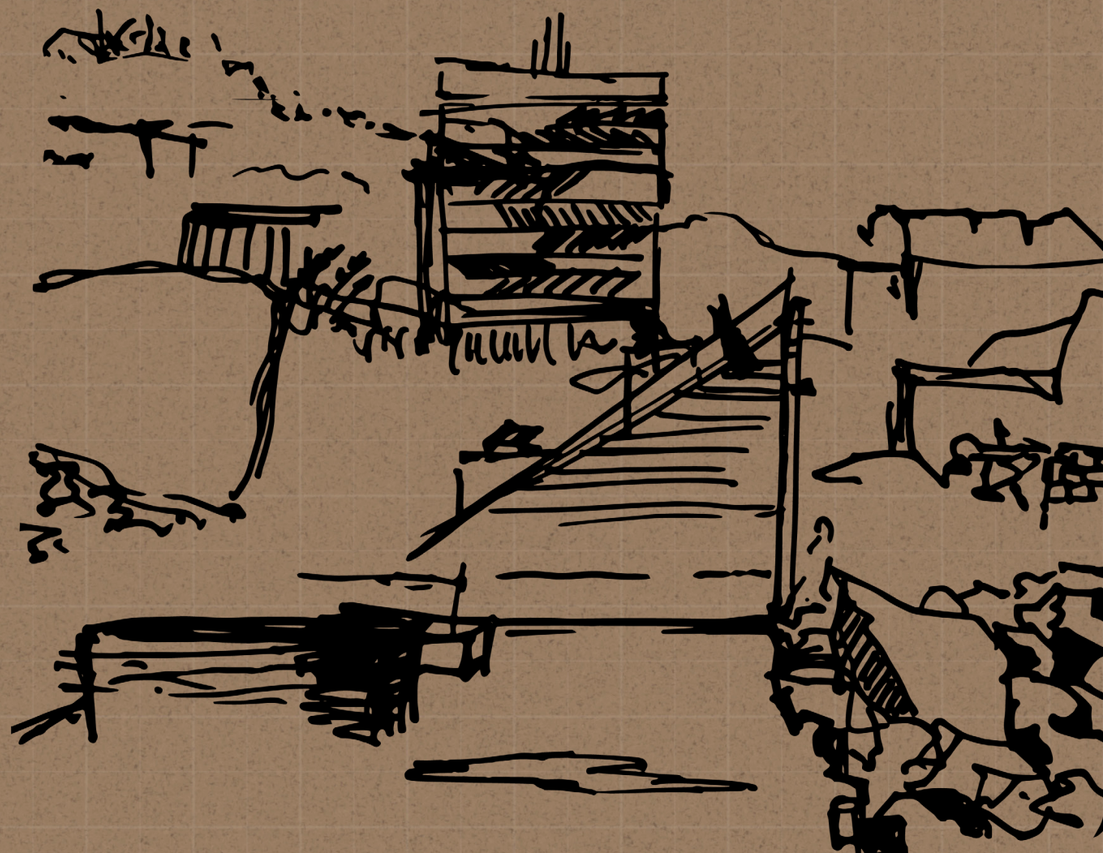


ARC310
Sensory Architecture

Maya Angelus

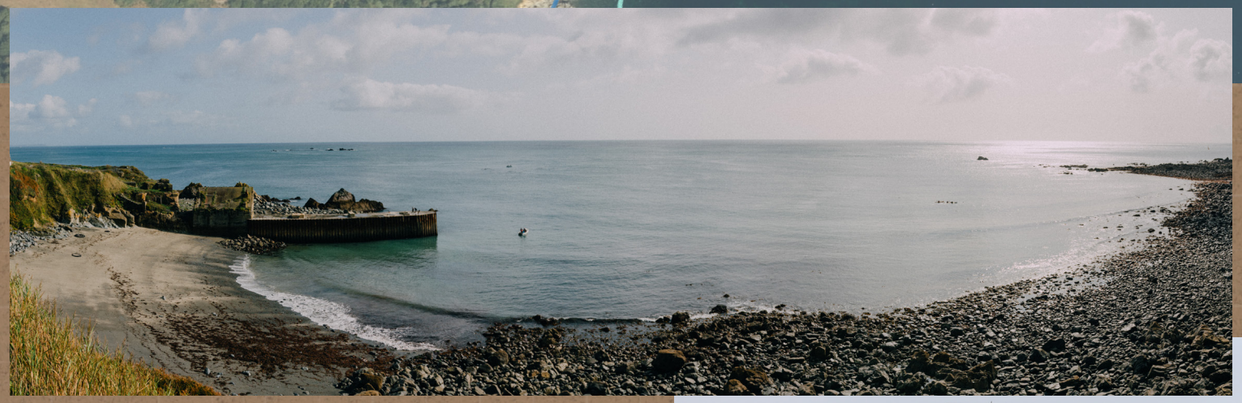


Site - Dean Point

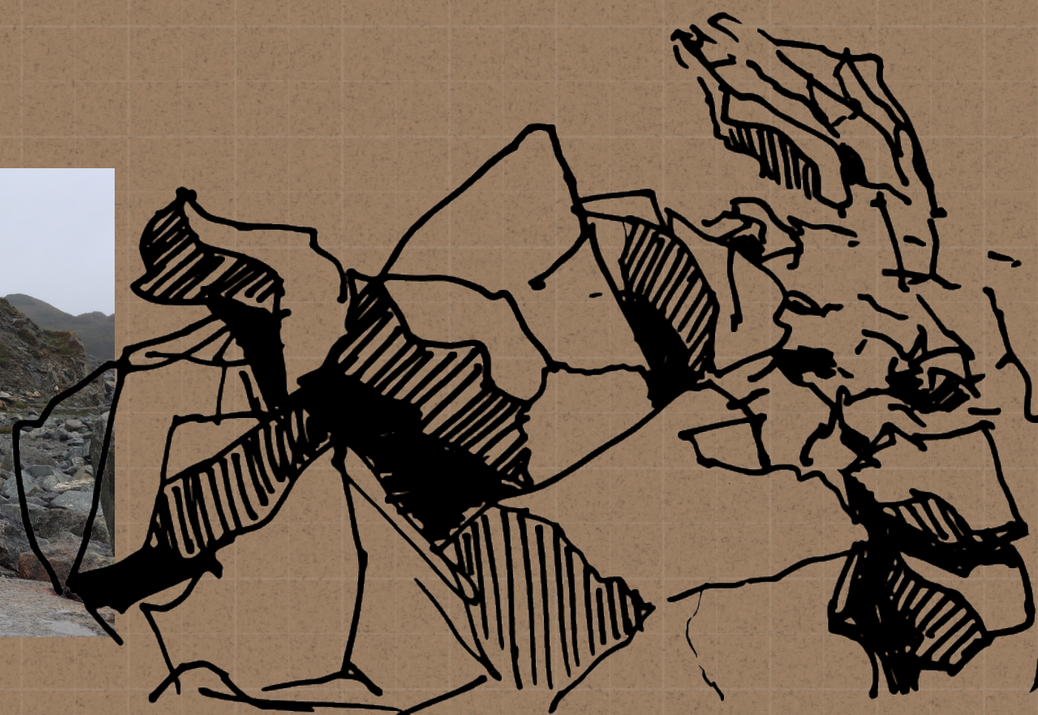


Dean Point, St Kevern, Cornwall

- on the east coast of the Lizard Peninsula
- large intrusion of gabbro from Coverack to St Keverne
- the quarry closed in 2005





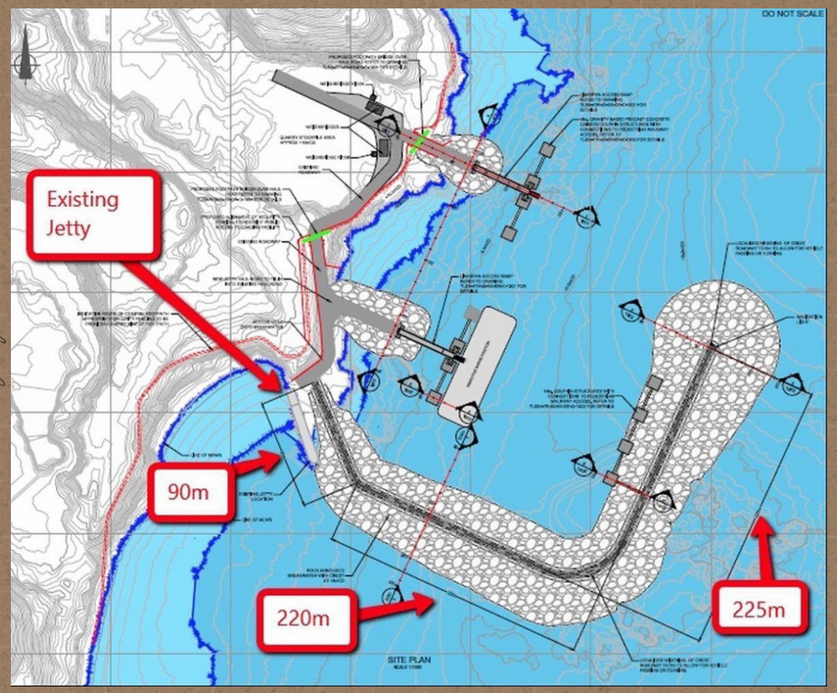


Site - Dean Point





Dean quarry under operation, befor 2005



Planned super quarry to provide millions of tonnes of armour rock for the Swansea Bay "Tidal Lagoon".

https://www.falmouthpacket.co.uk/news/12891072.anpas-quarry-moves-a-step-closer/

Community Againts Dean Super Quarry clame the plans will "forever change" the local area,cause "huge harm to the tourism industry" and subject residents to noise and air pollution from blasting operations.



Site - Material palette



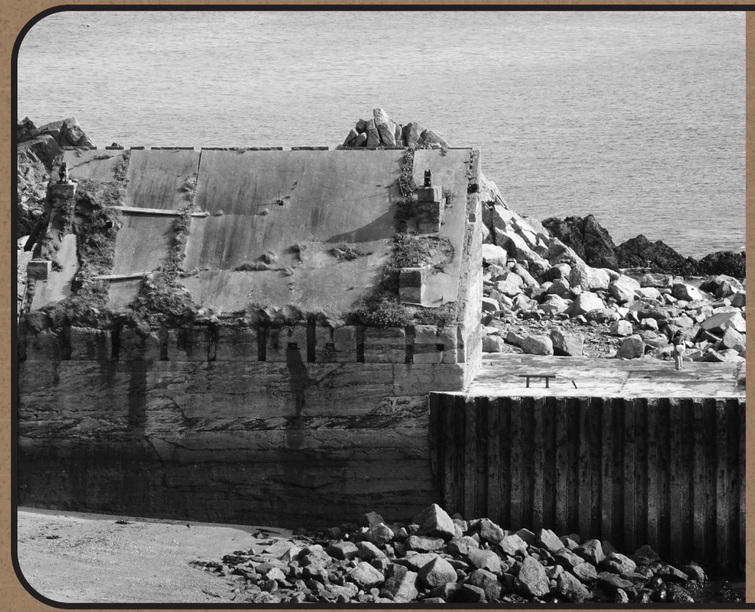
Wood

- forgottan peices
- driftwood

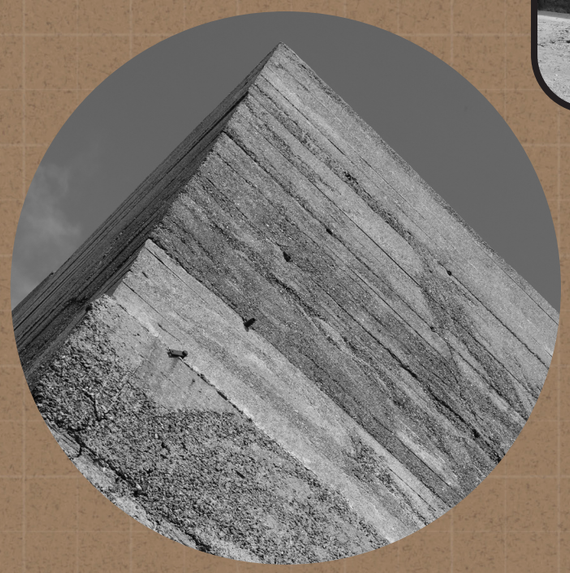
Stone

- gabbro
- granite





With my diveces I'd likes to visualize how materials influance the perceivement of place. How materials that are already there change, reaction to weather conditions.



Concrete

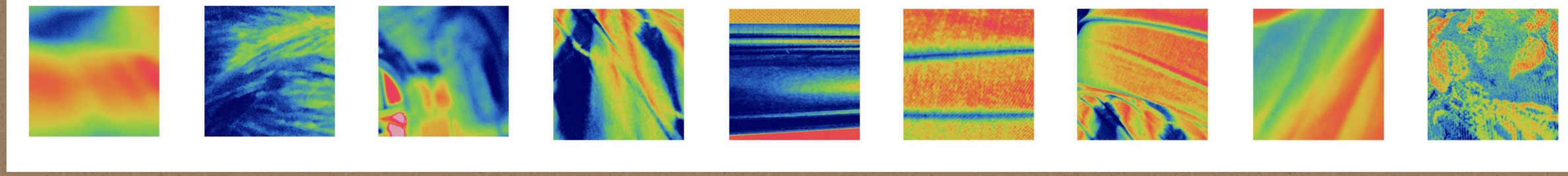
- pourred
- jetty
- ruins

Steel

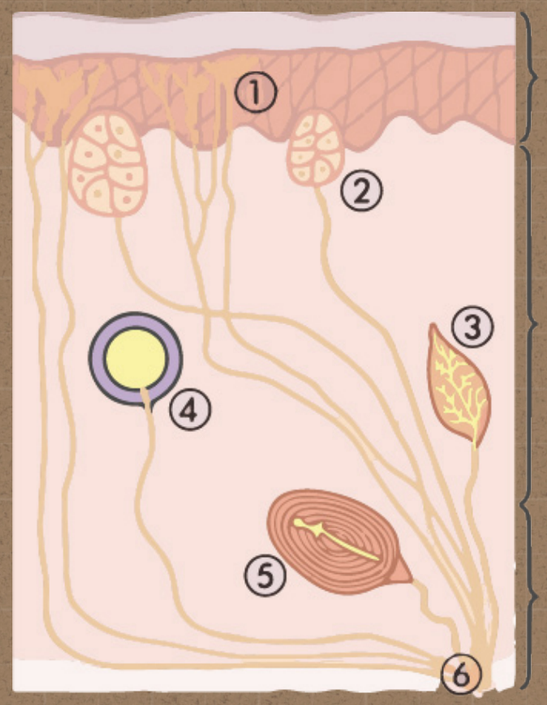
- rust
- metal
- copper



How we perceive - Skin and Temperature



Thermoception



Epidermis

1. Pain recepr (free nerv endings)
2. Meissner's corpuscals (tactile corpuscle)

Dermis

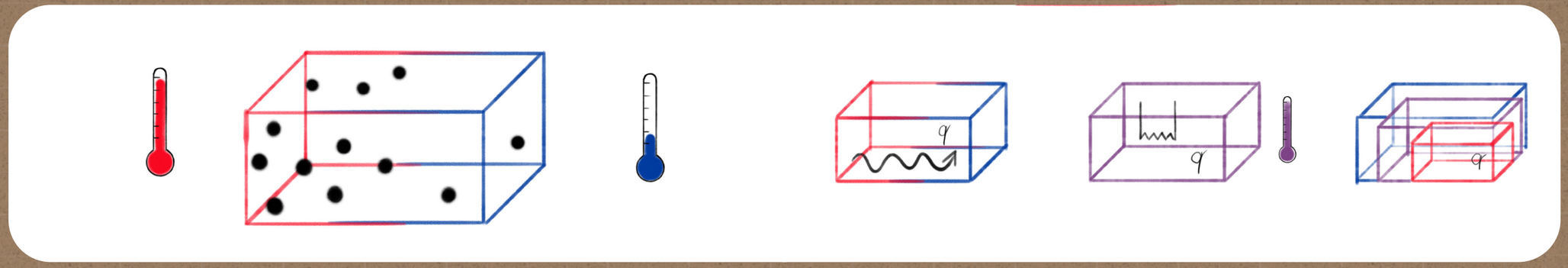
3. Heat receptor
4. Cold receptor

5. Vibration recepror
6. Sensory nerv fibres

Subcutis

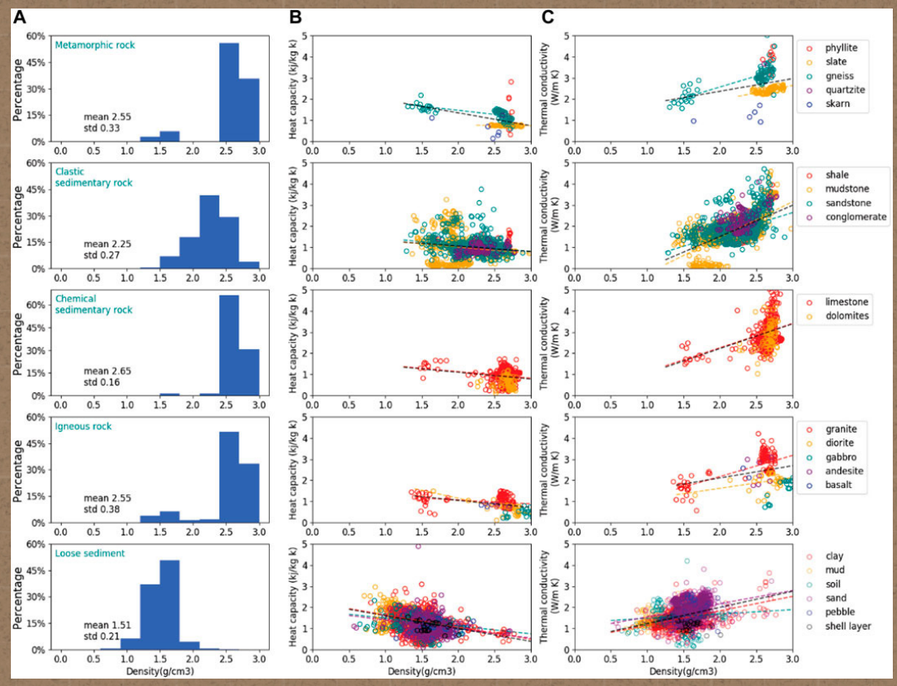
All the materials around us influence us. How do we perceive them? First with sight, and after, we form a preconception of what they are made of, how they would feel on the skin. Are they warm and fuzzy, or cold and rugged? Then we touch. Materials can surprise us because each has different attributes. And those qualities will determine the reaction in their state to environmental influences. Therefore how we experience them.

Thermal properties



Thermal conductivity | Heat capacity | Thermal expansion

Materials	Heat capacity kJ/kgK	Thermal conductivity W/mK	
Gabbro	0.89	2,8	
Wood	2,72	0,17	
Iron	0,452	81	
Concrete	0,88	1,0	
Glass	0,80	0,76	



Histograms of density (A) and its regression analysis with respect to heat capacity (B) and thermal conductivity (C) of rock and soil samples.

Heat Capacity

"How much energy you need to change the temperature of a given mass"

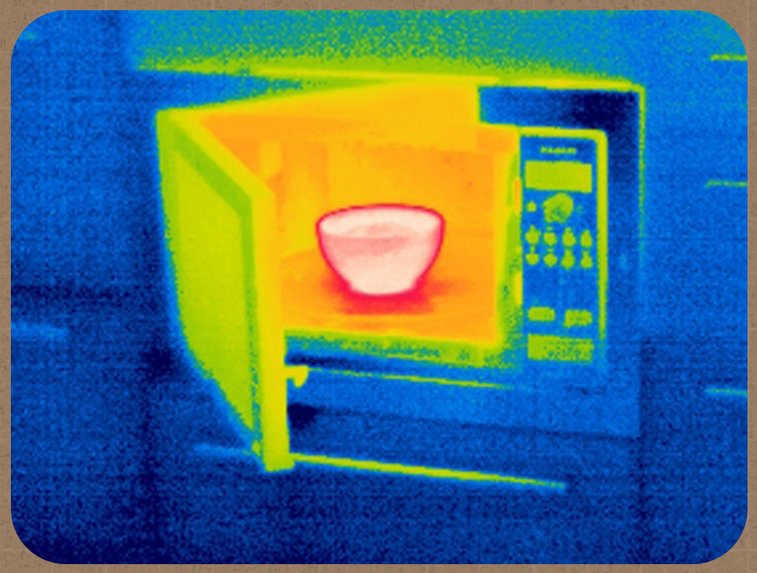
Each material has differenc thermal conductivity therefor their temerature will differ after the same amount of heat applied. Their state determined by other properties as well.



Bigger tempreature Increase

Smaller tempreature Increase

Same amount of heat applied

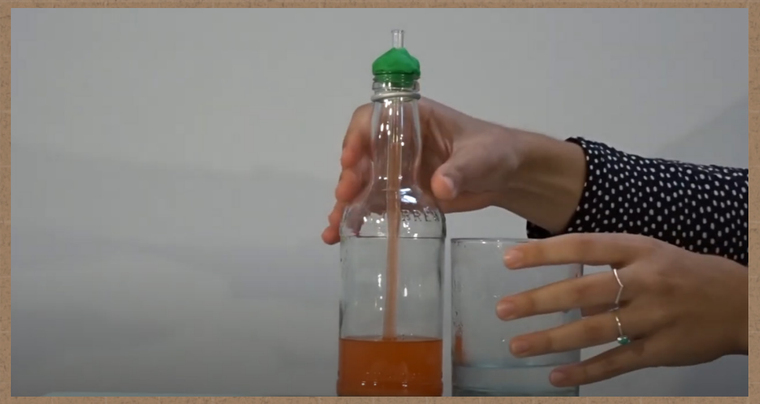




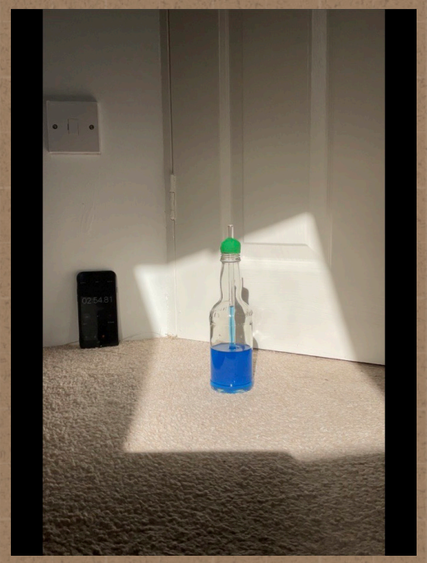


Thermometer development

Experiments



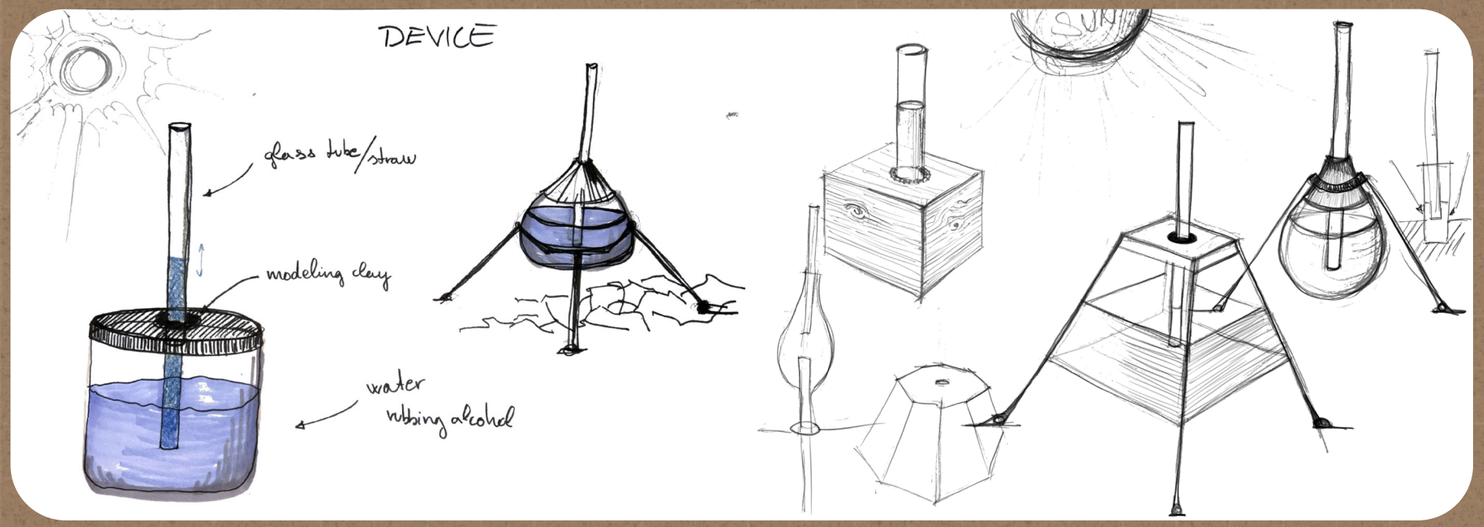
https://youtube.com/shorts/6-3fY-faWlMY?feature=share

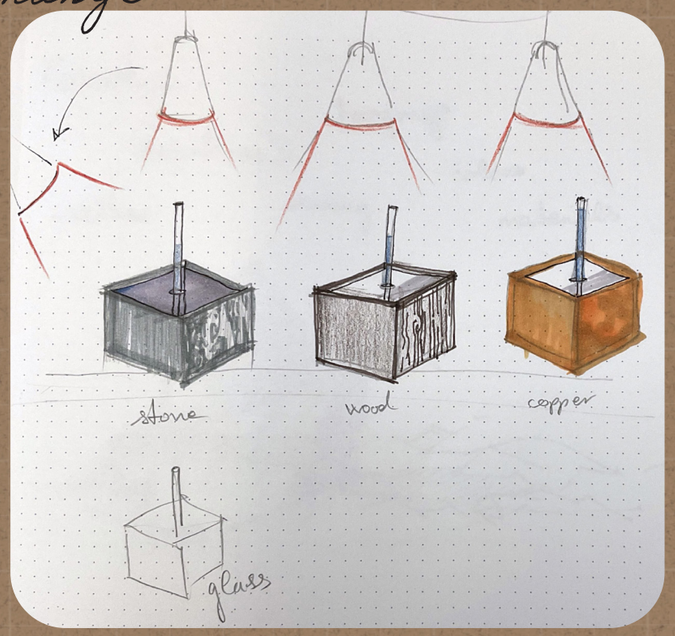


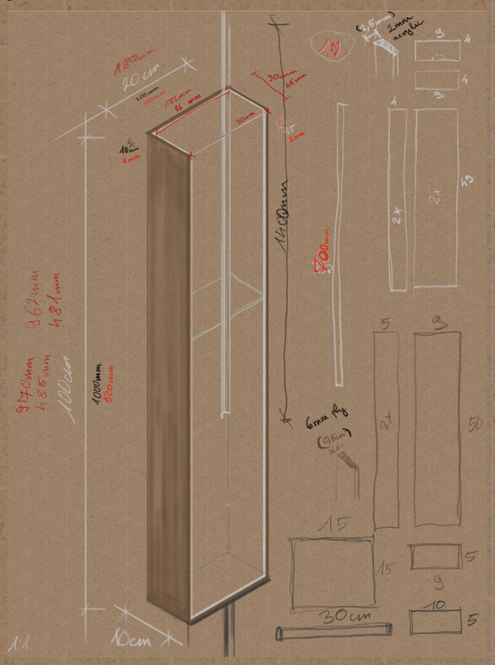
https://youtu.be/rwGQJh6VLgM



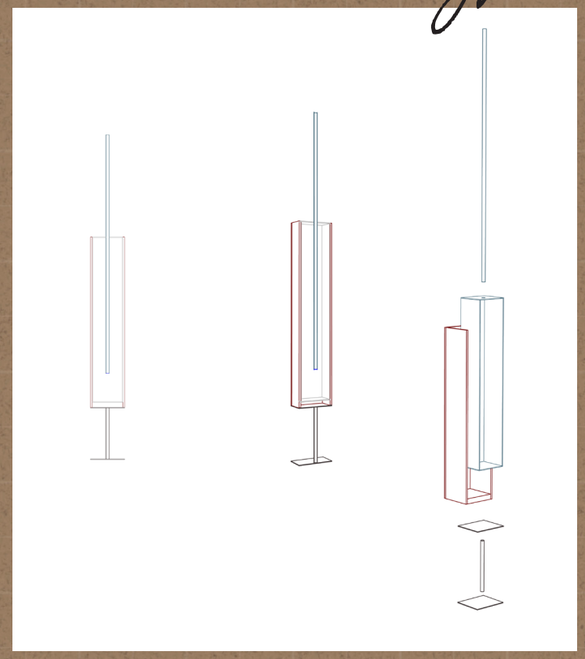
I conducted home made experiment with a seald bottle, a glass straw and 50-50 ratio of water and rubbing alcohol. As it heats up the liquid expands and will go up in the tube showing the the temperature change







Prototype

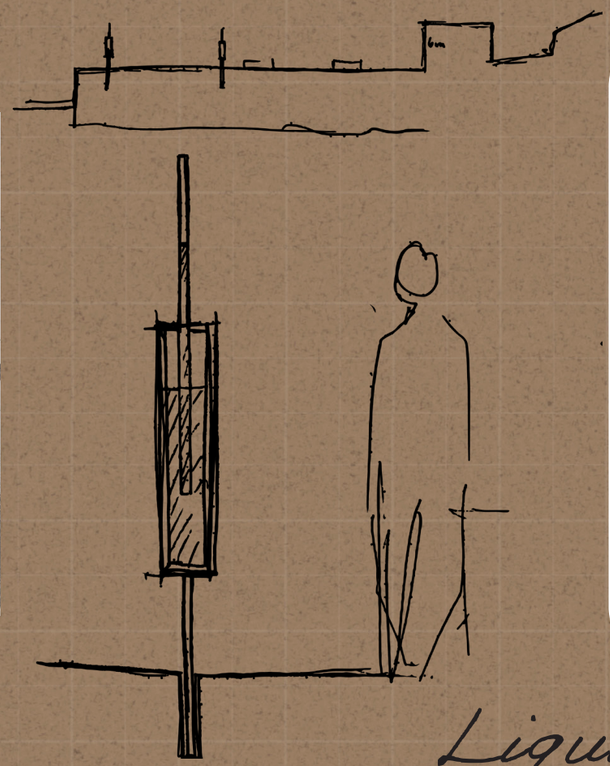


Thermometer development

Shape and size

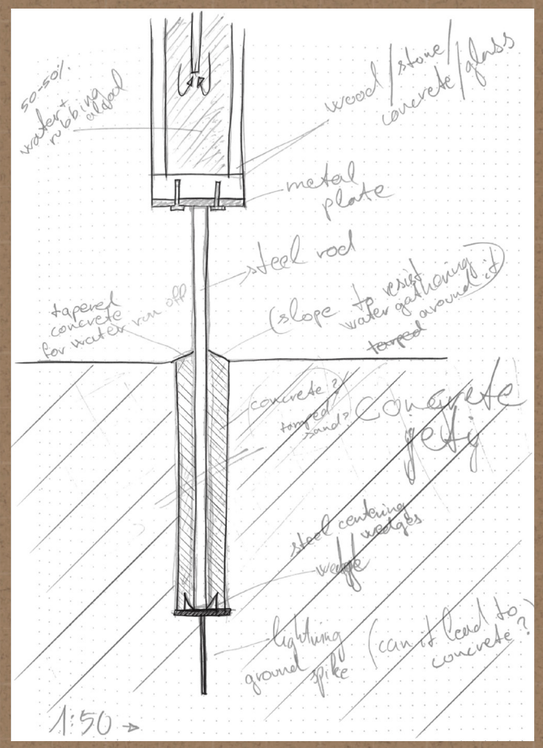


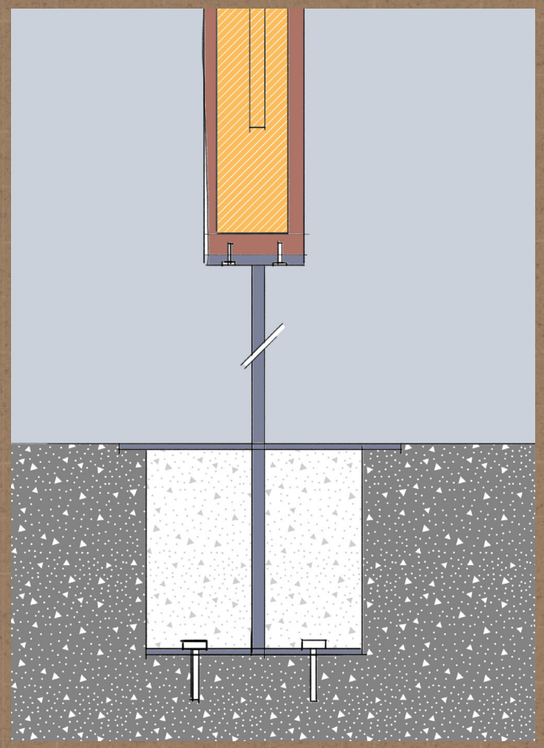






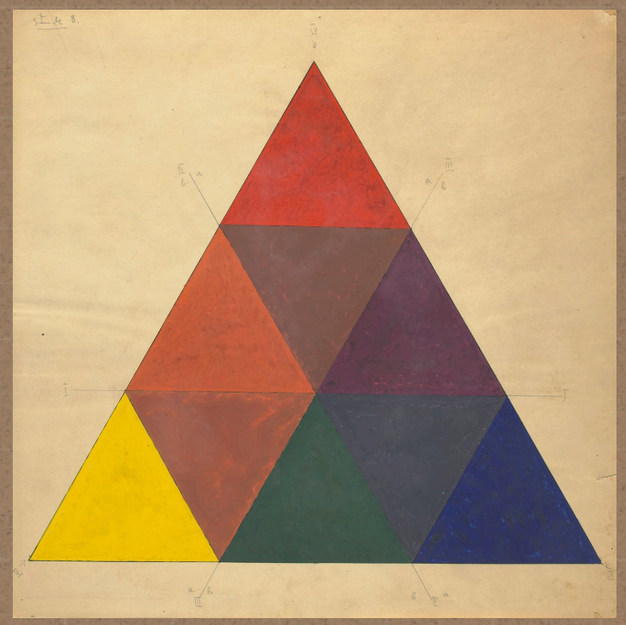
Footing





Liquid

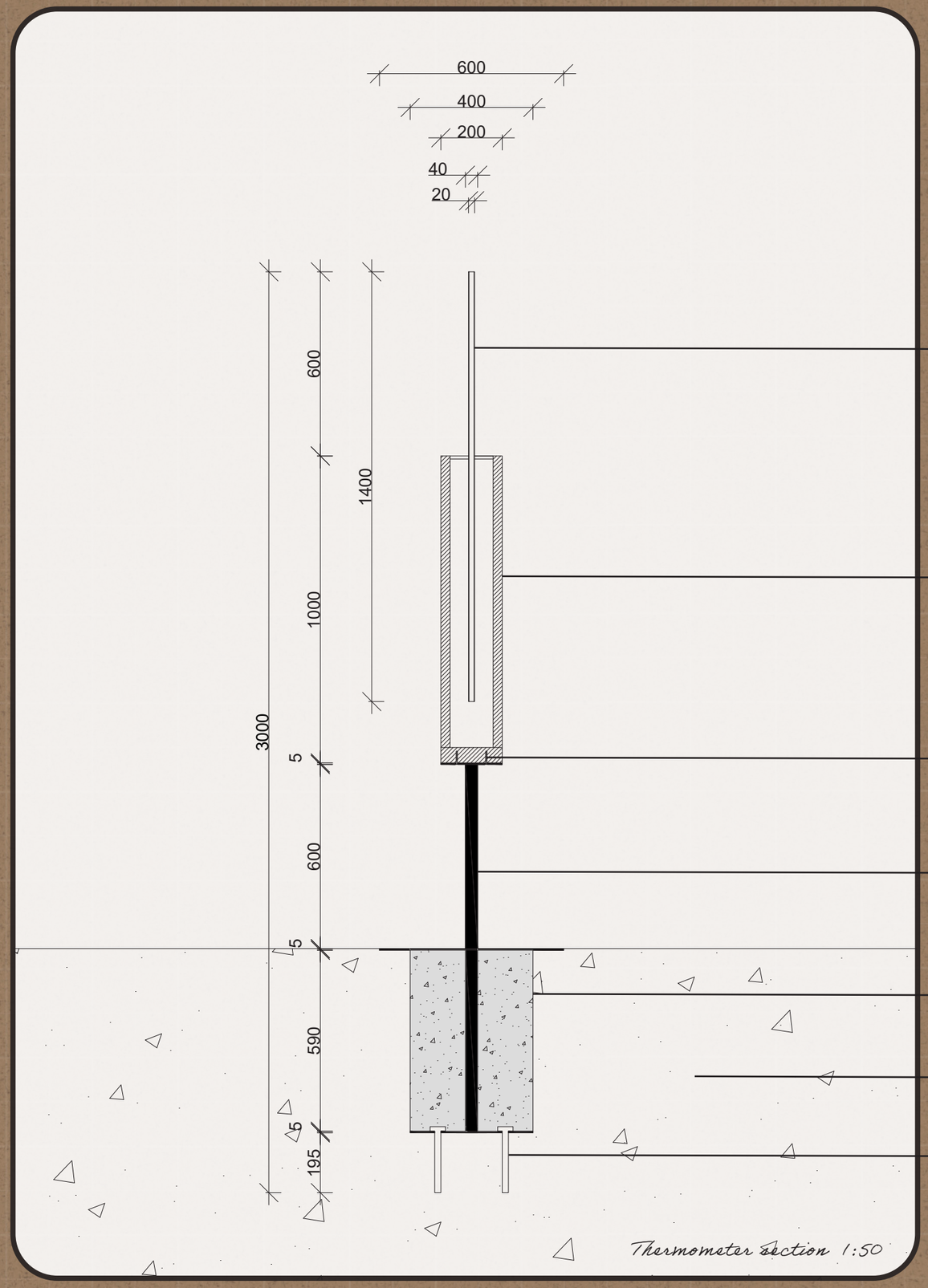
- 50-50% water-isopropyl alcohol
- the colour needs to contrast with the colour of the sky - orange/red



PROPOSAL



PROPOSAL



Thermometer section

glass tube, outer diameter 20mm

gabbro/granite, wood, metal, glass sealed container, thickness: 30mm, filled to 3/4 with 50%-50% water and isopropyl alcohol

device connector to footing

steel rod, diameter 40mm

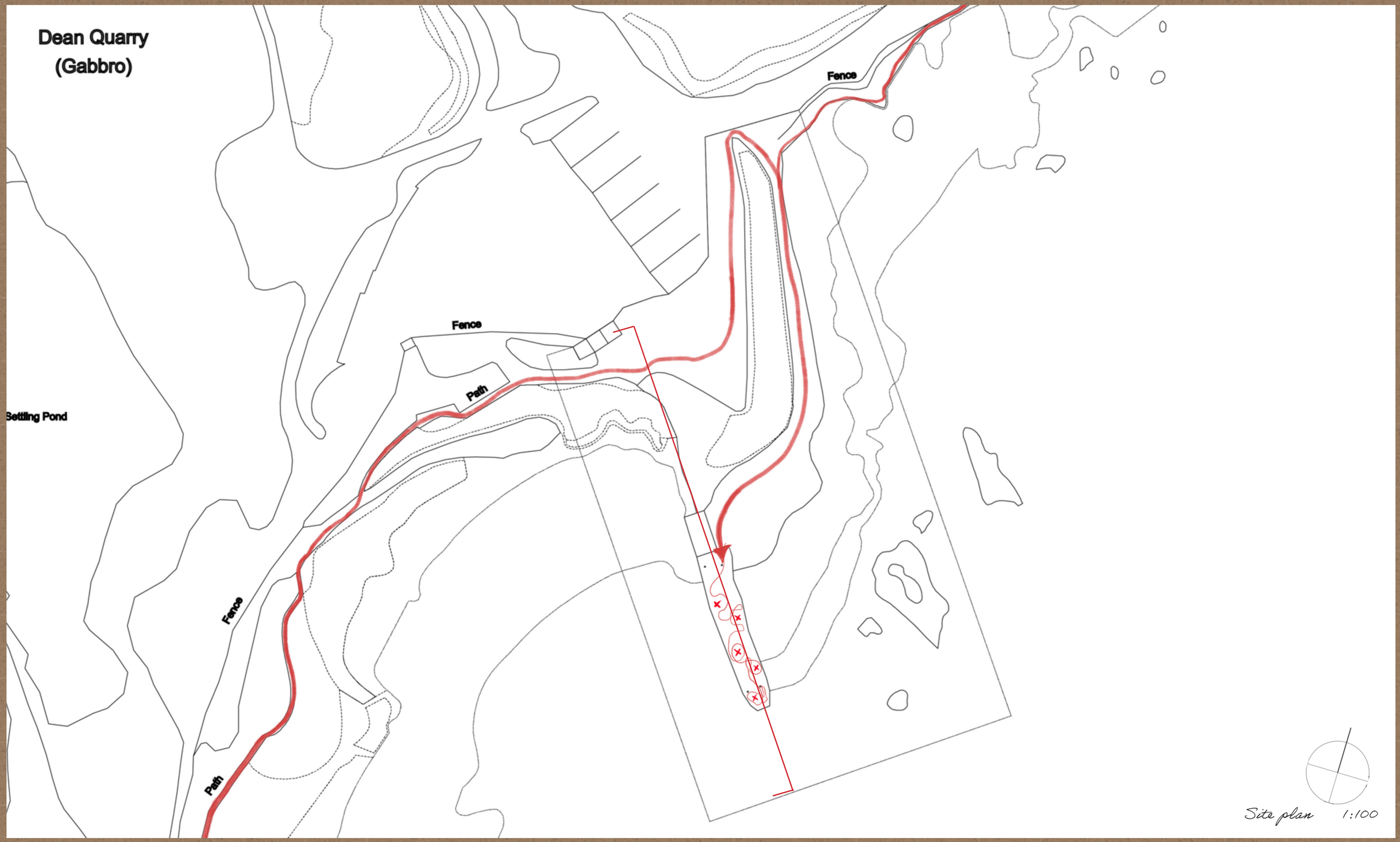
new concrete refill

existing concrete jetty

footing fixture

Site plan *with path to approach the jetty*

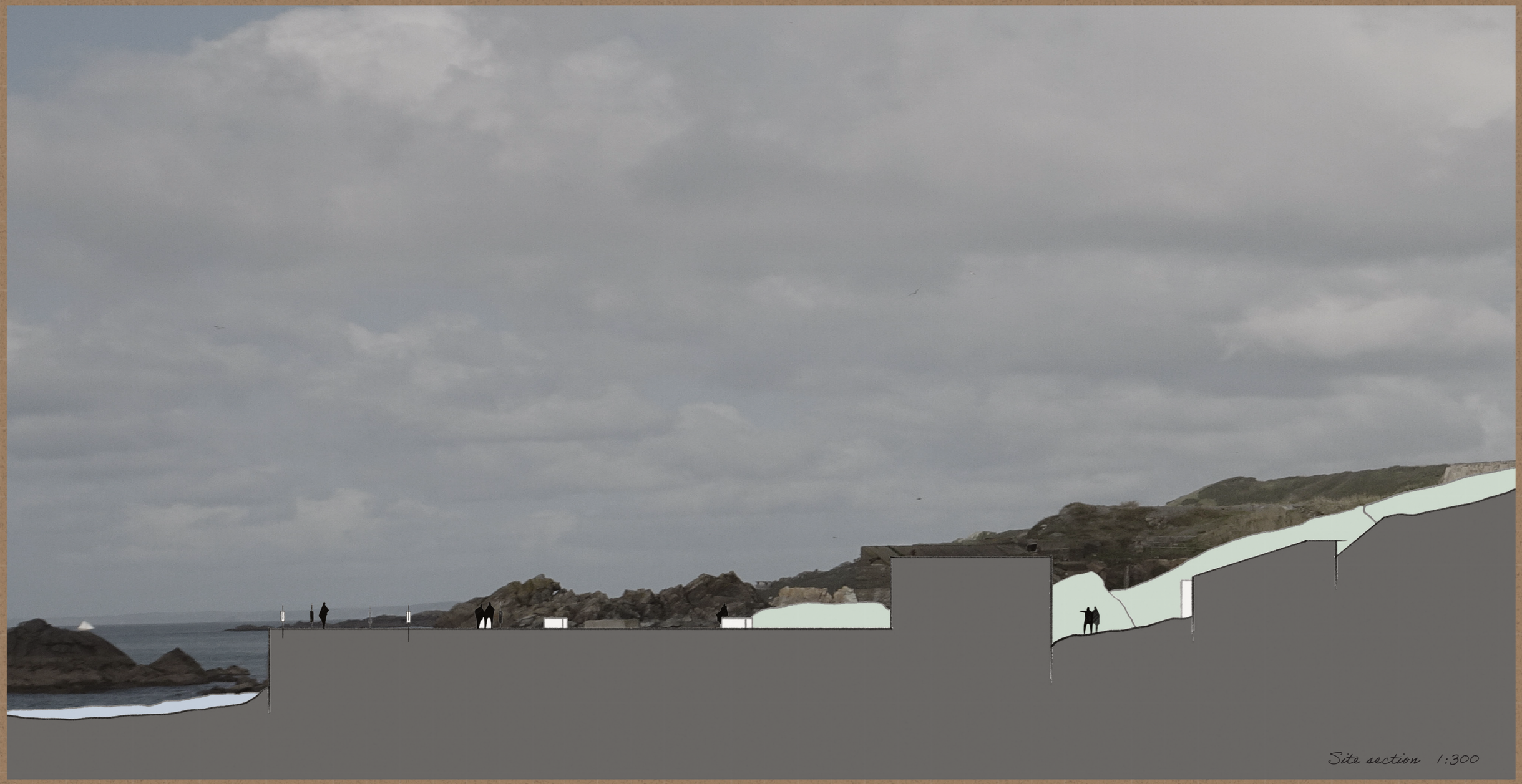
PROPOSAL



Site plan 1:100

PROPOSAL

Site section



Site section



Site section



PROPOSAL



2023.

