

Task 3: Preparing other urban data layers – Urban Data Input Tool

Description

This exercise offers the experience of a complete workflow of mapping urban data (frontages, entrances and land uses) using the Space Syntax standards for QGIS.

Note: It is a set of minimal instructions, assuming basic familiarity with the QGIS environment and the space syntax (depthmapX) terminology. Participants can work through the various steps in groups.

Stage 1 – Frontages data input

1) Prepare the project

- a) Open the sample data project (sample_data.qgs)
- b) Make sure the 'Building' layer is present in the layers panel
- c) Start the UrbanDataInput tool from the Space Syntax Toolkit menu or toolbar
- d) Select the 'Frontage' tab

2) Create frontage layer

- a) Click the 'Create New' button
- b) There are several ways to get started with a new frontage layer, we try one
- c) Memory layer from existing building layer:
 - i) Don't set the save location
 - ii) Select the 'Use building layer' check box.
 - iii) Select the 'buildings' layers from the drop-down menu.
 - iv) Click OK
- d) The memory layer is a temporary layer that disappears after closing QGIS. You need to save it as a shape file to keep the data.

3) Draw frontages

- a) Choose one of the following options:
 - i) Building
 - ii) Fences
- b) If you choose 'Building', you can choose the following sub categories-
 - i) Transparent (e.g. shop fronts with large windows)

- ii) Semi-transparent (e.g. wall with some windows)
- iii) Blank (e.g. blank wall with no windows)
- c) If you choose 'Fences', you can further choose from the following sub categories -
 - i) High Opaque Fence (or wall)
 - ii) High See Through Fence
 - iii) Low Fence (e.g. below waist level)
- d) Select the 'Add Feature' from the Digitizing QGIS toolbar.
- e) Draw lines along the respective building.

4) **Update frontages**

- a) Select the Frontage (line) to update
- b) Observe the attribute values in the data table
- c) Choose one of the following options:
 - i) Building
 - ii) Fences
- d) If you choose 'Building', you can set one of the sub categories (see above)
- e) If you choose 'Fences', you can further set from the sub category (see above)
- f) Click 'Update Type' at the bottom left on the Urban Data Input tool panel

5) **View attributes of selected features of the frontage layer**

- a) Use the 'Select features' QGIS tool to select the required frontages.
- b) The attributes related to the selected frontages will now be displayed in the Urban Data Input tool

6) **Update Frontages ID**

- a) If you have a Frontage layer loaded on the map canvas press 'Update IDs' to update the 'F-ID' attribute of the Frontage layer

7) **Update Frontages Length**

- a) If you have a Frontage layer loaded on the map canvas press 'Update Length' to update the 'Length' attribute of the Frontage layer

8) **Hide frontages**

- a) To hide the lines with no value for Frontage type press the 'Hide' button at the bottom right of the tool.
- b) To make the lines with no value for Frontage type reappear press the 'Hide' button again at the bottom right of the tool

Stage 2 – Entrances data input

9) Create entrance layer

- a) Shapefile:
 - i) Click the 'Create New' button
 - ii) Click the '...' button and select location to save the Shapefile.
 - iii) Click OK

10) Draw entrances

- a) Choose one of the following options:
 - i) Controlled
 - ii) Uncontrolled
- b) If you choose 'Controlled', you can choose the following sub categories-
 - i) Default
 - ii) Fire Exit
 - iii) Service Entrance
 - iv) Unused
- c) If you choose 'Uncontrolled', you can further choose from the following sub categories -
 - i) Default
- d) Select the 'Add Feature' from the Digitizing QGIS toolbar.
- e) Draw points at appropriate locations along the respective building.

11) Update entrances

- a) Select the Entrance (point) to update
- b) Observe the attribute values in the data table
- c) Choose one of the following options:
 - i) Controlled
 - ii) Uncontrolled
- d) If you choose 'Controlled' you can set one of the sub categories (see above)
- e) If you choose 'Uncontrolled' you can further set from the sub category (see above)
- f) Click 'Update Type' at the bottom left on the Urban Data Input tool panel

12) View attributes of selected features of the entrances layer

- a) Use the 'Select features' QGIS tool to select the required entrances.
- b) The attributes related to the selected entrances will now be displayed in the Urban Data Input tool

13) Update Frontages ID

- a) If you have a Entrances layer loaded on the map canvas press 'Update IDs' to update the 'E-ID' attribute of the Entrances layer

Stage 3 – Land use data input

14) Create frontage layer

- a) Select the 'Land Use' tab
- b) Click the 'Create New' button
- c) Shapefile from existing building layer:
 - i) Click the '...' button and select location to save the Shapefile.
 - ii) Select the 'Use building layer' check box.
 - iii) Select the 'buildings' layers from the drop-down menu.
 - iv) Select the appropriate ID column from the drop-down menu.
 - v) Click OK

15) Draw Land Use blocks

- a) Choose one of the 21 available land use categories.
- b) Choose one of the Sub Category options if available. Some land use categories also have Sub Categories, e.g. Catering has 3 Sub Categories:
 - i) Restaurants and cafes
 - ii) Drinking Establishments
 - iii) Hot Food Takeaways
- c) Add an integer for 'Total number of floors:' if required. Leave 0 if no data available.
- d) Add 'Description' if required. Leave blank if no description needed.
- e) Select the 'Add Feature' from the Digitizing QGIS toolbar.
- f) Draw polygons to represent the buildings as required.

16) Update Land Use blocks

- a) Select the Land Use blocks (polygon) to update
- b) Choose one of the 21 available land use categories.
- c) Choose one of the Sub Category options if available.
- d) Add an integer for 'Total number of floors:' if required. Leave 0 if no data available.
- e) Add 'Description' if required. Leave blank if no description needed.
- f) Click 'Update Type' at the bottom left on the tool

17) View attributes of selected features of the Land Use layer

- a) Use the 'Select features' QGIS tool to select the required land use blocks.

- b) The attributes related to the selected land use blocks will now be displayed in the Urban Data Input tool.

18) Update Land Use ID

- a) If you have a Land Use layer loaded on the map canvas press 'Update IDs' to update the 'LU-ID' attribute of the Frontage layer