



## Appendix 8

# Sustainable holiday in an old willow worker's home

## Report of the workshop on March 12, 2015 in Biesboschcentrum Dordrecht CaRe-Lands phase 2 (action 4), local action Biesbosch

Chairman of the day Wim van Hooff (advisor CaRe-lands project) welcomes everybody and introduces the Care-Lands project. Care-Lands is a clusterproject in the European program Interreg IVA 2 Zeeën. In CaRe-Lands, 7 partners and an associated partner work together to reduce CO2 in nature areas. Their subjects are biomass, sustainable mobility and sustainable buildings.

Luc Korpel, Staatsbosbeheer (associated partner in CaRe-Lands) tells about the plans of Staatsbosbeheer to reuse several of the old buildings they own, for recreation. Their locations are all very isolated. 4 architects were asked to make sketches for an old willow worker's cottage in Polder De Dood, if possible to be used for other old buildings as well.

All 4 presentations are available in pdf format.. This report mentions the most remarkable things from the presentations and the questions and discussions that followed.

### Sketch 1: Ingenieursbureau Drechtsteden

Designer is Ruud Hoogstad, presentation of the design by his colleague Mazin Abdulsada. Technical solutions that are pleasant and friendly in use are offered for the functions that are needed in a recreation home (sleeping /toilet / relaxing / food / shelter / hygiene). Insulation on the inside of the building to leave the outside intact, fitting in the environment. Through this type of insulation deep niches are created for practical use. Solar panels, heat recovery, water purification by heat pump, daylight and shutters. Modulair system, suitable for other buildings. Estimated costs € 450.000.

#### Questions:

- Van der Made: Does the size of the building influence the costs?  
Price is not per square meter.
- Bongers: Can you exploit it for that price?  
This should be possible.
- Linders: Type of water resource?  
Water can be stored.
- Verhorst: Did you look at the surroundings of the building?  
No, the assignment was for the building only.
- Zelvis: Where is room in the building for the installations?  
Half of the attic is reserved for this.
- Van Wuyckhuysen: Are installations in the attic including water storage not too heavy for the construction of the house?  
Construction is computed for his.
- Sturkenboom: Where does the waste water go?  
Purification system (IBA)
- Van Mill: Are the technical solutions energy neutral?  
For 80% yes.



## Sketch 2: Michael de Vos

Besides being an architect, De Vos is director of a primary school too. He asked his pupils to come with suggestions to experience the Biesbosch, e.g.: quicksand survival, Biesbosch mud baths, ruins for rare animals, observatory, bisonwood.

He presents a conceptual design with insulation on the outside: coat of glass, greenhouse coat, coat that fits (glasjajas – kasjas – pasjas).

If the building is a monument, then insulation inside. The house will be smaller then. Technical facilities beside the house instead of inside. The hearth place is the heart of the house. You could situate a kitchen or shower here (as a temple).

**Questions:** None.

## Sketch 3:

### Architects Bongers in cooperation with Installation Office Boonstoppel

The design is based on Trias Energetica: save energy as much as possible, use sustainable energy when necessary, if this is not enough then efficient use of fossil energy.

1. Insulating walls inside
2. Glass room on south side for warmth in the house
3. Natural ventilation
4. Add virtual mass to regulate temperature.

Explanation by Karel Abee (Boonstoppel Isolatie techniek): through mats with salt hydrates mass is created which keeps the temperature in balance (like thick stone walls in old churches).

Electricity by amorphous solar panels. Cooking on wood. Pump up drinking water. Purification of waste water by reed bed.

Because the building on Polder De Dood is not authentic, several changes have been made on the outside:

- Glass room on south side with panoramic view (shade of trees in summer)
- Extra door, building is divided in 2 apartments.

Extra mass in floor and roof for stable temperature.

Installations under stairs, reachable from outside.

Bathrooms upstairs.

#### Questions:

- De Roo: Is the house exploitable all year (costs of heating)?

Yes.

- Is there enough storage room under stairs?

You could consider an underground storage for wood.

- Costs?

€ 120.000 per unit. When you rent both apartments profit after 10 years.

- Linders: Why divided in 2? Less privacy.

Better for exploitation figures, terrace is divided as well.

- Van der Made: What if SBB cannot provide wood? Pretty laborious to provide.

You could provide guests with a bag of pellets on arrival. Nature experience.



## Sketch 4: ORGA-architect

It is not just a holiday home, it is a real willow worker's cottage. So it can be adventurous, basic. Environment is mysterious, rough. Bring back authenticity of cottage. Keep the building bare, use natural materials. Draft proof only. Put a small self-sufficient quick warm comfort unit beside it. In this unit e.g. bathroom, cooking. Prefab unit can be used for different cottages. Decide for every building separately where/how to situate it. Give it a specific shape that fits in the environment. Wellness experience could be possible. Use willow wood, biomass. Solar panels on rood or field. Plants can make energy too, e.g. on a field near the cottage. Year round rent.

### Questions:

- De Roo: Costs?

Not specified for Polder de Dood.

- Van der Made: Is it an installation unit or can you cook in it also?

It is a comfort unit. It may vary per cottage, cooking is an option.

- Zelvis: You can extend the unit with sleeping facility for more comfort )warmth'.

Yes, but the same techniques in all units is cheaper. Customization is always more expensive.

The cottage is the place to stay. The unit can be further away from the cottage.

After the presentations the participants split in 2 groups.

## Group 1 with architects of presentation 1 and 2

Michael de Vos, Mazin Abdulsada, Guus Degen, Ben Groen, Frans de Jong, Ferry Nitzsche, Doriene van Oudheusden, Guus Verhorst, Lodewijk Vormer.

Workshop leader and report Marianne den Braven.

Introduction of participants.

De Vos and Abdulsada give an extra explanation on their presentation.

- Renovation costs are not extremely high± renovating hotel rooms is just as expensive.
- Good idea to use hearth as a central place in the house.
- The installations are an important part of the design, because that is the part to be self-sufficient. And it has to be exploitable.
- There are doubts about installations underground because of tides and weak ground. Foundation of caissons is possible but expensive, so better above ground level
- Deliverance of building materials is difficult. De Vos reckons 20% extra costs (normally 6-8%). Therefore building on site as little as possible. Prefab unit beside is good idea. But connection to building needs attention.
- Guests do not expect 5 stars. Authenticity of cottage is important in marketing. Drafty and moist – comfort is in unit. There must be enough comfort to be happy. Choices are important: do you want 10.000 litres for showering or is less comfort ok.
- De-stressing.
- You can also choose for basic cottages: cold water, open fire, cooking, sleeping. Small boat near the house to go to central place with shower, bath, wellness, organic shop. But houses in Biesbosch too scattered for a central place like this. And we do not want it to be like Center Parcs.
- Another option is most of the houses basic but a few more luxury, like with mountain huts.



- 2 apartments on one spot: alright for 1 group in 2 apartments, but not for 2 separate families. They want privacy in such a place.
- For 2 apartments you need double facilities. Maximum size of groups may vary per cottage.
- Staatsbosbeheer wants to facilitate several target groups with different accommodations: private boats / nature campsites / holiday homes / niche for concept of willow worker's cottages.
- Make a business model that starts from reasonable rent prices. Minimal model and then add things. No gas, water, sewage, not accessible, so offer houses with electric boat with which you sail to this 'uninhabited island'. Park your car and boat on the shore and give information on how to get to your holiday home.
- You can also put the installations on a boat and then the only thing you have to do is connect the boat to the cottage.

### Group 2 with architects of presentations 3 and 4

All other participants. Workshop leader and report Luc Korpel.

- Thinking about sustainability means thinking about the facility level you want to offer. It does not have to mean that you look for alternative energy sources for the same level of facilities.
- You have to decide whether you want to rent year round or just for the season. It is possible that not to rent year round is more profitable than providing enough energy for the winter.
- Experience is essential and leading for what you are going to offer: what will be your marketing concept? The facility level has to fit this concept.
- Experience is defined by basic, authentic (fit Biesbosch), isolated. Surroundings have to be included into the concept/design.
- This fits a specific target group (post materialists). When the target group is families, then you want a different sustainability concept.
- For all target groups safety is an issue because of bad accessibility.
- It is great for the marketing concept but difficult logistically that the cottages can only be reached by boat. Cleaning, transport of materials etc. also are an issue for sustainability.
- There are not enough cottages to choose several target groups. It is better to put them in the market as one brand.
- It is possible to work with modules in 2 ways:
  - (1) design a separate module which can be transported by boat. It will be 'stuck' against the (almost) original cottage and contains the necessaire facilities.
  - (2) offer a variety of 'modules' for a stay in the cottage, from luxury to very basic (do it yourself).
- Thinking about exploitation we suggest 800-1000 euro rent/week. Because this is a scarce product, we consider it profitable.
- There are several possibilities to create energy: (wet) wood, solar power, wind power... and sufficient possibilities to become/make clean water. The main problem will be storage.
- Could this mean we need willow cutting around the cottages? Does this fit in the present Biesbosch?

### Presentation about self-sufficient toilet by Ferry Nietzsche, IcDuBo

The research on best practices is still going on. This presentation is meant to get feedback to specify the research. This research is into existing systems and experiences with the – not about a new design.



The final report will be available end of April. Below questions and remarks about the report.

De Vos: What do you mean by medicine residues?

Van Mill: How do you keep these toilets clean?

Bruggink: Chalk is a problem with waterless urinals.

Reed bed after 25 years full of poison?

Which company will go into the Biesbosch to drain a dry toilet with a suction hose?

Van der Made: Better: scoop instead of hose because you have compost.

Biotoilet is an experience too.

To prevent odors you can use one compost heap one week and a second compost heap the other week. As long as they both catch the sun.

Vormer: Where is the turtle point with a peak load? What is the capacity of a self-sufficient toilet?

What are costs of exploitation and of investment?

Turtle point depends on capacity (investment/exploitation)

Zelvis: Does a dry toilet need maintenance?

Verhorst: When you pour water in a dry toilet the system does not work anymore. This is important to explain to users.

Van Mill: This will definitely happen in isolated areas.

De Roo: Reed bed does not work properly. IBA in horeca breaks down easily if cleaned in the wrong way.

Bruggink: In holiday home risk of wrong use is smaller, but in public area it can be a problem.

Sturkenboom: How to wash your hands with a dry toilet? (spray, or in the kitchen of the holiday home)

Wuyckhuysse: Feces has value too: you can make biogas of it to create energy.

Verhorst: Toilet needs to look good, what happens below it you can explain but it has to be clean.

Van Mill: Why not a hole in the ground? Cover it, does not smell.

Chance on latrine flies, and with feces on one location the ground is polluted.

Zelvis: Is dixie a solution?

De Roo: What can you do with compost? Human compost is not allowed in Belgium. Menselijke compost mag niet in België.

Panjer: In The Netherlands strict rules for manuring. Even organic cow dung may not be spread.

Sturkenboom: What happens if the toilet is not used for a while?

lcDuBo uses questions and remarks to detail scenario's for situation in Biesbosch, Grevelingen en West-Vlaanderen. This will lead to advice for choices for a concrete design, which can possibly be used elsewhere as well. Results will be spread around.

## Conclusions and closure by Luc Korpel, Staatsbosbeheer

All architects are thanked for their beautiful, surprising, useful sketches. All other participants are thanked for their feedback on the presentations

Staatsbosbeheer will formulate a program of requirements, including:

- Which target group
- Which facility level (basic – high)
- Accessibility / safety
- What is suitable for Biesbosch
- It is all about experience: what is there to experience?
- Depending on financial possibilities there will be a follow up.

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