



XXVII FIG CONGRESS

11-15 SEPTEMBER 2022
Warsaw, Poland

*Volunteering
for the future –
Geospatial excellence
for a better living*

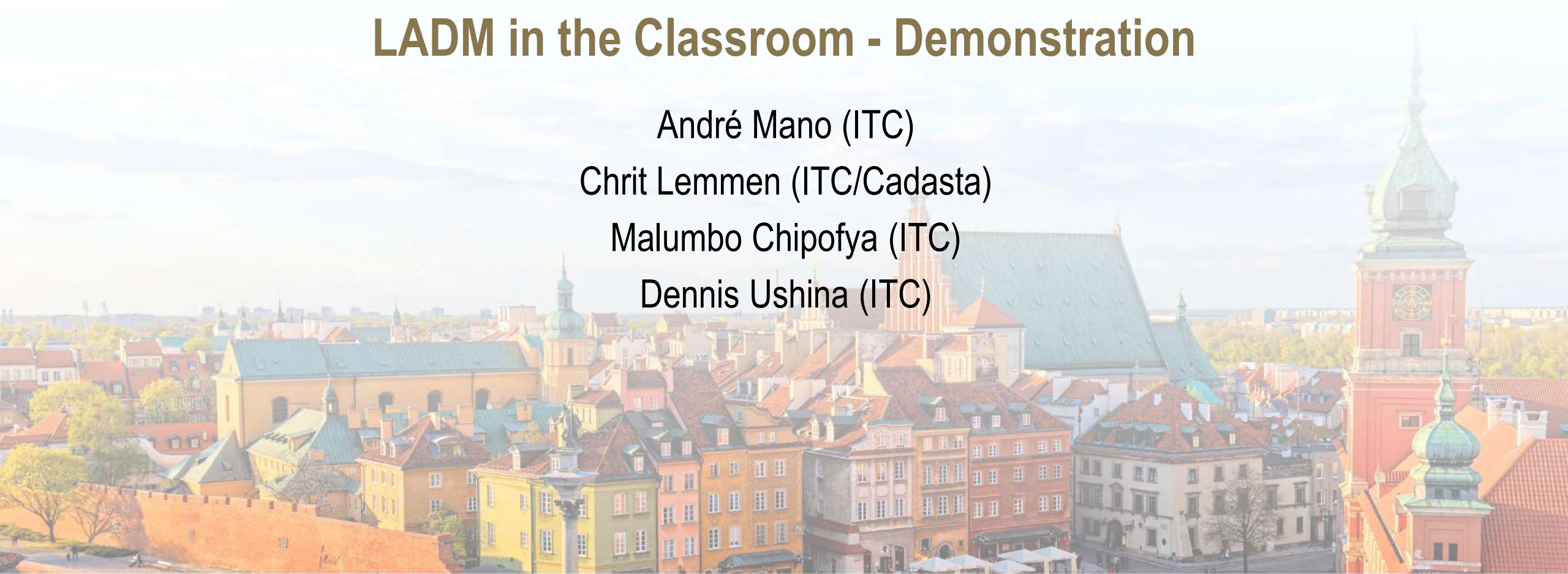
LADM in the Classroom - Demonstration

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Chrit Lemmen (ITC/Cadasta)

Malumbo Chipofya (ITC)

Dennis Ushina (ITC)



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Distribution

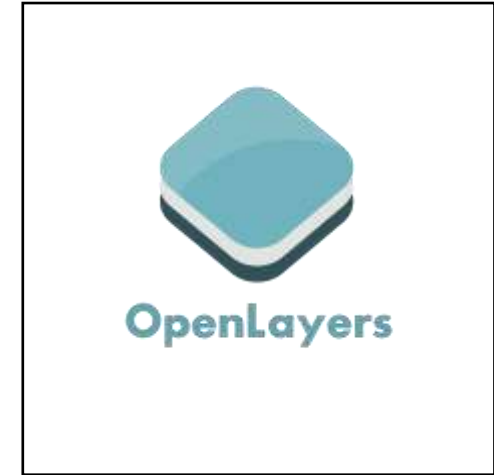
Local files (.gpkg)
+
QGIS



RDBMS (PostgreSQL)
+
QGIS



Webmap application



Try it yourself

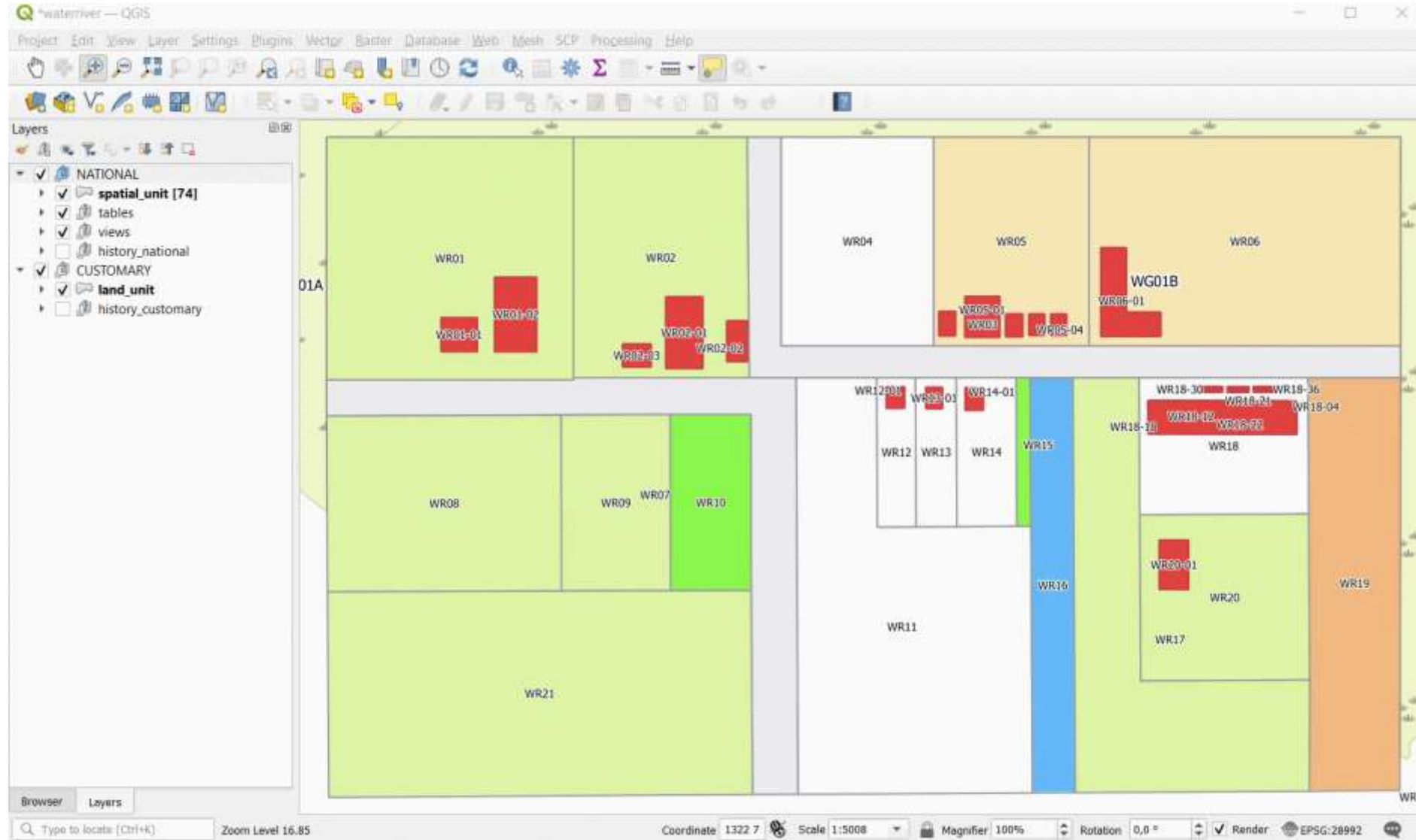


Or

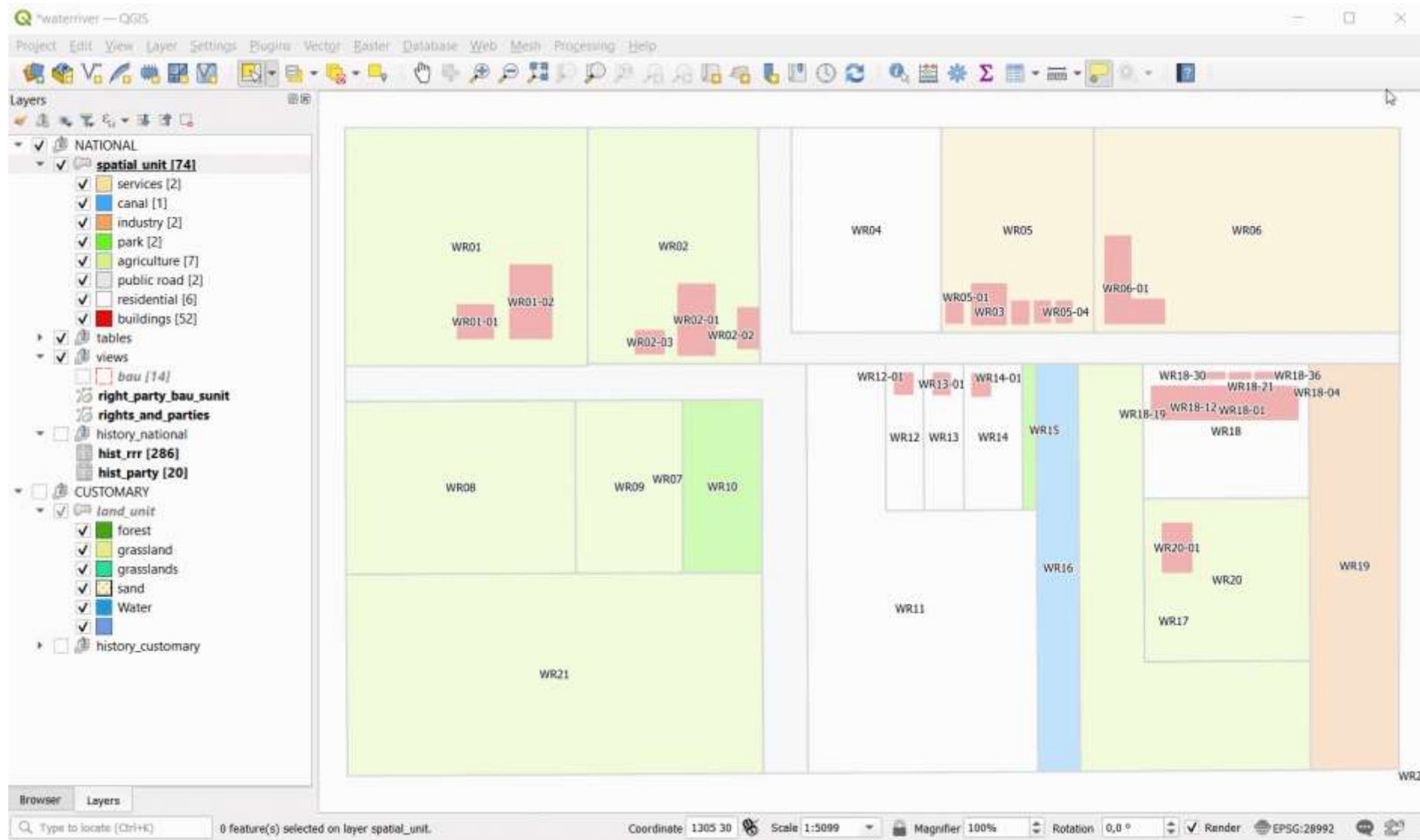
https://github.com/andremano/ladm_classroom (the datasets)

<https://tinyurl.com/y7dzh8cu> (the web map)

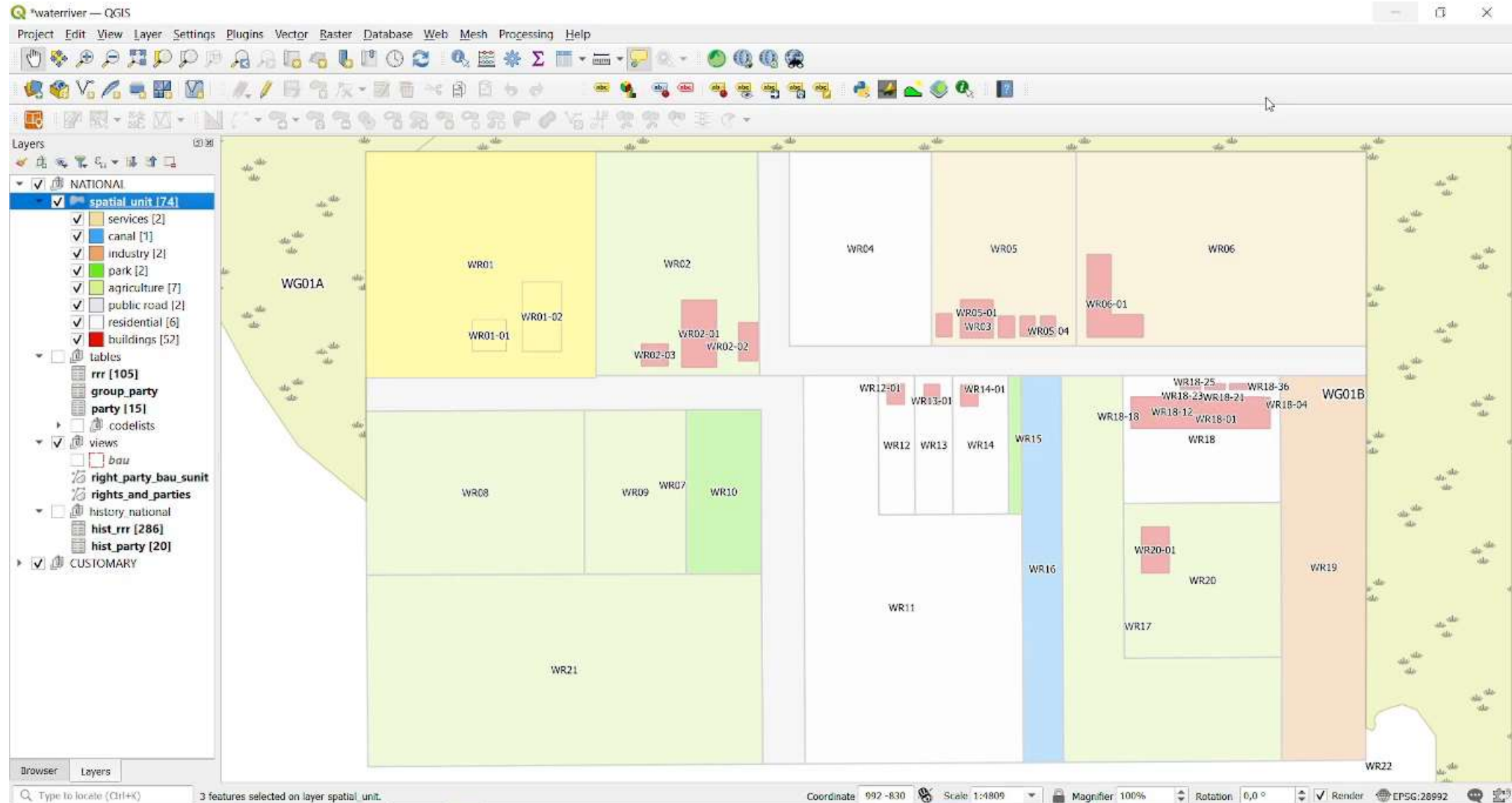
Overview



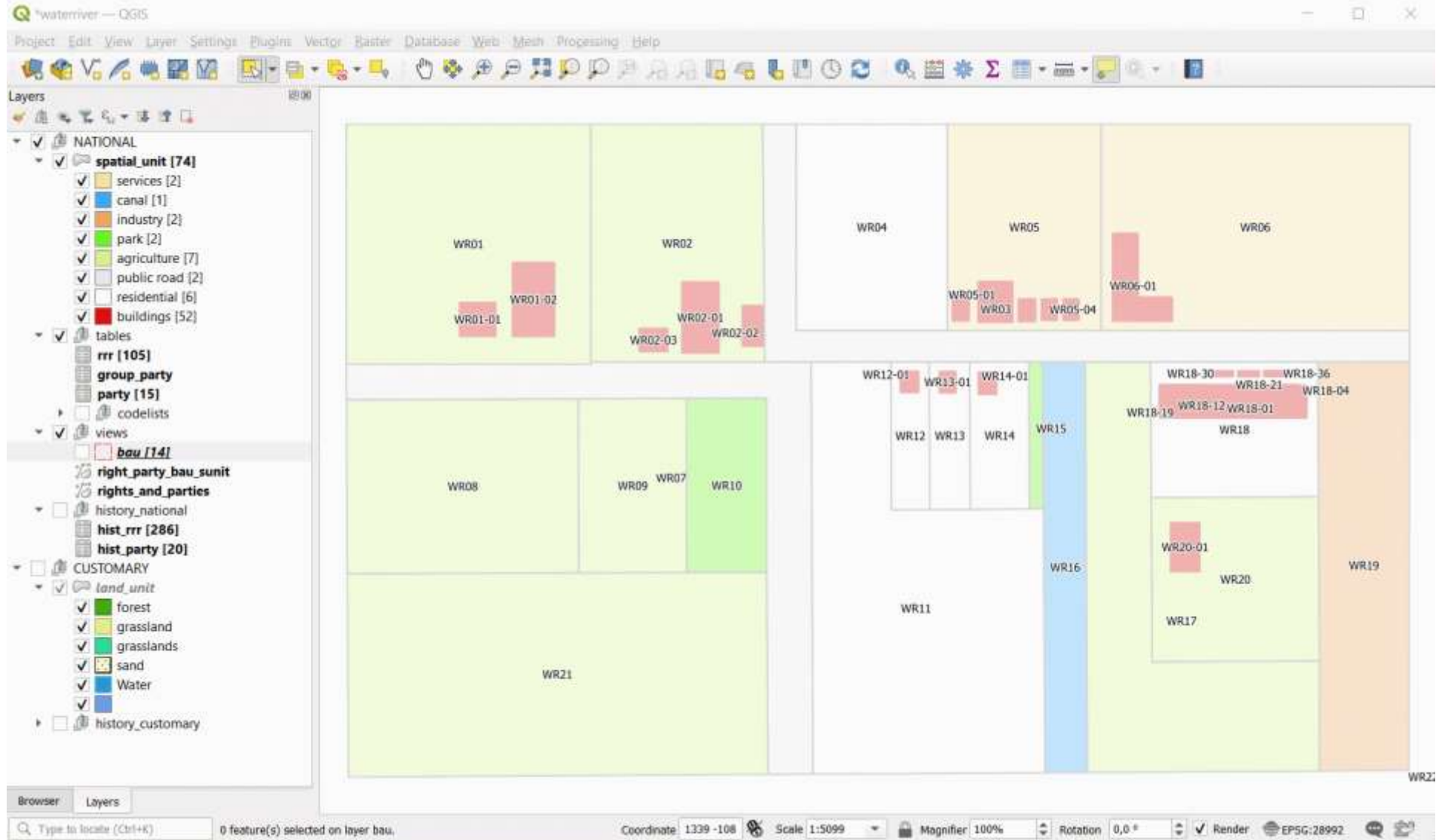
A simple relationship



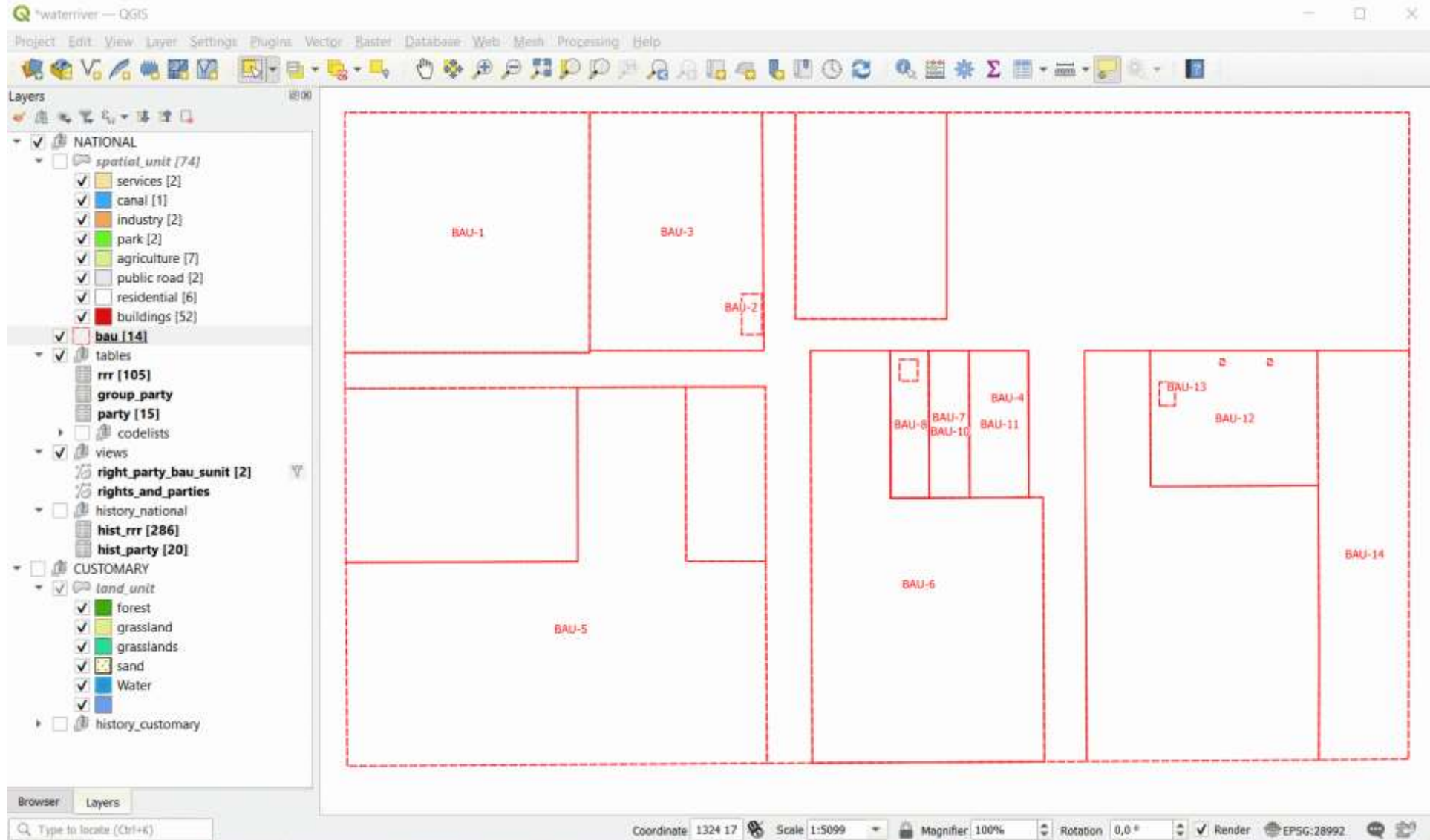
Deconstructing a simple relationship



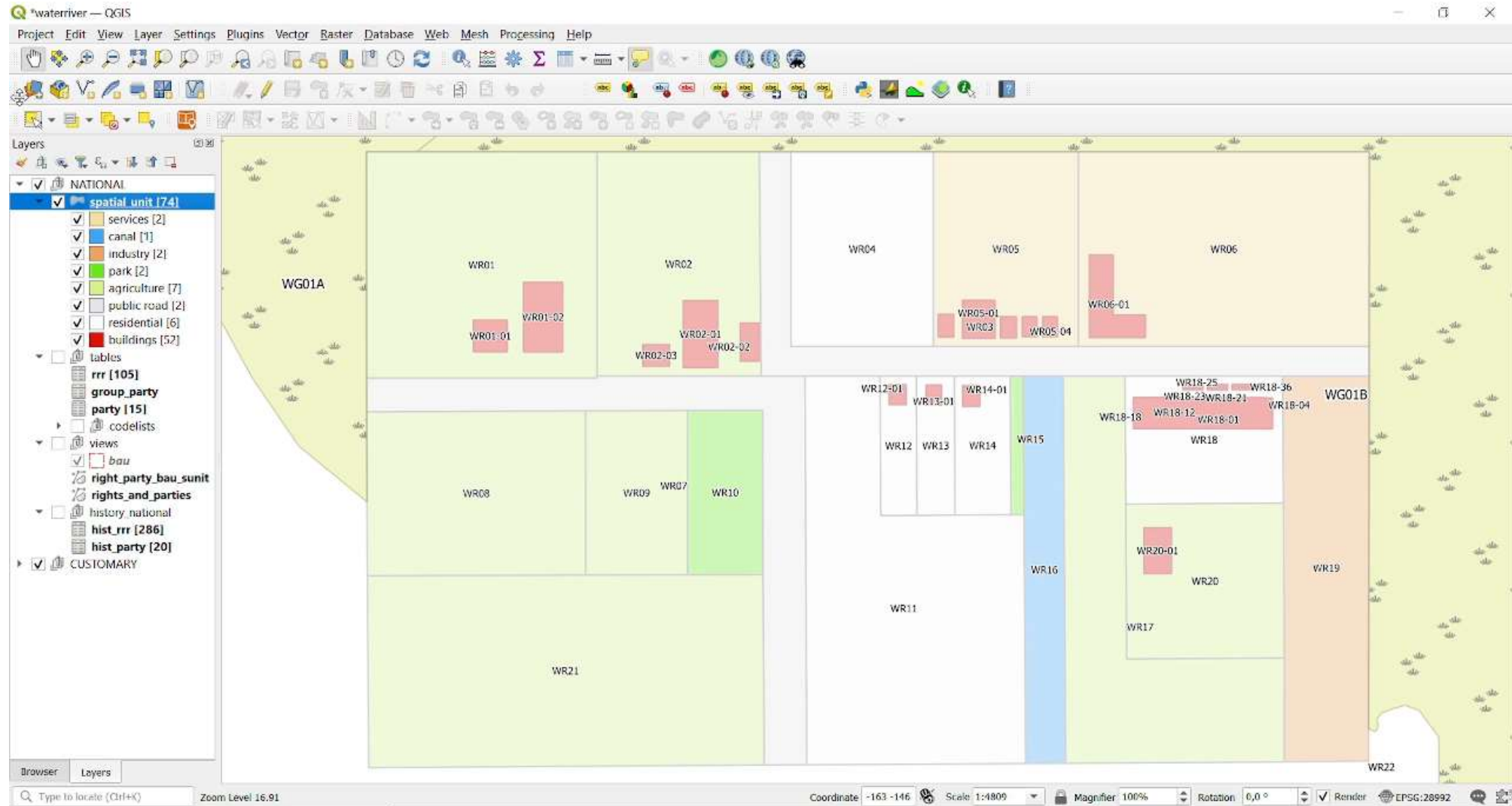
Zooming in...



Shared rights



3D visualizations

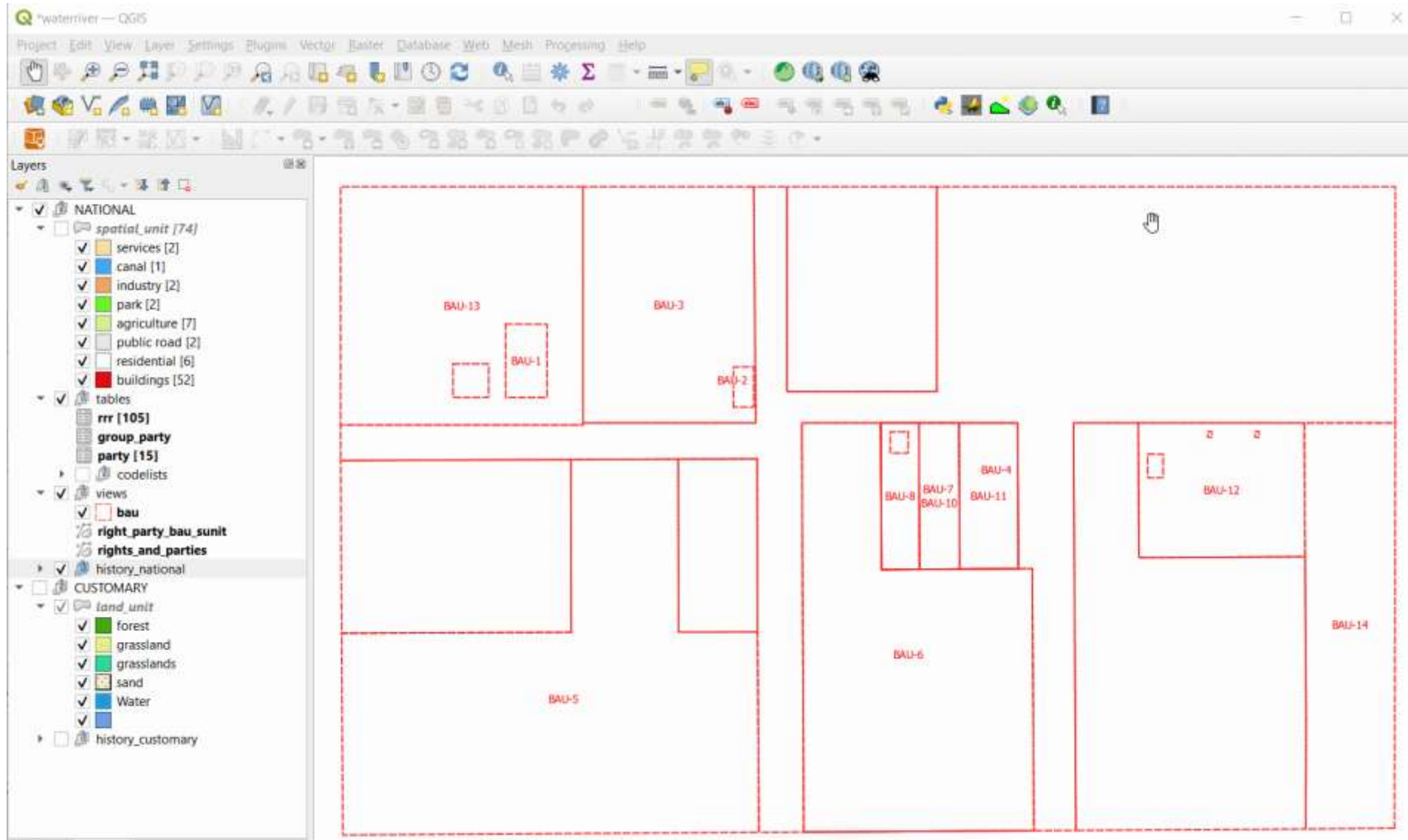


Transactions

The screenshot shows the QGIS interface with a map of land parcels. Three parcels are outlined in red and labeled BAU-1, BAU-2, and BAU-3. The Layers panel on the left shows a tree structure with 'bau' selected under 'views'. The Attribute Table at the bottom displays a table with columns: fid, id, type, share, start, end, party_id, baunit_id, beginLifespan, endLifespan, spatial_unit. Row 5 is highlighted in blue.

fid	id	type	share	start	end	party_id	baunit_id	beginLifespan	endLifespan	spatial_unit
1	13 Restr001	Mortgage	1/2	2021-1...	NULL	P07	NULL	2021-05-04 12:50:0...	2012-05-04 12:50:0...	WR11
2	21 Restr002	Servitude	1	2021-1...	NULL	P15	NULL	2021-05-04 12:50:0...	2012-05-04 12:50:0...	WR19
3	59 Restr003	Mortgage	1	2021-0...	NULL	P07	NULL	2021-05-04 12:50:0...	2012-05-04 12:50:0...	WR13
4	14 Restr004	Mortgage	1	2021-0...	NULL	P07	NULL	2021-05-04 12:50:0...	2012-05-04 12:50:0...	WR13-01
5	27 Right001	Ownership	1	2021-0...	NULL	P01	NULL	2021-05-04 12:50:0...	2012-05-04 12:50:0...	WR01

Database history

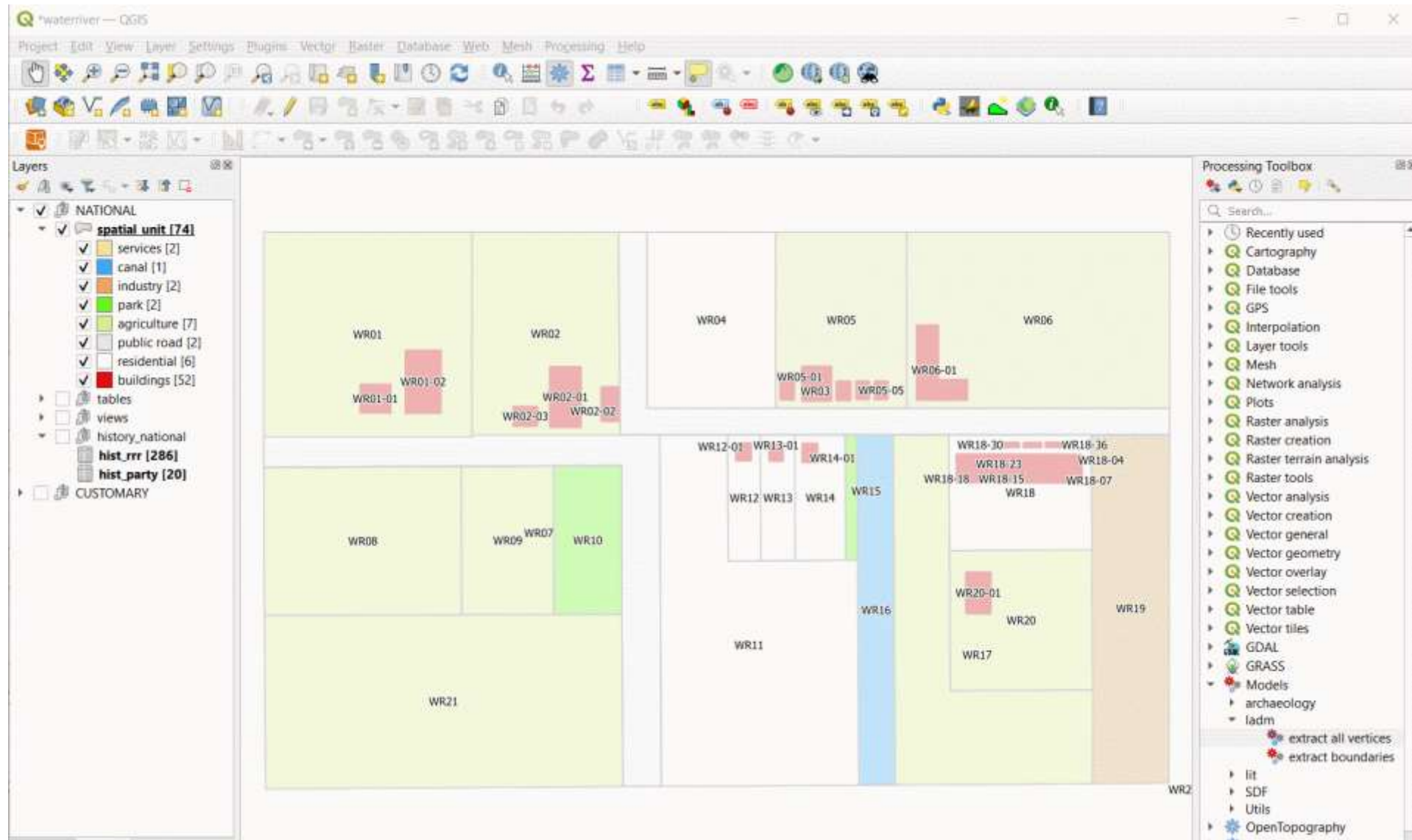


Database history – zooming in

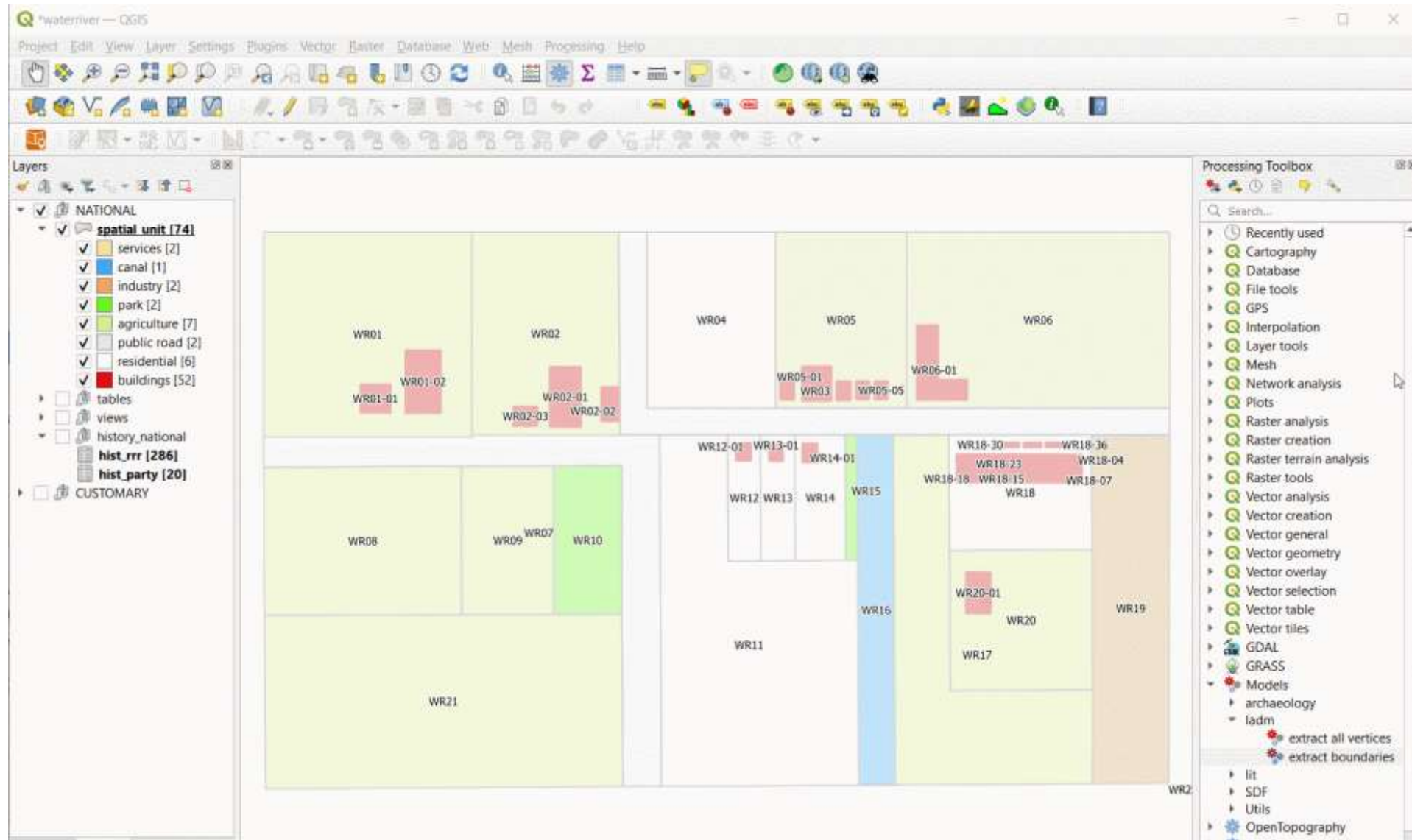
```
1 CREATE TRIGGER update_rrr_hist AFTER UPDATE
2 ON rrr
3 BEGIN
4
5 INSERT INTO hist_rrr(
11 party_id,
12 baunit_id,
13 beginLifespan,
14 endLifespan,
15 spatial_unit,
16 "operation")
17 VALUES (
23 old.party_id,
24 old.baunit_id,
25 old.beginLifespan,
26 datetime(),
27 old.spatial_unit,
28 'UPDATE');
29 END;
```

- history_delete_party
- history_delete_rrr
- history_delete_spatial_unit
- history_update_land_unit
- history_update_party
- history_update_rrr
- history_update_spatial_unit

Geometry extractors - vertices

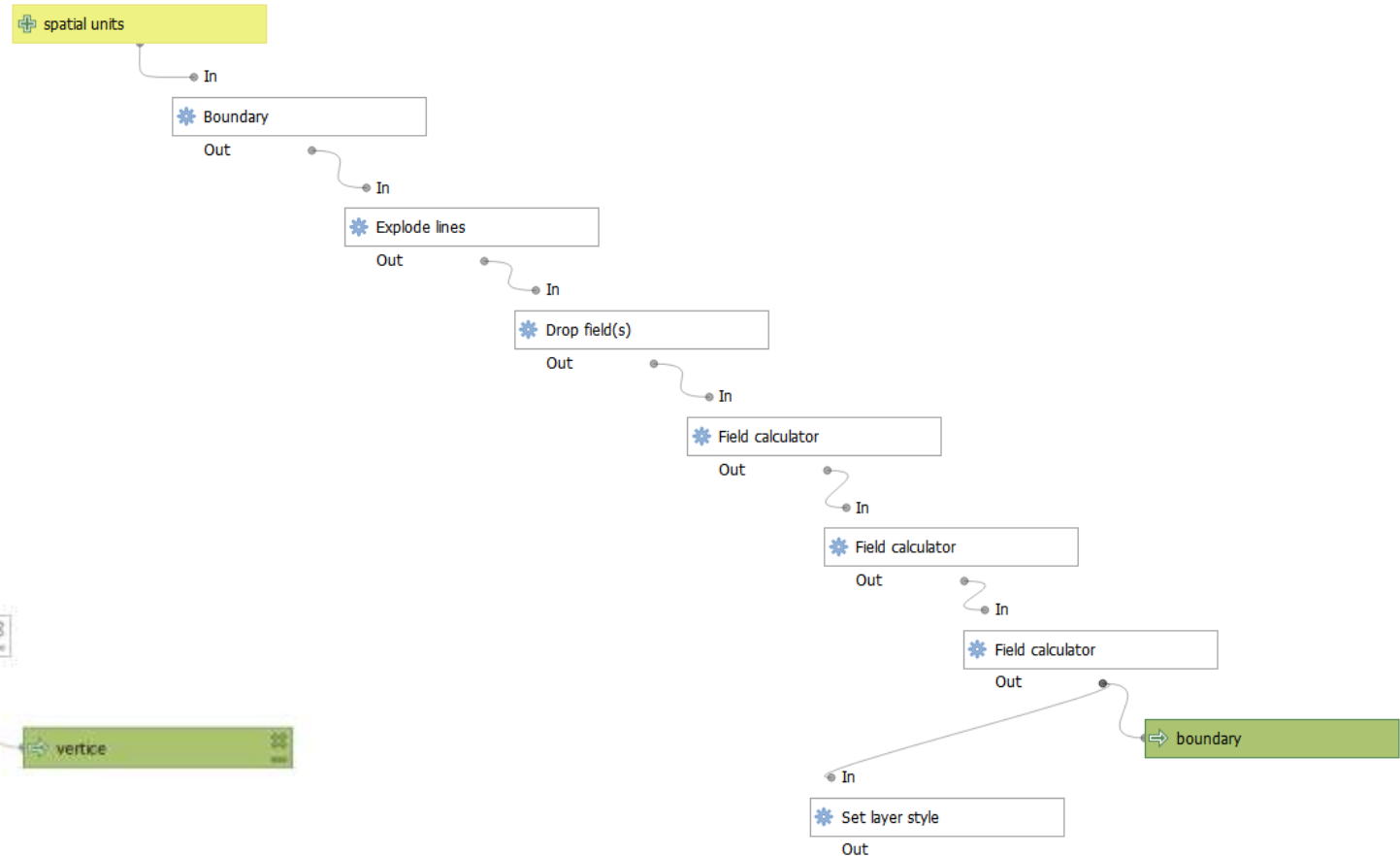


Geometry extractors - boundaries

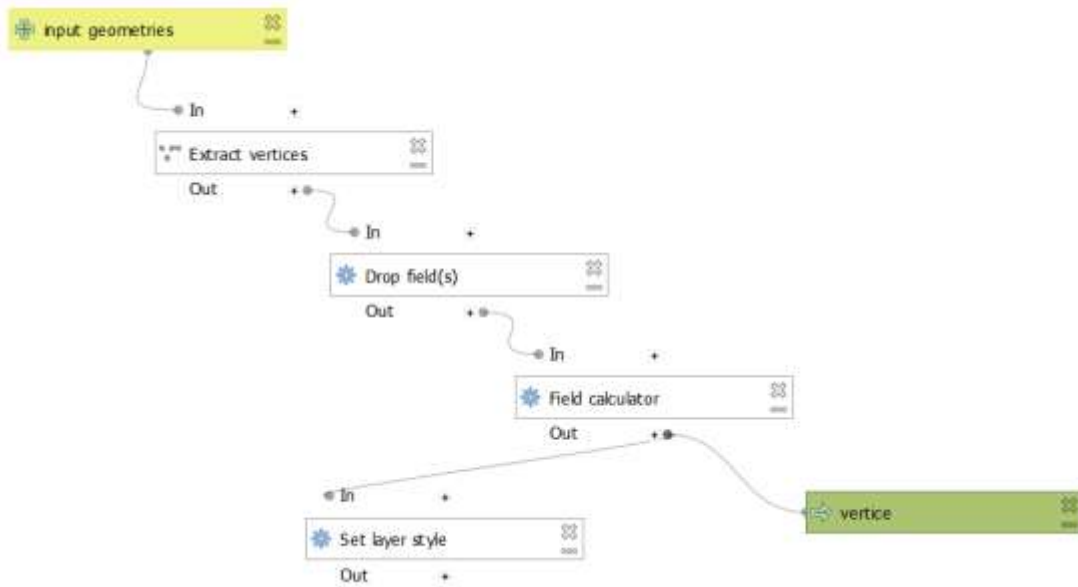


Geometry extractors – Zooming in

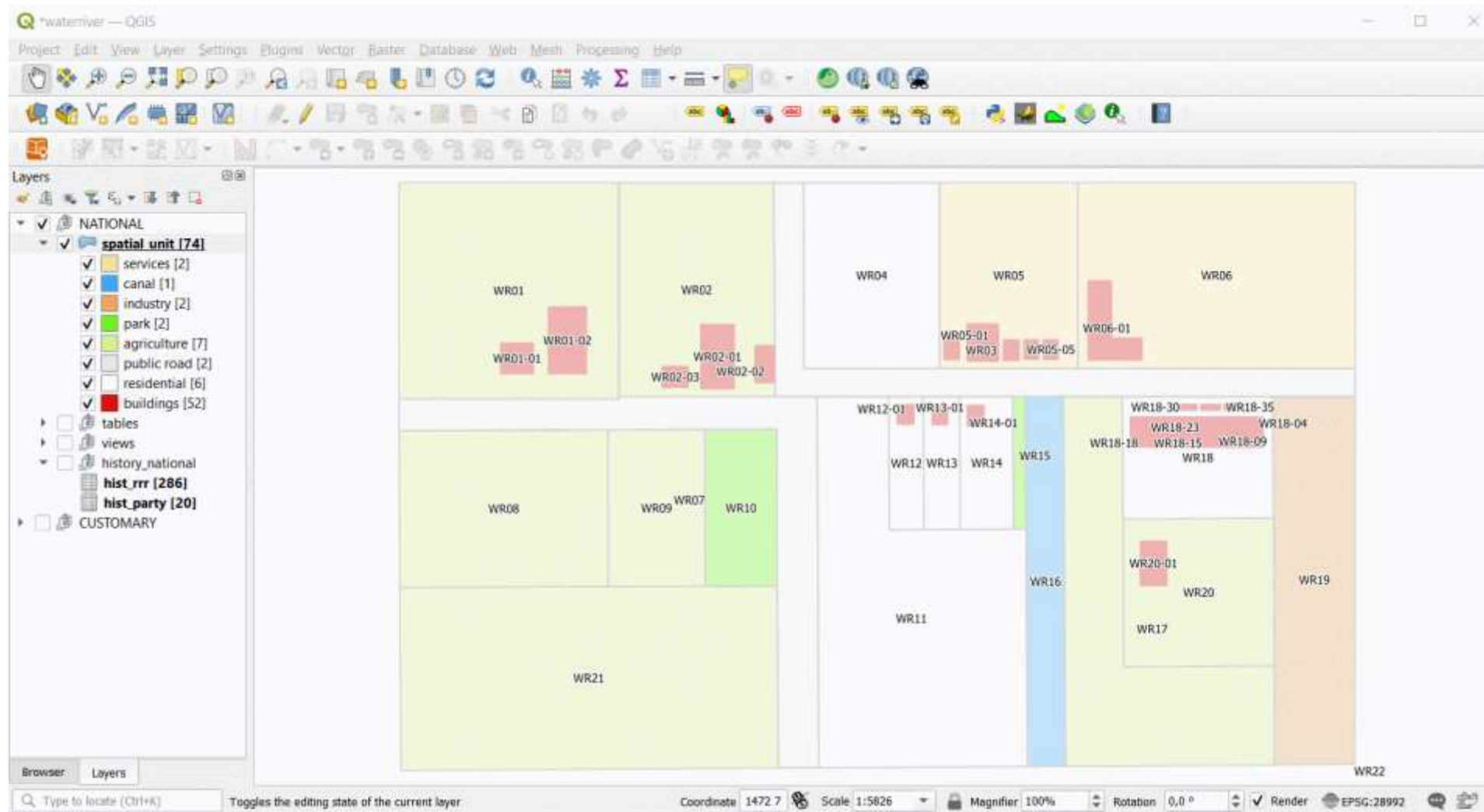
Extract boundaries workflow



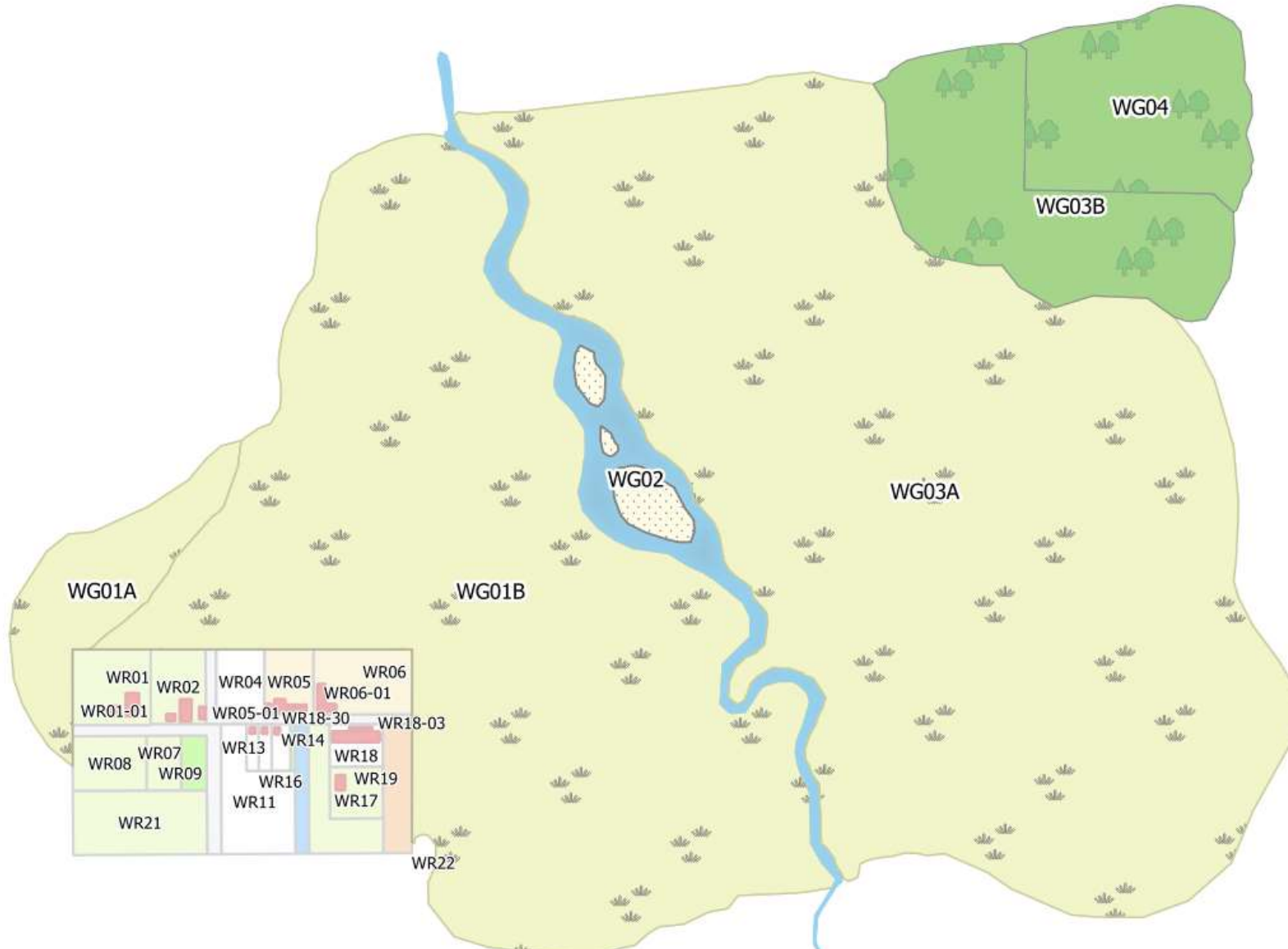
Extract vertices workflow



Different purposes



Customary database



Moving Forward

- Develop the customary database including relations with the national database
- Distribute the datasets in the form of PostgreSQL relational database
- Accompanying lectures and exercises
- Test!



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Thank you!



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