

00 what is the value of land?

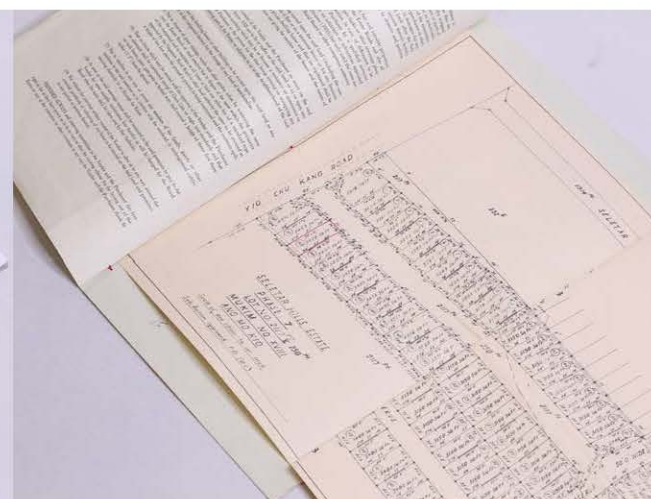
A series of non-cartographic techniques are used to question the value of land



What is land?



land is activity and life



land is a legal construct



land is an economic resource

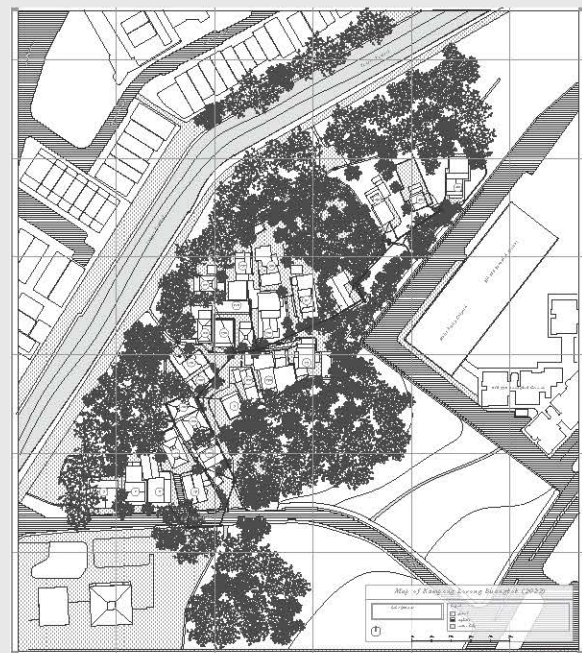


land is a record of history

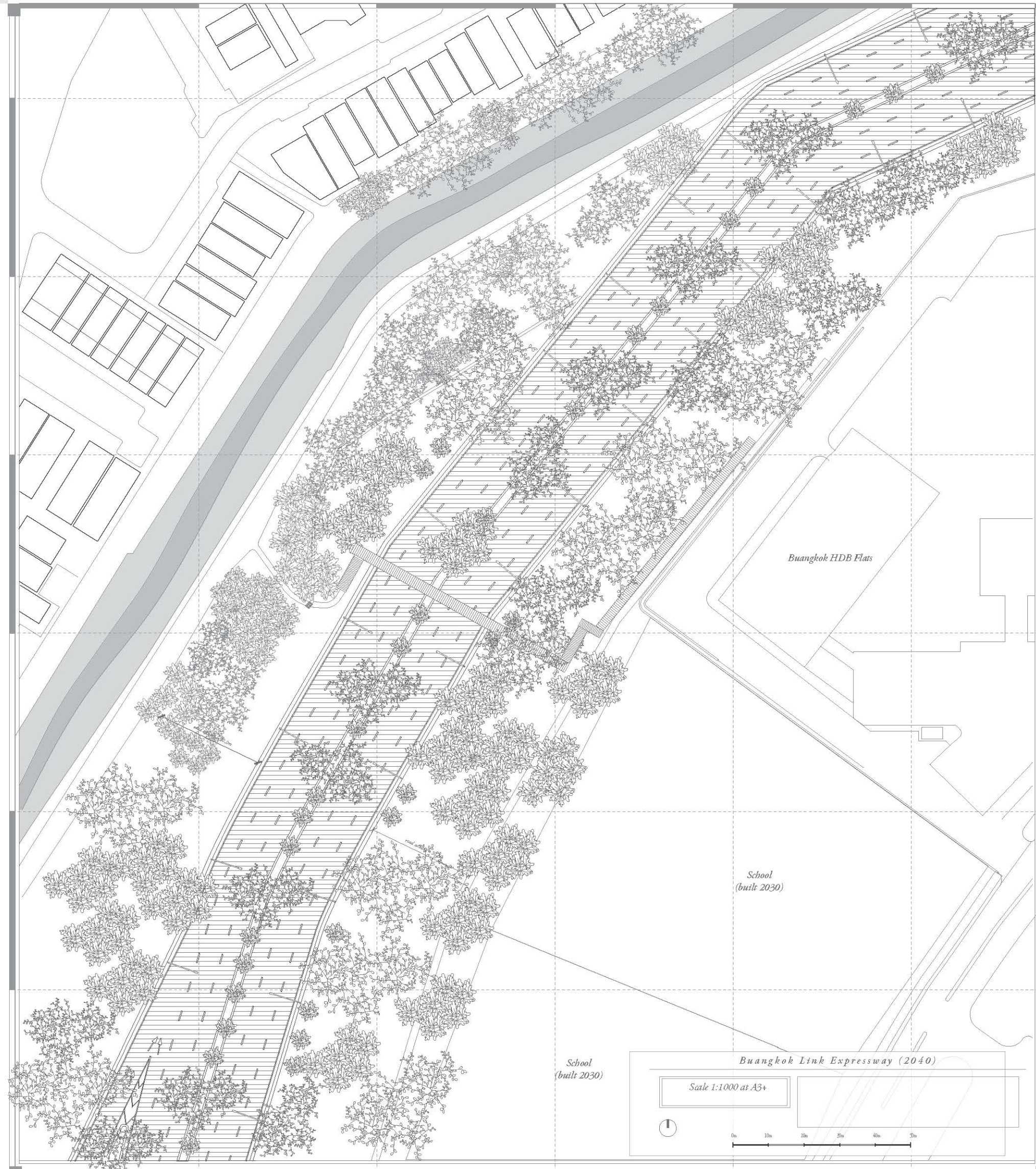
01. The Future Expressway

As part of the PAP's efforts to win votes in the Buangkok neighbourhood, more HDBs are built in the Buangkok neighbourhood.

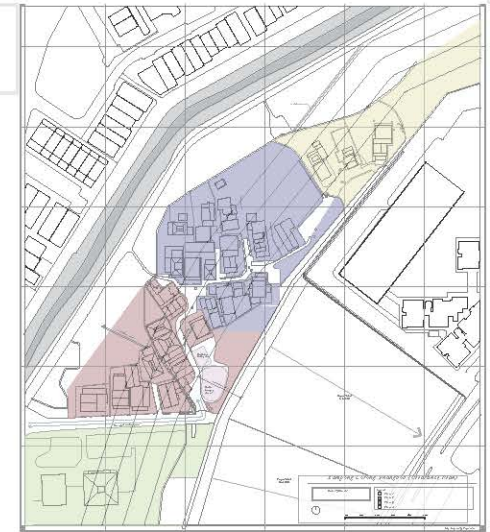
To meet the needs of this increased population by 2040, the government has decided to acquire the site of Kampong Lorong Buangkok. in 2037, to build a three-lane semi-expressway.



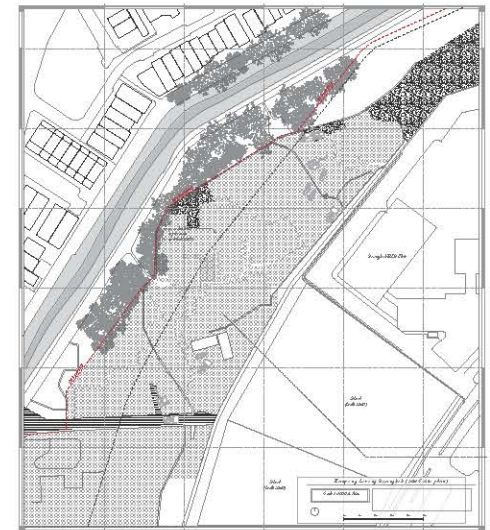
site analysis



2040: the expressway is built in order to meet the needs of the Buangkok community, before the General Elections.



2037: a design proposition for clearing the kampong is proposed.



2038: the kampong is cleared to prepare for the works

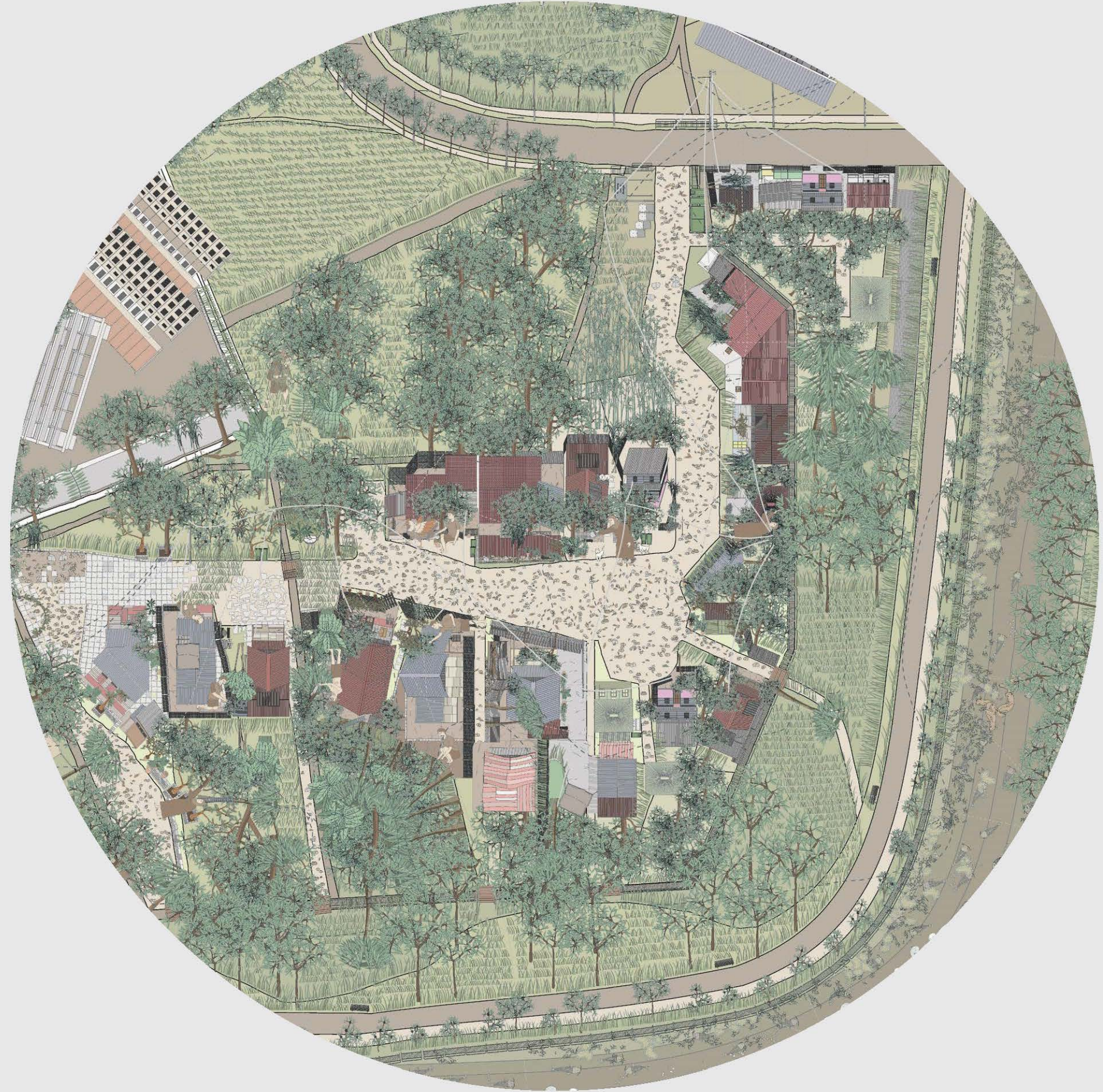
02. *The Archatographic Map*

Since the kampong has been cleared, the archatographic map can be used to recreate the narratives of the villagers and experience of inhabiting the kampong.



03. *A shifting of the frame*

The drawing was based on the mappa-muni. Where the circular form is used to represent a view of the world.



The drawing on the archatographic map.



the rectangular frame

04. the influence of narratives

This drawing describes the final narrative drawing. Here, multiple circles lie within the boundary circle that frames the drawing.

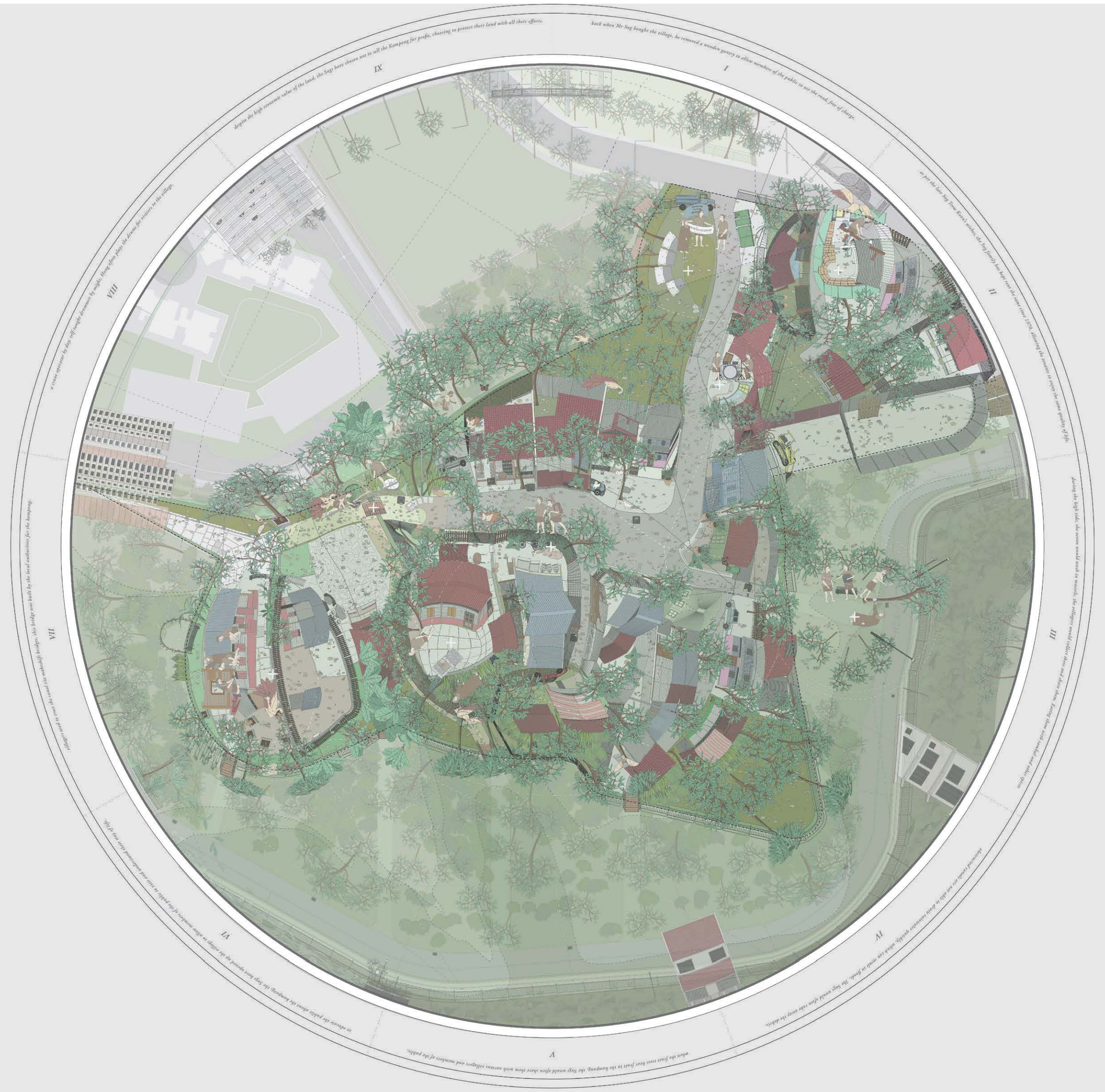
These individual circles create a certain gravitational field that warp the architecture of the site. This aesthetic describes an oral history of how the land has developed, while also describing the power of myths on shaping space.



the bridge on site, drawn on the drawing



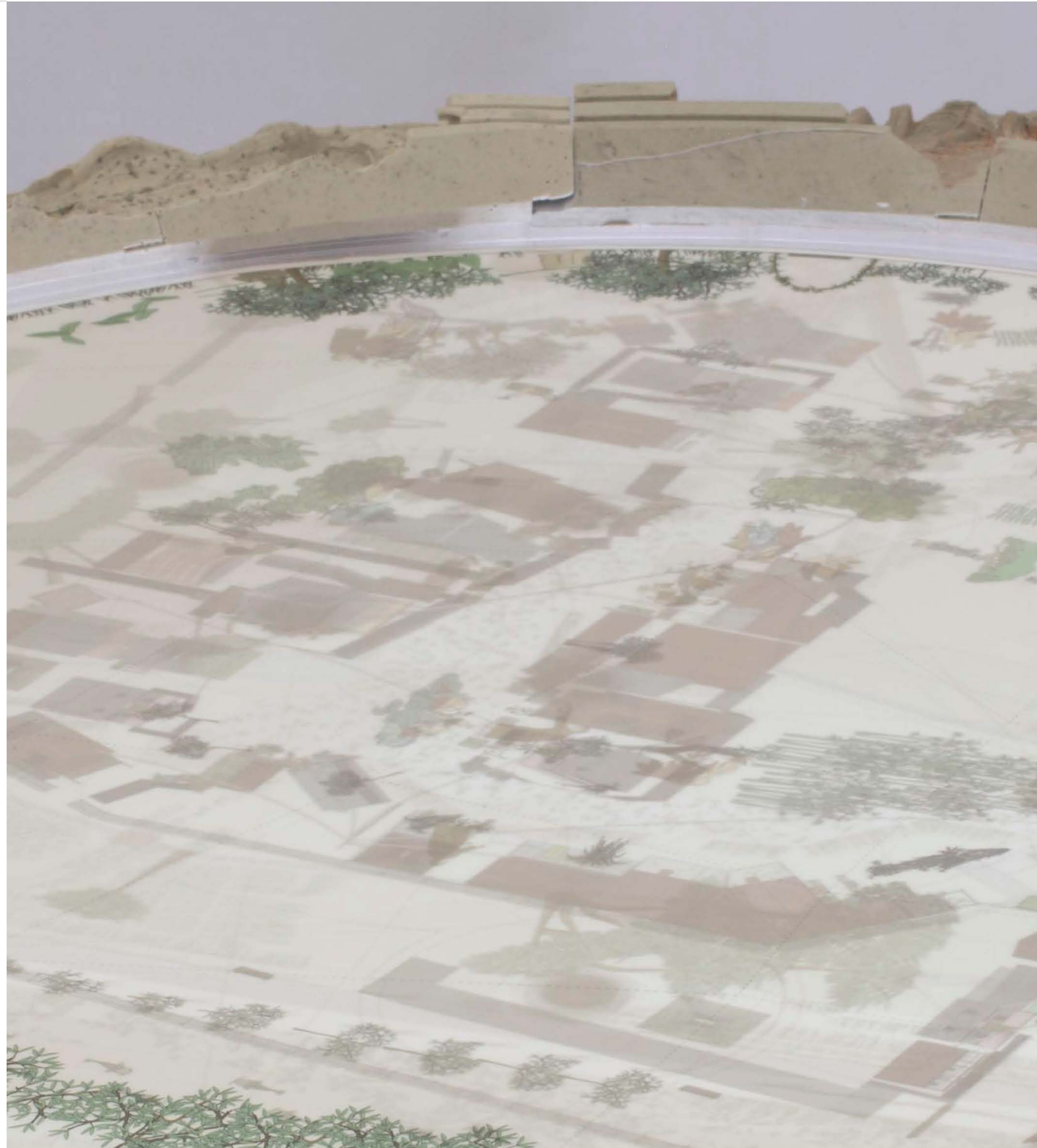
the bridge (can be seen in the background)



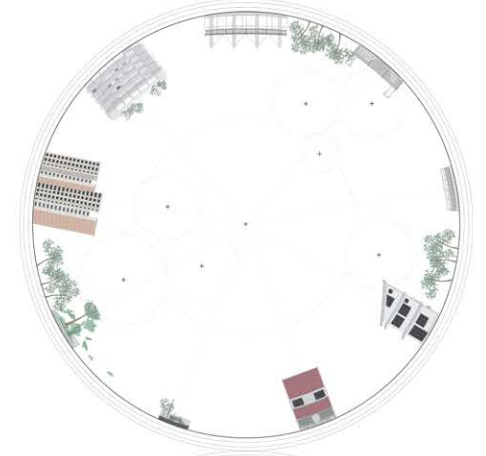
05. layering narratives

Instead of a single, flattened image, I chose to print the drawing on mylar, which allowed for the different layers to be seen.

This emphasizes that different layers can relate to each other.



when illuminated from below, the map shows the different layers



the different layers

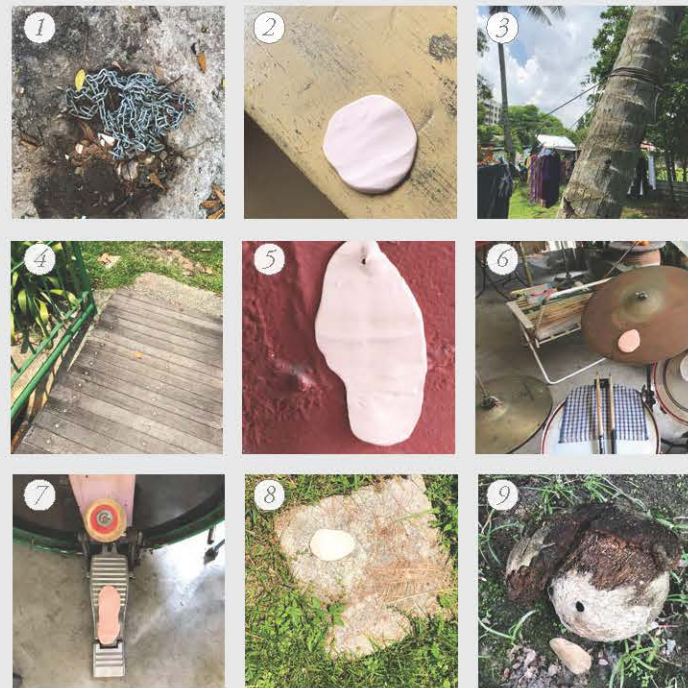
06. Situating Narratives

Narratives of the kampong, do not happen without a site. Thus, I sought to capture where these stories might have happened, to add a contextual element to the telling of these stories.

By creating the impression of real objects, the stories have an added dimension to be told.



gathering of the impressions on site.



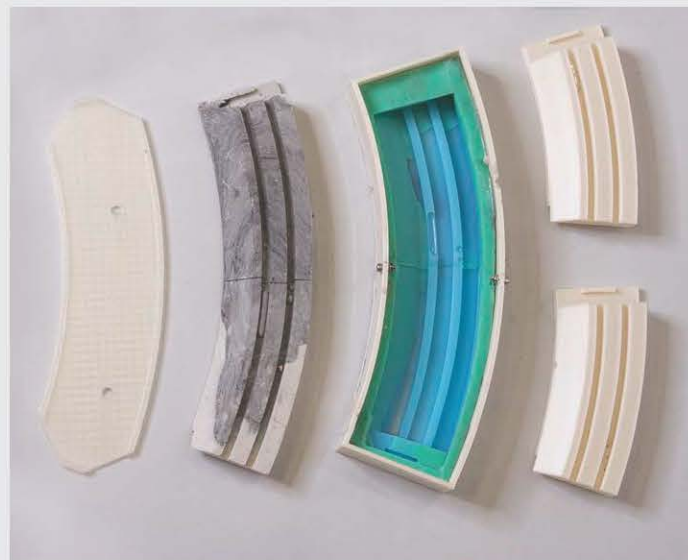
1: iron chain on four squares, 2: chair at Mdm Mimah's House, 3: huge coconut tree used to hang clothes, 4. A bridge across a canal in kampong, 5. detail of the brick wall of kampong, 6. Uncle Hong's cymbal. 7. foot pedal of the drum. 8. position of old wooden gantry. 9. coconut fruit



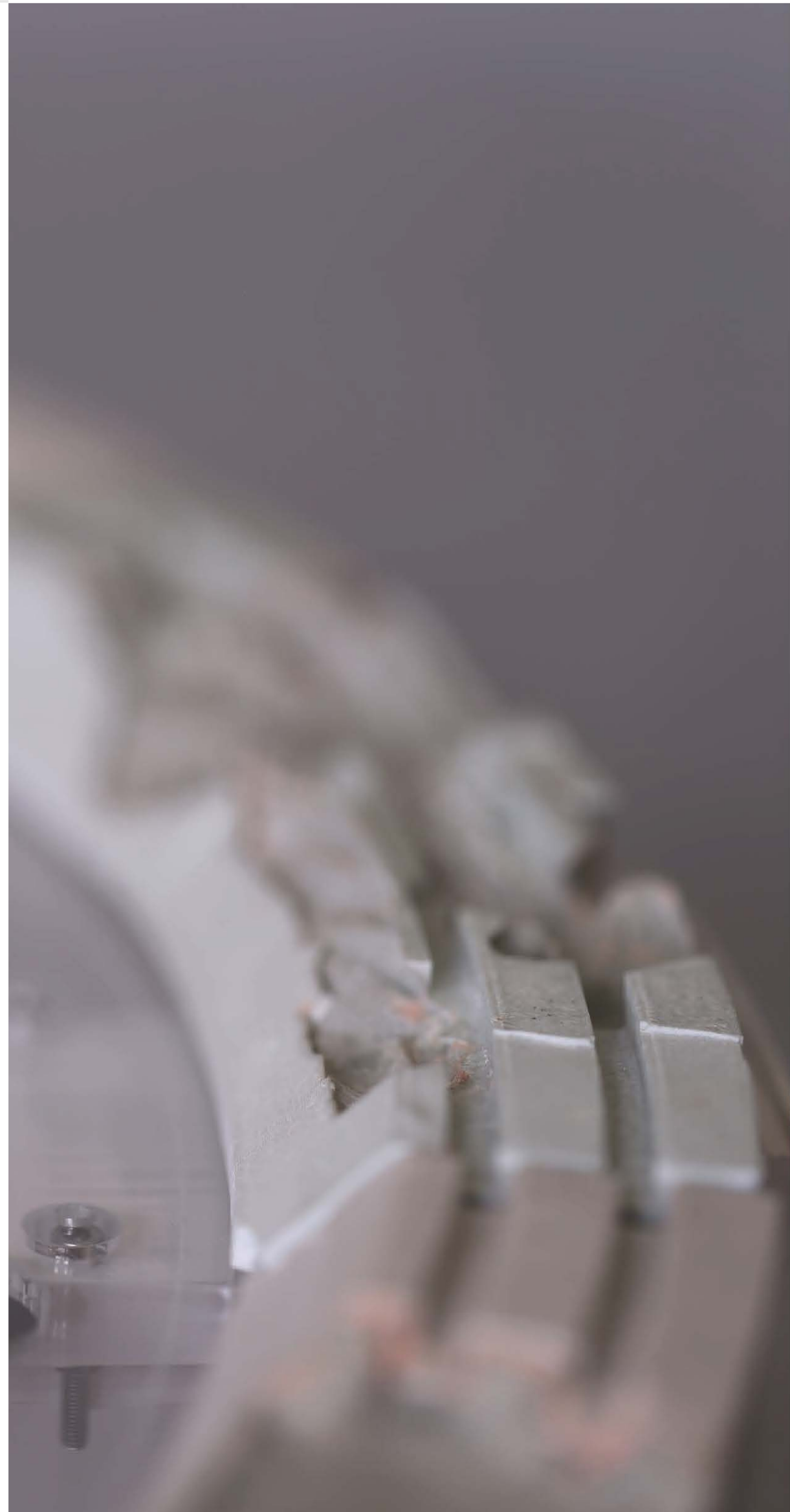
a compilation of all the artefacts.

07. Situating Narratives

Jesmonite casting was used for its strength and aesthetic finish. Silicone was used to create a mould that can be reused; and a 3D printed housing was used to prevent warping of the silicone.

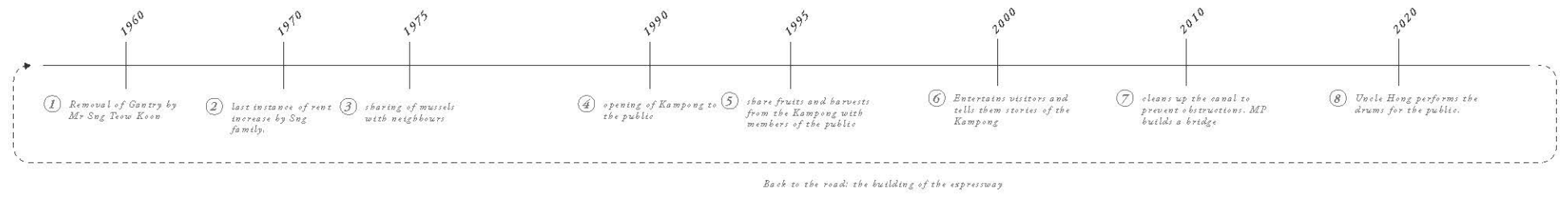
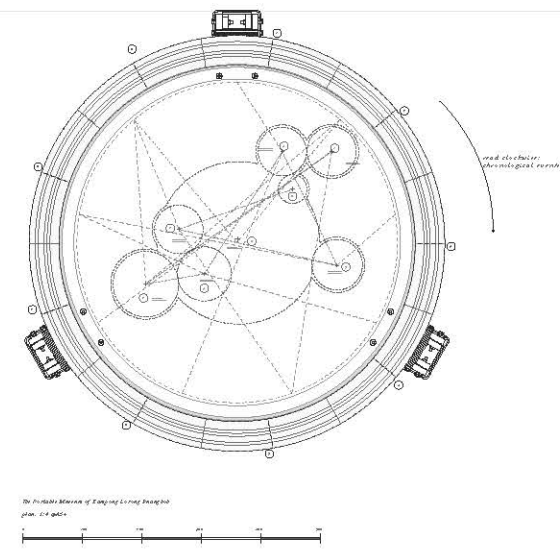


casting equipment used for telling the narratives of the kampong, from silicon moulds, to 3D prints of the frame. This kit was used.



07. Situating Narratives

The cast forms a circular arrangement, that tell of the history of the kampong and how narratives have influenced the space.



9 stories are told, which tell of events that have shaped the kampong to the way it is today.



Uncle Hong playing the drums on a weekend afternoon



the illustration of Uncle Hong



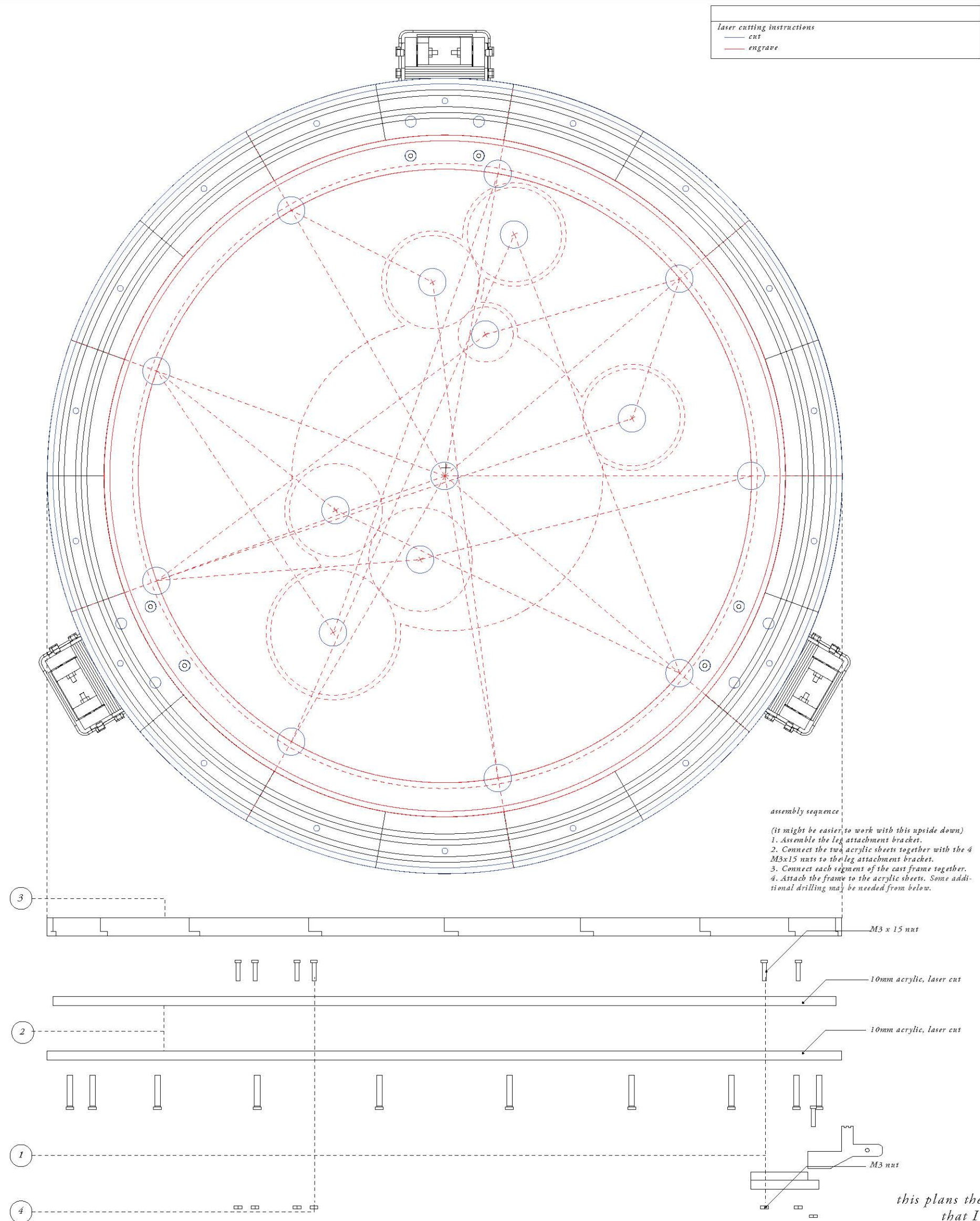
the cast of Uncle Hong's drumming

08. Assembling the frame

Laser cut and engraved acrylic was used to create the translucent quality of the map. Importantly was how each layer would be assembled and the order which they were assembled in.



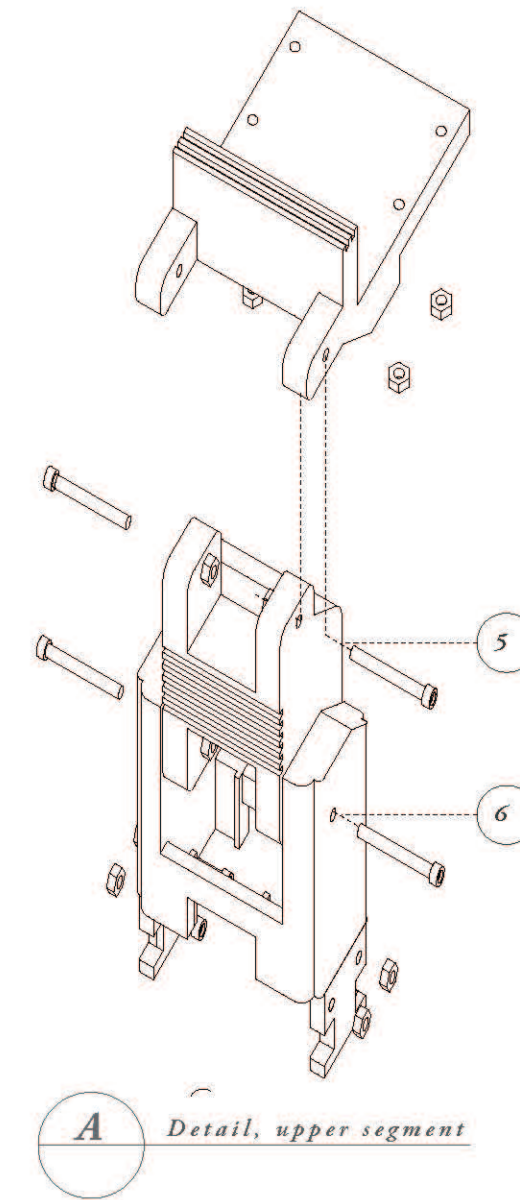
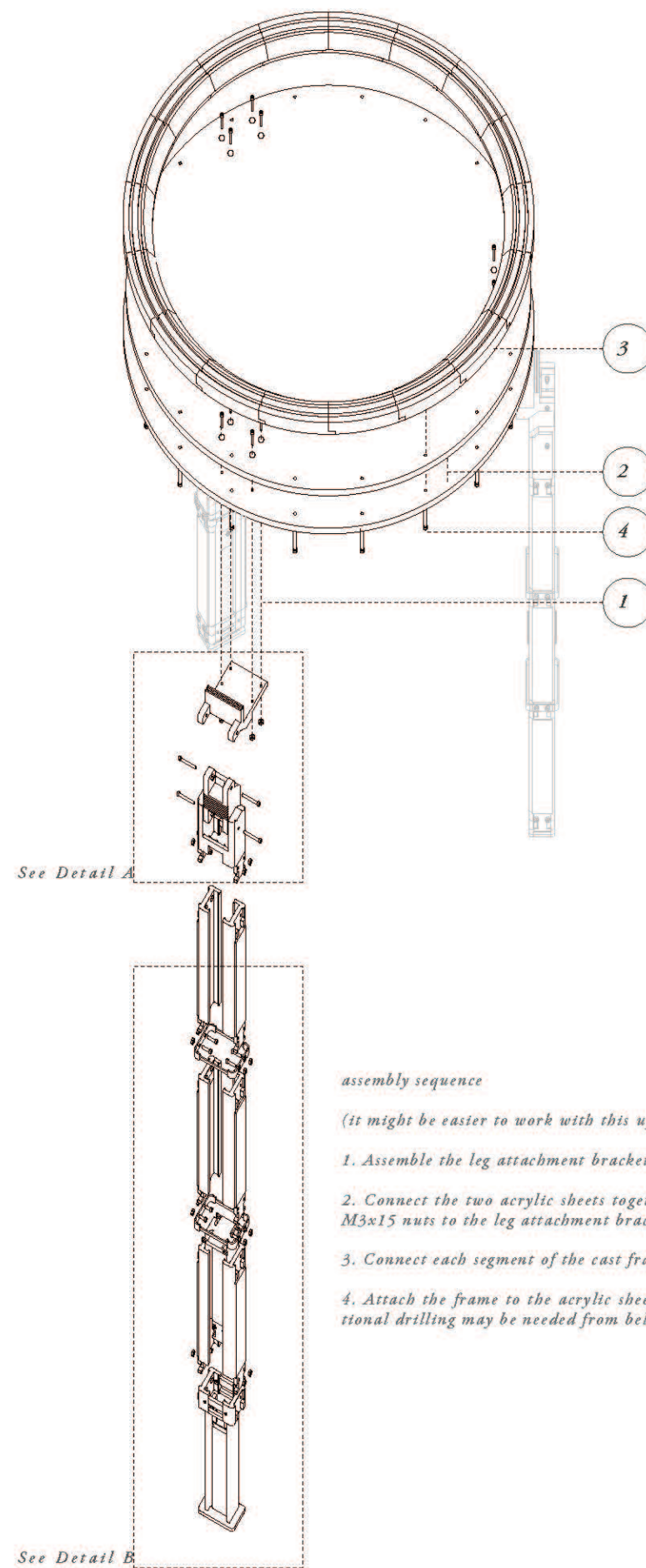
3 pieces of acrylic were used to reinforce the surface of the map.



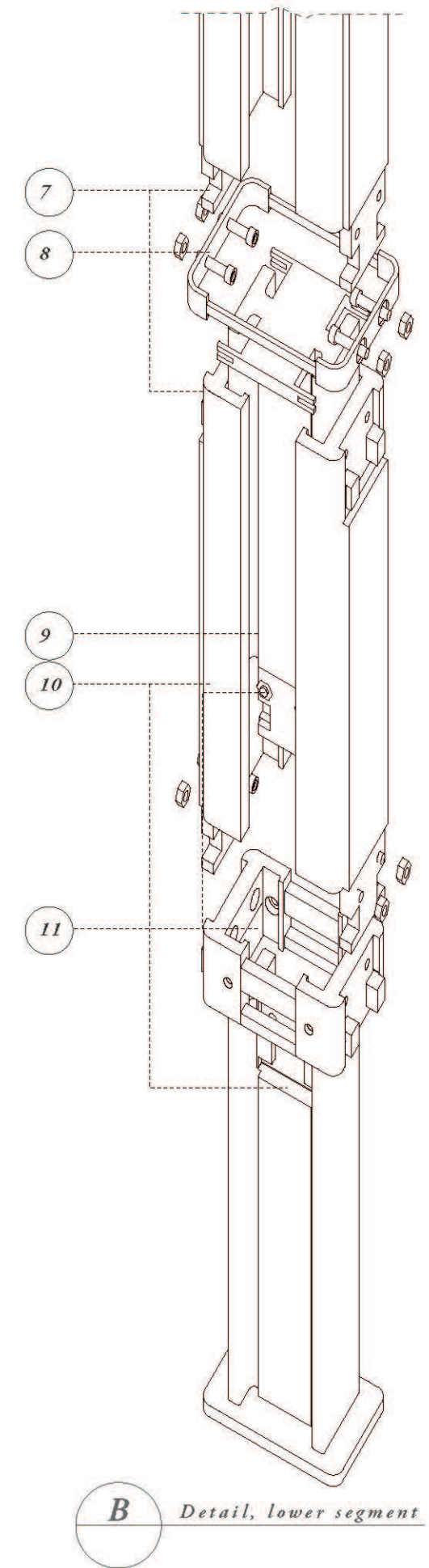
09. Extendable legs

Legs that could be assembled were designed and planned. This would allow the archatographic map to be used on any terrain.

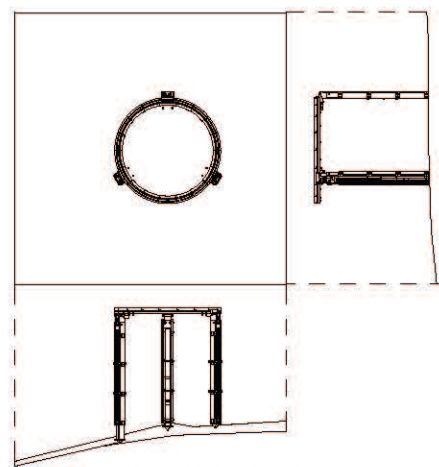
Similarly, the same process of levelling could be used to recreate an absent topography - an idea I adopted to demonstrate the contrast between past site and present site.



5. Connect the leg attachment bracket to the leg upper hinge. Use a M3 x 30 nut and bolt for securing.
 6. Connect the leg upper hinge to the leg top segment with a M3 x 30 nut and bolt.
 7. Make sure to affix one entire length of the leg segment. Use a M3 x 20 nut and bolt for securing the floating bracket to the leg segment. Once complete, repeat this step for the mirrored side.
9. Insert the movable leg segment (top segment) once both sides of the leg segments are done.
 10. Attach the bottom holder into the leg segments.
 11. With the bottom holder in place, attach the bottom segment of the movable leg segment to the top segment. Use a M3 x 15 nut and bolt to secure.

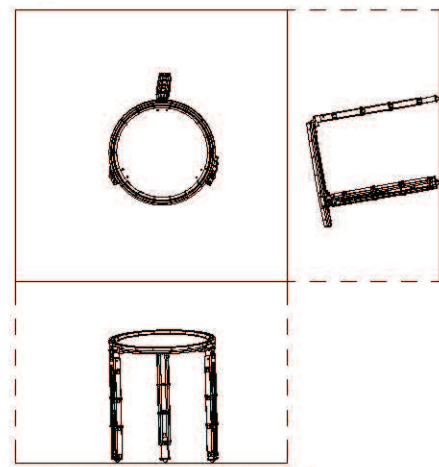


2022



levelling the portable museum on uneven grounds.

2038



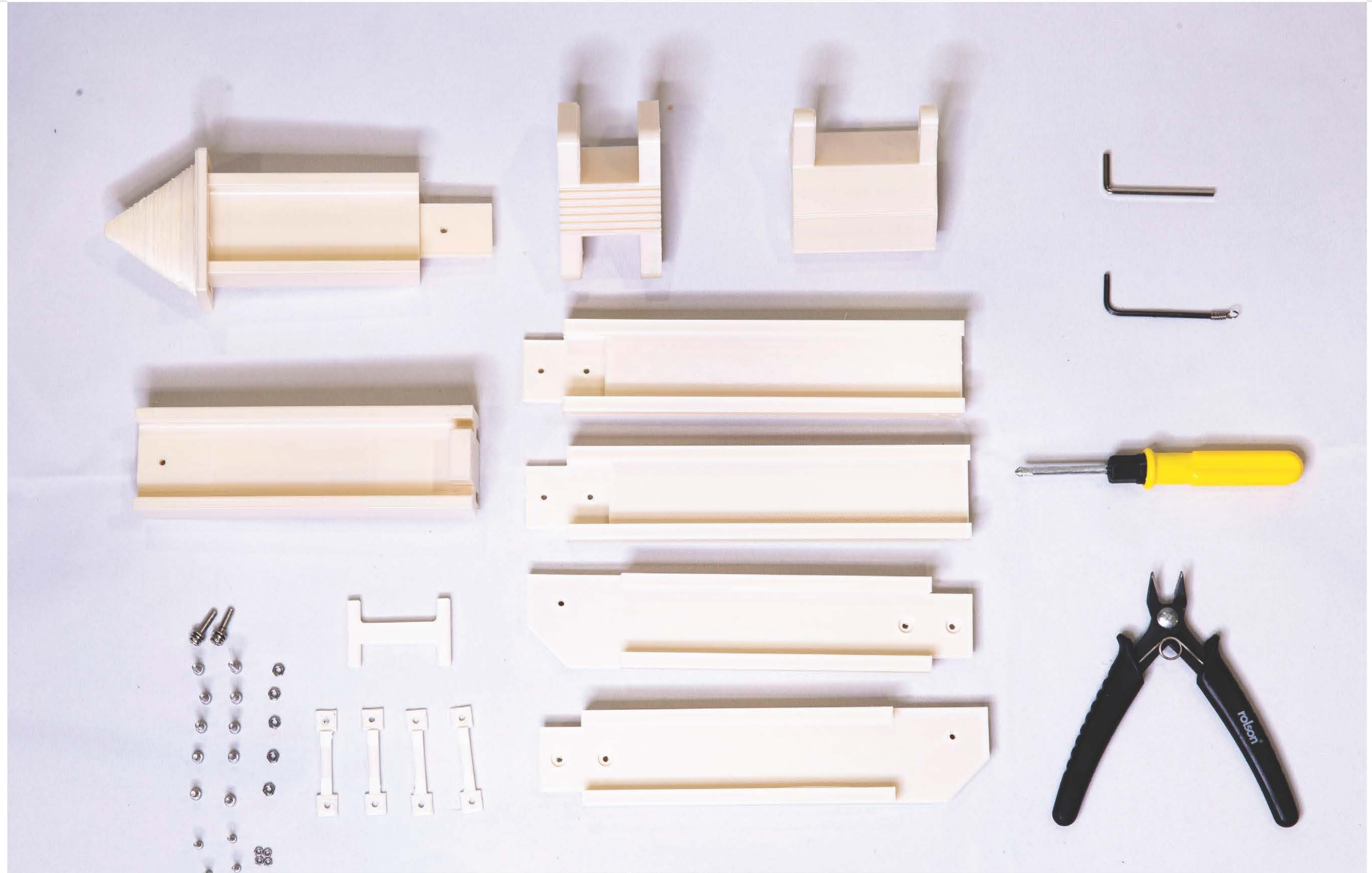
re-levelling the portable museum on flattened ground.

describing how different terrain affects the same map; this technique is used to create the absent topography.

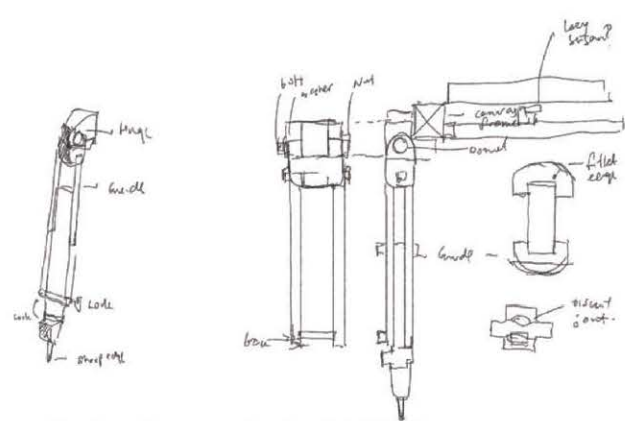
the assembly diagram of the modular legs, considering how certain components are used.

10. Prototype

Using 3D prints, I could prototype how the leg might function. This allowed me to test if the weight could work



the assembly of parts for the leg module



3 Part leg, 900 mm max height - 400, 350, 50.

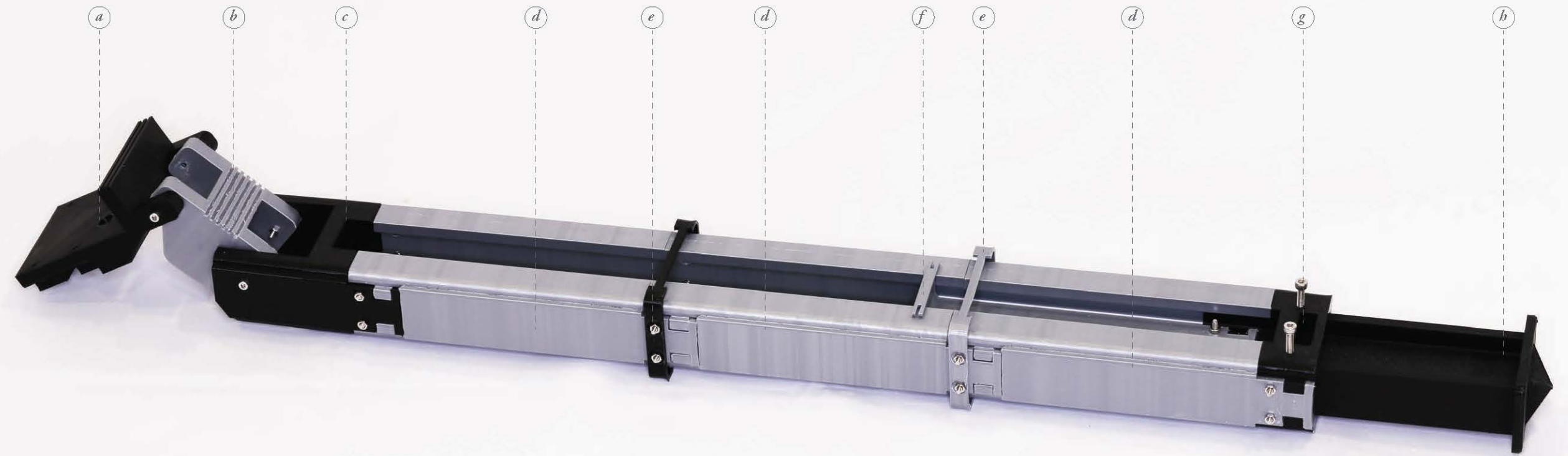
Early prototypes of the modular legs



The extendable feature

11. Prototype #2

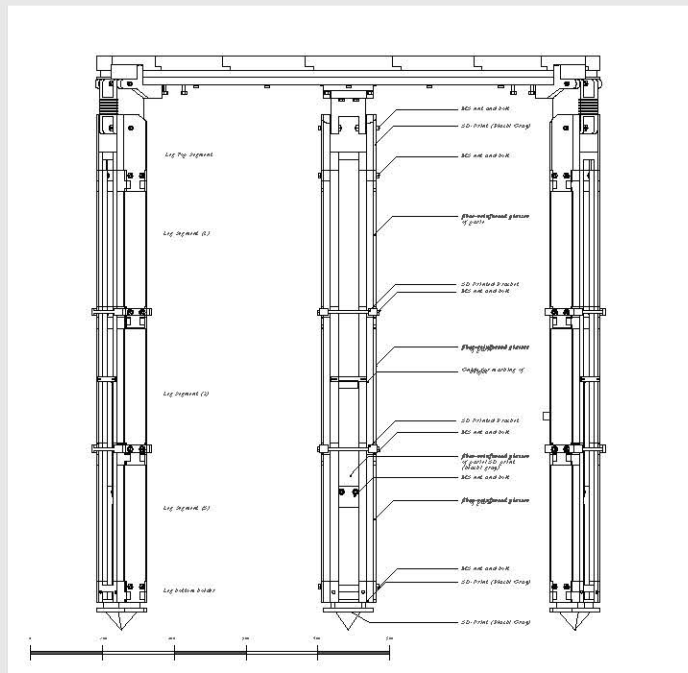
The second iteration used the same module but increased the height and robustness with a bracket



Iteration #2, modular leg

Legend

- a leg-frame bracket
- b folding hinge for portability
- c leg segment, top
- d leg segment, middle module
- e horizontal bracing
- f internal extender, top segment with drawing ruler
- g leg segment, bottom housing
- h internal extender, bottom segment



elevation describing the parts and design of the legs



action sequence for how the legs are operated

12. Recording the Absent topography

Bringing the archatographic map to the site, I could record the different heights of the legs which would be recreated in 2038.



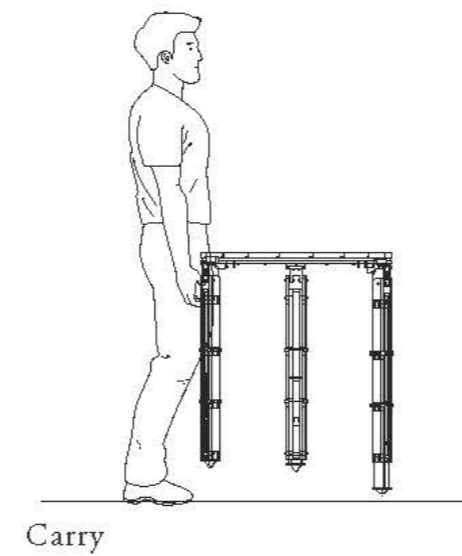
recording canal heights at Uncle Hong's house



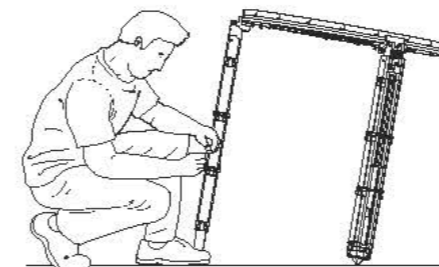
Using a knife, I would carve on the wooden legs the different markings for each leg.



the archatographic map measuring the height of this structure



Carry



Level



read the narratives

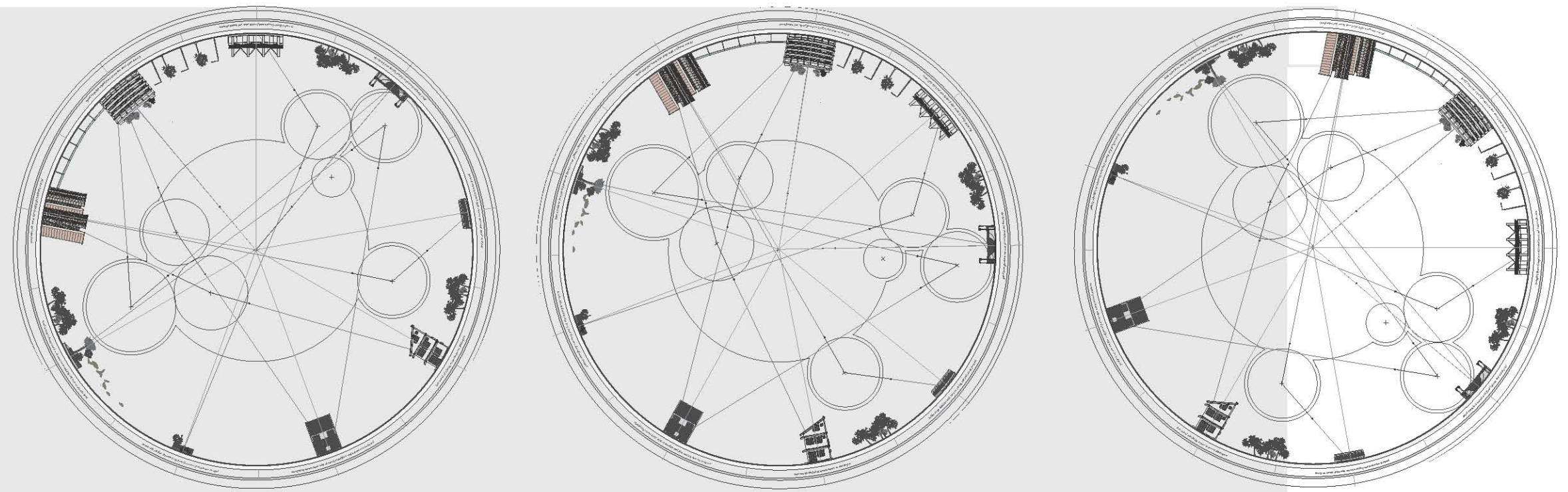
diagram describing the process of using the archatographic map!

12. Recording the Absent topography

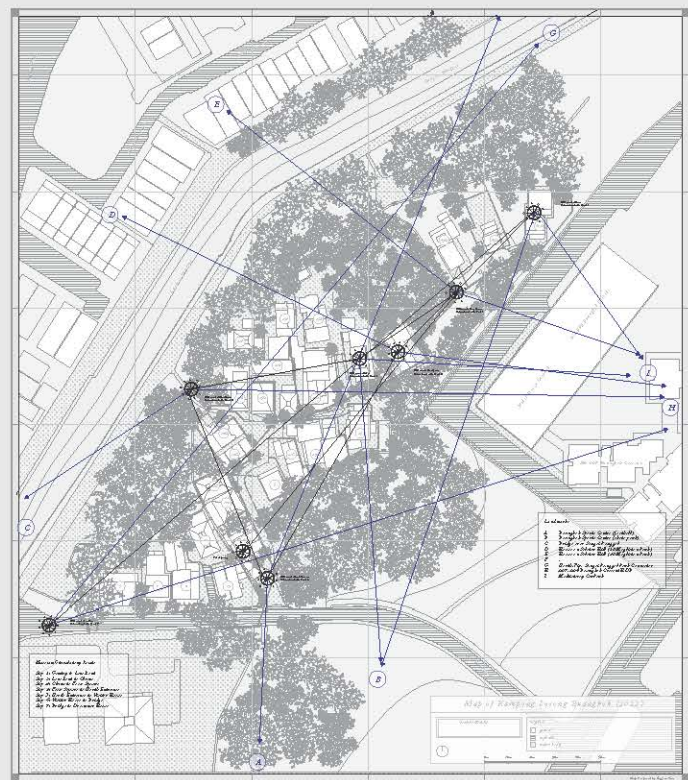
To orientate like a resident, I devised this orientation strategy, that would allow visitors to orientate according to landmarks.

As location of the sites are fixed, I could draw out the different landmarks that each site could see. Iterating through the number of landmarks and the options, I reverse engineered these 9 landmarks.

Below is a diagram which shows the calculation of this process.



as relative position to landmarks always change, it was a quality that could be used for orientation



computing the positions of each site to the landmarks. This exercise highlighted that each location could have only 2 landmarks for orientation due to conflicts

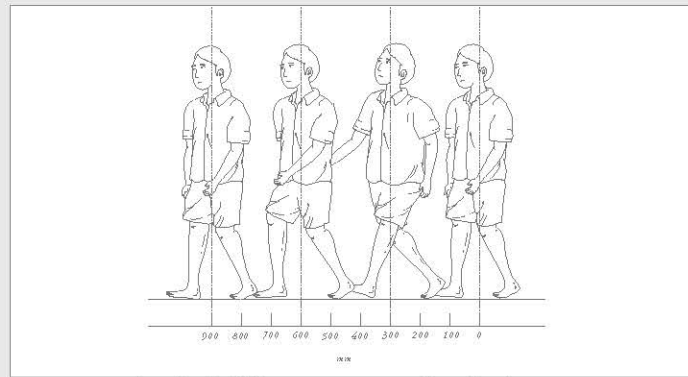


action sequence depicting how a visitor might hold and walk around with the archatographic map

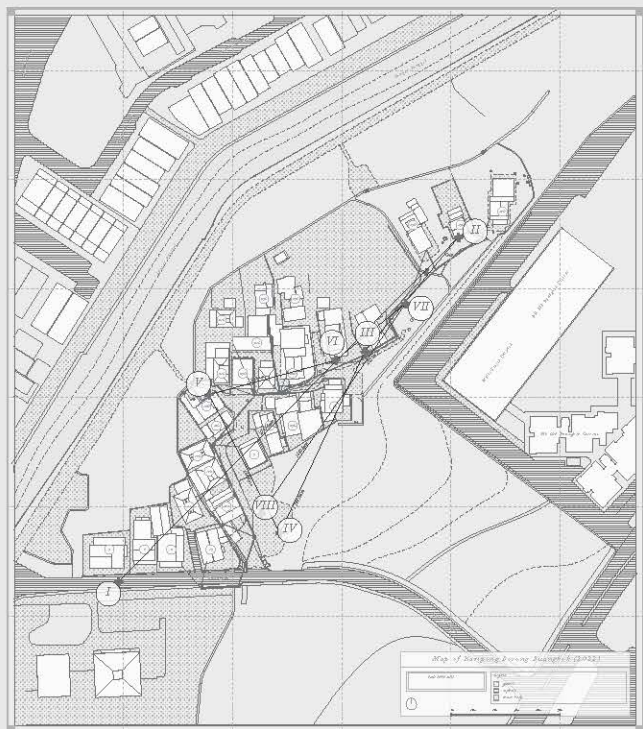
13. Measuring Steps

I wanted visitors to be able to use their body for wayfinding. Thus instead of using a metric system for measurements, I proposed the use of steps to wayfind.

This step ruler allows one to translate between the map and the number of steps needed to walk.

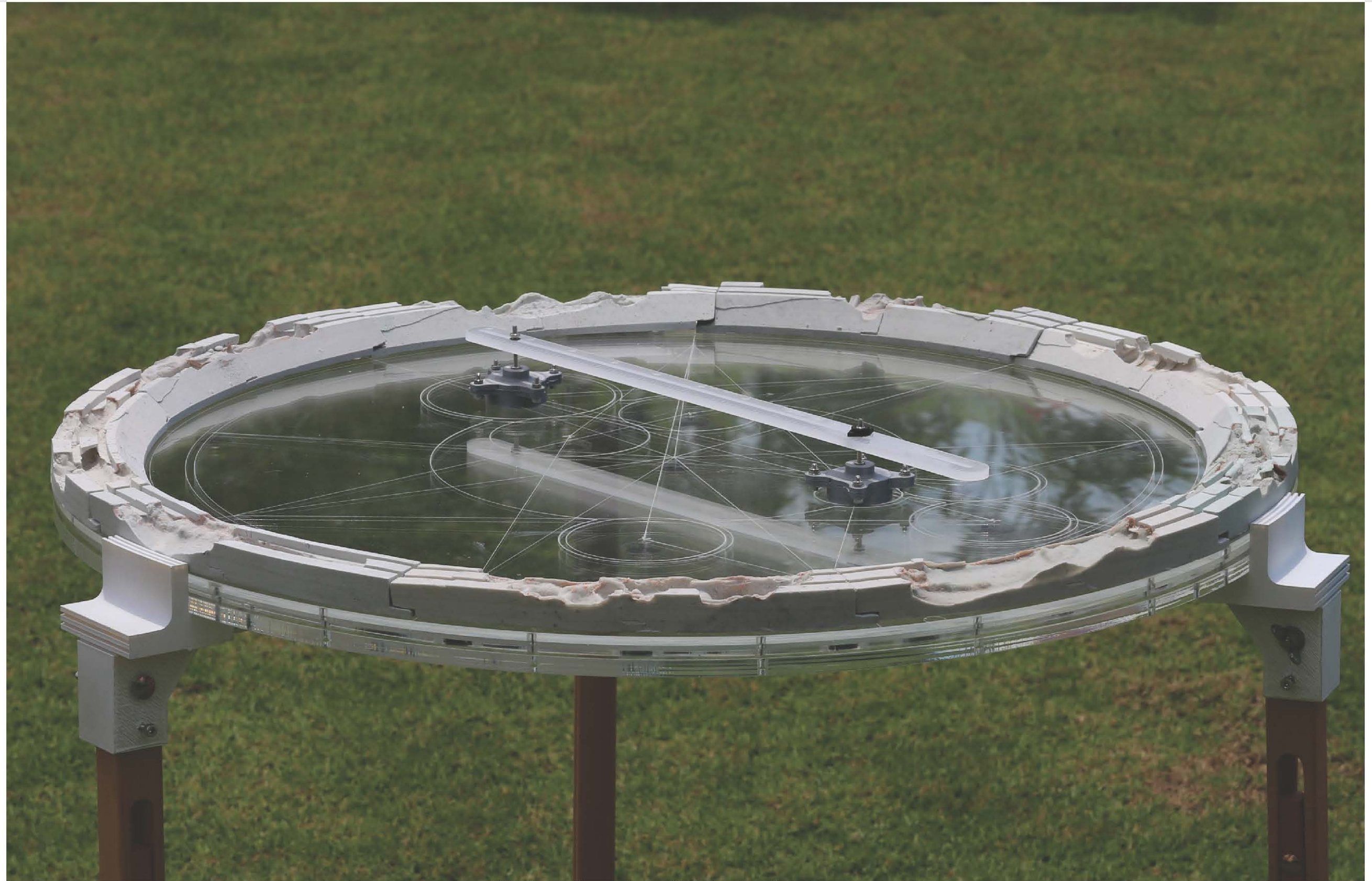


the divisible amount: mdm Sng's steps



- I Bwingshok Road Gallery (demolished)
- II Lau Courts at Muzam's House
- III Closets at the backyard of Sing house
- IV Four Senses
- V North Entrance to the 11 Bays
- VI Service At Entrance at Eastwing Larning Dwanghok
- VII Water House
- VIII Hong's House, formerly the Conversation Space

computation of distance from the satellite map



magnets within the acrylic panels would anchor the ruler on uneven topography



14. Subjectivity in Space

As each body is different, I questioned if the spatial response would be unique for each person. These drawings propose how the archatographic map would give a different spatial response if the visitor has a larger gait or if they miss the landmark by a few degrees.

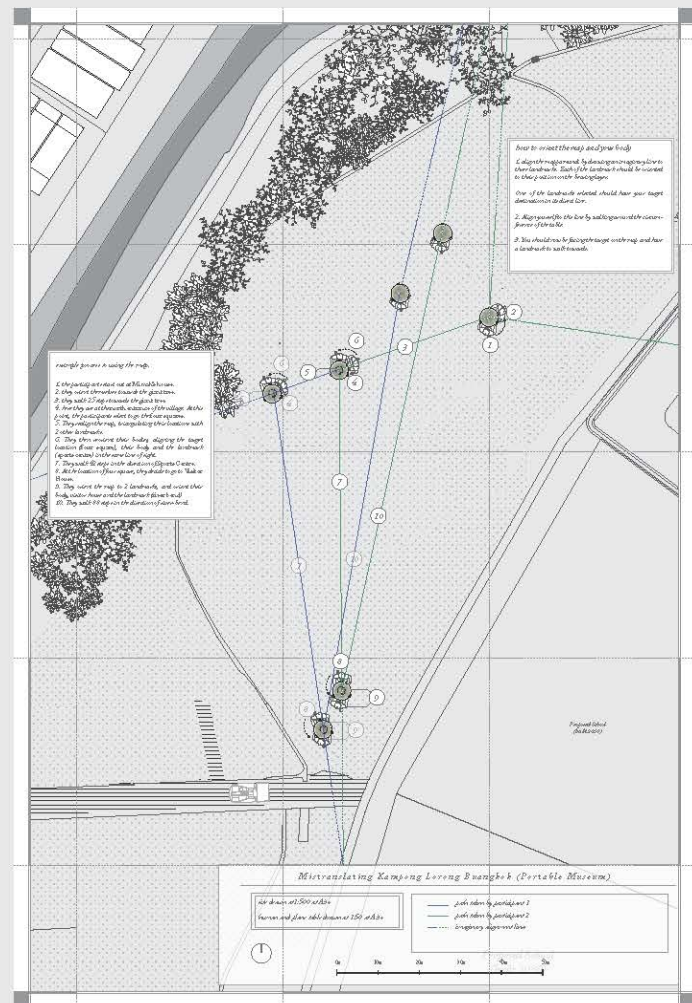
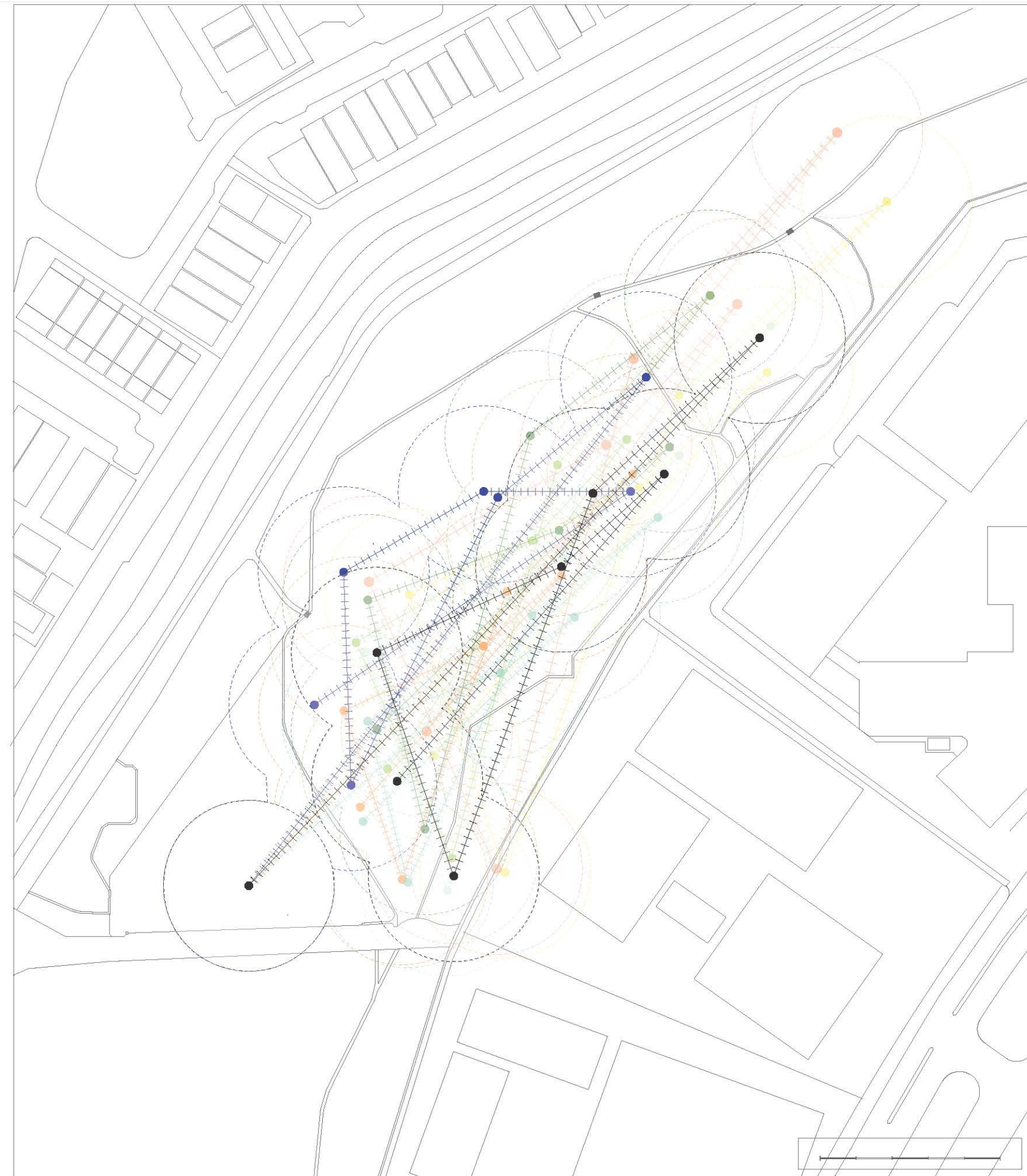
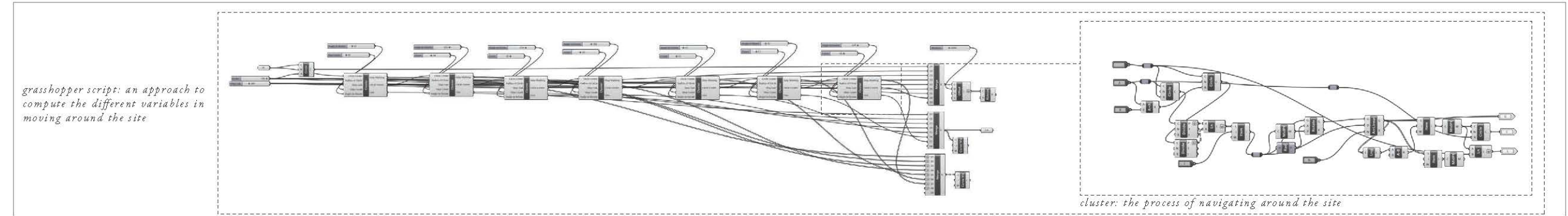


diagram illustrating how the spaces might differ.



simulations done to test for variations in spaces, as a result of each subjective interpretation of the map.

	default: based on Mdm Sng's step - 200mm
gait (mm)	200
angle (°)	47 223 250 109 25 42 229
step count	92 28 50 29 25 17 50
	smaller gait, -50mm
gait (mm)	150
angle (°)	47 223 250 109 25 42 229
step count	92 28 50 29 25 17 50
	larger gait, +50mm
gait (mm)	250
angle (°)	47 223 250 109 25 42 229
step count	92 28 50 29 25 17 50
	smaller angle, -5°
gait (mm)	200
angle (°)	42 218 245 104 20 37 224
step count	92 28 50 29 25 17 50
	larger angle, +5°
gait (mm)	200
angle (°)	52 228 255 114 30 47 234
step count	92 28 50 29 25 17 50
	over step, +2
gait (mm)	200
angle (°)	47 223 250 109 25 42 229
step count	94 30 52 31 27 19 52
	upper limit, gait + 50, angle + 5, step + 2
gait (mm)	250
angle (°)	52 228 255 114 30 47 234
step count	94 30 52 31 27 19 52
	lower limit, gait - 50, angle - 5, step - 2
gait (mm)	150
angle (°)	42 218 245 104 20 37 224
step count	90 28 50 29 25 17 50
	random
gait (mm)	180
angle (°)	52 219 243 92 20 42 214
step count	88 26 44 29 20 15 52



grasshopper script: an approach to compute the different variables in moving around the site

simulations done in grasshopper to determine the extents of deviation

cluster: the process of navigating around the site

15. Public Engagement

A bonus of bringing the archatographic map to the site was seeing how the public engaged with it. Here, these photographs document how different people slowed down from their tours and activities to see what the map says.



16. *a kink in the road*

might this process influence how we design the road in the future? could the past influence the future by creating kinks and bends that speak of the invisible history of the site?

This drawing speculates on how the road might kink and bend, relating the future to the past; and how we can design as a physical historian.

