Living in a world with(out) oil

Turning oil tanks into dwellings in a post oil world
Oil tanks
The era of oil

(R. Ehrt, 2012)
Peak of oil

(The Hubbert Curve)
We are running out of oil
Demolish
How to redesign oil tanks into dwellings in a post-oil world?
Method: research by design

“Creative design seems more to be a matter of developing and refining together both the formulation of a problem and ideas for a solution, with constant iteration of analysis, synthesis and evaluation processes between the two notional design ‘spaces’—problem space and solution space.” (Cross and Dorst, 2001)

“If research in the humanities is fundamentally based on knowledge involving evaluation and interpretation, architectural research has the same possible objectivity as the humanities, and therefore, the risk run by bringing in experiments, tools and methods from the practice of architecture should not be alarming as long as the use of these is done systematically, and new insight is expressed and communicated in a way that is useful to others.” (Hauberg, 2011)

“Research through art and design is a material-based research, development work and action research: practical experiments in laboratories resulting in reports and step-by-step diaries, clear about what is being achieved and communicated through the activity of design process.” (Hauberg, 2011)
Research by design: my experience

Experimenting

Defined problems: daylight, privacy and construction

Continuous process
My design
Rotterdam Harbour
Concepts

Forest

Pond

Square
Location
Location
Urban design
The raised street
The raised street
Daylight and Privacy
Daylight
Facade
Interior
Interior
Tank at night
Facade at street side
The individual dwelling
Structure

Current foundation
Max load 137.9 kN/m²

Therefore line loads and wooden construction
Flexibility

304 m²

150 m²

154 m²

224 m²

80 m²

100 m²

80 m²

124 m²

40 m²
A dwelling
A dwelling
Opening doors
Interieur
Flexibility: utility shafts
Sustainability
Oil free materials

- Expanded Cork
- Wood fiber
- Hemp
- Silicone
Climate

Winter

Summer
Climate
Discussion
Research by design

(van Dooren, 2014)
Concepts

- Dunes
- Floating dwellings
- Stacking
- Cans
- Tree houses
- On his side
Discussion: re-purposing oil tanks

(I DON'T MIND RISING SEA LEVELS)

(Chappatte, 2014)
Insert your idea here
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Turning oil tanks into dwellings in a post oil world
Foundation
Details: roof
Details: street
Details: garage
Facade at street side
The raised street
Plan 00: garage
Plan 01
Plan 02: street
Plan 03
Opening doors
Tank openings
Cleaning

Bas Fuhring van:
Interieur
Facade at street side
Impressions
Location

50 min to Rotterdam centre

40 min to Rotterdam Central

15 min to Hoek van Holland
Location