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Synergetic Landscapes Unit: The Multispecies Biodigital Community Codesign

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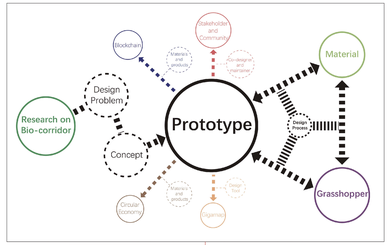
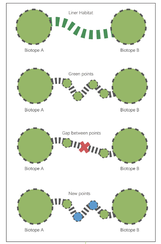
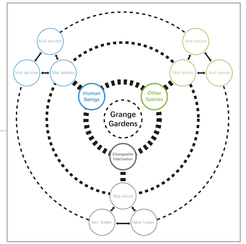
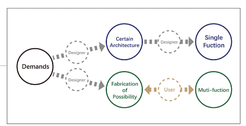
Possible Fabrication









The idea of the prototype comes from the research on bio-corridor. The prototype is developed through material and grasshopper experiments and responds to all other elements by the means of gigamap.

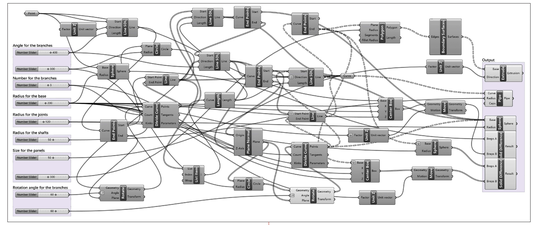
The forms of the bio-corridor are different in the city and in the wild. The bio-corridor in the city is normally made up with green points instead of continuous liner habitat. More green points should be generated while the density of these green points may not be enough now.

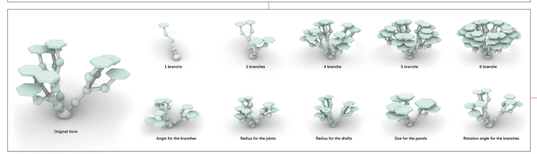
Normally, if we want to make a new design, we always do the research about the demand of the stakeholder and try to answer it. And in most of the time, we just make a certain design answering some certain requests. Is it possible for me to just make a fabrication which is full of different possibilities, and the user will reshape the fabrication to meet their own requests.

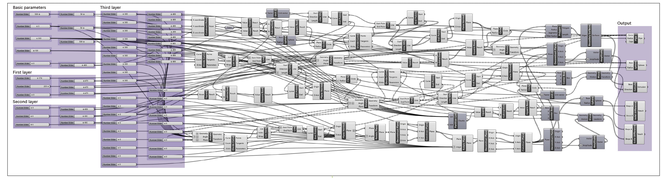
A lot of designs in the city come from human need. I want my fabrication to combine the two elements, human beings and other species to contribute to local ecological system. It may be a good way to make it come true that the fabrication could be changeable adapted to different situation.

Systematic Design Logic | Design Problem | Design Strategy A | Design Strategy B

Design Logic







Simulation on Basic Parameters | Simulation on Fuction

Structure Experiments in Grasshopper

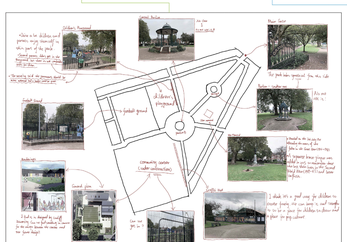
Research on the Site

Location of the Site

Our site is in the Grange Gardens which are in the centre of the northeastern residential community of Grangetown. We are allowed to place our fabrication in the Grange Pavilion in the Garden.

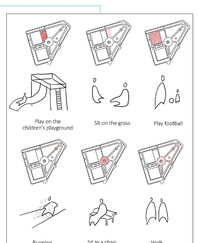
Basic Elements in Grange Gardens

The facilities in the park are quite simple. However the background of the park is very complex, so there are still a lot of factors which should be taken into consideration.



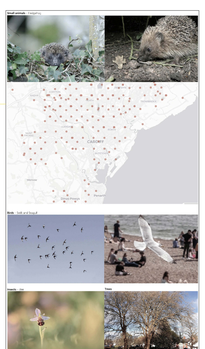
Main Activities in Grangetown

There are not much people in the Grange Gardens in the working hours. However there are quite a few people spending their spare time on weekends or after 5pm on weekdays. I have recorded the basic activities of my 3 visits to the site in the week. And the different depths of red colour stand for different frequency of those activities.

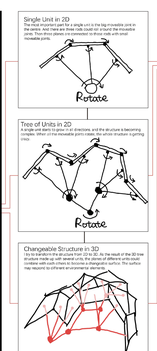


Species in Grangetown

For the prototype, I zoomed into the species in Grangetown from the whole Taff Trail. There are variety of species, and I focus on the hedgehog and present the map for it.



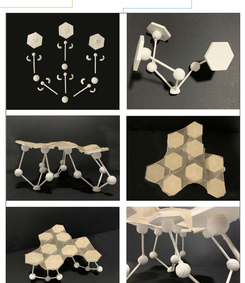
Physical Experiments on joints



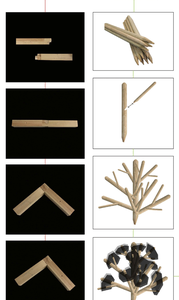
Moveable Joints

All materials of this 1:1 moveable joints are from local trees. First, the carpenter helped me to make different sizes of wooden balls and shafts. Second, I cut a wooden ball into two half and carved them. Third, I made a hole in a smaller wooden ball, and carved a shaft to insert into the smaller ball. Fourth, I put the smaller ball between the two halves of the bigger ball, and connected the two halves. Last, I carved another shaft to insert into the bigger ball.

1:1 Moveable Joints



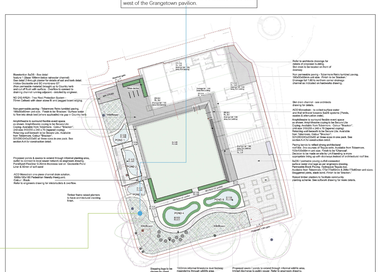
Performance Testing



version 1

version 2

Simplification of the Prototype on Site

Location for the Prototype

The possible fabrication is designed to adapt to wide variety of environments. The prototype on Grangetown Pavilion is speculated to be more covert. It will be located in the south west of the Grangetown pavilion.