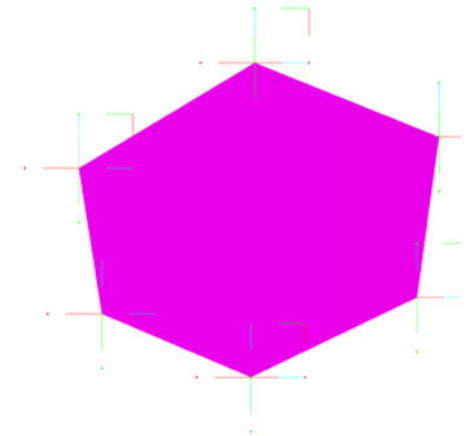
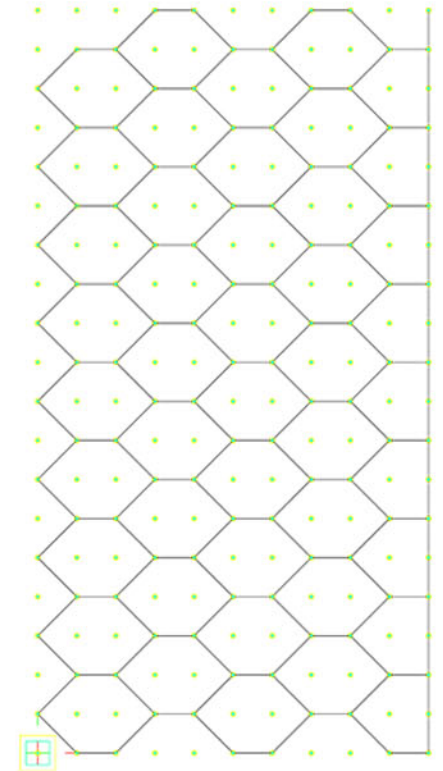




Holygons

valerie leong 178757 ;; bharat dave ;; digital design application 720 515 ;; 2008

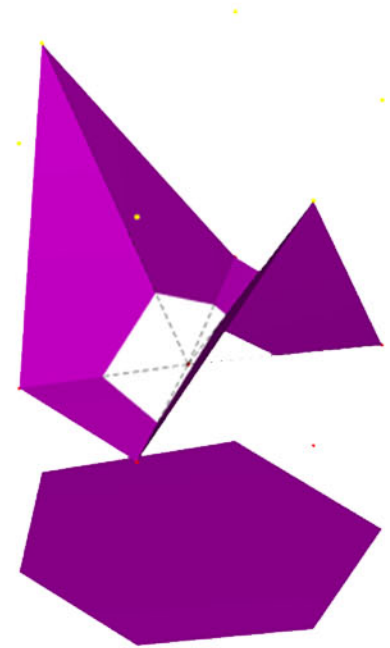
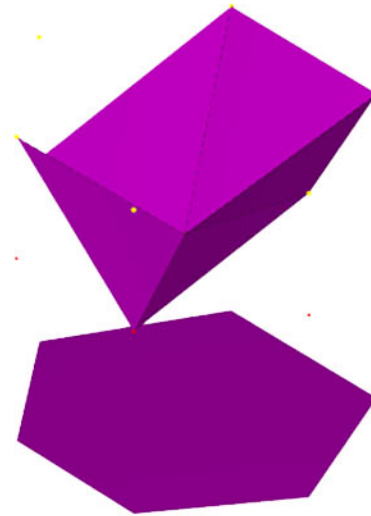
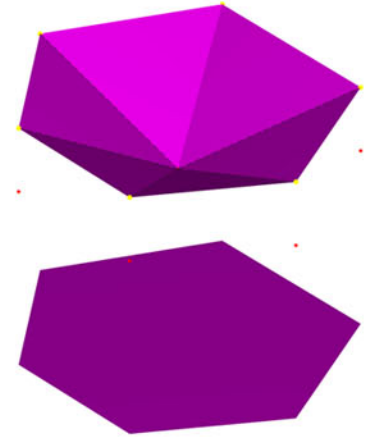
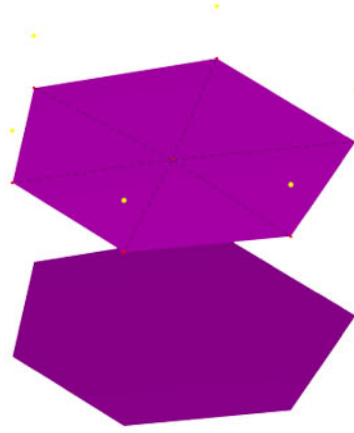
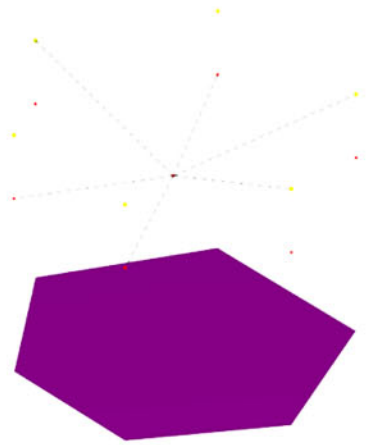


Design idea

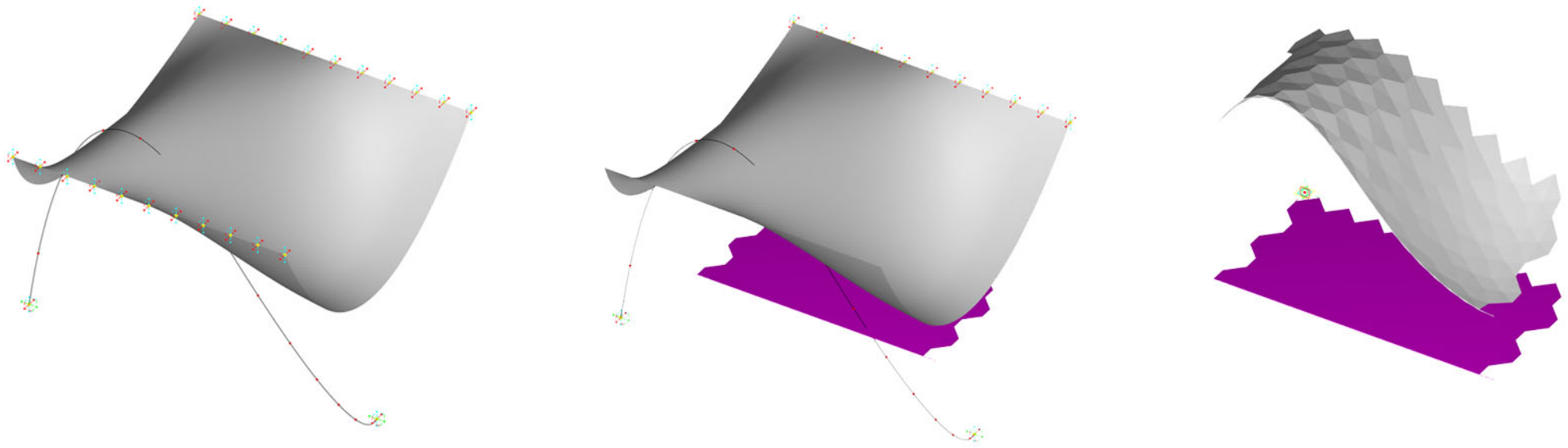
the concept is to create a canopy over the alley with a series of hexagons that are punctured with variable openings in regard to the width of the alley, In other words, the canopy is more open towards Swanston Street and less permeable in a narrower space, Elizabeth Murdoch building.

Steps

- 1 generate hexagons by function as a base grid for tessellation.
- 2 create an independent hexagon as a component that enables manipulation or animation of its physical attribute.






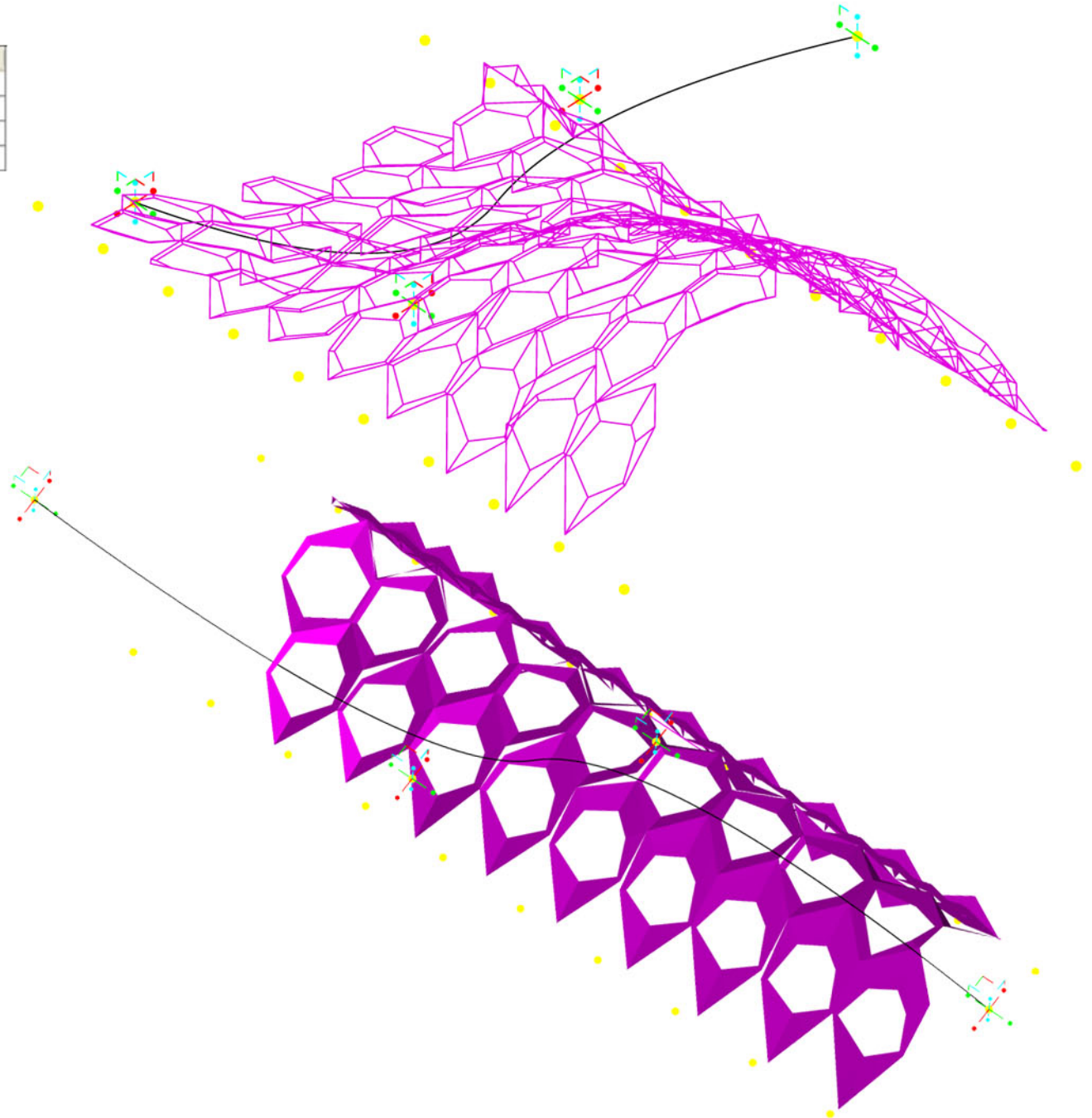
- Steps**
- 3 with the one hexagon as a reference of projection, points are projected in order to create a sister hexagon that can be manipulated.
 - 4 sides of the sister hexagon will have changing heights derived by a random factor.
 - 5 the deformed hexagon is then punctured with hole of variable size.



Steps

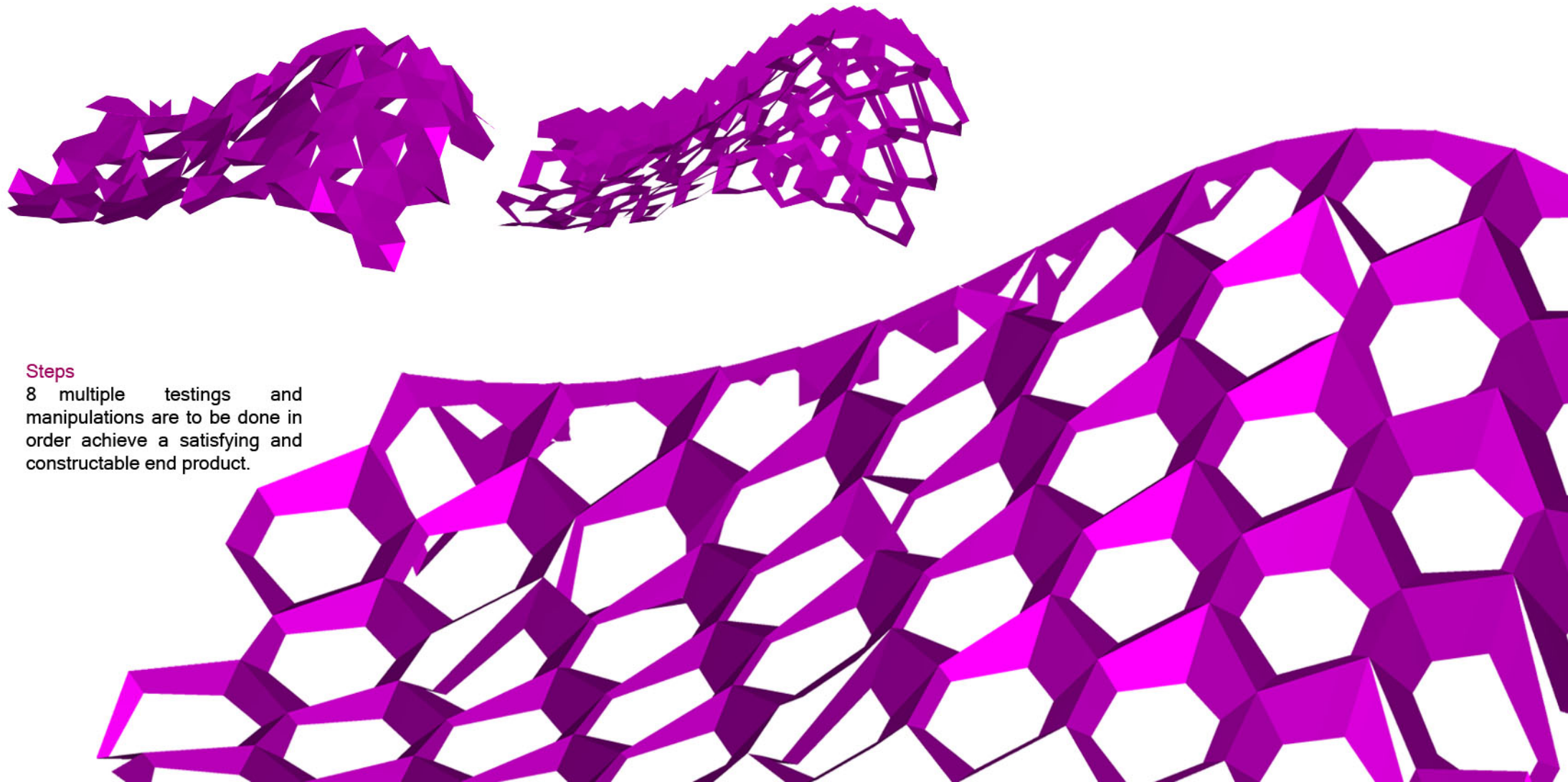
- 6 a three dimensional surface is created where the hexagons would be projected on. the gradient of the splinesurface is controlled by a splinecurve in order to determine the height of the canopy in relation to the alley.

Name	Value	Analog Value
d1	1	
holeSize	0.51	
popate	0.2	
popDist	0.5	



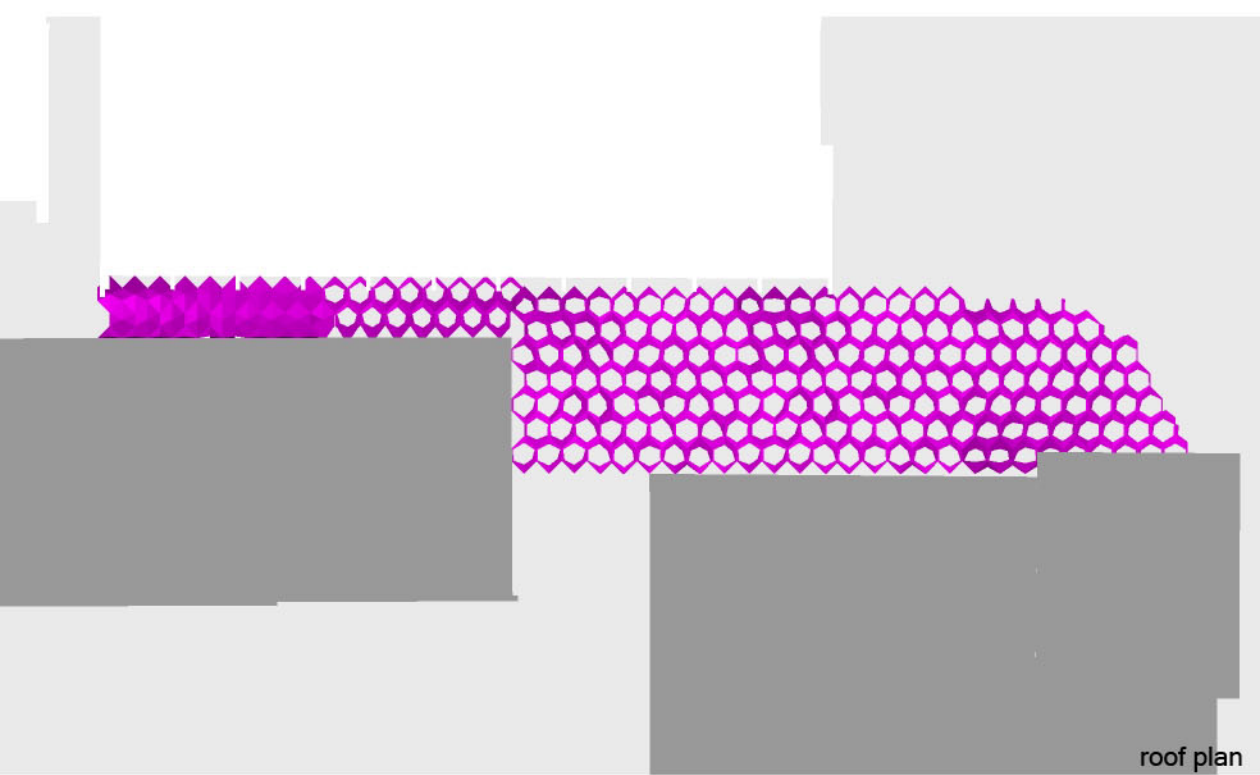
Steps

7 to fit on to the site, the width, height and curvature of the canopy is adjusted by having grid points and spline curve as control points where as the permeability of the canopy is controlled by sliders (table above).

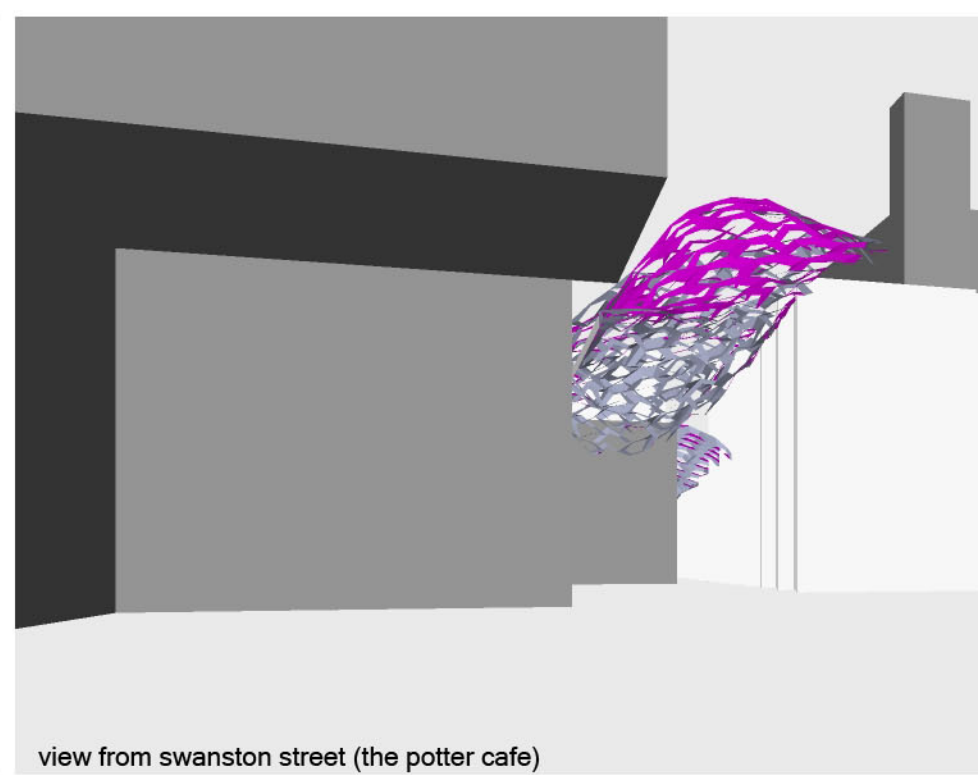


Steps

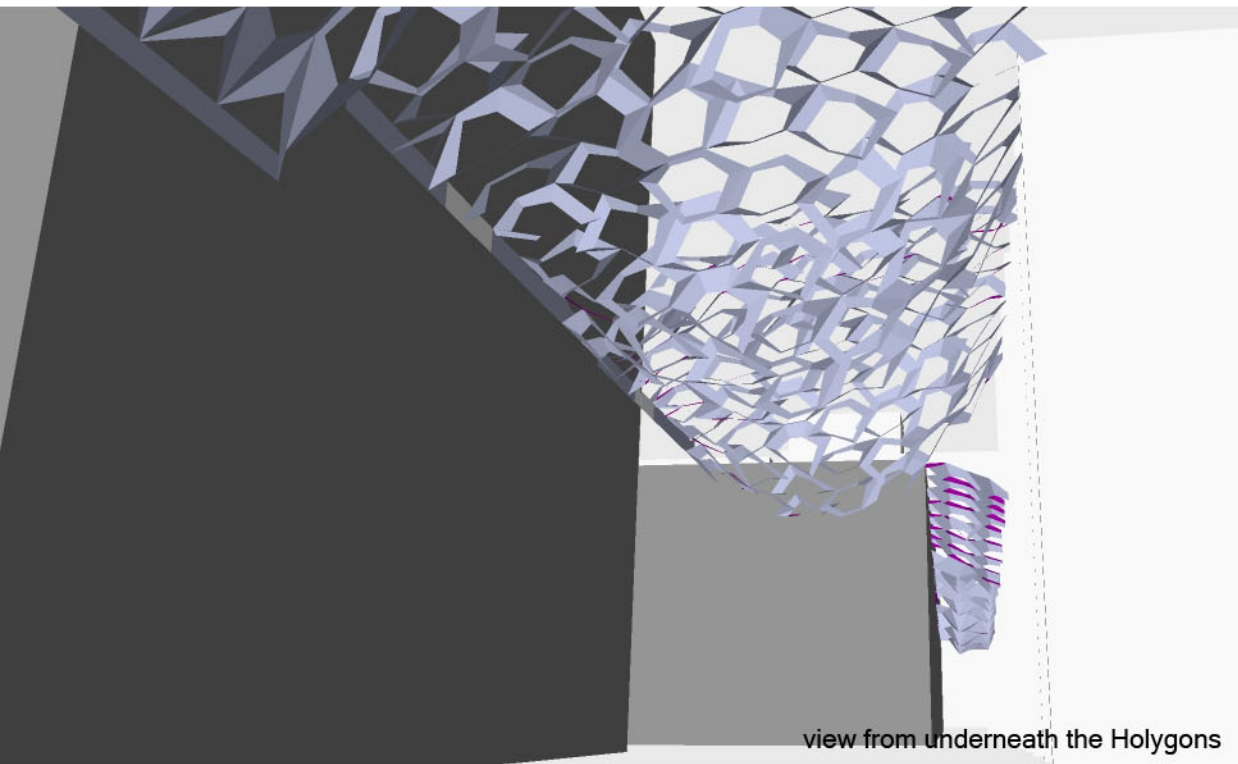
8 multiple testings and manipulations are to be done in order to achieve a satisfying and constructible end product.



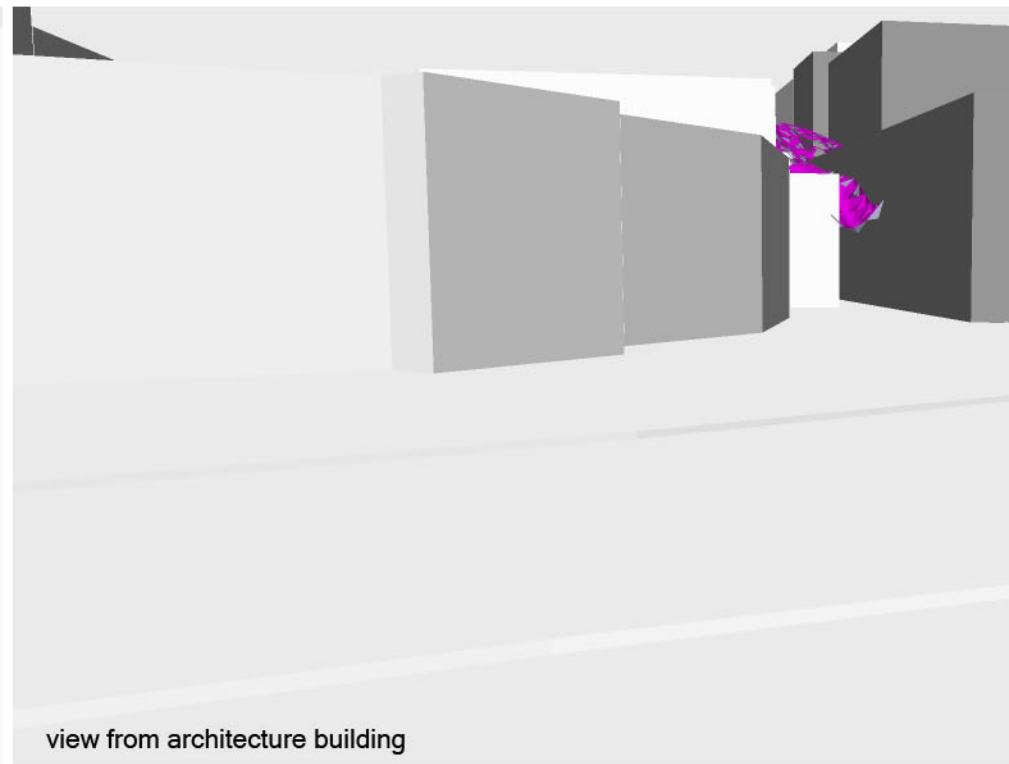
roof plan



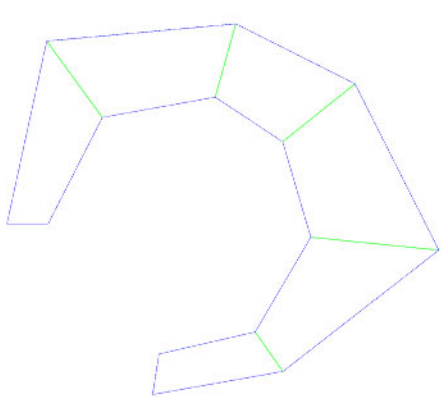
view from swanston street (the potter cafe)



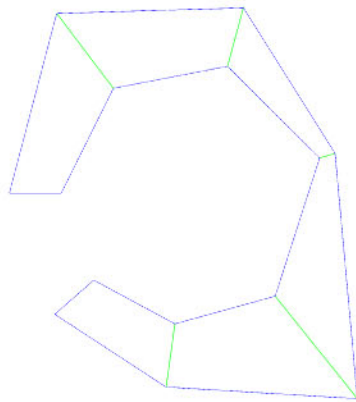
view from underneath the Hologons



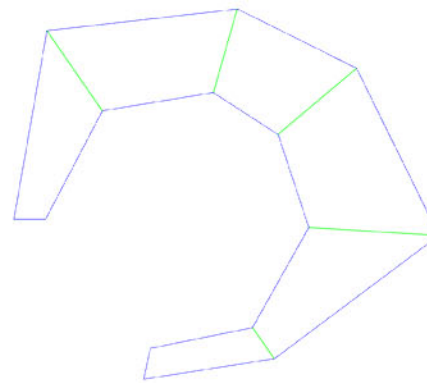
view from architecture building



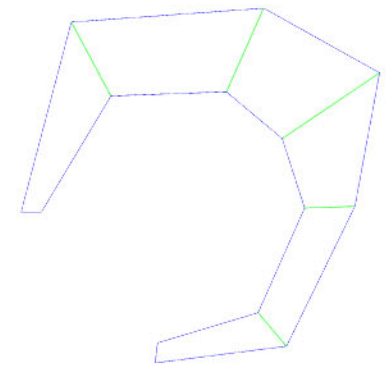
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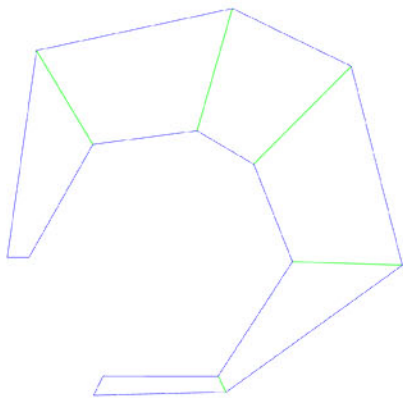
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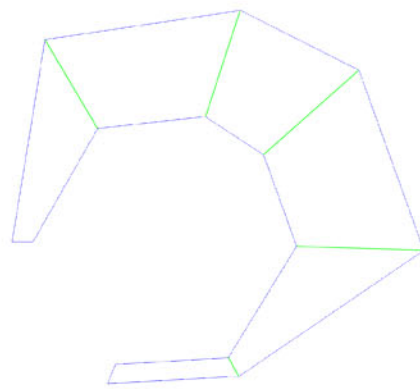
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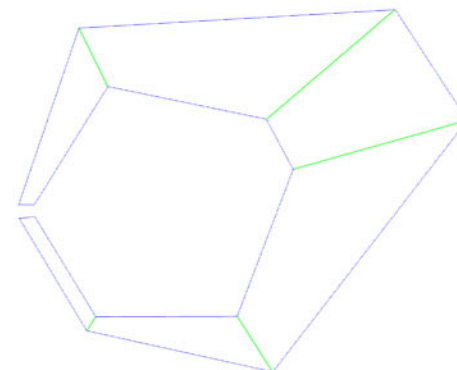
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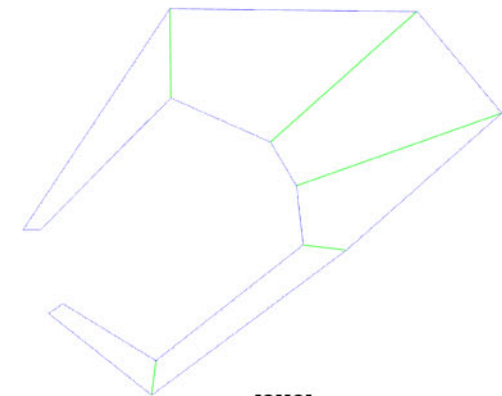
[0][0]



[1][0]



[2][0]



[3][0]

Fabrication

above are examples of unfold polygons with fabrication planning feature in Generative Components.

for model fabrication, it is going to be laser cut plastic with fold lines and to be joined together with frames along the edges in order to retain the desired form and counter the effects of the characteristics of plastic acting upon the form.