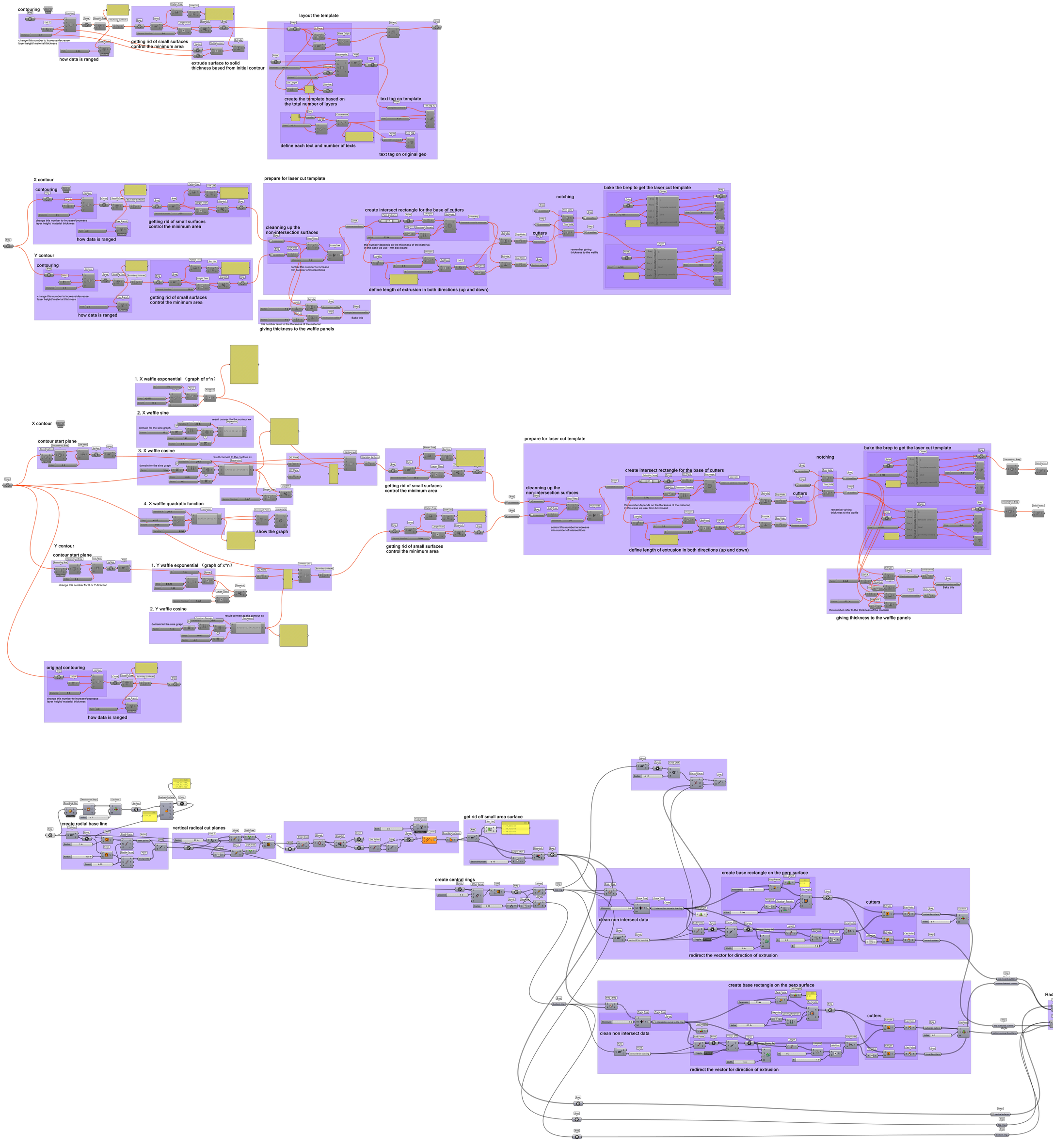
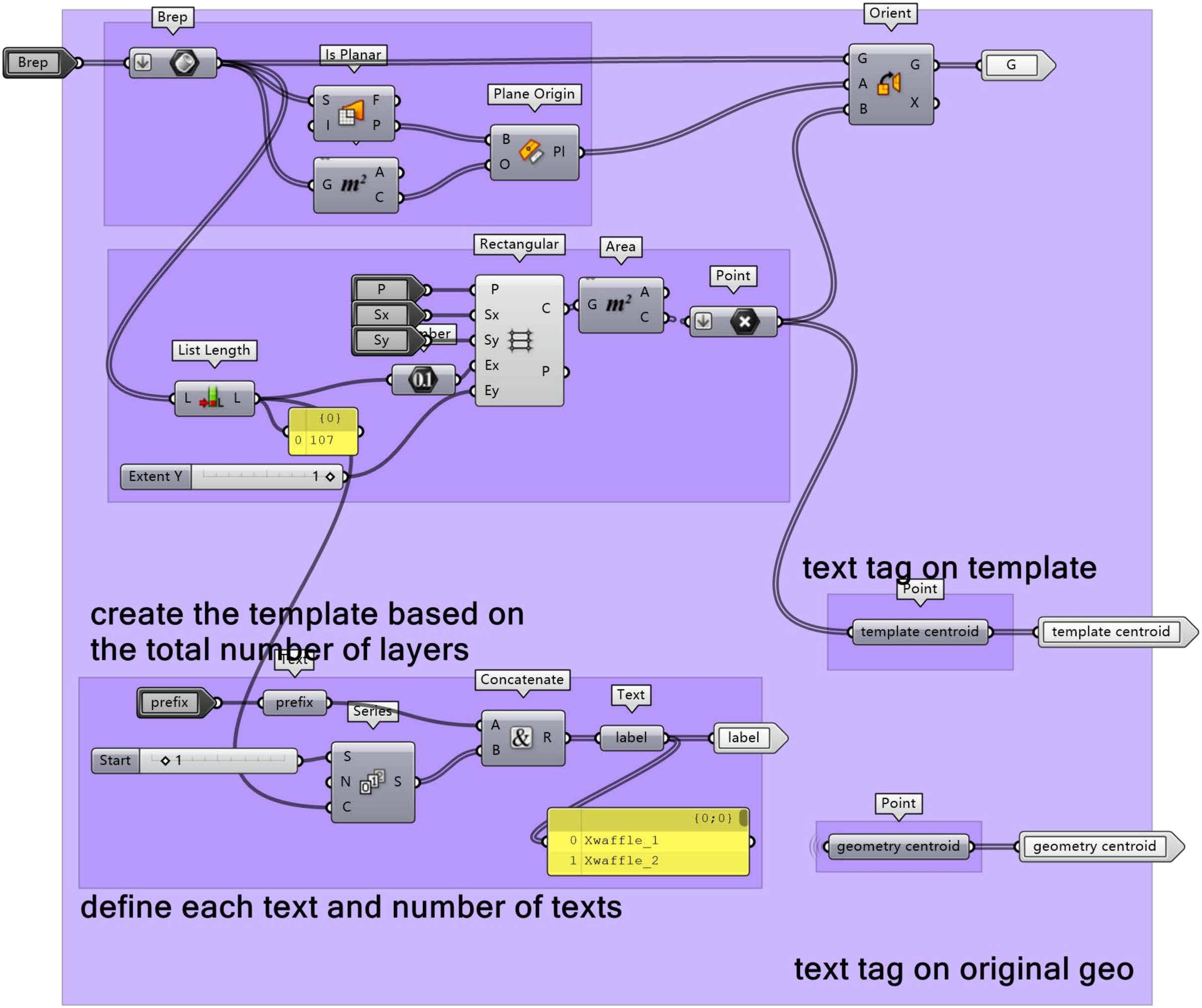
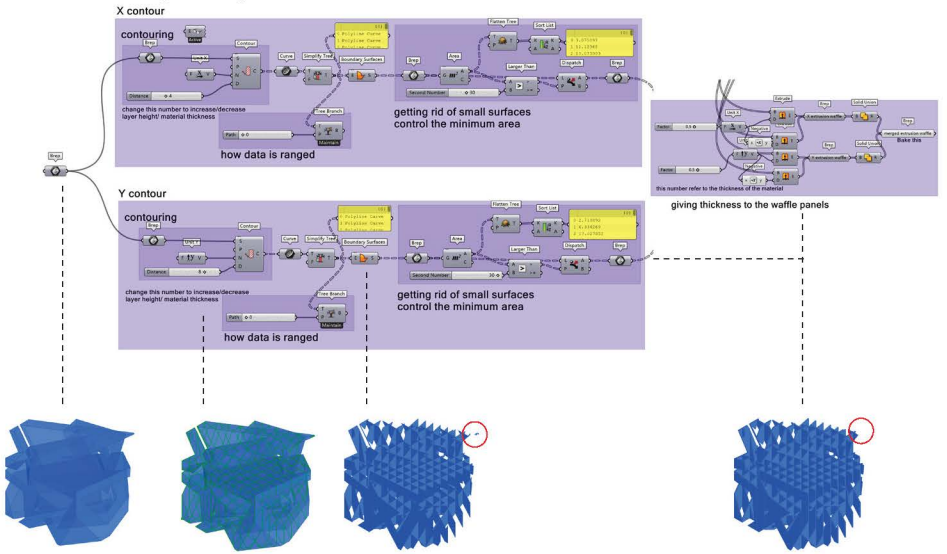

contouring
change this number to increase/decrease layer height/ material thickness
how data is ranged
getting rid of small surfaces control the minimum area
extrude surface to solid thickness based from initial contour
layout the template
create the template based on the total number of layers
define each text and number of texts
text tag on template
text tag on original geo
X contour
Y contour
prepare for laser cut template
cleanning up the non-intersection surfaces
control this number to increase min number of intersections
create intersect rectangle for the base of cutters
this number depends on the thickness of the material, in this case we use 1mm box board
define length of extrusion in both directions (up and down)
cutters
notching
remember giving thickness to the waffle
bake the brep to get the laser cut template
giving thickness to the waffle panels
this number refer to the thickness of the material
1. X waffle exponential （graph of x^n）
2. X waffle sine
3. X waffle cosine
4. X waffle quadratic function
domain for the sine graph
result connect to the contour ex
show the graph
contour start plane
change this number for X or Y direction
1. Y waffle exponential （graph of x^n）
2. Y waffle cosine
original contouring
create radial base line
vertical radical cut planes
get rid off small area surface
create central rings
clean non intersect data
create base rectangle on the perp surface
redirect the vector for direction of extrusion
Radial waffle

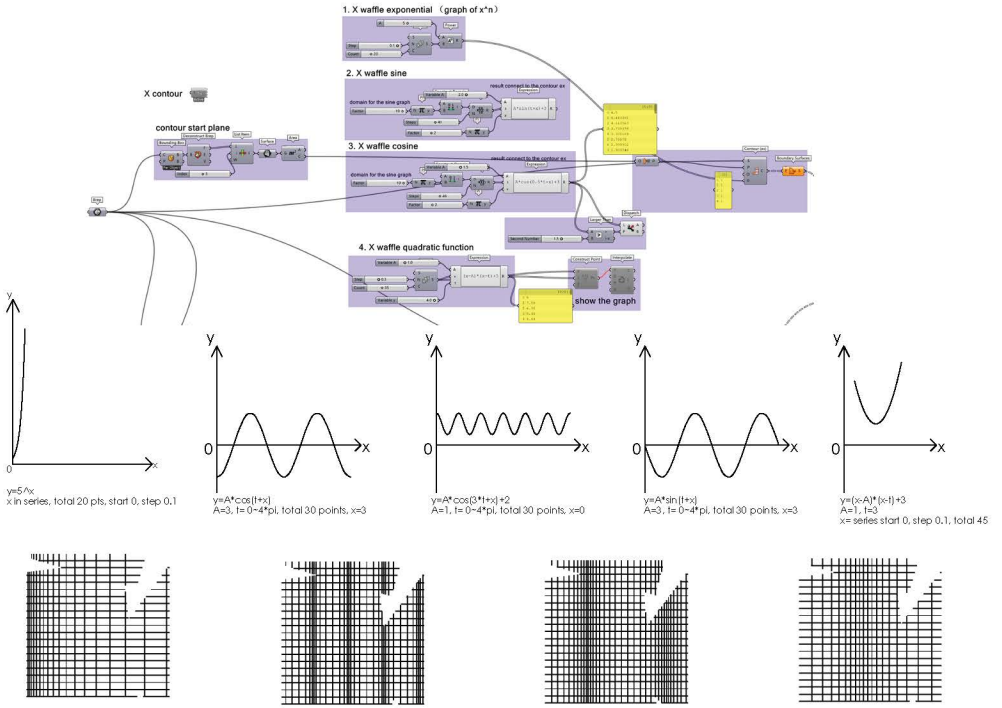
layout the template



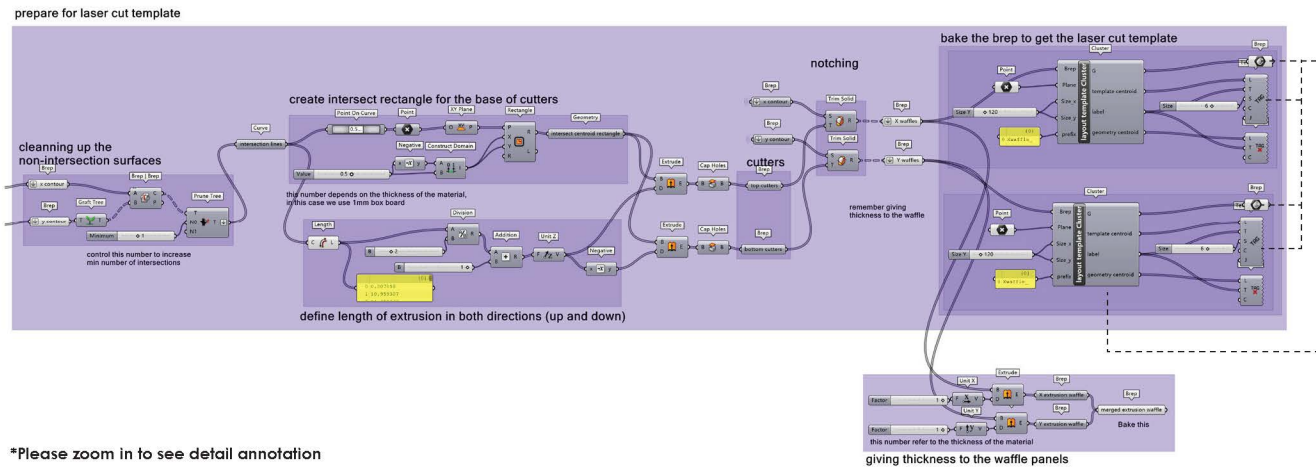
Sectioning Script

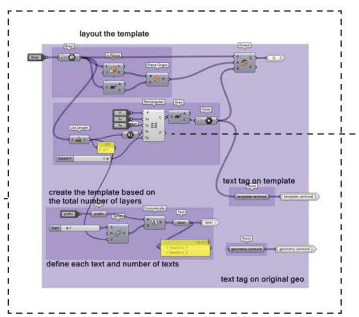


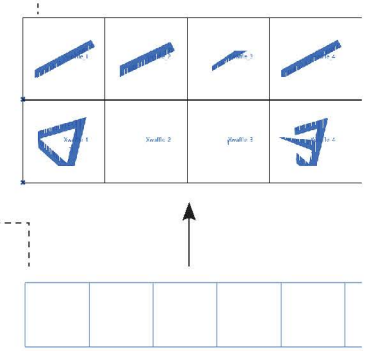
- create XY contours
- create surface
- get rid of the small parts
- giving thickness to each waffle pieces



test patterns by different function expression

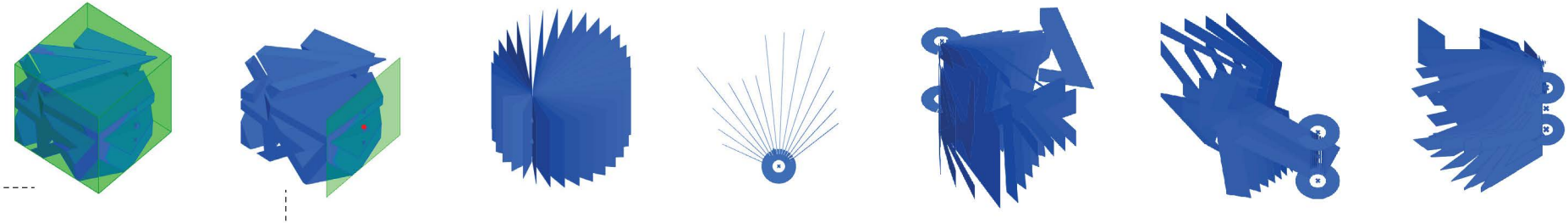


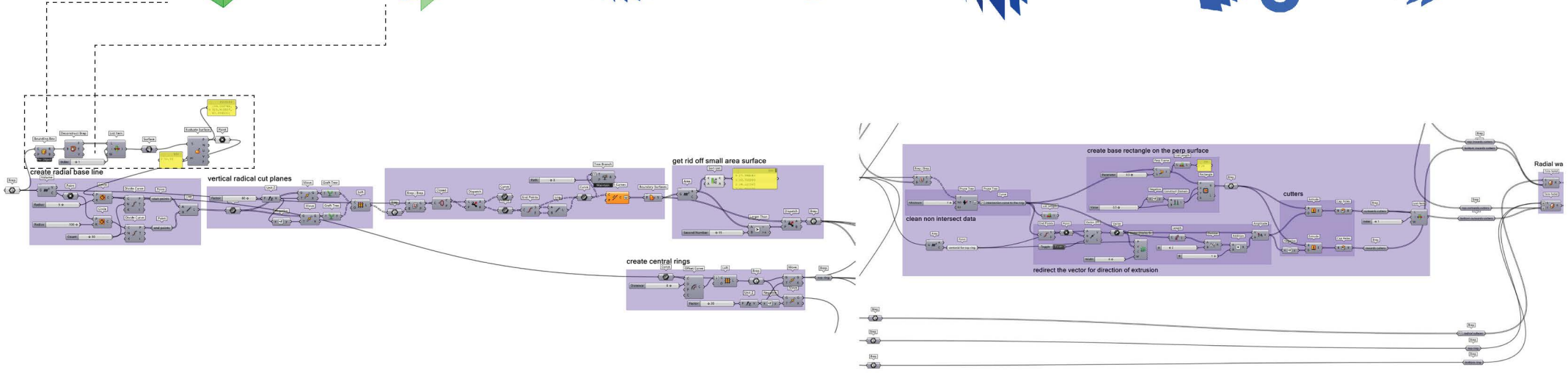




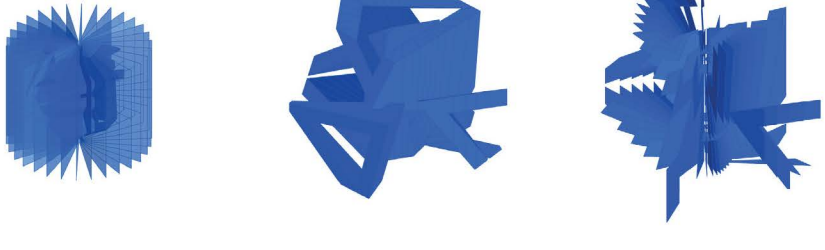
get the template for laser cutting

*Please zoom in to see detail annotation





This is the test on radial waffle, the top row is the tests which defines the center of rings on the boundary surfaces of the original model. Point (50,50) on each surface has chosen. Three iteration has made on surface no.0, no.1, no,3. The other surfaces were not working on generating radial waffle, or lose 90% of the model detail



The bottom row is the iteration with centroid rings. 70% details has created, which is fine. But there are too many surfaces which are not actually intersect with the ring, which will cause low constructable.