



Blender

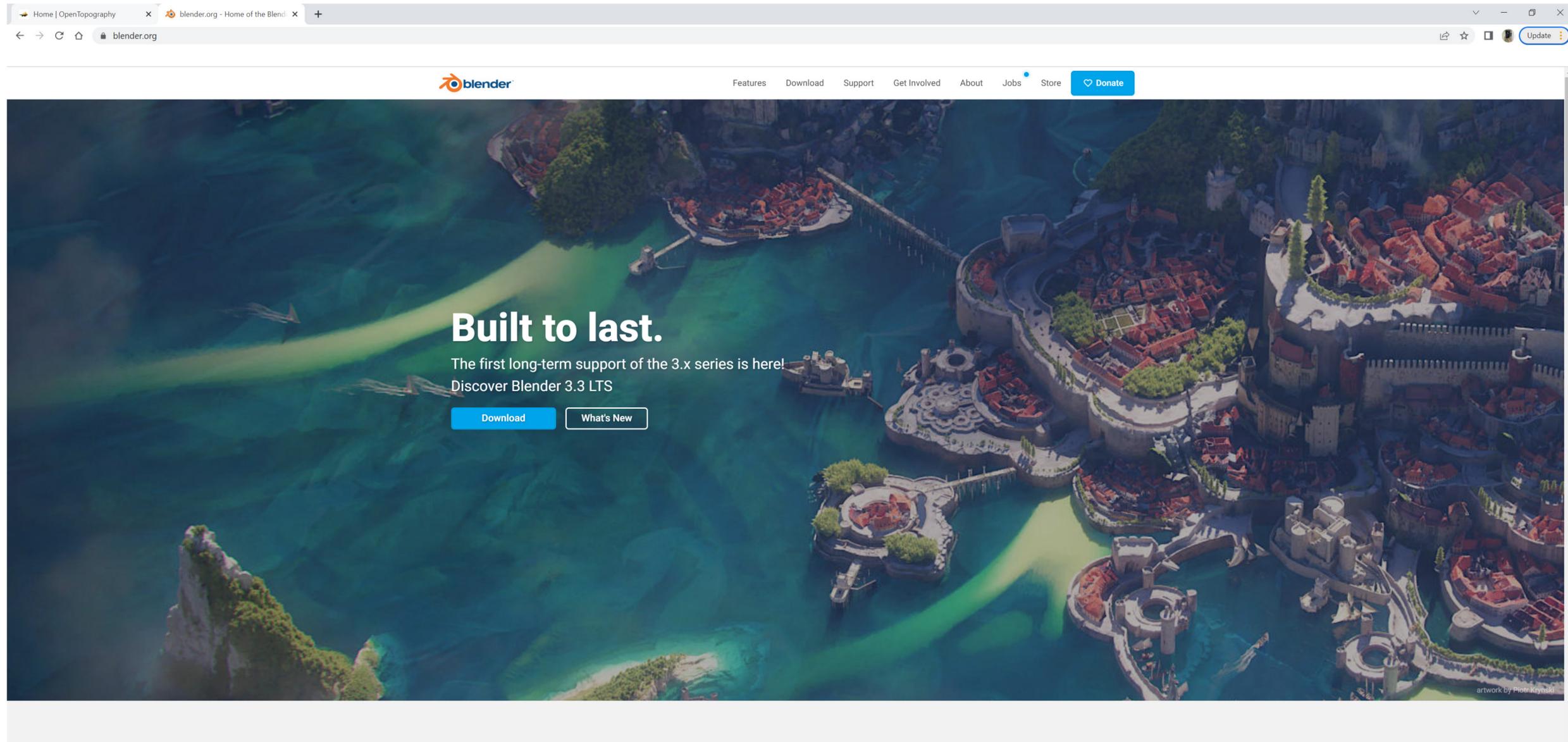
Creating Site Map through Blender + BlenderGIS | Exporting data to Rhino



BlenderGIS

Creating Site Map from Blender + BlenderGIS

Blender - Download



The screenshot shows a web browser window with two tabs: "Home | OpenTopography" and "blender.org - Home of the Blend". The address bar shows "blender.org". The website header includes the Blender logo and a navigation menu with links for "Features", "Download", "Support", "Get Involved", "About", "Jobs", "Store", and a blue "Donate" button. The main content area features a large, detailed 3D rendered scene of a coastal town with red-roofed buildings and stone structures. Overlaid on this scene is the text "Built to last." in a large, white, sans-serif font. Below this, in a smaller white font, it says "The first long-term support of the 3.x series is here!" and "Discover Blender 3.3 LTS". At the bottom of the text block are two buttons: a blue "Download" button and a white "What's New" button with a black border. In the bottom right corner of the 3D scene, there is a small credit: "artwork by Piotr Kozłowski".

Step 1: Download Blender
<https://www.blender.org/>

Blender - Download

blender

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Download > Release Notes Long-term Support Requirements Demo Files Previous Versions Builds

The Freedom to Create

Download Blender 3.3

Windows · Installer · 231MB · ⓘ

macOS, Linux, and other versions ▾

Fully Featured

Whether you do animation, modeling, VFX, games, you name it. Blender's got you covered.

[Check out the features >](#)

Free & Open Source

Free to Use. Free to Share. Free to Change. Free to Sell Your Work. Blender is Free Software.

[Learn more about the license >](#)

Be Part of It

Blender's main strength is its huge community. Made by hundreds of contributors from around the world.

[Get involved >](#)

What's New

A new hair grooming system, procedural UV unwrapping, Library Overrides improvements and so much more.

blender-3.3.0-win...msi
2.9/231 MB, 9 mins left

Show all ×

Step 1: Download Blender
<https://www.blender.org/>

Blender GIS - Download

The screenshot displays the GitHub repository page for `domlysz/BlenderGIS`. The repository is public and has 5.6k stars and 1k forks. The commit history shows a recent commit by `7acdaae` on 31 May with 489 commits. The repository structure includes folders like `clients`, `core`, `icons`, and `operators`, along with files like `.gitignore`, `LICENSE`, `README.md`, `__init__.py`, `geoscene.py`, `issue_template.md`, and `prefs.py`.

The README content is as follows:

Blender GIS

Blender minimum version required : v2.83

Note : Since 2022, the OpenTopography web service requires an API key. Please register to opentopography.org and request a key. This service is still free.

[Wiki - FAQ - Quick start guide - Flowchart](#)

Functionalities overview

GIS datafile import : Import in Blender most commons GIS data format : Shapefile vector, raster image, geotiff DEM, OpenStreetMap xml.

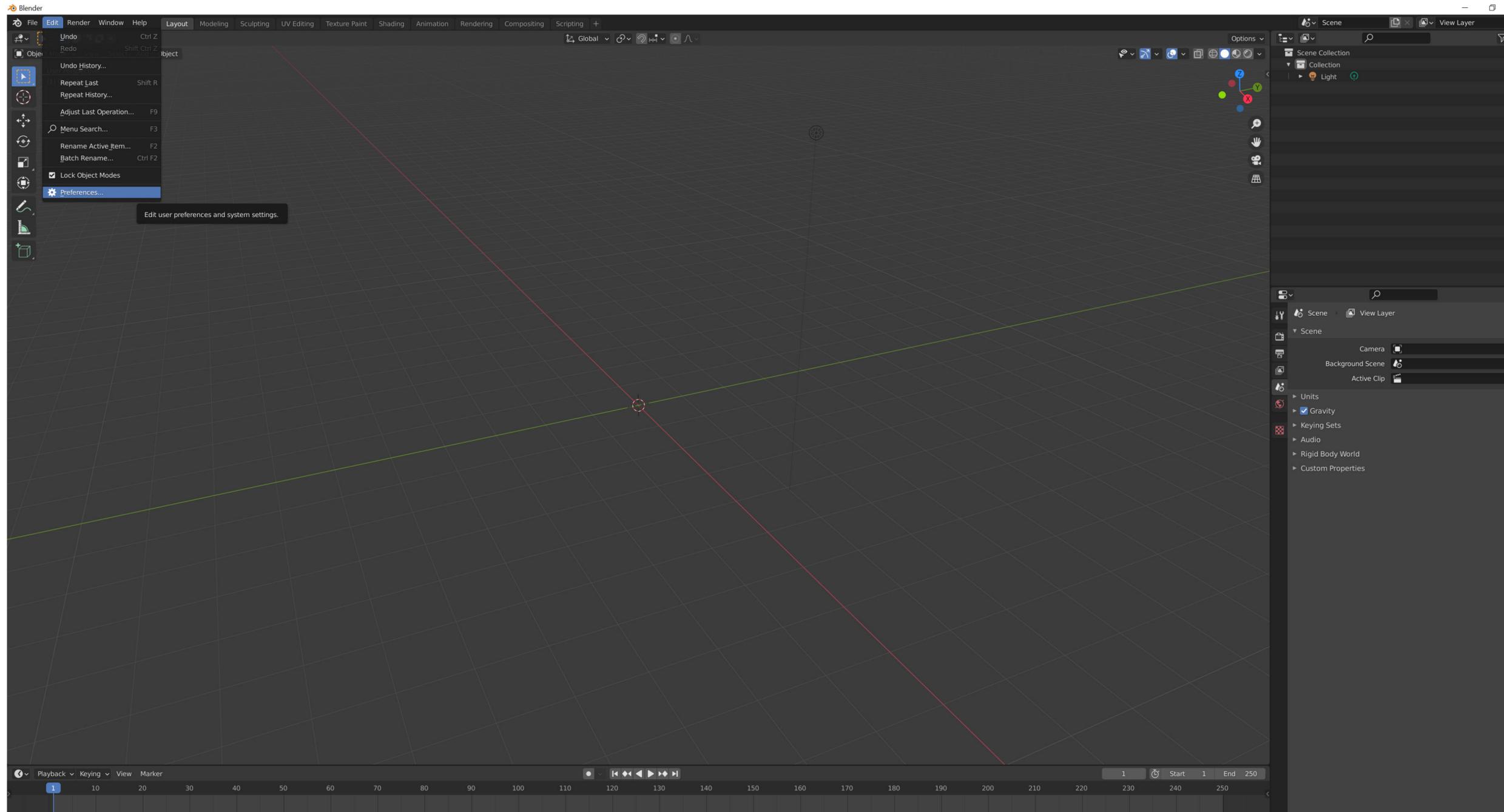
There are a lot of possibilities to create a 3D terrain from geographic data with BlenderGIS, check the [Flowchart](#) to have an overview.

Exemple : import vector contour lines, create faces by triangulation and put a topographic raster texture.

The right sidebar shows the repository's metadata, including the license (GPL-3.0), 5.6k stars, 240 watchers, and 1k forks. It also lists 3 releases, with the latest being v2.2.8 on 31 May. There are no packages published and 13 contributors are listed.

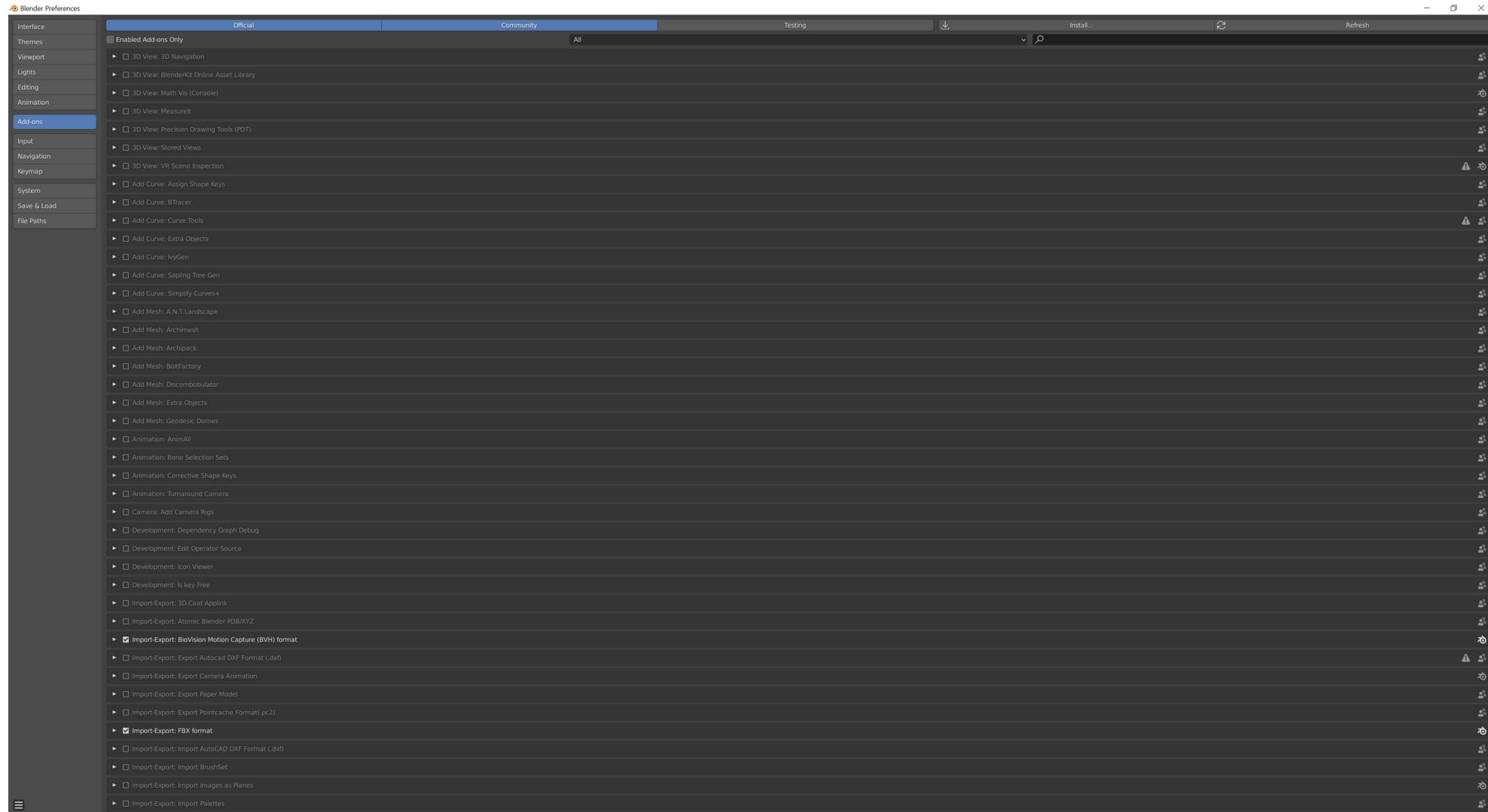
Step 2: Download BlenderGIS & download code as ZIP (don't unpack)
<https://github.com/domlysz/BlenderGIS>

Installing BlenderGIS to Blender



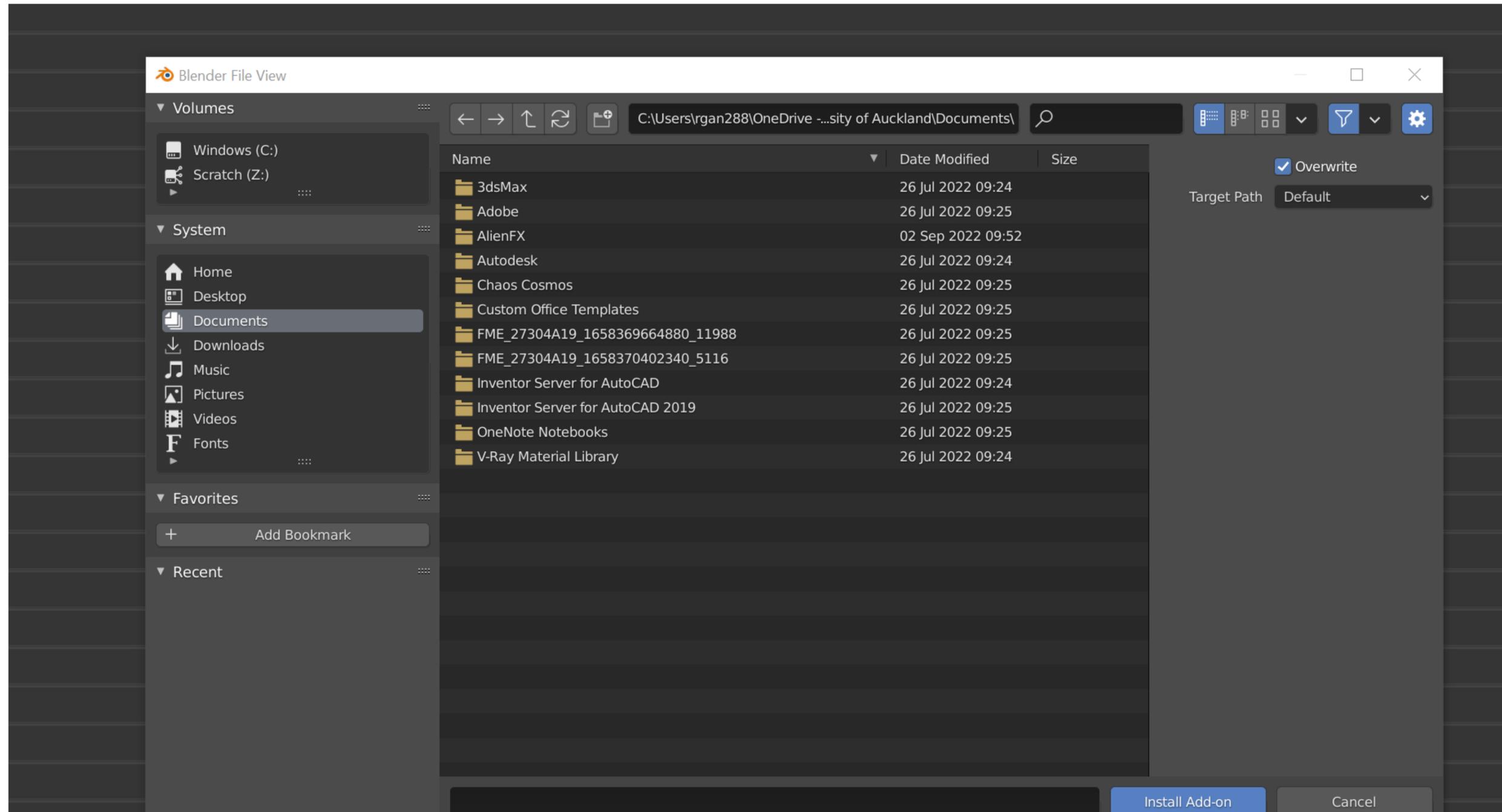
Step 3: Open Blender + Create a new project + Go to Edit > Preferences > Add-ons > Install > Find “BlenderGIS-master.zip (wherever you downloaded it) > Install Add-on > Tick the box stating: “3D View: BlenderGIS” to enable BlenderGIS.

Installing BlenderGIS to Blender



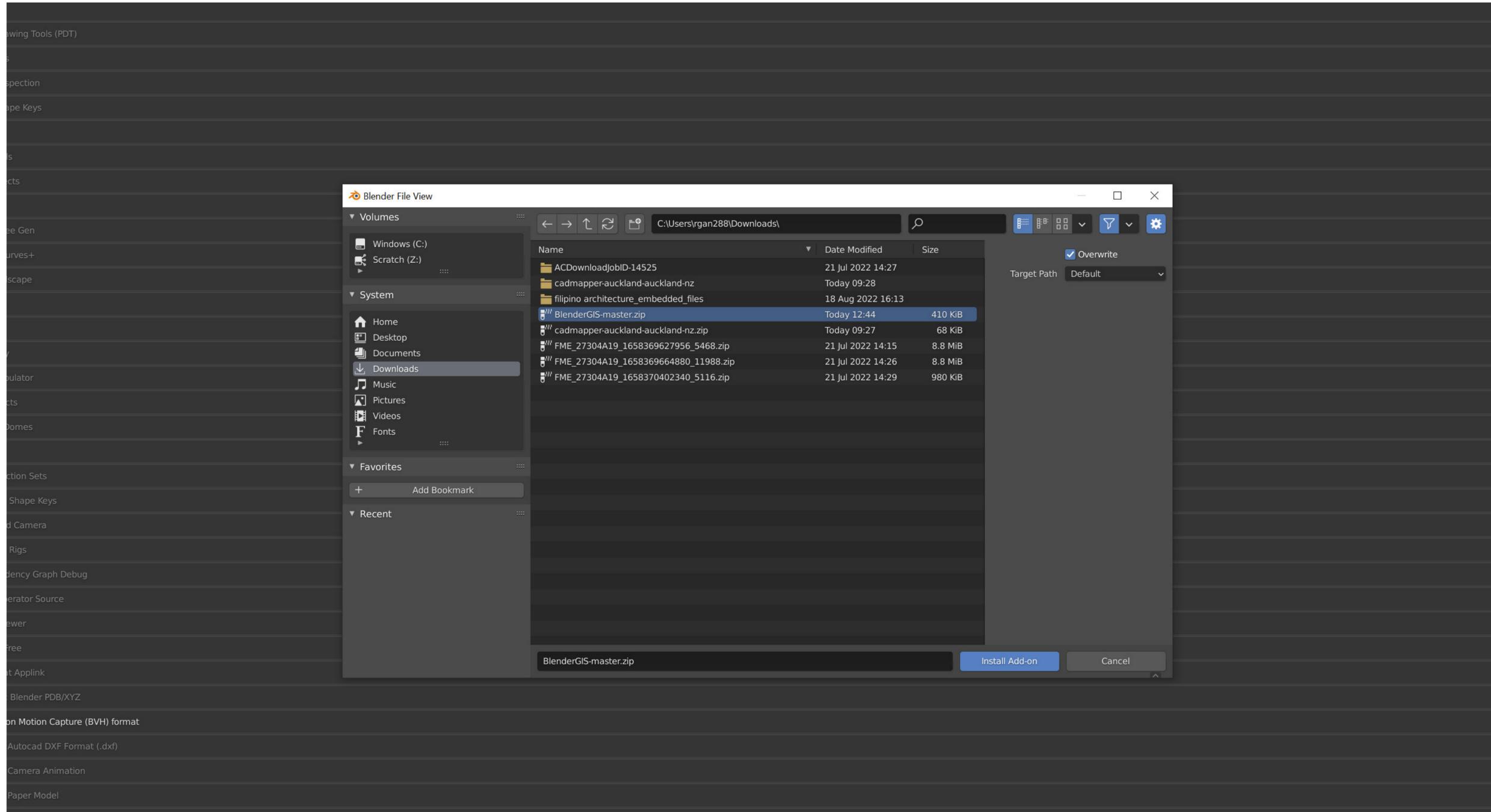
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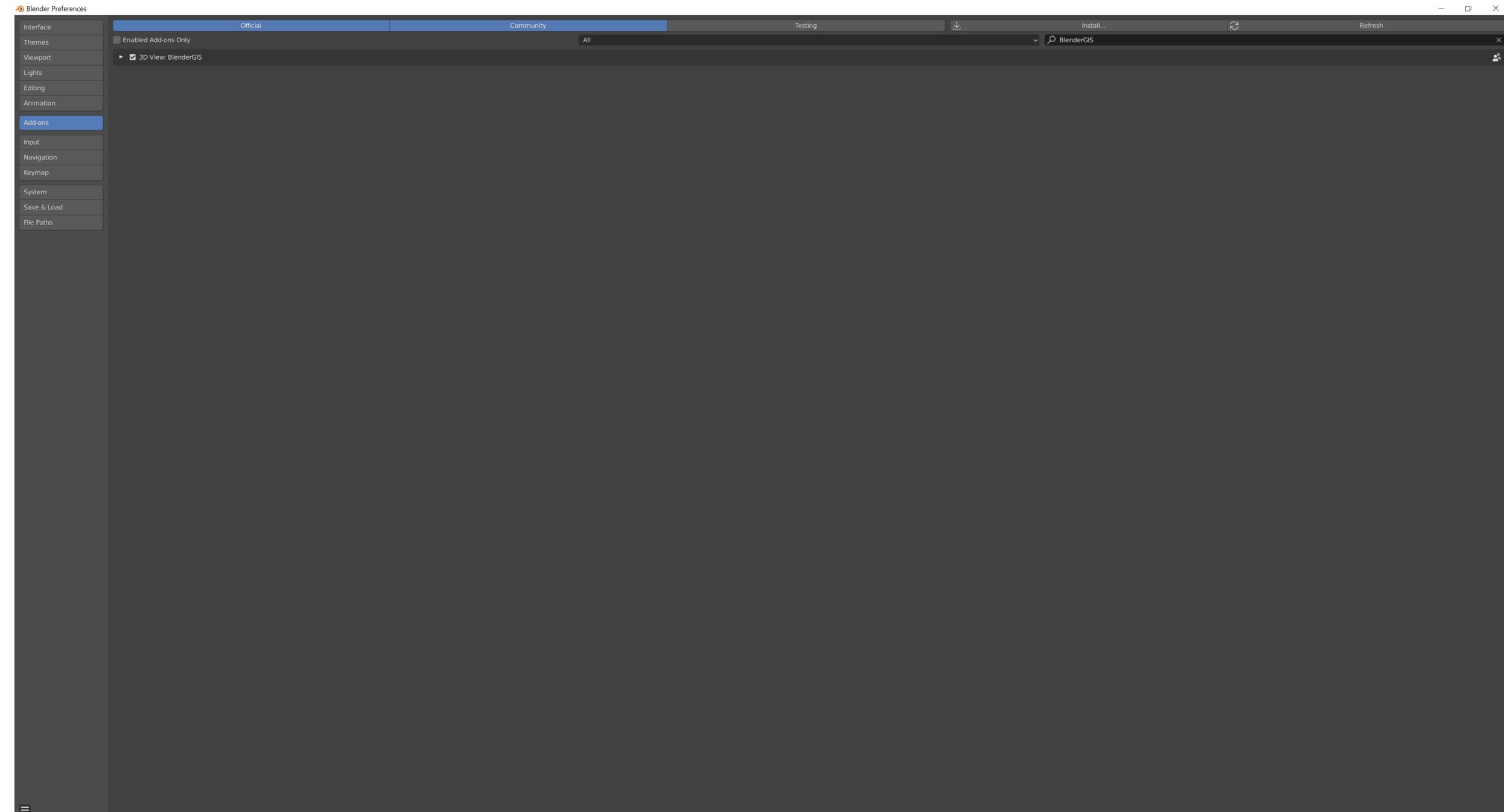
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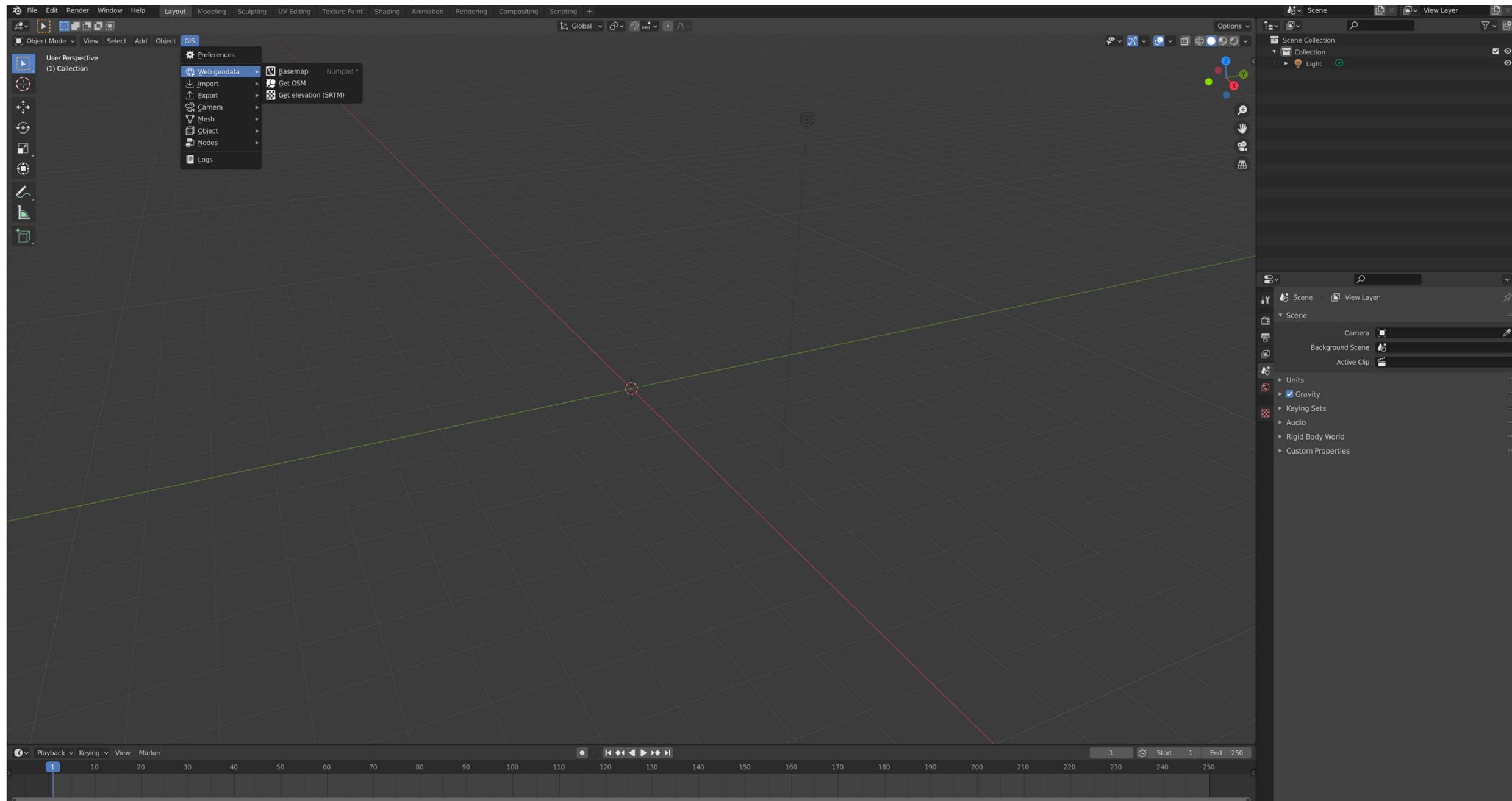
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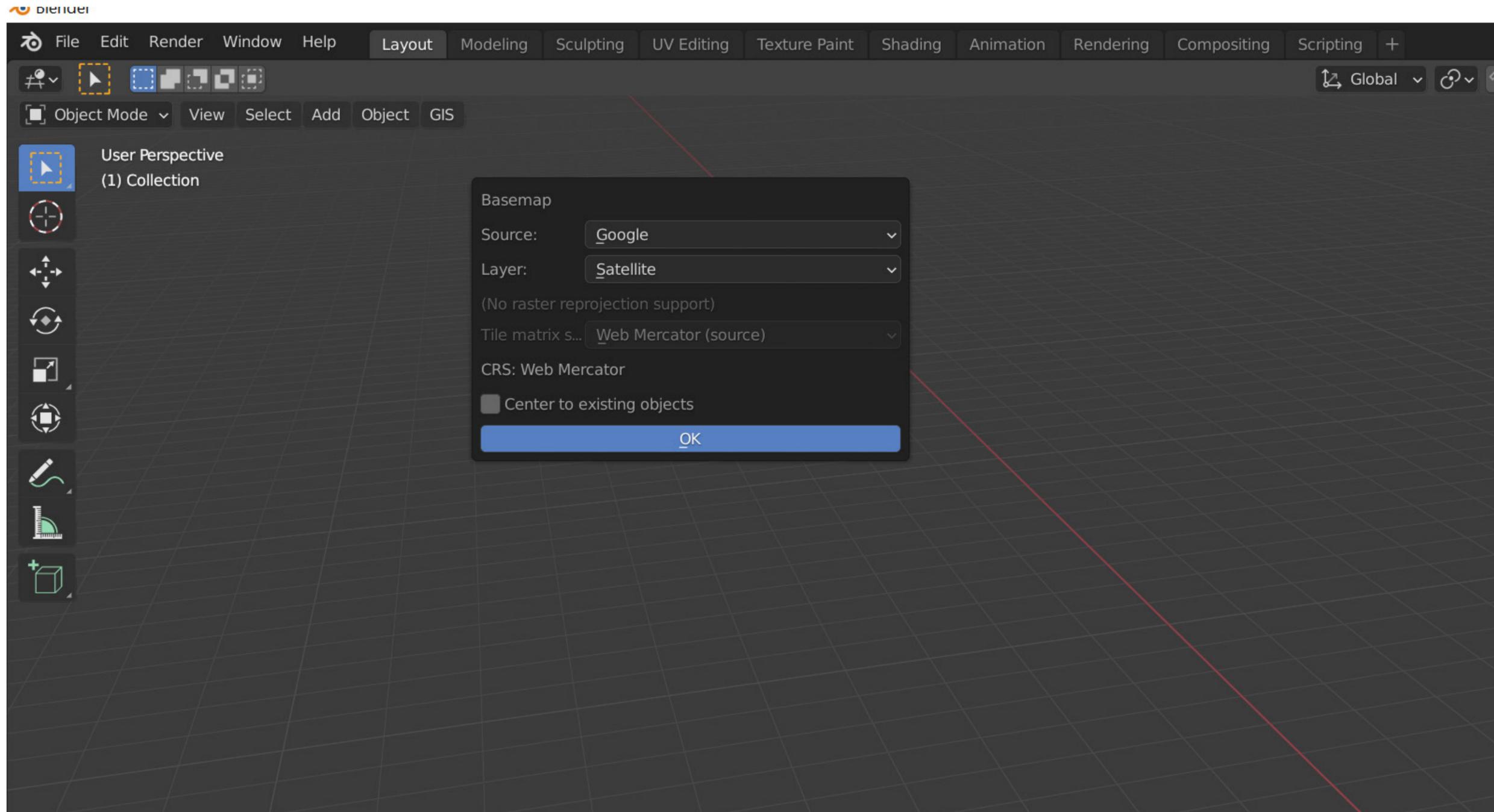
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BlenderGIS - Generating Basemap



Step 4: To create your site, you need to go to GIS > Web geodata > Basemap

BlenderGIS - Generating Basemap



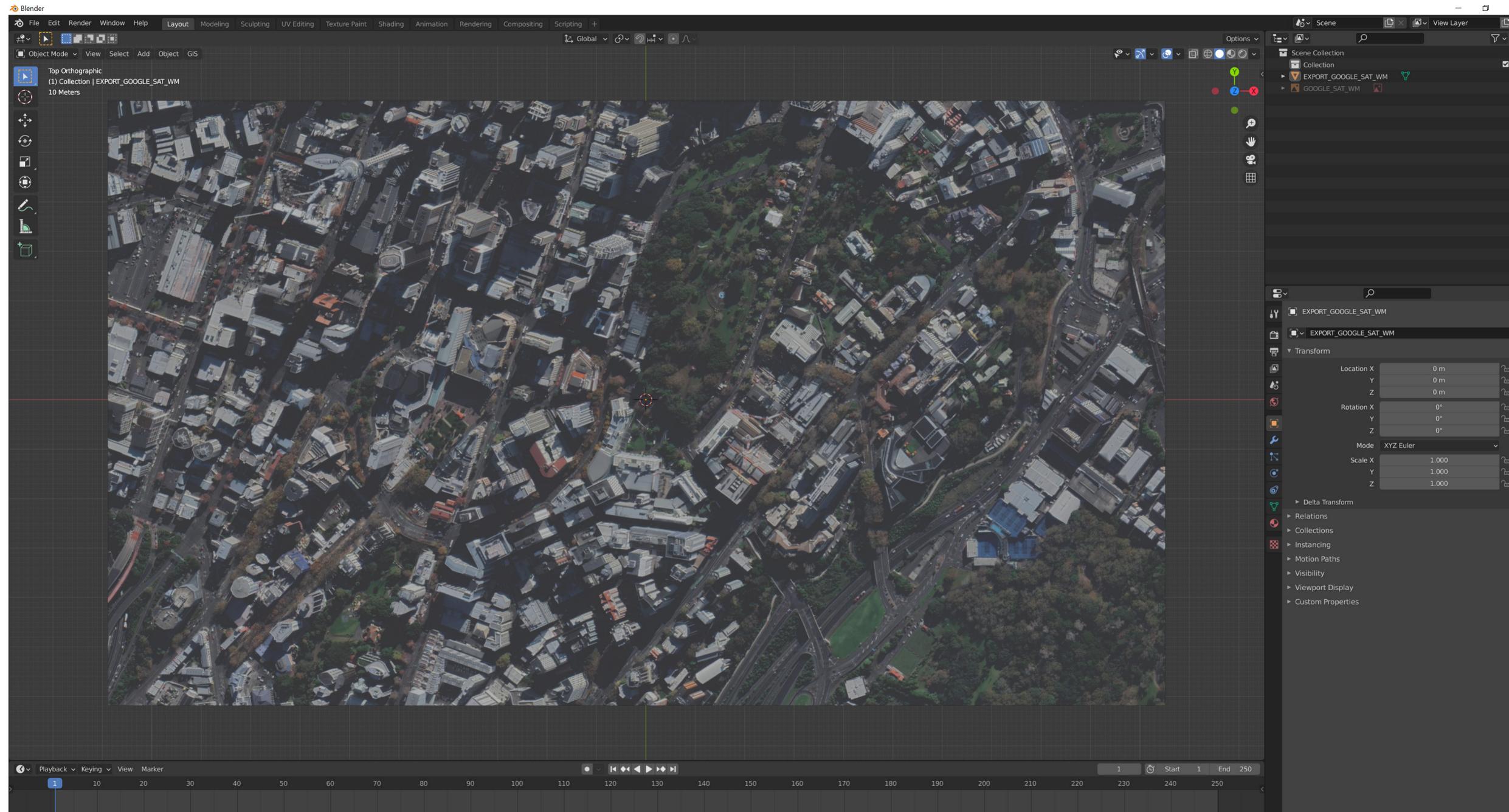
Step 5: A basemap UI should pop up and all you have to do is make sure the source is google and the layer is satellite, if so press OK.

BlenderGIS - Generating Basemap



Step 6: It'll give you a new UI and a satellite view of the whole earth will pop up. Press "G" to go to basemap (basically making you go to a destination), type in your site - for example "The University of Auckland". After that, your zoom by default is at 0, the bigger the number - the closer it is to your site. I normally recommend 13-15. Once everything is setted up, press OK.

BlenderGIS - Generated Basemap



Step 7: It'll give you a closer shot of your site, to capture/grab what's on screen press "E" and it should crop it to your viewport screen ratio.

OpenTopography - Generating API key

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opentopography.org

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HOME DATA RESOURCES LEARN ABOUT

Profile through Auckland, NZ lidar point cloud data. Sky Tower at center left.

Latest News

New NCALM dataset over the South Padre Island, TX available

Sep 1, 2022
A new lidar dataset covering 61 km² over Padre Island, TX is now available on OpenTopography. This lidar dataset was collected by the National Center for Airborne Laser Mapping (NCALM) as...

Land Information New Zealand (LINZ) West Coast dataset expanded along west coast of South Island, NZ

Aug 31, 2022
OpenTopography has updated the LINZ dataset over Westport, New Zealand with new data that now covers over 6000 km² along the west coast of the South Island. This collection is part of the South Island, West Coast regional lidar survey, and is the...

OpenTopography at the 2022 AGIC Education and Training Symposium

Aug 29, 2022
OpenTopography will be at the Arizona Geographic Information Council (AGIC) Education and Training Symposium in Prescott, AZ this week. Be sure...

[More news](#)

Latest Blog Posts

New package automates river relative elevation model (REM) generation

[Request an API Key](#)

Latest Datasets:

- Topographic Signatures of Barrier Island Vulnerability, TX 2021
- Sediment Accretion Rates and Spatial Patterns in the Wax Lake Delta, LA 2020
- Structure from Motion data along the sSAF, Salt Creek, CA 2021

[Real Time Analytics](#)

Twitter

OpenTop...
@... · Sep 8

New @NCALM_UH #lidar seed dataset covering 61 sq km of Padre Island, TX. Data collected for Kenton Fisher at Texas A&M University to analyze

Step 8: Before we make our site contours, you need to generate an API Key. To generate one, you need to create an account with OpenTopography (opentopography.org). Create an account and request for an API Key.

myOpenTopo Authorizations and API Key

Welcome Raphael Angelo Gannaban ([Sign Out](#))

Request API Key

API key: edd70f33361e82b632f0fe08015305122

OpenTopography's [REST API](#) is documented using the OpenAPI specification and available via [Swagger](#) for visualizing and testing via the browser.

Request Power User

Request Dataspace User

User Access Levels

1. Guest Users:

- Access to 50 million points per point cloud & processing job
- Guests do not have access to the personalized point cloud and raster jobs interface which allows you to view all previously submitted jobs, share job results and resubmit jobs

📍 Username: rgan288@aucklanduni.ac.nz. You are logged into OpenTopography as a registered user.

2. Registered Users:

- Access to 250 million points per point cloud & processing job
- Personalized point cloud and raster jobs interface
- Point Cloud & Raster bulk data downloads

3. Power Users:

- Access to 500 million points per point cloud job (without DEM generation) or 350 million points per point cloud & processing job (with DEM generation). Power User status does not apply to federated datasets (e.g. USGS 3DEP) at this time.
- Personalized point cloud and raster jobs interface
- Point Cloud & Raster bulk data downloads

Power User requires completing a simple form to explain why you feel you need elevated data access privileges.

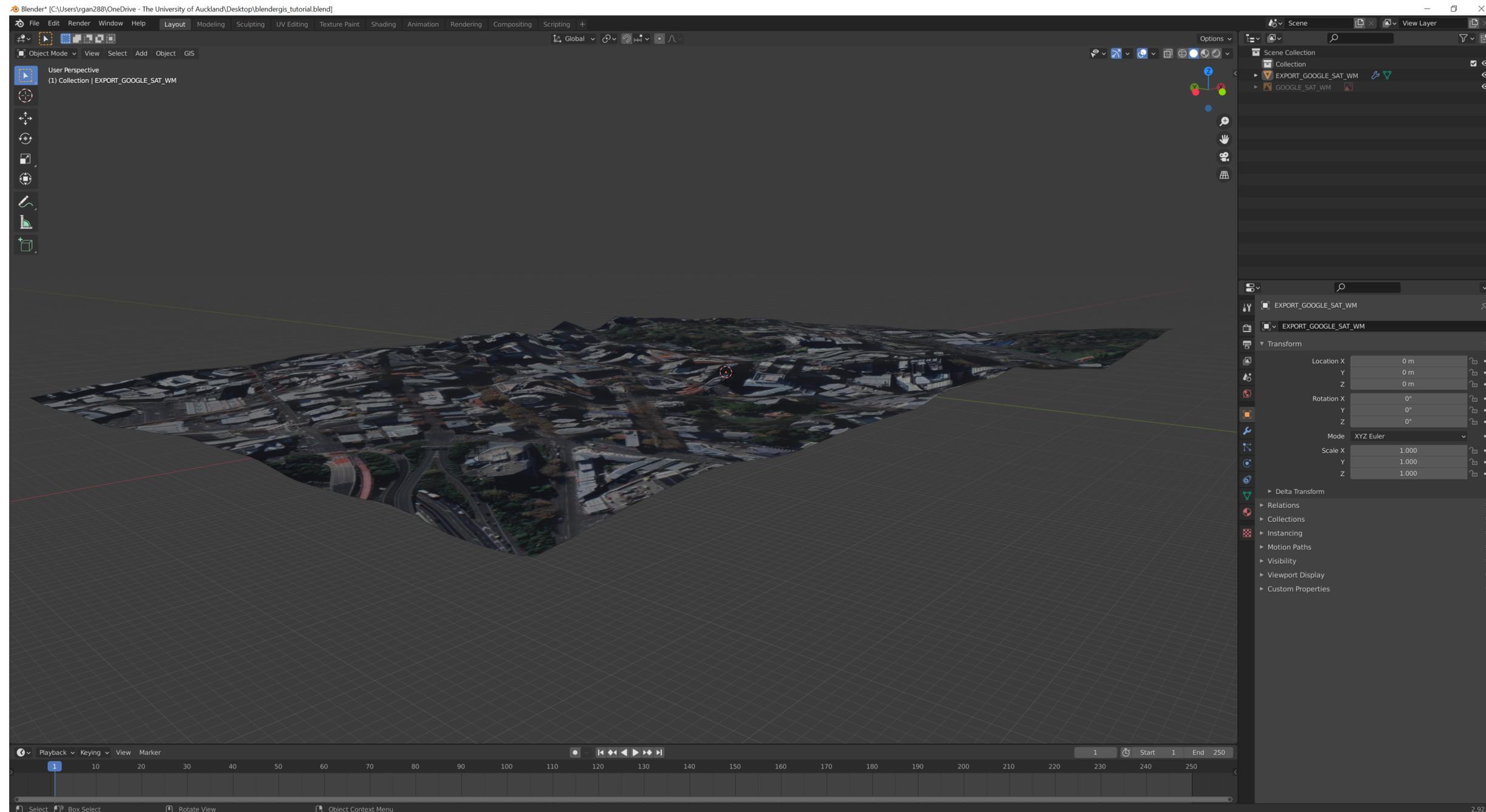
Step 9: Once the API key is generated, copy and paste it. Go back to Blender and select GIS > Web geodata > Get Elevation (SRTM). A small UI will pop up and say 'server' and 'api key'. Paste your API key and press OK. It'll take roughly around 2-3 minutes to generate your site topography.

Creating SRTM Data through generated API Key



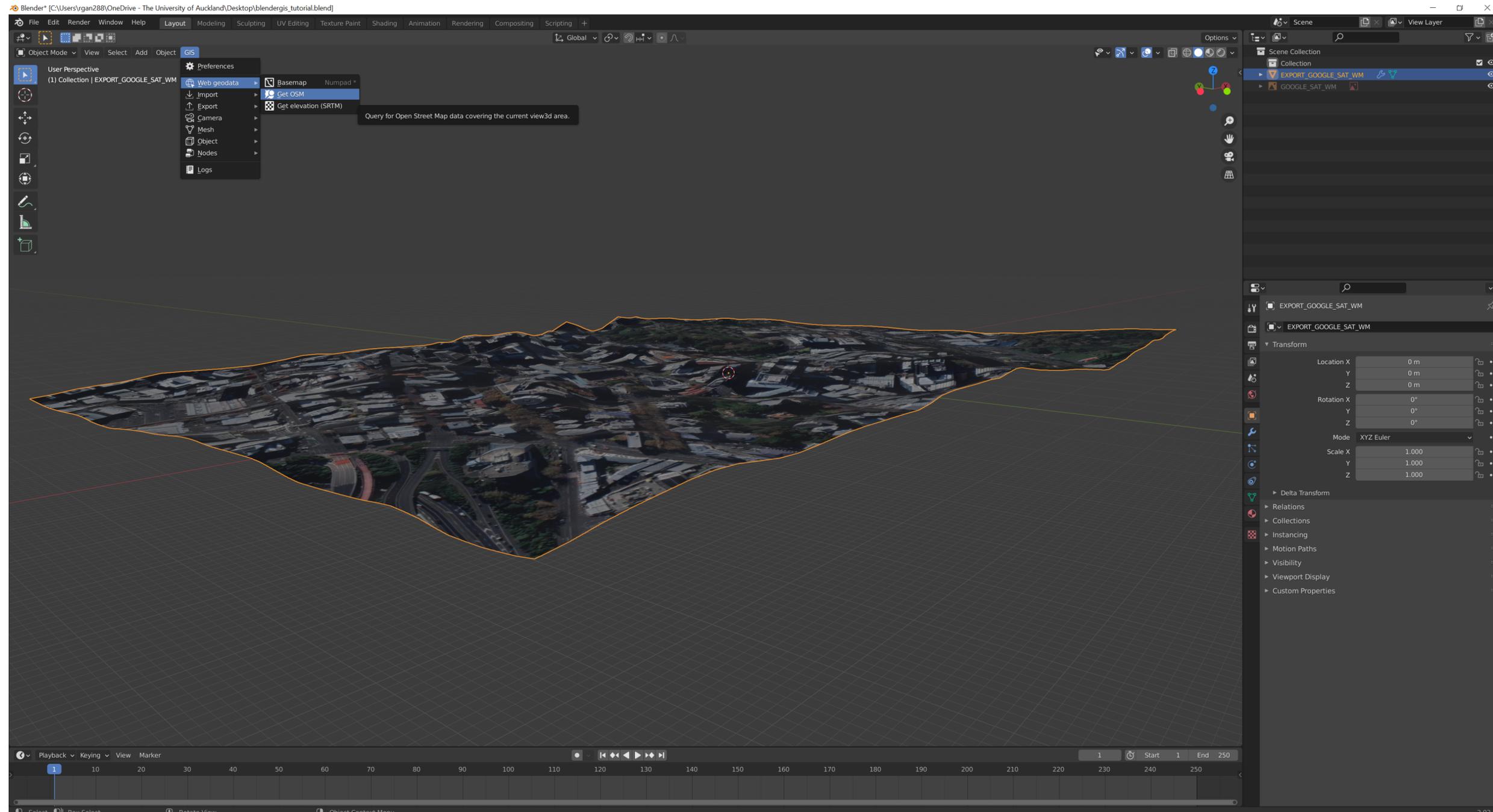
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Generating site topography



Step 10: Once topography has been generated, next step is to generate building heights, roads, etc. Go to GIS > Web geodata > Get OSM > A new GUI will pop up and by default it will be on 'Nodes' - change that to Ways and tick what you needed (Control + Shift + L click), also tick "Elevation from Object" and "Building Extrusion", you'll be needing one for building heights, etc. Once all is setted up, tick OK. It'll take 5-8 minutes generating the building heights, roads, etc (depending on the complexity of the site).

Generating Site Topography



Step 10: Once topography has been generated, next step is to generate building heights, roads, etc. Go to GIS > Web geodata > Get OSM > A new GUI will pop up and by default it will be on 'Nodes' - change that to Ways and tick what you needed (Control + Shift + L click), also tick "Elevation from Object" and "Building Extrusion", you'll be needing one for building heights, etc. Once all is setted up, tick OK. It'll take 5-8 minutes generating the building heights, roads, etc (depending on the complexity of the site).

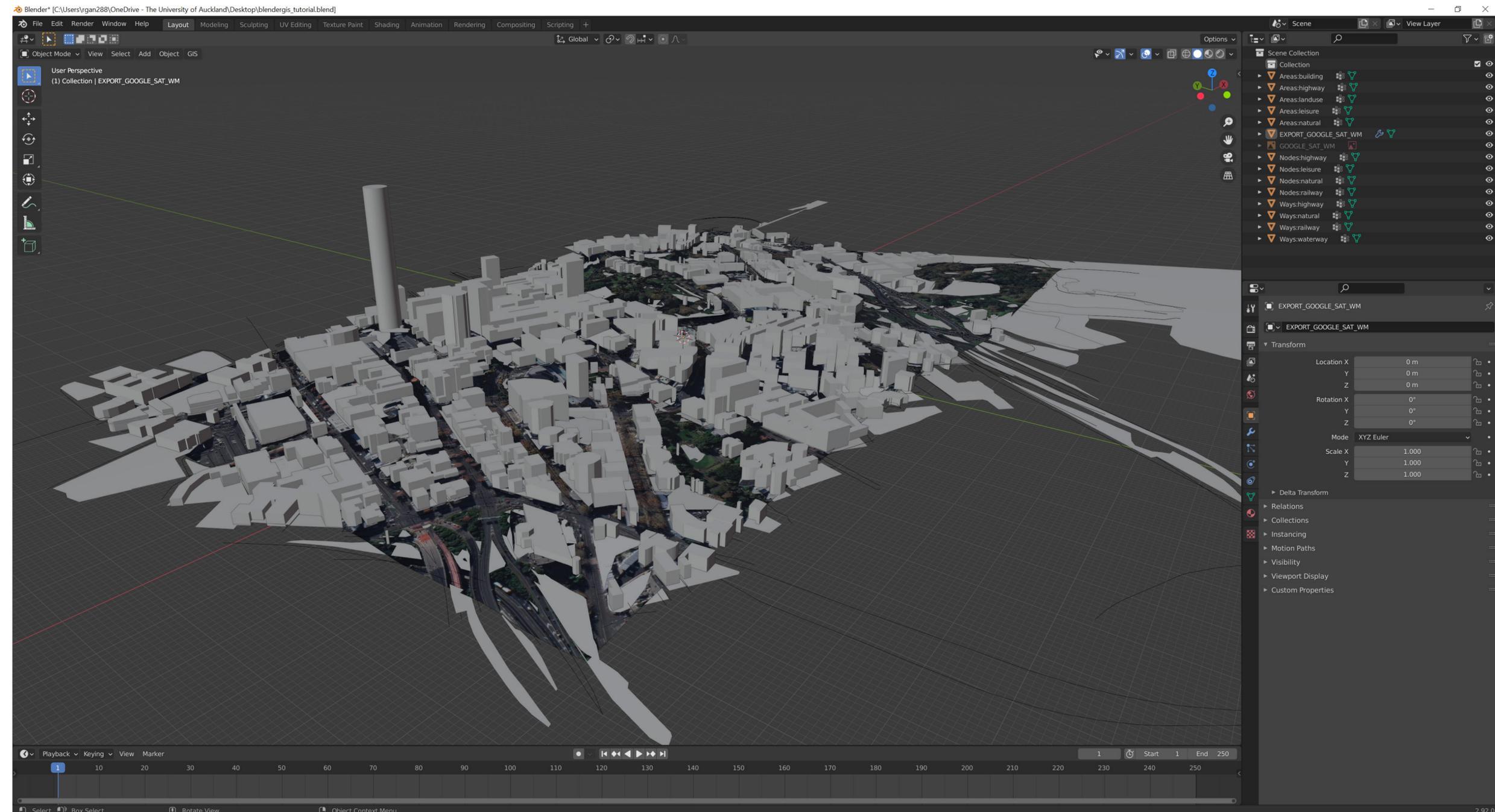
Generating Building Heights, Highway, Waterway, etc

The 'Get OSM' dialog box is shown with the 'Nodes' tab selected. The list of object types includes building, highway, landuse, leisure, natural, railway, and waterway. The 'Elevation from object' checkbox is unchecked, while 'Buildings extrusion' is checked. The 'Default Height' is set to 20.00, 'Random height threshold' to 0.00, and 'Level height' to 3.00. The 'Separate objects' checkbox is unchecked. An 'OK' button is at the bottom.

The 'Get OSM' dialog box is shown with the 'Ways' tab selected. The list of object types includes building, highway, landuse, leisure, natural, railway, and waterway. The 'Elevation from object' checkbox is checked, and the 'Elev. object' dropdown is set to 'EXPORT_GOOGLE_SAT_WM'. 'Buildings extrusion' is also checked. The 'Default Height' is set to 20.00, 'Random height threshold' to 0.00, and 'Level height' to 3.00. The 'Separate objects' checkbox is unchecked. An 'OK' button is at the bottom.

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Generated Buildings, Road + Topography (Final)



Step 11: Once generated, double check if the buildings are in one group, same as the road, etc.

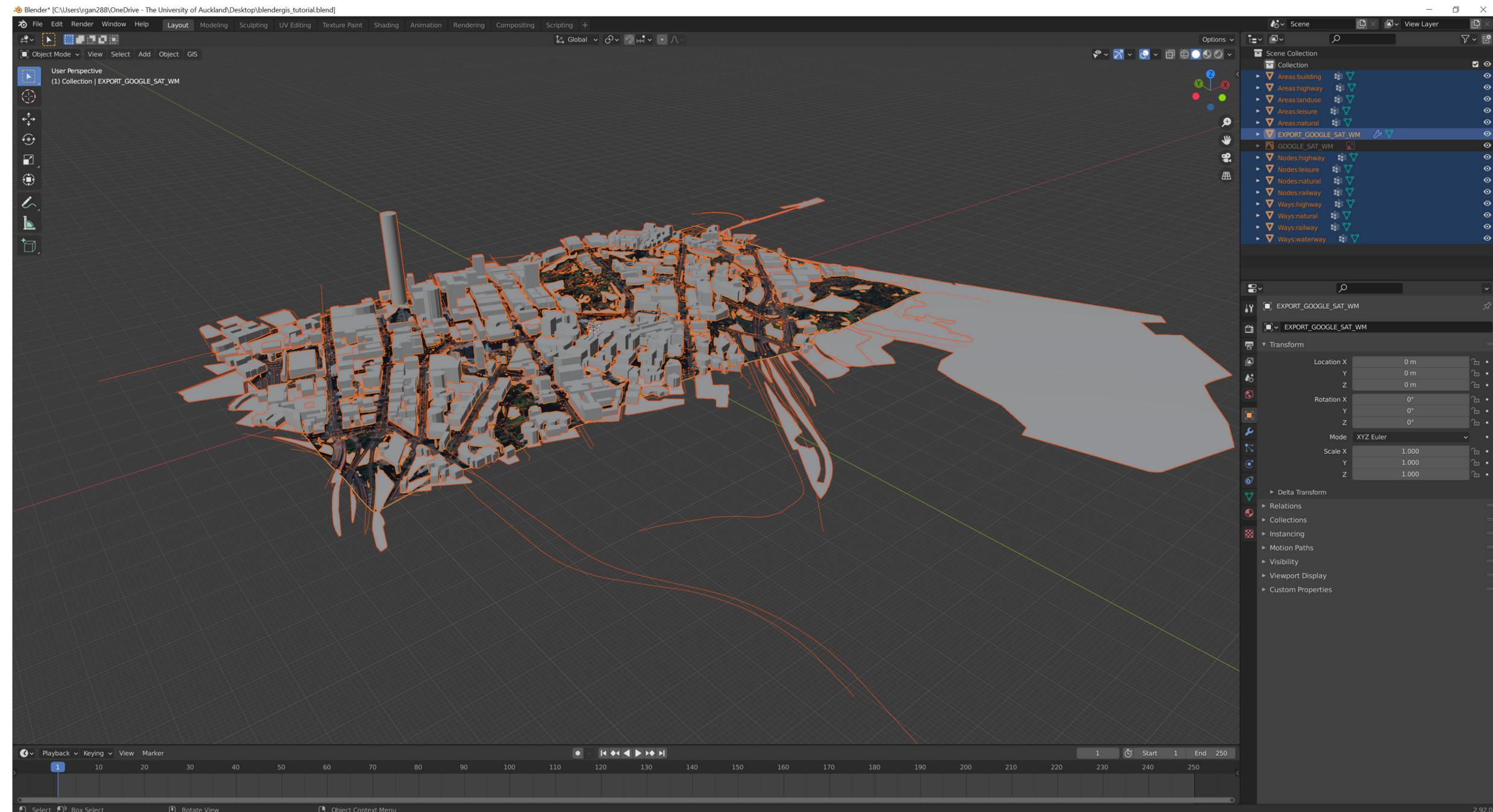
Link to YouTube tutorial in case you're lost: <https://www.youtube.com/watch?v=YNtKnmRXVlo>



BlenderGIS to Rhino

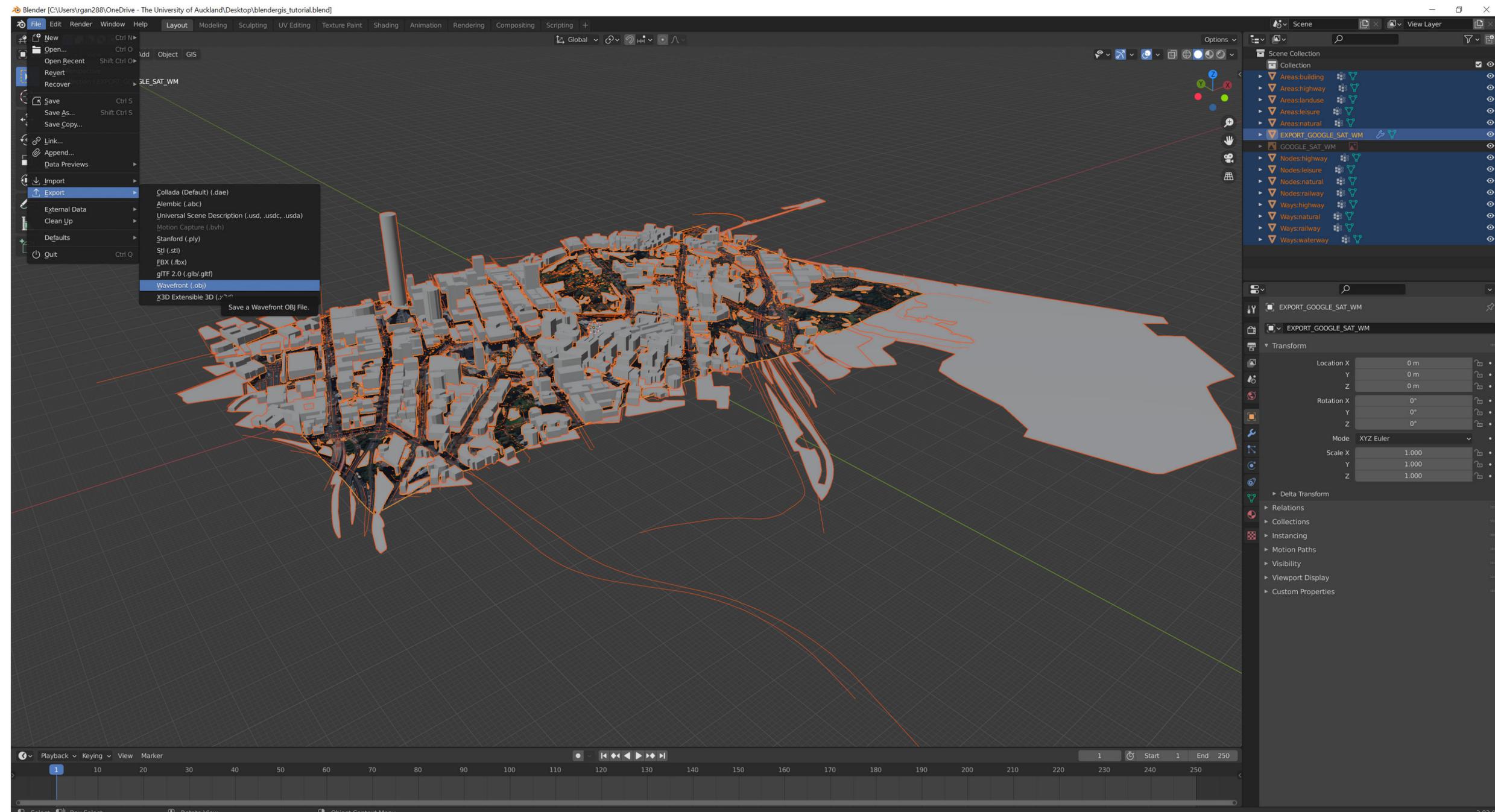
Importing Data from BlenderGIS to Rhino

BlenderGIS - Import from Blender to Rhino



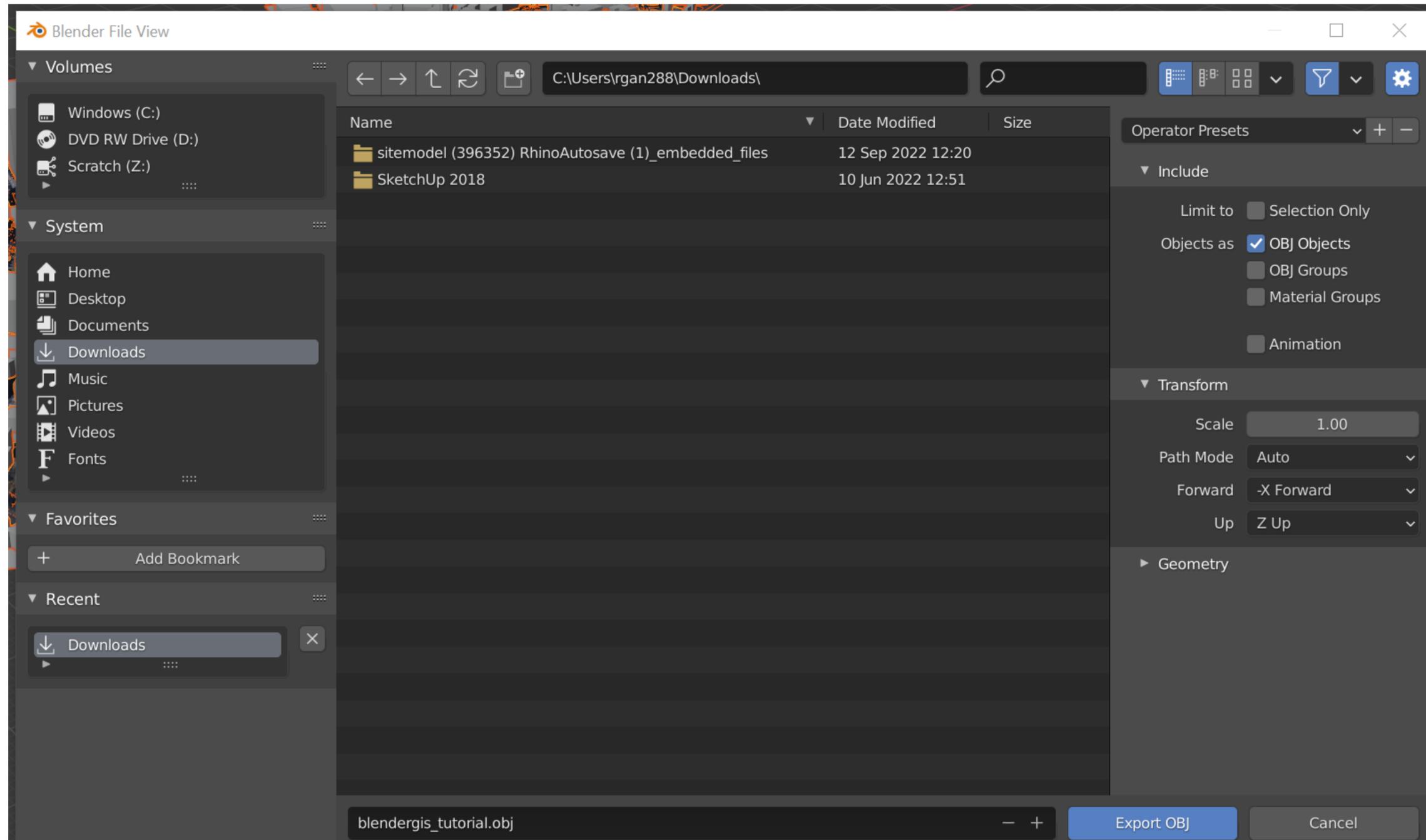
Step 1: Select all your model components and go to File > Export > Wavefront (.obj) - easiest export to Rhino compared to other options.

BlenderGIS - Import from Blender to Rhino

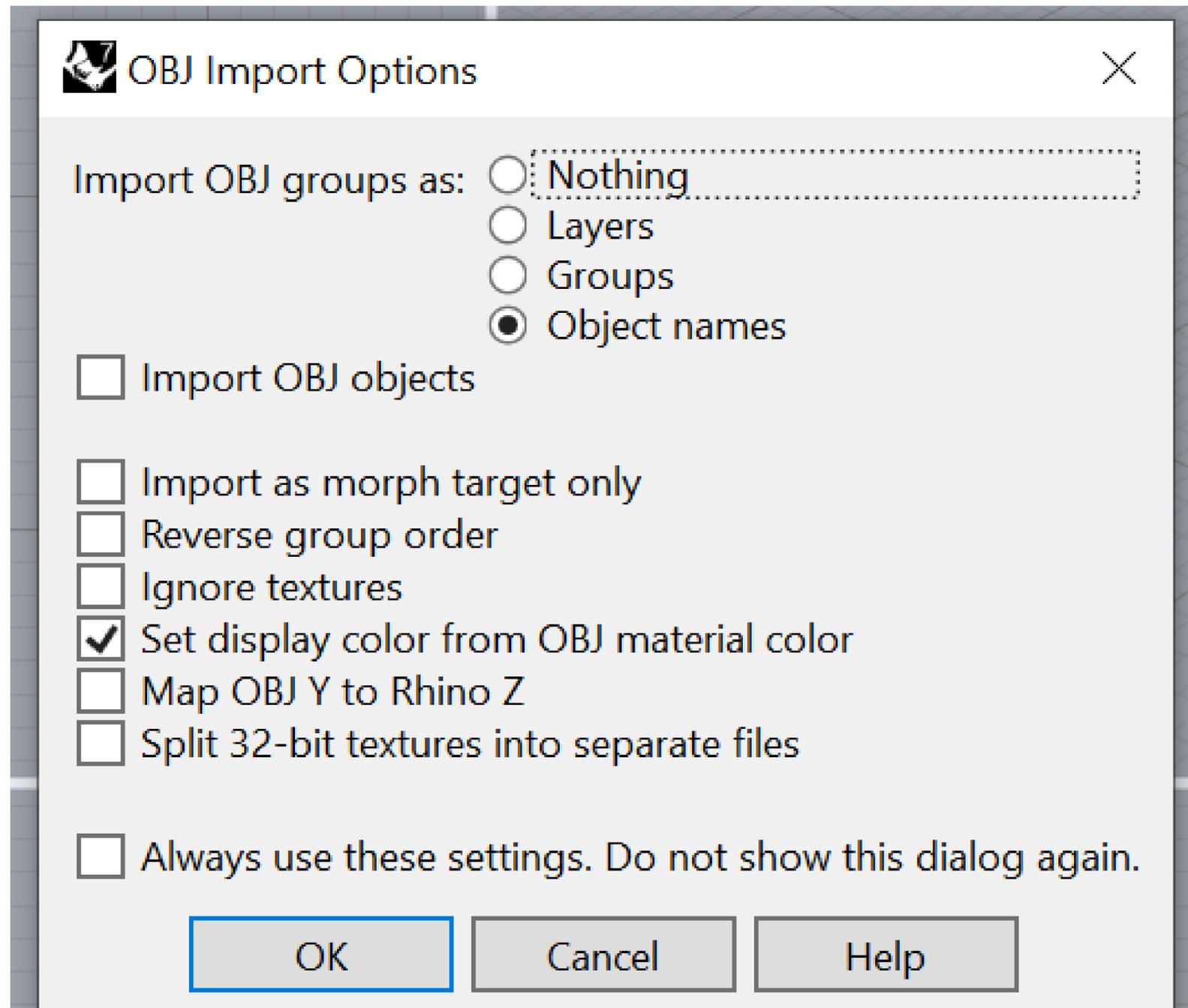


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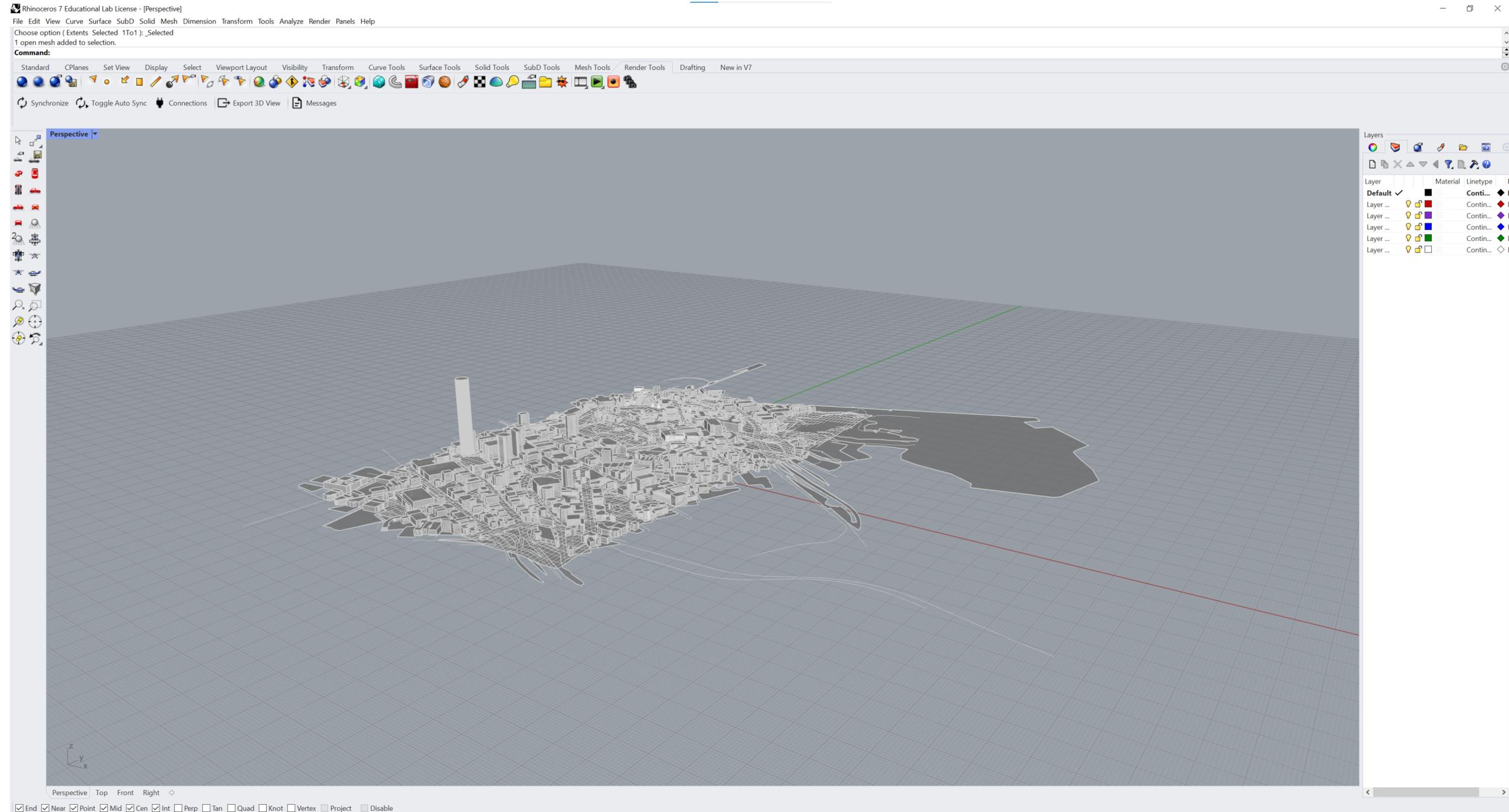


Step 2: Under “Transform” on the right hand side - change the “Up” to “Z Up”.



Step 3: Export OBJ and open up Rhino. Type "Import" and find the file. A new UI will pop up and press OK and import should go smoothly.

BlenderGIS - Import from Blender to Rhino



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Blender

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