An Introduction to JOSM

Dr. Peter Mooney,
Department of Computer Science,
Maynooth University,
Ireland

What is JOSM?

- JOSM is the Java for OpenStreetMap (OSM) editor.
- The JOSM software is written in Java. It will work on your computer provided you have a recent version of Java installed (>= Java 8)
- It is distributed as a JAR (Java Archive) file
- It is very frequently updated.
- JOSM sounds like “Jo-SOME” (as in the name Josh and then ‘some’ or ‘sum’)

JOSM

https://josm.openstreetmap.de

Wiki | Timeline | Changelog | Browse Source | View Tickets

wiki: WikiStart

JOSM is an extensible editor for OpenStreetMap (OSM) for Java 8+.

It supports loading GPX tracks, background imagery and OSM data from local sources as well as from online relations) and their metadata tags.

JOSM is open source and licensed under GPL.

Start josm.jnlp (newest tested version (currently 15155))

preferred distribution channel, all platforms, monthly automatic update (how to start)

Download josm-tested.jar (version 15155)

all platforms (how to run)

JOSM - Chromium

JOSM | Plugins – JOSM

https://josm.openstreetmap.de/wiki/Plugins

Wiki | Timeline | Changelog | Browse Source | View Tickets

wiki: Plugins

If you want to learn steps to install or update plugins see "Plugins" tab of preferences menu

Plugins for JOSM

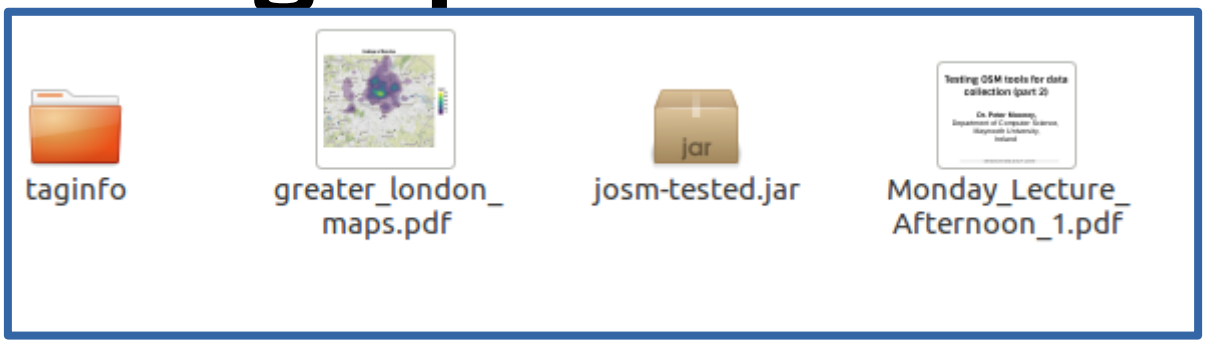
This is a list of all plugins available via the in JOSM integrated plugin manager.

Name	Author	Description
AddrInterpolation	Mike Nice	Group common Address Interpolation inputs in a single dialog, as well as an opti generate individual house number nodes from a Way. More details
alignways	Attila Szász	Makes a pair of selected way segments parallel by rotating one of them around a More details
apache-commons	nokutu; Don-vip	Provides Apache Commons library components. Not meant to be installed direct rather as a dependency for other plugins.
apache-http	Don-vip	Provides Apache HTTP library. Not meant to be installed directly by users, but ra dependency for other plugins.
areaselector	Paul Woelfel, Thomas Konrad	Allows selection of areas in an layer and automatic creation of a way as polygon mapping of building from background layers. Optimized for basemap.at. More
austriaaddresshelper	Thomas Konrad	Automatically assigns the address to a selected object in Austria. Data © Österre Adressregister 2017, N 23806/2017. More details
auto_tools	Rub21,samely	Automatic tools to help on common issues More details
BuildingGeneralization	Rotariu Anamaria	Allows the user to correct angle of buildings to 90 degrees, and aligns all loaded road.
buildings_tools	Upliner	Tools for drawing buildings. More details
cadastre-fr	Pieren;Don-vip	A special handler for the French land registry WMS server. More details
CADTools	Rotariu Anamaria-Ionela	Allows the user to make small changes to some selected buildings . More deta
canvec_helper	Michael Bishop	Overlays the canvec tile grid on the map and prints URL's to the .zip files. Future downloading and loading of canvec .osm files
changeset-viewer	Rub21	Changeset Viewer plugin allows you to visualize the changesets in JOSM backg details
		Color Plugin provide functionality for Josm users who want to put 'color' attribute

You will need a valid OpenStreetMap account to use JOSM. This will be required when you start JOSM for the first time.

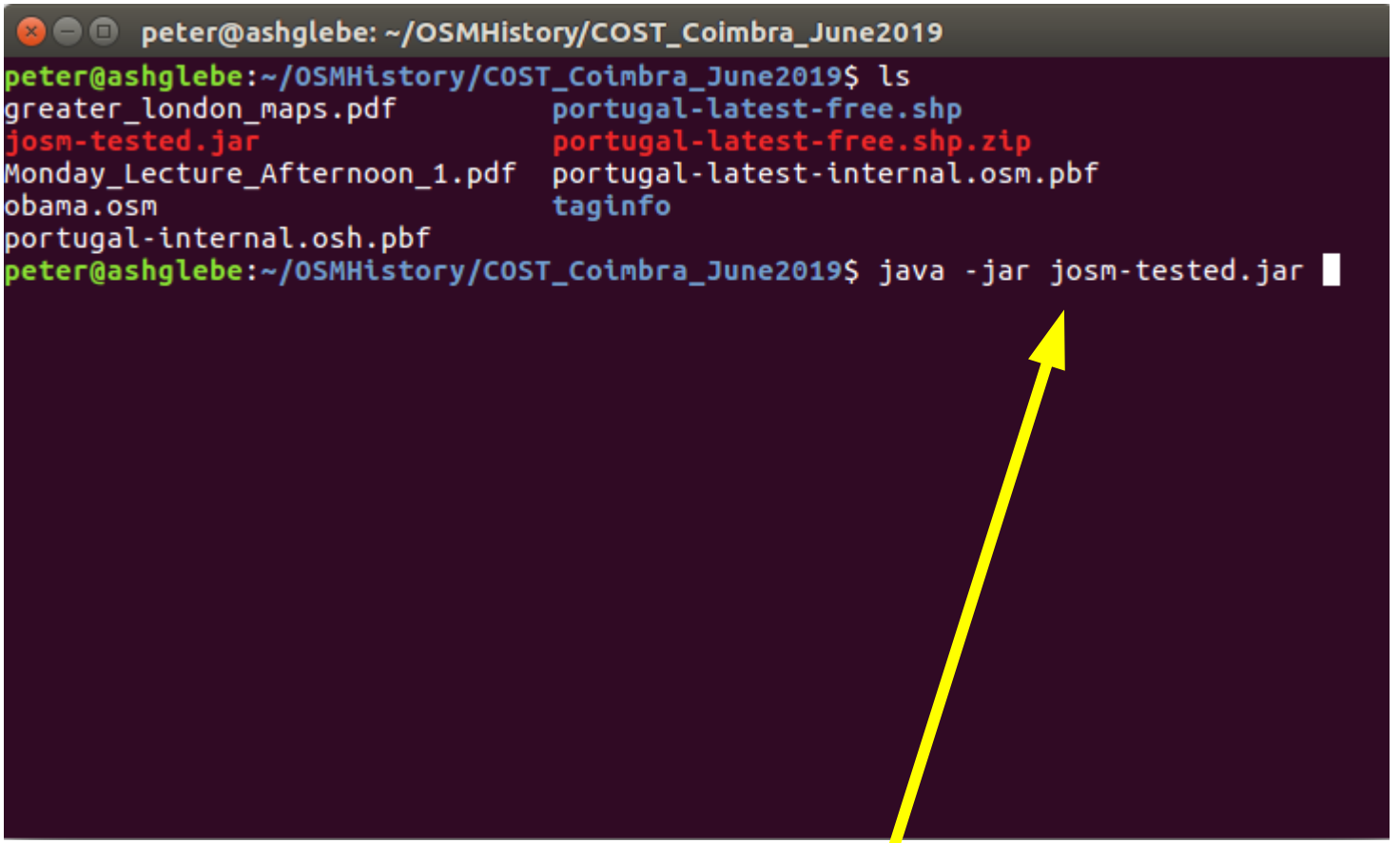
JOSM can be a little bit scary and complicated for beginners

Starting up JOSM



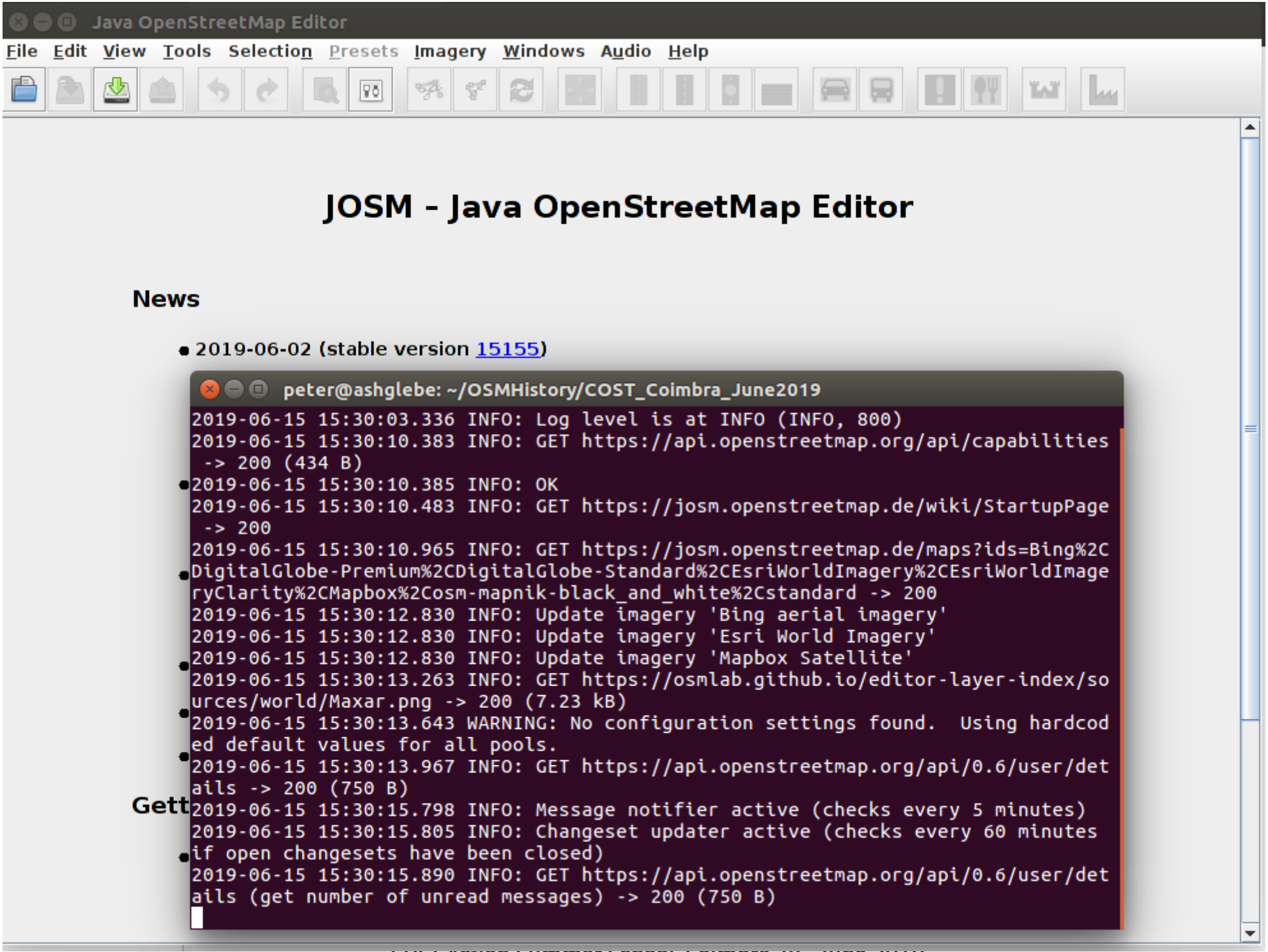
- JOSM is just a single file on your computer (see above)
- So we need to run this Java JAR file.
- This is performed in different ways on different operating systems.
- But we can use the command prompt in any O/S

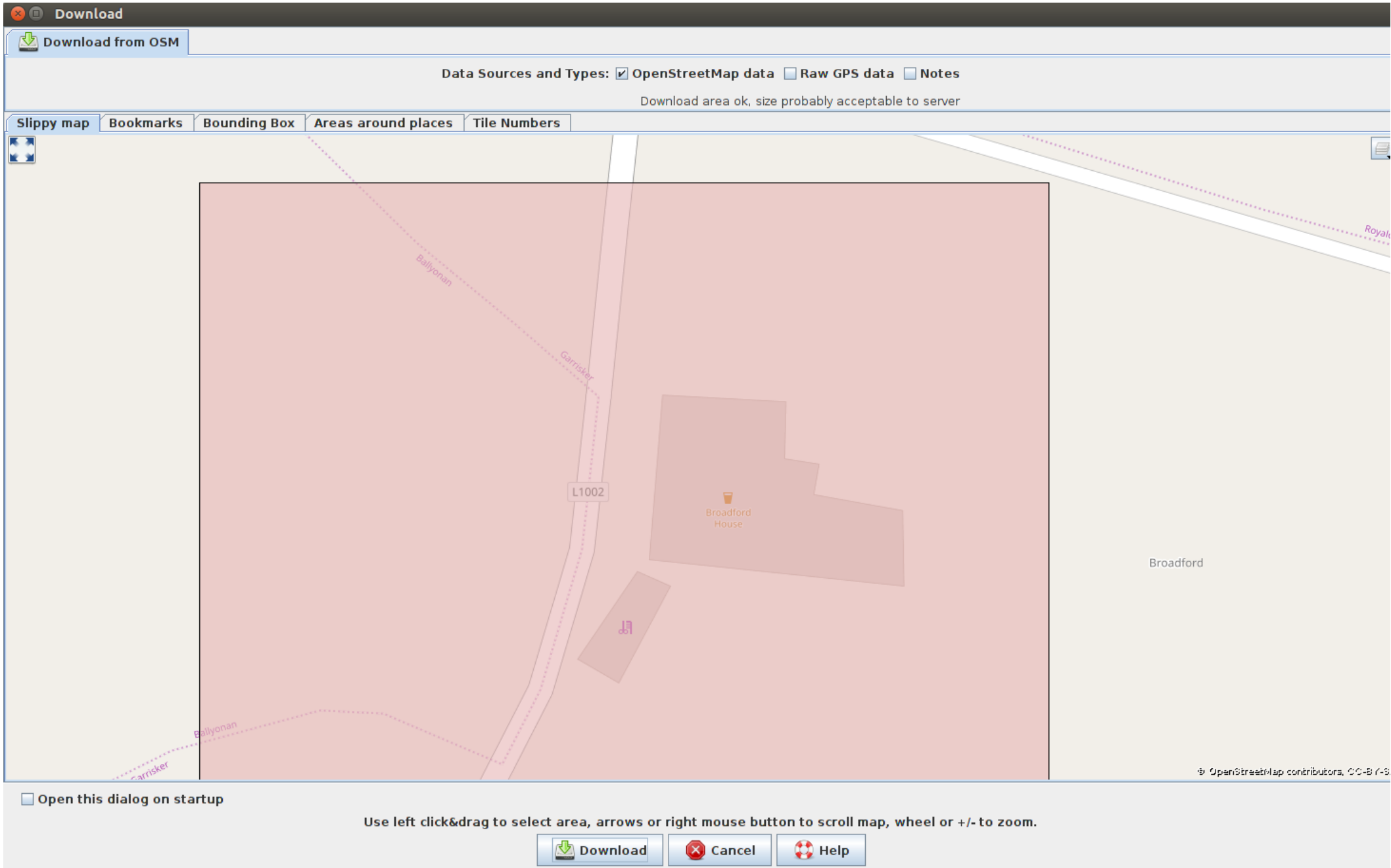
Open the command prompt in the folder where you downloaded the JAR file for JOSM



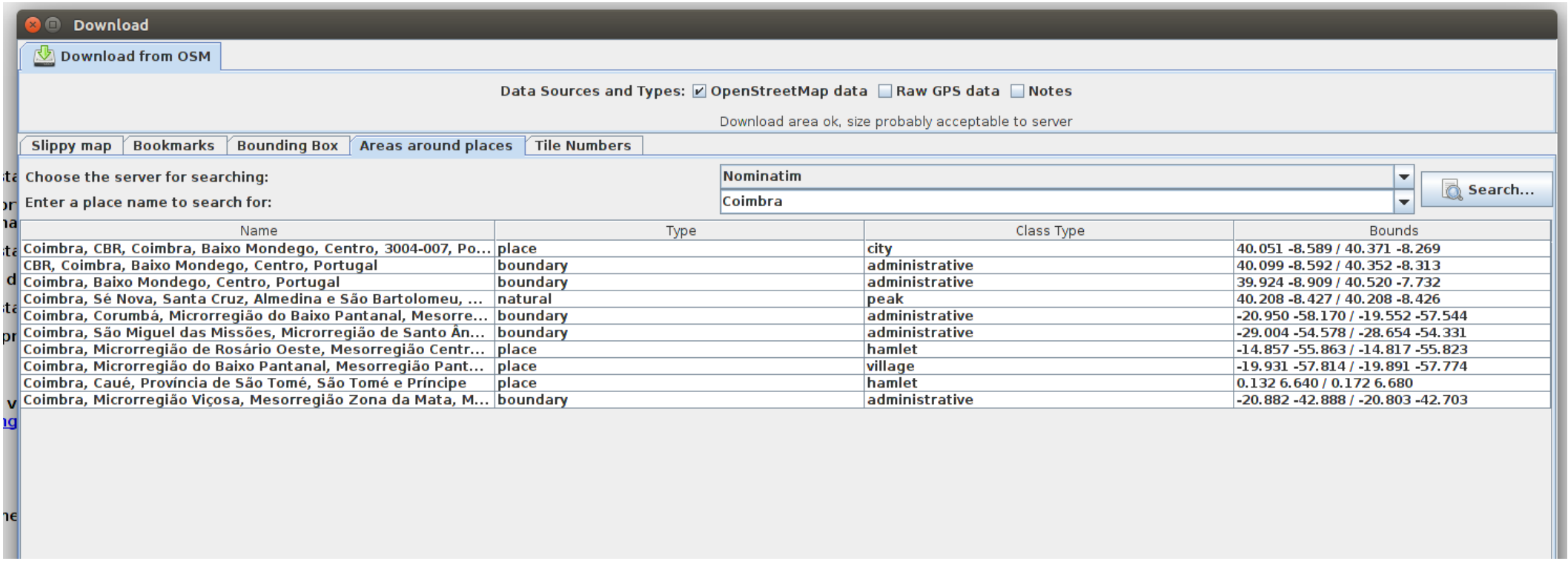
Then run the command `java -jar josm-tested.jar`

(please replace with correct filename as per your download)


Java OpenStreetMap Editor
File Edit View Tools Selection Presets Imagery Windows Audio Help
JOSM - Java OpenStreetMap Editor
News
2019-06-02 (stable version 15155)
peter@ashglebe: ~/OSMHistory/COST_Coimbra_June2019
2019-06-15 15:30:03.336 INFO: Log level is at INFO (INFO, 800)
2019-06-15 15:30:10.383 INFO: GET https://api.openstreetmap.org/api/capabilities -> 200 (434 B)
2019-06-15 15:30:10.385 INFO: OK
2019-06-15 15:30:10.483 INFO: GET https://josm.openstreetmap.de/wiki/StartupPage -> 200
2019-06-15 15:30:10.965 INFO: GET https://josm.openstreetmap.de/maps?ids=Bing%2CDigitalGlobe-Premium%2CDigitalGlobe-Standard%2CEsriWorldImagery%2CEsriWorldImageryClarity%2CMapbox%2Cosm-mapnik-black_and_white%2Cstandard -> 200
2019-06-15 15:30:12.830 INFO: Update imagery 'Bing aerial imagery'
2019-06-15 15:30:12.830 INFO: Update imagery 'Esri World Imagery'
2019-06-15 15:30:12.830 INFO: Update imagery 'Mapbox Satellite'
2019-06-15 15:30:13.263 INFO: GET https://osmlab.github.io/editor-layer-index/sources/world/Maxar.png -> 200 (7.23 kB)
2019-06-15 15:30:13.643 WARNING: No configuration settings found. Using hardcoded default values for all pools.
2019-06-15 15:30:13.967 INFO: GET https://api.openstreetmap.org/api/0.6/user/details -> 200 (750 B)
2019-06-15 15:30:15.798 INFO: Message notifier active (checks every 5 minutes)
2019-06-15 15:30:15.805 INFO: Changeset updater active (checks every 60 minutes if open changesets have been closed)
2019-06-15 15:30:15.890 INFO: GET https://api.openstreetmap.org/api/0.6/user/details (get number of unread messages) -> 200 (750 B)
Gett

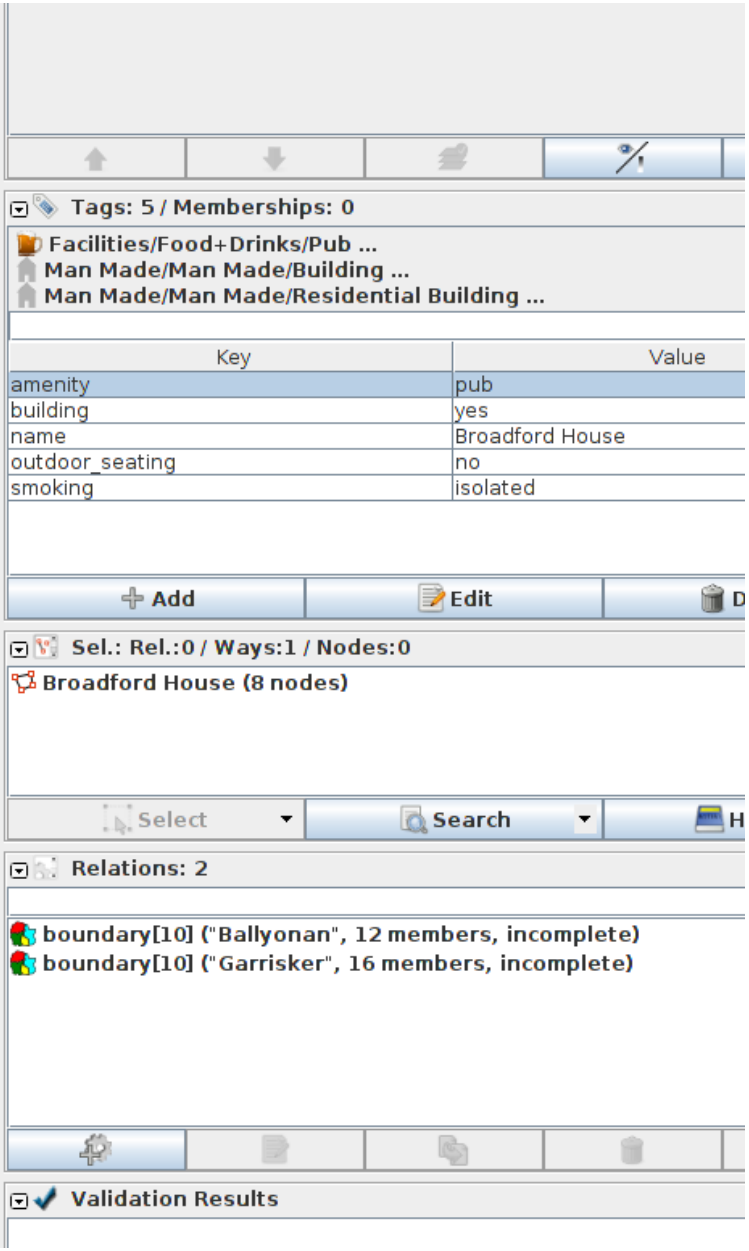

Download
Download from OSM
Data Sources and Types: OpenStreetMap data Raw GPS data Notes
Download area ok, size probably acceptable to server
Slippy map
Bookmarks
Bounding Box
Areas around places
Tile Numbers
Ballyonan
Garrisker
L1002
Broadford House
Broadford
Ballyonan
Garrisker
Open this dialog on startup
Use left click&drag to select area, arrows or right mouse button to scroll map, wheel or +/- to zoom.
Download
Cancel
Help

You can also use “Areas around places” to search for a location!

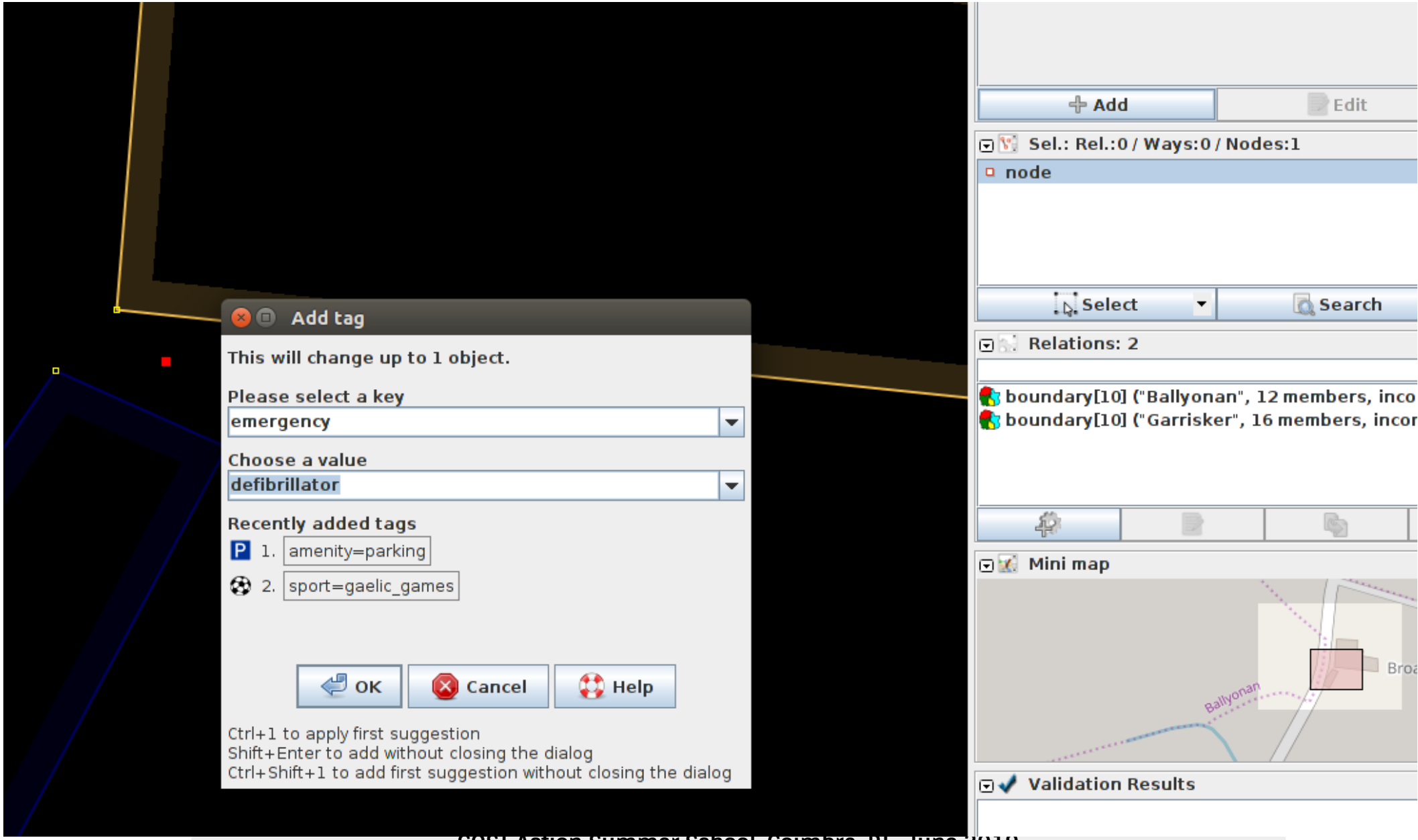


Name	Type	Class Type	Bounds
Coimbra, CBR, Coimbra, Baixo Mondego, Centro, 3004-007, Po...	place	city	40.051 -8.589 / 40.371 -8.269
CBR, Coimbra, Baixo Mondego, Centro, Portugal	boundary	administrative	40.099 -8.592 / 40.352 -8.313
Coimbra, Baixo Mondego, Centro, Portugal	boundary	administrative	39.924 -8.909 / 40.520 -7.732
Coimbra, Sé Nova, Santa Cruz, Almedina e São Bartolomeu, ...	natural	peak	40.208 -8.427 / 40.208 -8.426
Coimbra, Corumbá, Microrregião do Baixo Pantanal, Mesorre...	boundary	administrative	-20.950 -58.170 / -19.552 -57.544
Coimbra, São Miguel das Missões, Microrregião de Santo Ân...	boundary	administrative	-29.004 -54.578 / -28.654 -54.331
Coimbra, Microrregião de Rosário Oeste, Mesorregião Centr...	place	hamlet	-14.857 -55.863 / -14.817 -55.823
Coimbra, Microrregião do Baixo Pantanal, Mesorregião Pant...	place	village	-19.931 -57.814 / -19.891 -57.774
Coimbra, Caué, Província de São Tomé, São Tomé e Príncipe	place	hamlet	0.132 6.640 / 0.172 6.680
Coimbra, Microrregião Viçosa, Mesorregião Zona da Mata, M...	boundary	administrative	-20.882 -42.888 / -20.803 -42.703

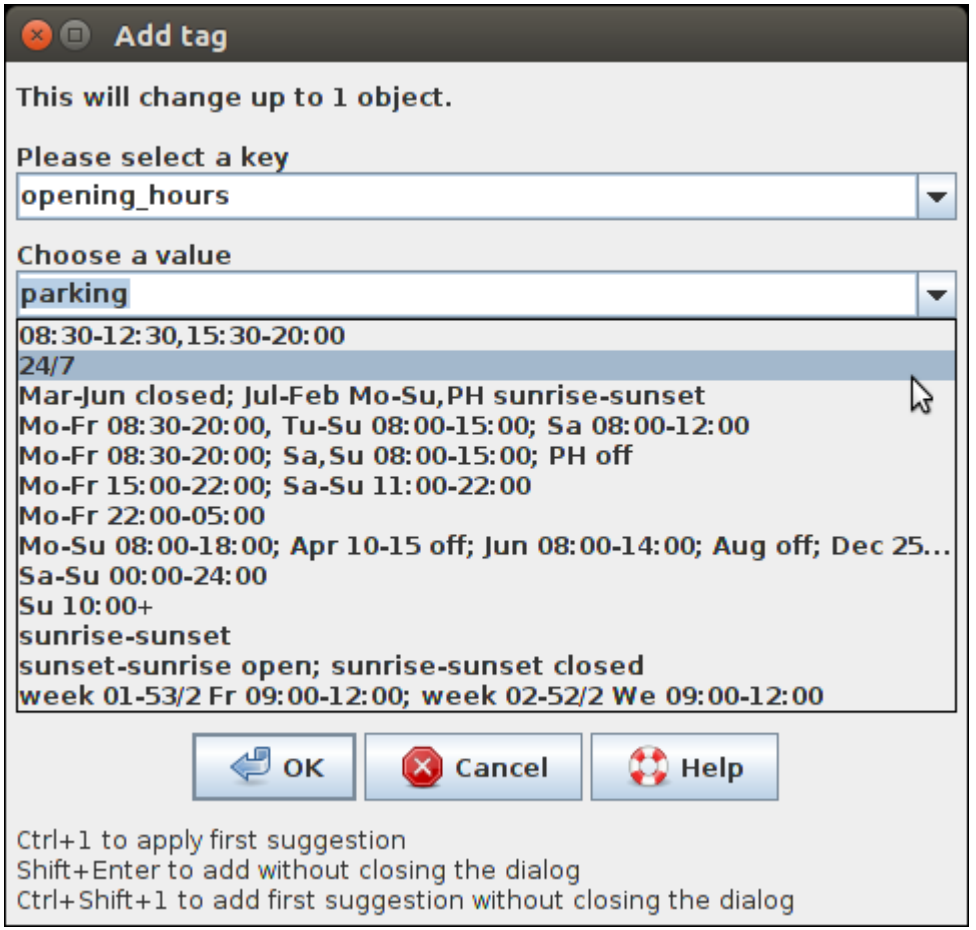
Adding a node – go to your location



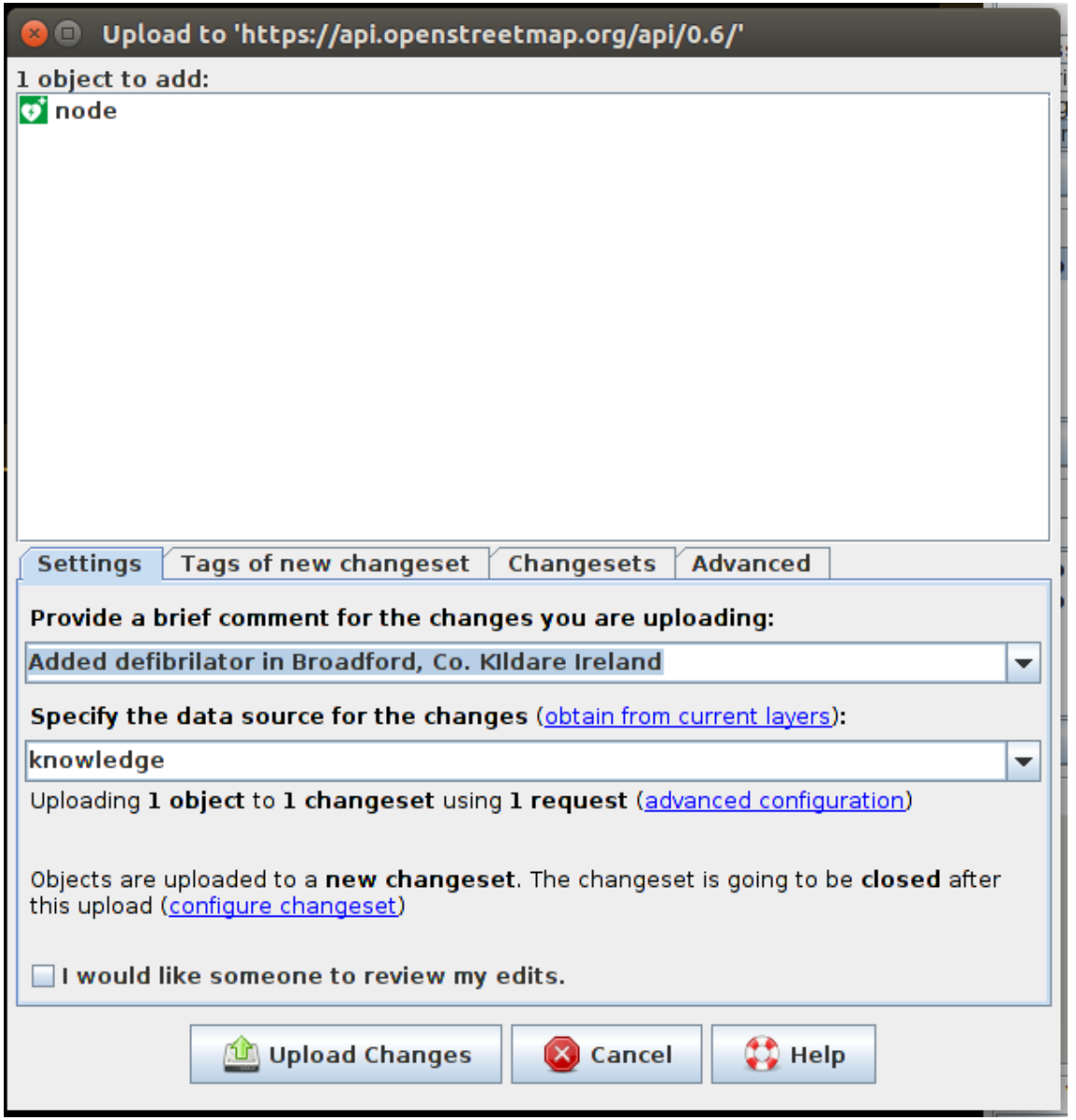
Add a node – make sure to choose a correct tag!



JOSM Tag Presets



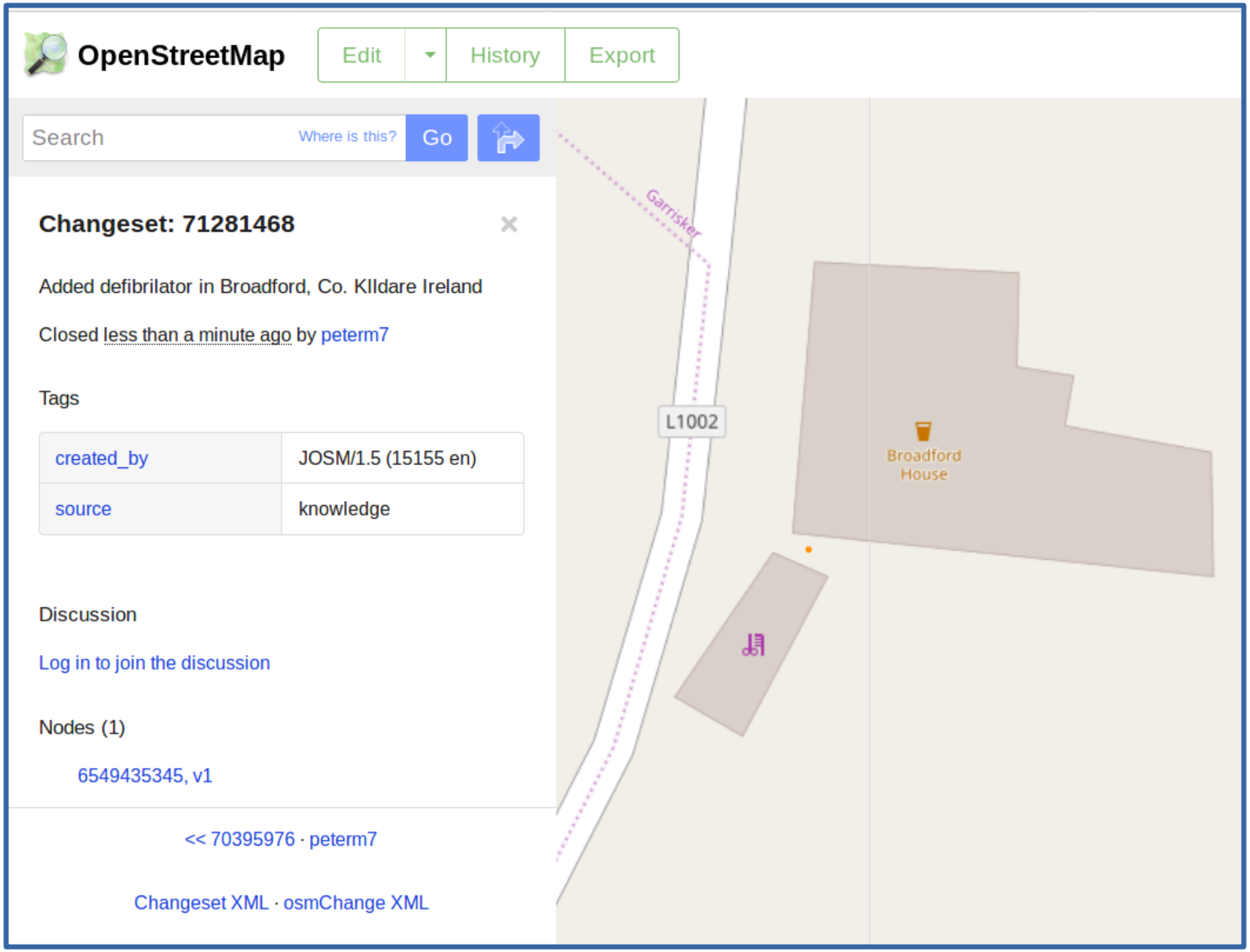
If we are finished – we can upload to OSM – you should provide some comments on your changes/new data



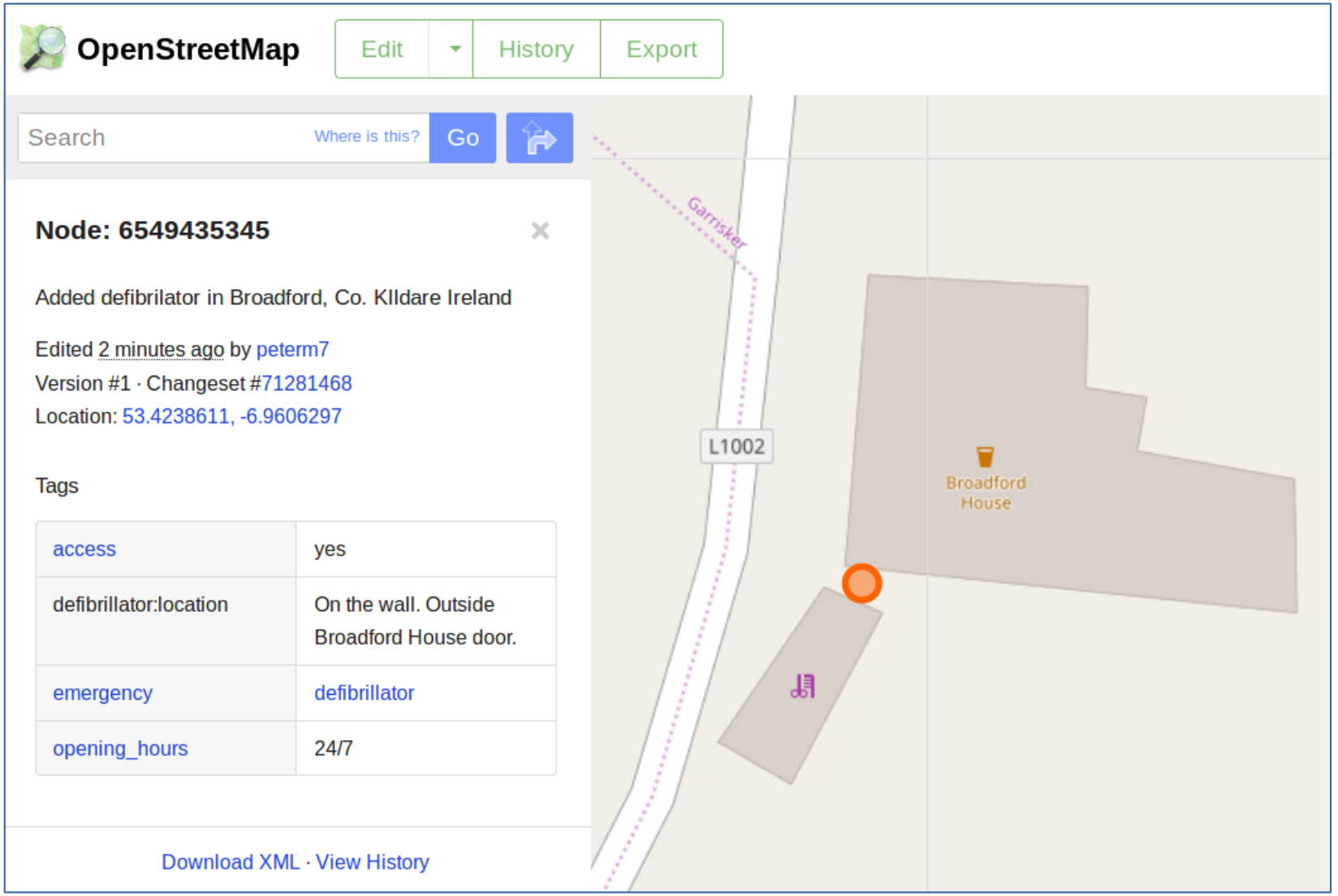
What is a Changeset?

- A CHANGESET in OSM is a logical grouping of edits by a user.
- Suppose you create 6 nodes and 4 ways. You provide tags for these objects. Suppose you edit the tags on 2 nodes. Then you upload to OSM.
- The editor software you are using will upload these changes as a group. When they are entered into the OSM database they will be attached to a CHANGESET which will describe the changes you have made.
- You don’t need to worry about Changesets – but you should be aware that they are a method for tracking the edits and uploads of ALL users.

My very simple edit (one new node) in a Changeset

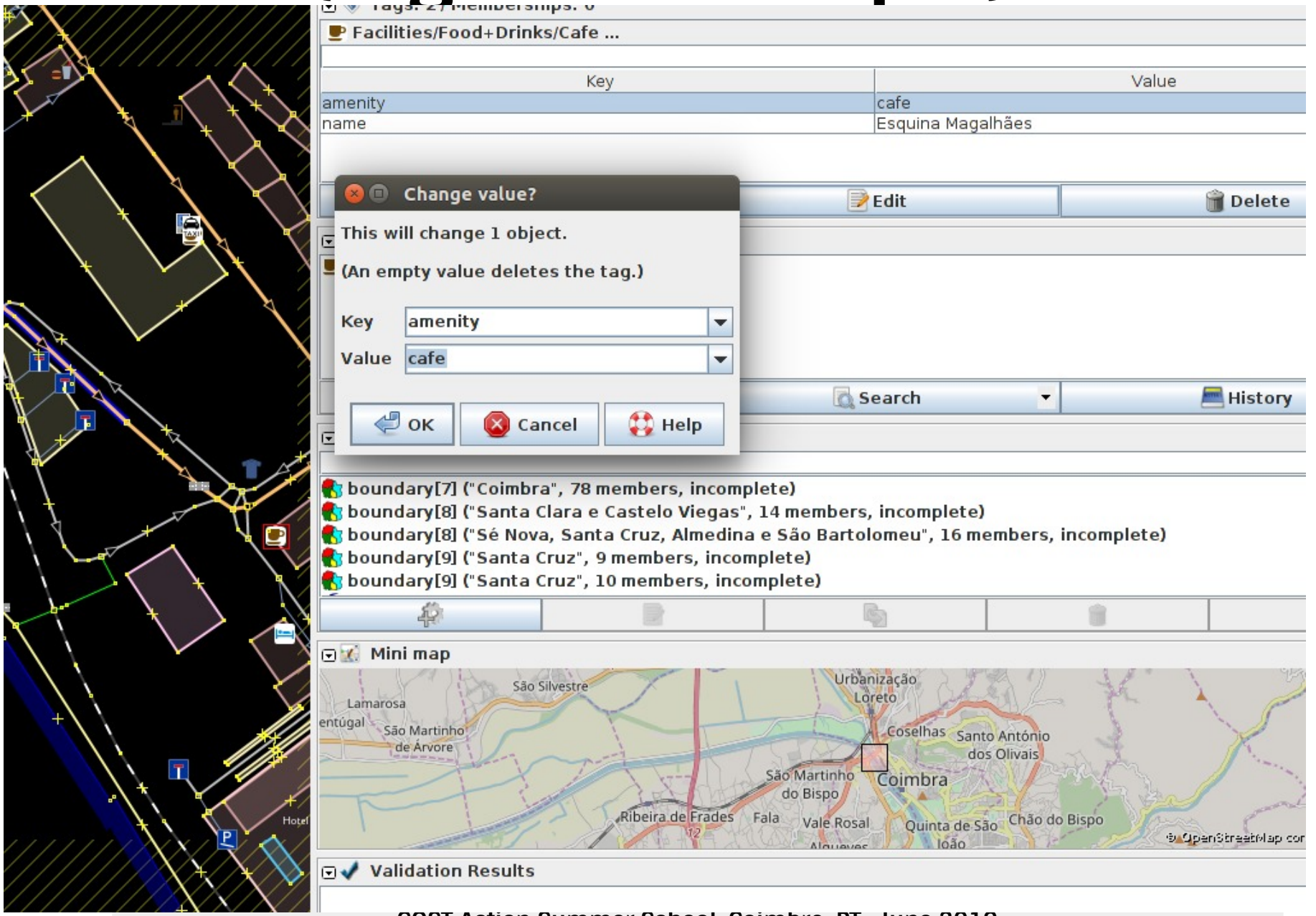


We can see information about the node on the OSM website

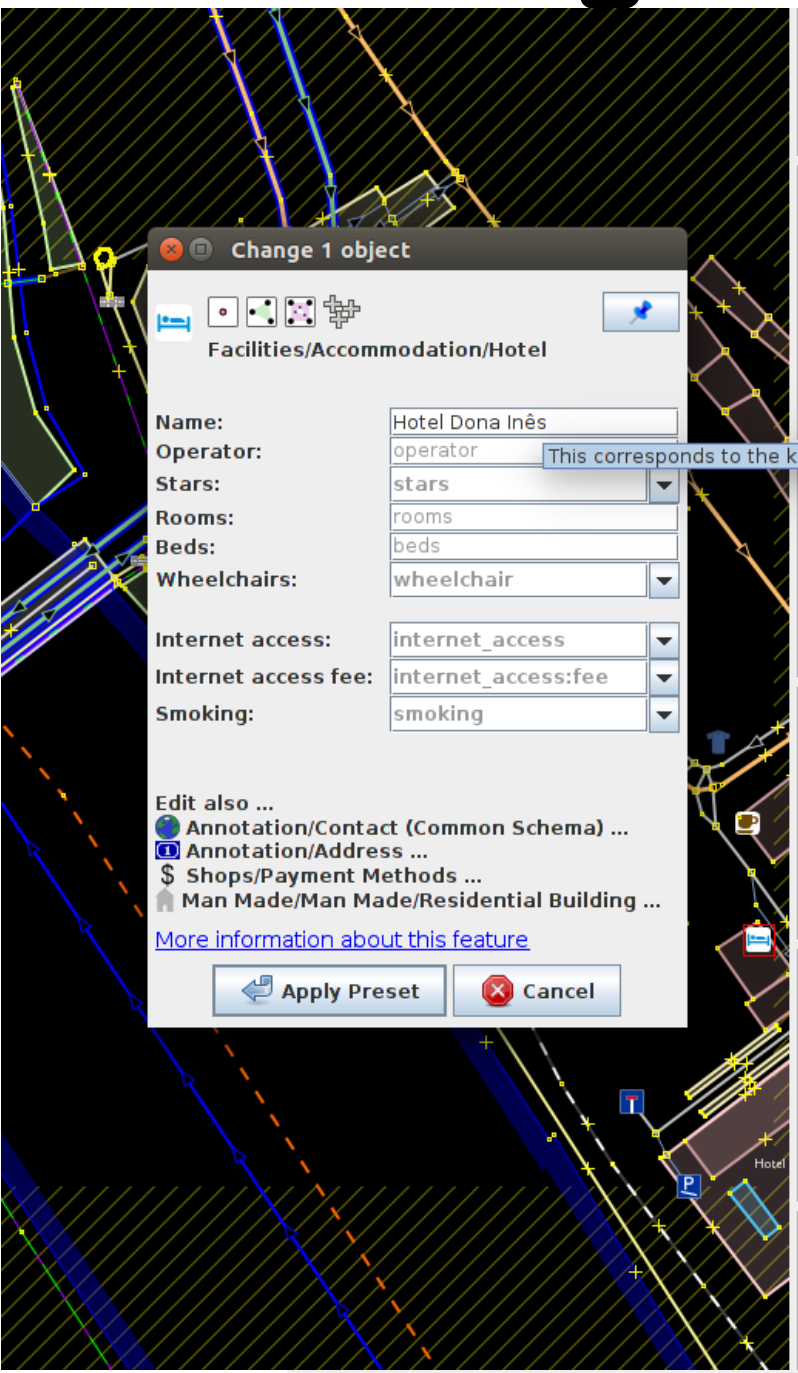


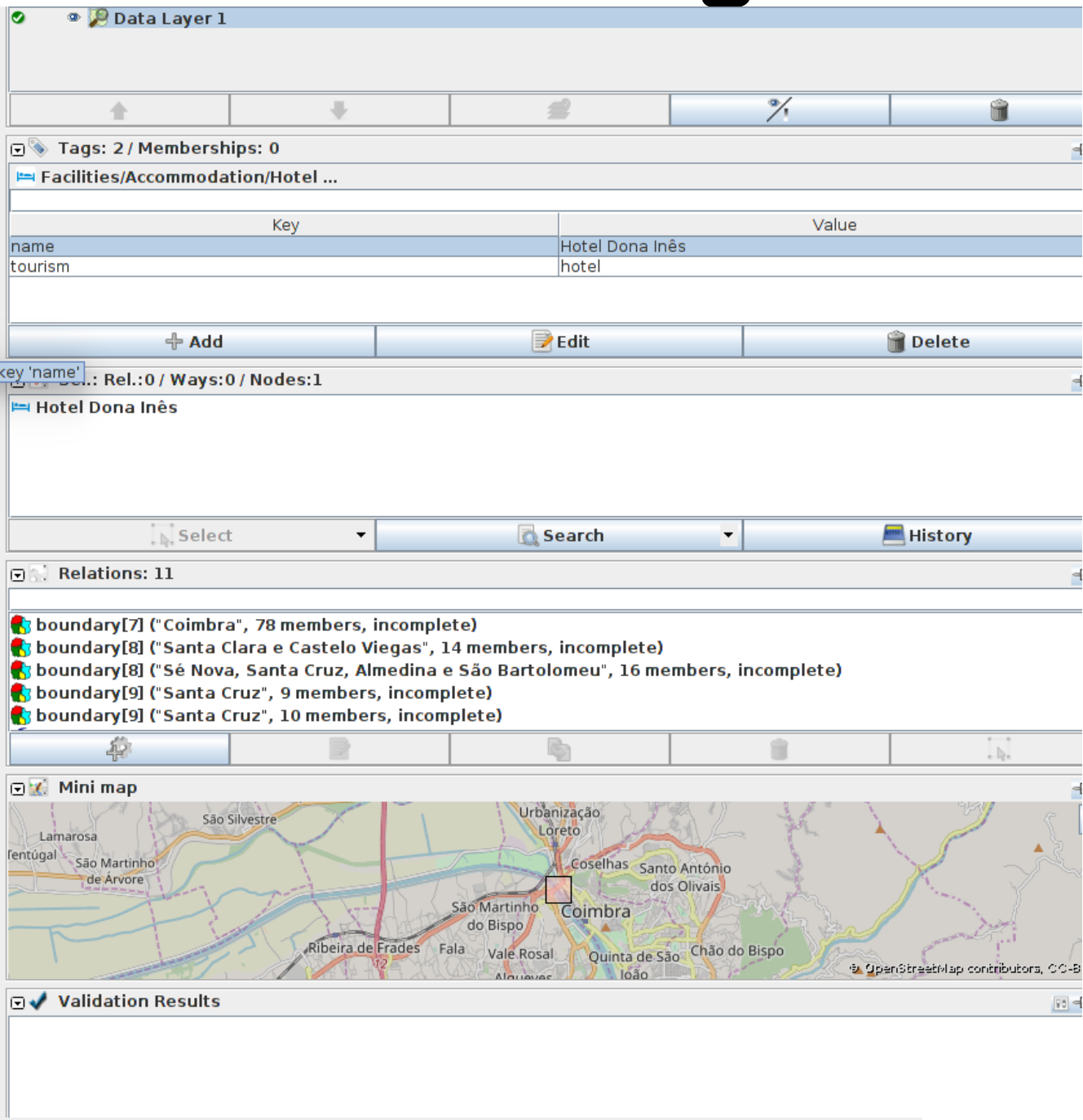
Editing a Node

Click on the node you wish to edit (tags for example)

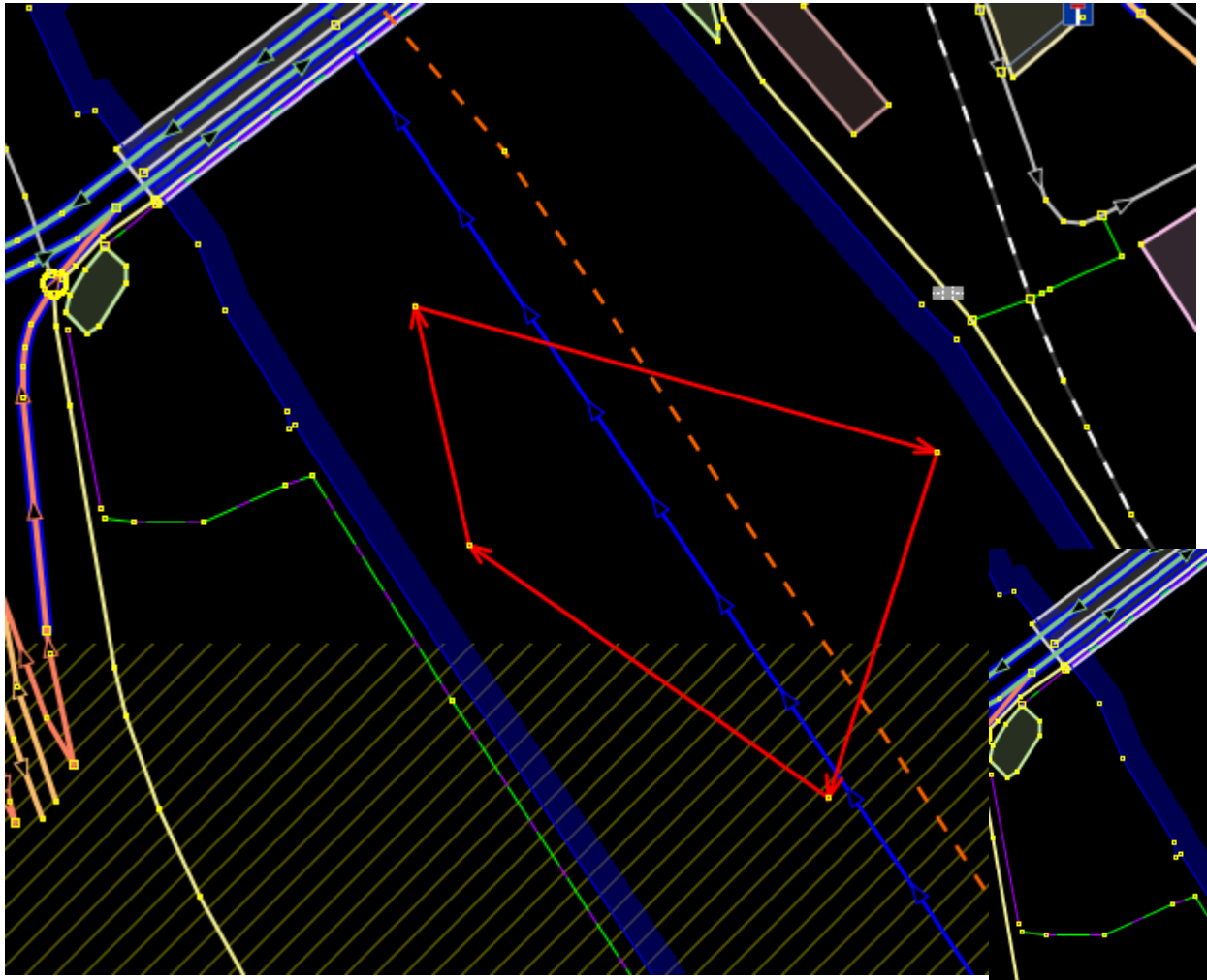


Using PRESETS to edit tags

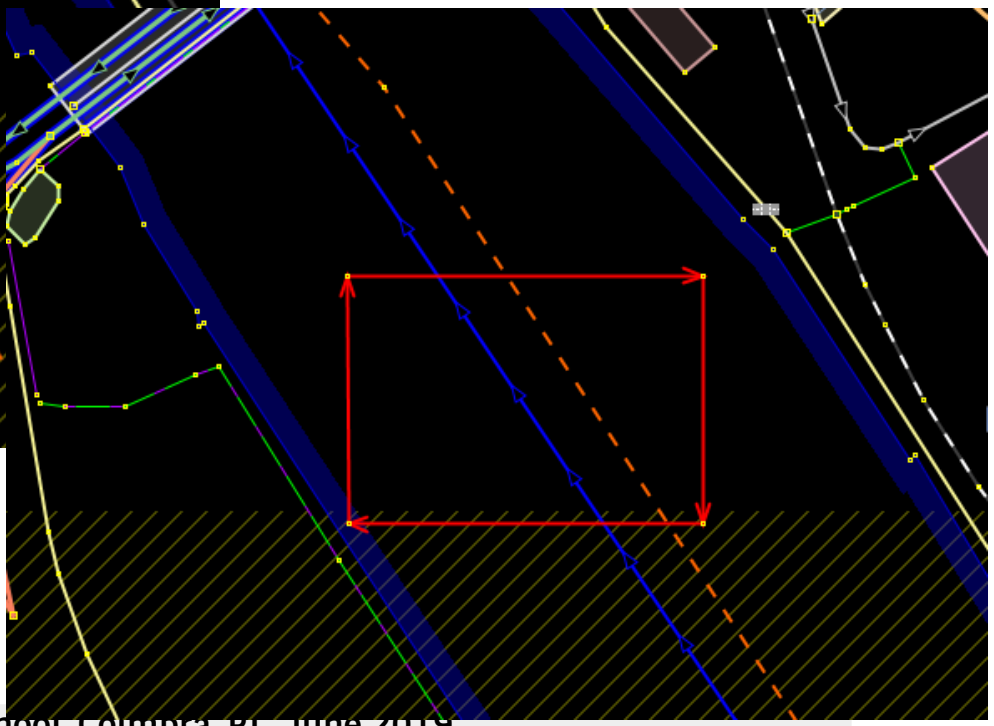




Making Buildings SQUARE

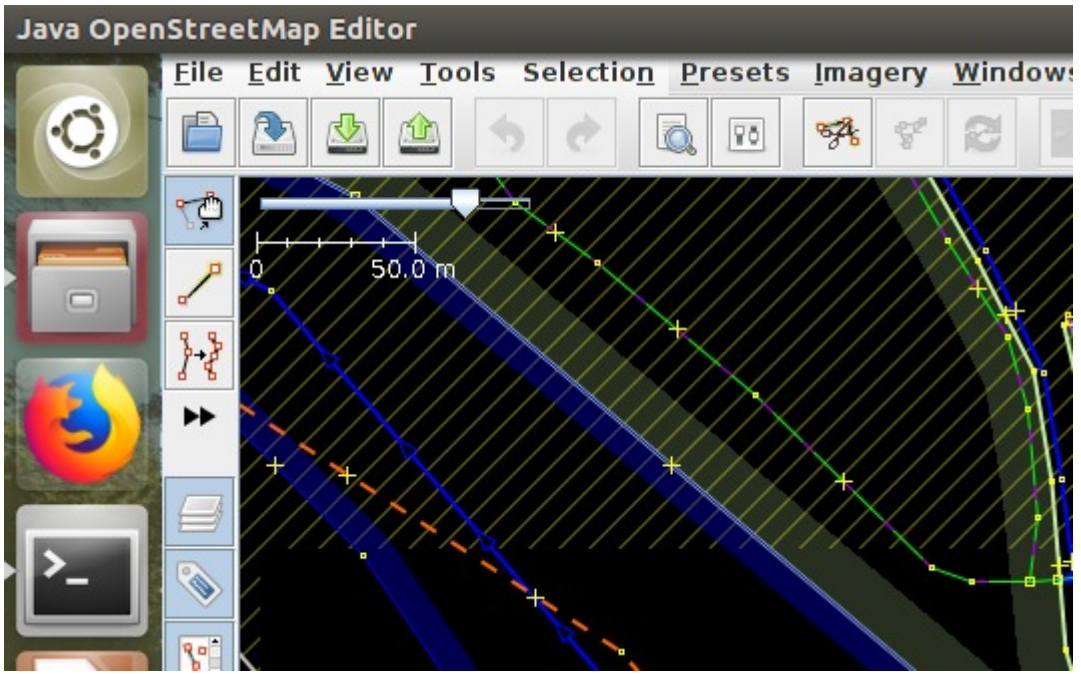


PRESS the Q key



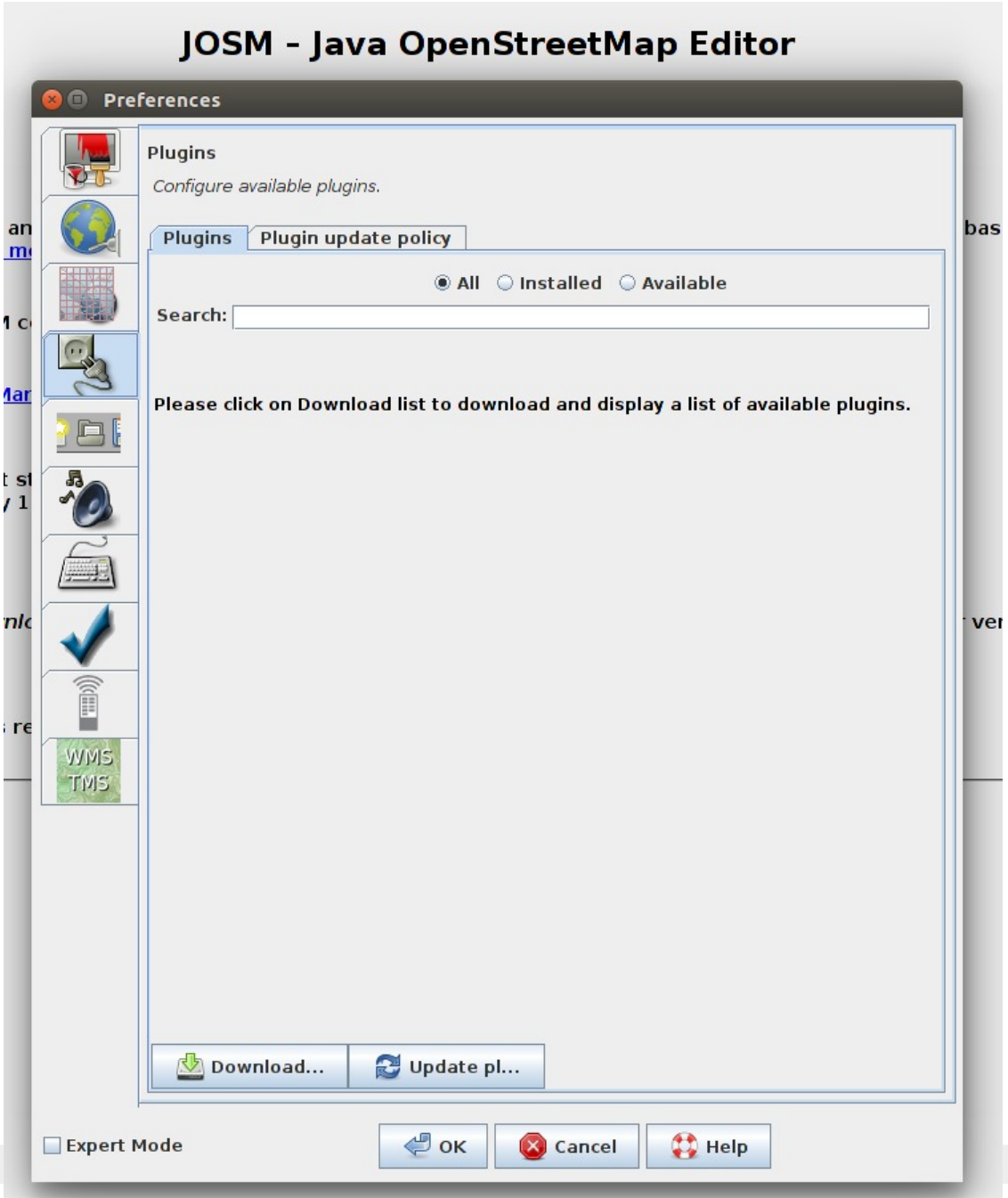
Remember – JOSM is an offline editor.

- This is very important.
- All of your edits happen OFFLINE.
- Press the UPLOAD button to submit your edits to OSM database

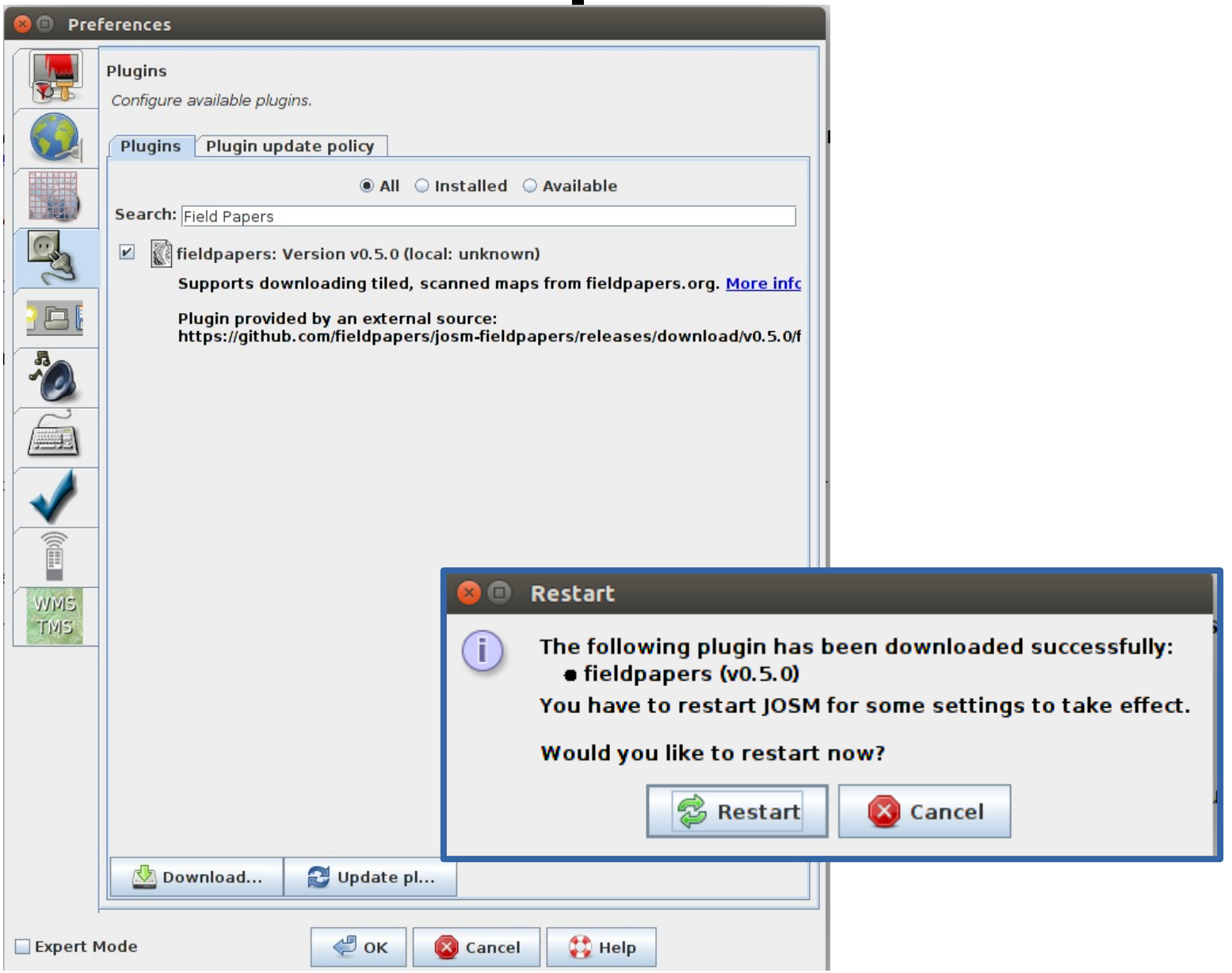


Using Field Papers

Edit->Preferences-Plugins



Plugins: Click ‘Download’ then search for ‘Field Papers’



The LearnOSM website has a very good guide to using FieldPapers in JOSM

learnOSM

Learn OpenStreetMap Step by Step

► OTHER GUIDES

► Beginner's guide

► JOSM - Detailed Editing

► Coordination

► Mapping with a SmartPhone, GPS or Paper

► Surveying with a Garmin GPS

► Field Papers

► OsmAnd 2.0+

► OSMAnd

► OruxMaps

► OSMTracker

Surveying with Field Papers

NOTE:

Reviewed 2016-08-10

In this chapter we will see how we can record the coordinates of places without a GPS. We will use a tool called Field Papers, which allows you to print a map of an area, draw on it and add notes, and load the paper back into JOSM, where you can add your locations to OpenStreetMap. You can also watch this 8-minute Tutorial Field Papers video on how to create an atlas and upload a snapshot.

OVERVIEW OF FIELD PAPERS

Before we go into detail about Field Papers, let's look at an overview of how the process works:

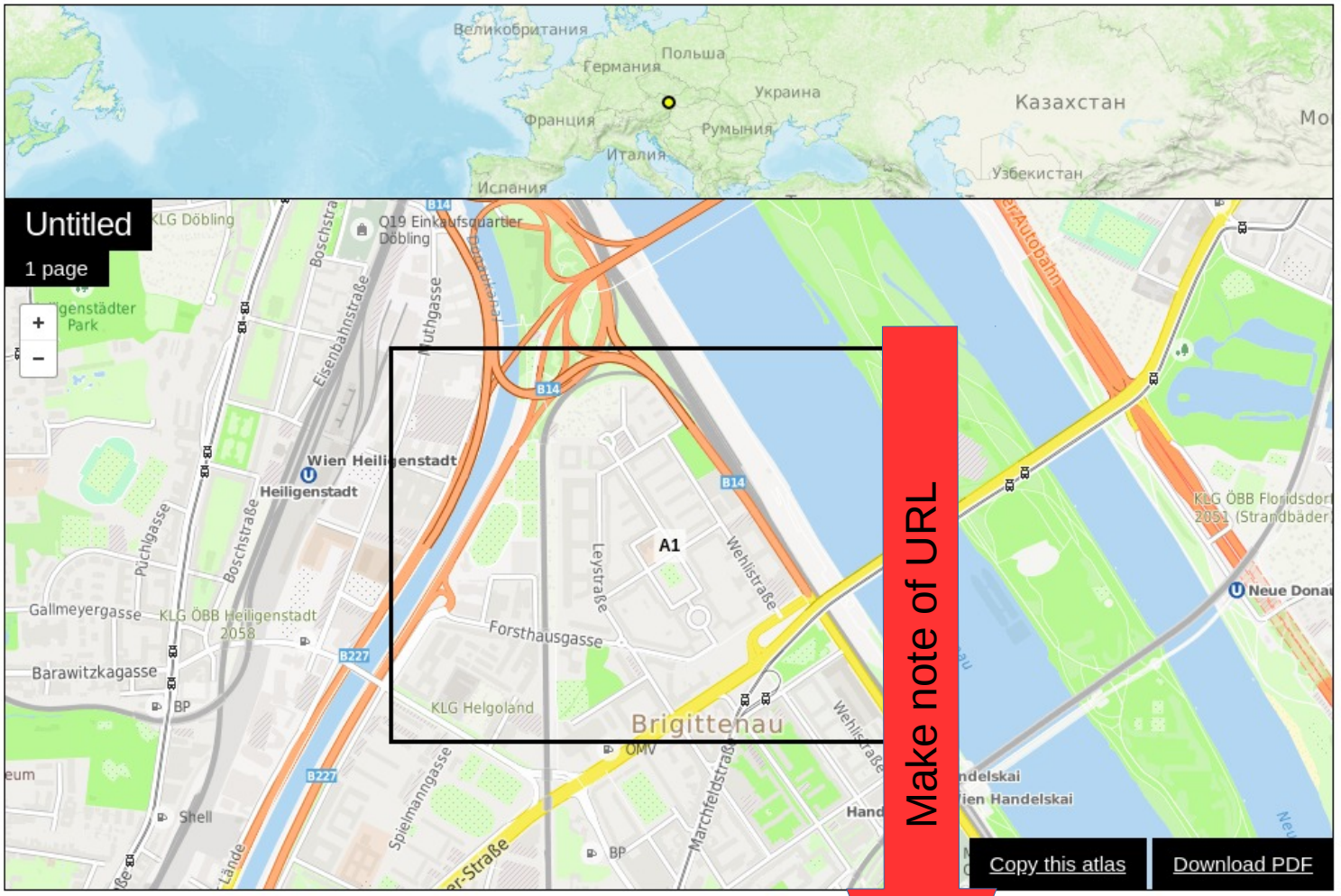
1. Locate the area you want to map on the Field Papers website. Print out a map of this area. You can choose to print the current map of the area on OpenStreetMap, or you can choose to print aerial imagery, if it is available in your area.

LearnOSM | Atlas - Field Papers

ieldpapers.org/atlases/3oojddx4

Field Papers

MAKE an atlas to print | **UPLOAD** pages you've marked | **WATCH** recent activity | **EXTEND** with advanced tools | **LOG IN** or create an account



Activity

- anonymous made this atlas about 5 hours ago
  1 page + sputnik.ru + landscape + full-page

Export Data

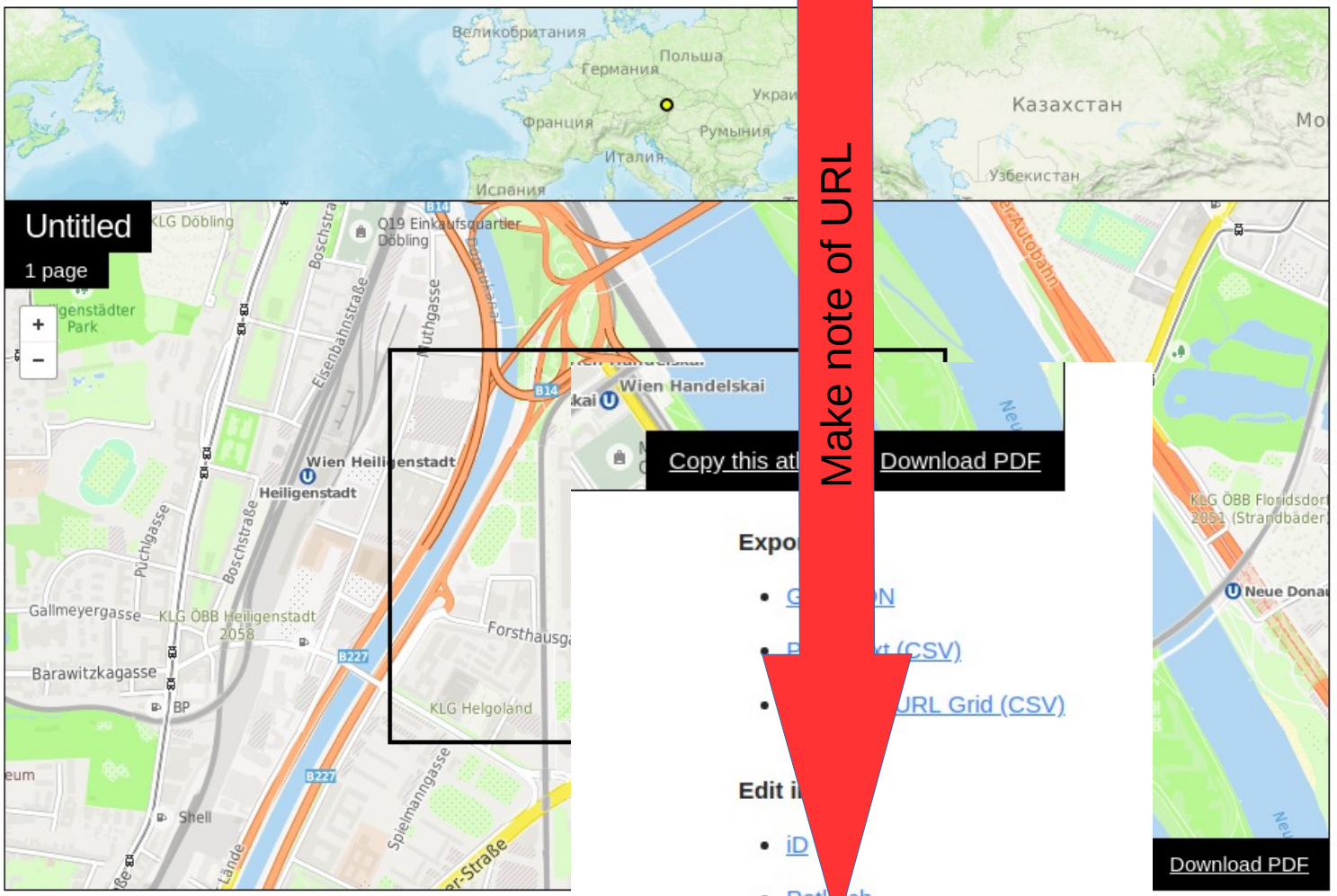
- GeoJSON
- Plain Text (CSV)
- Snapshot URL Grid (CSV)

LearnOSM | Atlas - Field Papers

ieldpapers.org/atlases/3oojddx4

Field Papers

MAKE an atlas to print | **UPLOAD** pages you've marked | **WATCH** recent activity | **EXTEND** with advanced tools | **LOG IN** or create an account



Activity

- anonymous made this atlas about 5 hours ago
  1 page + sputnik.ru + landscape + full-page

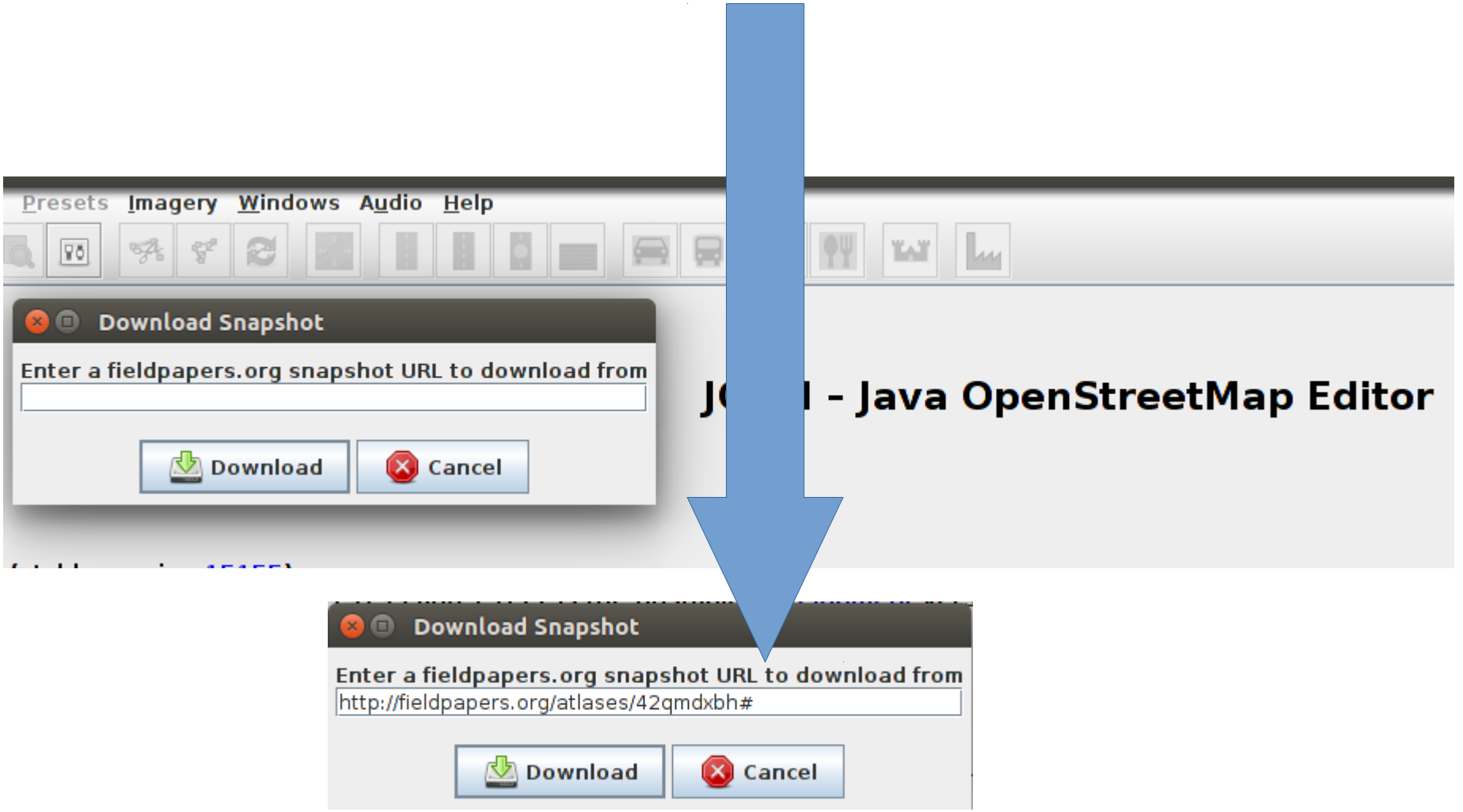
Expo
- G ON
- P t (CSV)
- URL Grid (CSV)

Edit i
- iD
- Potl ch
- JOSM

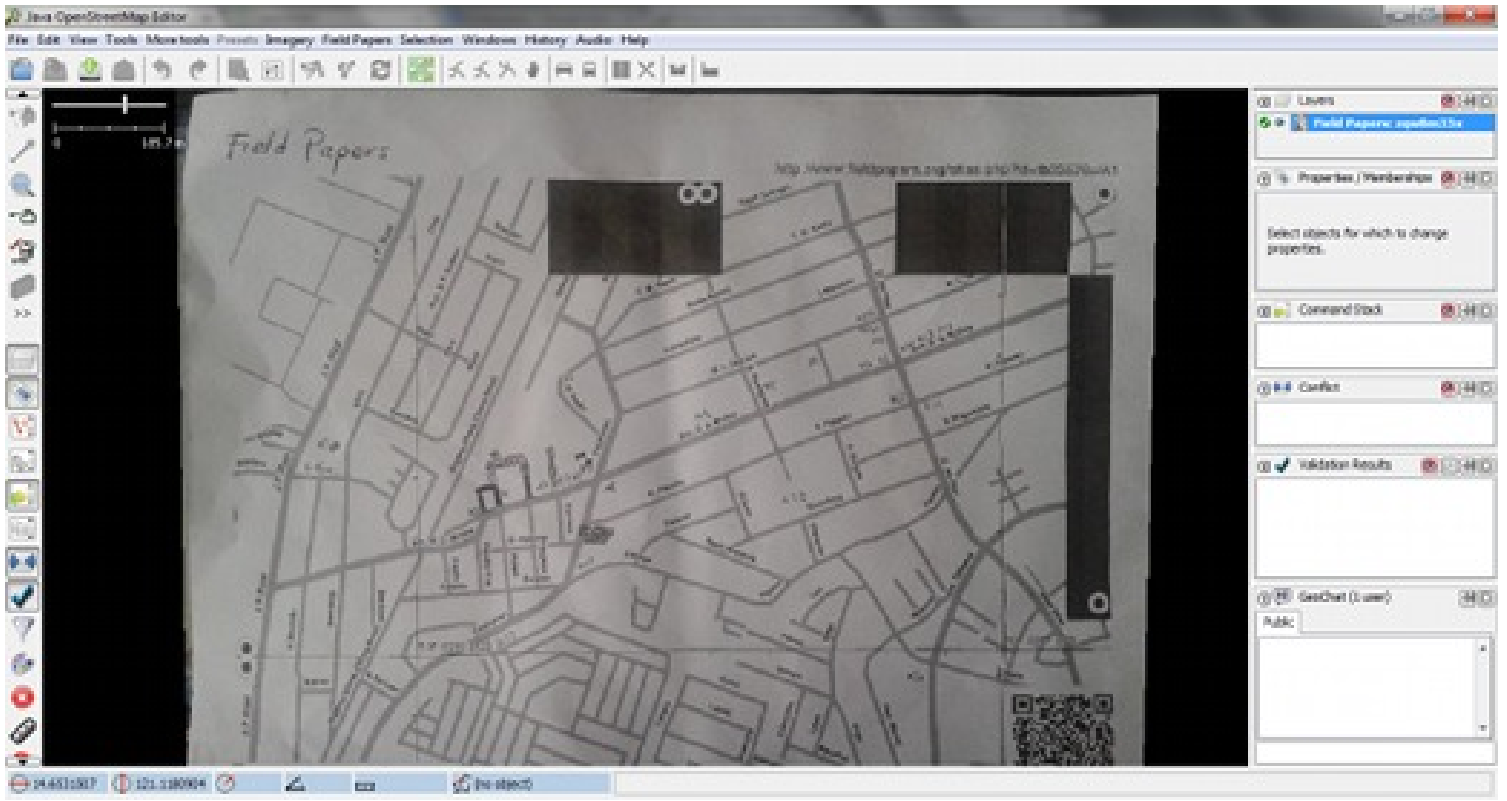
Download PDF

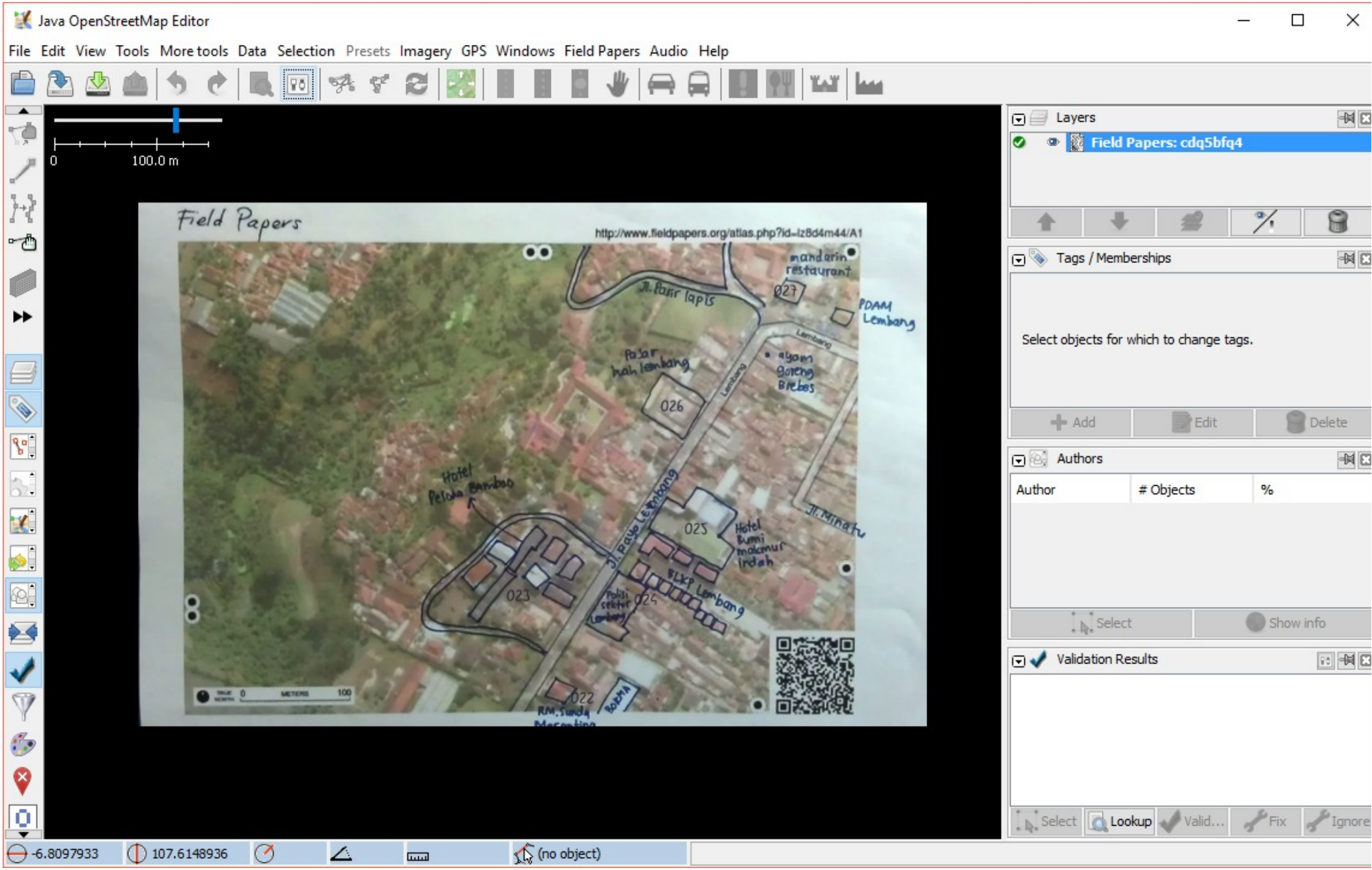
a
ON
ext (CSV)
Snapshot URL Grid (CSV)

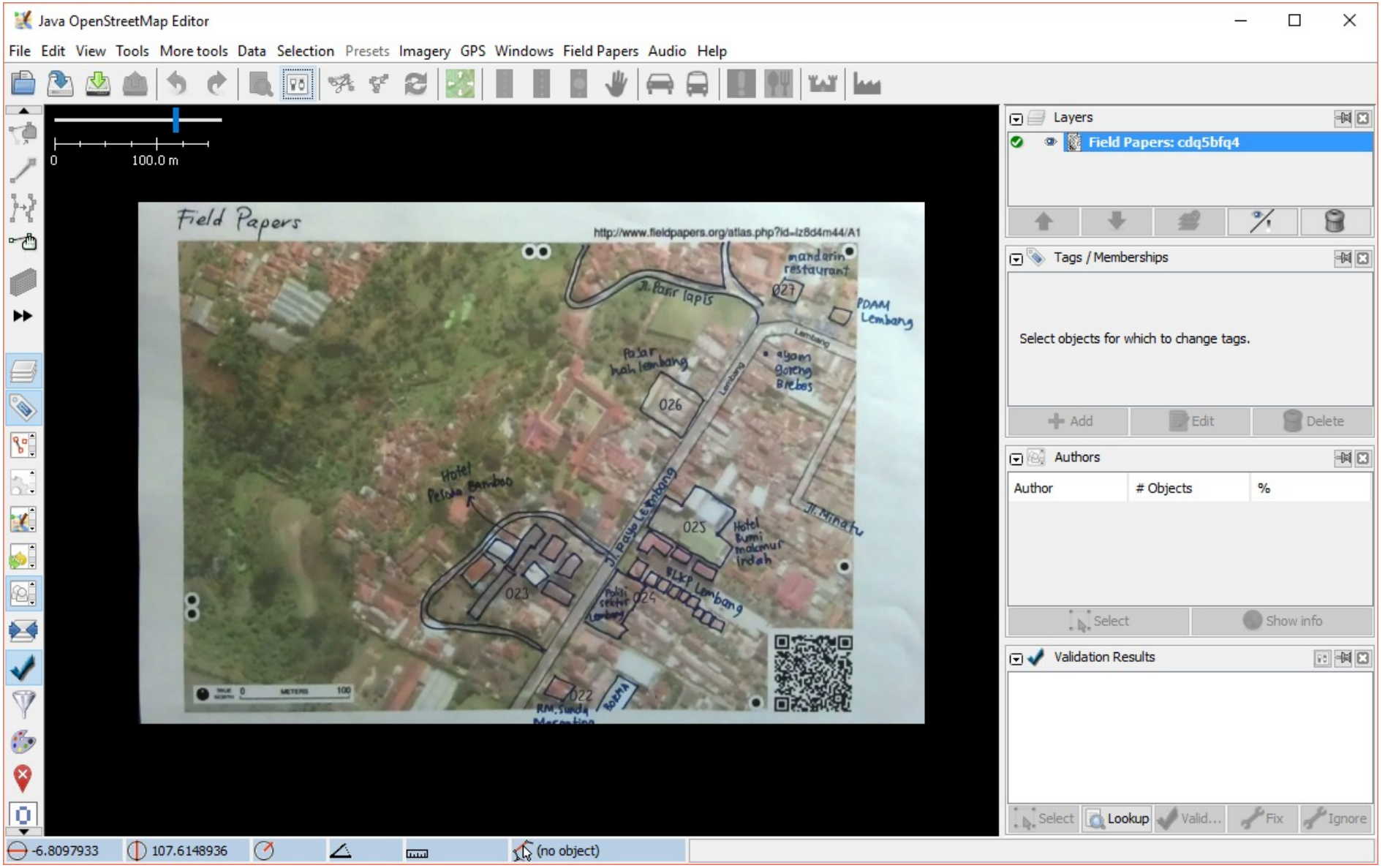
Copy the specific URL from the Field Papers website for this ‘atlas’



JOSM will load the Field Paper, in the correct position. You can start editing





COST Action Summer School, Coimbra, PT, June 2019

Make sure you do not obscure the ‘dots’ and the QR Code. Otherwise JOSM will not be able to orientate the paper