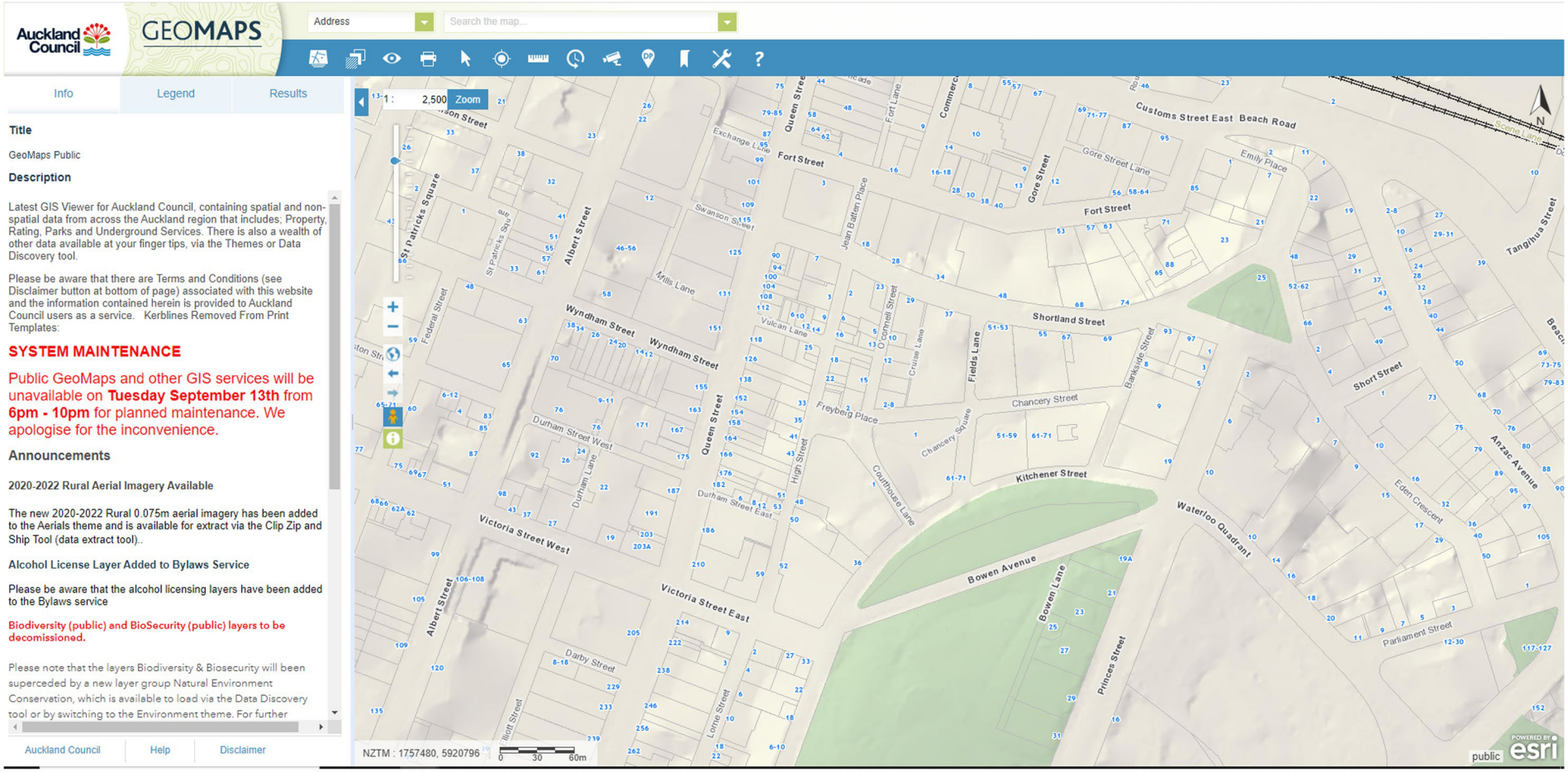
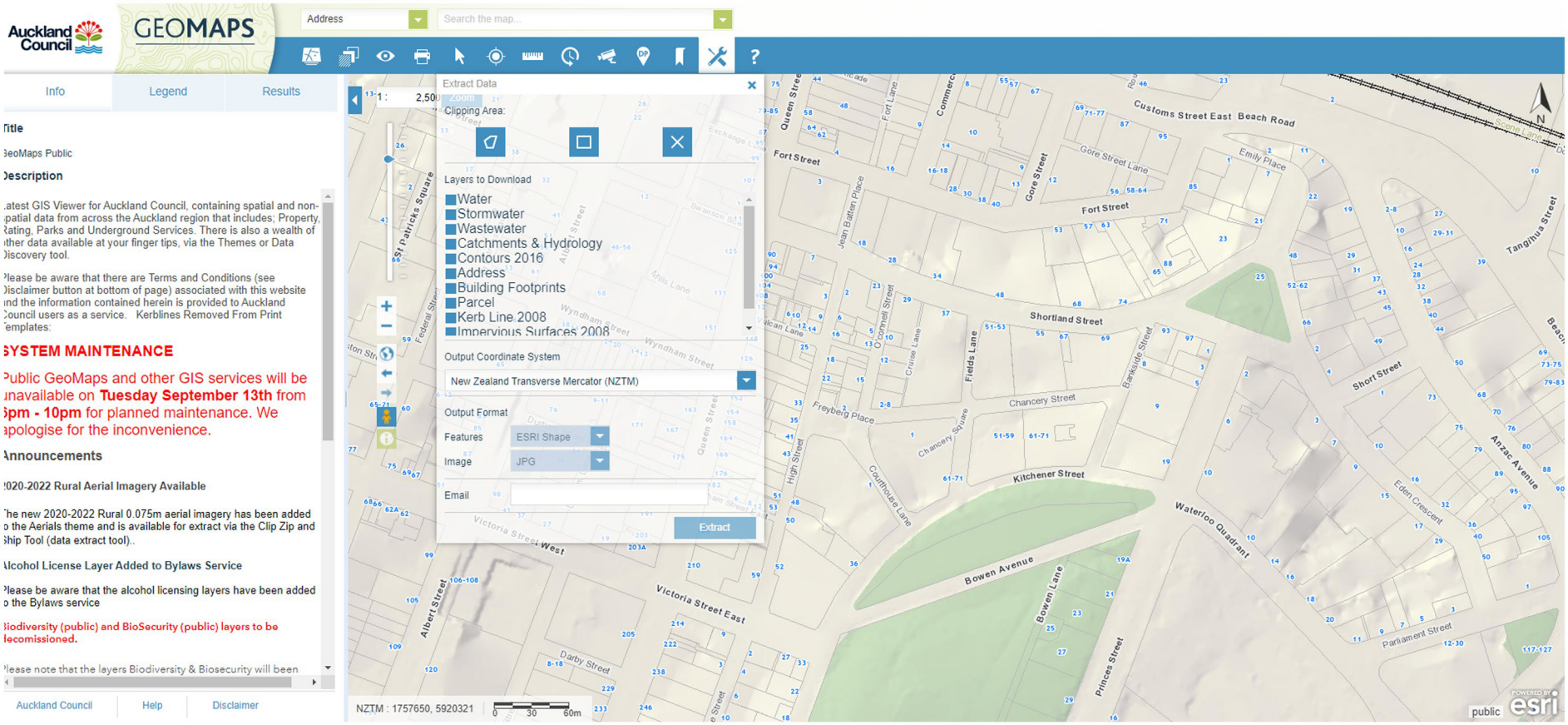
Contour Model Tutorial

from Geo Maps Data

Contents

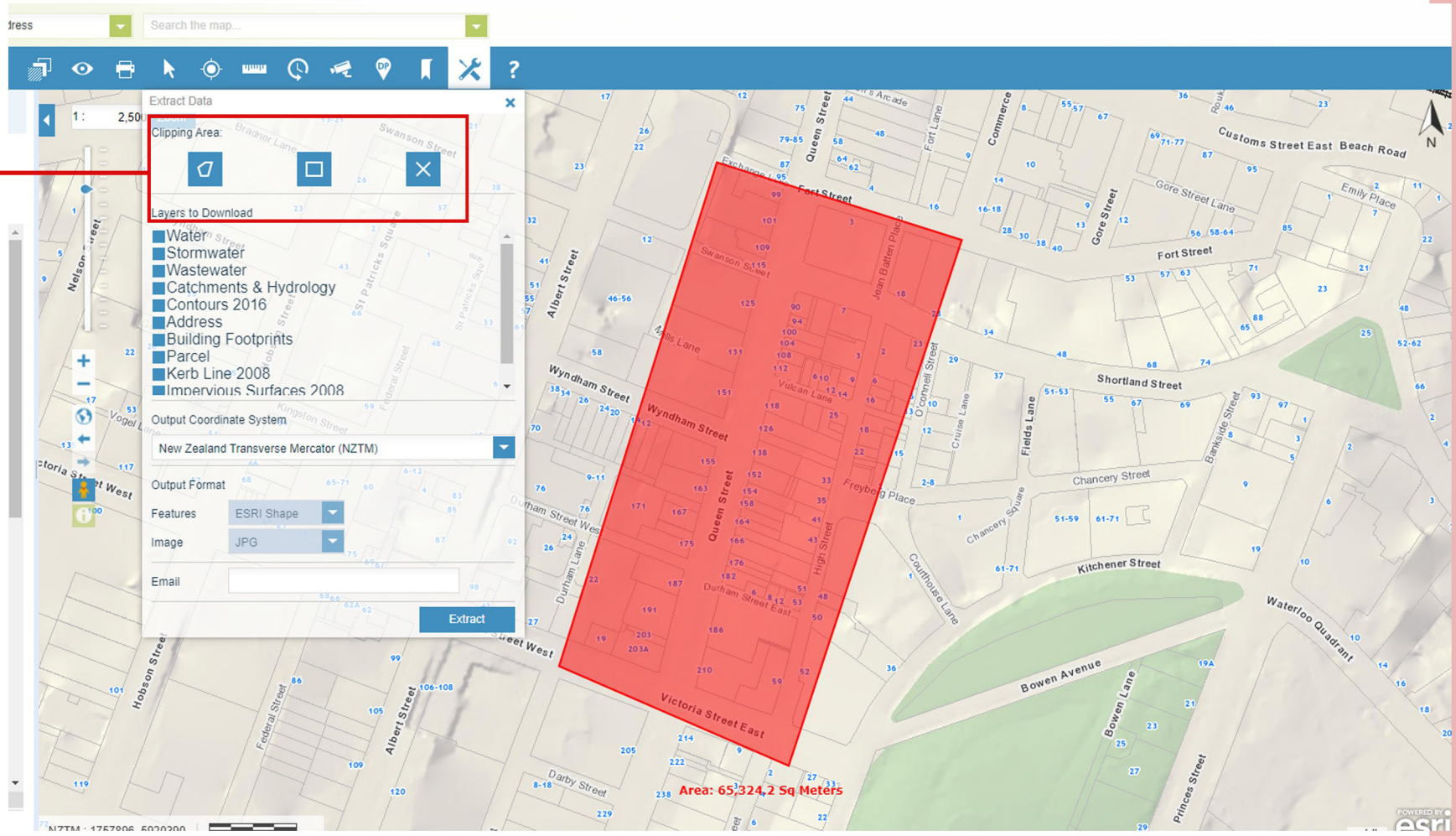


Go to
https://geomapspublic.aucklandcouncil.govt.nz/viewer/
And zoom in to your selected site, in this example we will be viewing High Street, Auckland CBD.



Click on the tool icon to bring up the tools drop down menu.
You will be presented with a prompt, press ‘agree’

Use one of these options to select your area to export.



Highlight your selected area to export.

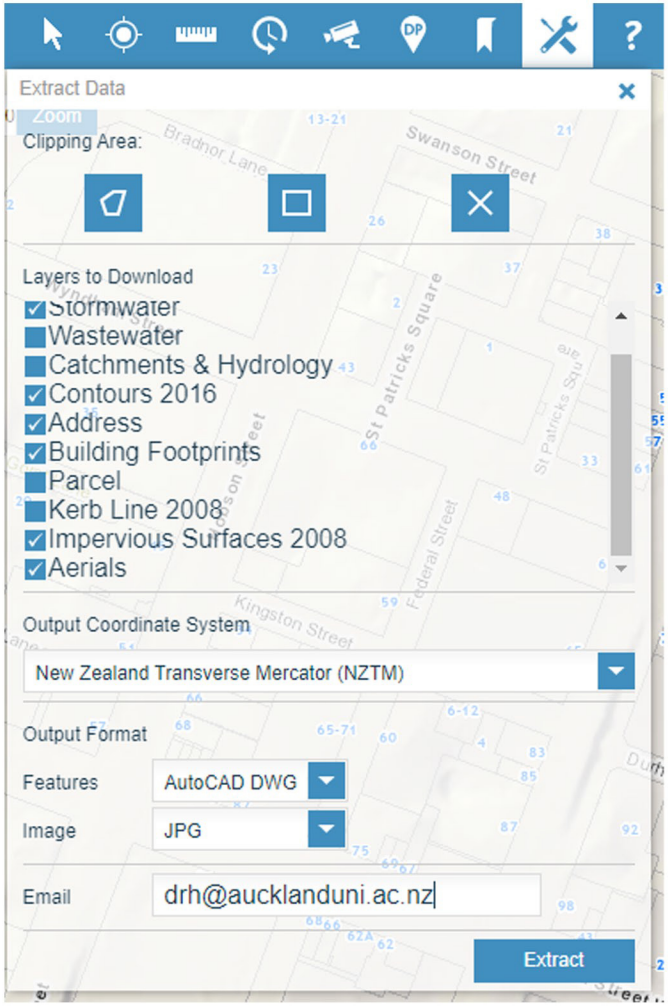
Keep NZTM

Change to AutoCAD DWG

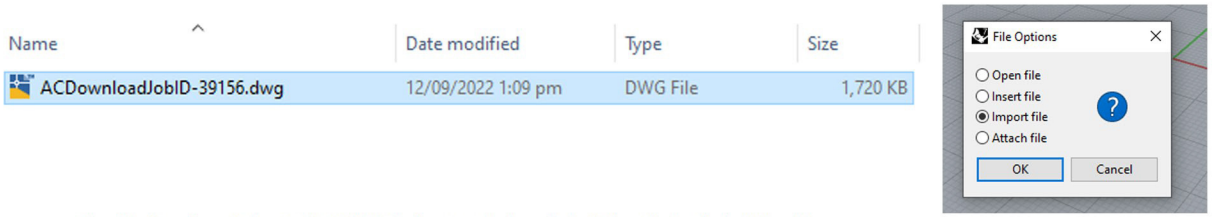
Select either JPG or PNG (JPG is generally better)

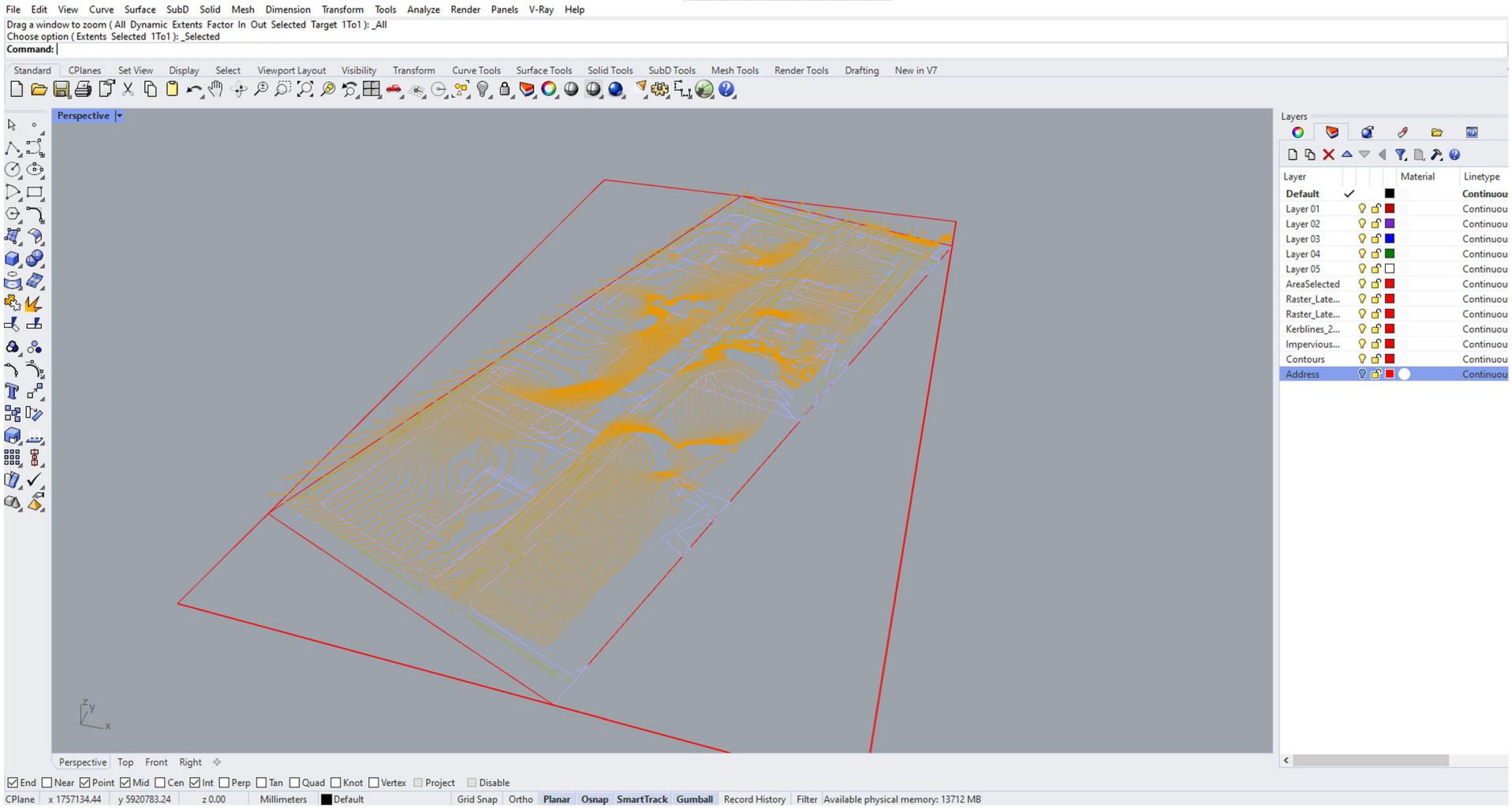
Enter your Email

Then click ‘Extract’

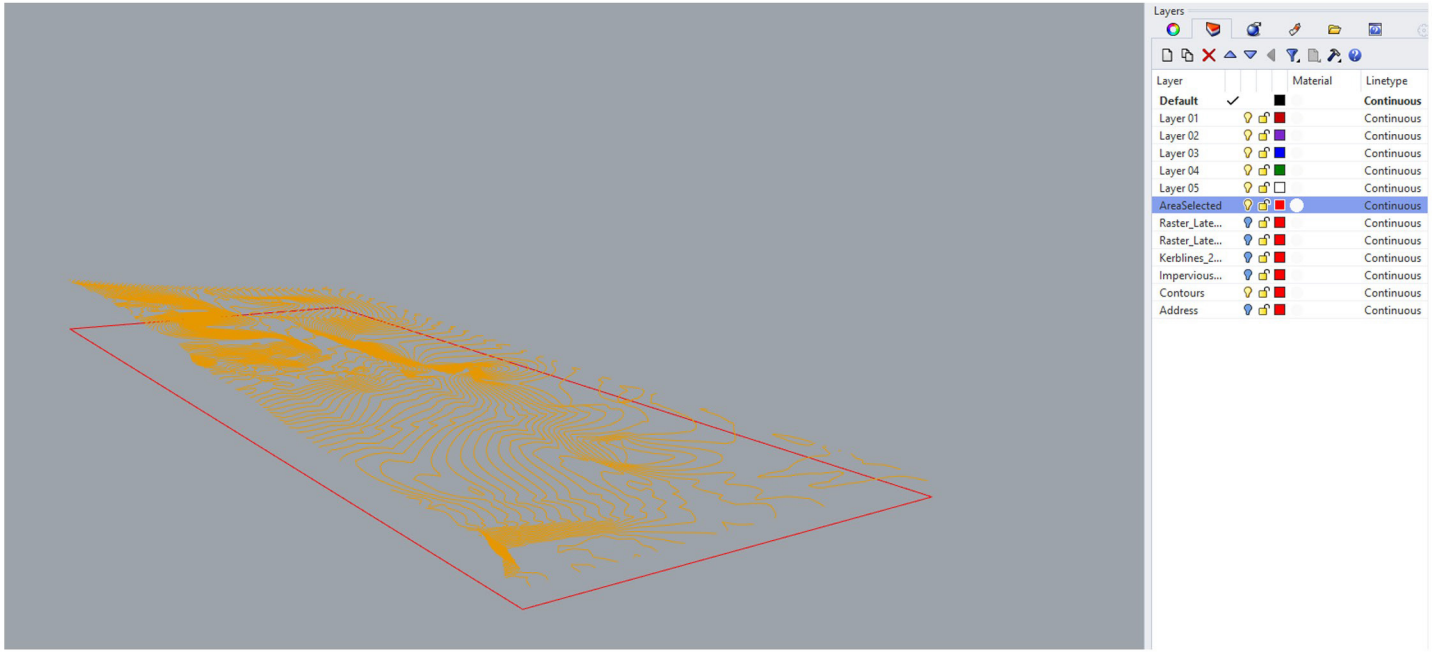


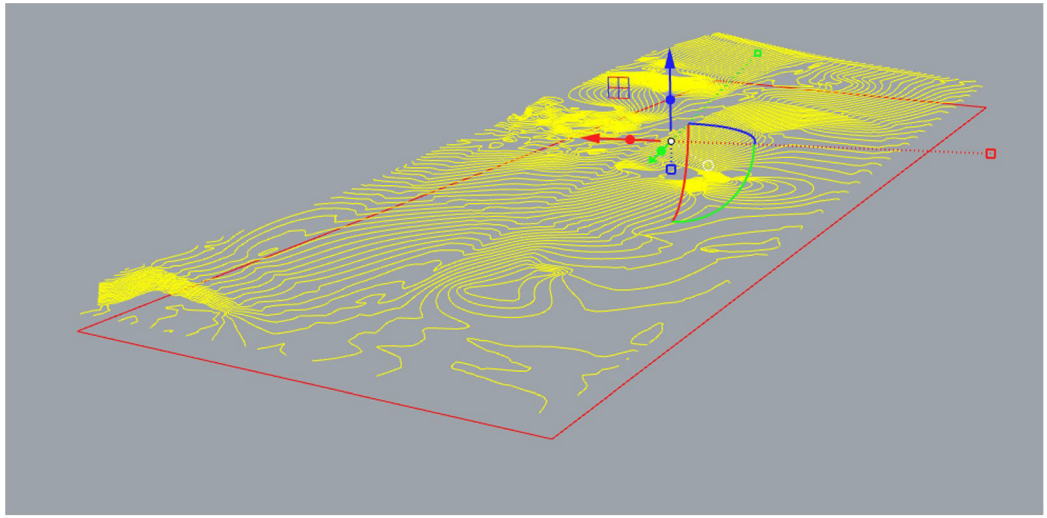
Select which options you would like to import, generally you import contours, Kerb Lines, Addresses and Aerials. You can choose to import additional information.





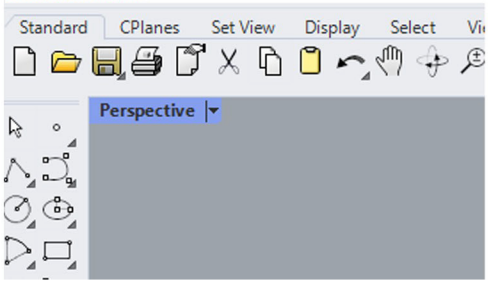
The files will be emailed to you, once you recieve the Email, import the files into Rhino.

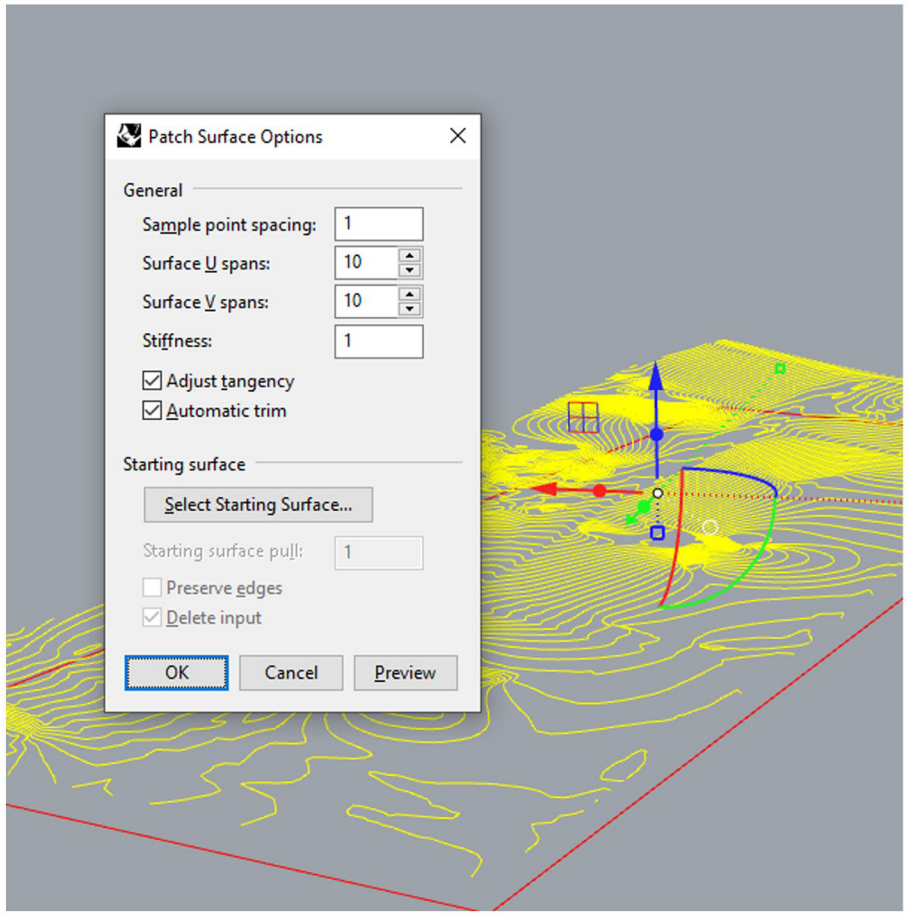




Then hide all other layers except for the contours and outline.
Select all of the contours.

Command: Patch

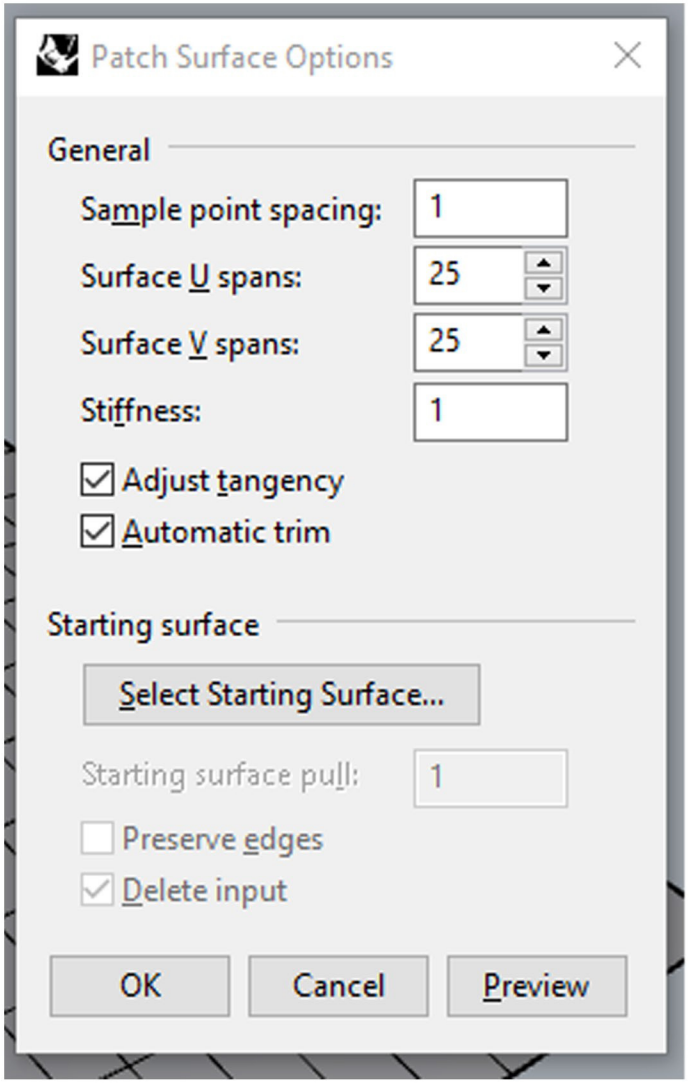




Type ‘patch’ command, you will then be prompted with the ‘Patch Surface Options’ box.

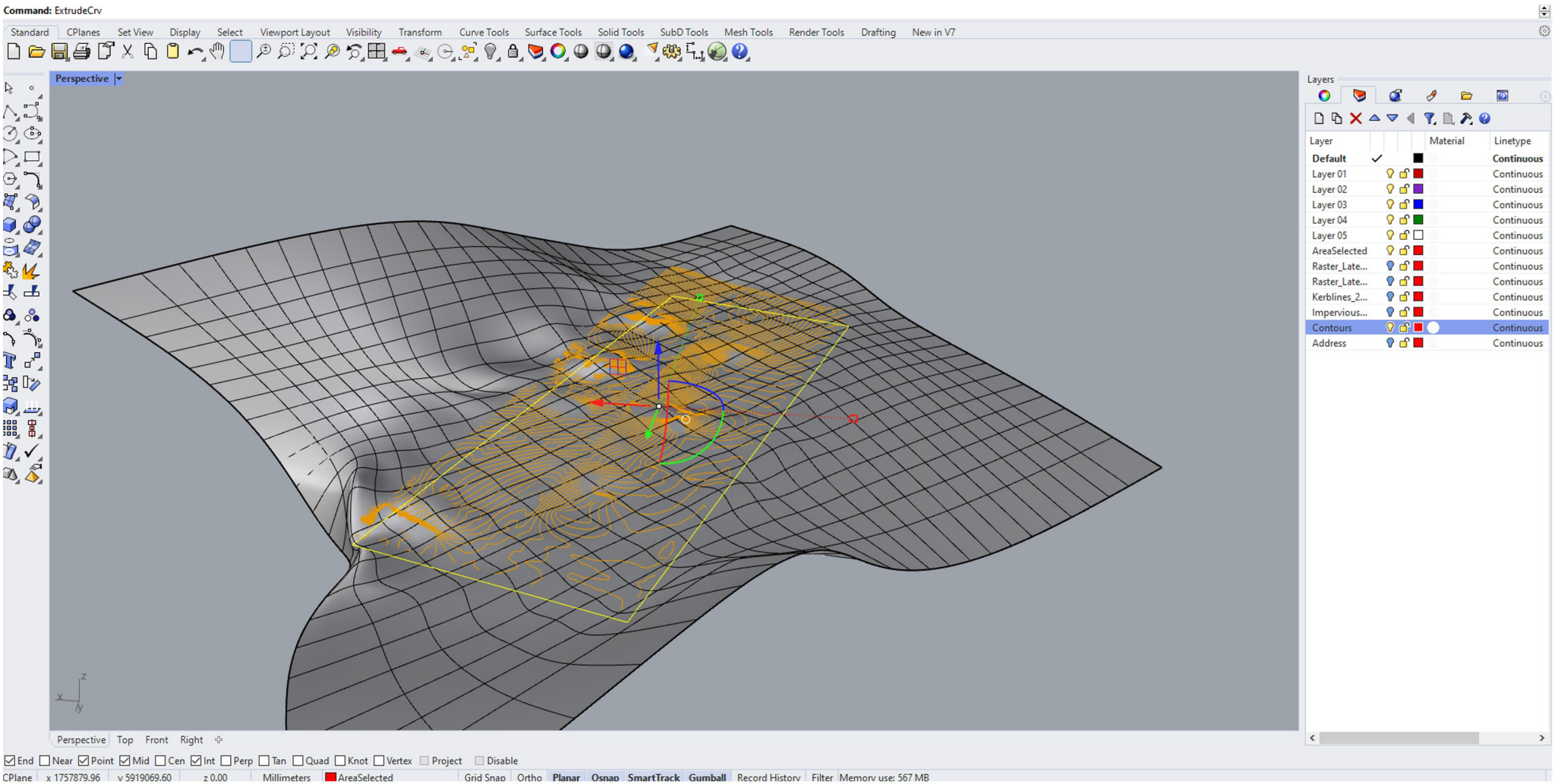
U V Spans determines how detailed your surface will be, the higher the number, the more detailed.

Stiffnes defines how rigid the surface will be.

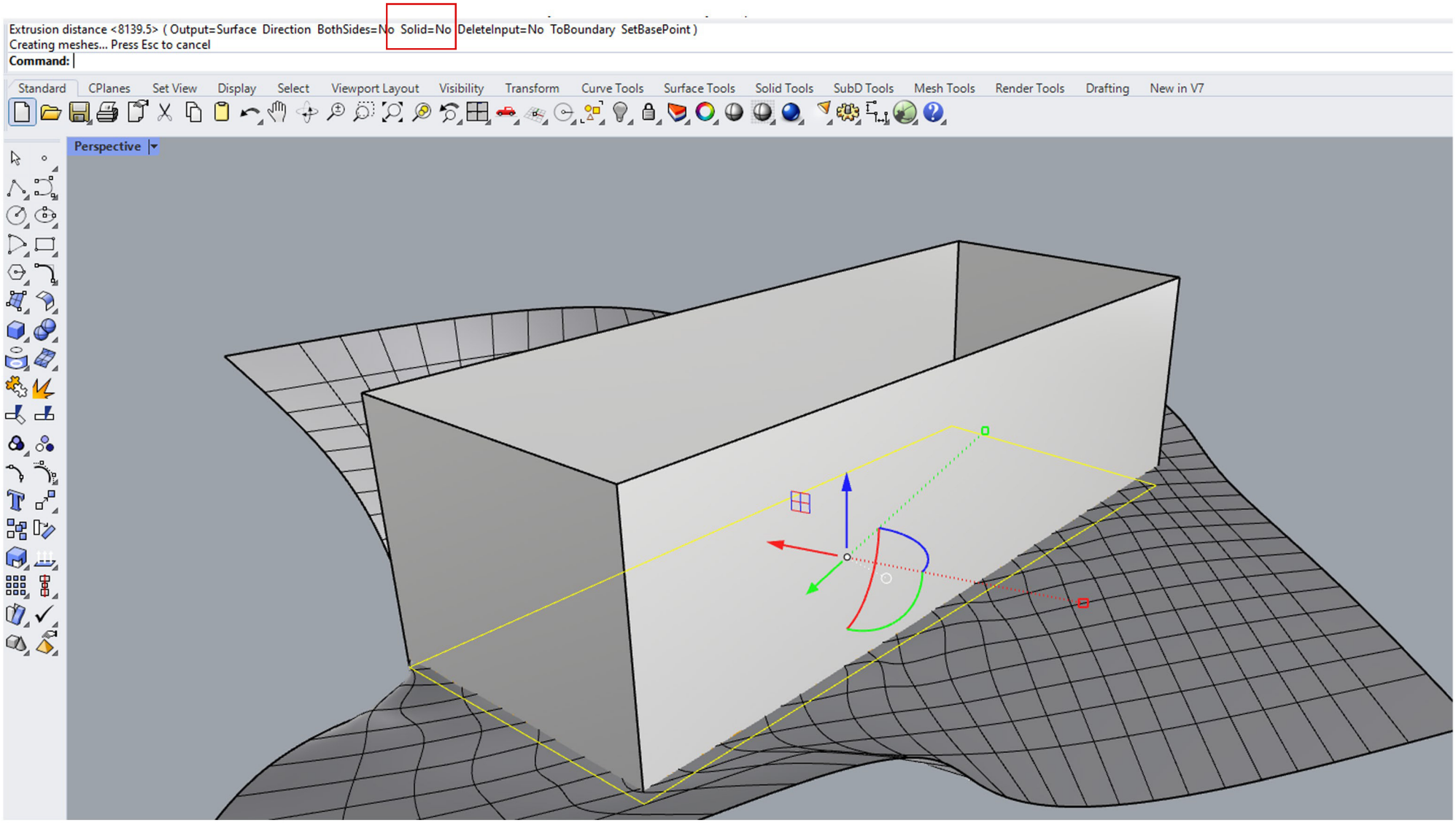


Keep in mind the result will take longer, the more UV Spancs you have

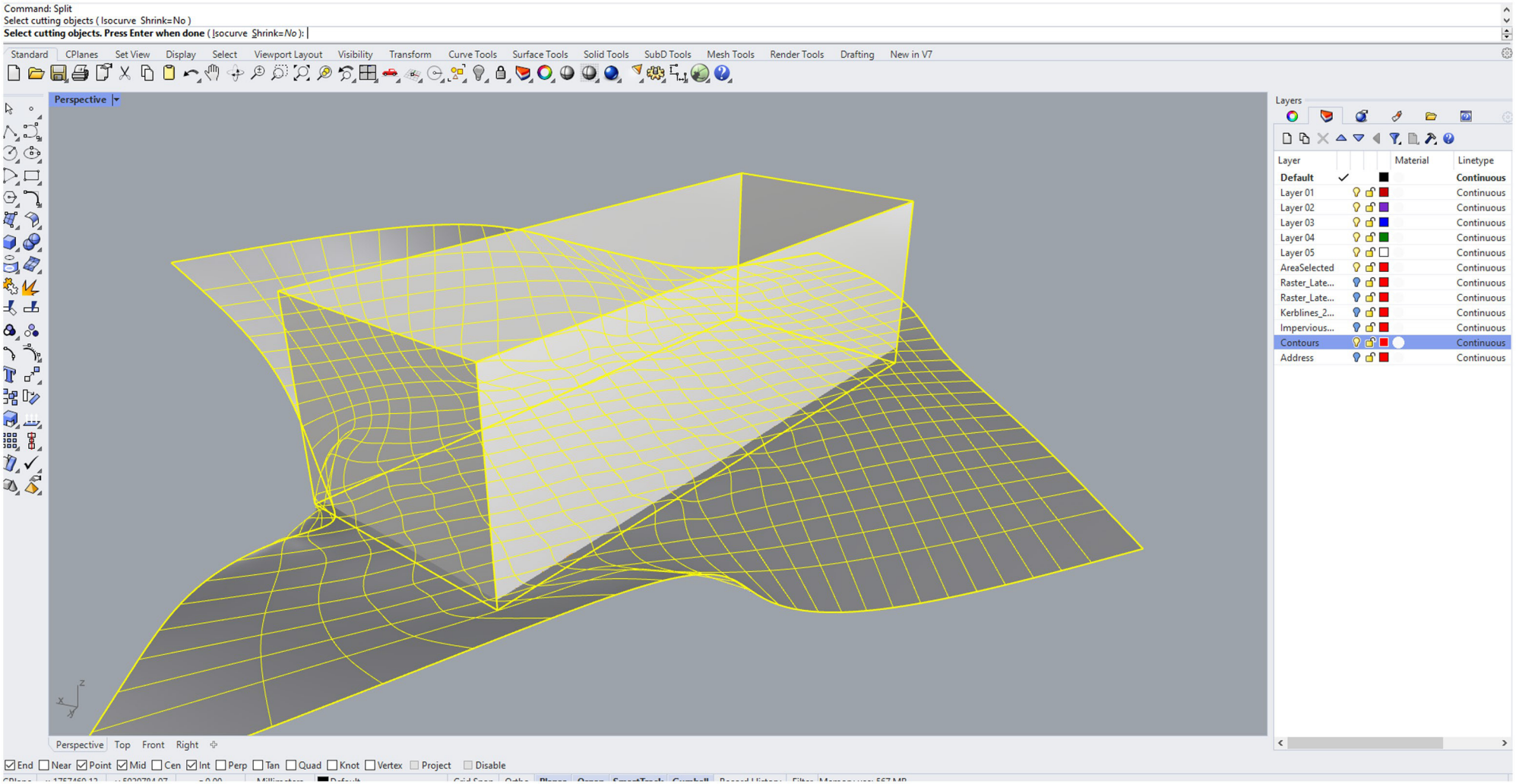
Set your UV spans and stiffness (these default settings provide a reasonably detailed surface).
Then press OK or Preview if you would like to make adjustments.



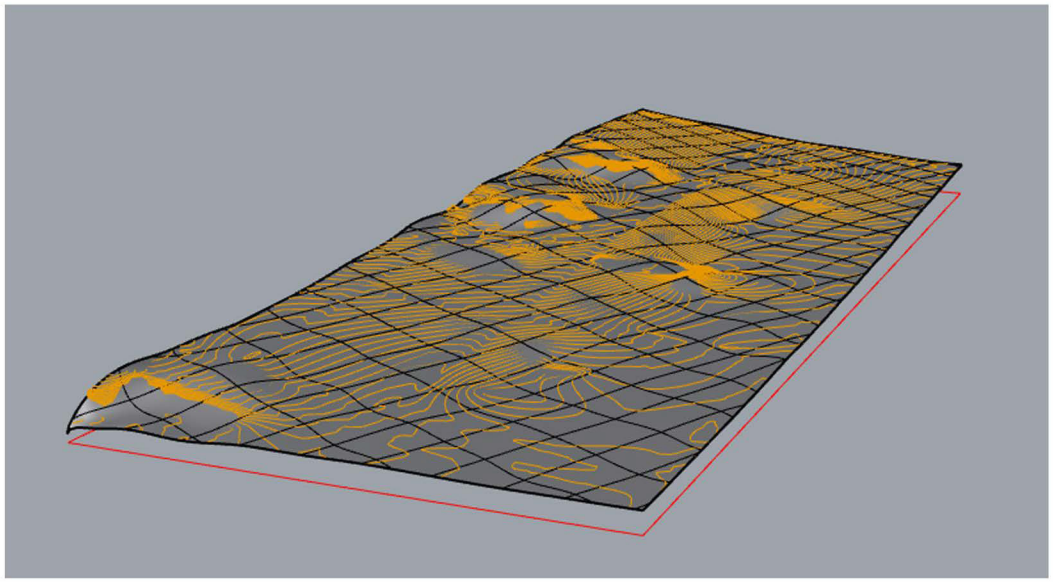
With your outline selected, type the command ‘ExtrudeCrv’

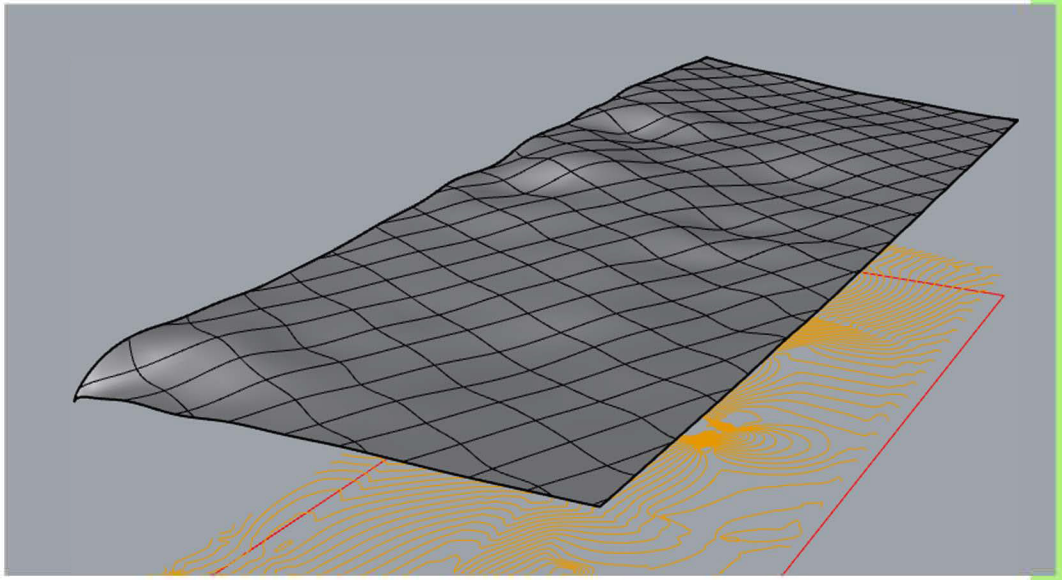


Then extrude the shape upwards, ensure that Solid=No

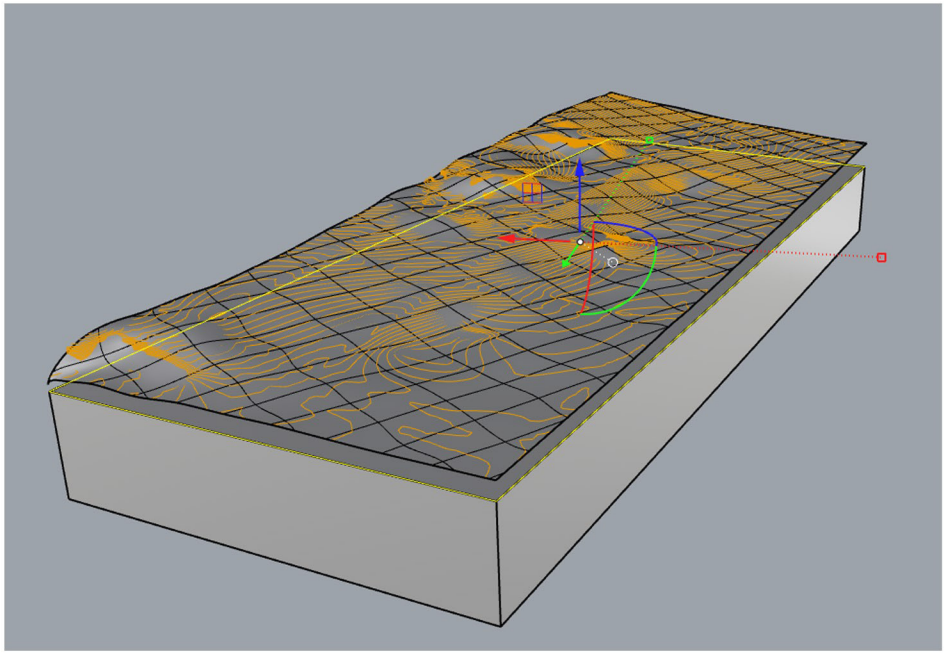


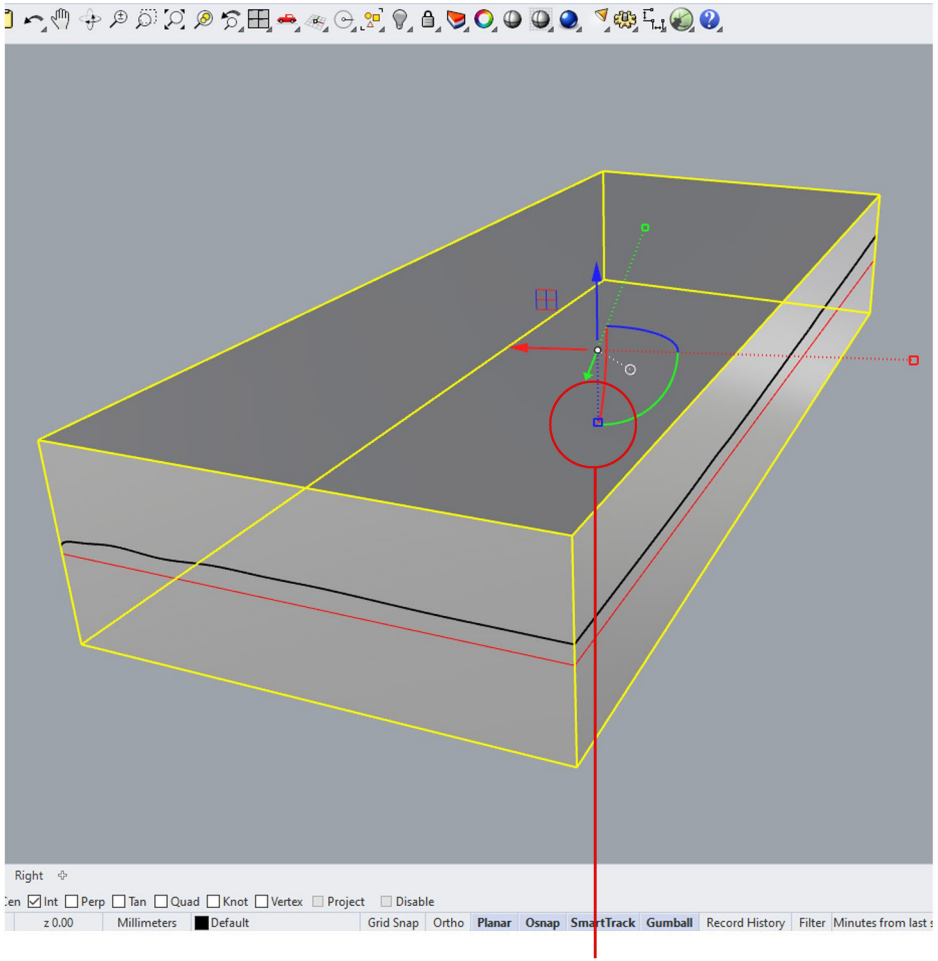
Use the ‘split’ command to split the ground using the box.





After the contour has been split, you can remove the excess surfaces outside of the bounding box.

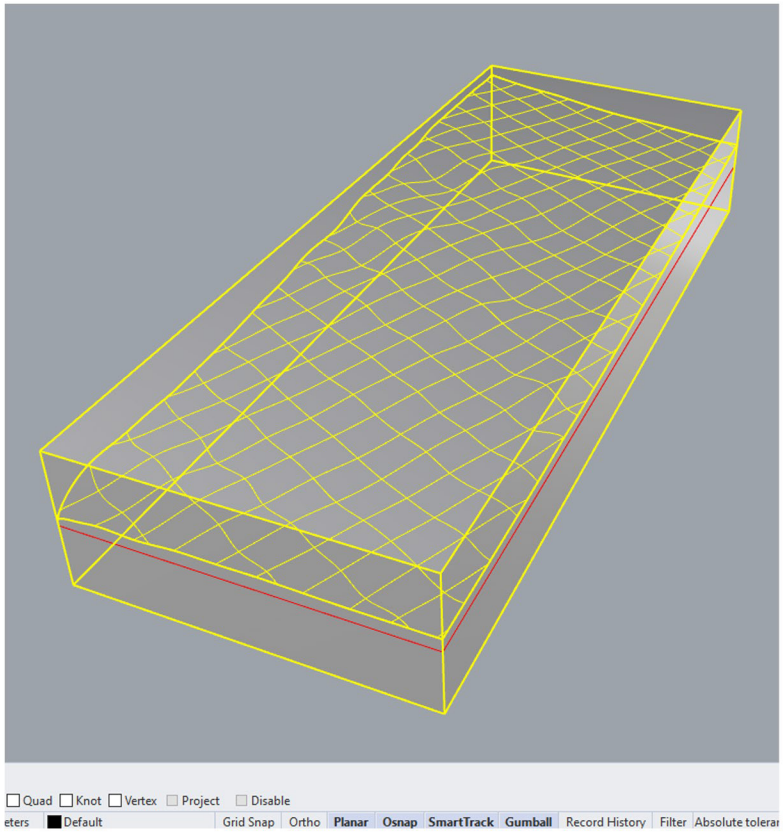


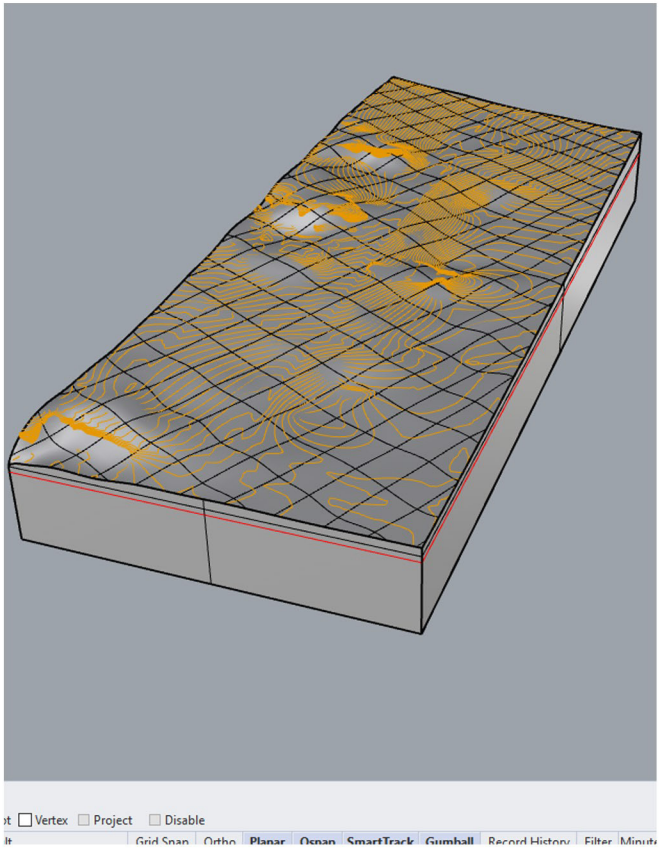


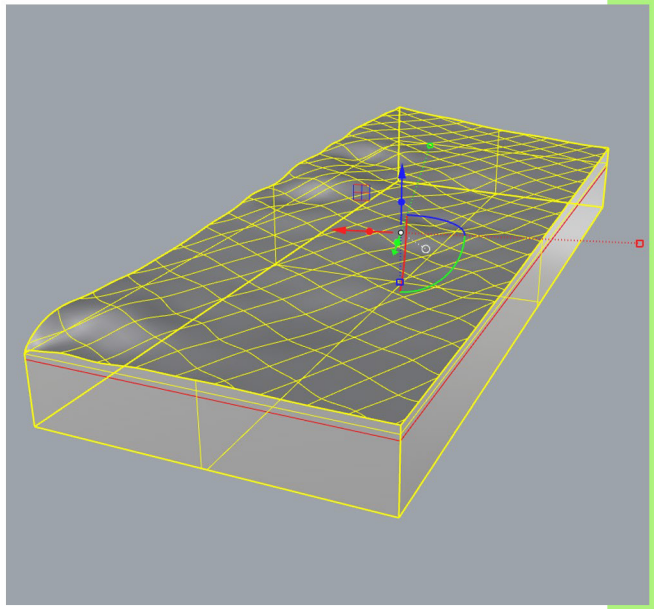
Each of these RGB boxes changes the size of the object, this is Gumball.

Using ExtrudeCrv on the bounding box again, set the extrusion to Solid=Yes, and drag the extrusion downwards.

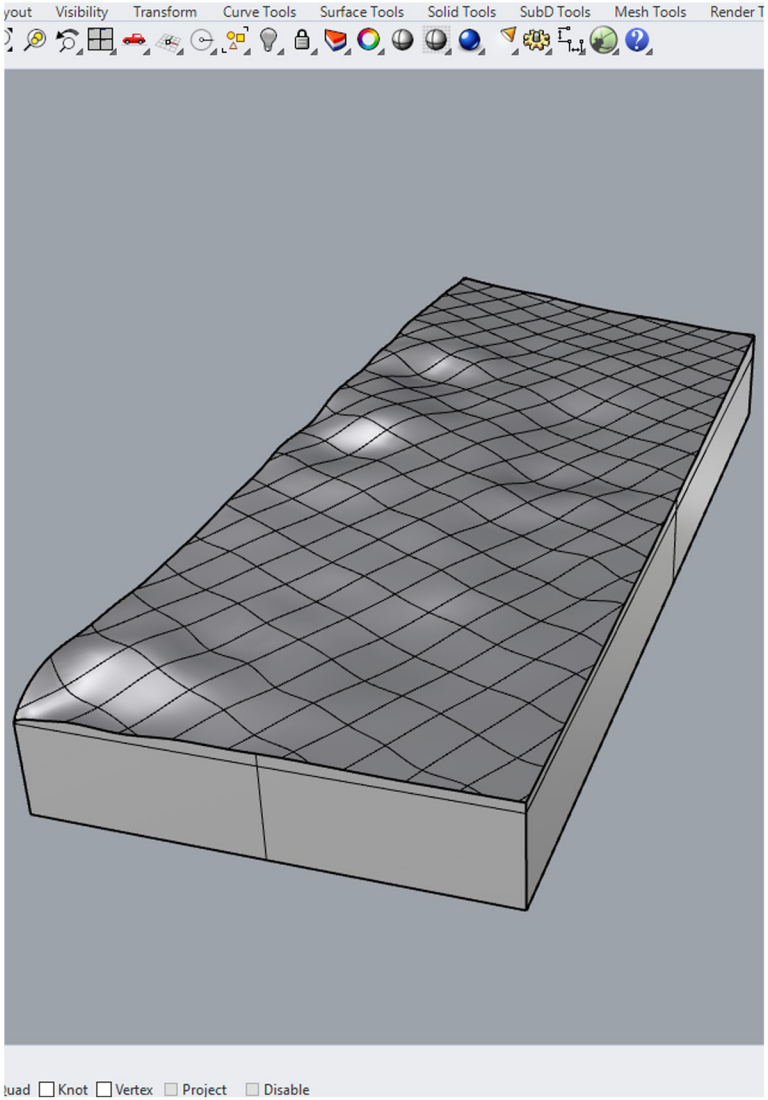
Then using Gumball (highlighted in the second image) increase the size of the box until the top goes over the contours.







Then again using the ‘Split’ command, split the box using the contour surface.
Remove the top of the box and you will be left with a box below in the shape of the contour.
Then highlight both the surface and the box and type command ‘Join’



You will be left with a solid polysurface as your contour model.