Back to Nature: The Life Cycle of Pottery

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About Pottery Craft
The Cycle of Pottery

1. Mining raw clay
2. Raw clay processing
3. Making pottery
4. Firing pottery
5. Distributing pottery
Nature as Foundation

"The Pottery cycle itself is a microcosm of MAN - NATURE - CULTURE. From digging clay to forming it into wares, to glazing, firing and distributing them."
Design Goal

How to use architectural ways to translate the value and the spirit of the pottery craft culture?

Three entries

- Cycle of pottery craft (Raw material - Making - Consumption)
- Nature as a foundation
- Earth as a building material and technique
The Urban Context
River Deposit Clay

The Urban Context

Site + Arnhem
The Urban Context

Arnhem Pottery Culture

Past

The history of Arnhem in producing pottery

Present

Part of the local cultural industry
The Urban Context
The Urban Context

Surroundings

**Duno Park**
The site is inside the duno park and by the Rhine, with beautiful natural environment

**Heveadorp**
Nearby there is a town. The site is with convenient access to public

**Height Difference**
28 meters from river side to top

**Short History**
Old Duno Mansion, destroyed in 2nd World War
The Urban Context

Old Duno Mansion

Current Situation

River Rhine

Duno Park

Heveadorp (living district)
The Urban Context

Approaching the woods

The Woods and the Slope
The Urban Context

Clay Ground at bottom

Facing the river

Duno Park

River Rhine

Heveadorp (living district)
The Urban Context
The Urban Context

Pathway at top

Street at bottom
The Urban Context

Natural Environment

Height Difference

Narrative Reflecting Pottery Cycle to Link the Surrounding
The Building Proposal
Programs

- Programs as a way to reflect the cycle of pottery
- Making space (private) and Consumption space (public)
The General Layout

- 4 clusters scattered around the site to structure the overall layout instead of being a compact one to get stretch into the natural environment
The Building Proposal

The General Layout

- Building clusters oriented all in one way to fit into the topography as well as facing nice river view
The Building Proposal

Raw Material $\rightarrow$ clay Processing

Making $\rightarrow$
- workshop
- oven
- office
- classroom

Consumption $\rightarrow$
- exhibition
- shop
- auditorium
- tea room
The Building Proposal

Raw Material  →  clay Processing

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PUBLIC VIEWING POINT

STREET

CLAY GROUND

RHINE RIVER
The General Layout
- Building clusters structures into two woods: an inner one and an exterior one
The General Layout

- The inner woods is more communal in connecting different clusters and providing a natural environment for people to walk into

- The exterior woods is more wild, free and towards the river.
The Building Proposal

Model 1:250
The cluster of the pottery making

- Workshop as center
- Oven and chiminey as outstanding point
- Interactive
The Building Proposal

The cluster of the exhibition hall

- Exhibition hall towards the woods in another direction
- Gallery as a semi-outside space connecting the outside (inner woods and nature) with the inside
The Building Proposal

The cluster of the public activity

- Shop and gallery towards woods in different direction

- Auditorium and tea room standing at the highest point with nice view to the river
The Circulation

- Entrances at both bottom and top
- Separate entrance for tea room from the public viewing point
- Outside ramp and semi-outside gallery connecting different clusters
The Building Proposal

The Circulation

- Visitors come by car enter from the bottom

- Sequence: passing by the workshop
  walking through the inner woods
  entering exhibition hall, etc.
The Circulation

- Visitors come by foot enter from the top
- Sequence: entering exhibition hall, etc.
  walking through inner woods
  getting to the workshop
Material and Structure
The Material: rammed earth

- Abundant, natural, local resources
- Evoke sense back to nature and earth
- Excellent thermal and load bearing performance
Material and Structure

- Concrete
  - Foundation
- Rammed earth
  - Load bearing wall
- Timber
  - Beams and roof
Material and Structure

The Structure

- Rammed earth wall as load bearing wall to support timber main beams
- Main beams support secondary beams in interior space
- Main beams support the third beams timber in the semi-outside space
Material and Structure

The Structure

- Timber main beams (bond beam) on rammed earth walls as a point of attachment for the roof structure and to maintain structural integrity

- Each bond beam structure for each main interior space
Material and Structure

The Structure

- Secondary structure and third structure system on the bond beam system
Material and Structure

The Structure

- The architectural language is to emphasize the surfaces: the wall, the roof, the glass curtain wall, the holes.
Material and Structure

Model 1:100
Material and Structure

Model 1:100
Material and Structure

Model 1:100
Material and Structure

Model 1:100
Material and Structure

Model 1:100
Material and Structure
Material and Structure
South-East Elevation of Experiencial Center 1:150

South-East Elevation of Workshop 1:150
The Workshop
Workshop Setting

- Workshop space as a central space
- Workshop setting reflects the working process flow
The Workshop

- throwing (forming)
- temporary dring collective working
- decorating (glazing, etc)
- throwing (forming)
- decorating (glazing, etc)
- collective working
The Workshop

cooling
Climate Design
Ventilation

- Mechanical ventilation system for each cluster
- Separate ventilation for oven and classroom
The Climate Design

Ventilation
- Air inlet on the floor
- Air outlet on the roof with mechanical fans
The Climate Design

Energy

- Summer: Natural ventilation in the oven to take away the heat
- Winter: Using the waste heat to warm the interior space
Thank you!