Taste of the Reitdiep

Agricultural Continuity in a Shifting Landscape

Technologies & Aesthetics P5 Presentation 19/06/2024 Mila Kovacev

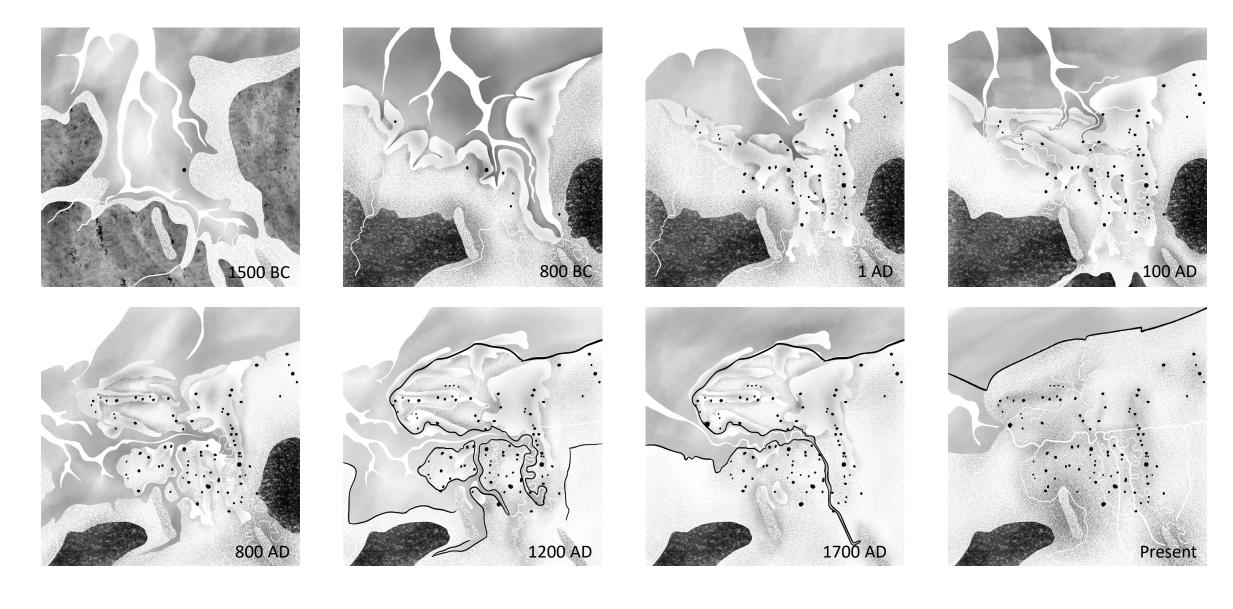


The Context



Groningen

Landscape formation Northwest Groningen



The Context



Groningen

Land use Agriculture





Arable farming (seed potato, sugar beet, winter wheat)



Dairy farming

Future of the site? Northwest Groningen



Salt marsh landscape coastal protection

The Challenges

Water

Rising sea levels
Rising ground water levels

Agriculture

Soil degradation Nitrogen emissions Climate

CO2 emissions Loss of biodiversity

The Challenges

Water Agriculture Climate

Rising sea levels Soil degradation C02 emissions

Rising ground water levels Nitrogen Loss of emissions biodiversity

The current agricultural system relies on a static and predictable environment. However, this approach is becoming less sustainable. Could accepting the landscape as dynamic lead to a more resilient system?

What about the agriculture?

Productive

Large scale
Global market
Monocultures
Static
Hard boundaries
Agriculture
Private

What about the agriculture?

Productive Performative

Large scale Small scale

Global market Local market

Monocultures Local diversity

Static Dynamic

Hard boundaries Soft boundaries

Agriculture Agrotourism

Private Public

How can architecture both preserve the past and accommodate the future through the experience of food in the context of a changing landscape?

How can architecture both <u>preserve the past and accommodate the future</u> through the experience of food in the context of a changing landscape?

Temporality

Permanent Temporary Seasonal Adaptive

How can architecture both preserve the past and accommodate the future through the <u>experience of food</u> in the context of a changing landscape?

Temporality

Permanent

Temporary

Seasonal

Adaptive

Taste

Sensory

Local identity

Cultural

Social

How can architecture both preserve the past and accommodate the future through the experience of food in the context of a changing landscape?

Temporality

Permanent

Temporary

Seasonal

Adaptive

Taste

Sensory

Local identity

Cultural

Social

Visitor route
Tasteries and attractions along the Reitdiep



Touristic route
Tasteries and attractions along the Reitdiep



What happens when this area becomes a salt marsh landscape? Tourism – dynamic experience Agriculture – oyster farming









Salt marsh at high tide Oyster tables



Oyster pools & Tasting rooms above

Old roof tiles
Used as hard bedding
Placed at the bottom of the salt marsh



Clay Starting the research with a material

Baked clay (bricks and roof tiles) is prominent in this whole region's architecture



Garnwerd, Groningen

Fertile **raw clay** drives its agricultural economy and is not as visible.



Clay Starting the research with a material

Baked clay (bricks and roof tiles) is prominent in this whole region's architecture



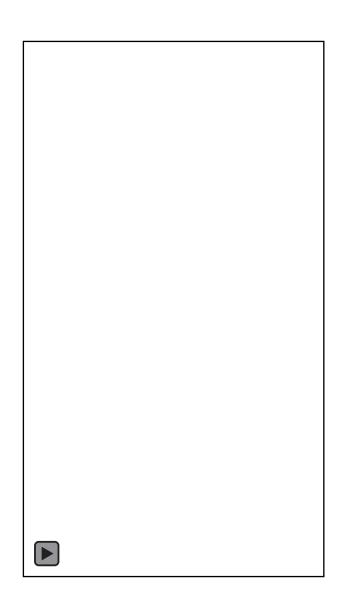
Garnwerd, Groningen

Fertile **raw clay** drives its agricultural economy and is not as visible.



Excursion
Wienerberger Roof tile factory, Deest

Process Automated Efficiency New technology



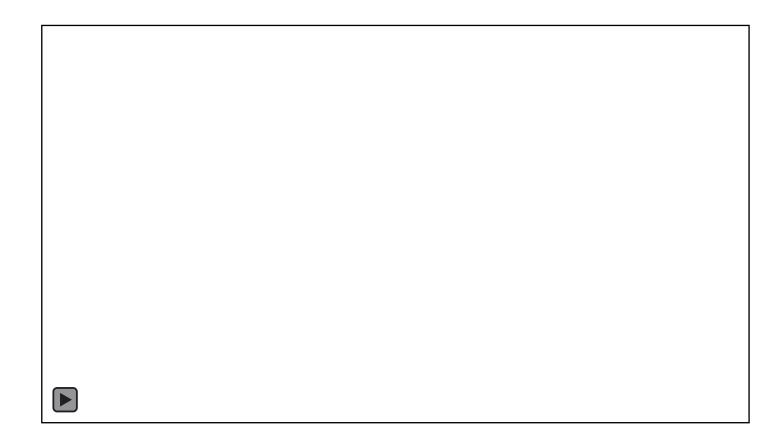
Result
Standard products
Large scale production
Global outreach

Application
Reuse as cultural layer
Whole and crushed as aggregate



Excursion Vogelensangh, Deest

Process
Ring oven
Less efficient
Old technology

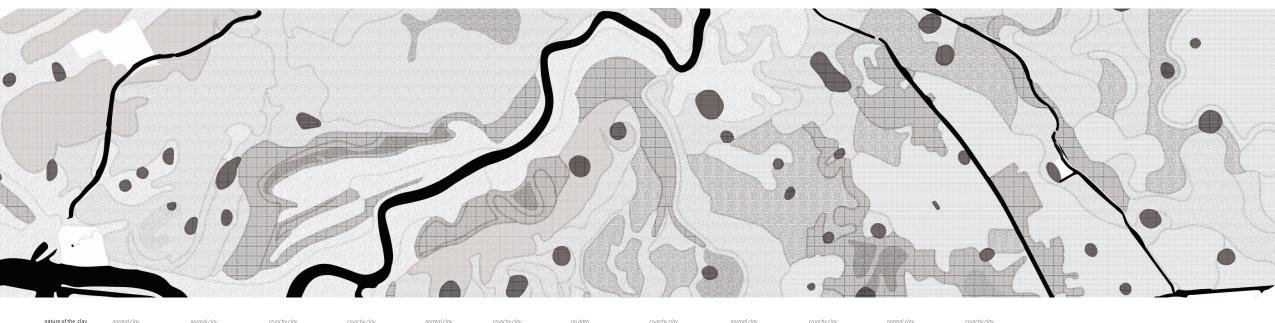


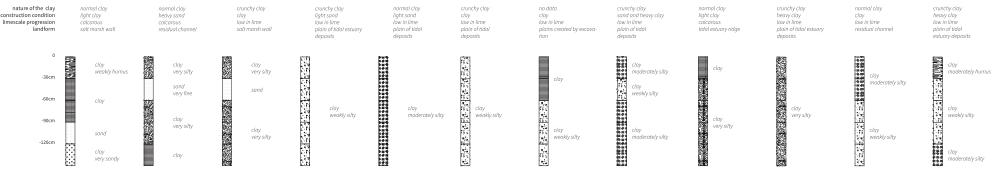
Result Irregular shape Irregular colour

Application Reuse; Aggregate



Geological Map Selected site





Extraction locations Varied clay types and geomorphologies



Extraction and Collection



Earth Auger 120 cm deep 20 cm biomaterial

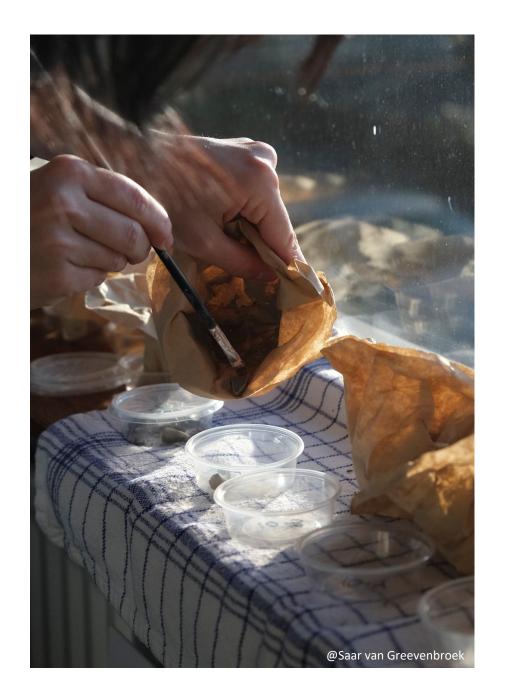
Sapmles Clay and biomaterial



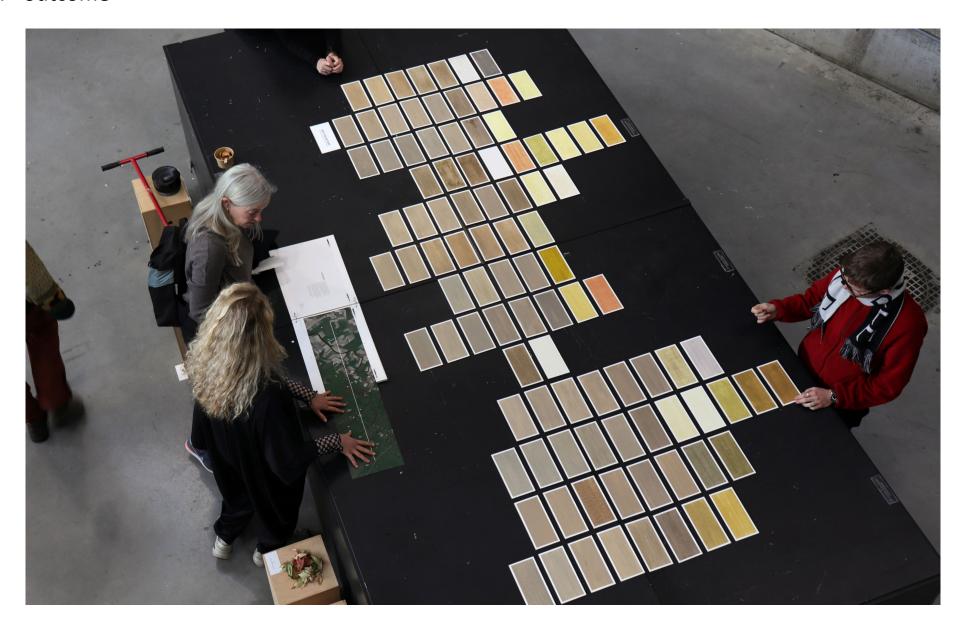
Processing
Plants – lake pigment method



Processing
Clay – drying, settling, grinding



Exhibition - outcome



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Rammed earth workshop Raw earth as a building material

Testing different earth mixes Different quantities of water Varying pressure



Rammed earth workshop Raw earth as a building material







Rammed earth columns Rammed earth wall Compressed Earth Block (CEB) Rammed Earth Excursion
Observation Tower, Belgium
De Gouden Liniaal Architecten, 2016



Rammed Earth & Temporality

Rammed Earth Excursion
Observation Tower, Belgium
De Gouden Liniaal Architecten, 2016

Protected sheltered smooth



Rammed Earth Excursion Observation Tower, Belgium

De Gouden Liniaal Architecten, 2016





exposed worn rough

Research Takeaways

Function

Adaptive (temporal)
Productive & performative
Embedded into the
landscape

Materiality

Temporality (soft & hard)
Mainly Local materials (clay)
Layering – weaving of old and
new materials

Climate

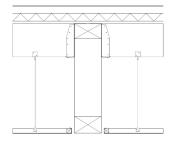
Natural materials
High thermal mass
Natural insulation

Design/Form
Approaching the building, view from the touristic route

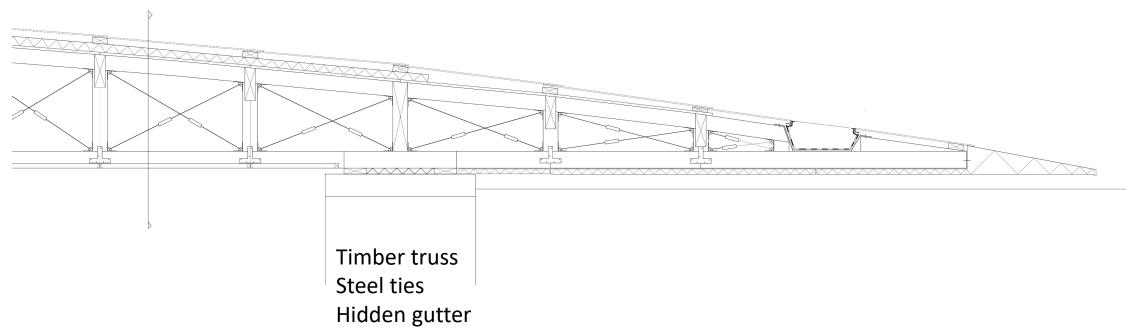




Roof detail 1:10

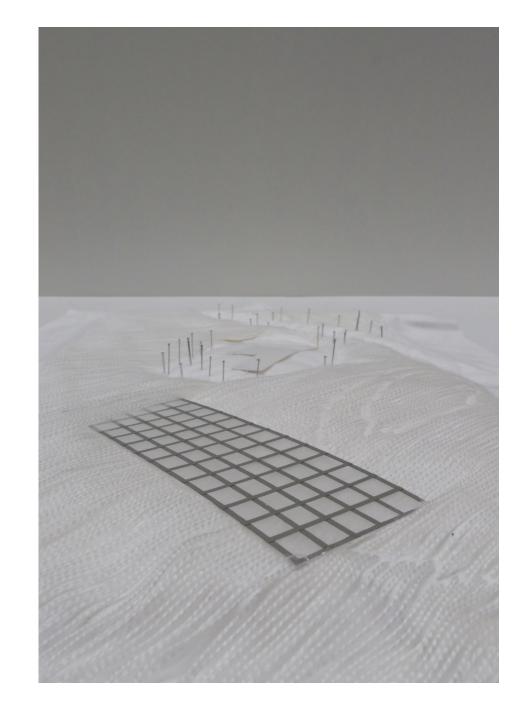


Suspended ceiling Linen fabric pulled over wooden frame



Sandwich panel on the end Solar panels

Temporality Scale 1:500



Hard – foundation/bedding/oyster pools,
Soft – fluctuating landscape; raw clay

Temporality Scale 1:500



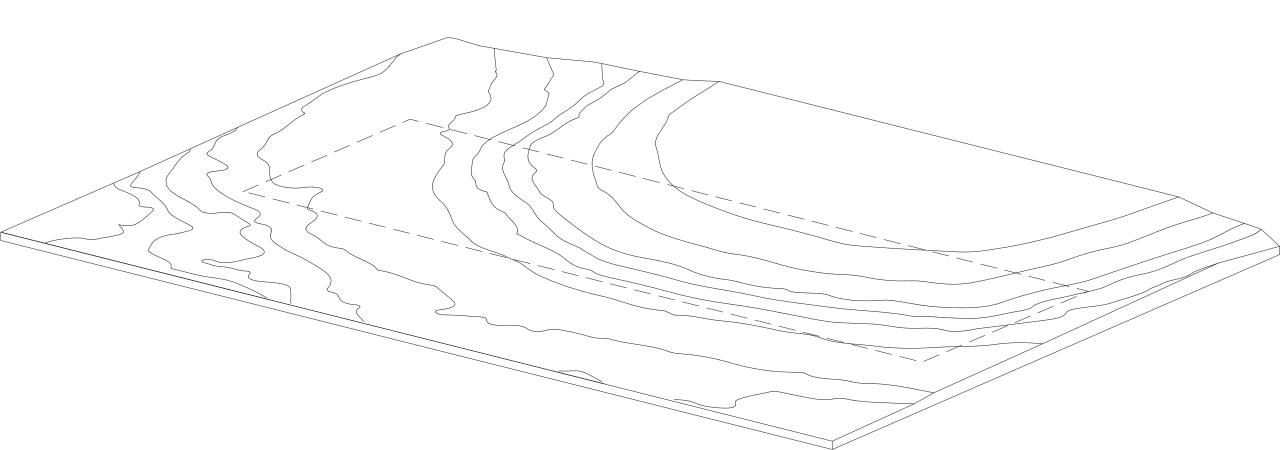
1:500 site
Dairy farm/tastery

Temporality Scale 1:500

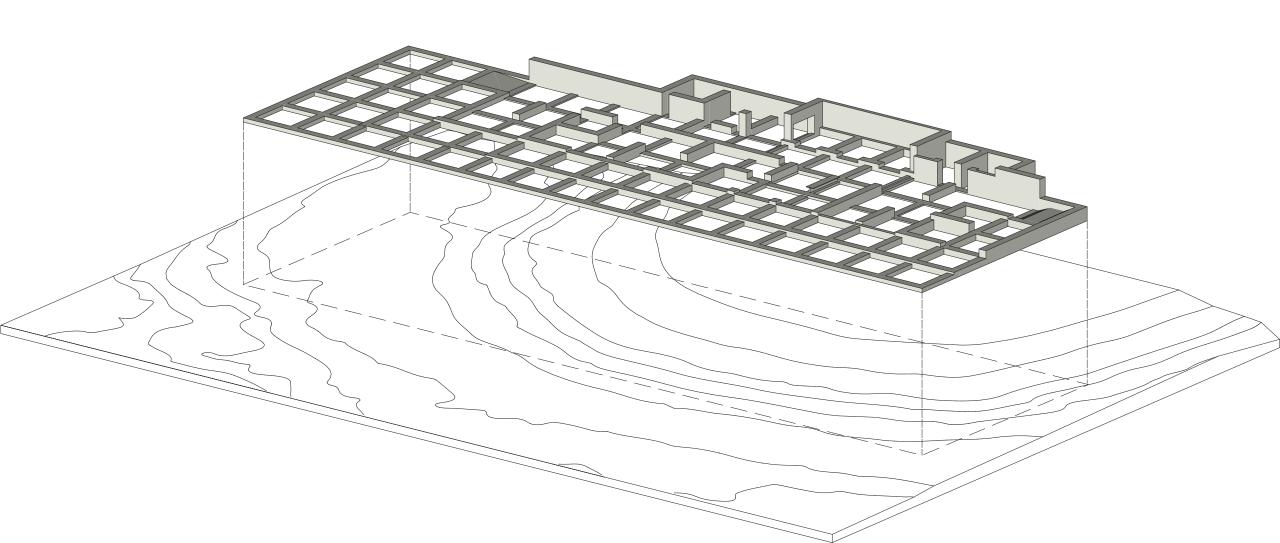


1:500 site
Oyster farm/tastery

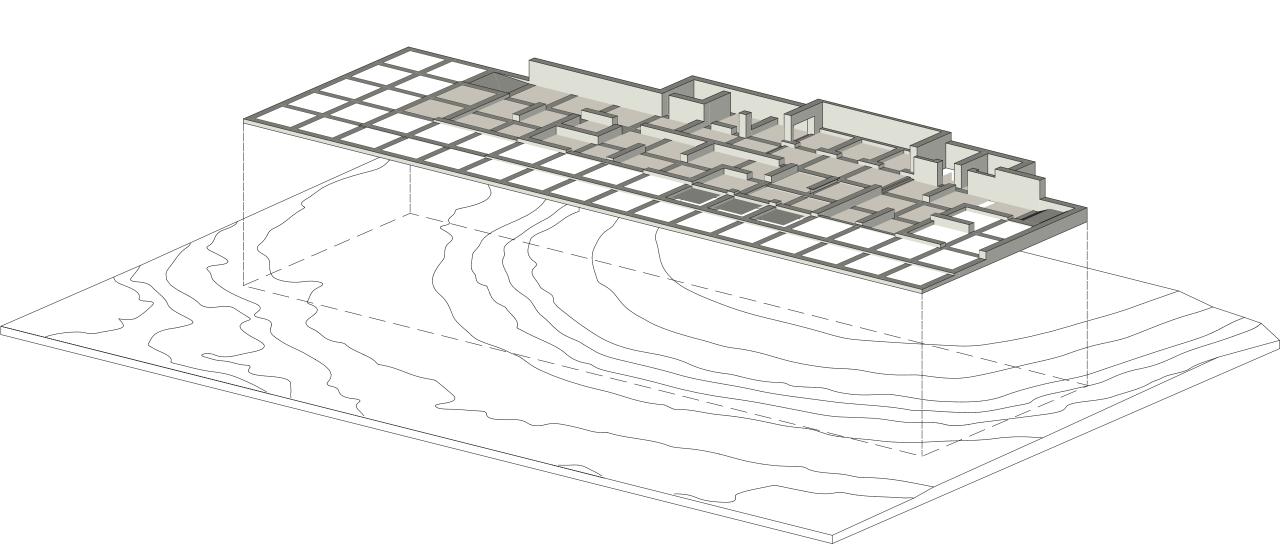
Construction Phases Phase 1 Excavation



Construction Phases Phase 2 Foundation

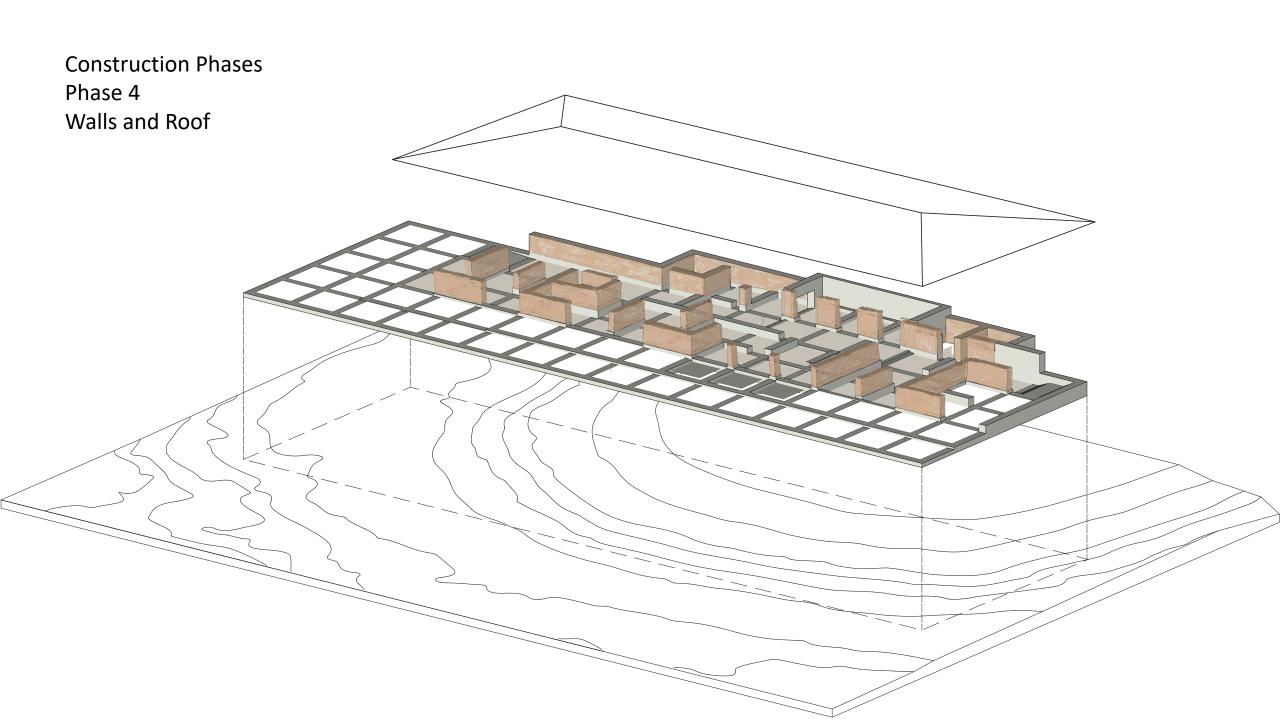


Construction Phases Phase 3 Floors

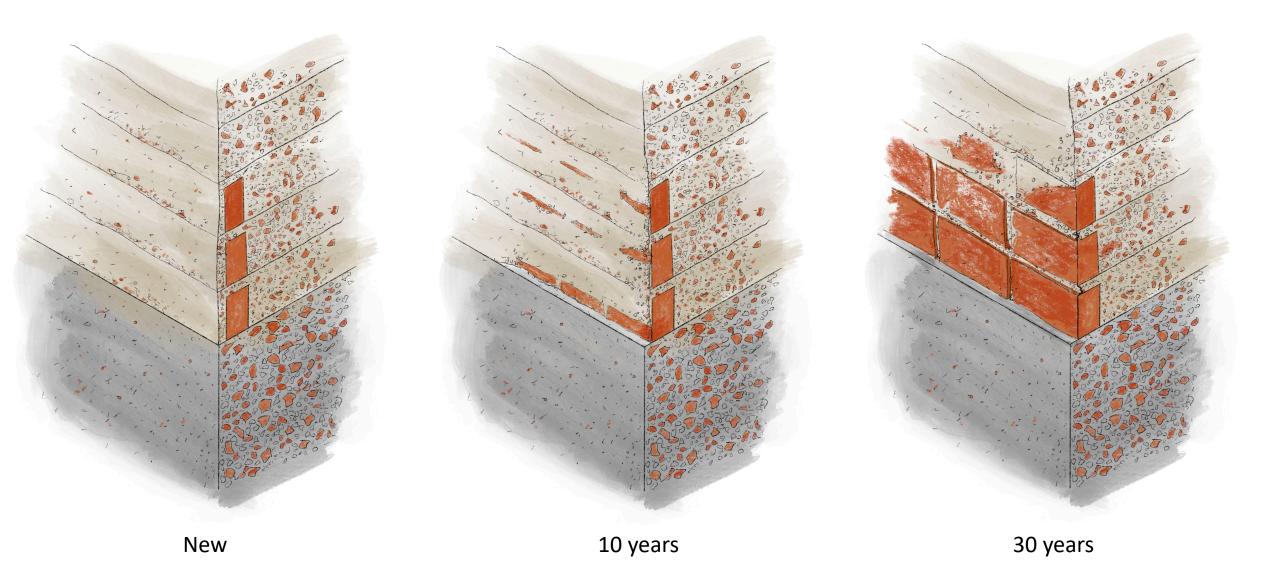


Inside floors over time Detail 1:10

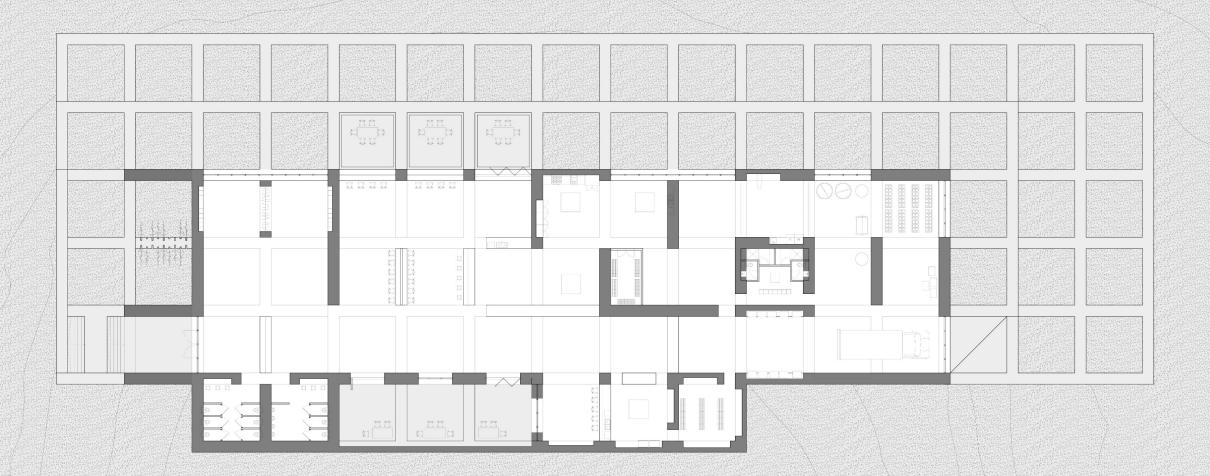




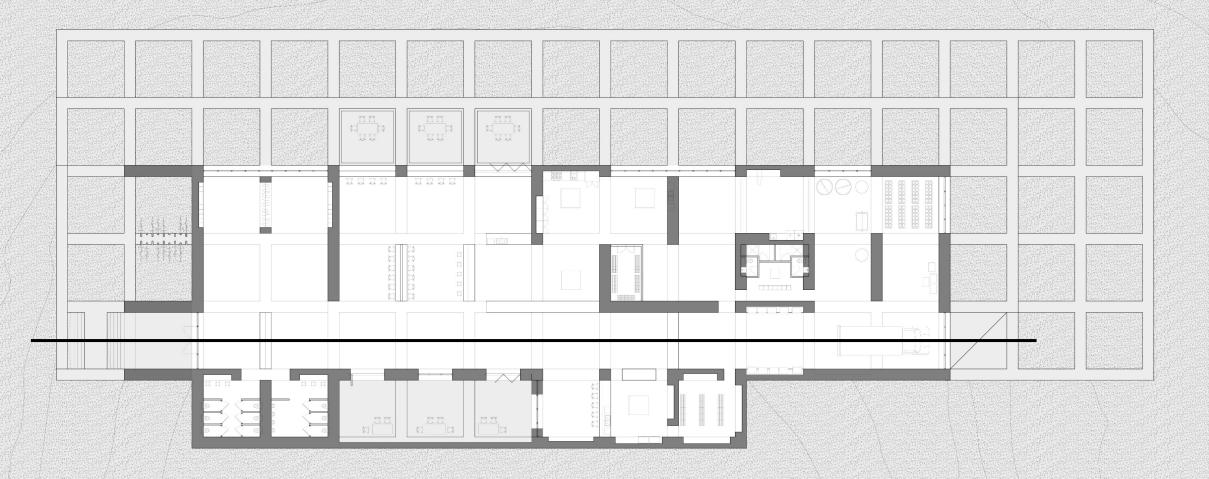
Rammed earth walls over time Detail 1:10



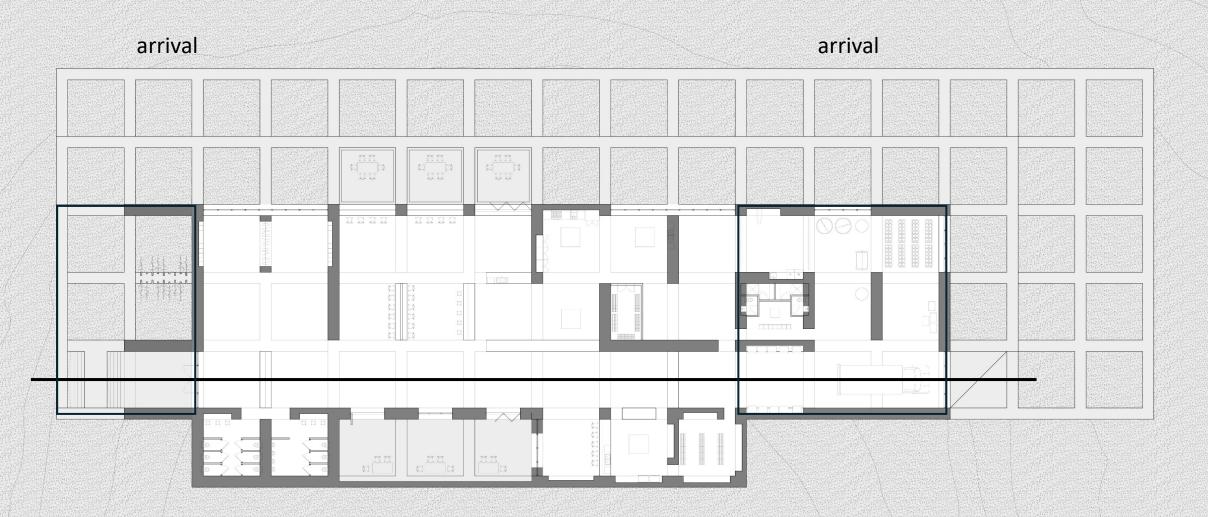
Spatial Organization Floorplan



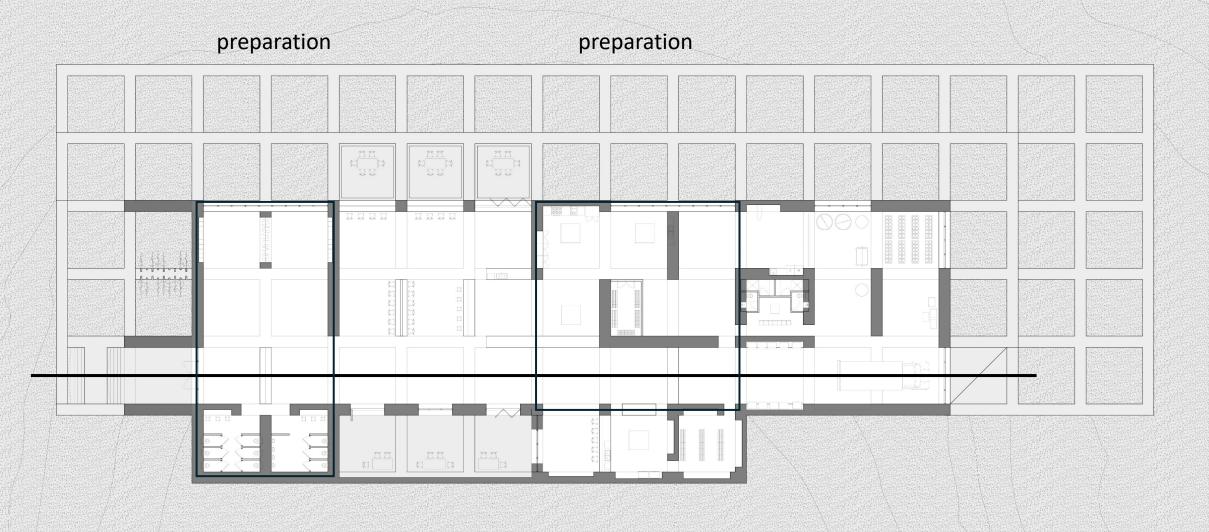
Longitudinal View
Connecting the entrances of the visitors and staff
Connecting productive and performative aspects of the building and site



Spatial sequence

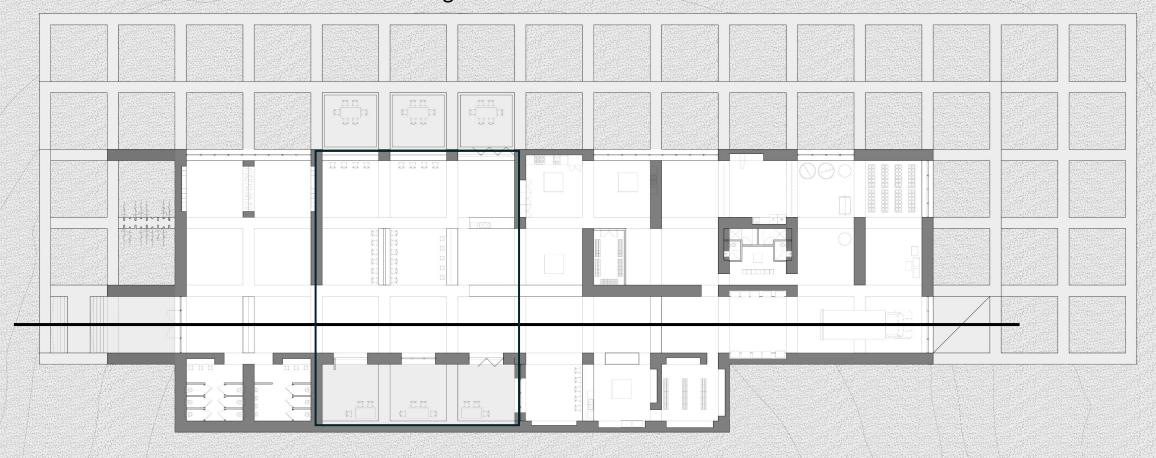


Spatial sequence



Spatial sequence

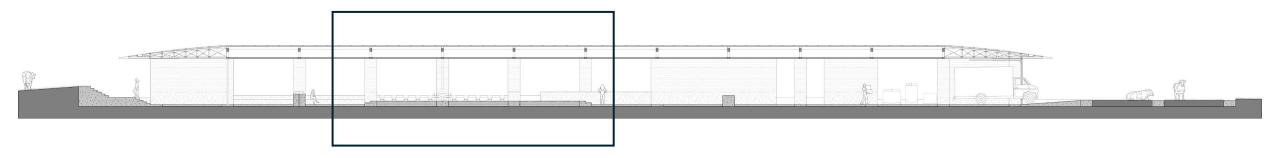
tasting



Longitudinal section Flows Meeting at the center

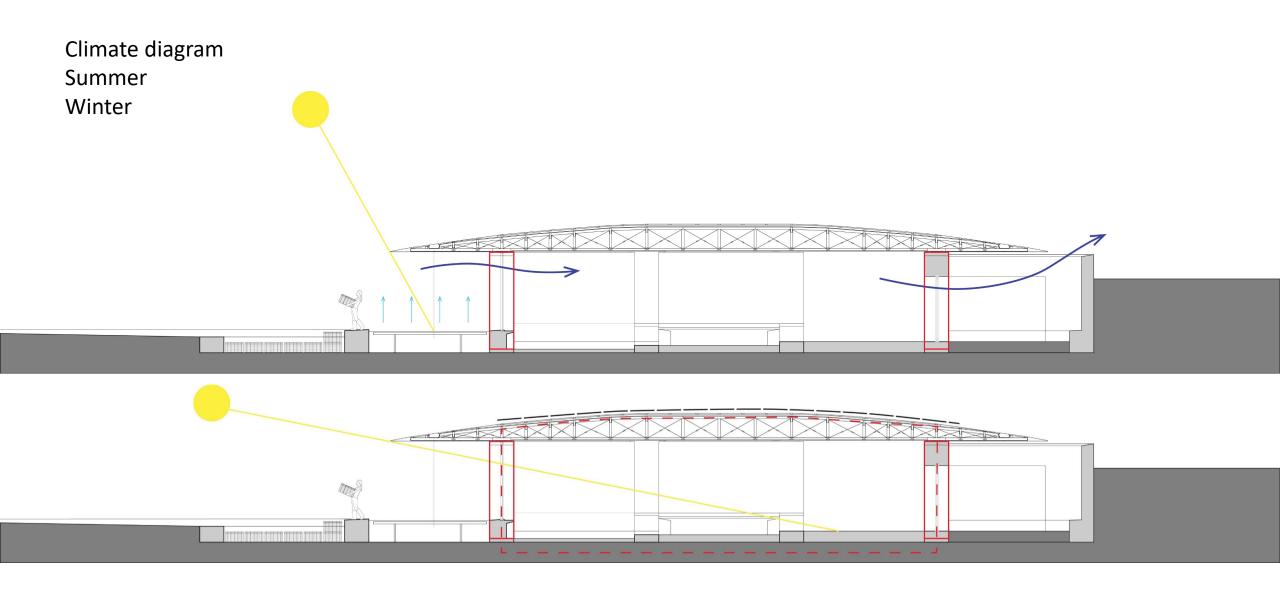


Longitudinal section Flows Meeting at the center



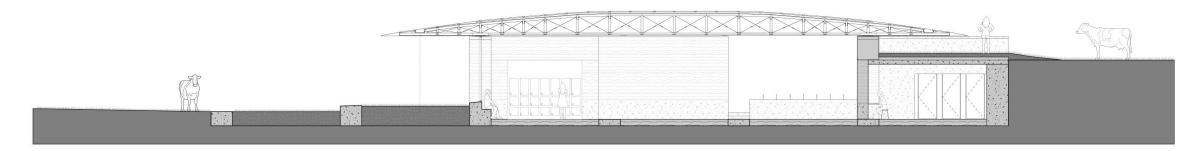
Tastery View

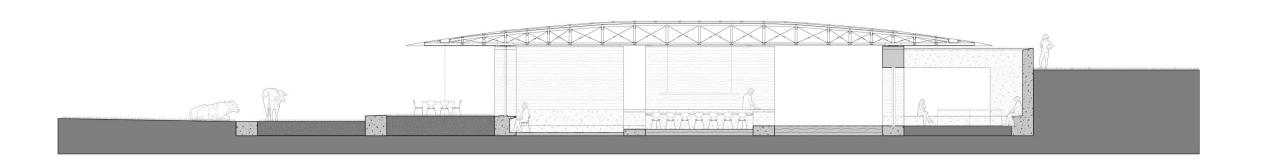




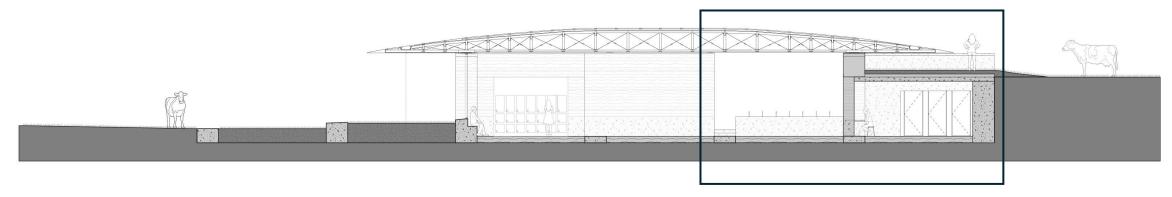
Apart from adapting to the landscape in terms of **function** and **materiality**, the building also adapts to the seasonal **climate.**

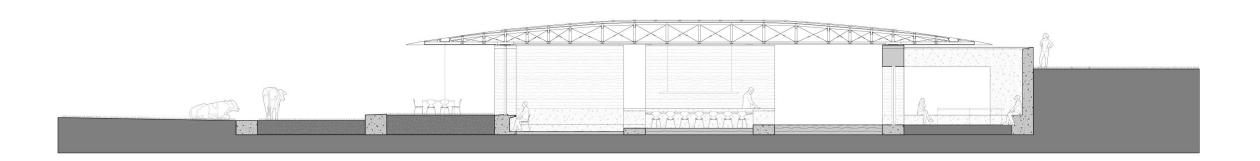
Short sections – phase 1 Visitor preparation space Tastery



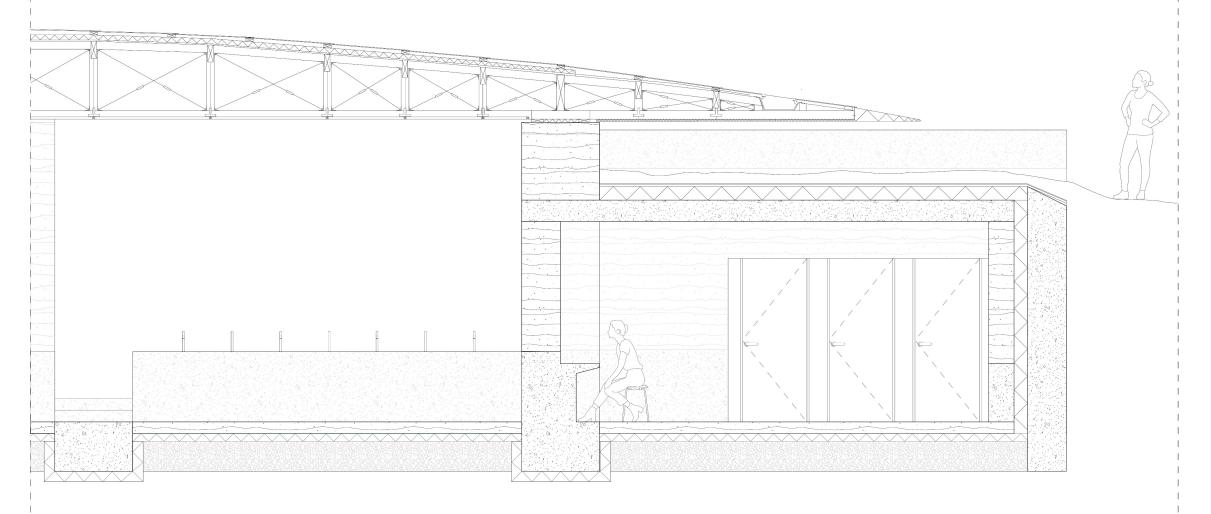


Short sections – phase 1 Visitor preparation space Tastery

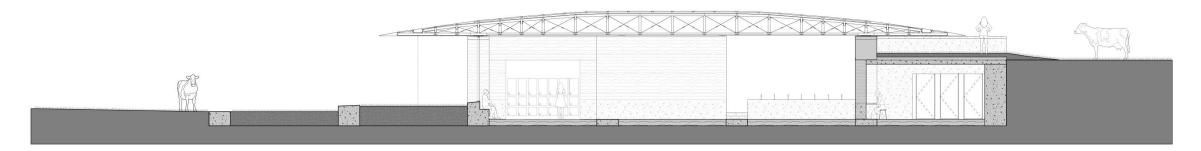


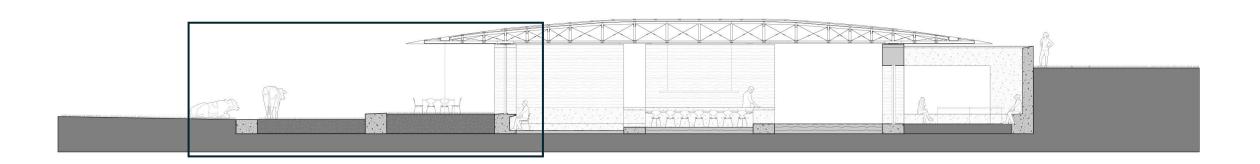


1:20 Detail Green roof

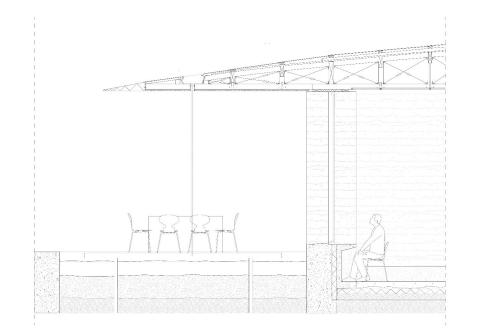


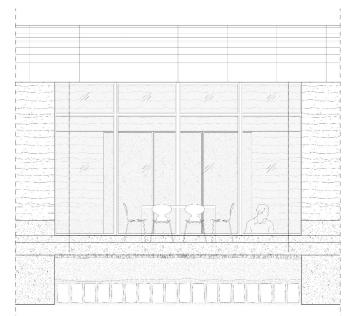
Short sections – phase 1 Visitor preparation space Tastery

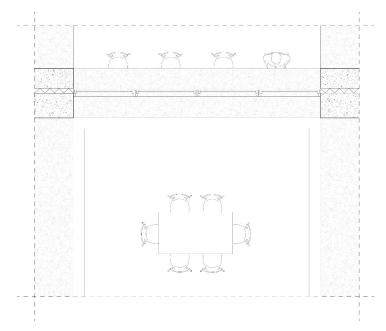




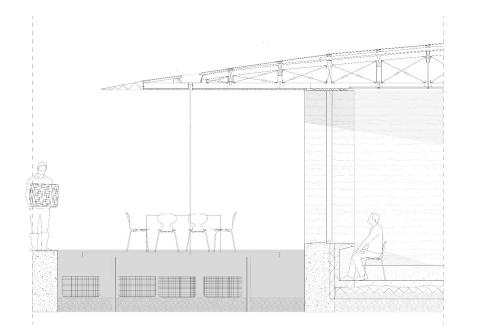
1:20 Combination drawing South-West Façade Phase 1

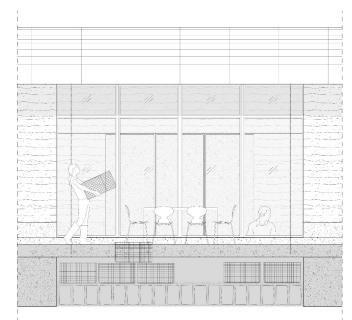


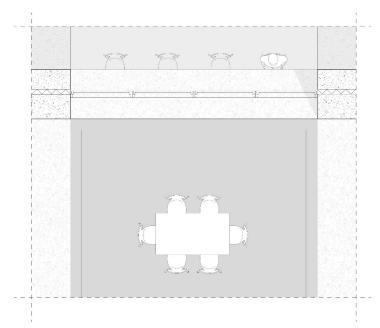




1:20 Combination drawing South-West Façade Phase 2



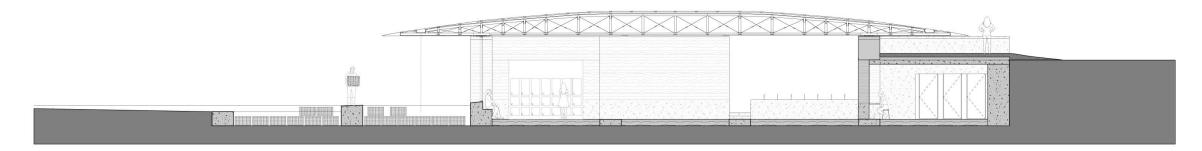


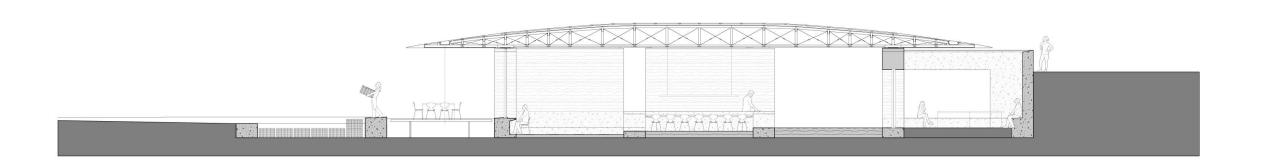


Farm fields view Phase 1

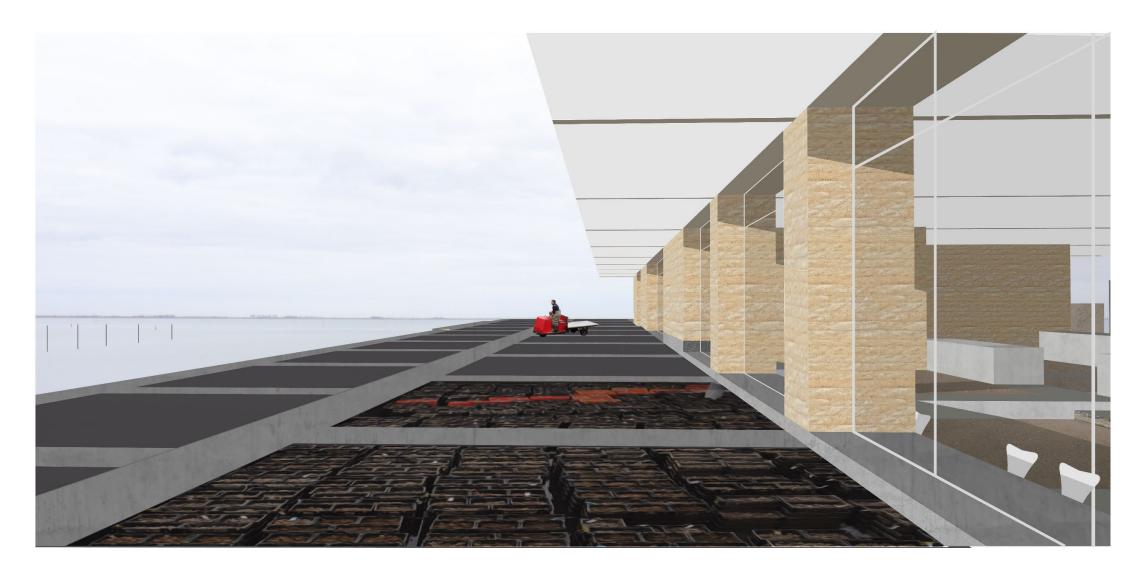


Short sections – phase 2 Visitor preparation space Tastery





Oyster fields view Phase 2



Research Question

How can architecture both preserve the past and accommodate the future through the experience of food in the context of a changing landscape?

- Incorporating the possibility of a future function
- 2. Weaving of old and new materials
- Enriching/elevating an existing function
- 4. Allowing the building to absorb the changes in the landscape

