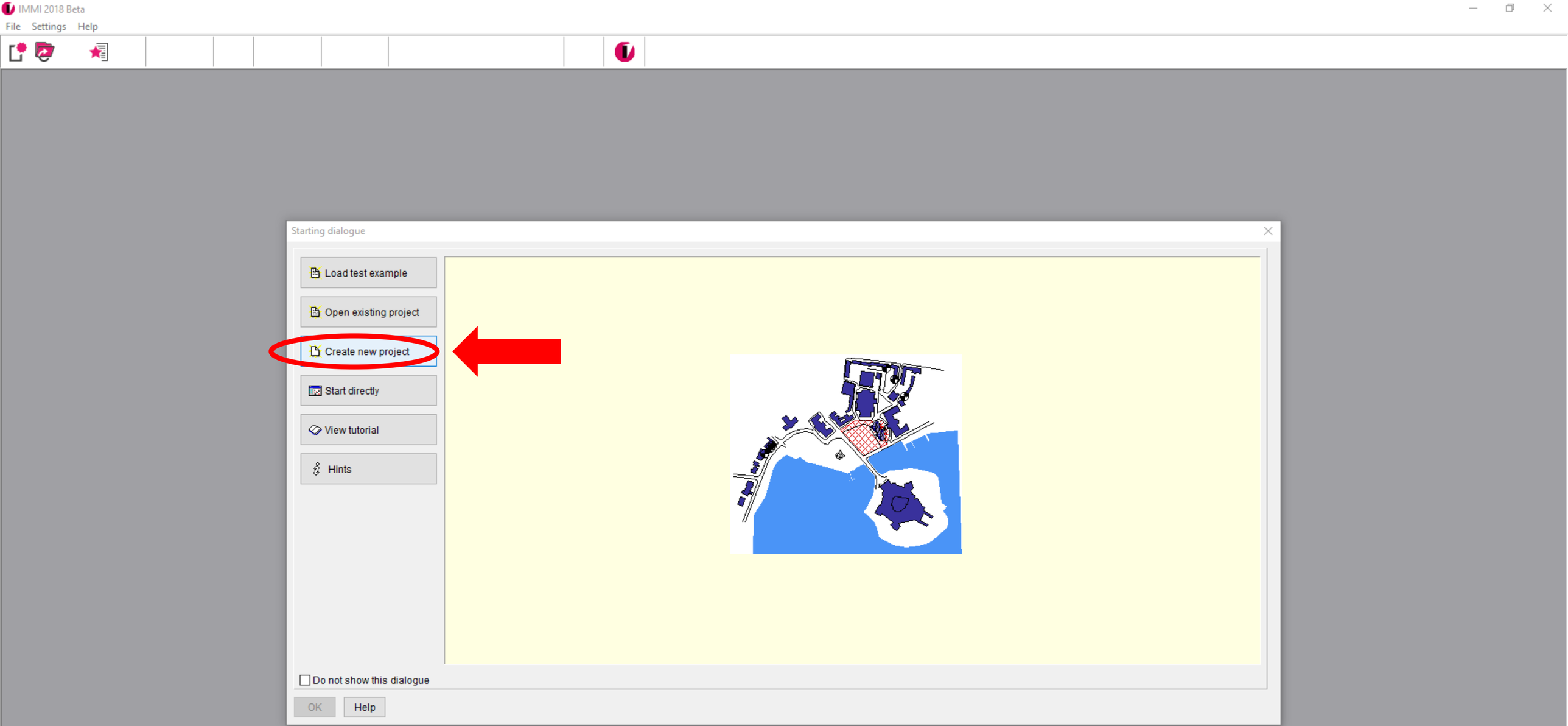
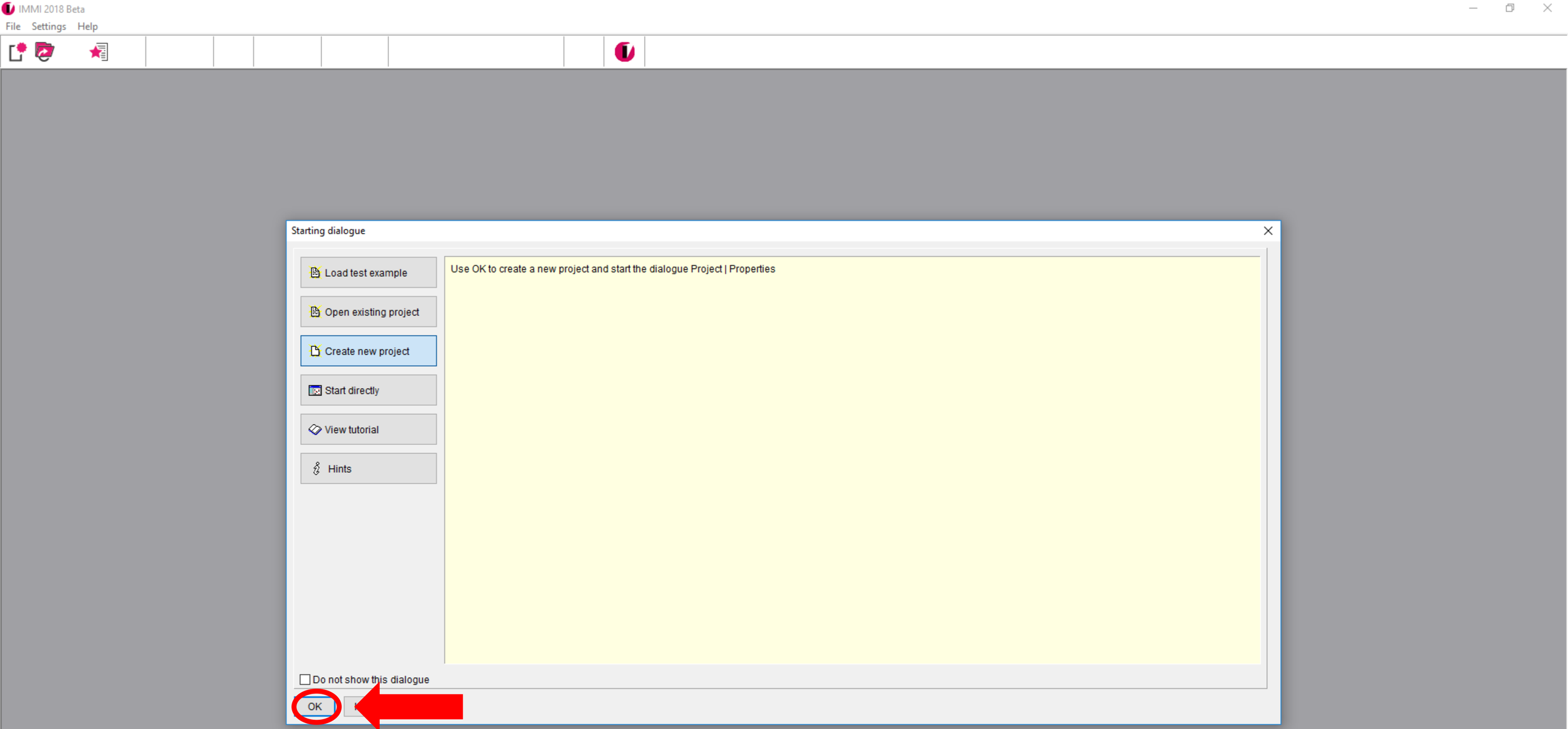
IMMI

IMMI 2018 – Import of OSM vector data

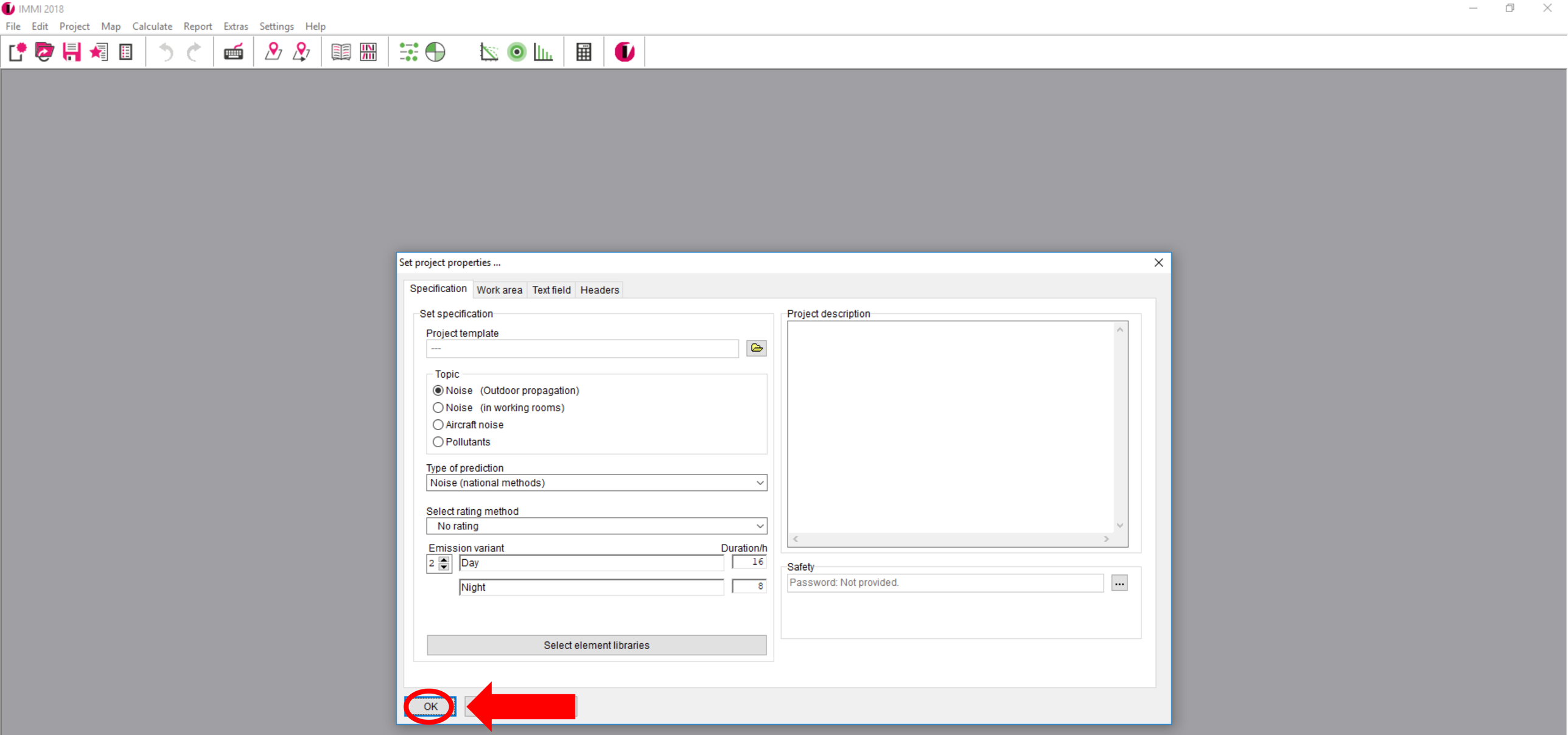
Wölfel



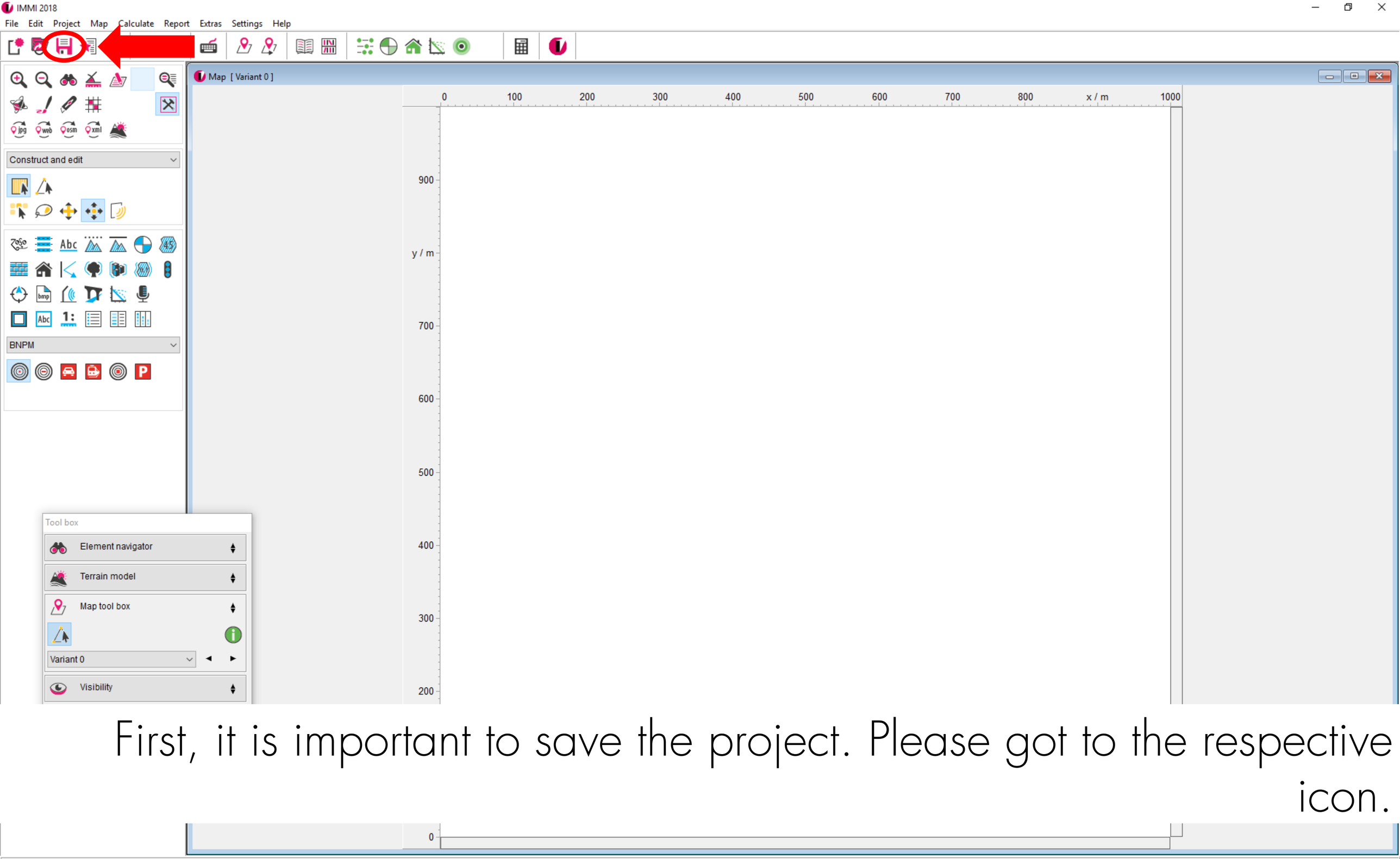
Start IMMI, choose „create new project“ and confirm with OK.



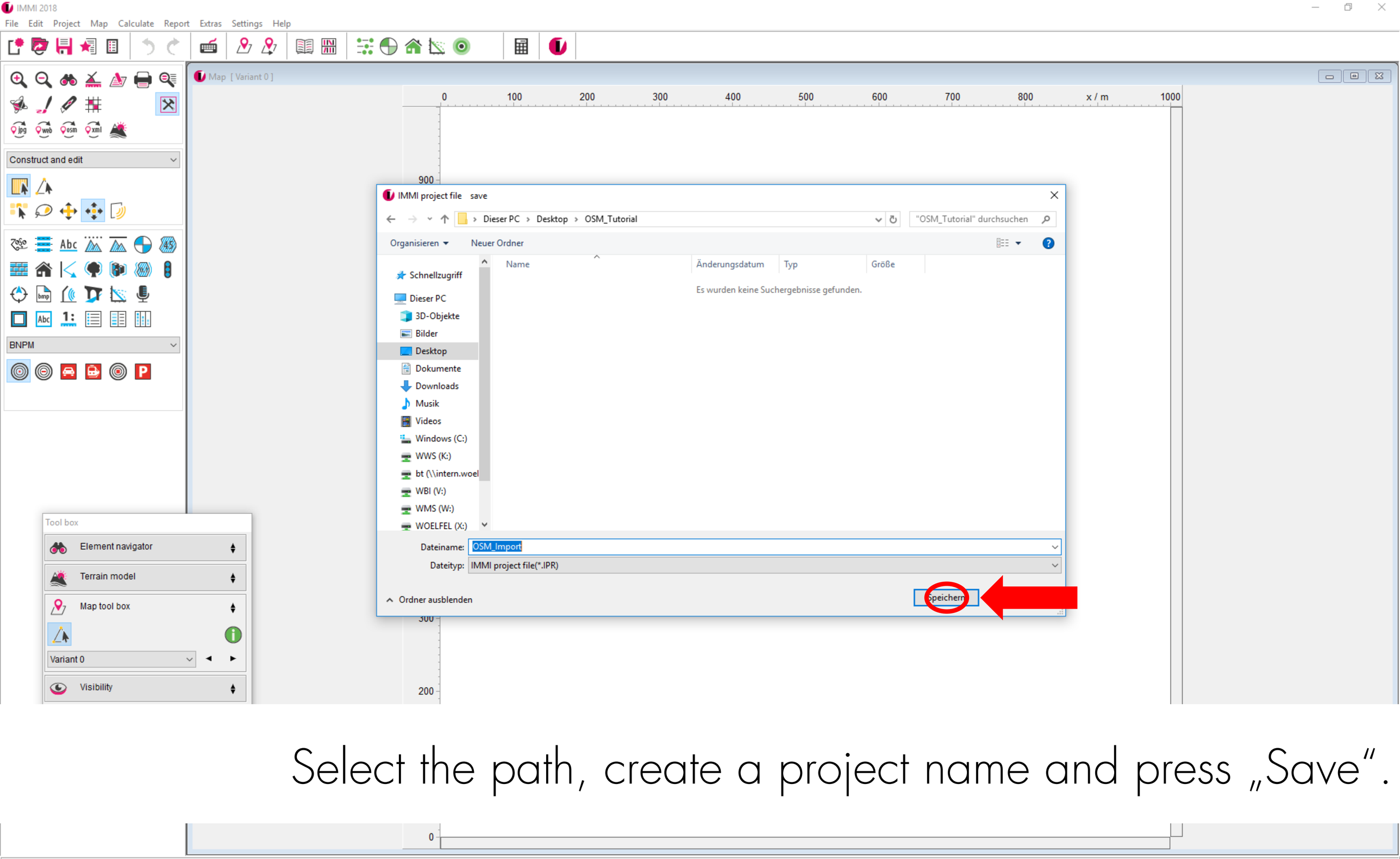
Start IMMI, choose „create new project“ and confirm with OK.



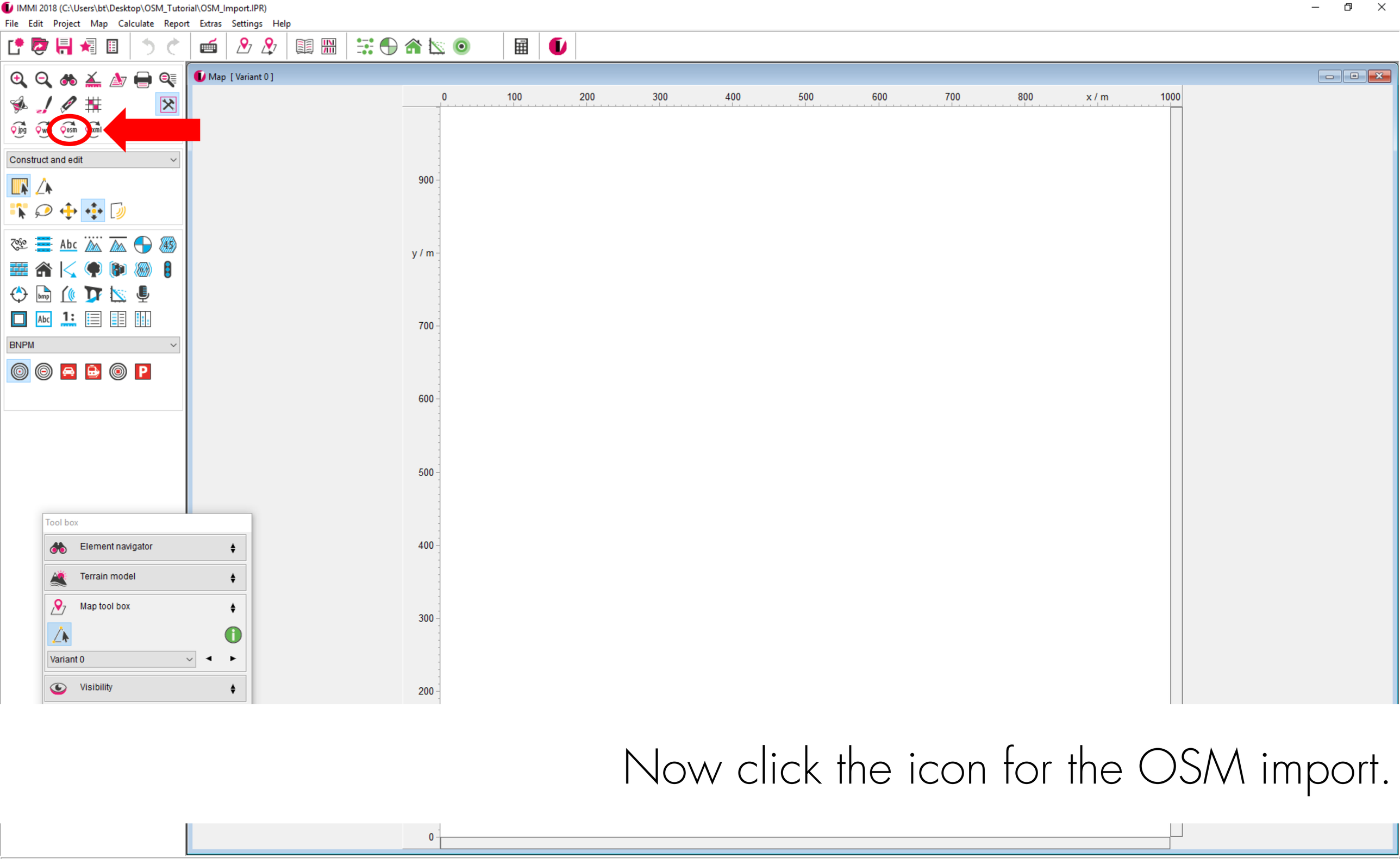
In the dialogue for the project properties leave the default setting „Noise (Outdoor propagation)“ and confirm with OK.



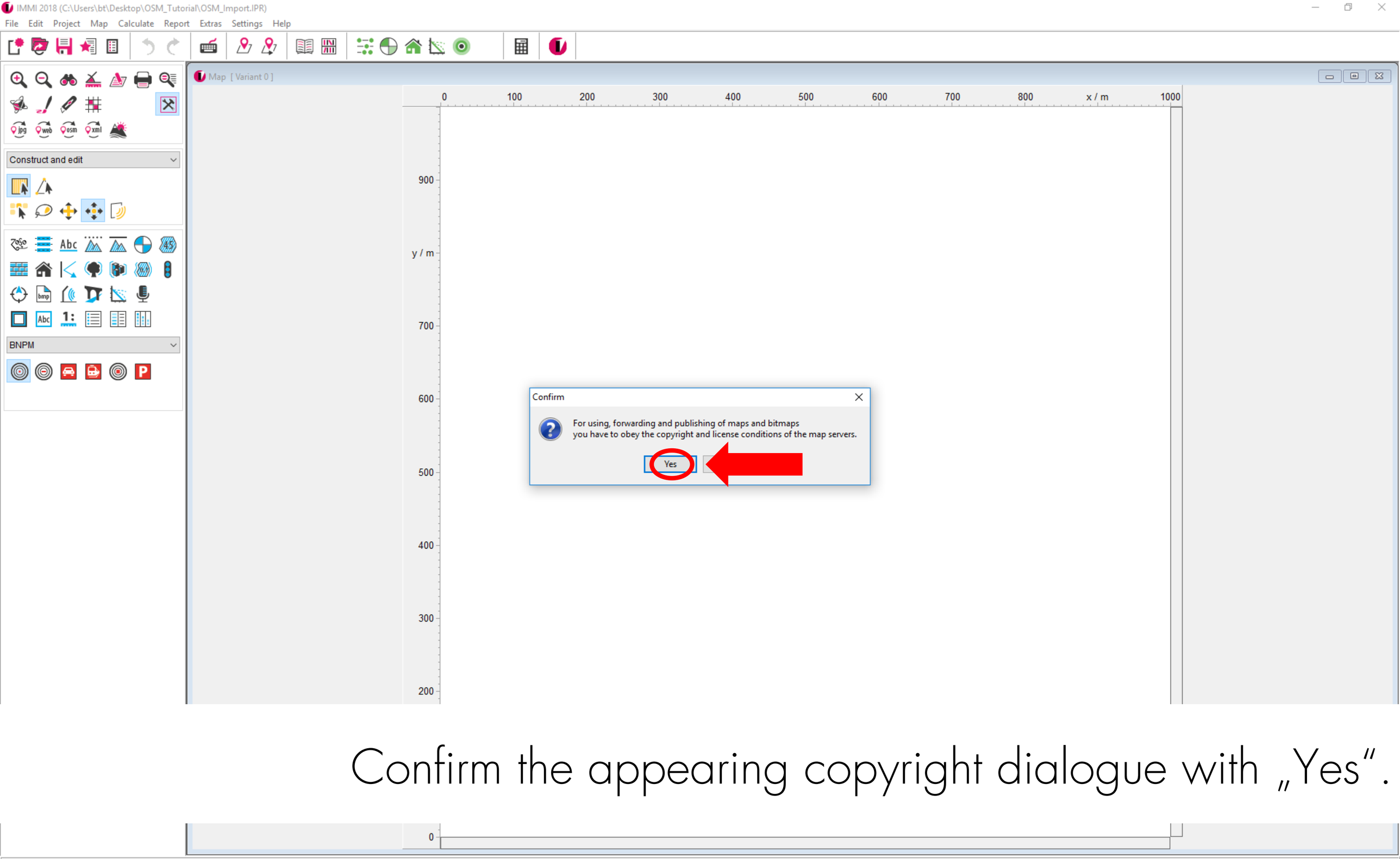
First, it is important to save the project. Please got to the respective icon.



Select the path, create a project name and press „Save“.



Now click the icon for the OSM import.



Confirm the appearing copyright dialogue with „Yes“.

This will open a full screen view of OpenStreetMap.

IMMI 2018 - Map import

Search

Map center: Mouse position:

9.273582 47.964615 2.418113 48.600654 UTM

Map borders:

West	East	South	North	Map zoom
-11.820168	30.367332	38.613086	55.884919	6

OpenStreetMap German Style

Import background bitmap

Import SRTM elevation raster

Hide console

Vector maps

Select area

West	East	South	North
-11.820168	30.367332	38.613086	55.884919

OK Cancel Help

Other maps are available in the dropdown menu.

IMMI 2018 - Map import

New York | Search

Map center: 9.273582 | 47.964615 | Mouse position: -10.831398 | 54.543769 | UTM

Map borders:

West	East	South	North	Map zoom
-11.820168	30.367332	38.613086	55.884919	6

OpenStreetMap German Style

Import background bitmap

Import SRTM elevation raster

Hide console

Vector maps

Select area

West	East	South	North
-11.820168	30.367332	38.613086	55.884919

OK | Cancel | Help

Enter the desired location of the project – in our example we will choose New York – and press „Search“.

IMMI 2018 - Map import

New York | Search

Map center: 40.707898 | Mouse position: -74.012550, 40.716282 | UTM

Map borders:

West	East	South	North	Map zoom
-74.028494	-73.987295	40.698358	40.717438	16

OpenStreetMap German Style

Import background bitmap

Import SRTM elevation raster

Hide console

Vector maps

Select area

West	East	South	North
-74.028494	-73.987295	40.698358	40.717438

OK | Cancel | Help

Use the map zoom - either by srolling or using the zoom buttons - to get a reasonable area for the import.

IMMI 2018 - Map import

New York | Search

Map center: -74.007895 | 40.707898 | Mouse position: -74.017078 | 40.706198 | UTM

Map borders:

West	East	South	North	Map zoom
-74.028494	-73.987295	40.698358	40.717438	16

OpenStreetMap German Style

Import background bitmap

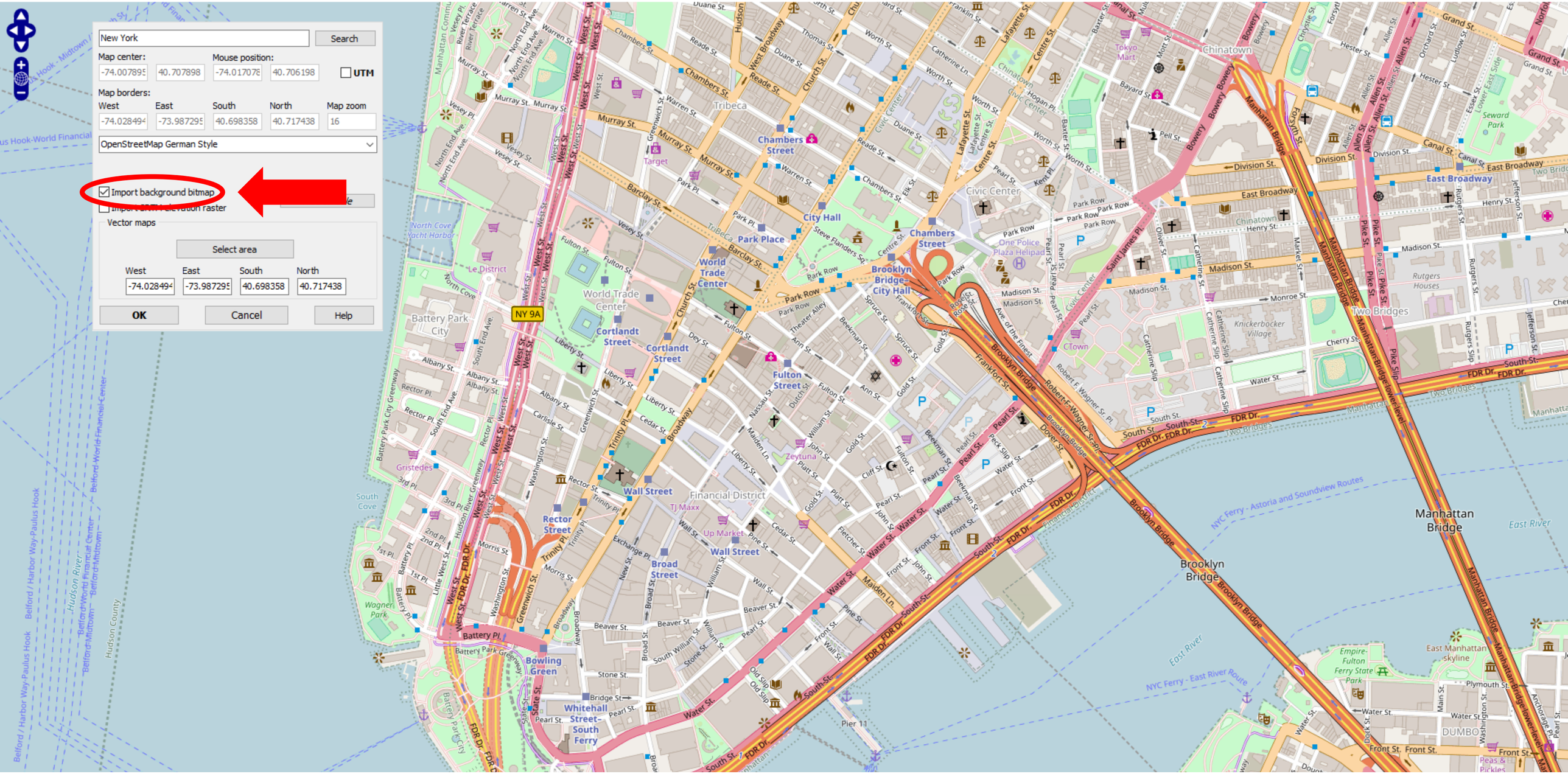
Import DEM / Elevation raster

Vector maps

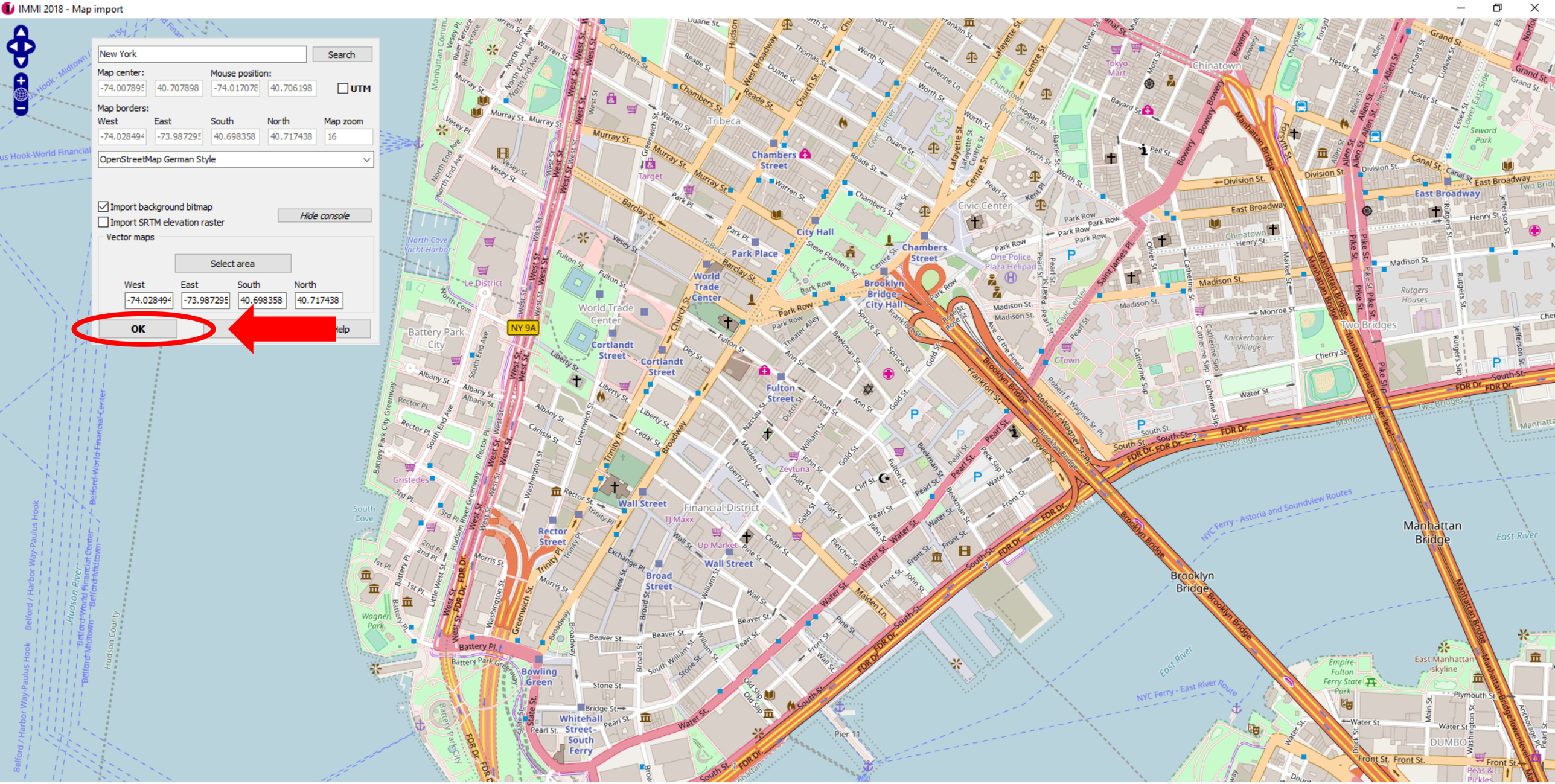
Select area

West	East	South	North
-74.028494	-73.987295	40.698358	40.717438

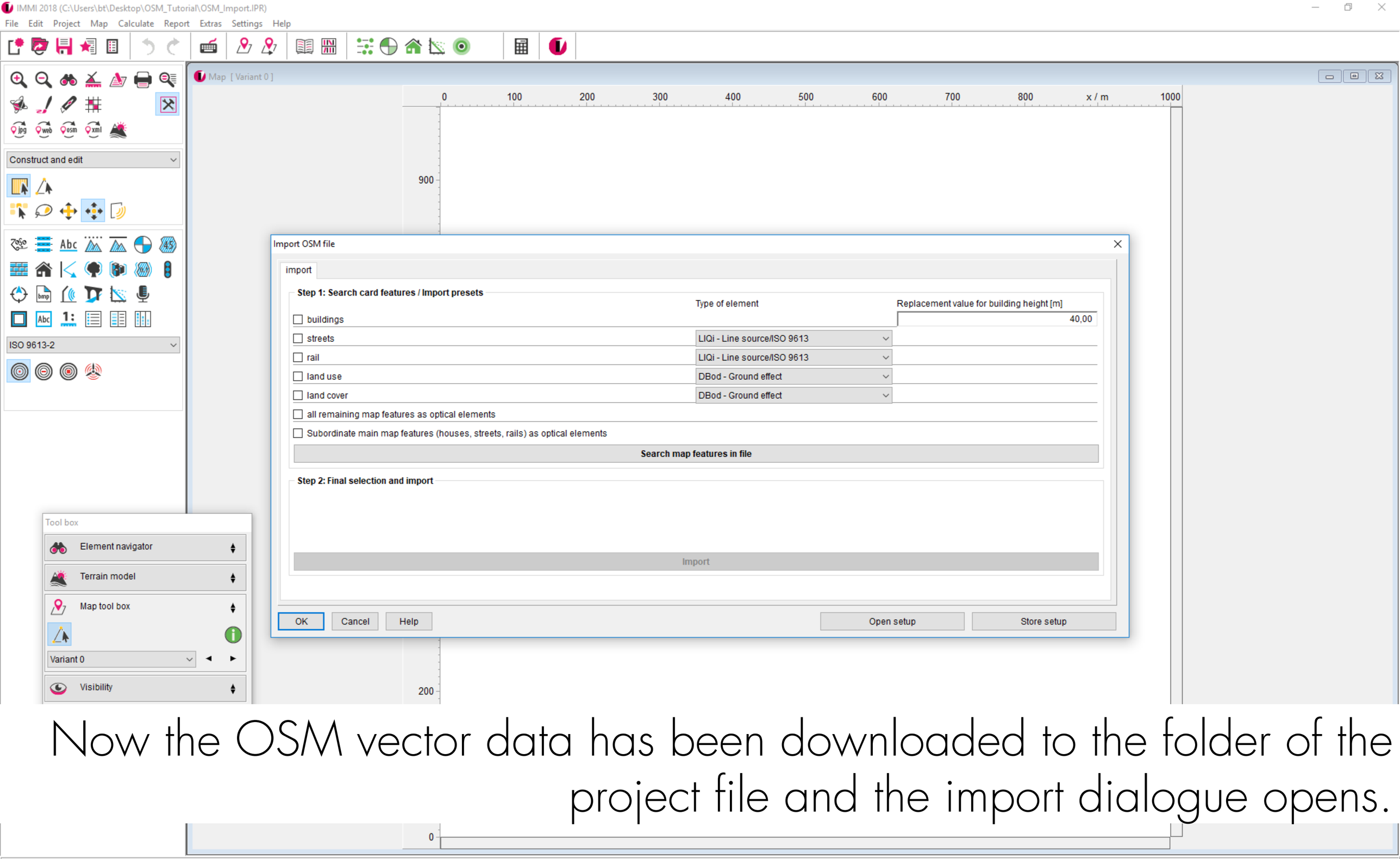
OK | Cancel | Help



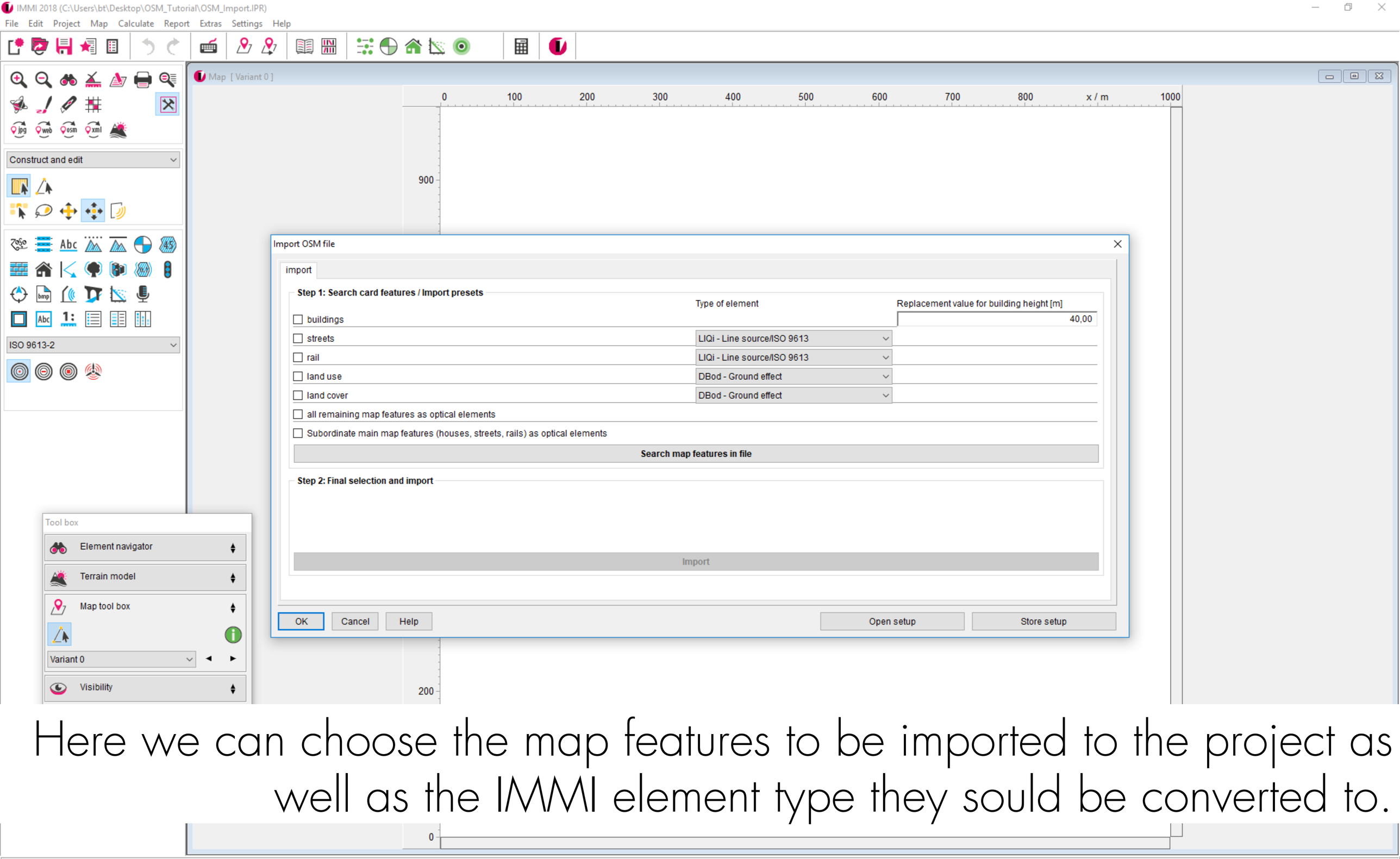
Activate „Import background bitmap“.



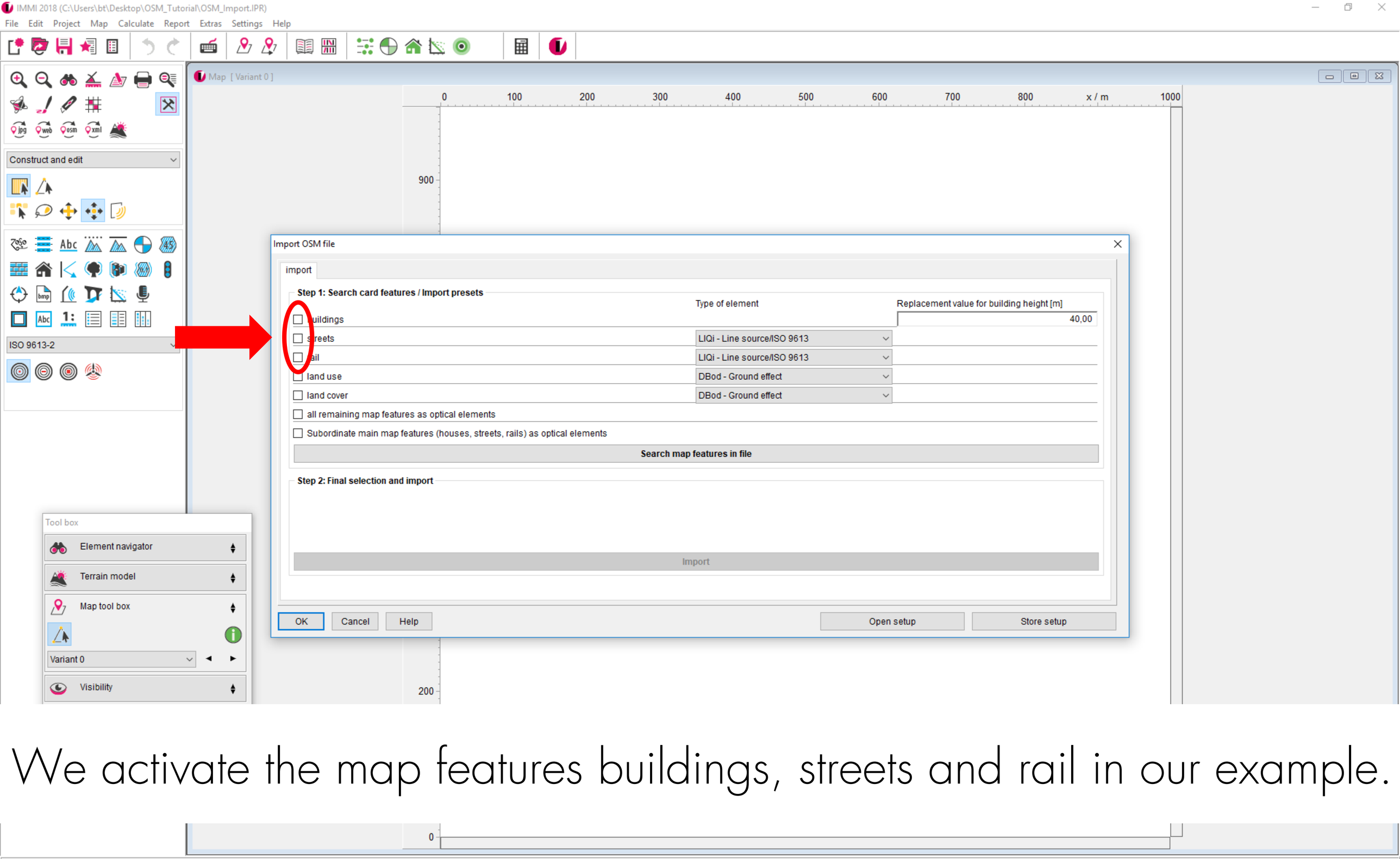
The button „Select area“ enables you to draw an outline of the desired area on the map. In our example we will simply proceed with OK.



Now the OSM vector data has been downloaded to the folder of the project file and the import dialogue opens.



Here we can choose the map features to be imported to the project as well as the IMMI element type they sould be converted to.



We activate the map features buildings, streets and rail in our example.

IMMI 2018 (C:\Users\bt\Desktop\OSM_Tutorial\OSM_Import.IPR)

File Edit Project Map Calculate Report Extras Settings Help

Map [Variant 0]

Import OSM file

import

Step 1: Search card features / Import presets

	Type of element	Replacement value for building height [m]
☑ buildings		40,00
☑ streets	LIQi - Line source/ISO 9613	
☑ rail	LIQi - Line source/ISO 9613	
☐ land use	DBod - Ground effect	
☐ land cover	DBod - Ground effect	

☐ all remaining map features as optical elements

☐ Subordinate main map features (houses, streets, rails) as optical elements

Search map features in file

Step 2: Final selection and import

Import

OK Cancel Help Open setup Store setup

Tool box

Element navigator

Terrain model

Map tool box

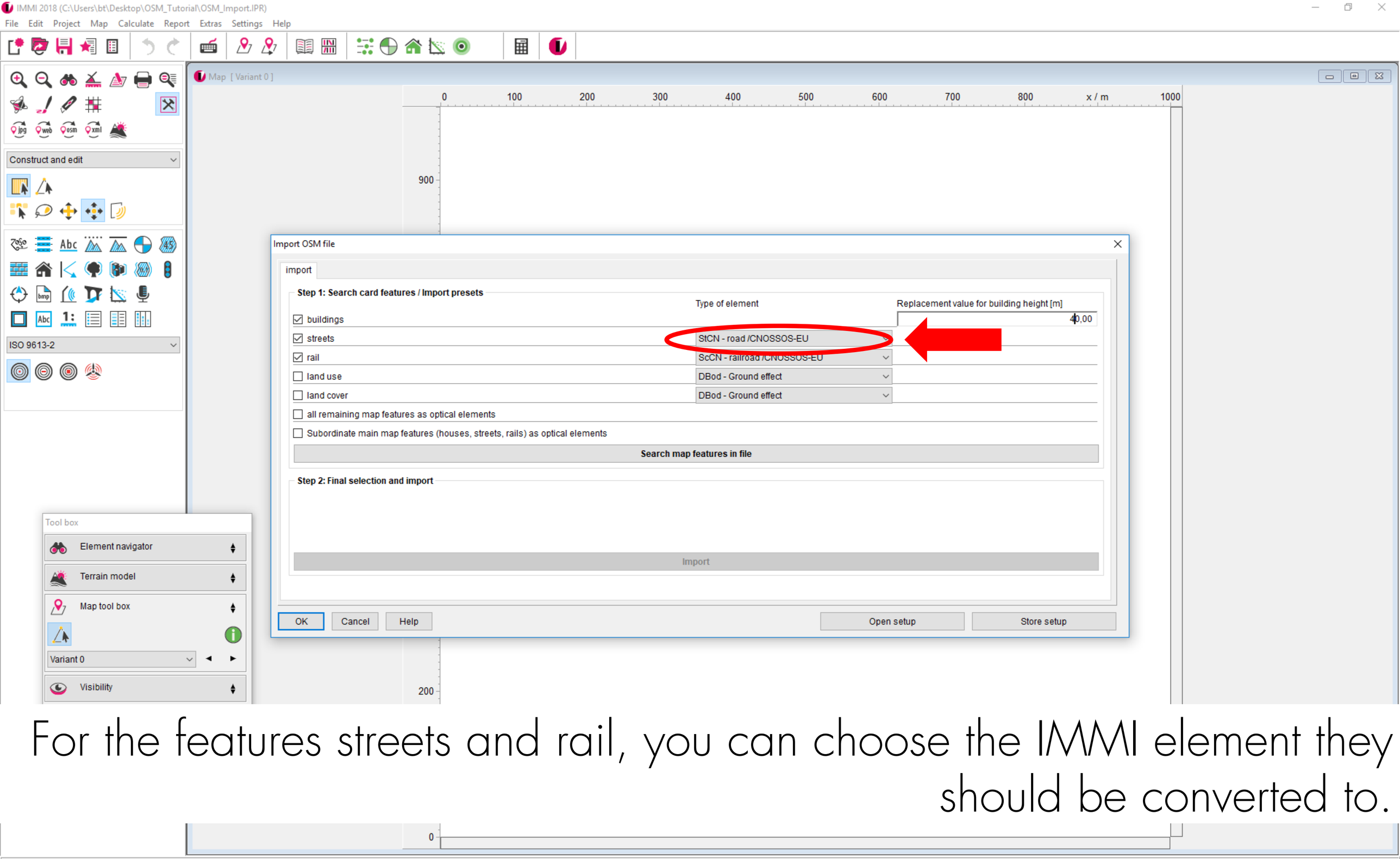
Variant 0

Visibility

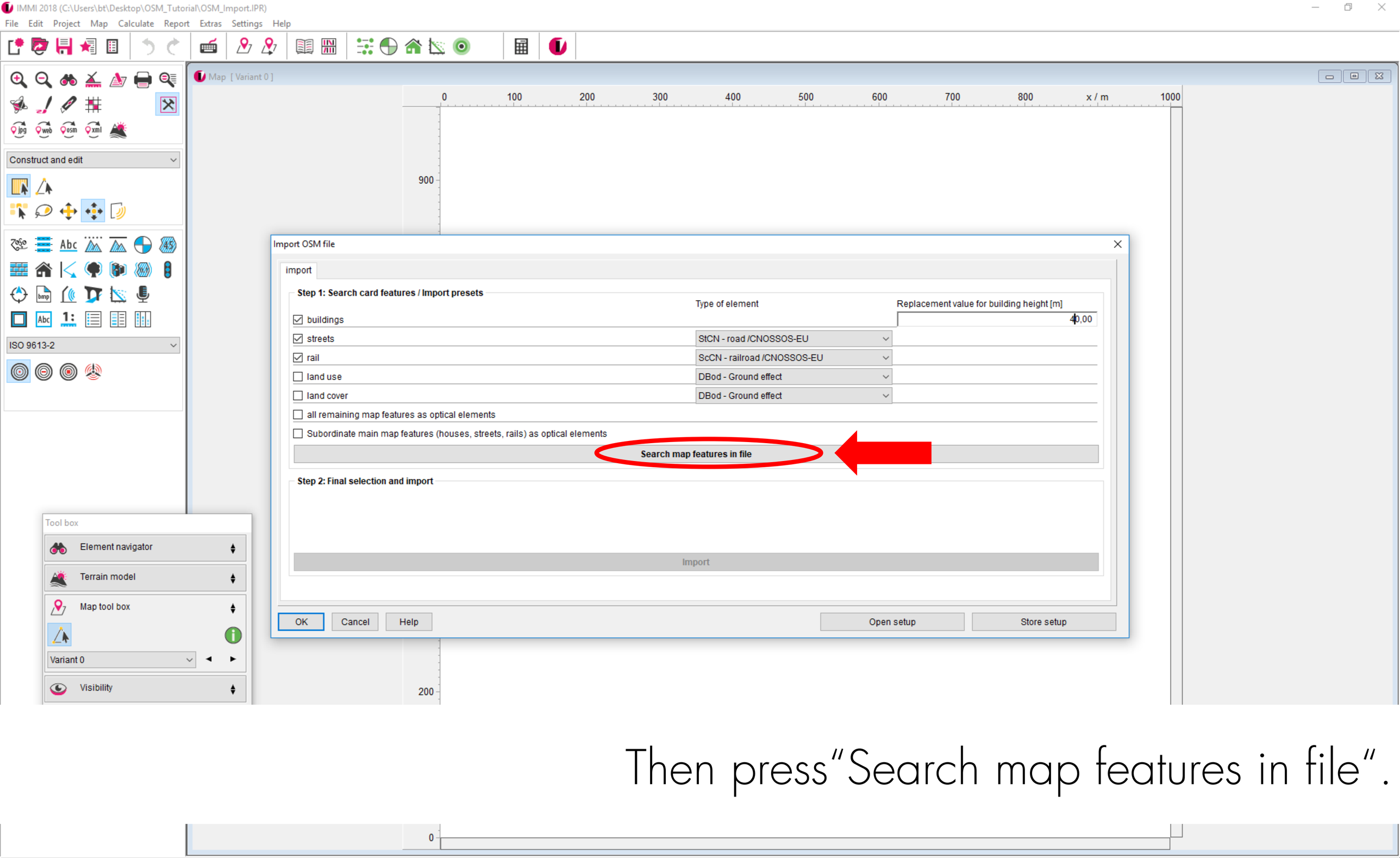
Construct and edit

ISO 9613-2

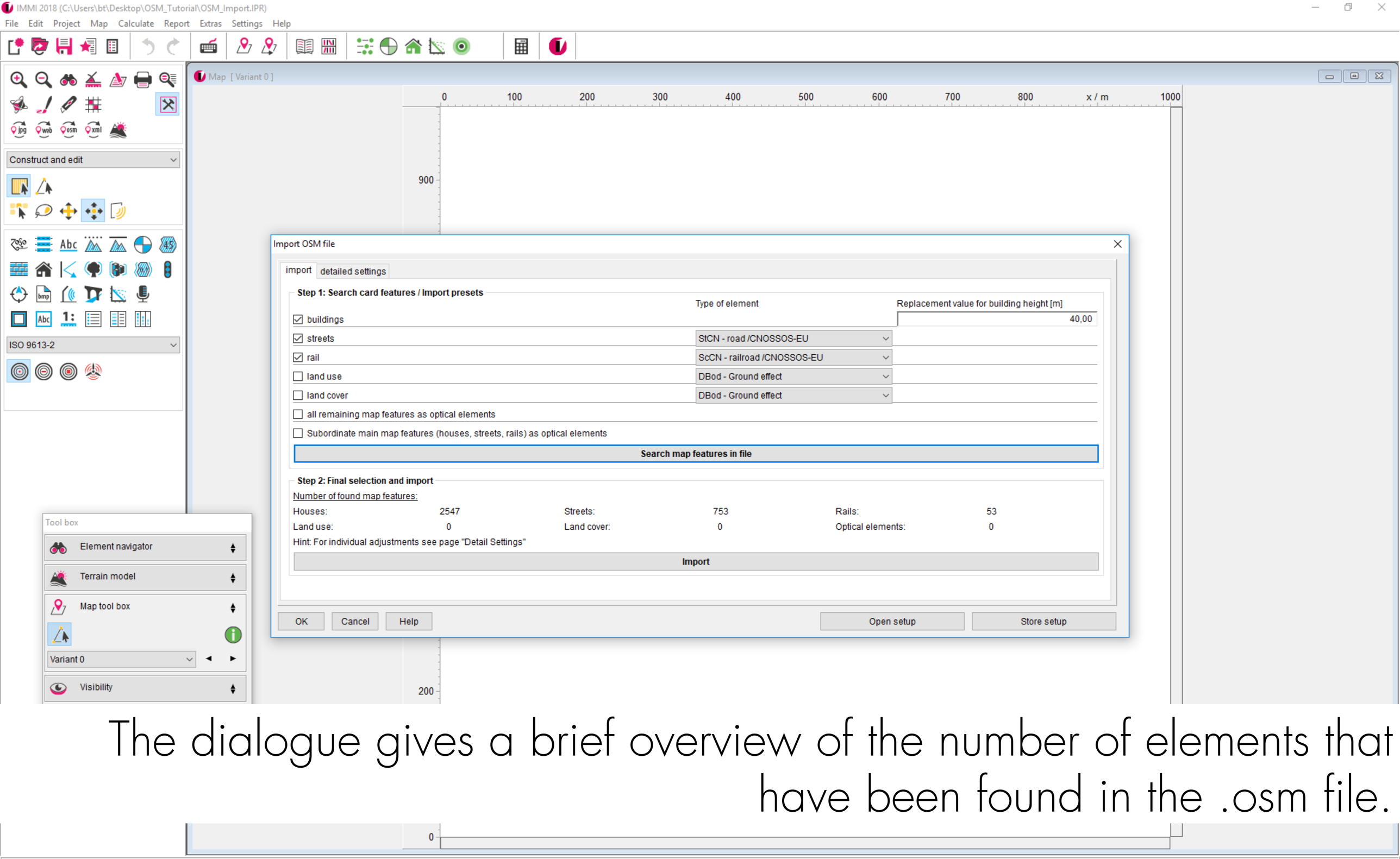
The building height is considered according to OSM data if available.
For buildings without height information, you can define a default value.



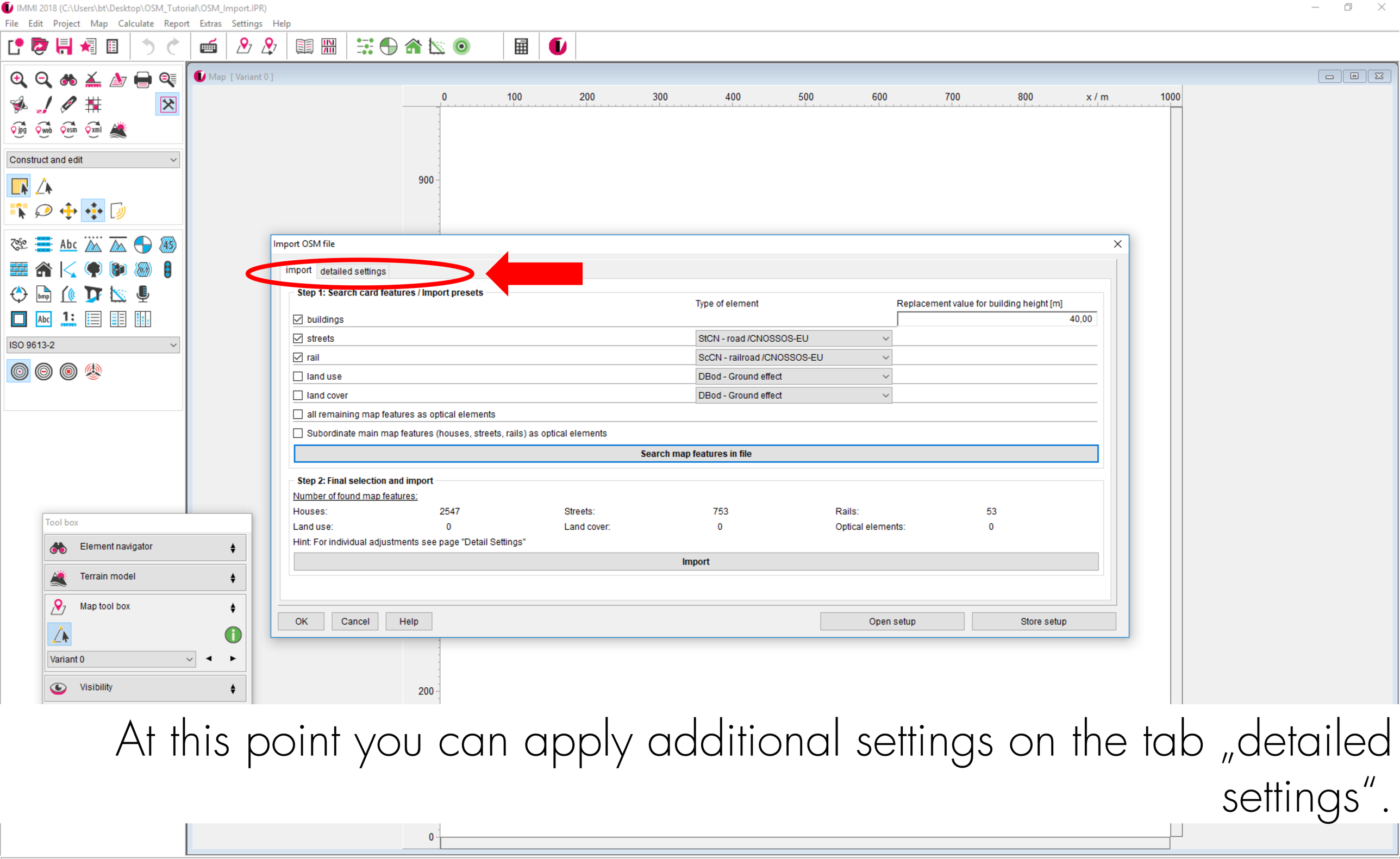
For the features streets and rail, you can choose the IMMI element they should be converted to.



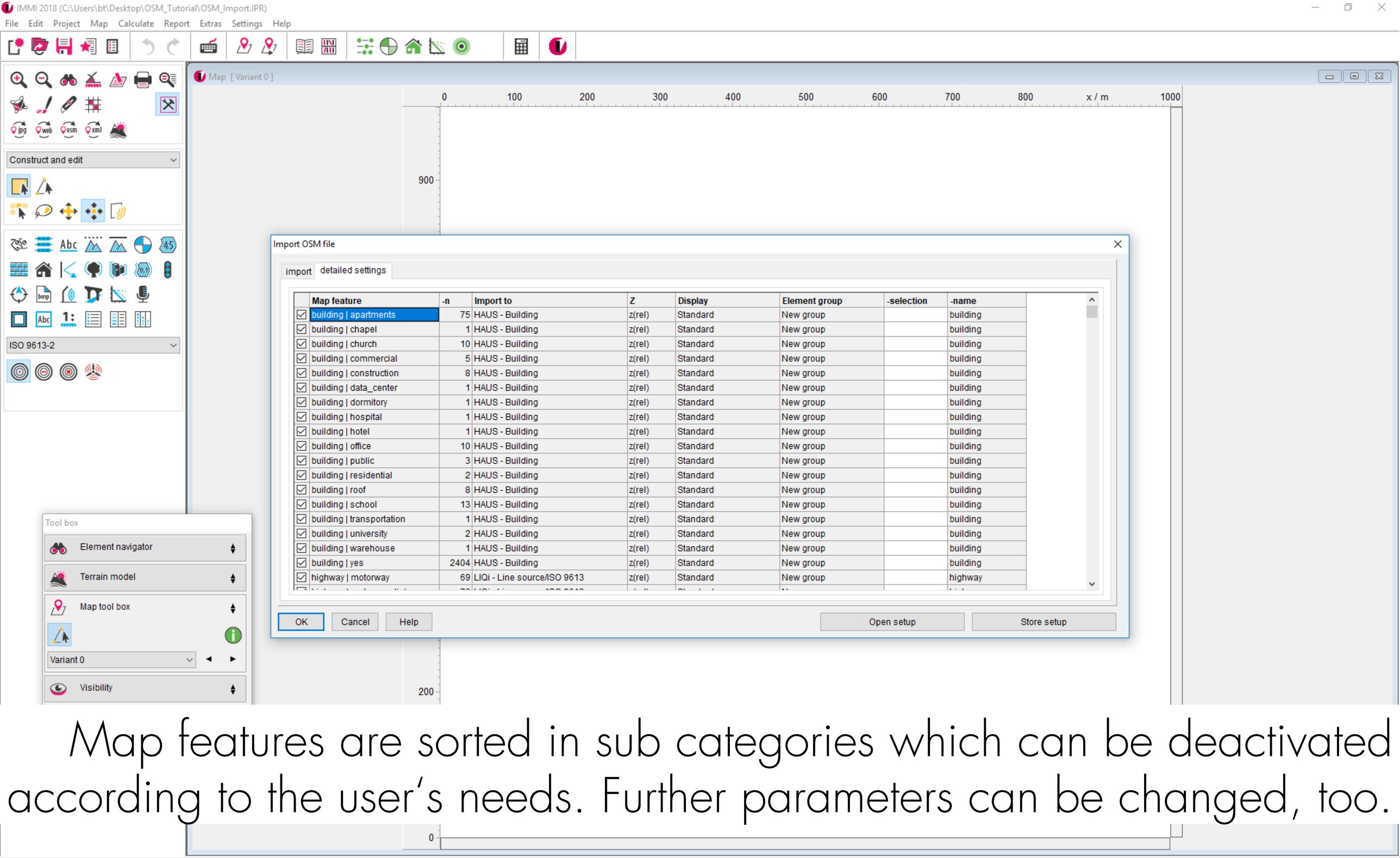
Then press“Search map features in file”.



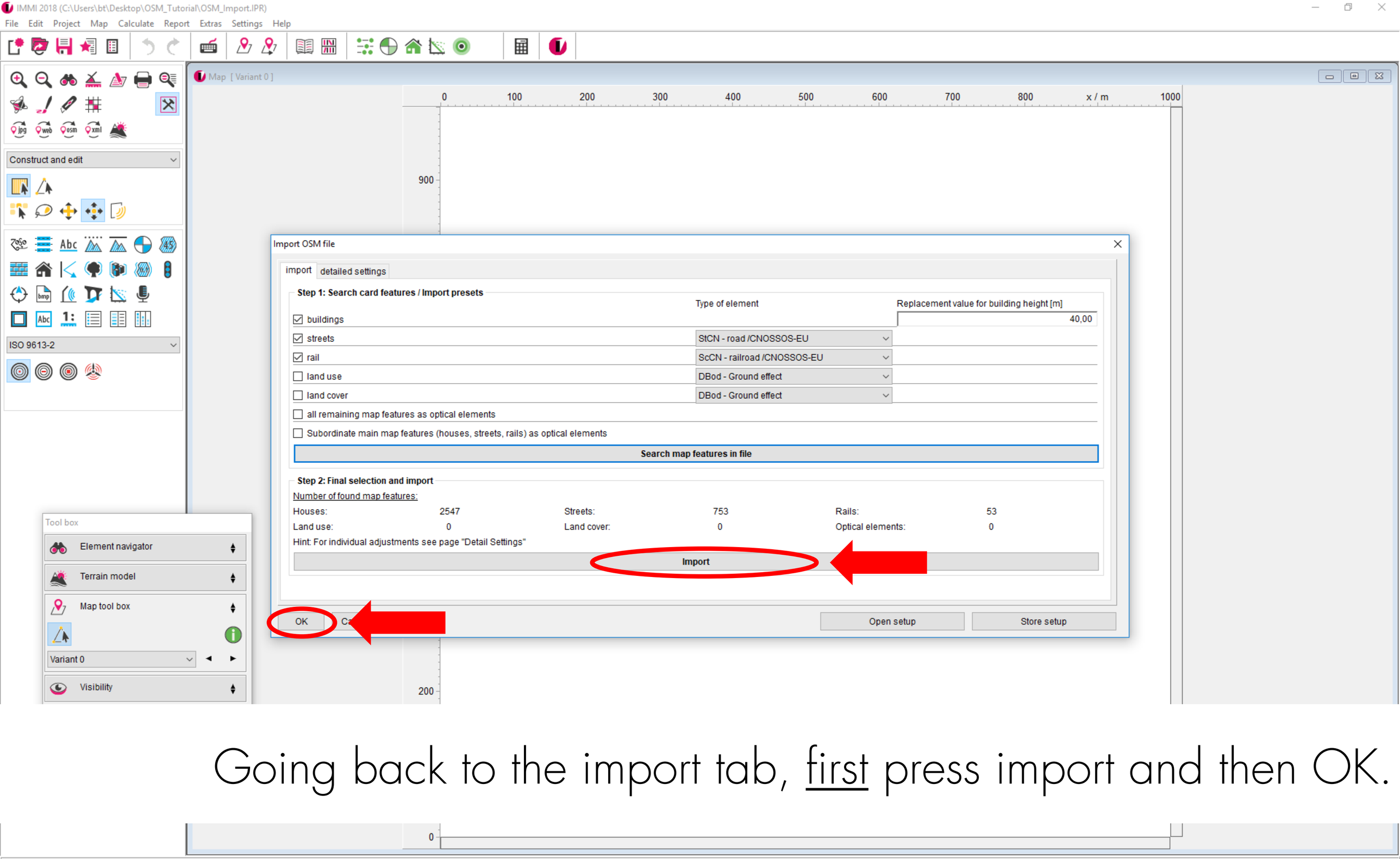
The dialogue gives a brief overview of the number of elements that have been found in the .osm file.



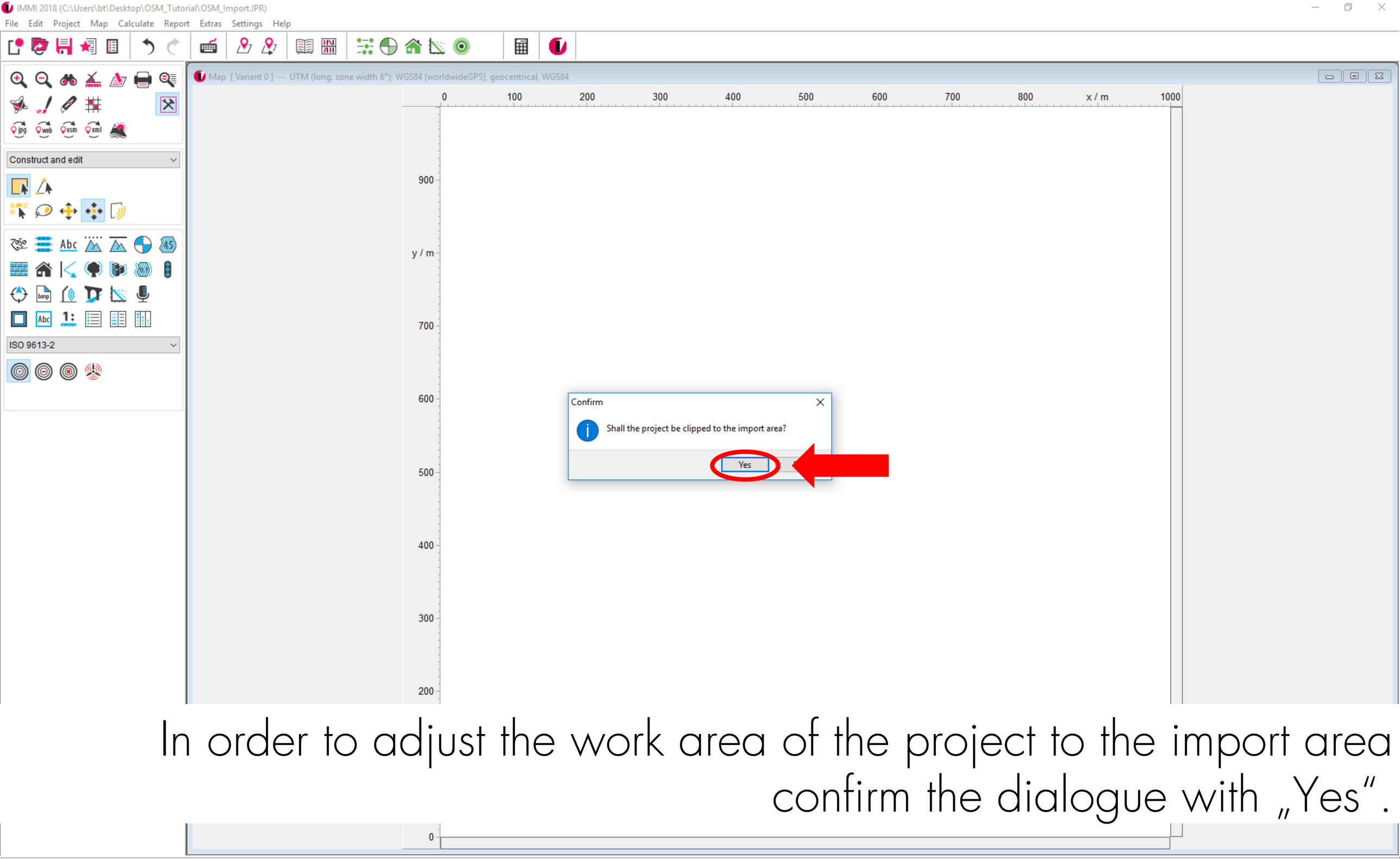
At this point you can apply additional settings on the tab „detailed settings".



Map features are sorted in sub categories which can be deactivated according to the user's needs. Further parameters can be changed, too.



Going back to the import tab, first press import and then OK.



In order to adjust the work area of the project to the import area confirm the dialogue with „Yes“.

IMMI 2018 (C:\Users\bt\Desktop\OSM_Tutorial\OSM_Import.IPR)

File Edit Project Map Calculate Report Extras Settings Help

Map [Variant 0] -- UTM (long. zone width 6°); WGS84 (worldwideGPS), geocentrical, WGS84

582500 583000 583500 584000 584500 x / m 585500

4507500

y / m

Construct and edit

ISO 9613-2

Tool box

Element navigator

Terrain model

Map tool box

Variant 0

Visibility

All selected map features have been imported to IMMI. Check the element list to view the element properties.

IMMI 2018 (C:\Users\bt\Desktop\OSM_Tutorial\OSM_Import.IPR)

File Edit Project Map Calculate Report Extras Settings Help

Map [Variant 0] -- UTM (long. zone width 6°); WGS84 (worldwideGPS), geocentrical, WGS84

582500 583000 583500 584000 584500 x / m 585500

4507500 y / m

Element input

All STD PLOT ISO XS31 CNOS SRM2 INTR

Building

SYMB
HLIN
TEXT
HOEP
HOEL
IPkt
NuGe
WAND
HAUS 2534
REFL
DBwu
DBeb
DBod
AMPL
NPfl 1
BMP
ALSW
BRCK
SAK
MPkt
Box
TBox
MStb
LegE
Skal
PegT
CONT
EZQi
LIQi
FLQi

[]: 102m x 105m

Direct Input

Sort: Click on column header

No.	Name	Label	Group
1	HAUS00	South Street 4	building_hXml
2	HAUS00	Water Street 199	building_hXml
3	HAUS00	Old Slip 33	building_hDefault
4	HAUS00	Water Street 175	building_hDefault
5	HAUS00	200 Water Street	building_hXml
6	HAUS00	Washington Street 99	building_hDefault
7	HAUS00	75309459	building_hXml
8	HAUS00	Liberty Street 225	building_hXml
9	HAUS00	Church Street 100	building_hXml
10	HAUS00	Park Place 75	building_hXml
11	HAUS00	Liberty Street 200	building_hXml
12	HAUS00	West Street 200	building_hDefault
13	HAUS00	Four Seasons New York Downtown Hotel & Residences	building_hXml
14	HAUS00	South End Avenue 355	building_hXml
15	HAUS00	Woolworth Building	building_hXml
16	HAUS00	Federal Plaza 26	building_hXml
17	HAUS00	Federal Hall National Memorial	building_hXml
18	HAUS00	Park Row 180	building_hXml
19	HAUS00	Pearl Street 375	building_hXml
20	HAUS00	Chatham Towers I	building_hXml
21	HAUS00	8 Spruce Street	building_hXml
22	HAUS00	Millennium Tower Residences	building_hDefault
23	HAUS00	Barclay Street 101	building_hXml
24	HAUS00	World Trade Center 1	building_hXml
25	HAUS00	Exchange Place 20	building_hXml
26	HAUS00	Broadway 2	building_hDefault
27	HAUS00	Water Street 1	building_hXml
28	HAUS00	South End Avenue 395	building_hXml

Use selection in the scheme

Selected: 1 Element

HAUS0001 South Street 4

Insert before Delete

Edit Geo

Staten Island Ferry Whitehall Terminal

Tool box

Element navigator

Terrain model

Map tool box

Variant 0

Visibility

Construct and edit

ISO 9613-2

Brooklyn Bridge

Manhattan Bridge

Buildings are imported in the groups building_hXml or building_hdefault according to the origin of the height value.

IMMI 2018 (C:\Users\bt\Desktop\OSM_Tutorial\OSM_Import.IPR)

File Edit Project Map Calculate Report Extras Settings Help

Map [Variant 0] -- UTM (long. zone width 6°); WGS84 (worldwideGPS), geocentrical, WGS84

582500 583000 583500 584000 584500 x / m 585500

4507500 y / m

Element input

All STD PLOT ISO XS31 CNOS SRM2 INTR

Building

SYMB
HLIN
TEXT
HOEP
HOEL
IPkt
NuGe
WAND
HAUS 2534
REFL
DBwu
DBeb
DBod
AMPL
NPfl 1
BMP
ALSW
BRCK
SAK
MPkt
Box
TBox
MStb
LegE
Skal
PegT
CONT
EZQi
LIQi
FLQi

[]: 102m x 105m

Direct Input

Sort: Click on column header

No.	Name	Label	Group
1	HAUS00	South Street 4	building_hXml
2	HAUS00	Water Street 199	building_hXml
3	HAUS00	Old Slip 33	building_hDefault
4	HAUS00	Water Street 175	building_hDefault
5	HAUS00	200 Water Street	building_hXml
6	HAUS00	Washington Street 99	building_hDefault
7	HAUS00	75309459	building_hXml
8	HAUS00	Liberty Street 225	building_hXml
9	HAUS00	Church Street 100	building_hXml
10	HAUS00	Park Place 75	building_hXml
11	HAUS00	Liberty Street 200	building_hXml
12	HAUS00	West Street 200	building_hDefault
13	HAUS00	Four Seasons New York Downtown Hotel & Residences	building_hXml
14	HAUS00	South End Avenue 355	building_hXml
15	HAUS00	Woolworth Building	building_hXml
16	HAUS00	Federal Plaza 26	building_hXml
17	HAUS00	Federal Hall National Memorial	building_hXml
18	HAUS00	Park Row 180	building_hXml
19	HAUS00	Pearl Street 375	building_hXml
20	HAUS00	Chatham Towers I	building_hXml
21	HAUS00	8 Spruce Street	building_hXml
22	HAUS00	Millennium Tower Residences	building_hDefault
23	HAUS00	Barclay Street 101	building_hXml
24	HAUS00	World Trade Center 1	building_hXml
25	HAUS00	Exchange Place 20	building_hXml
26	HAUS00	Broadway 2	building_hDefault
27	HAUS00	Water Street 1	building_hXml
28	HAUS00	South End Avenue 395	building_hXml

Use selection in the scheme

Selected: 1 Element

HAUS0001 South Street 4

Insert before Delete

Edit Geo

Staten Island Ferry Whitehall Terminal

Tool box

Element navigator

Terrain model

Map tool box

Variant 0

Visibility

ISO 9613-2

Construct and edit

The label represents the street address if this information is available in OSM.

IMMI 2018 (C:\Users\bt\Desktop\OSM_Tutorial\OSM_Import.IPR)

File Edit Project Map Calculate Report Extras Settings Help

Map [Variant 0] -- UTM (long. zone width 6°); WGS84 (worldwideGPS), geocentrical, WGS84

582500 583000 583500 584000 584500 x / m 585500

4507500 y / m

Element input

All STD PLOT ISO XS31 CNOS SRM2 INTR

road (CNOSSOS-EU) 86.46m x97.48m

StCN 745
EQCN
LQCN
FQCN

Direct Input Sort: Click on column header

No.	Name	Label	Group
1	StCN0	Old Slip	residential street
2	StCN0	Liberty Street	residential street
3	StCN0	5669194	highway
4	StCN0	5669206	highway
5	StCN0	5669304	highway
6	StCN0	5669420	highway
7	StCN0	Spruce Street	residential street
8	StCN0	Fletcher Street	side road
9	StCN0	5669636	highway
10	StCN0	Broadway*	country road
11	StCN0	Broadway	residential street
12	StCN0	Platt Street	side road
13	StCN0	Hanover Street	residential street
14	StCN0	Murray Street	residential street
15	StCN0	Thomas Street	residential street
16	StCN0	Park Place	residential street
17	StCN0	State Street Plaza	federal highway
18	StCN0	Duane Street	residential street
19	StCN0	Duane Street	residential street
20	StCN0	Oliver Street	residential street
21	StCN0	Mott Street*	residential street
22	StCN0	Peck Slip	residential street
23	StCN0	Peck Slip	residential street
24	StCN0	Cliff Street	residential street
25	StCN0	East Broadway	country road
26	StCN0	New York Plaza	federal highway
27	StCN0	2nd Place	residential street
28	StCN0	Cedar Street	side road
29	StCN0	Cedar Street	residential street

Use selection in the scheme

Selected: 1 Element

StCN001 Old Slip

Insert before Delete

Edit Geo

No notes available

Construct and edit

ISO 9613-2

Tool box

Element navigator

Terrain model

Map tool box

Variant 0

Visibility

Road sources are categorized into sub categories and placed in groups accordingly.

IMMI 2018 (C:\Users\bt\Desktop\OSM_Tutorial\OSM_Import.IPR)

File Edit Project Map Calculate Report Extras Settings Help

Map [Variant 0] -- UTM (long. zone width 6°); WGS84 (worldwideGPS), geocentrical, WGS84

582500 583000 583500 584000 584500 x / m 585500

4507500 y / m

Element input

All STD PLOT ISO XS31 CNOS SRM2 INTR

railroad /CNOSSOS-EU [ ]: 379m x 269m

ScCN 53

LQCN

FQCN

Direct Input Sort: Click on column header

No.	Name	Label	Group
1	ScCN0	IRT Lexington Avenue Line*	tube
2	ScCN0	BMT Broadway Line*	tube
3	ScCN0	Manhattan Bridge subway tracks*	tube
4	ScCN0	IND Culver Line*	tube
5	ScCN0	Manhattan Bridge subway tracks*	tube
6	ScCN0	IND Fulton Street Line*	tube
7	ScCN0	IND Sixth Avenue Line*	tube
8	ScCN0	Montague Street Tunnel*	tube
9	ScCN0	Downtown Hudson Tubes*	tube
10	ScCN0	Manhattan Bridge subway tracks*	tube
11	ScCN0	BMT Nassau Street Line*	tube
12	ScCN0	IND Eighth Avenue Line*	tube
13	ScCN0	IRT City Hall Loop	tube
14	ScCN0	BMT Nassau Street Line	tube
15	ScCN0	IRT Lexington Avenue Line	tube
16	ScCN0	IRT Lexington Avenue Line*	tube
17	ScCN0	Chrystie Street Connection*	tube
18	ScCN0	IND Eighth Avenue Line*	tube
19	ScCN0	IRT Broadway-Seventh Avenue Line*	tube
20	ScCN0	IRT Broadway-Seventh Avenue Line*	tube
21	ScCN0	IRT Broadway-Seventh Avenue Line*	tube
22	ScCN0	IRT Broadway-Seventh Avenue Line*	tube
23	ScCN0	PATH	tube
24	ScCN0	IRT Broadway-Seventh Avenue Line*	tube
25	ScCN0	IRT Broadway-Seventh Avenue Line*	tube
26	ScCN0	IRT Broadway-Seventh Avenue Line	tube
27	ScCN0	IRT Lexington Avenue Line	tube
28	ScCN0	IRT Broadway-Seventh Avenue Line	tube
29	ScCN0	IRT Broadway-Seventh Avenue Line	tube

Use selection in the scheme

Selected:	1 Element
ScCN001	IRT Lexington Avenue

Insert before Delete

Edit Geo

tunnel: yes

Tool box

Element navigator

Terrain model

Map tool box

Variant 0

Visibility

Construct and edit

ISO 9613-2

The same applies for railway sources.

IMMI 2018 (C:\Users\bt\Desktop\OSM_Tutorial\OSM_Import.IPR)

File Edit Project Map Calculate Report Extras Settings Help

Map [Variant 0] -- UTM (long. zone width 6°); WGS84 (worldwideGPS), geocentrical, WGS84

582500 583000 583500 584000 584500 x / m 585500

4507500 y / m

Element input

All STD PLOT ISO XS31 CNOS SRM2 INTR

railroad /CNOSSOS-EU [ ]: 379m x 269m

StCN 745
ScCN 53
EQCN
LQCN
FQCN

Direct Input Sort: Click on column header

No.	Name	Label	Group
1	ScCN0	IRT Lexington Avenue Line*	tube
2	ScCN0	BMT Broadway Line*	tube
3	ScCN0	Manhattan Bridge subway tracks*	tube
4	ScCN0	IND Culver Line*	tube
5	ScCN0	Manhattan Bridge subway tracks*	tube
6	ScCN0	IND Fulton Street Line*	tube
7	ScCN0	IND Sixth Avenue Line*	tube
8	ScCN0	Montague Street Tunnel*	tube
9	ScCN0	Downtown Hudson Tubes*	tube
10	ScCN0	Manhattan Bridge subway tracks*	tube
11	ScCN0	BMT Nassau Street Line*	tube
12	ScCN0	IND Eighth Avenue Line*	tube
13	ScCN0	IRT City Hall Loop	tube
14	ScCN0	BMT Nassau Street Line	tube
15	ScCN0	IRT Lexington Avenue Line	tube
16	ScCN0	IRT Lexington Avenue Line*	tube
17	ScCN0	Chrystie Street Connection*	tube
18	ScCN0	IND Eighth Avenue Line*	tube
19	ScCN0	IRT Broadway-Seventh Avenue Line*	tube
20	ScCN0	IRT Broadway-Seventh Avenue Line*	tube
21	ScCN0	IRT Broadway-Seventh Avenue Line*	tube
22	ScCN0	IRT Broadway-Seventh Avenue Line*	tube
23	ScCN0	PATH	tube
24	ScCN0	IRT Broadway-Seventh Avenue Line*	tube
25	ScCN0	IRT Broadway-Seventh Avenue Line*	tube
26	ScCN0	IRT Broadway-Seventh Avenue Line	tube
27	ScCN0	IRT Lexington Avenue Line	tube
28	ScCN0	IRT Broadway-Seventh Avenue Line	tube
29	ScCN0	IRT Broadway-Seventh Avenue Line	tube

Use selection in the scheme

Selected:	1 Element
ScCN001	IRT Lexington Avenue

Insert before Delete

Edit Geo

tunnel: yes

Tool box

Element navigator

Terrain model

Map tool box

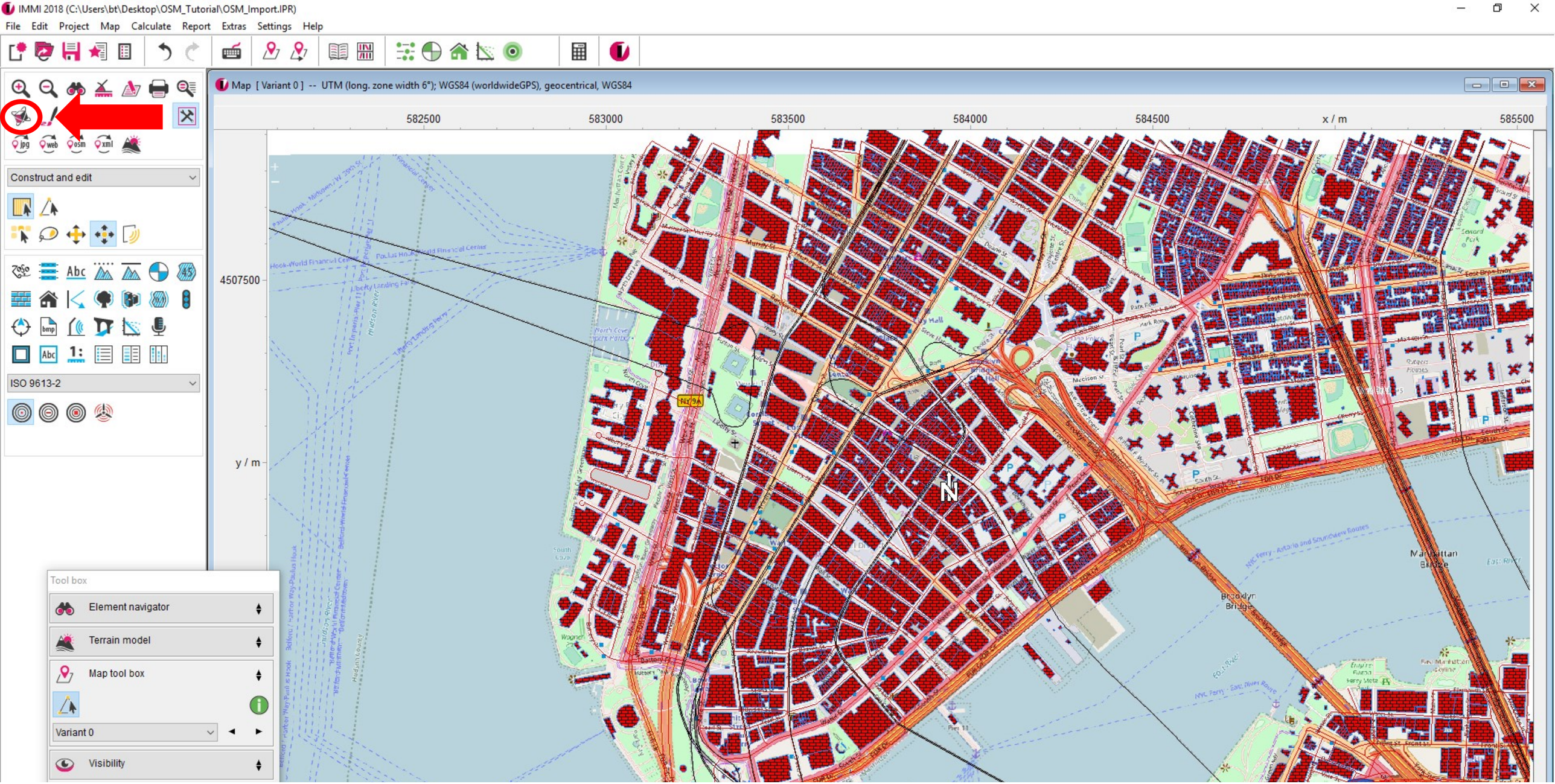
Variant 0

Visibility

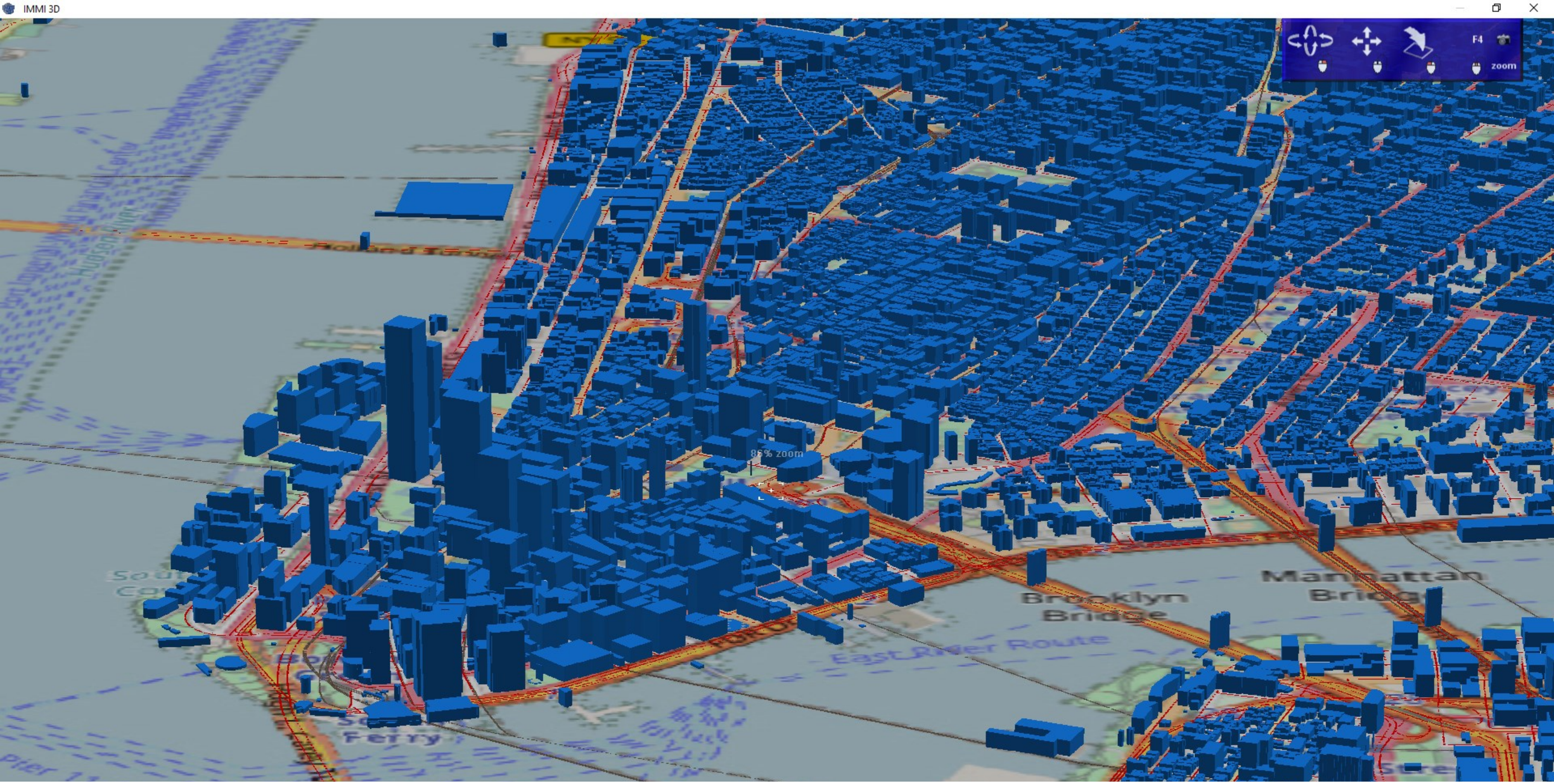
Construct and edit

ISO 9613-2

Close the element list to have a look at the 3D model.



In order to start the 3D viewer click the respective icon.



The setup of the model is now complete.