Enjoyable living @ Pagediepdal

ACTIVE LIFE RETIREMENT COMMUNITY IN OOST-GRONINGEN

P4 PRESENTATION - Jim van Oord 1271504 - Explorelab 11
ENJOYABLE LIVING AT PAGEDIEPDAL

Aim of project:

> The primary aim of this project is to understand and test the idea of an *Active Living Senior Community* in Oost-Groningen.

Target group: Seniors of Oost-Groningen 55+
> high percentage live rural

Research:
> Getting to know who they are and what they want!
CONCLUSIONS & INPUT DESIGN

> Respect the individual, facilitate life

> Not a prewritten plan, but involve the target group from the start!

> Avoid any association with growing old

> Offer choice - more than just proficient!

> Provide recreation & vacation feeling close to home

> A welcome environment for all age groups
CONCLUSION: **FACILITATE, DON’T DICTATE!**

**ENJOYABLE LIVING** + **RECREATION/VACATION & RURAL LIFE** + **SOCIAL INTERACTION**

*Project definition, Research, Urban Design, Architectural Design, Archetype, Sustainability, Integration*
URBAN DESIGN - Location & urban model

Stadskanaal, Oost Groningen

Project definition  Research  Urban Design  Architectural Design  Archetype  Sustainability  Integration

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THE GRONINGER LANDSCAPE - CHARACTERISTICS

THE ESSENTIAL THEMES
- crops
- DIVERSITY
- LONG LINES
- ORGANIZED
- cultivated structure

THE DIFFERENT TIMES OF YEAR
- seasons

EXPERIENCE THE SEASONS

Project definition | Research | Urban Design | Architectural Design | Archetype | Sustainability | Integration
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URBAN DESIGN - The Groninger landscape - Themes

- Local focus
- Participation of residents
- Connection with Stadskanaal
URBAN DESIGN - The Groninger landscape
URBAN DESIGN - The Groninger landscape

architectural design

Senior community

Stadskanaal Community

Connect
CONCEPT

Location:
The Groninger landscape

Target group

Archetype

THE BARN
(Boerenschuur)

THE ESSENTIAL THEMES

seasons
crops
cultivated structure

SUSTAINABILITY

PROJECT DEFINITION

RESEARCH

URBAN DESIGN

ARCHITECTURAL DESIGN

ARCHETYPE

SUSTAINABILITY

INTEGRATION
CONCEPT

Senior community

THE BARN

Stadskanaal Community

Project definition  Research  Urban Design  Architectural Design  Archetype  Sustainability  Integration
CONCEPT

Senior community

Stadskanaal Community

Project definition  Research  Urban Design  Architectural Design  Archetype  Sustainability  Integration
ARCHETYPE : THE BARN (Boerenschuur)

The traditional ‘barn’ in the Oost Groningen
> agricultural farming - large barns

Simplicity
Form & closed character
Construction & organization
Spatial quality
ARCHETYPE : THE BARN (Boerenschuur)

Form & closed character

Transformation to contemporary form to open up the facades

Traditional pure monolithic form of a barn

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Project definition  Research  Urban Design  Architectural Design  Archetype  Sustainability  Integration
ARCHETYPE : THE BARN (Boerenschuur)

Form & closed character

Traditional closed facade with very small openings

From most angles closed, wooden slats half open, on a openable louvre door
ARCHETYPE: THE BARN (Boerenschuur)

Form & closed character

monolithic appearance with a higher level of detail when close by
ARCHETYPE : THE BARN (Boerenschuur)

Form & closed character

Open/Closed facade - When viewed from an angle the facade appears to be closed, daylight can enter the room and the 90 degree angled views allow both view from inside and outside.
ARCHETYPE: THE BARN (Boerenschuur)

Form & closed character

Open/Closed facade
ARCHETYPE : THE BARN (Boerenschuur)

Form & closed character

The pure geometric form of a traditional shed have been transformed without destroying the simplicity of it.
ARCHETYPE : THE BARN (Boerenschuur)

Construction & spatial organization
ARCHETYPE: THE BARN (Boerenschuur)

Construction & spatial organization

characteristic rhythmic structural pattern retained
ARCHETYPE : THE BARN (Boerenschuur)

Construction & spatial organization

Traditional construction with trusses

Transformation to contemporary laminated truss

walls play an important roll in the construction of the roof

moment connection

moment connection using prestressed Lignoforce connections

construction allows for a lot of freedom in the roof and facade
ARCHETYPE: THE BARN (Boerenschuur)

Traditional constructions need supports to create a solid construction.

Ligno-Force joins aids in creating a contemporary construction.

Spacious quality retained.
Traditional barns in Groningen are organized from one side with a secondary organization on the other side.
ARCHETYPE: THE BARN (Boerenschuur)

Similar organization principle used to organise the contemporary design program

- Multifunctional storage
- Kitchen
- Wintergarden
- Sunspace (winter)
  - Shaded patio (summer)
- Restaurant

Project definition | Research | Urban Design | Architectural Design | Archetype | Sustainability | Intergration

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ARCHETYPE: THE BARN (Boerenschuur)

Ground floor plan

- **Project definition**
- **Research**
- **Urban Design**
- **Architectural Design**
- **Archetype**
- **Sustainability**
- **Integration**

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ARCHETYPE : THE BARN (Boerenschuur)

Similar organization principle used to organise the contemporary design program

Storage
Plantroom
Storage/restaurant
Storage
ARCHETYPE : THE BARN (Boerenschuur)

First floorplan
ARCHETYPE : THE BARN (Boerenschuur)

Spaciousness & construction
ARCHETYPE: THE BARN (Boerenschuur)

Spaciousness & construction
ARCHETYPE: THE BARN (Boerenschuur)

Materialization

Traditional clay products

Platohout - Face chared with a burner
ARCHETYPE : THE BARN (Boerenschuur)

Materialization: Wood

> Sustainable
> Can be used for basically everything
  construction, facade, interior, furniture, flooring, ceiling etc.
> Natural & traditional material

Interior: wooden elements and walls

Laminated construction trusses

Platohout - Face shared with a burner
ARCHETYPE : THE BARN (Boerenschuur)

Summary
The building blocks

SHELTER
THE SHELL
The outer skin and rain jacket of the building

SEASONS & SURROUNDINGS
A VIEW TO ALL SIDES
Glas elements with dark jambs, transparent material used to separate the outside and inside climates. The dark jambs make the appearance less dominant

SPACIAL ORGANIZATION & CHARACTER
THE TRUSS - CONSTRUCTION
Dominant and visible element in and outside the building where the shell has been removed.

FUNCTION ORGANIZATION
FLOORS & WALLS
Spacial separation elements. Possibility to change and remove elements in the future.
INTERGRATION : BRINGING IT TOGETHER

Result: The contemporary groningse barn
INTEGRATION OF SUSTAINABILITY: A MATTER OF COURSE

More than just ‘green’
SUSTAINABILITY : A MATTER OF COURSE

Use the sun
Orientation, Positioning of glass

sun, wind & rain

orientation

rotated to maximize the sun through the building

daylight infiltration
Passive solar energy & unheated sunspace

floor mass, direct sunlight
SUSTAINABILITY : A MATTER OF COURSE

Passive solar energy & unheated sunspace
SUSTAINABILITY : A MATTER OF COURSE

Thermal insulation & Sun shading
SUSTAINABILITY: A MATTER OF COURSE

Air quality & Ventilation

Summer

Winter

Prevent heat losses.

Balanced ventilation & heat recovery.
**SUSTAINABILITY : A MATTER OF COURSE**

**Air quality & Ventilation**

- **Laminated construction**
- **300 x 50**

**louvre door**
- Painted vertical wooden slats (95x50)
- Fixed in a hidden steel frame with steel cables & tubes

**insect mesh**
- Black colour

**glass shutters**
- HR++ glass
- Insulated aluminium frame
- Rubber separations

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**Project definition**
**Research**
**Urban Design**
**Architectural Design**
**Archetype**
**Sustainability**
**Integration**

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SUSTAINABILITY : A MATTER OF COURSE

Water conservation

> Rain water harvesting
Heat pump, heat recovery & solar hot water
Positioning installations
SUSTAINABILITY : A MATTER OF COURSE

Flexibility
Integration: Bringing It Together

Integration of control and choice for the users

Sunspace
(Autumn, Winter & Spring)
Outdoor patio
(Summer)

Wintergarden

Restaurant

Project definition Research Urban Design Architectural Design Archetype Sustainability Integration
ANY QUESTIONS?

Thankyou for your time!