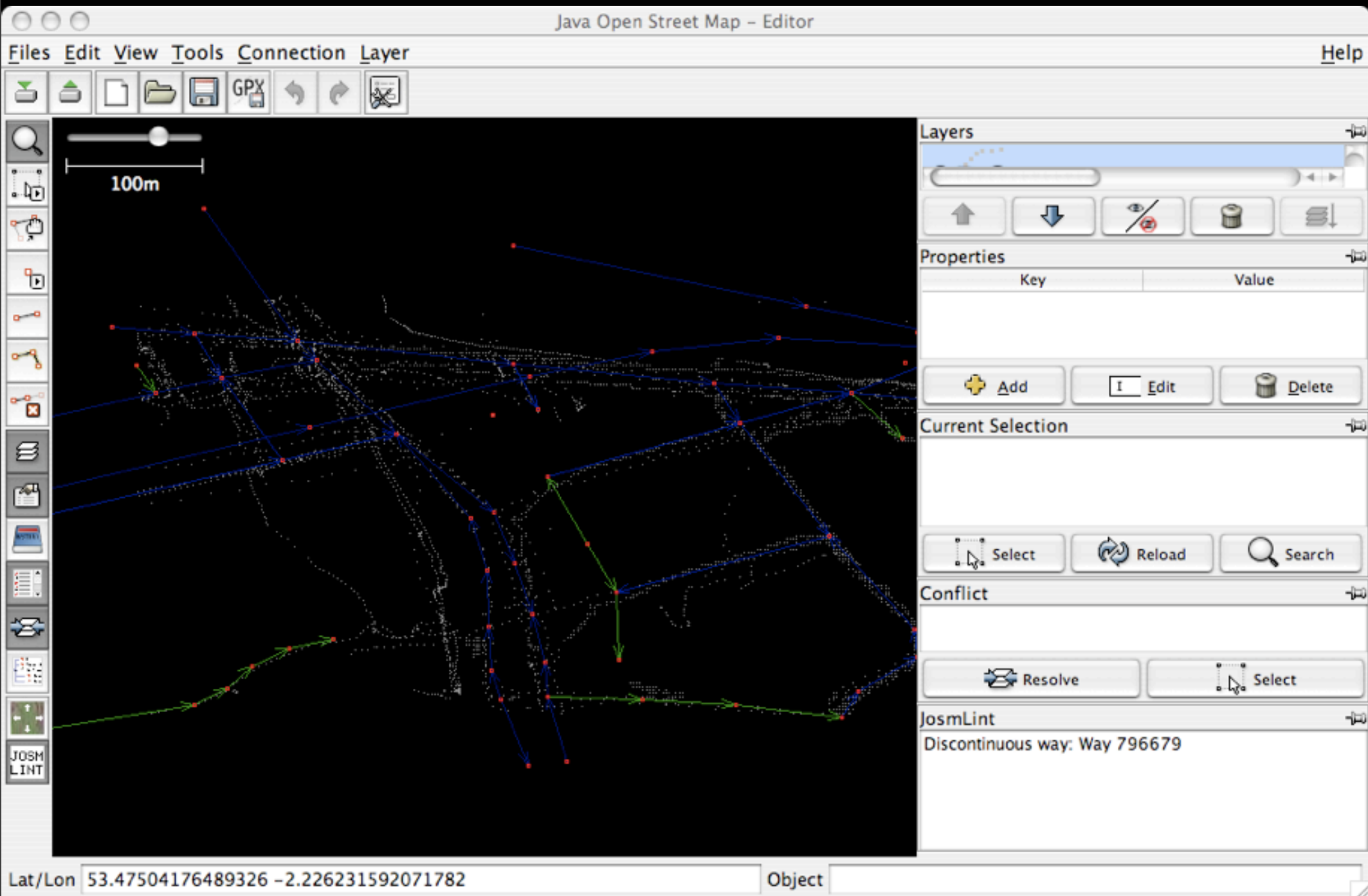
[Help & Wiki](#)  
[News blog](#)  
[shop](#)

User

Display name:

mcknut

[View](#) [Edit](#) [GPS traces](#) 



## OpenStreetMap



The Free Wiki World Map

[Help & Wiki](#)  
[News blog](#)  
[Shop](#)

User

Display name:

mcknut



# Getting Involved

- Sign up for API account:
  - <http://www.openstreetmap.org/create-account.html>
- Submit traces:
  - <http://www.openstreetmap.org/traces/mine>
- Edit via the Applet:
  - <http://www.openstreetmap.org/index.html>
  - (Find area to edit, then click “Edit” at the top)
- Or download and edit with JOSM:
  - <http://wiki.openstreetmap.org/index.php/JOSM>
- Find more tags in the WIKI:
  - [http://wiki.openstreetmap.org/index.php/Map\\_Features](http://wiki.openstreetmap.org/index.php/Map_Features)

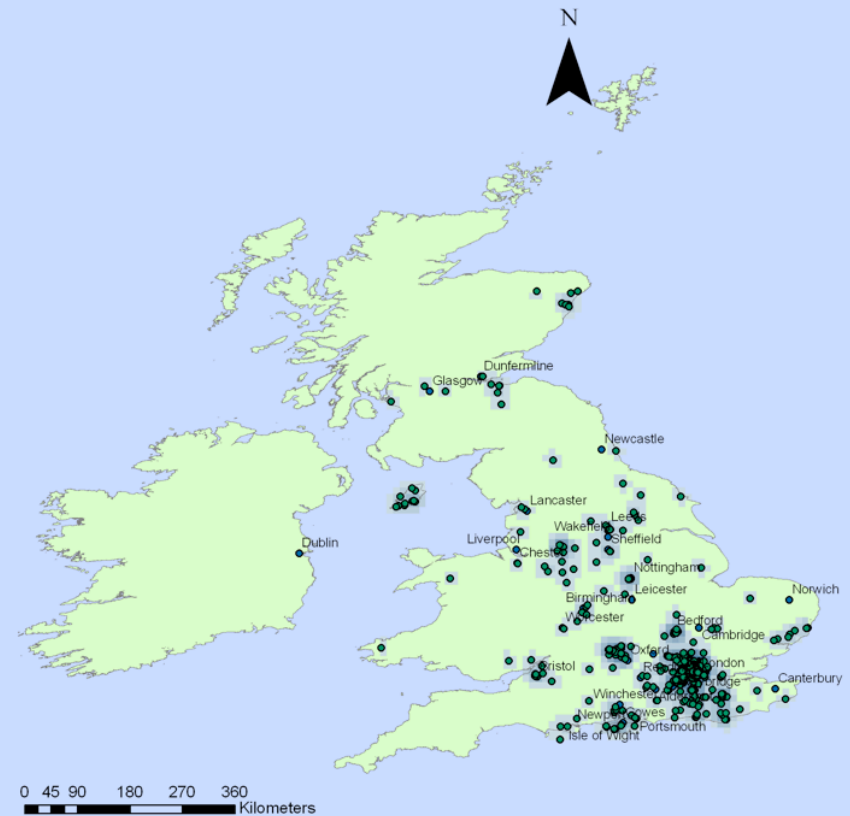


# Postcodes!?

3650 -2.148780 AB25 3SQ  
9970 -2.104150 AB41 8JU  
54300 -1.965510 AB41 9JB  
390770 -2.071200 AB52 6UY  
365080 -2.596490 AL1 1DS  
.390010 -0.317316 AL1 2QL  
1.730907 -0.346262 AL2 1GR  
51.733203 -0.293305 AL2 2LA  
51.721616 -0.331070 AL2 2LE  
51.710522 -0.333903 AL2 2PA  
51.714127 -0.340726 AL4 0SE  
51.724834 -0.258973 AL4 9AH  
51.746314 -0.296870 AL4 9NH  
51.770150 -0.321020 AL5 5RU  
51.770430 -0.337272 AL6 9HT  
51.815879 -0.214148 B14 7TG  
51.821930 -1.901901 B72 1JU  
52.434691 -1.817927 B90 2AA  
52.551040 -1.827760 B97 4NF  
52.404420 -1.969556 BA2 3BH  
52.300354 -2.367850 BD17 5QA  
51.378340 -1.767370 BH20 4PF  
53.847590 -2.123162 BH20 6EP  
50.682699 -2.231780 BH21 1HJ  
670071 -2.077160 BN1 3DA

## Preliminary Kernel Density Values of FreeThePostcode data distribution.

Based on the distribution of FreeThePostcode point data on 12th August 2006.



Licensed under the Creative Commons Attribution-ShareAlike 2.0 License

# Coase's Penguin

(Yochai Benkler)

Commons-based Peer Production:

- Non-monetary motivation
- Discrete multi-size pieces
- Low-cost integration



# Coase's Penguin

(Yochai Benkler)

Commons-based Peer Production:

- Fun
- Takes 5 minutes
- Easy



# Data: UK-US comparison



# US GeoData Market

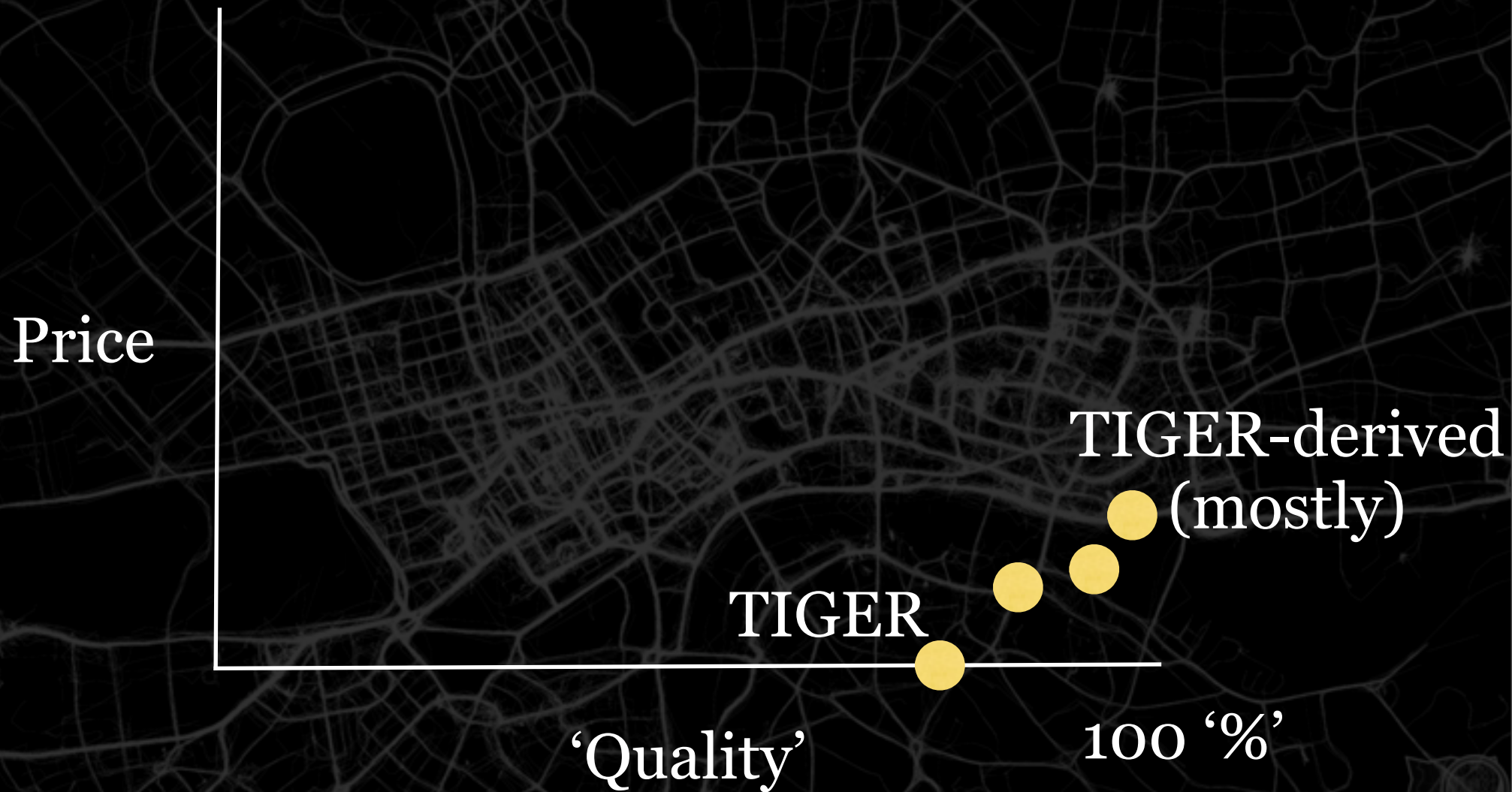
Price



‘Quality’

100 ‘%’

# US GeoData Market



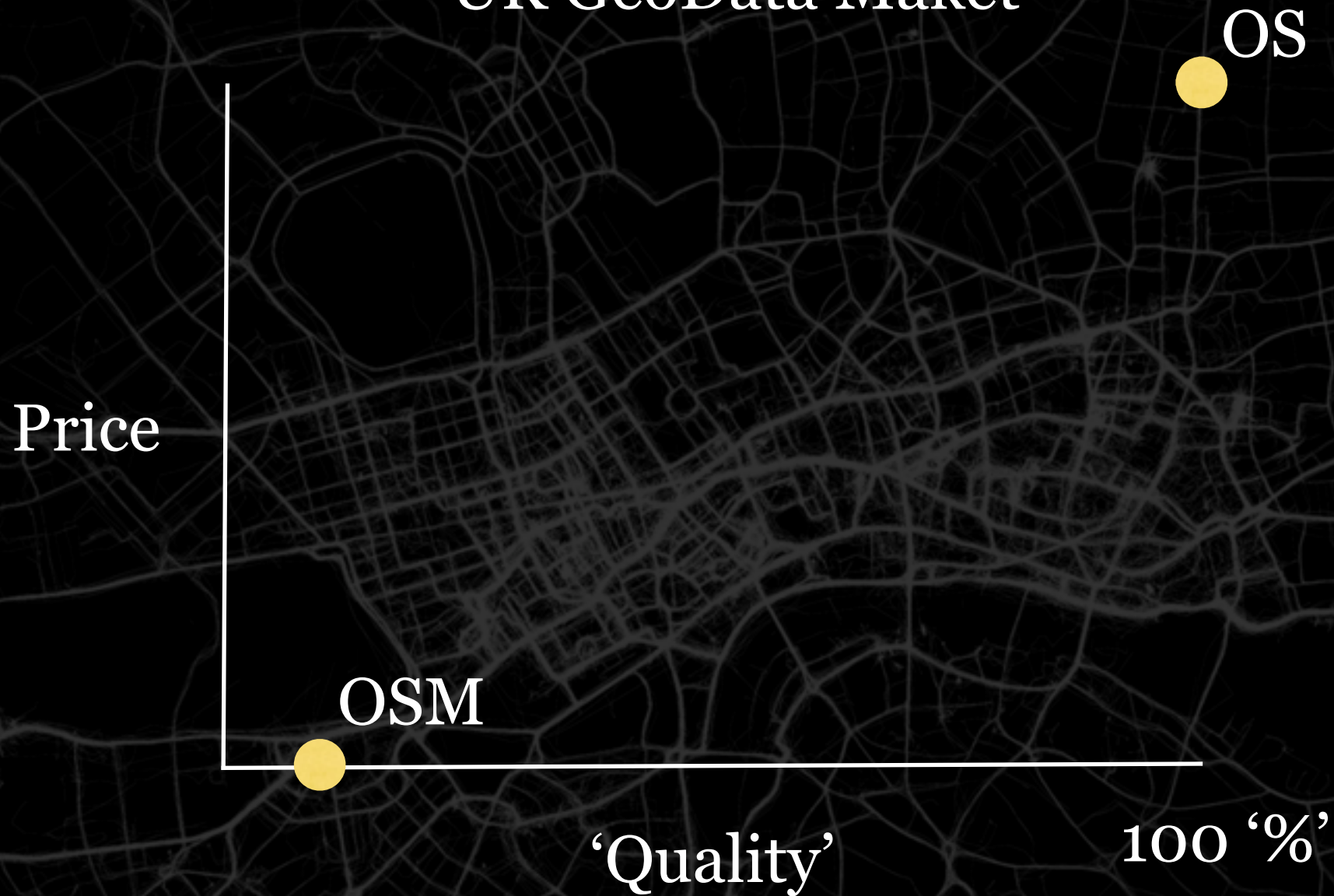
# UK GeoData Maket

Price

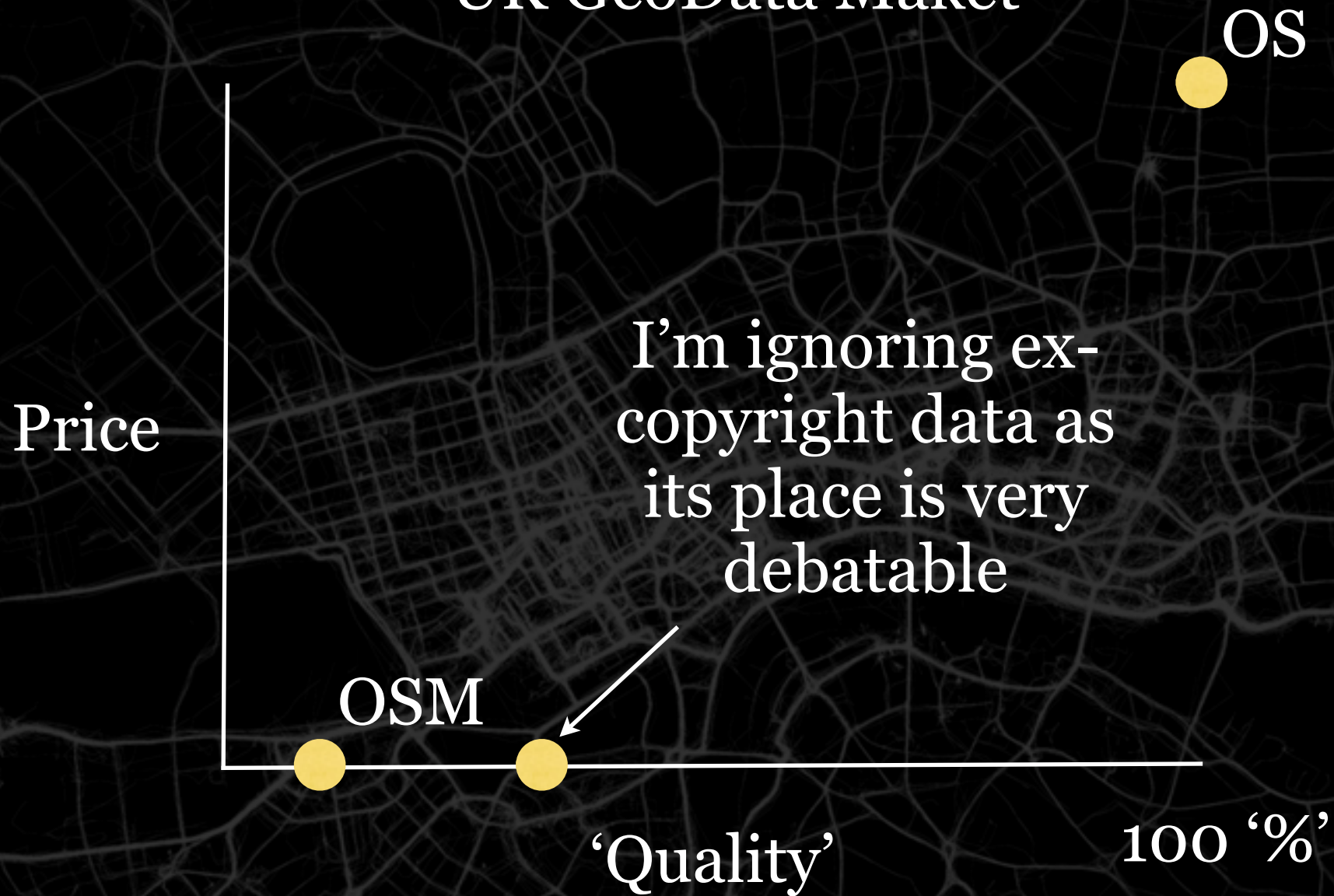
‘Quality’

100 ‘%’

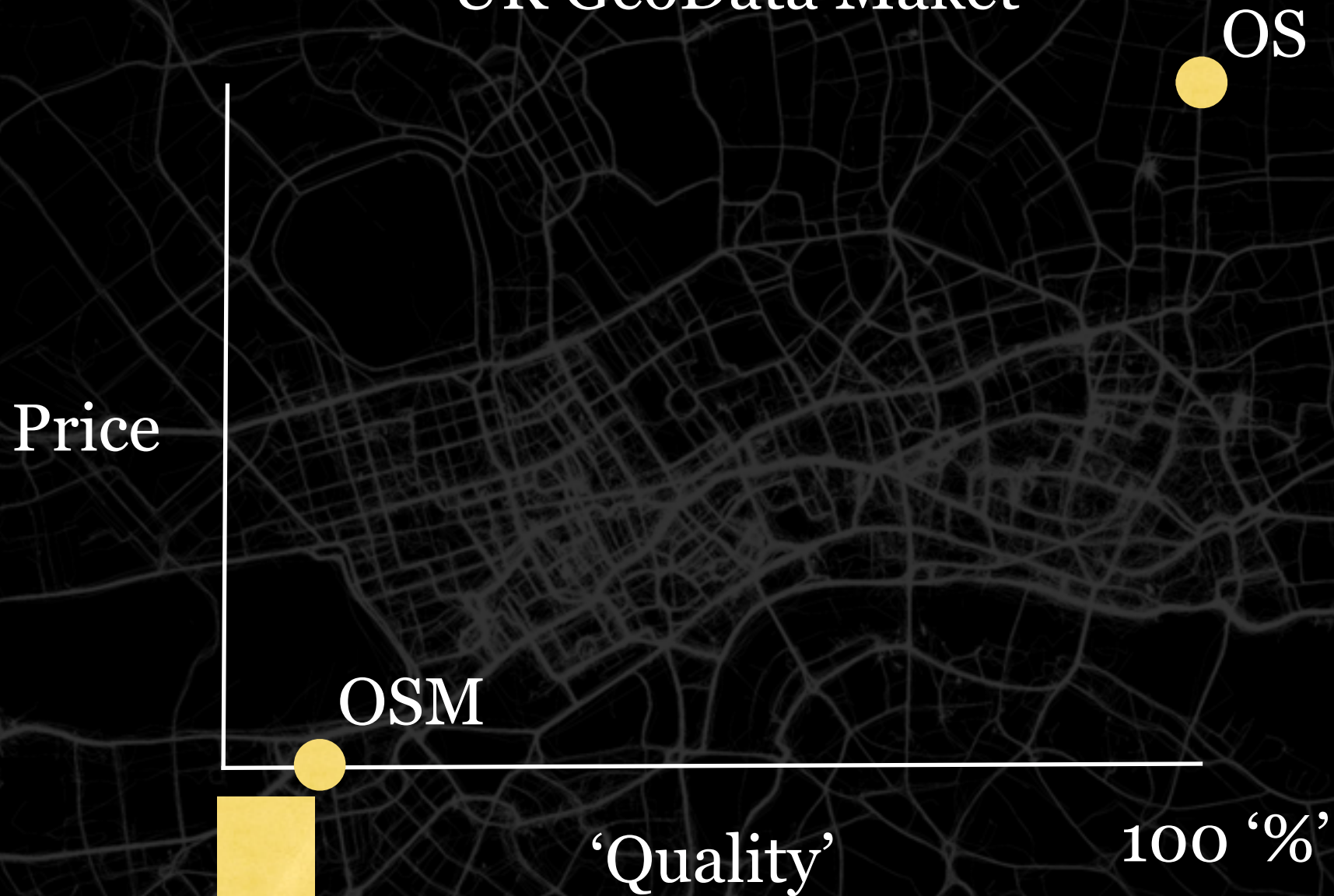
# UK GeoData Market



# UK GeoData Market



# UK GeoData Market



# UK GeoData Market



# UK GeoData Market





We've seen this before



# OS Market



# OS Market



# Thanks for listening

John McKerrell

[john@mckerrell.net](mailto:john@mckerrell.net)

with thanks to Steve Coast -  
[steve@asklater.com](mailto:steve@asklater.com) for original slides

All OSM maps displayed are CC-BY-SA

