



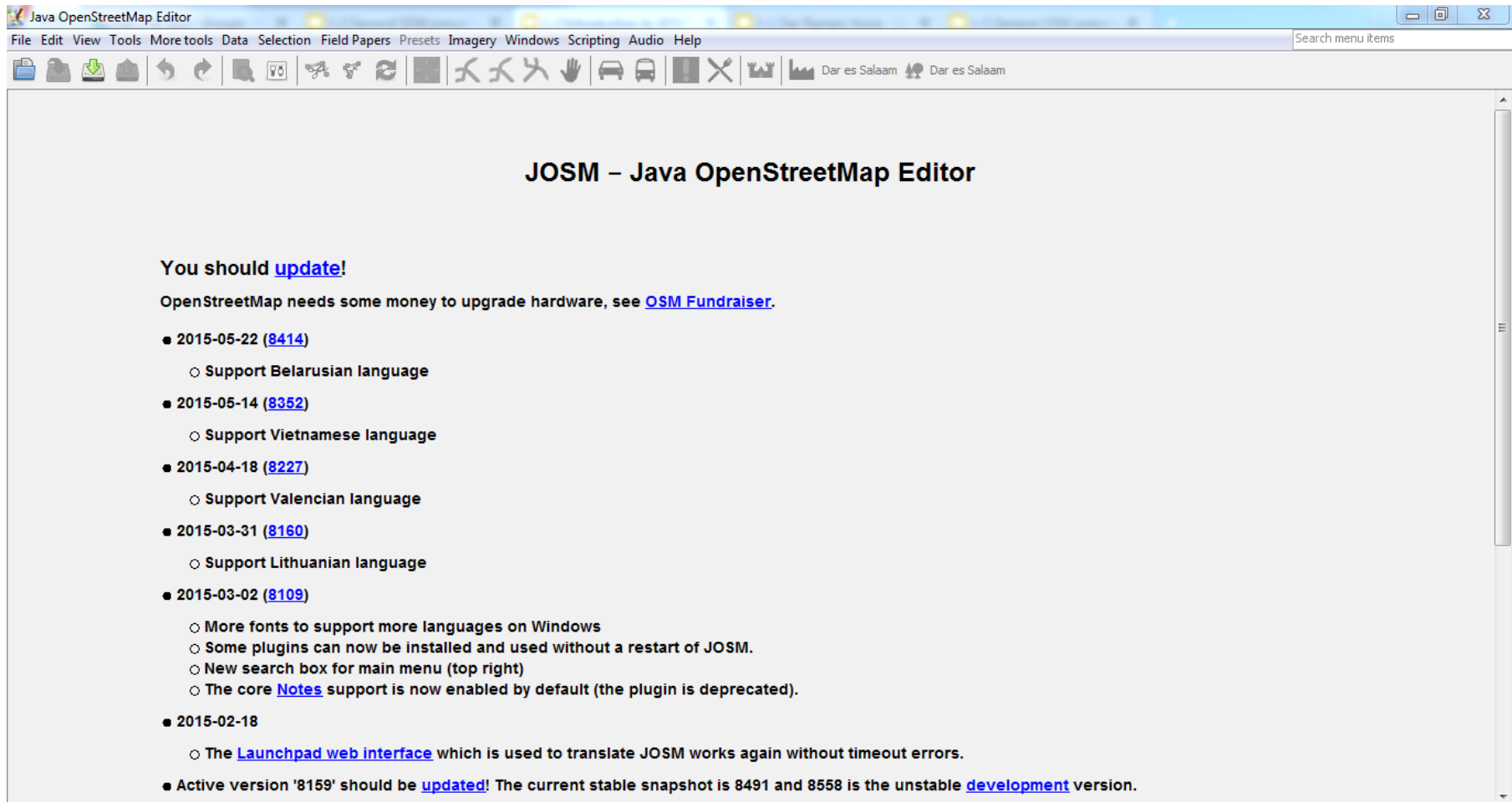
Humanitarian
OpenStreetMap
Team

Introduction to JOSM



What is JOSM

Open source OpenStreetMap editor, written in Java



Works on offline data, only synced by the user (download data/upload), so data usage is limited

Install JOSM

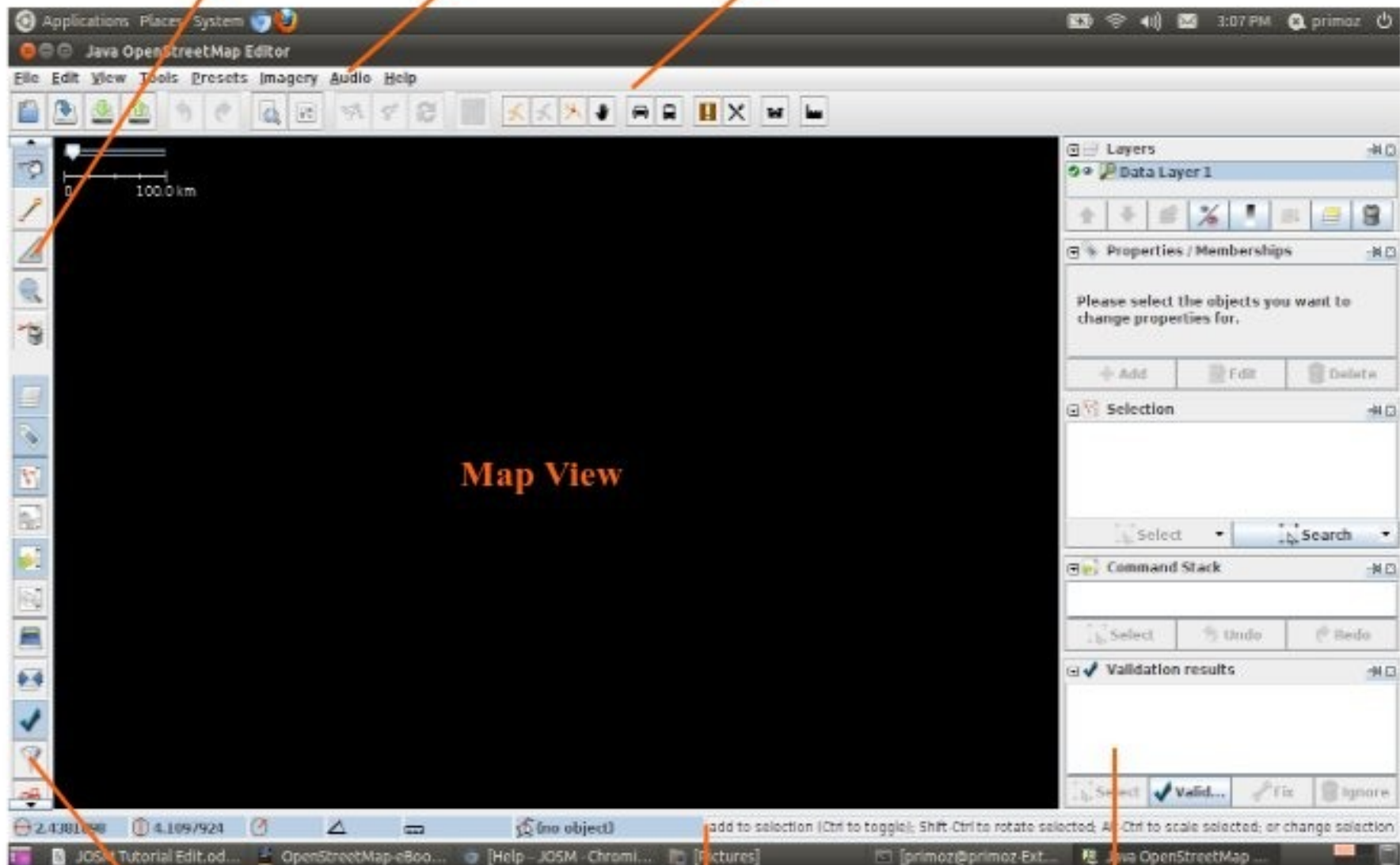
1. Get a copy from the USB Stick from the facilitator. Copy the “JOSM install” folder.
2. Install the Java runtime (jre-8u45-windows-i586.exe)
3. Install JOSM
4. Open a file explorer window
5. Type %APPDATA% in the location bar
6. Copy the “JOSM” folder to this directory. This will install plugins.
7. Type C:\ProgramData in the location bar
8. Copy the “JOSM_preset” folder to this directory. This will install the presets.
9. Launch JOSM.

JOSM Interface:

Edit Tools

Main Menu

Shortcut
Toolbar



Map View

JOSM interface

Panel / Toggler
Toolbar

Status Bar

Information
Panel

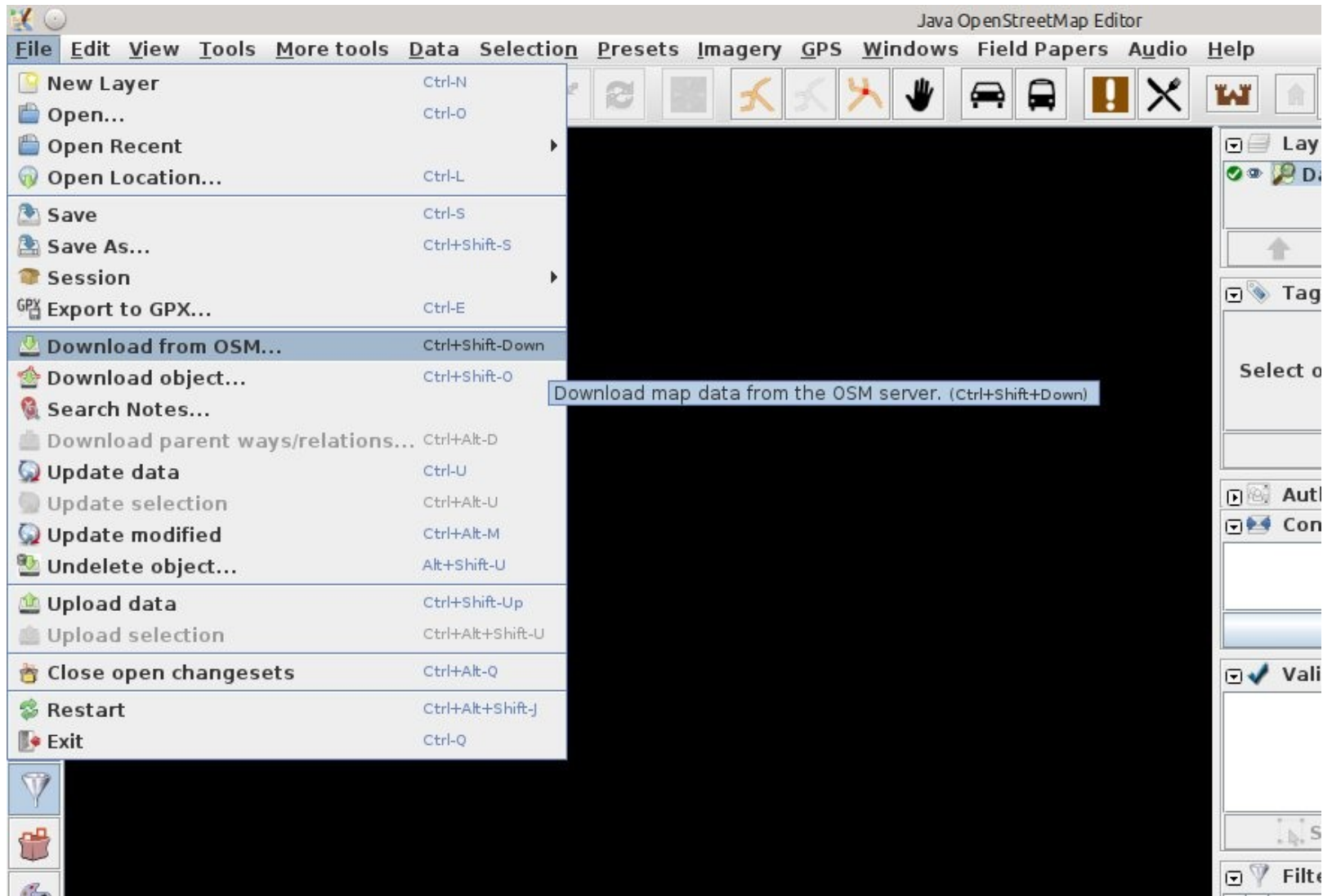
JOSM Interface

- **Map View** – The main window where the geodata is displayed and editing takes place
- **Main Menu** – The menu is customizable depending on which plugins you have installed
- **Shortcut Toolbar** – The buttons in this toolbar are shortcuts to commands from the Main Menu. This toolbar is highly customizable, with the ability to add and remove menu items from the preference dialog.

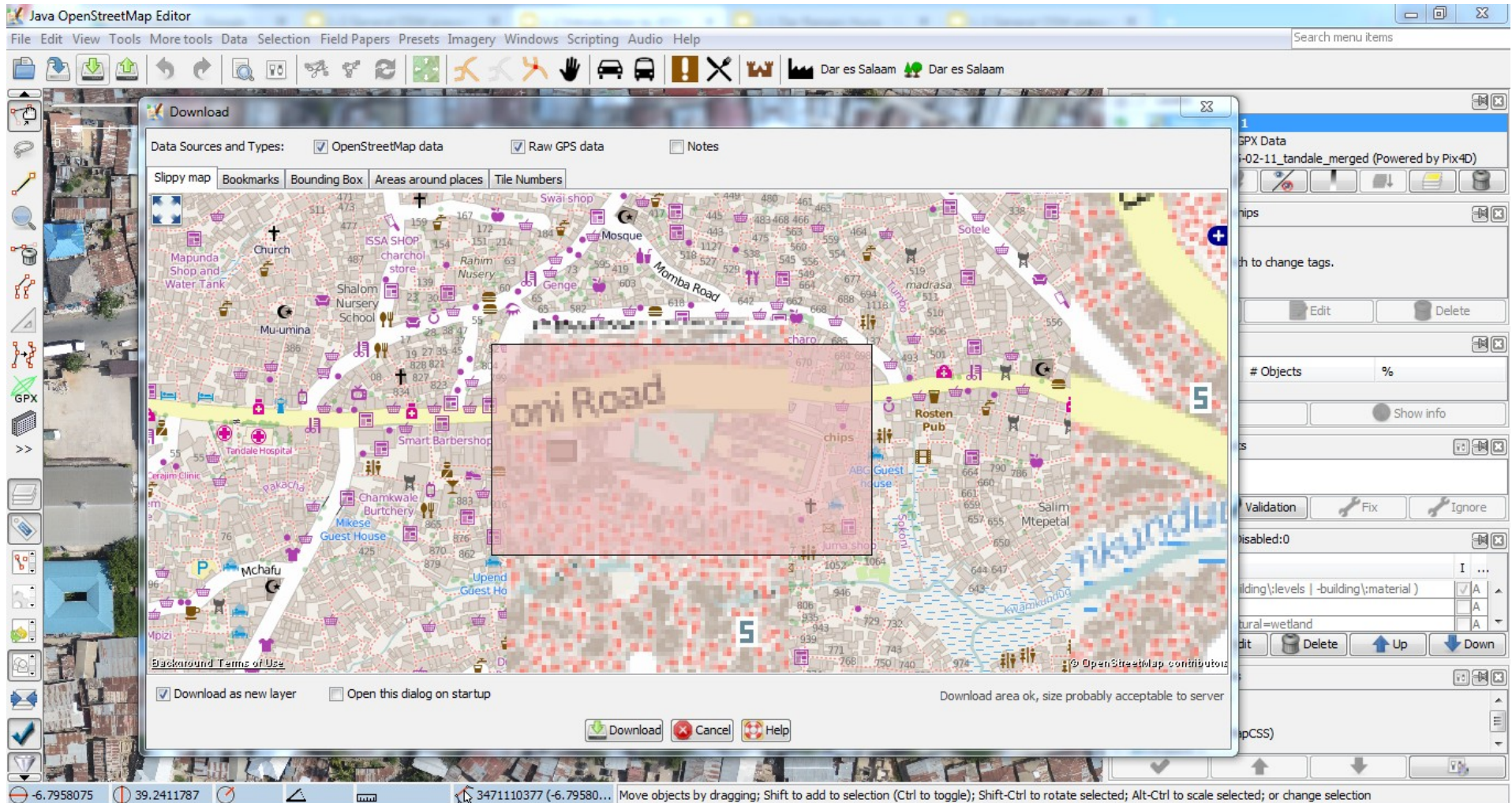
- **Edit Tools** – Contains drawing tools and the show/hide buttons for the Toggle Dialogs window
- **Information Panels** – These show information about the data in JOSM, including a list of selected features, objects, how the selected objects are tagged, who the last mapper to edit a feature was, and the different layers in the view
- **Status Bar** – Gives coordinates and measurements for features, as well as a hint of the current tools

Downloading Data into JOSM from OSM Servers

Click File > Download from OSM (or the icon on the Main Toolbar)



The download dialog box appears (Slippy Map)



Hold your left mouse button, drag to create a light pink box. This will be the data that will be downloaded into JOSM.

NB: Don't download large portions of data because it may take a long while. Work with smaller portions, and after you're done, you download another portion. You can always choose to download additional data!

Installing aerial imagery into JOSM (Mbtilles)

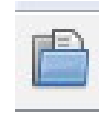
Run JOSM on your computer (Start Menu>Search>JOSM)

Collect mbtiles from supervisor (on memory stick), save your drive

Whats are Plugins?

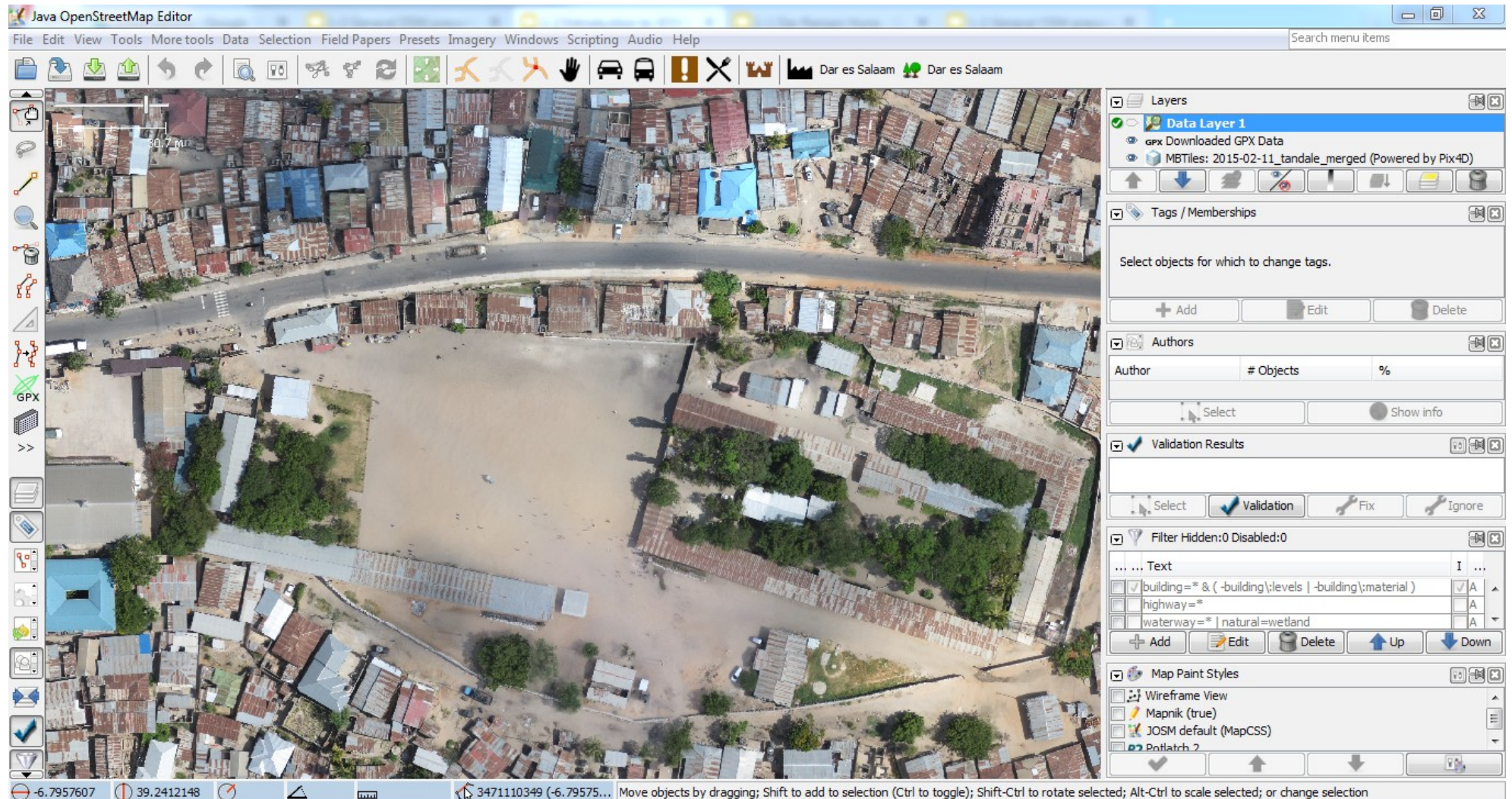
These are tools that are not installed with JOSM by default, but can be installed later on to add more functionality to JOSM to help you accomplish a given task. They are downloaded manually by user.

On the top menu, click on file>Open (ctrl + O)



Navigate to the location for mbtiles on your drive. Example:

 2015-02-11_tandale_merged_fixed.mbtiles Open file



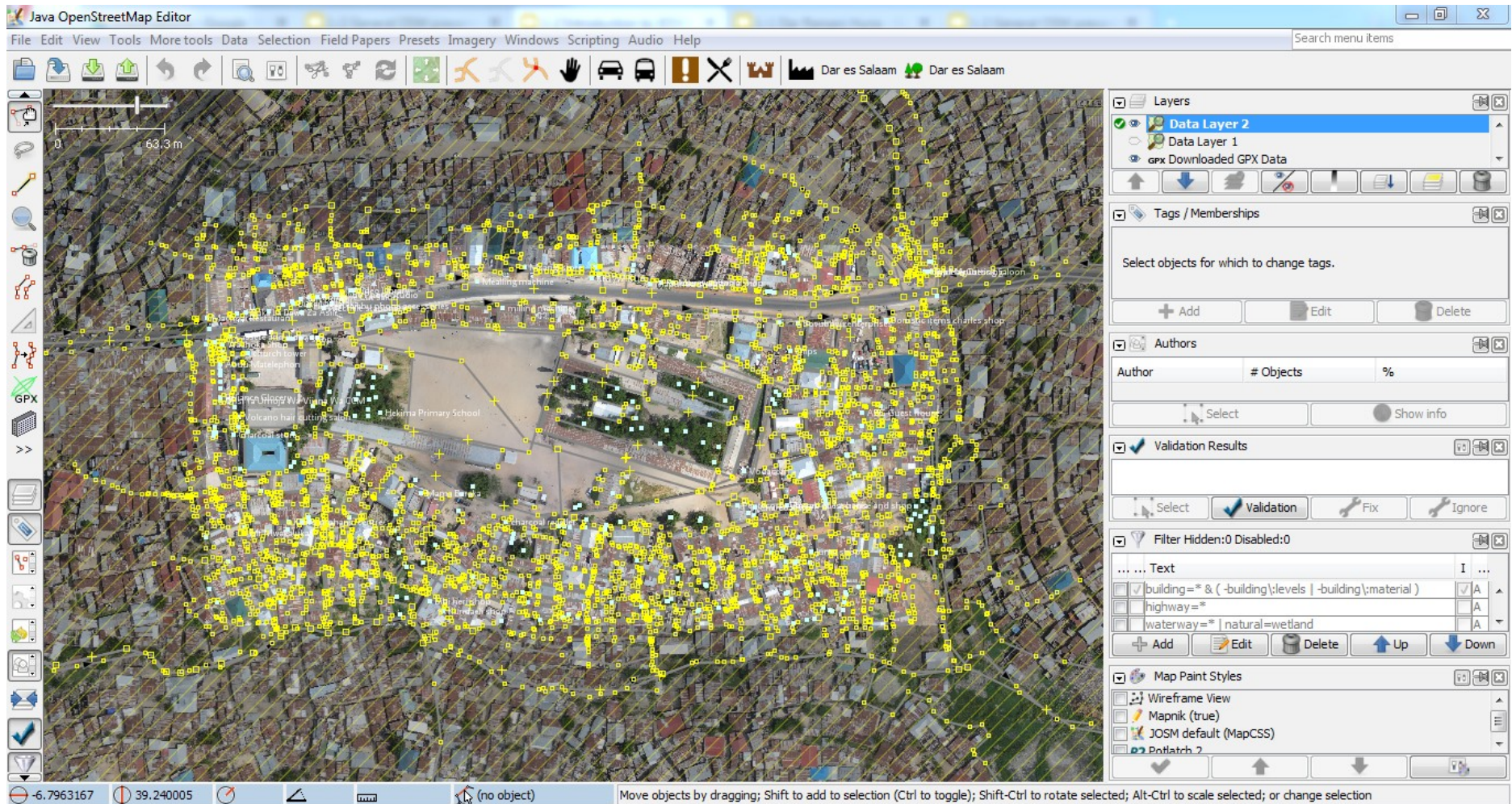
Note: At times you may need to import your data to have the Mbtiles loaded into the Map Window. Just incase they don't open instantly

Press the

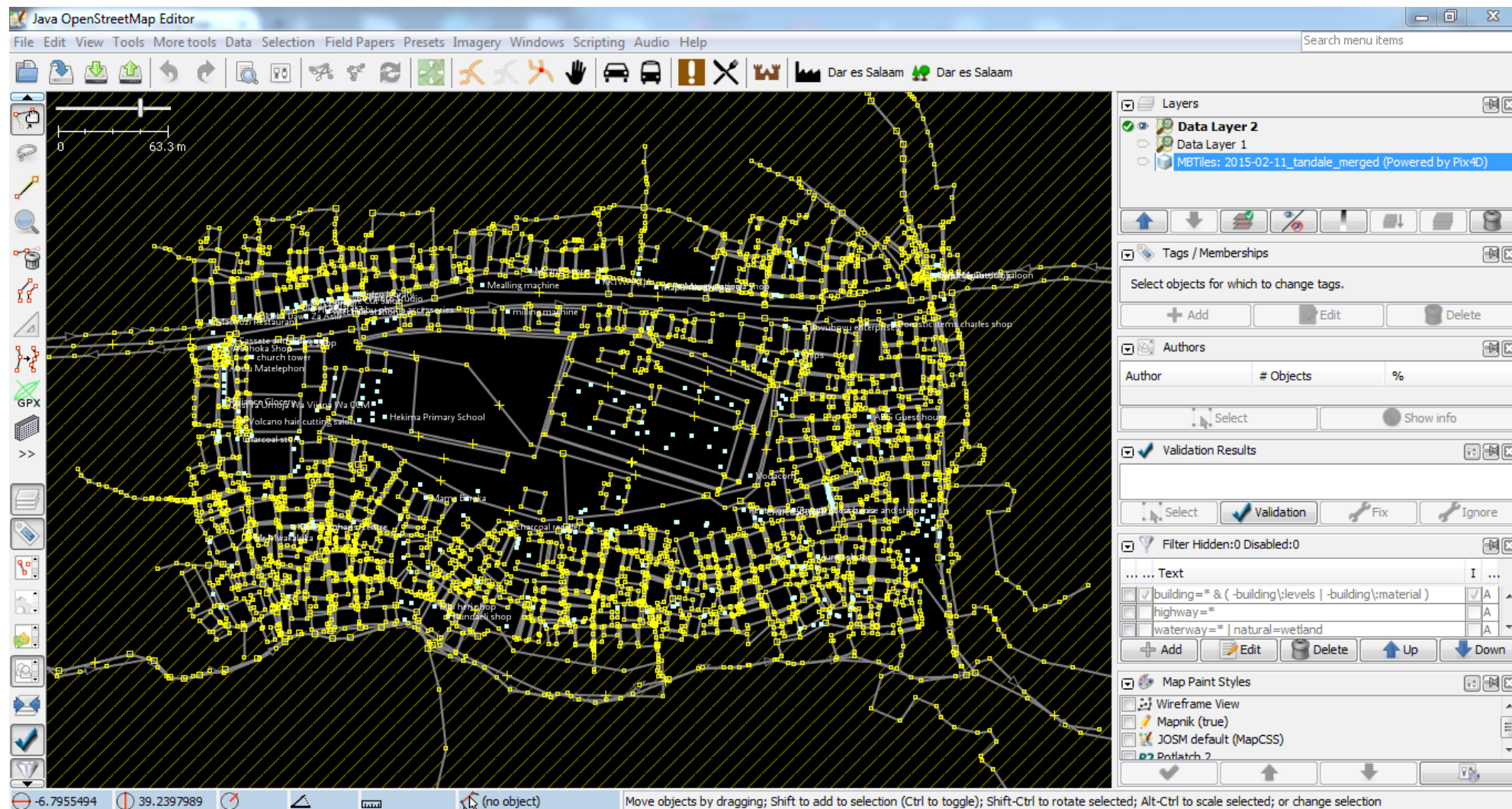


button

Download Data should appear in the main Map View Window



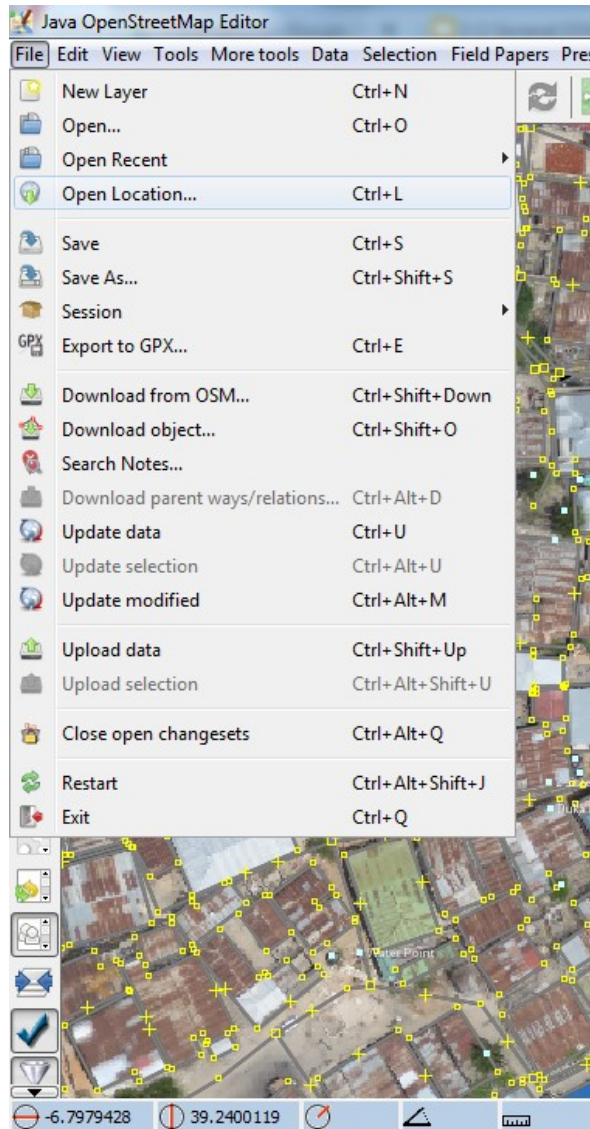
The cross hatched area is to remind you that you should not edit outside the area that you download from the server.



Downloaded data in JOSM

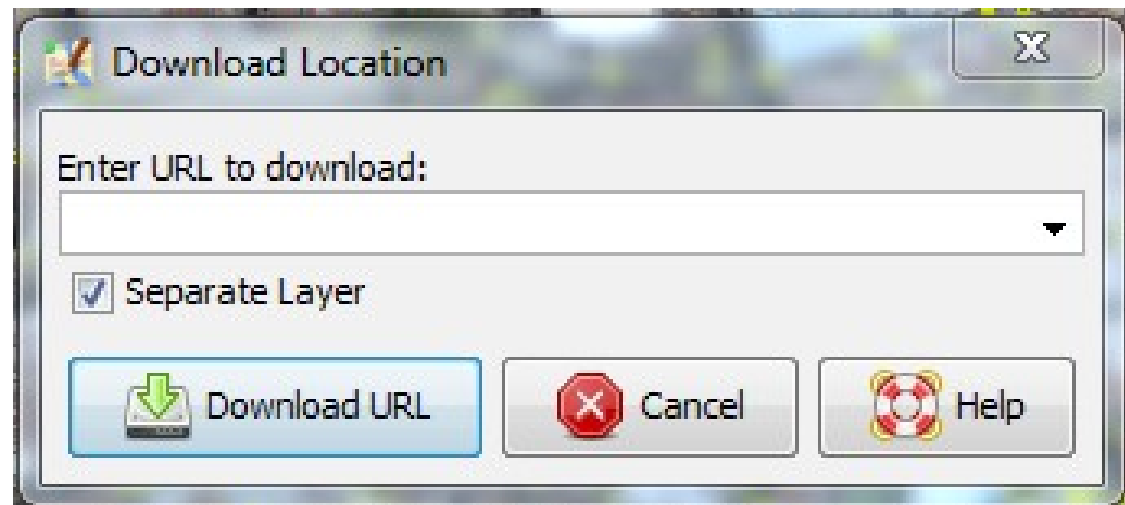
You can activate and deactivate the visibility of any layer, change the order of alignment, increase and decrease its transparency, merge a previously downloaded layer with a new one (Data Layer 1 and Data Layer 2 into one layer), Duplicate Layer and Delete.

Downloading Data from OSM

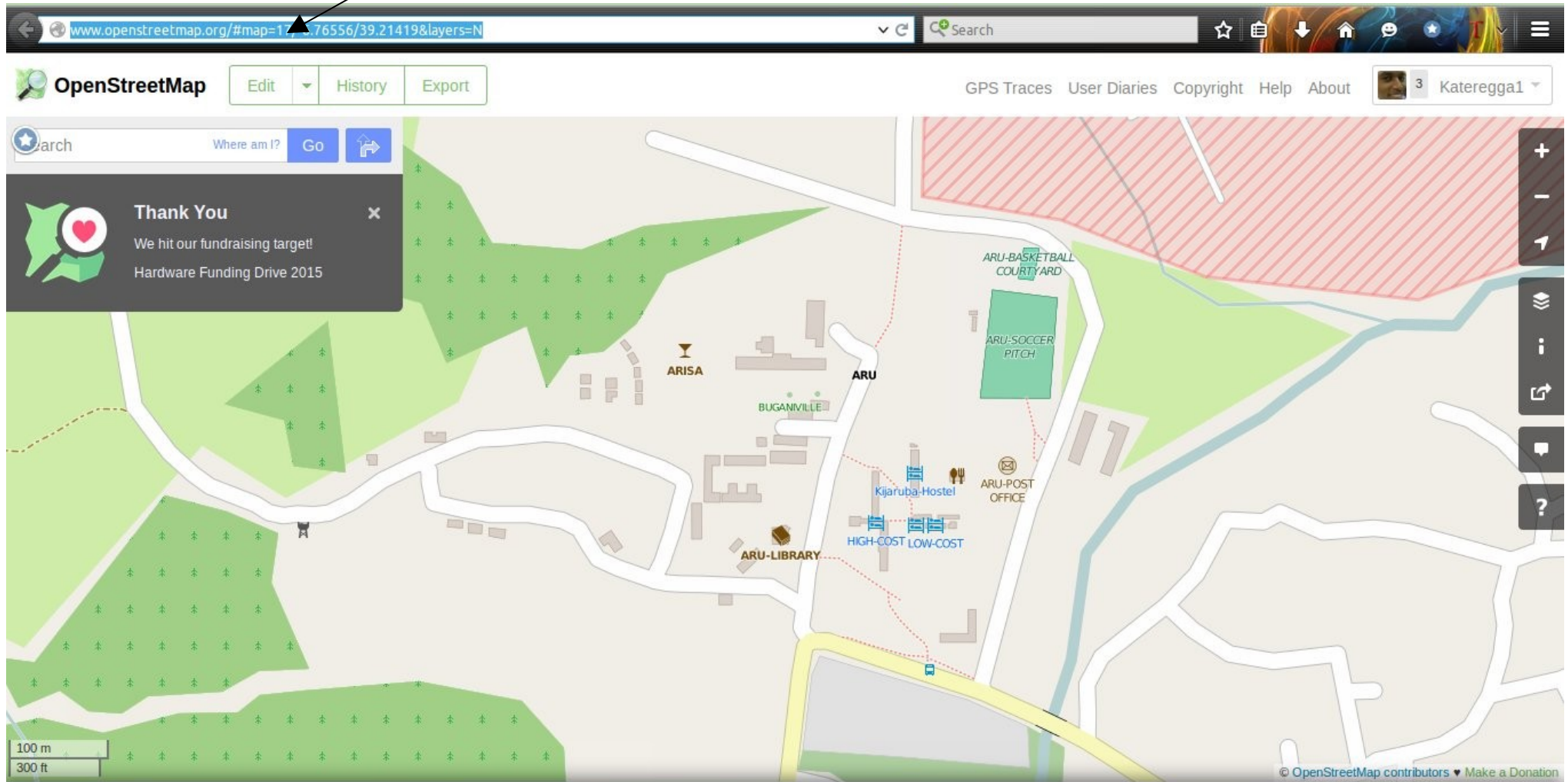


There are other ways to specify the area you want to download:

- Download data by pasting the url from OpenStreetMap site into JOSM
File>Open Location or Ctrl + L



Copy the URL



Once downloaded

Basic navigation:

- Right mouse button: drag the map
- Left mouse button: manipulate an element
- Scroll wheel: zoom in/out

There are three main modes of operation when editing:

- (S)elect 

for selecting elements, viewing/editing their tags and moving them.

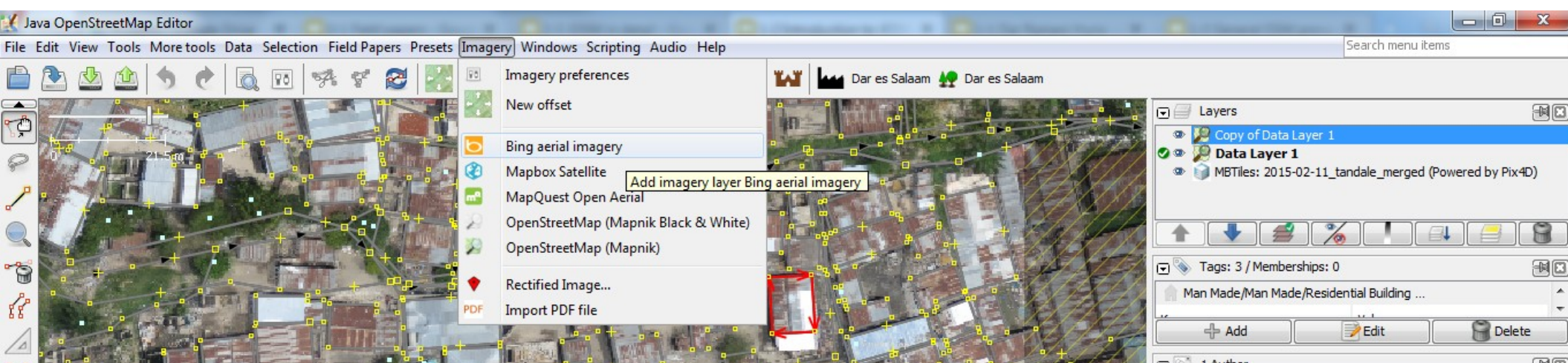
- (A)dd 

for adding elements, such as standalone nodes, adding new nodes to create a new way, or extend an existing way.

Delete (Ctrl+Delete) 
for deleting elements.

Importing Imagery into JOSM

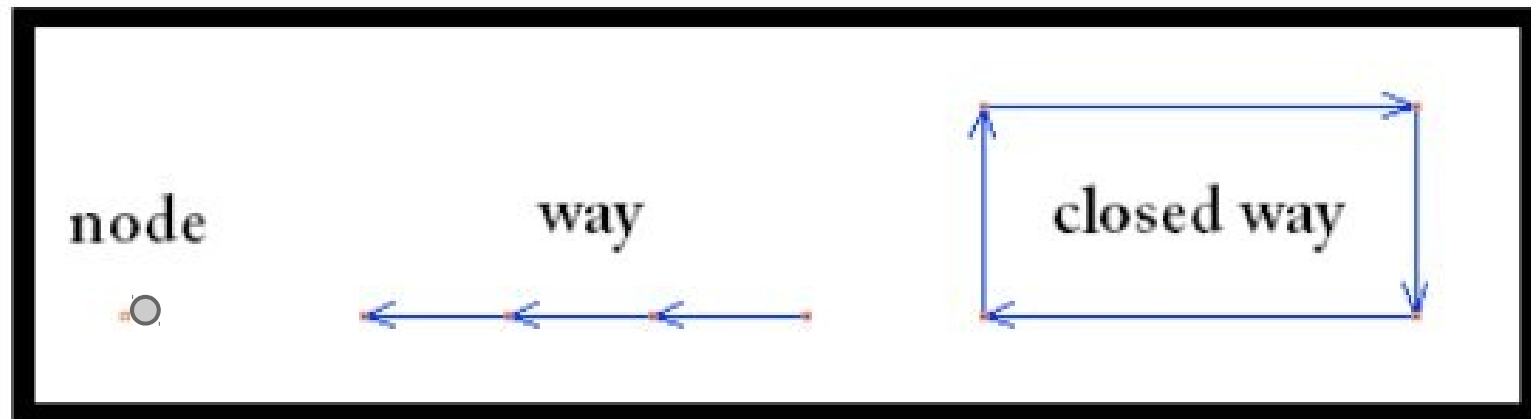
If you can't access Mbtiles for a certain area, there are other means of accessing aerial imagery with the use of satellite imagery. (Bing is widely used)



Drawing basic elements

- **Nodes:** The dots that are used to mark specific locations or for drawing the segments between these locations. Nodes are points in space. Each node has a latitude and longitude
- **Ways:** An ordered list of nodes, displayed as connected by line segments. They are used to describe roads, paths etc
- **Closed Way or Area:** Closed ways are ways which go in a closed loop. Used to describe areas (like parks, lakes, islands or buildings).



Drawing basic elements

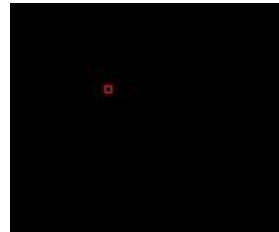


Node, way and enclosed way

Drawing a node

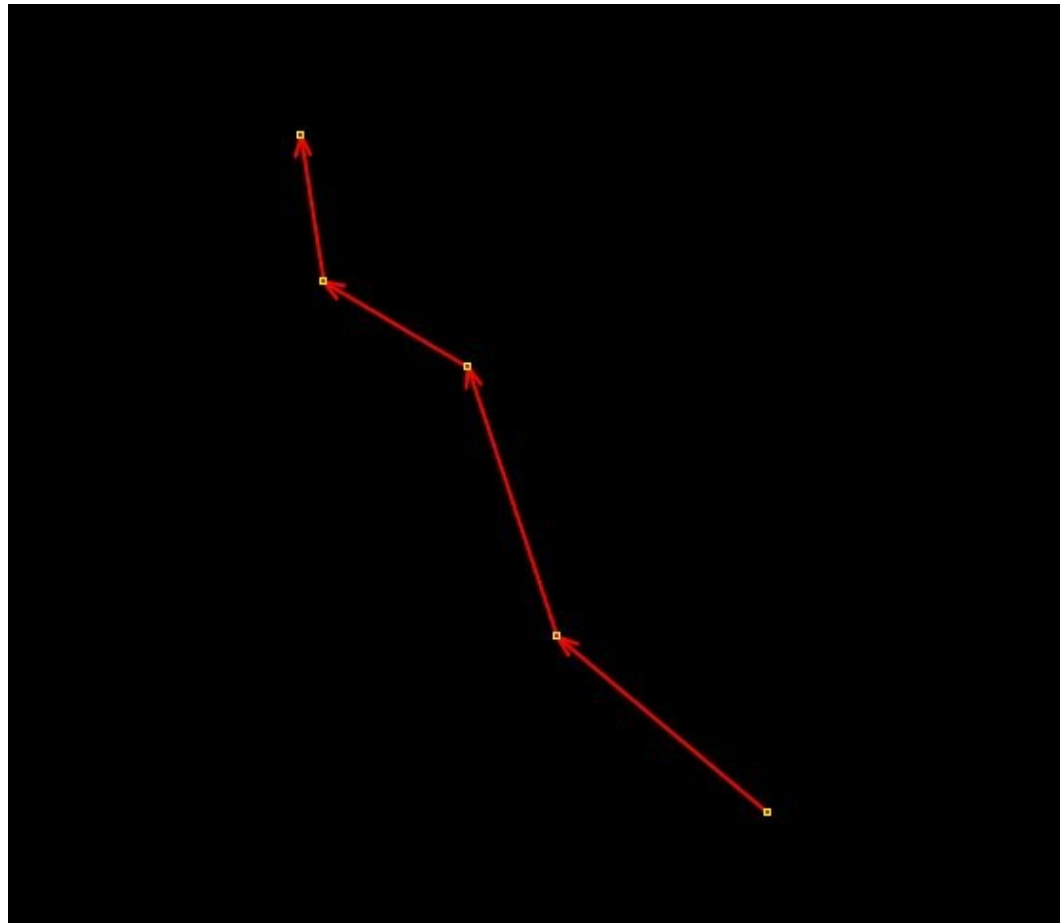
To draw a standalone node:

- Clear your current selection by pressing *Edit > Unselect All* or press *Escape* button on your computer
- Press 'A' or select the *Draw Nodes*  to begin drawing a node
- Press the *Left Mouse Button* somewhere in the Map View Window and press *Escape*
- *Double Click* to create a node
- Return to *Select* mode 

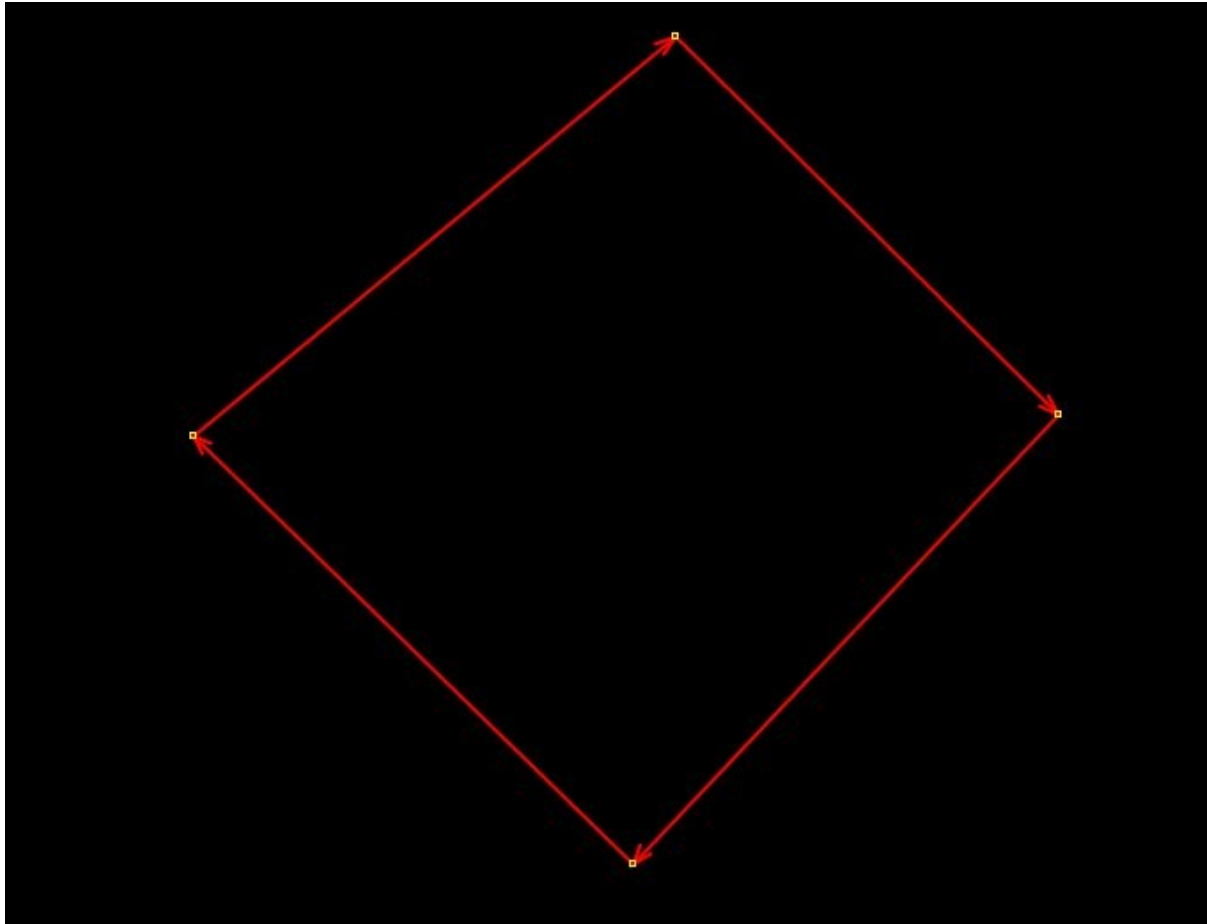


Drawing a way (2)

- Press again somewhere and another node will appear, joined by the first segment of a way
- Keep pressing to draw a way with several nodes and segments on it
- To stop go back to Select mode or press 'S' or Escape button on your computer



A way






A closed way

- Tags describe geographic data in OpenStreetMap.
Tags are attributes (or descriptions) you attach to basic elements (nodes, ways, closed ways/areas)
- A Tag is a **Key = Value** pair
- Key is a string describing the general classification of the feature. The Value gives more specific information within the class Key
- Keys and generic Values are lower case and do not including space, use underscore instead.

Tagging

In JOSM tags are displayed on the right side under “properties/memberships”. Selecting an element displays the table with key and value fields

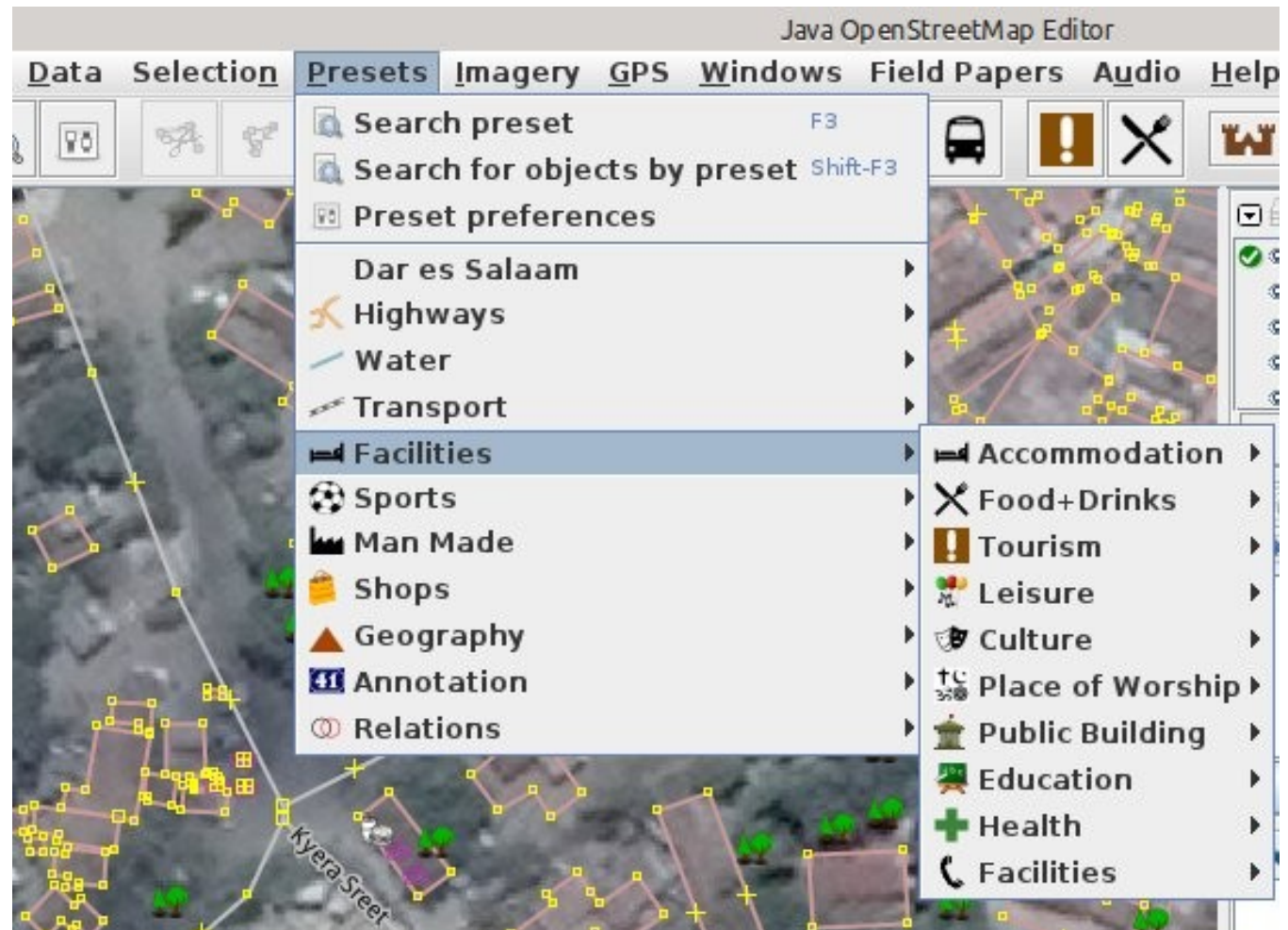
Key	Value
addr:street	Utengule
amenity	place_of_worship
building	public
building:levels	1
building:material	cement_block
name	Mchikichini Pentekoste Church
religion	christian
 Add	 Edit
 Delete	

Tags for a selected object


Presets

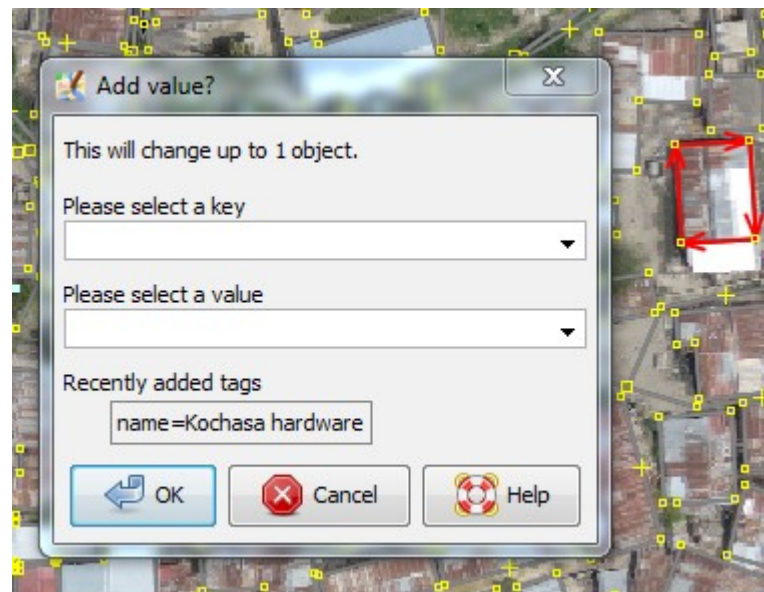
A preset is a tag that is given a “human-readable” name. Presets allow the user to tag objects by selecting them from the predefined menu.

*In JOSM go to
Main Menu
and press
Presets*



Presets/Tag

- Add a tag by using an “Add” button: A rectangular button with a light blue gradient, containing a plus sign icon and the text 'Add'.
- Press the button Add a Tag
- Change values window appears where you can select a key or a value from the drop-down list. The drop-down list contains all the values in the downloaded area and all the know tags or presets. Add a tag by using predefined



Presets

- Select an entry from Presets by pressing Presets tab on the Main Menu
- Select an entry from the drop-down
- Select the attributes
- Press Apply Preset