Wittenburgstraat (2010)
PRODUCTIVE LANDSCAPE - URBAN GREEN LEARNING CENTRE
RMIT/ 2010-2011/ Intervention on Wittenburgstraat buildings in Zevenaar
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PRODUCTIVE LANDSCAPE - URBAN GREEN LEARNING CENTRE
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Background
1. Problems for design
2. History of Zevenaar’s Development
3. Idea for solution - Productive Landscape of Zevenaar

Masterplan design
4. Productive Landscape of Zevenaar
5. Productive Landscape Learning centre

Building Design
6. Existing/ Massing/ Programme /materialization/ structural/spatial/ installation
7. Intervention per session
   existing values
   spatial qualities
   Materiality
   Construction Details

Scale
Urban
Building complex
Building
Technics
Problems for design

Future

A light population shrinkage of 0% to 5% until 2025
A less than average growth of households of 10.3 to 25% until 2025

Ageing group expands

Project site

SELECTED AREA OF ZEVENAAR

Current (2010)

Manorial Estate & its ecological forest

open agricultural land

BAT Terrain

3 secluded entities

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History of Zevenaar’s development

Past

1350

Longitudinal development inherited from Levee Aa & Manorial Estate.

1866

Early agricultural dominance with small farming lots (via: www.watwaswaar.nl)

1925-1990

Turmac Tobacco Factory (now B.A.T.) - a significant industrial development in Zevenaar

Current (2010)

Current city axis in filled Levee Aa

A large piece of green land, mainly belonged to Jonker Huub van Nispen, is situated next to city axis

The halted tobacco production turned factory buildings into storage and rented out for other business
Idea for solutions

Opportunities
- preserved green land gives an unique open green quality next to the city central axis.

Proposed Ideas
- enhance the current diversity of green and propose a rather unique identity for Zevenaar
- benefits local aging population and bring a healthy living style for local dwellers and young families

Solution
Productive Landscape
As a form of Modern Arcadia provides not only quality that would be brought about by picturesque scenic park, but it integrates food production and daily activities as visitor destination. It takes care of human beings’ welfare, but also those of species in nature. Productive Landscape helps to create and maintain ecologically valuable habitats and landscapes, and providing opportunities for recreation, social and community activities.
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Masterplan for Productive Landscape of Zevenaar

Current city axis

To Arnhem

Manorial Estate

To new transferium

To Germany

BAT

P

To Germany
Masterplan for Productive Landscape of Zevenaar

- New Municipality Office
- BAT
- Manorial Estate
- New city axis
- To Arnhem
- To new transferium
- To Germany
Masterplan for Productive Landscape of Zevenaar

- Educational & recreational border
- New city axis
- New Municipality Office
- To Arnhem
- To Germany
- To new transferium
- To Germany
Masterplan for Productive Landscape of Zevenaar

To Arnhem
New city axis
Educational & recreational border
Productive Landscape
Ecological Forest
Community garden
Forest
biological agriculture
meadow
meadow
Sport ground
To new transferium
To Germany
To Germany
Masterplan for Productive Landscape of Zevenaar
Masterplan model 1:500

Programme
- Different zones
- MUSEUM
- LIBRARY
- PANCAKE HOUSE
- THEATRE
- PARKDWELLING
- LIBRARY
- MUNICIPALITY MARKET
- PANCAKE HOUSE
- CHURCH
- DWELLING
- MARKET
- TERRACE
- BREWERY
- PARK
- VIEW TOWER
- MUNICIPALITY
- NEW CITY AXIS

Masterplan for Productive Landscape of Zevenaar
Masterplan for Productive Landscape Learning Centre
Masterplan for Productive Landscape Learning Centre

- Productive Landscape Foundation
- Natural Habitat
- Urban Green Learning Centre
- Garden Guesthouse
- Kitchen garden
- Biological crops shop
- Cookery School
- Organic Restaurant
- Brewery
- Sewage Park
- Arboretum trail
- Greenhouse
- Compost workshop
- Animal shed
- City
- Productive Landscape
- Masterplan for Productive Landscape Learning Centre

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"The years of maintenance of landscape elements of the Estate House Sevenaer results in including the return of butterflies, great crested newt and amphibians. A unique development, so close to the center of the city."
-- De Wekkrant Newspaper
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Scale
Urban
Building complex
Building
Technics
Existing

KOETSTAL

MELKHUIS

POLDERHUIS

MARKT 27-29

MARKT 31

MARKT 33

WITTENBURGSTRAAT

WEVERSTRAAT

MARKTSTRAAT

H. Andreas Church

Building Design
Existing

The Polderhuis is unique because of a few things:

- The construction dates back from the 16th century. Few houses in Zevenaar have this kind of floor construction.
- The oak floor determines the ambiance of the house greatly.
- The house is almost in original state from the 16th century and thereby a good example of Zevenaars history.

Values

Polderhuis (Markt 25)

The layouts of all buildings are based around a formal entrance with a central hall which connects to rooms.
Existing

Values
Market 31
- NO VALUE on facade. Fake crossbar window and shutters.

Overall Composition
- The layouts of all buildings are based around a formal entrance with a central hall which connects to rooms
Existing

Values

Koetstal (Cattle shed)

- facades with wall anchors and original openings
- 1868 construction marked on door lintel stone
- internal brick wall (originally an outside wall)
- Jack arch Floor construction

H. Andreas Church
Massing

[Diagram showing massing of a building design]
Spatial - solid & void / organization
Routing of different user groups

[Diagram showing routing of visitors, staff, arboretum, and business office through various parts of a building.]
Routing of different user groups

To Auditorium
To Cafe
To Office Space

To Arboretum/
Garden Kitchen

Meeting Point /
Arboretum Info

Garden Kitchen
Arboretum
Structure

Brick
- load bearing wall
- contextual brick facade

> To maximize visitor’s recognition of brick walls by highlighting them with skylight.

Concrete
- load bearing wall
- representing urban condition
- homogeneous smooth polished finishing

> To create simple geometric shape, a tunnel and a box echoing urban city blocks

Timber
- post and beam structure
- colour and texture representing nature
- delicate joint connection

> To resemble the adjacent natural habitat imerge with the surrounding.

Steel
- signage/ columns

> To clarify the architectural expression of other structural components.
Two way mirror

> Initiated by Artist Dan Graham’s Pavilion which acts to ‘overlap’ on visitors, city and nature on a plane. The curious gaze brings up the theme by first a evoking reflection both physically and mentally.

Green Roof

> Exhibits of current green in urban situation.

Timber open truss

> Visitors find themselves walking under a ‘tree canopy’ which is illuminated from above from sunlight.

Glass

> Full view over the nature

Polycarbonate

> The panels transform with changing opaqueness along with changing sunlight. Framed window brings limited view resemble urban situation.
Installation - Heating
Installation - ventilation (Winter)

Installation - ventilation (Summer)
Installation - Water treatment
Elevation
- Entrance as Pavilion

- The brick ‘wall’ is open up with a new entrance
- Beautiful arch ceiling sitting on wooden columns at 2.9m
Auditorium used for special event like bio-conference/symposium organized by business company or the Foundation.
Vertical sections 1:20

1. 100x40mm laminated timber sheet column
2. 100x300mm laminated timber sheet beam
3. Triple-sealed plastic laminate panel
4. Prefabricated birch plywood roofing panel, upper layer 9mm, lower layer 15mm and 30mm thermal insulation
5. Heating pipes
6. 10mm tim. structural glaze
7. Wooden railing
8. Double glaze with low-E coating in steel frame (with operable windows)
9. 80 x 60 mm counter battens
10. 280 x 280 mm grey ceramic roof tiles
11. Cavity Shallow brick foundation
12. Lighting
13. Prefabricated birch plywood floor panel, upper layer 9mm, lower layer 15mm and 30mm thermal insulation
33. Steel hinge connection for span timber beam
37. Double glazing (3 x 6 mm laminated glass + 10 mm cavity)
44. 33mm laminated timber sheet
45. 150mm thermal insulation and 20mm lam. timber sheeting
48. 150x400 mm lam. timber beam
47. 100mm dia. steel columns
49. Floor construction 150x240mm sawn timber decking screwed, floor heating, waterproof membrane, thermal insulation
49. 250mm dia. pre-heated fresh air outlet
50. 150mm existing brick wall
51. 150x500 mm steel beam
52. Adhesive joint
53. Gutter
54. Wooden railing
Thank you