Graduation Presentation  Sander Apperlo

'a new industrial strip on the site of a (former) nuclear powerplant in Tihange, Belgium'
January 25, 2011
Presentation Content

´a new industrial strip on the site of a (former) nuclear powerplant in Tihange, Belgium´

- GENERAL INTRODUCTION
- MSC3 RESEARCH (SURVEY/SYSTEM/THING)
- MSC3 CONCLUSIONS
- MSC4 DEVELOPMENT (SITE/PART/WHOLE)
- MSC4 CONCLUSIONS AND EVALUATION
General Introduction

Msc3/4 Studio Public Territory, Territory in Transit

‘The Territory-in-Transit research and design studio deals with ‘the large dimension’ through the lens of architecture’

‘to deal with the ‘territory’ of the post-industrial city-region’

Cedric Price, Architectural Design 36 December 1966, p484
General Introduction

Msc3/4 Territory: Dorsale-Wallonne region, Belgium

‘former Industrial backbone of Wallonia, Belgium’
...Produce a field of knowledge across the territory in question...
...to offer a drawn speculation in order to (re)discover reality and ‘take measure’...
‘... produce a more abstract, but specific, diagram of relationships projected on the territory, rendering evident the way it is appropriated by the different regimes acting upon it...’
MSC3 RESEARCH

SYSTEM

Uranium mining

Canada

Australia

Research Centre

BRICK

FRC: Diesel (Production Fuel Assemblies)

Belgiprococ Diesel (reprocessing waste)

Belgiprococ Diesel (waste storage)

Doel

Tihange

Reactor 1: 392 MW
Reactor 2: 433 MW
Reactor 3: 1006 MW
Reactor 1: 962 MW
Reactor 2: 1008 MW
Reactor 3: 1015 MW

Fossil Fuel
Renewable energy
Pumped storage
Geothermal power
Hydropower

Nuclear energy

52 %

industry

Household
Energy
Transportation
Agriculture

production

operator

supplier

distribution

operator

user
THING

‘... find and to consider an object-an-sich of which the ‘thingness’ is indebted in a reciprocal way to the territory that accommodates it...’
MSC3 CONCLUSION

Design issues and themes related to research:

- Nuclear Decommissioning
- Remain a mayor employer in the area
- Create public areas
- Use human artefacts (cooling towers) for specific program
- Create an infrastructure for industrial purpose
- Use organized chaotic grid of the Charleroi Black Mile
MSC4 DEVELOPMENT

Site location
MSC4 DEVELOPMENT

Current Site Plan
Phasing of Nuclear Decommissioning
MSC4 DEVELOPMENT

Site General Layout

Scale 1:2000

Legend

- Work
- Industrial strip on a (former) nuclear powerplant Tihange, Belgium
- Subject
- Site Plan
- Scale 1:2000
- Drafter SA
- Date 25-01-2011
- P5 Presentation Drawing A.050

Drawing Number

Paper Size: Custom A0 Oversize (1589x841)
MSC4 DEVELOPMENT

Site Programmatic Layout
MSC4 DEVELOPMENT

Site General Layout
MSC4 DEVELOPMENT

Floorplan level 1
MSC4 DEVELOPMENT

Cross section industrial strip
MSC4 DEVELOPMENT

Facades

North Facade

South Facade
MSC4 DEVELOPMENT

Cooling tower section
Building components

Foundation & Installation street
Building components

Flooring
BUILDING TECHNOLOGY

Building components

Columns
BUILDING TECHNOLOGY

Building components

Elevated Road
Constructive Core
BUILDING TECHNOLOGY

Building components

Prefabricated Structural Roof
BUILDING TECHNOLOGY

Building components

Concrete Roofcassettes
BUILDING TECHNOLOGY

Building components

Glass Facades
Glass Sliding Doors
Connection has to withstand shear forces, and flexible in relation to variable forces.

Fixed connections of roof structure

Structural core (vertical forces-rigid connection with roof structure)
Details

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BUILDING TECHNOLOGY

Sustainability

- Cold water northern light
- Big glass facade
- Collective bio-digester (output: heat and electricity)
- Southern light big cantilever
- Warm water

Specific program

Collective installations

Heat/Cold storage in surface

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CONCLUSION/EVALUATION

- **SURVEY** provided information about the reach and scale of the project site
- Complex interrelated **SYSTEMs** are vital to understand Nuclear Energy
- Research of an industrial **THING** gave underlying layers of an organized chaos

- Clear **SITE** definition by using a regular pattern of program and distinction
- Common regular building **PARTS** connect different industrial activities
- Public and private activities are working together as a difficult **WHOLE**
QUESTIONS