

# TIDES OF CARE

Residential Care Farms for People with Mild Intellectual Disabilities



P5 presentation  
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AR3AD100 Advanced Housing Design: Ecologies of Inclusion

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ZUS URBAN MASTERPLAN



OUR URBAN MASTERPLAN (drawing made by Anna Lugard)

## People with mild intellectual disabilities (MID)

- safe to live on water
- largest target group of care farms
- 1.1 million people in NL

*What kind of spatial qualities can residential care farms provide for people with mild intellectual disabilities in a future with flooded polders?*

## People with mild intellectual disabilities (MID)

- lower IQ (50 - 85)
- difficulties meeting expectations of society, seek a sense of freedom
- difficulties making contact
- need privacy and place to retreat, in a low-stimulus environment



Residential care farm 'Nieuw Rijsenburg'



Residential care farm 'De Fochtel'



Residential care farm 'Artemis'



Residential care farm 'Juutsom'



Residential care farm 'Hesselshoeve'



Residential care farm 'De Mare'



A physical separation between residents and farm family to protect privacy



A quiet environment with space and peace, an alternation of open and enclosed spaces, and space for animals



Living groups (6 - 15 residents) live separately with their own entrance and have a collective living space and kitchen within the living group



A recognisable and homely environment, think of a large family home, and windowsills for personal belongings



A relatively small private room with the possibility to darken the room and avoid the open view with curtains



A relatively small private outdoor space



A sensory room to develop a resident's sense, usually through special lighting, music, and objects



A space to practice hobbies and for daytime activities, like woodworking and art, with enough storage space



A vegetable garden, which can be used for daytime activities as well



IJburg



Nicolaas Witsenkade / Stadhouderskade



IJburg (Cas Oorthuyskade)



IJsbaanpad



Schoonschip



Village configuration, no direct neighbours, but still closeby, which contributes to the community feeling



A terrace and/or roof terrace, often used to jump in the water, which contributes to the feeling of freedom



More connection with outdoors and between spaces



Spacious rooms with a lot of daylight and open views

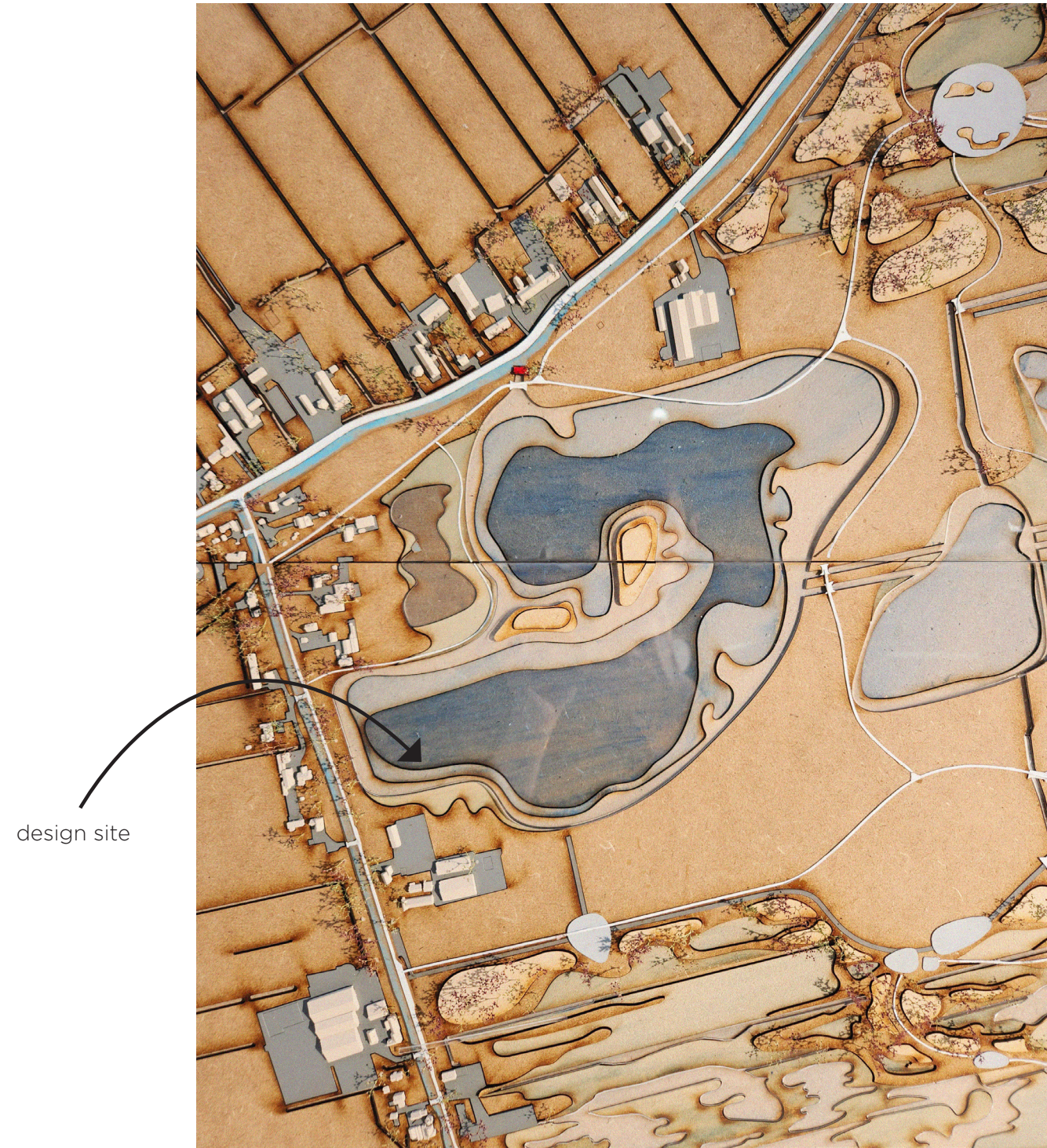


Living in a moveable house, surrounded by water and easily adaptable

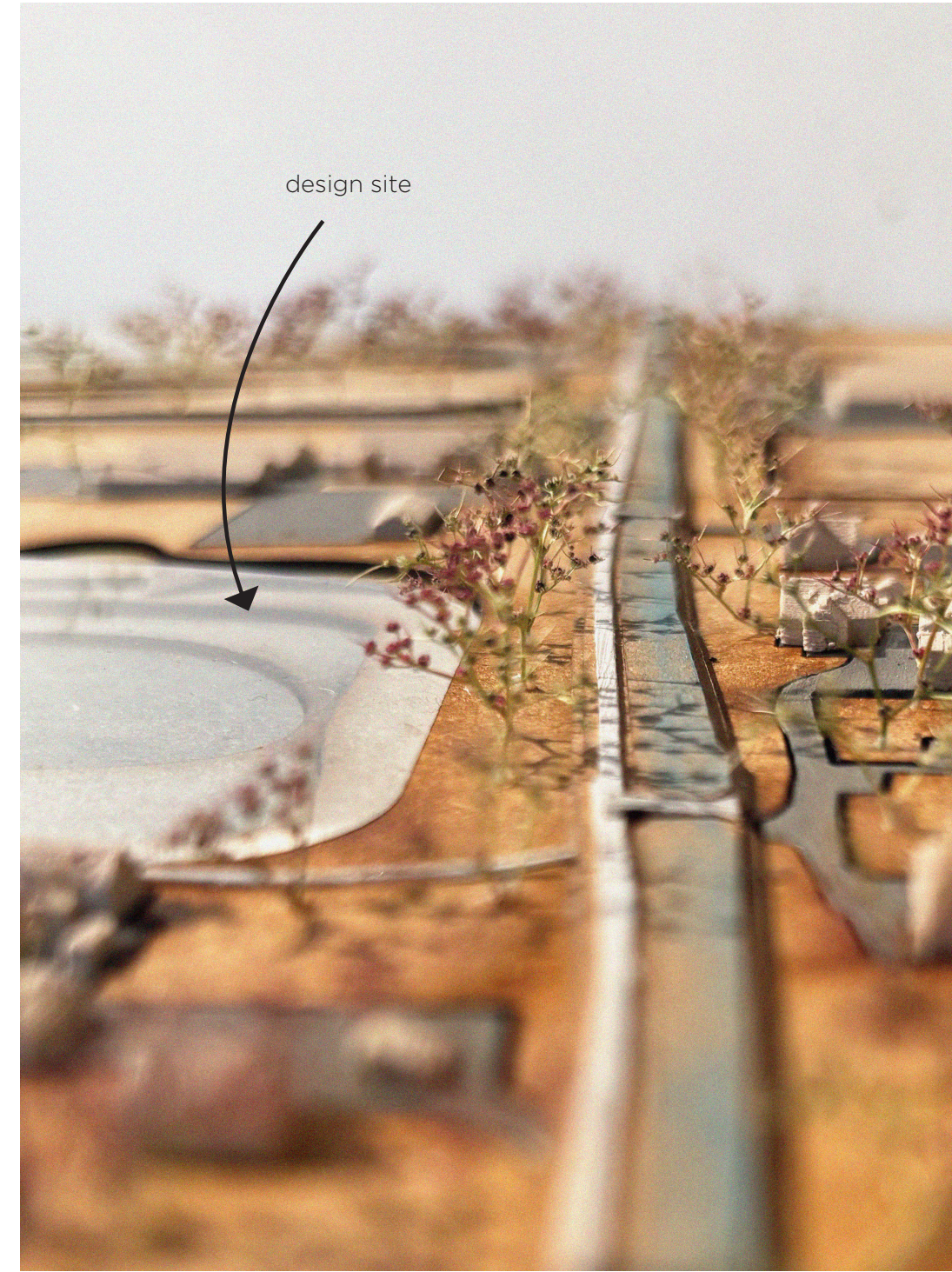


Bedrooms below water level that stay cool

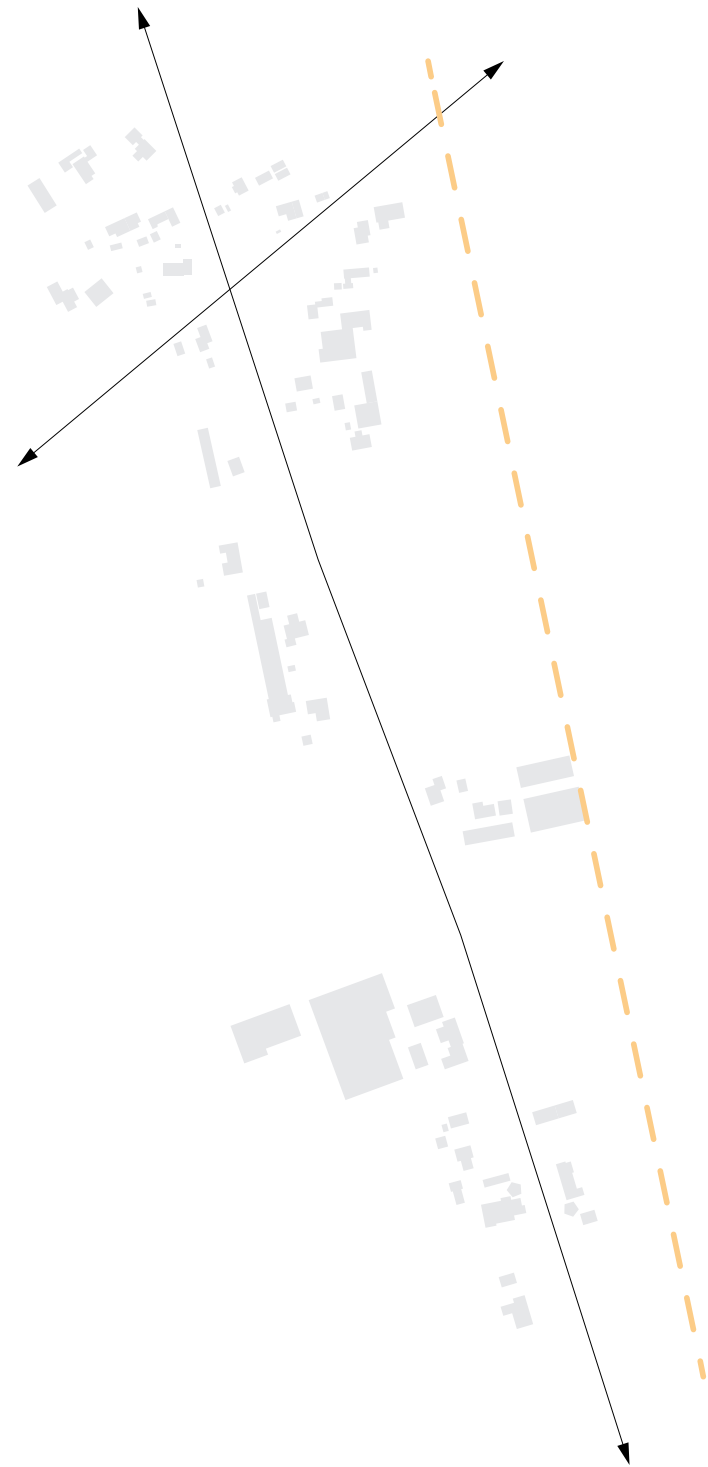
Living on water can offer creative design solutions to meet the housing needs of people with MID in an alternative way.



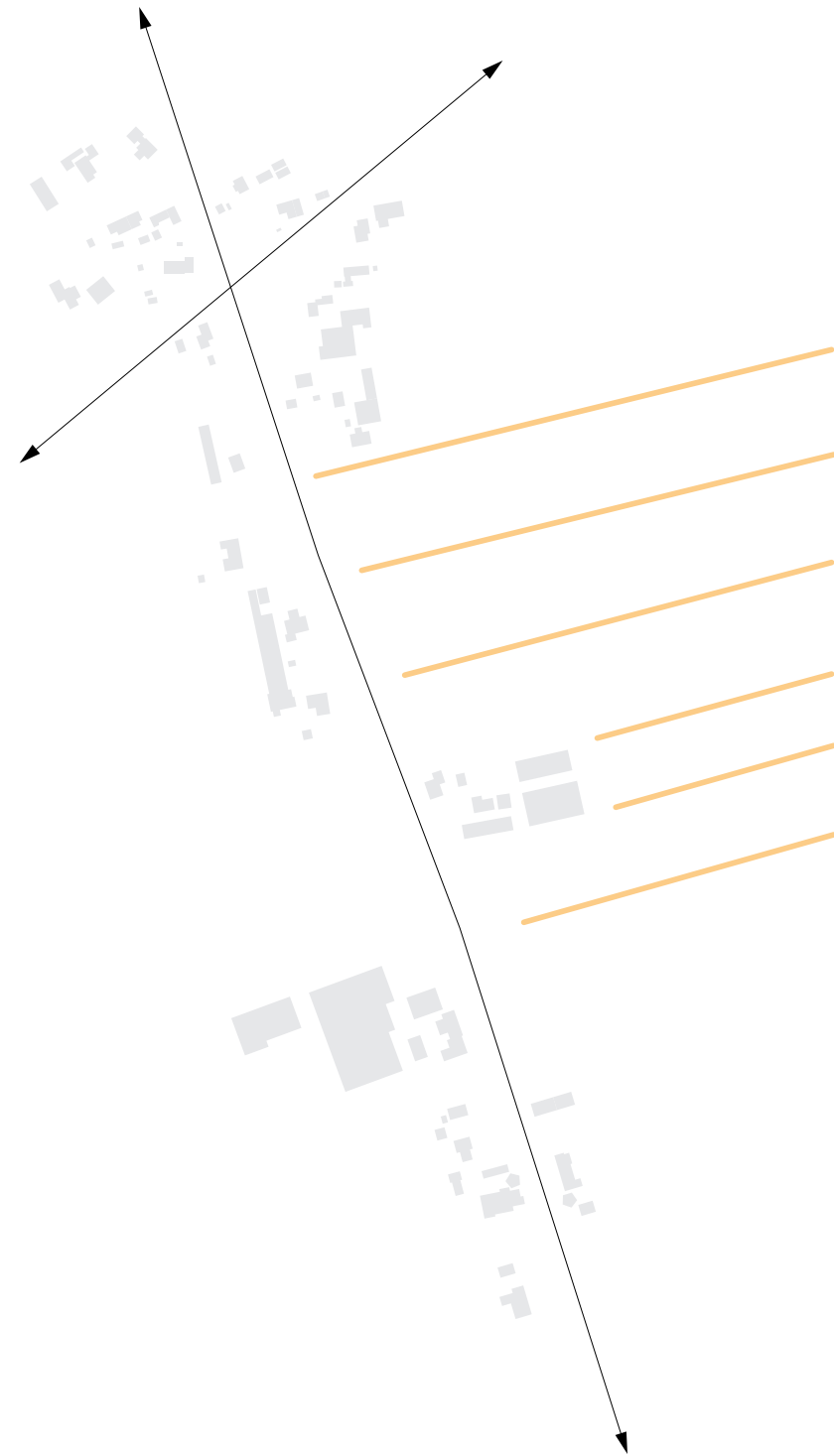
DUIFPOLDER



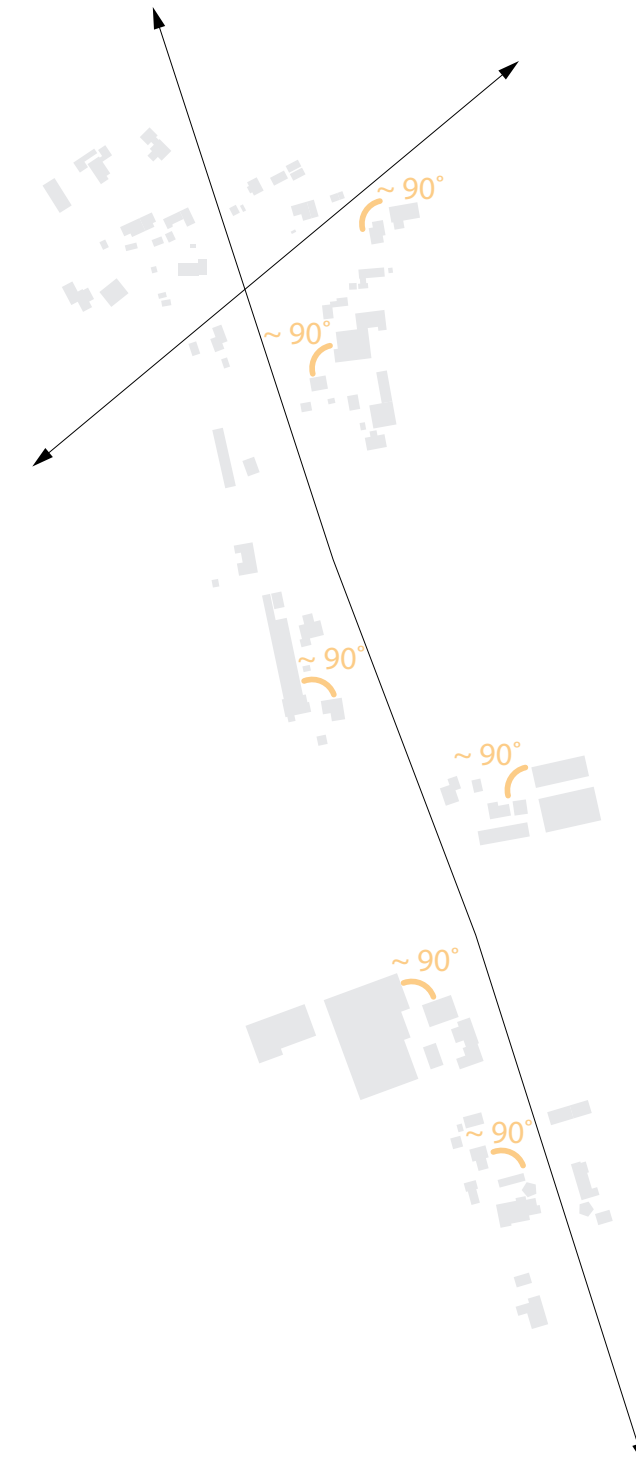
KWAKELWEG



roughly the border up to which houses along Kwakelweg extend



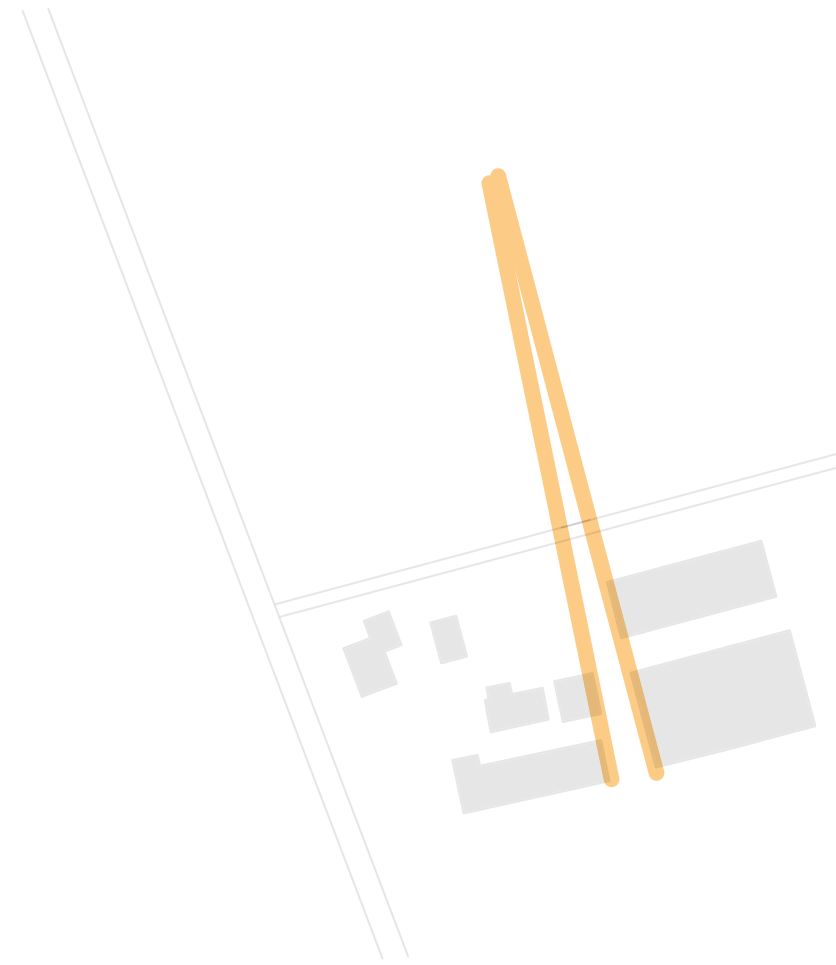
direction of the polders, ditches and yards



buildings are arranged roughly orthogonally



a new dike to separate water and land and as footpath and cycle path in the same direction as the existing polders



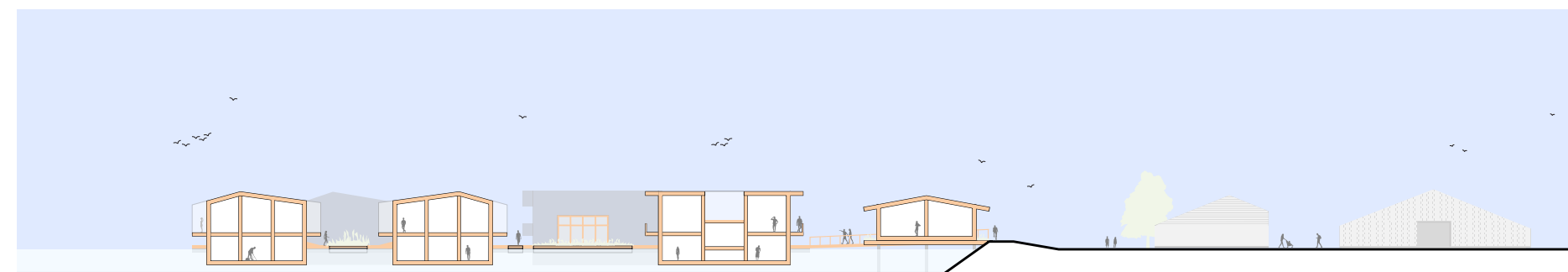
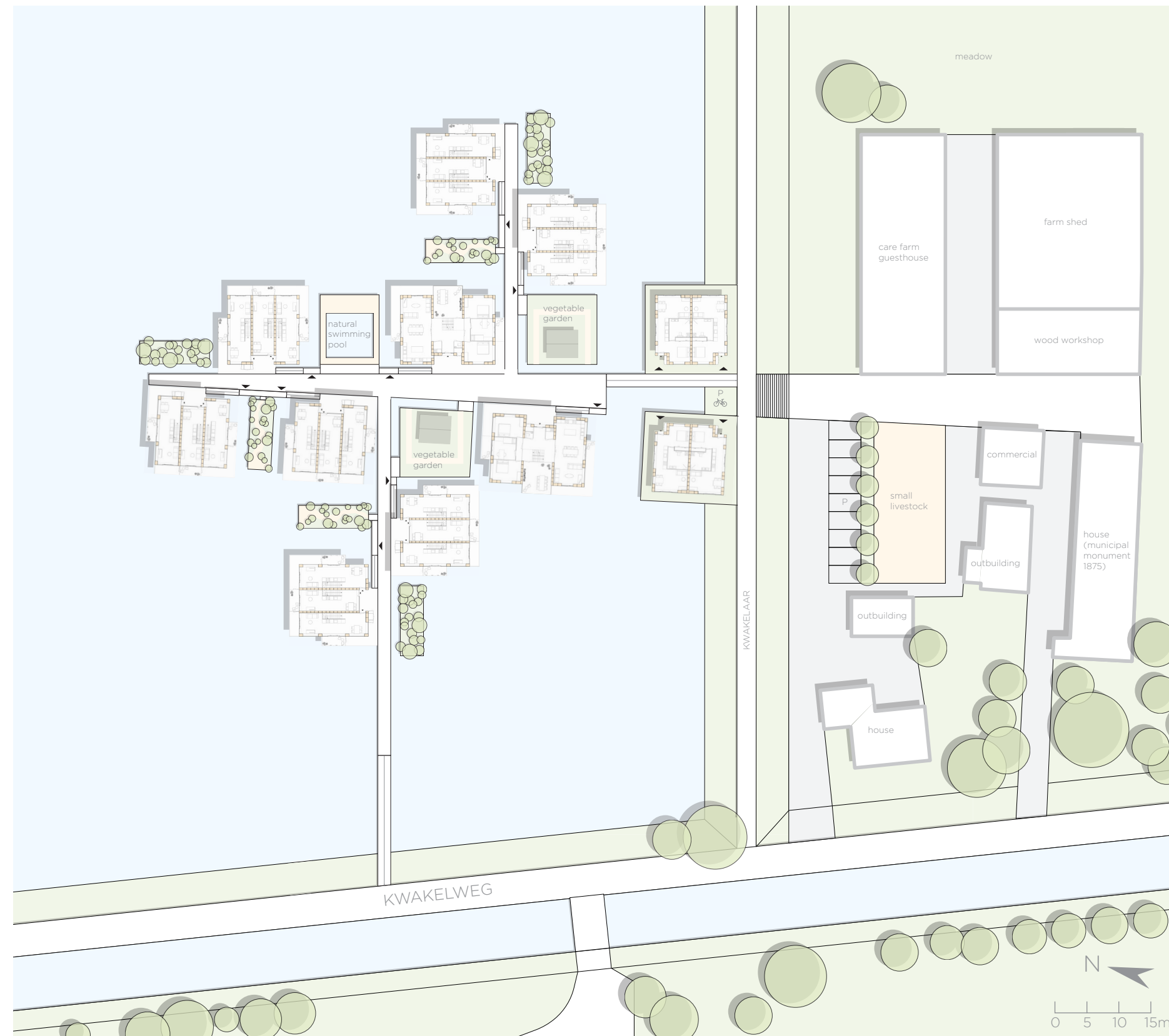
a new main street that connects the homes on water with the care farm on land, parallel to the existing buildings



jetties as "side branches", in the same direction as the existing polders and one of them serving as a back entrance to the Kwakelweg



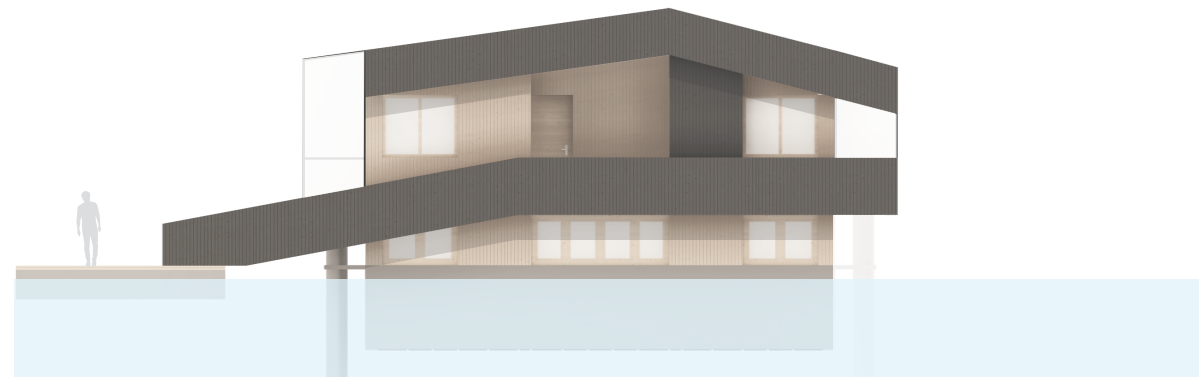
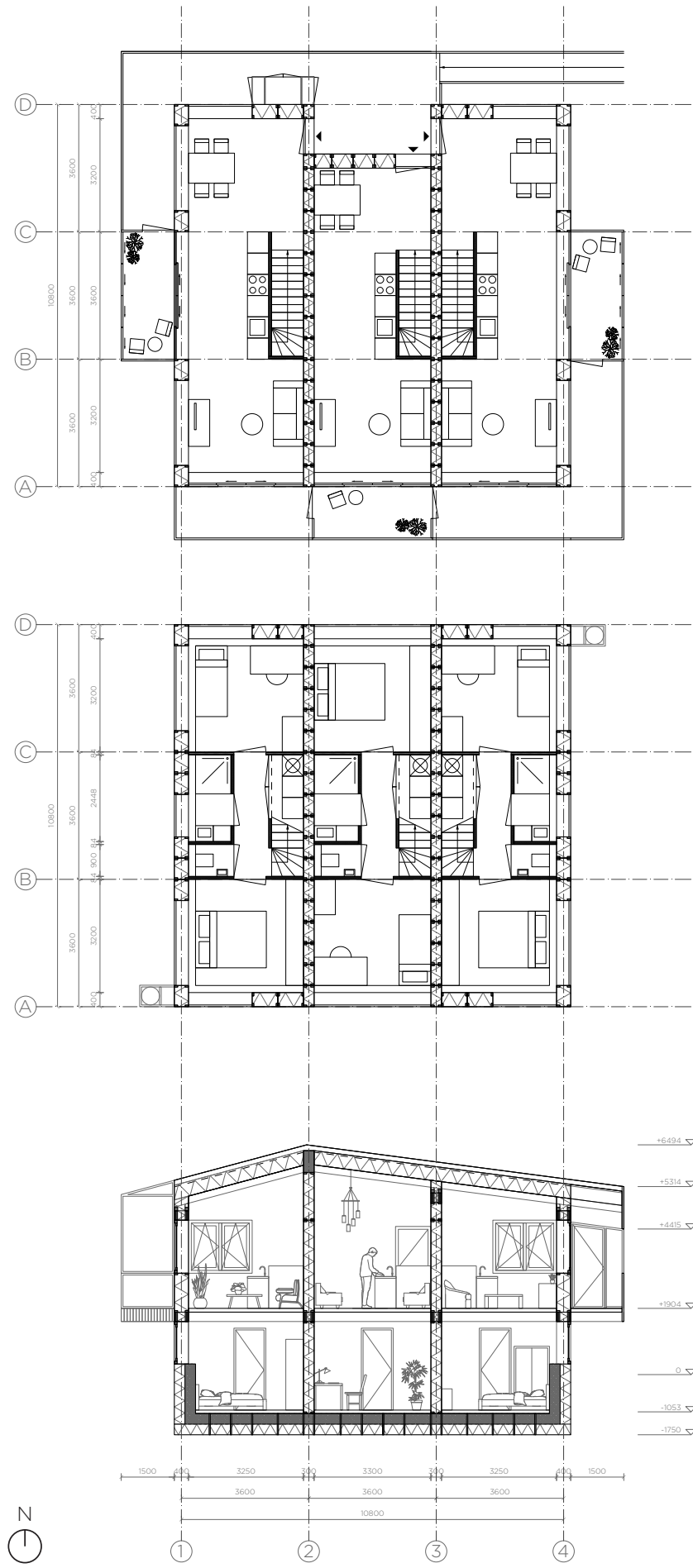
configuration of 11 residential blocks, with open views and community feeling as key aspects



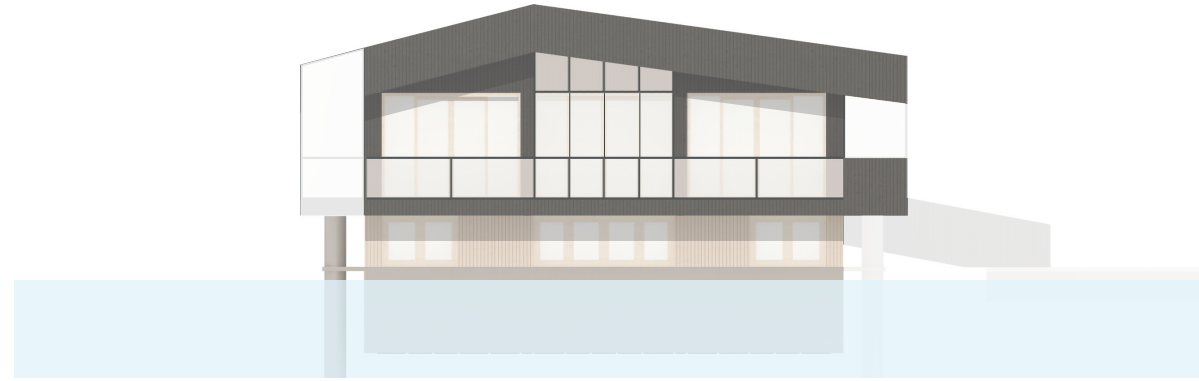








north



south



east

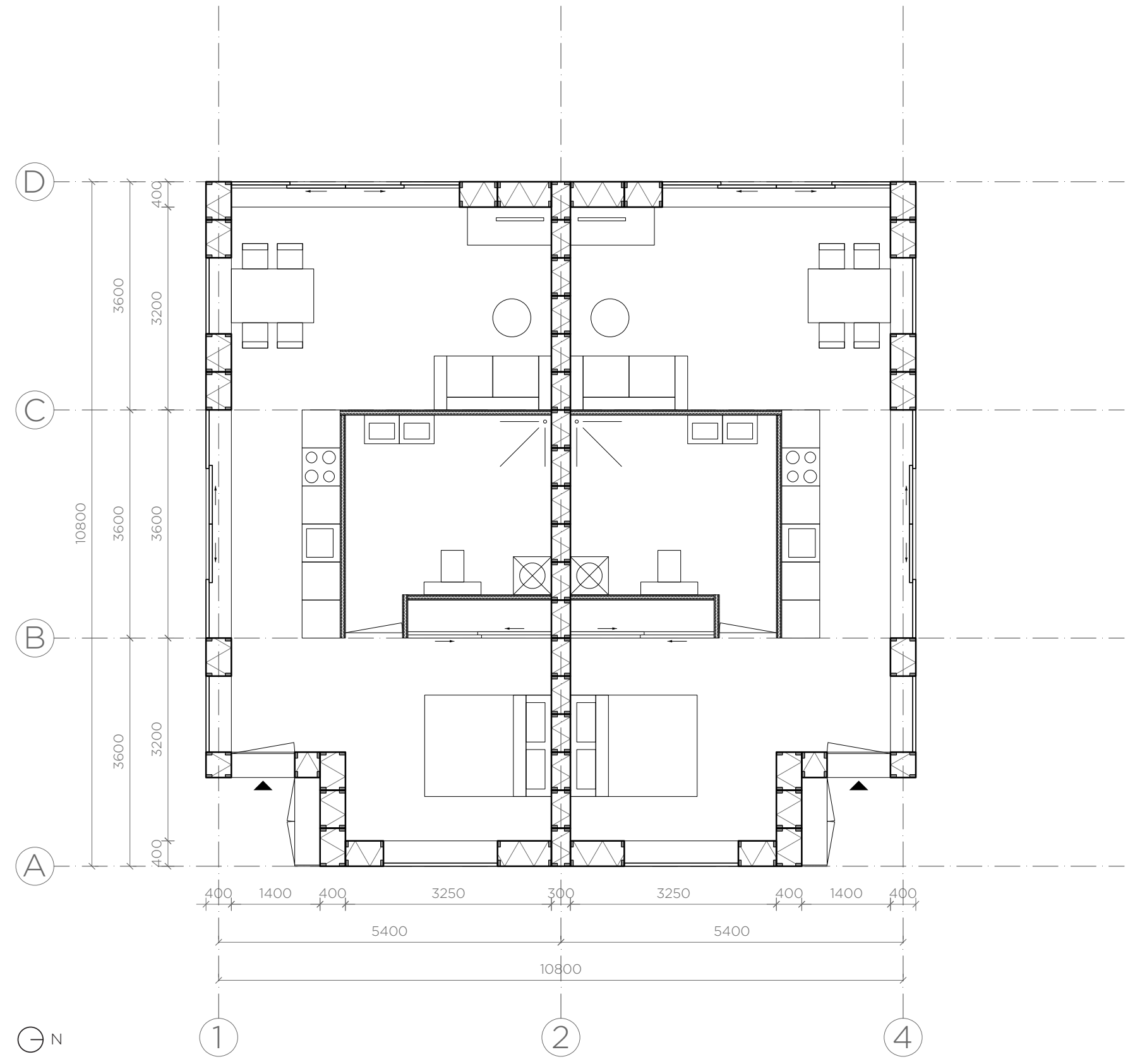


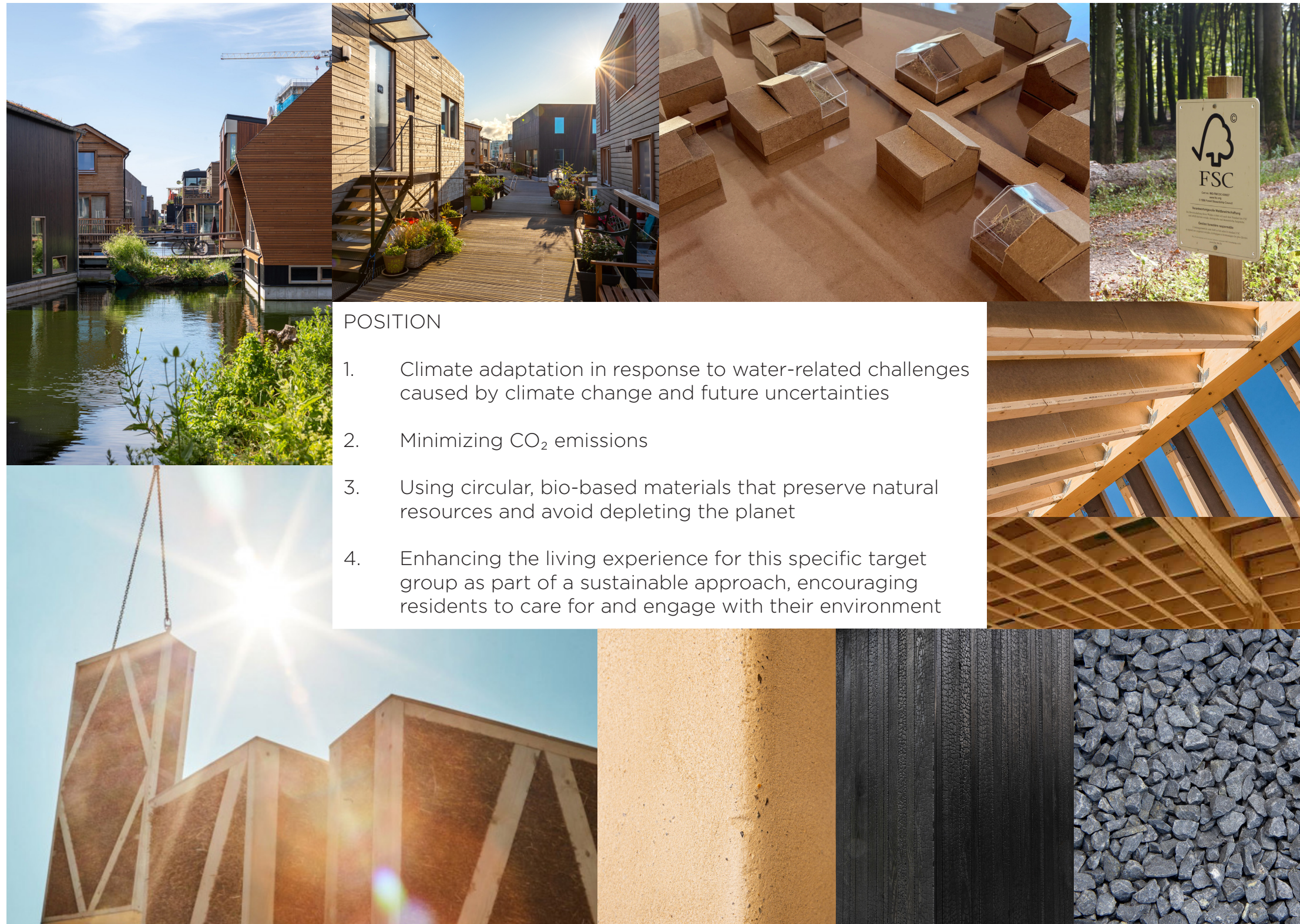
west





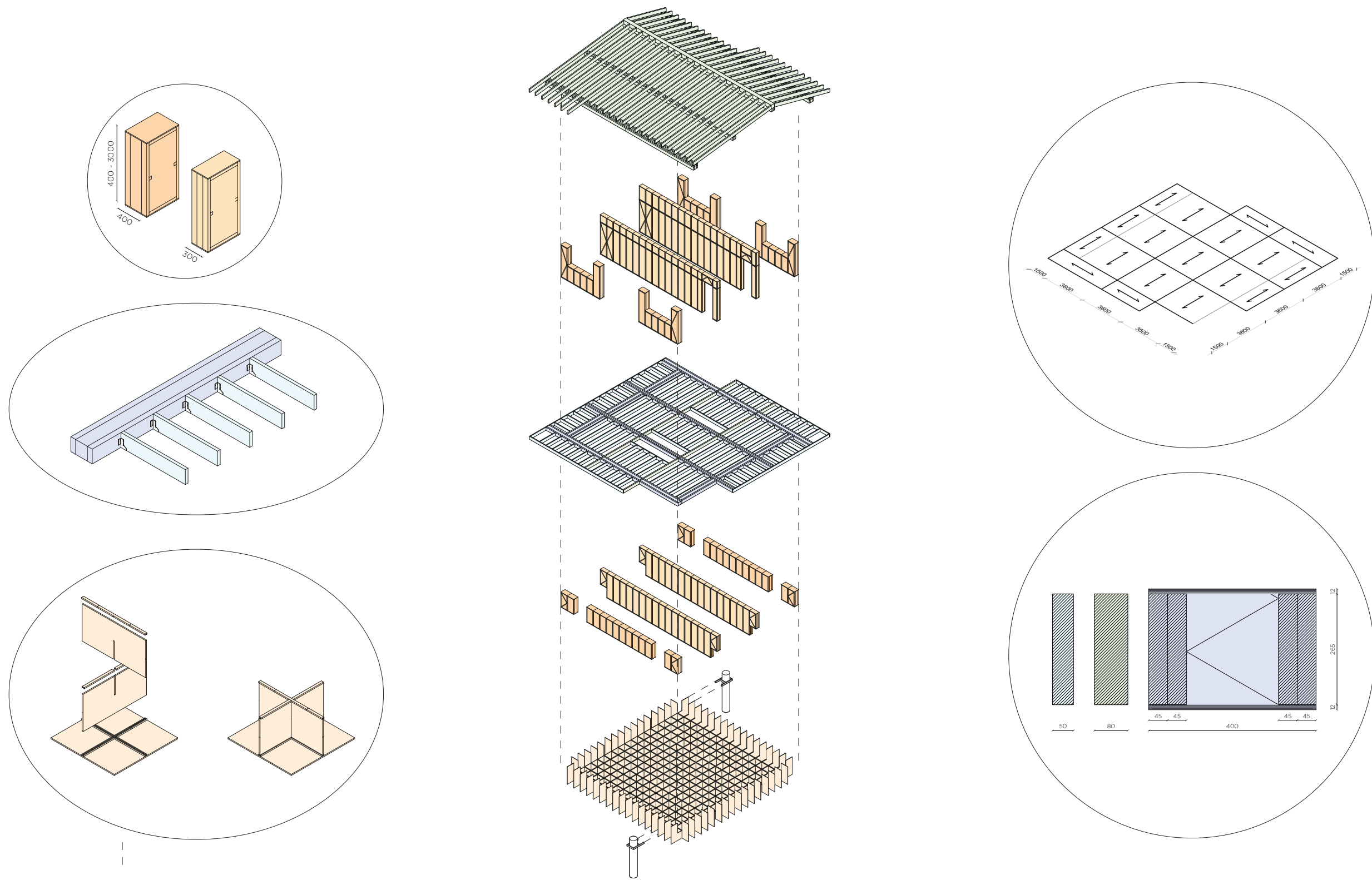
Tides of Care | Impression of green terrace between independent homes

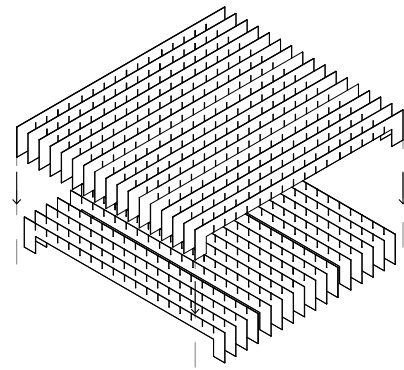




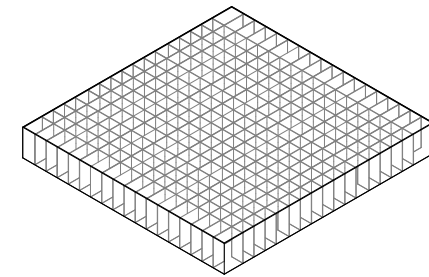
POSITION

1. Climate adaptation in response to water-related challenges caused by climate change and future uncertainties
2. Minimizing CO<sub>2</sub> emissions
3. Using circular, bio-based materials that preserve natural resources and avoid depleting the planet
4. Enhancing the living experience for this specific target group as part of a sustainable approach, encouraging residents to care for and engage with their environment

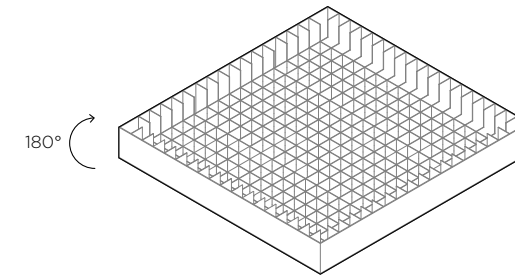




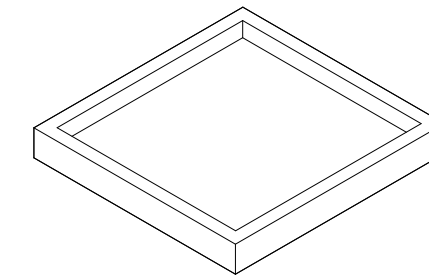
1. slide the wooden frames together in opposite directions



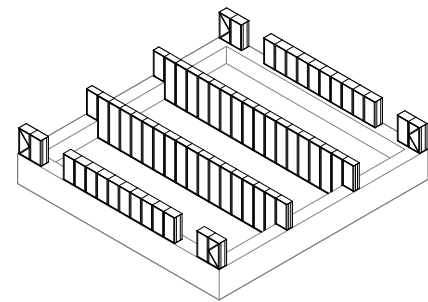
2. place plywood panels on the outside of the wooden frames and the waterproof polyester tray made on site around it



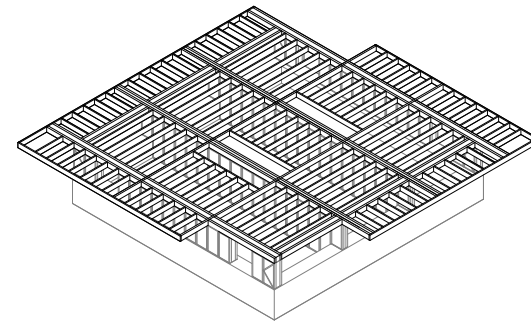
3. turn the entire construction 180 degrees and fill the space between the wooden frames with gravel and XPS insulation boards



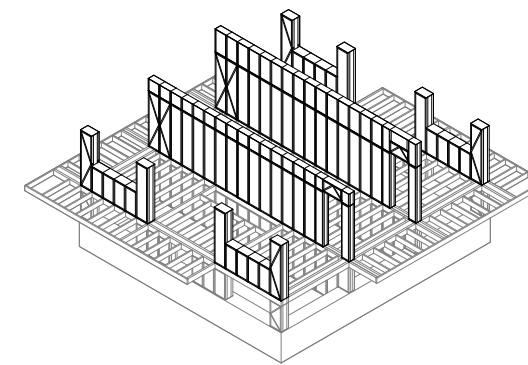
4. finish the top and inside of the box with plywood panels



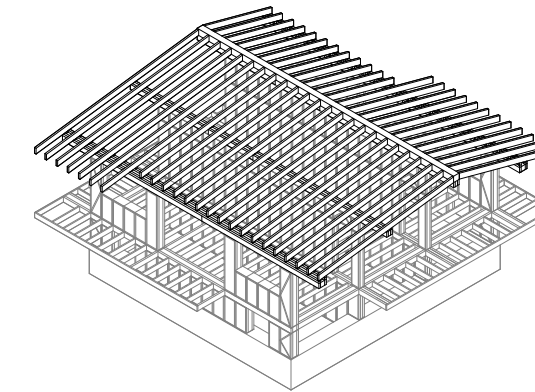
5. place the EcoCocon wall elements of the lower floor on and in the box



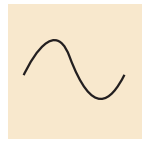
6. fix the wooden beams on top of the EcoCocon panels to each other



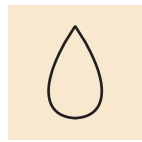
7. place the EcoCocon wall elements of the upper floor on top of the wooden beam structure



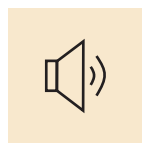
8. place the wooden beam construction of the roof on the panels



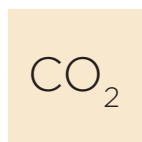
Straw insulation has a **high phase shift**, meaning it slows down the transfer of heat between the inside and outside of the house. As a result, indoor temperatures remain stable for longer—staying cooler in the summer and warmer in the winter. It provides natural temperature regulation, which reduces the need for mechanical heating and results in lower CO<sub>2</sub> emissions.



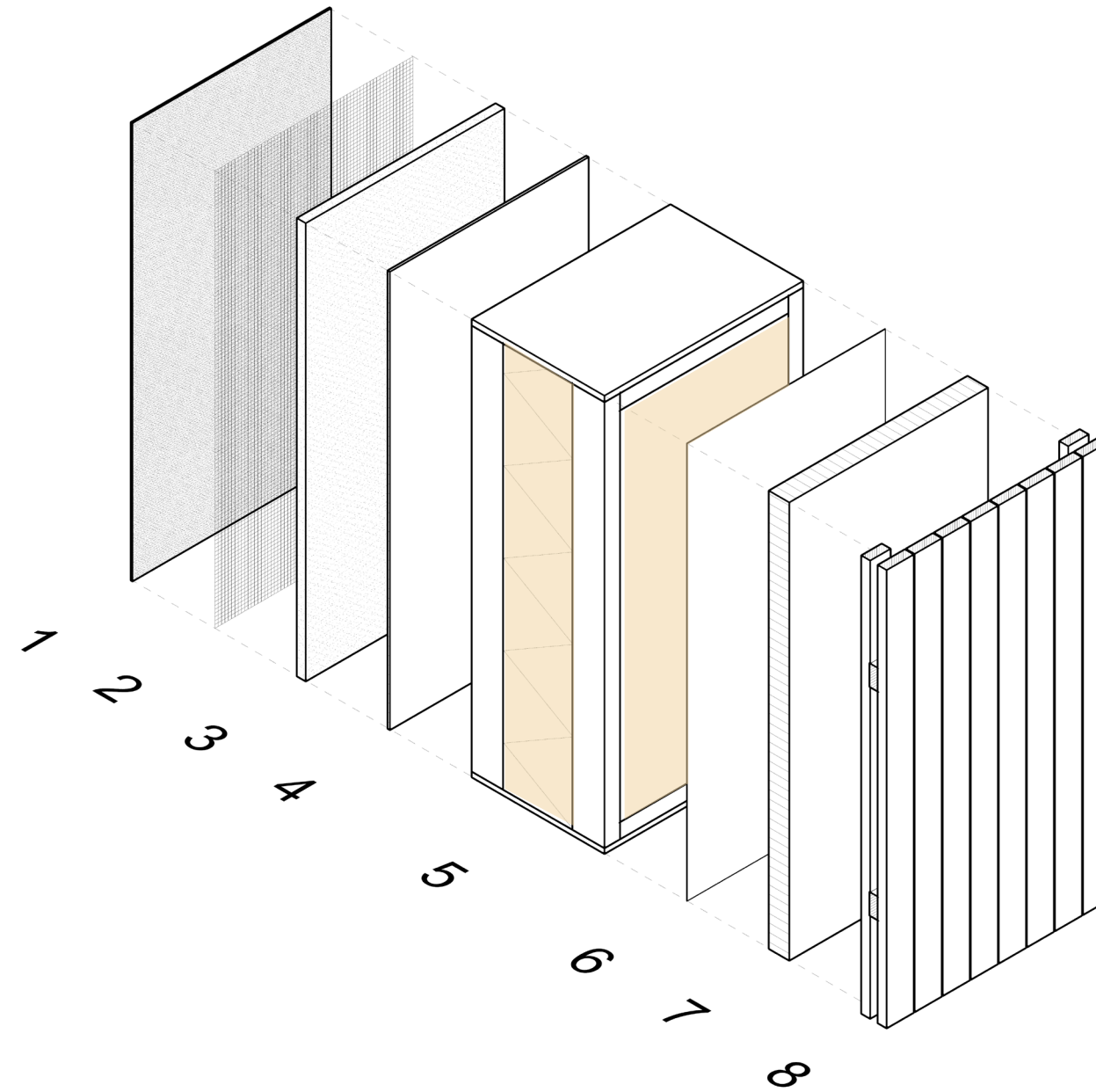
Straw can absorb moisture and release it on the warm side, which ensures **natural moisture regulation**. This keeps the humidity in the house in balance, which prevents mold formation and contributes to a healthy indoor climate. In addition, the directly applied clay plaster works as a natural moisture regulator indoors. Clay plaster absorbs excess moisture and releases it again when the humidity drops, keeping it close to the optimal level.



EcoCocon panels keep out all noise up to 54 dB. This far exceeds the minimum standard requirements and results in **exceptional acoustic comfort**.

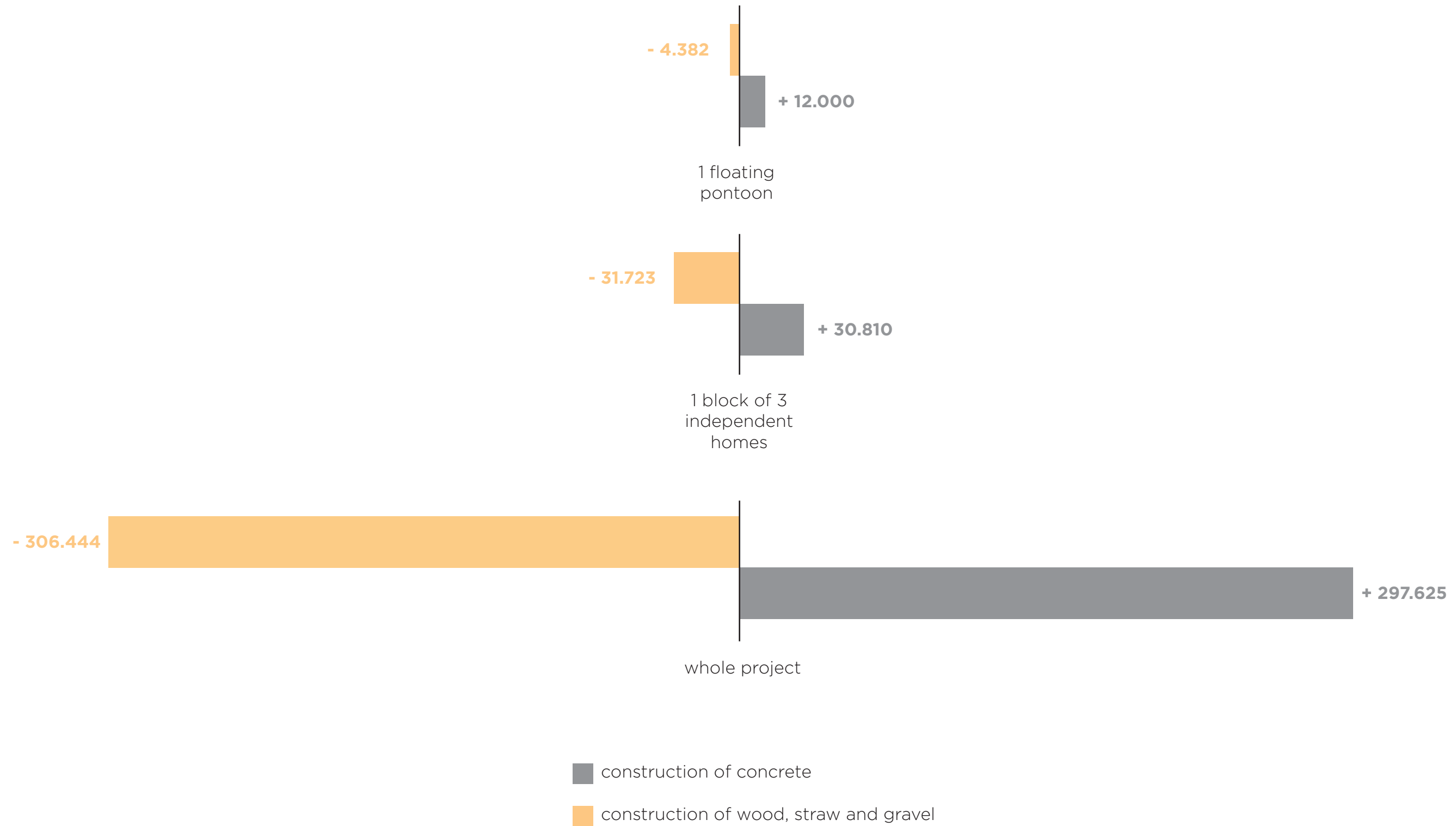


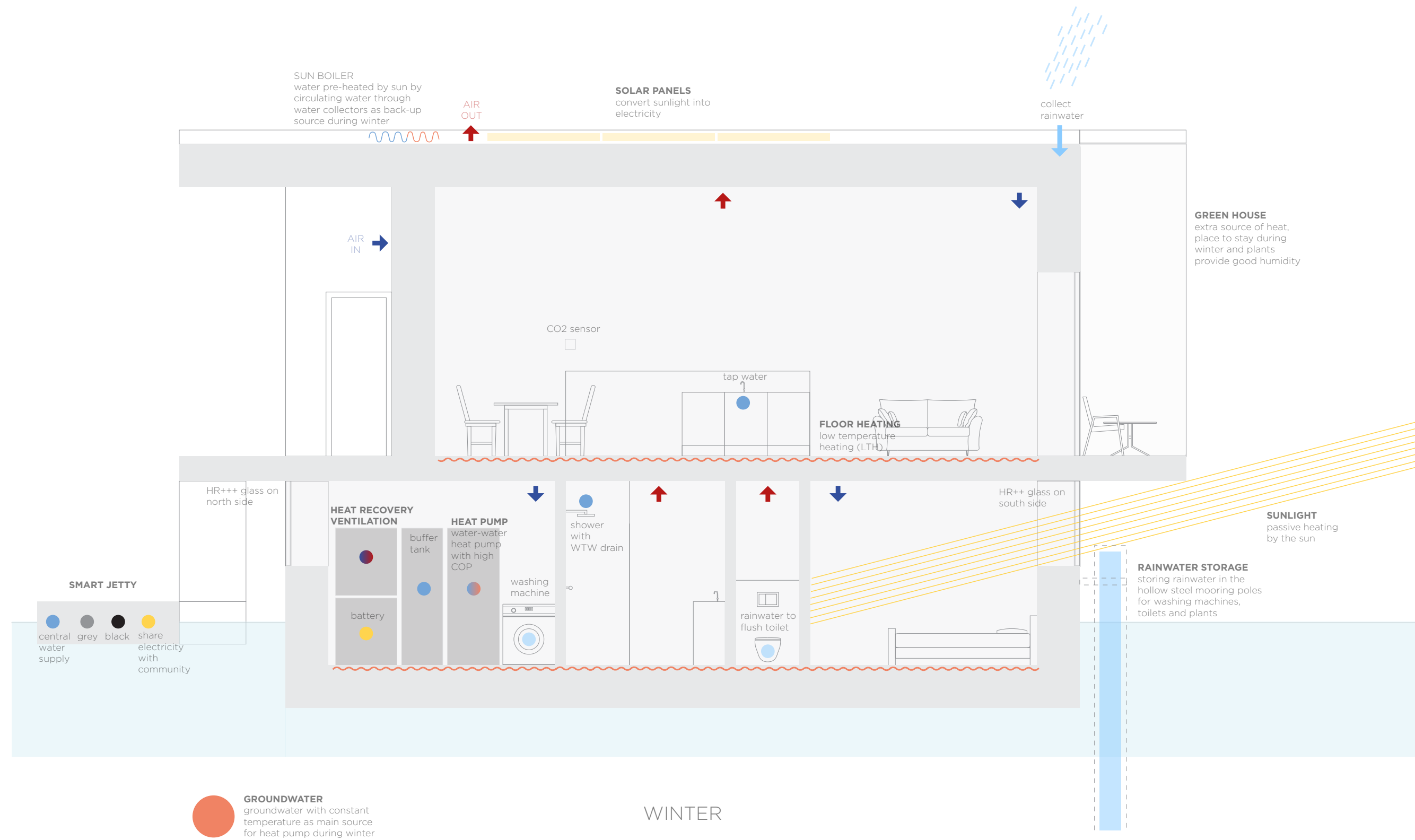
The **CO<sub>2</sub> storage** of straw is more than 16 times more efficient than CO<sub>2</sub> storage in wood. An EcoCocon panel has a CO<sub>2</sub> storage capacity of 97.6 kg/m<sup>2</sup>.

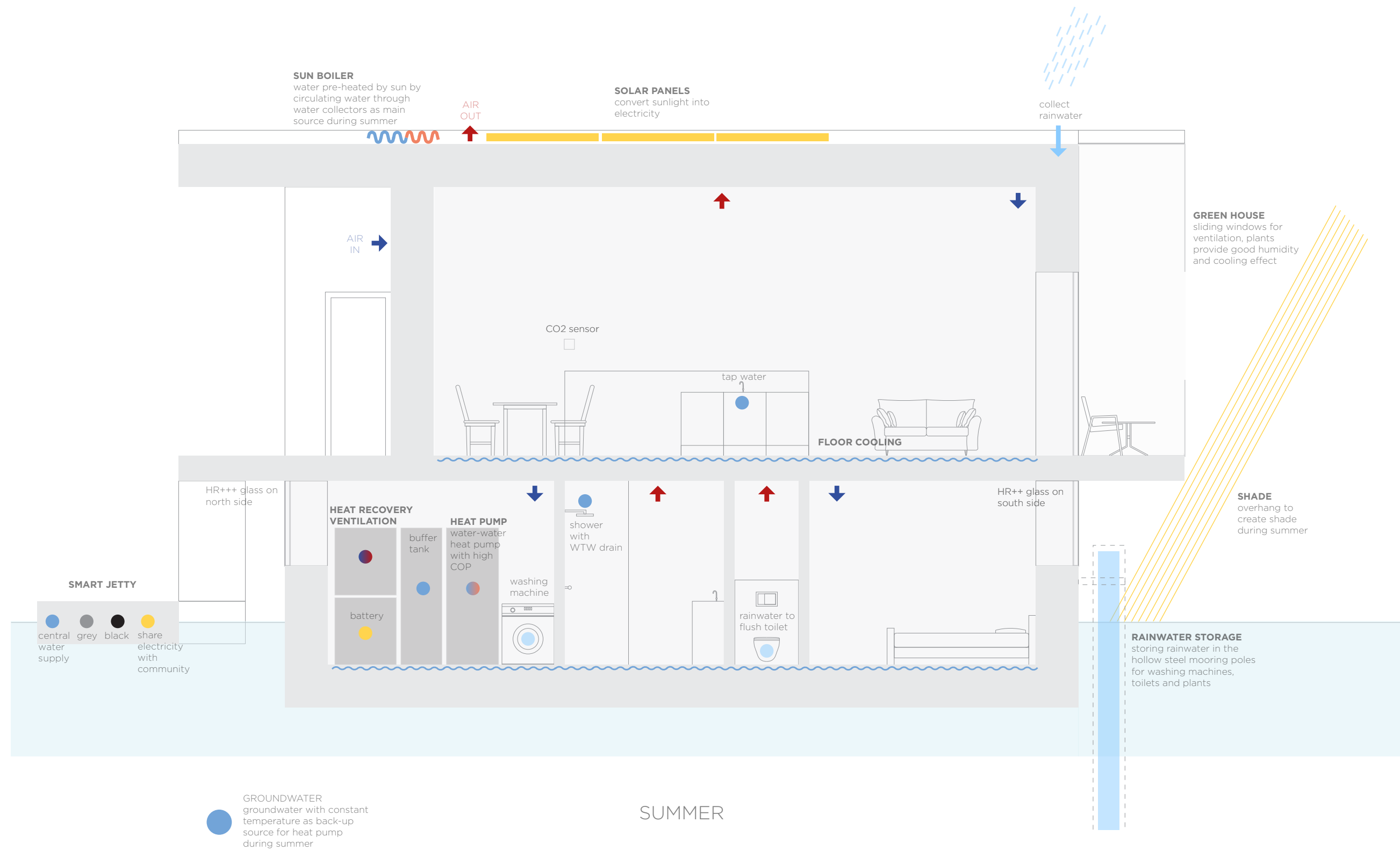


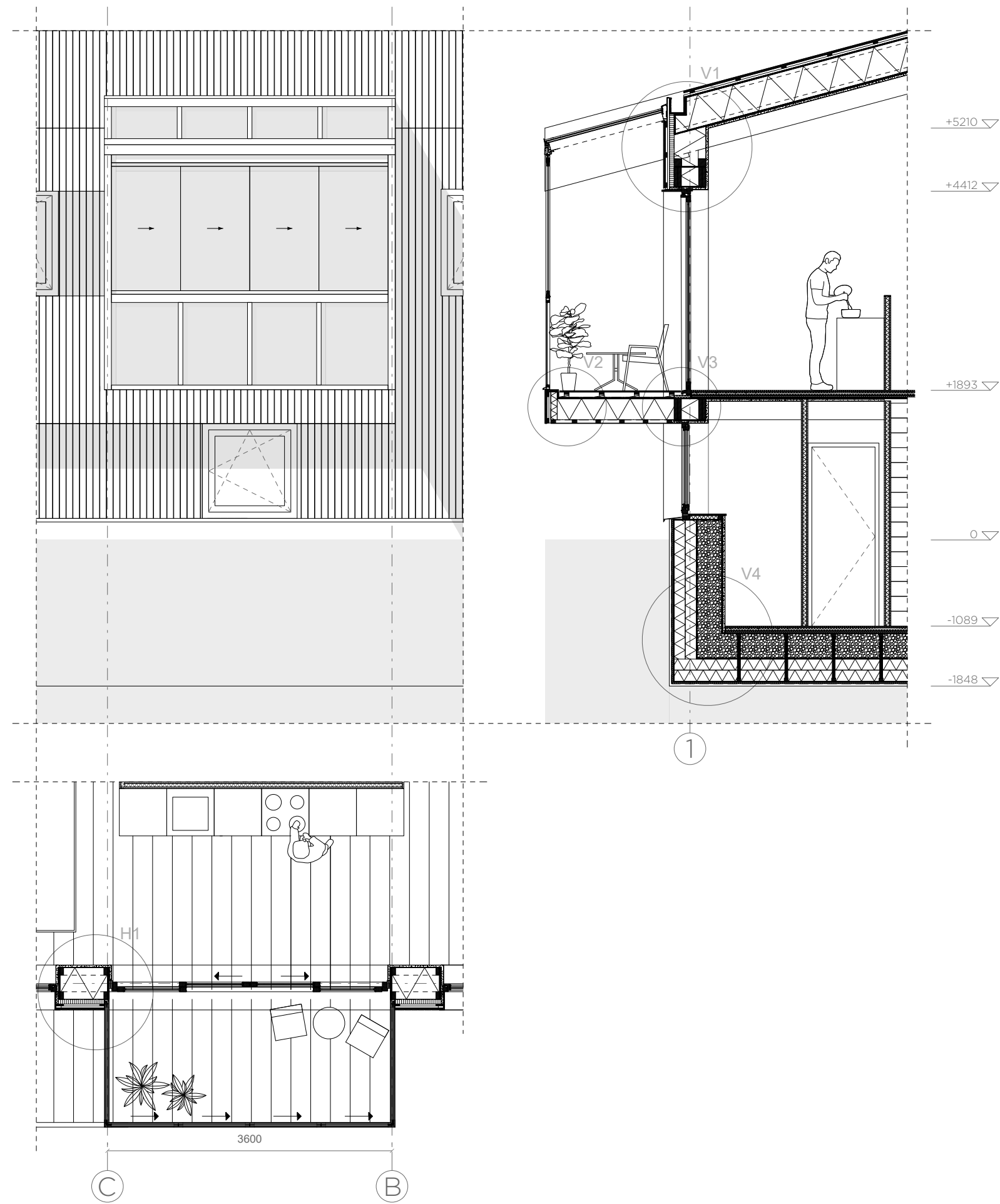
1. fine clay plaster 3 mm
2. reinforcing mesh
3. base coat clay plaster 25 mm
4. wood fibre board 5 mm
5. EcoCocon straw wall element 400 mm
6. airtight breather membrane Sd < 0,2 m
7. wood fibre board 60 mm
8. timber cladding

## CO<sub>2</sub> emissions (kg)









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