

# Re-awakening The Senses

An architectural rendering of a waterfront development at sunset. The scene features a winding river or canal with several boats docked along the shore. In the foreground, there are modern buildings with flat roofs and some greenery. The sky is a mix of orange, yellow, and blue, with the sun low on the horizon. The overall atmosphere is serene and modern.

A4 Presentation 25 June 2026  
Public Building Graduation Studio  
Juliana Lueb | 5066376

# Regional framework

Nij Begun, growth in recreation

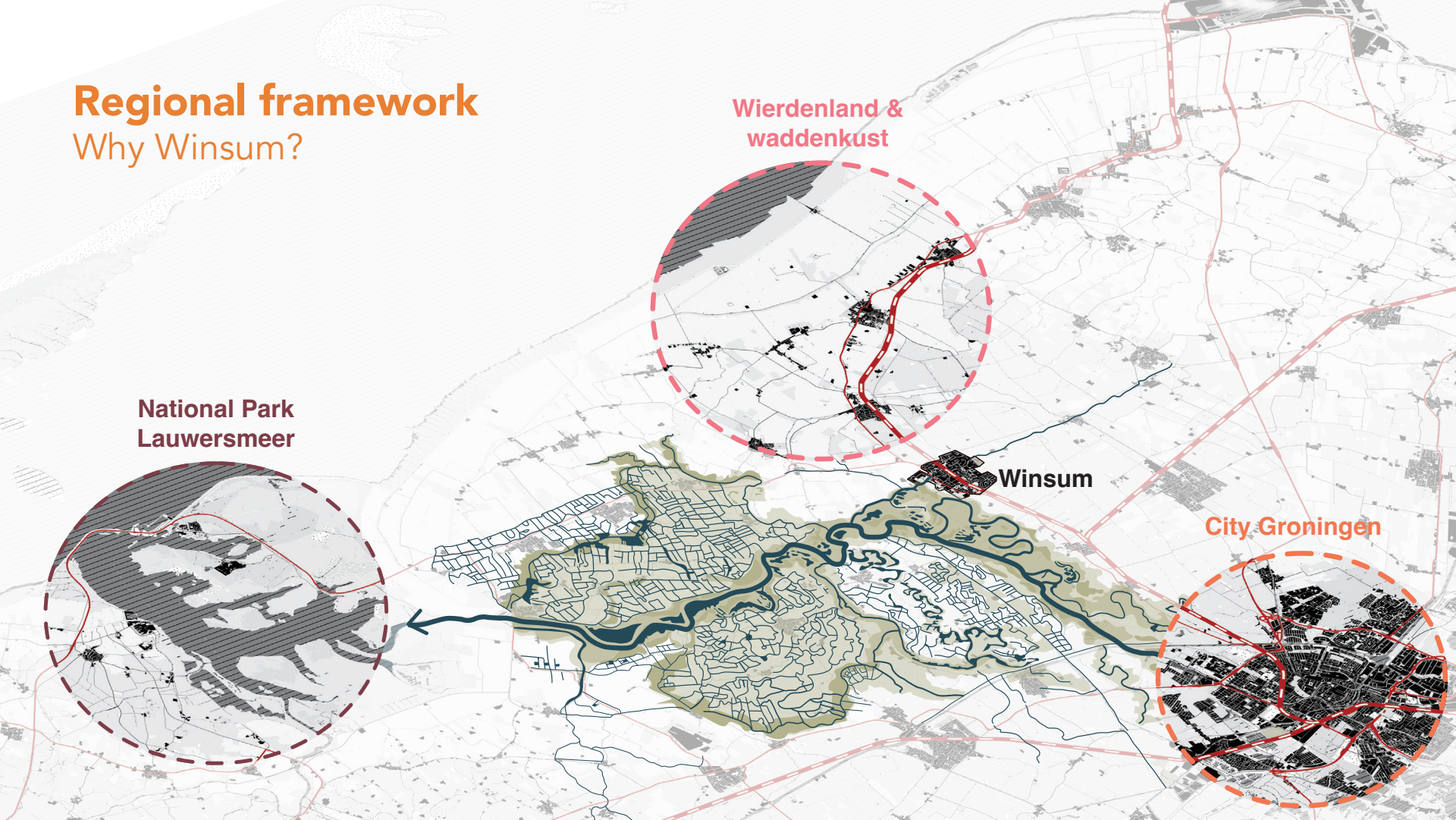
- Nij Begun agenda: 30-year investment program for the region
- Tourism growth in Groningen +11% staying visitors in 2024 (CBS)



- |                                 |                 |                       |
|---------------------------------|-----------------|-----------------------|
| National park Lauwersmeer       | Reitdiep        | Traditional Pieterpad |
| Wierdenland & waddenkust        | Winsummerdiep   | Addition Pieterpad    |
| Middag-Humsterland and Reitdiep | Het oude diepje | Train                 |
| City Groningen                  | Lauwersmeer     | Car                   |

# Regional framework

Why Winsum?



Wierdenland & waddenkust

National Park  
Lauwersmeer

Winsum

City Groningen



Train Station  
Winsum



Sint Nicolaas kerk

Former Arnhemhuis Dinghikum

Former Synagogue

Windmill De Vriendschap

Torenkerk

Albert Schut Memorial

De Boog

Old Town Hall

Windmill De Ster

War Memorial

Raid Memorial

Pieterpad

Marenland

Pieterpad









# Waternetwerk

National Park  
Lauwersmeer



Drentsche Aa



-  Reitdiep river: dynamic fresh water backbone
-  main fresh water distributor zones
-  water storage and drain zones
-  lower lying small scale agricultural area
-  polder landscape
-  wierden
-  culvert / watercrossing
-  water pumping station





# Wierden- & dikelandscape



- Ossengang, ringweg
- Dobbe

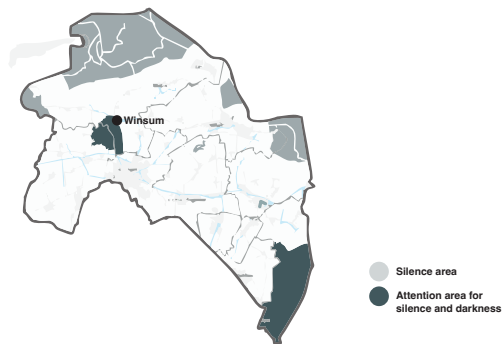
## Legend

- - - Pieterpad
- ▤▤▤ Road N361
- Wierde
- ▬ Train

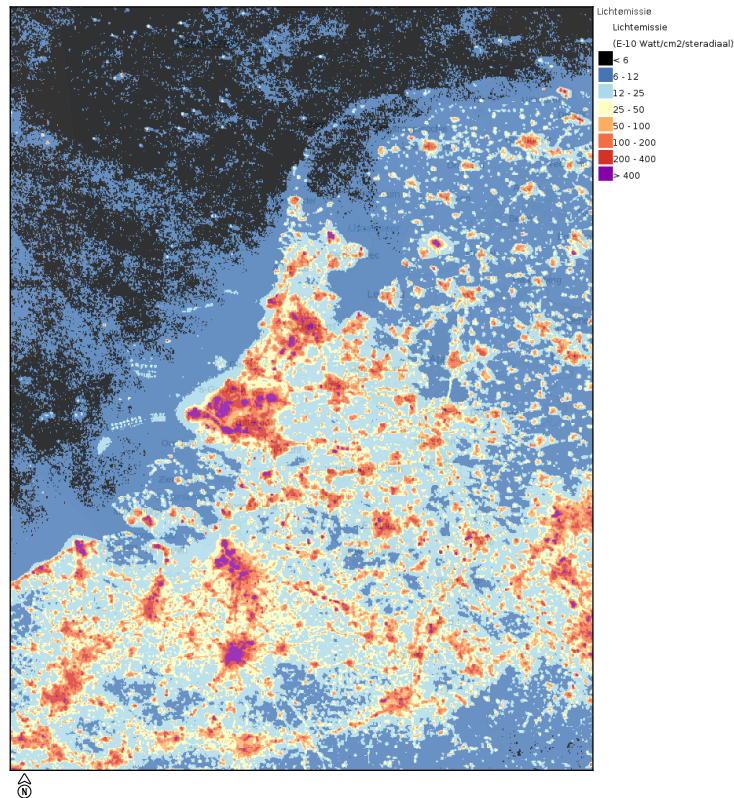


# Darkness & sillence

## Preserving darkness as a quality



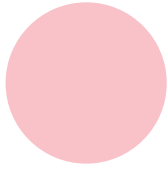
## Dark-sky connections from Winsum



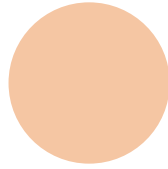
Rijksinstituut voor Volksgezondheid en Milieu (RIVM), 2024

# What are the potentials of Winsum?

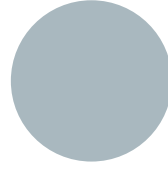
From



Slow mobility  
passing through



Historic landscape  
unnoticed

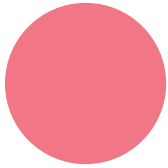


Water as  
background

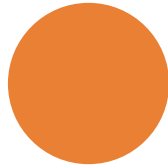


Dark sky potential  
unused

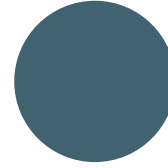
To



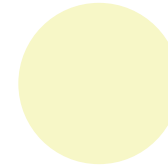
A node within the  
slow mobility  
network



Architecture revealing  
the terp landscape



Water as  
experience



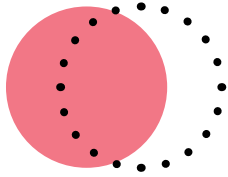
Experience the  
darkness & silence

# Design ambition

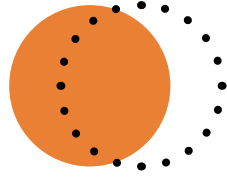


## Strategy

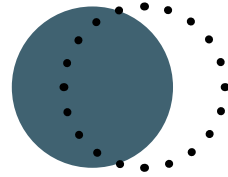
Amplifying the sensory experience of the local context



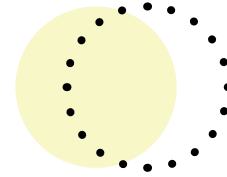
Slow-mobility



The wierden and  
dike landscape



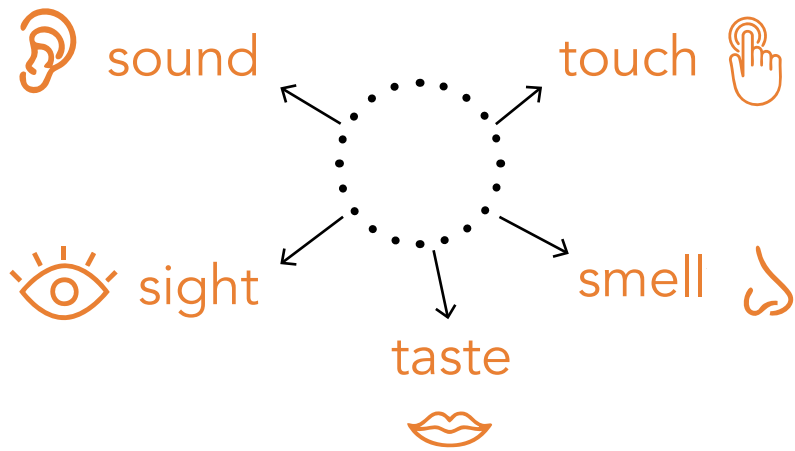
Water



Darkness and  
silence



**sensory experience**



## Qualities of the local context



## Designing for the senses



- Wierden- & dike landscape
- Water
- Slow Mobility
- Darkness & silence



Sight



Sound



Smell



Touch



Taste

*Creates a deeper connection  
with the landscape*



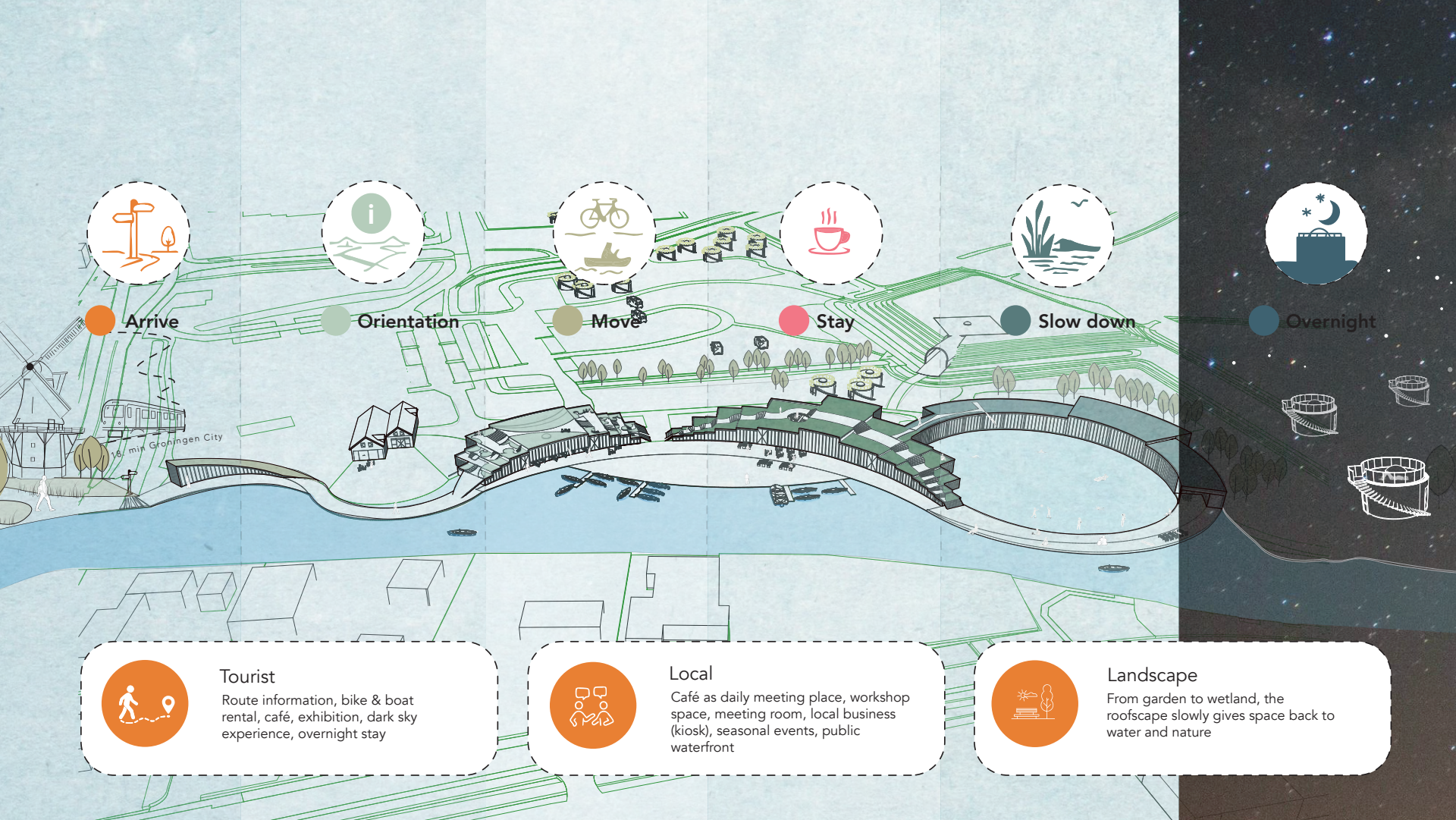
Slow down & stay longer



Seasonal awareness



Meaningful memories



Arrive



Orientation



Move



Stay



Slow down



Overnight



**Tourist**

Route information, bike & boat rental, café, exhibition, dark sky experience, overnight stay



**Local**

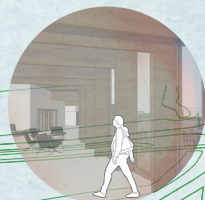
Café as daily meeting place, workshop space, meeting room, local business (kiosk), seasonal events, public waterfront



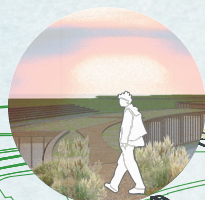
**Landscape**

From garden to wetland, the roofscape slowly gives space back to water and nature

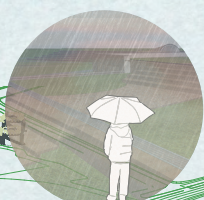
**See & feel  
the rhytm**



**Tactile tides**



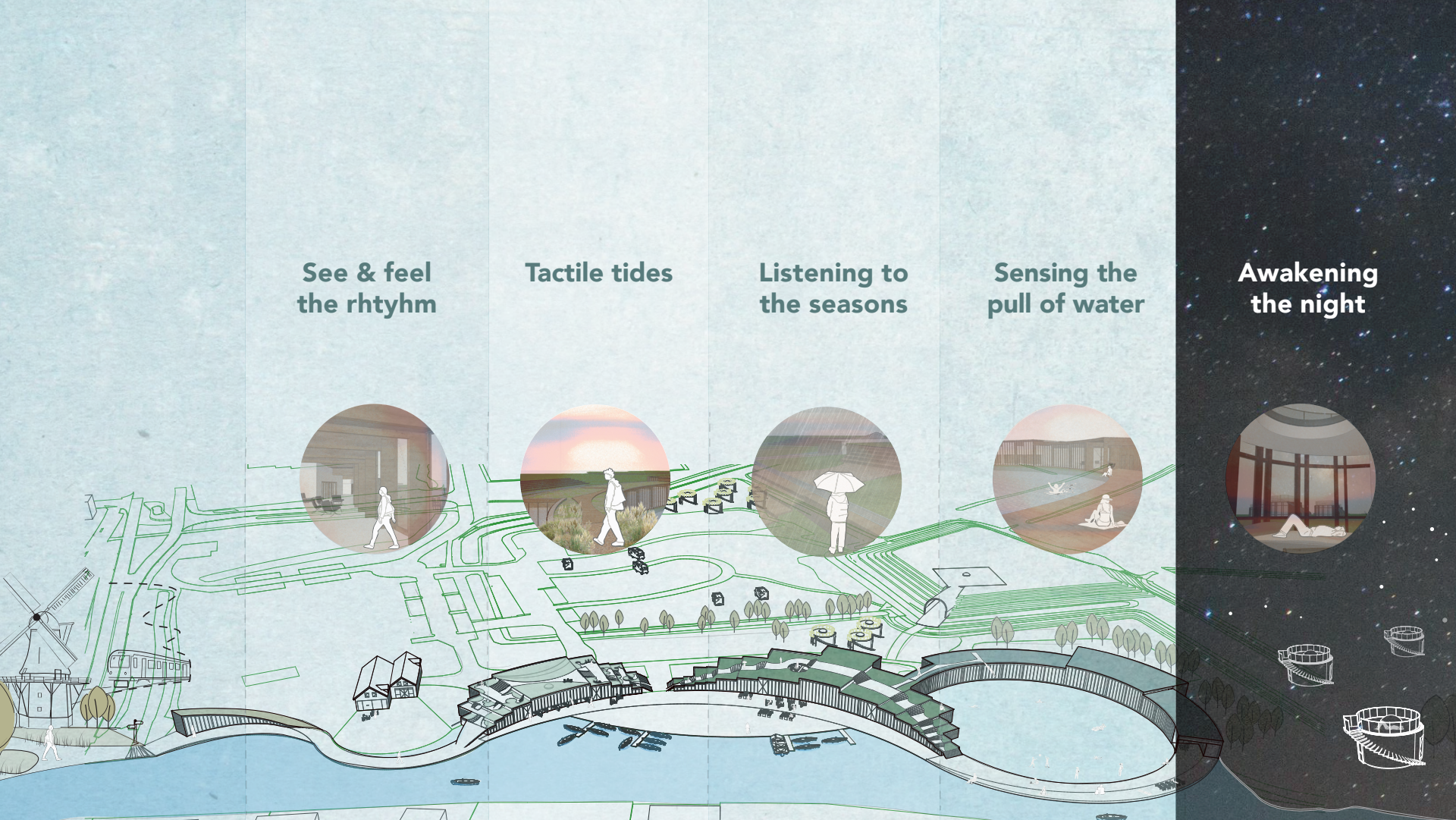
**Listening to  
the seasons**



**Sensing the  
pull of water**



**Awakening  
the night**



# Urban design Analysis



Marenland  
Source data: *openstreetmap, shademap, google earth*



# Urban design

Public / private + day / night zones

## ● Active waterside

*Daytime | Public | Water & Movement*



reflections, light on water, open views



fresh water and vegetation



water movement, reeds, small waves



water, boardwalk

## ● Darkness & silence zone

*Nighttime | Private | Overnight stay*



minimal lighting to reveal the stars



night plants, moist air after sunset



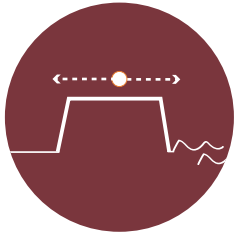
wind, insects



grass, natural ground, cool night air

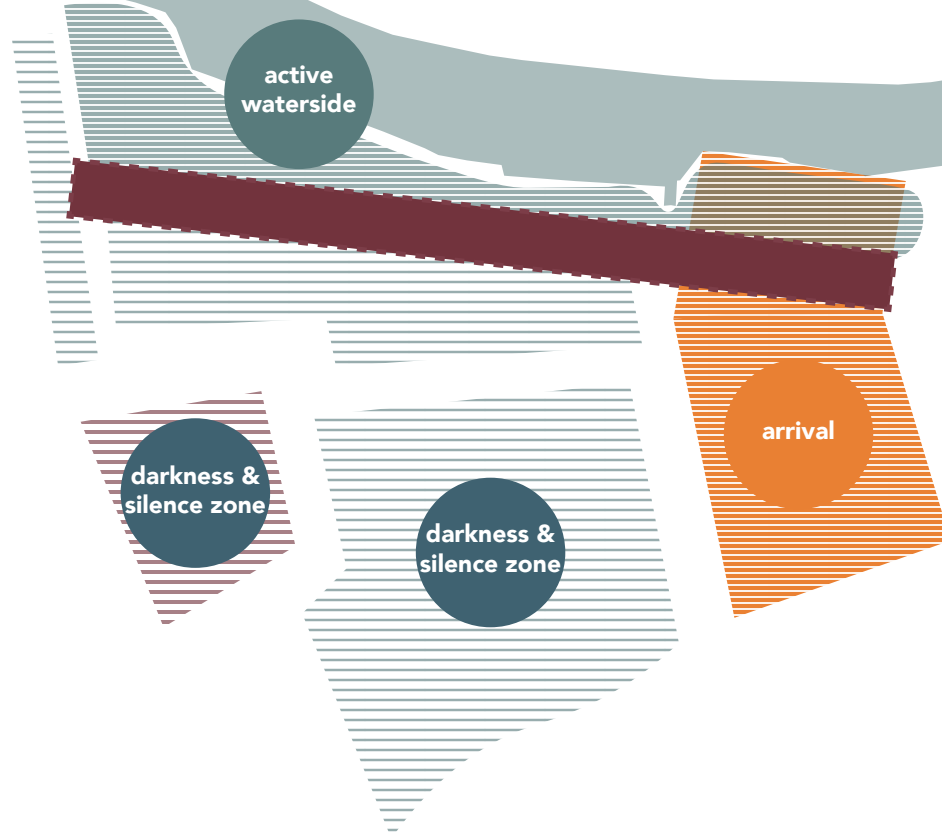
# Urban design

## Building position



### Dike principle:

- on the dike:  
*overview and route*
- in front of the water:  
*public activity*
- behind the dike:  
*shelter and silence*

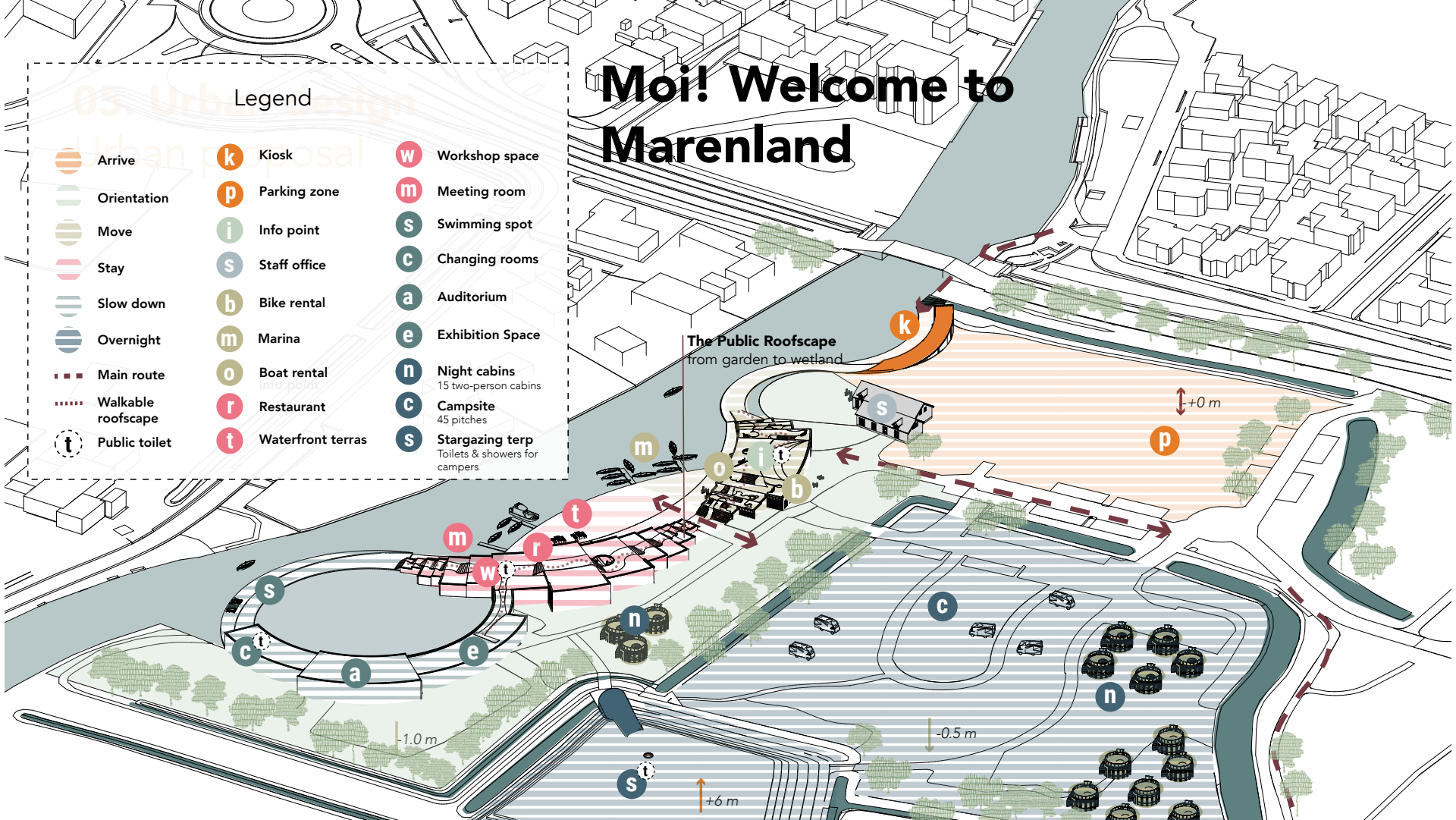


# Moi! Welcome to Marenland

## Legend

- |  |                       |  |                   |  |  |
|--|-----------------------|--|-------------------|--|--|
|  | Arrive                |  | Kiosk             |  | Workshop space                                   |
|  | Orientation           |  | Parking zone      |  | Meeting room                                     |
|  | Move                  |  | Info point        |  | Swimming spot                                    |
|  | Stay                  |  | Staff office      |  | Changing rooms                                   |
|  | Slow down             |  | Bike rental       |  | Auditorium                                       |
|  | Overnight             |  | Marina            |  | Exhibition Space                                 |
|  | Main route            |  | Boat rental       |  | Night cabins<br>15 two-person cabins             |
|  | Walkable<br>roofscape |  | Restaurant        |  | Campsite<br>45 pitches                           |
|  | Public toilet         |  | Waterfront terras |  | Stargazing terp<br>Toilets & showers for campers |

The Public Roofscape  
from garden to wetland



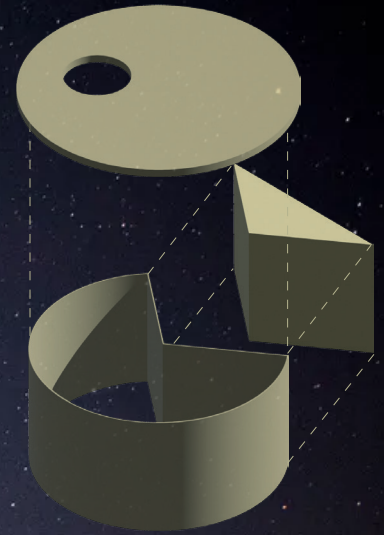
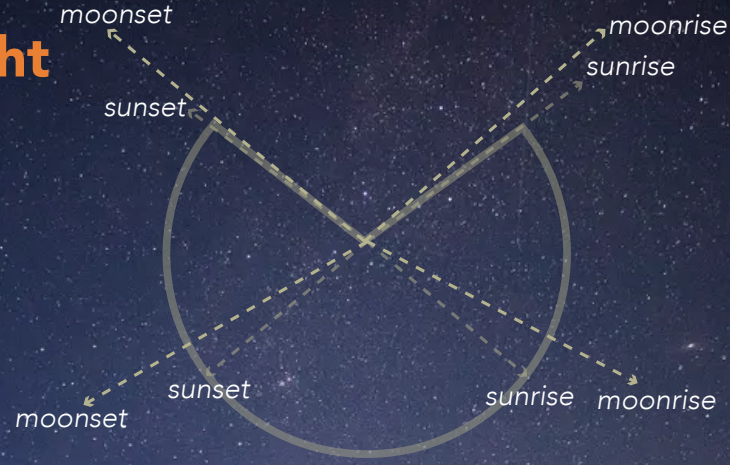
# Awakening the night

Sight, hearing



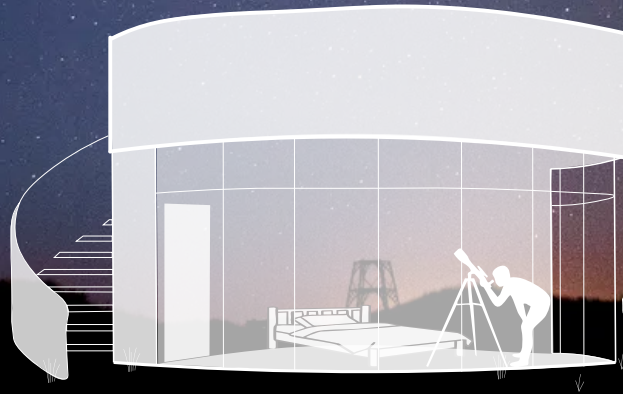
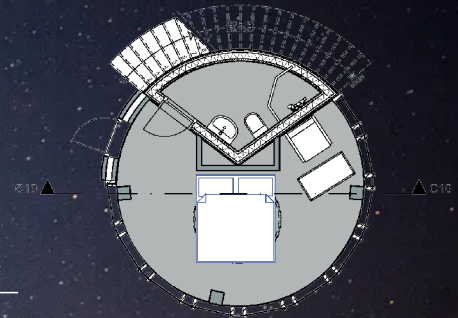
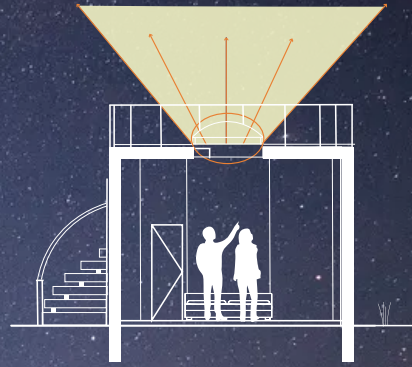
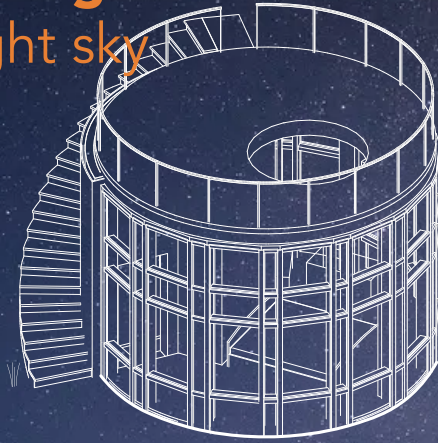
# Awakening the night

## Following the moon



# Awakening the night

Framing the night sky



# See & feel the rhythm

*Sight, touch, movement*





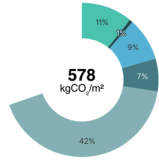
# See & feel the rhythm

## Structural concept

### Where is carbon emitted?

Biggest potential for reduction are in: Substructure 18% Skin 6.5%

Minimum scenario



Maximum scenario



● Superstructure ● Space Plan ● Skin ● Substructure ● Services

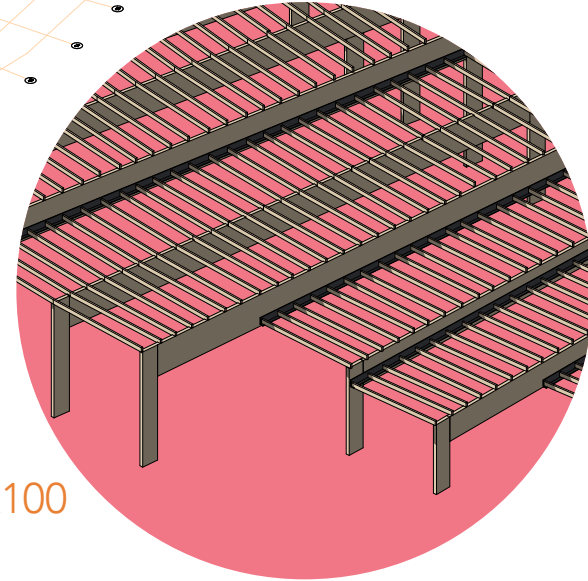
CarbonSpace by MVRDV

### Substructure

- CLT beams
- 125x50x2500mm
- 600 mm c-t-c

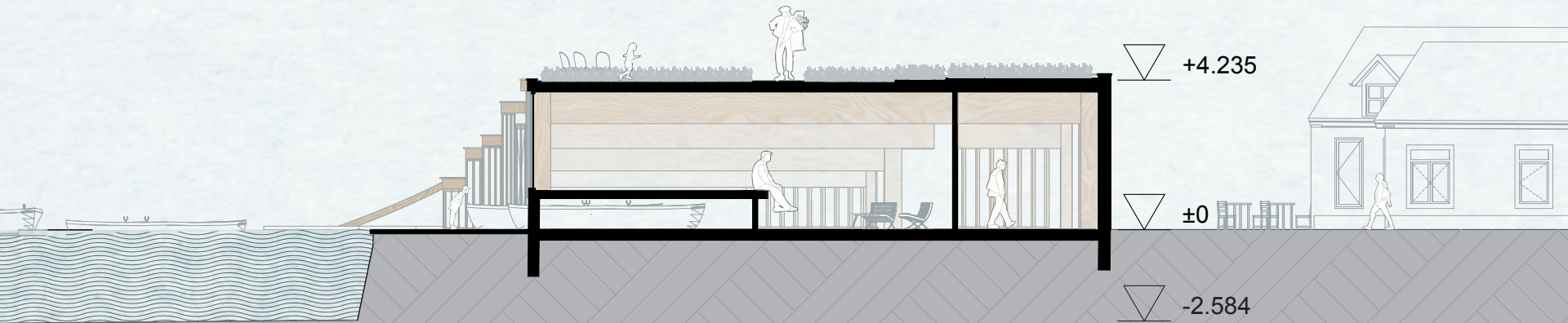
### Main structure

- Max. 20 m span
- Min. 8 m span
- Load-bearing 500x100 mm column



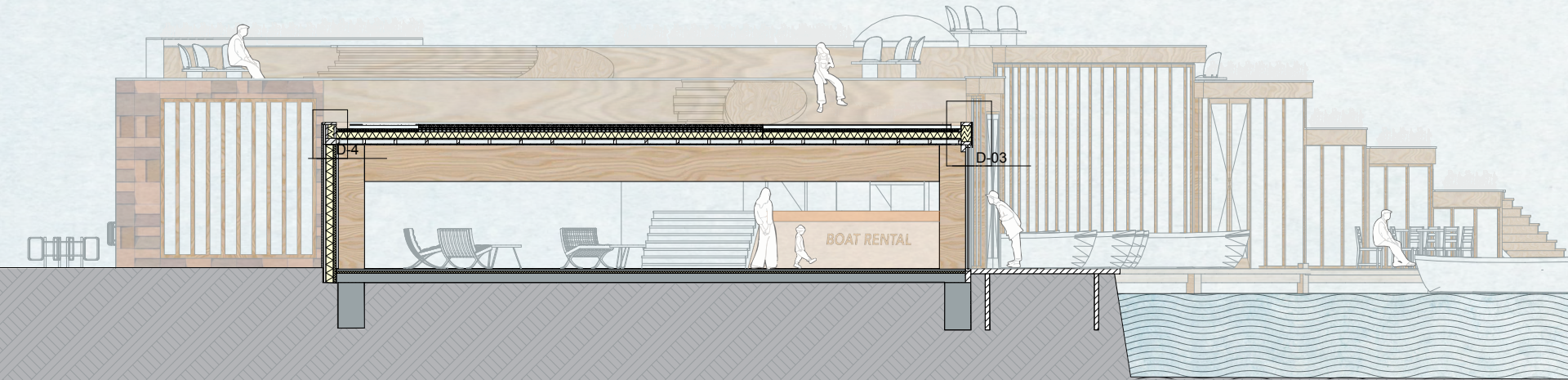
# See & feel the rhythm

## Section Dd



# See & feel the rhythm

## Section Bb



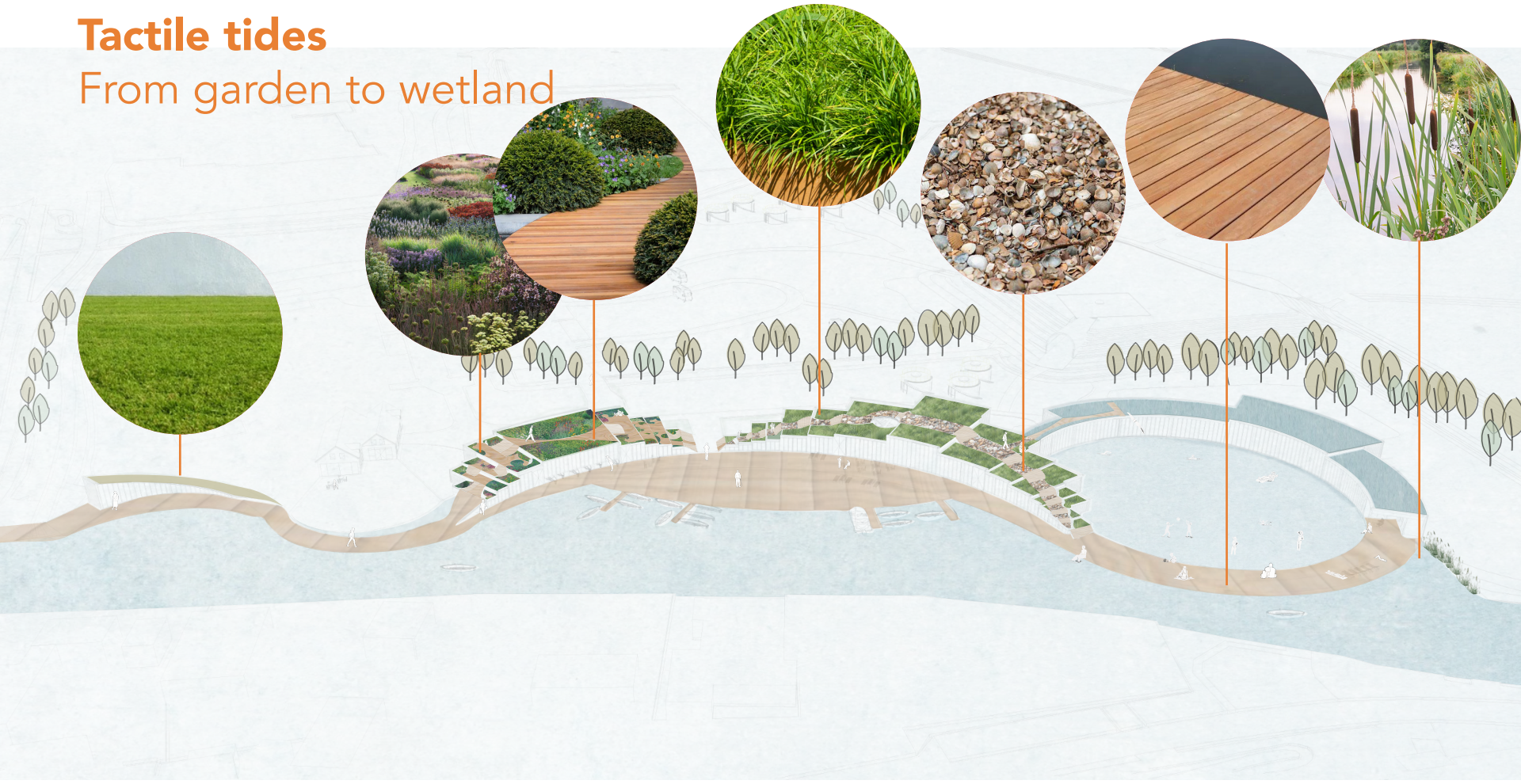
# Tactile tides

*Touch, movement, smell*



# Tactile tides

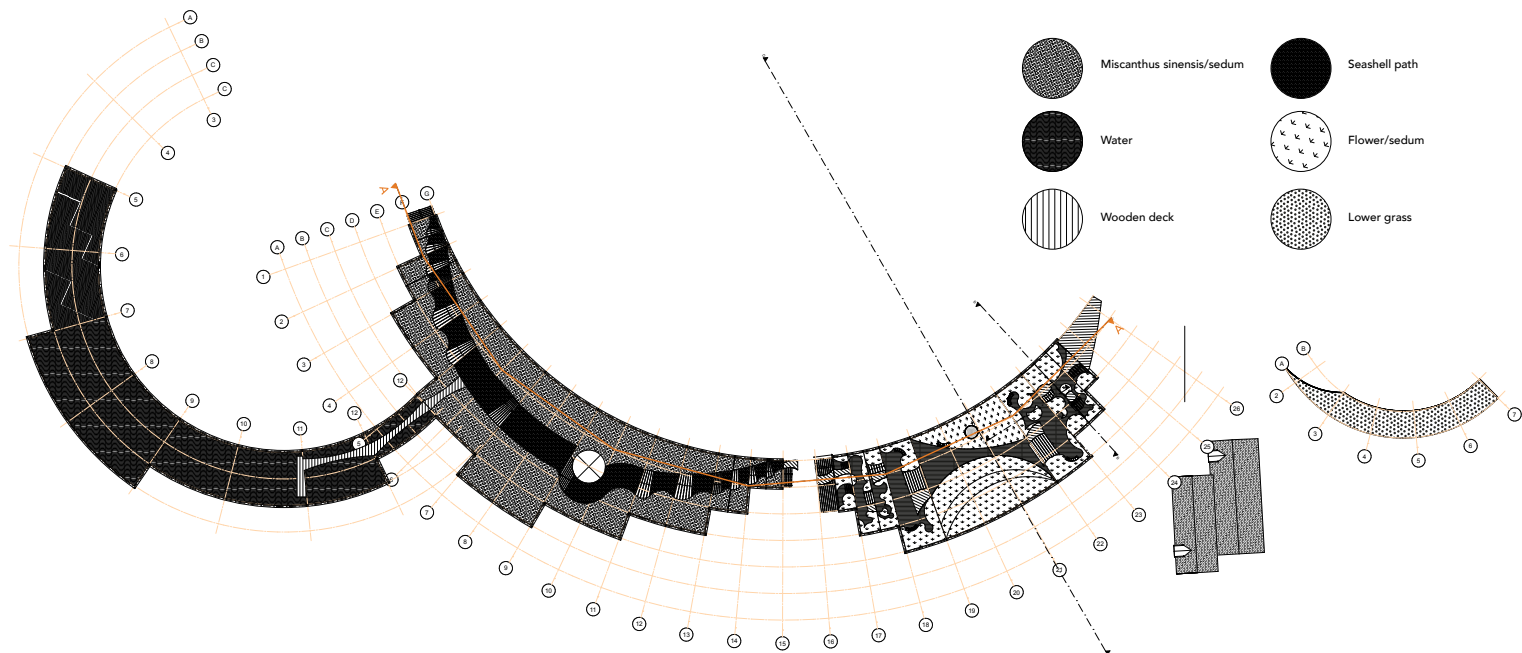
From garden to wetland



# Tactile tides

## Floorplan roof

scale 1:200



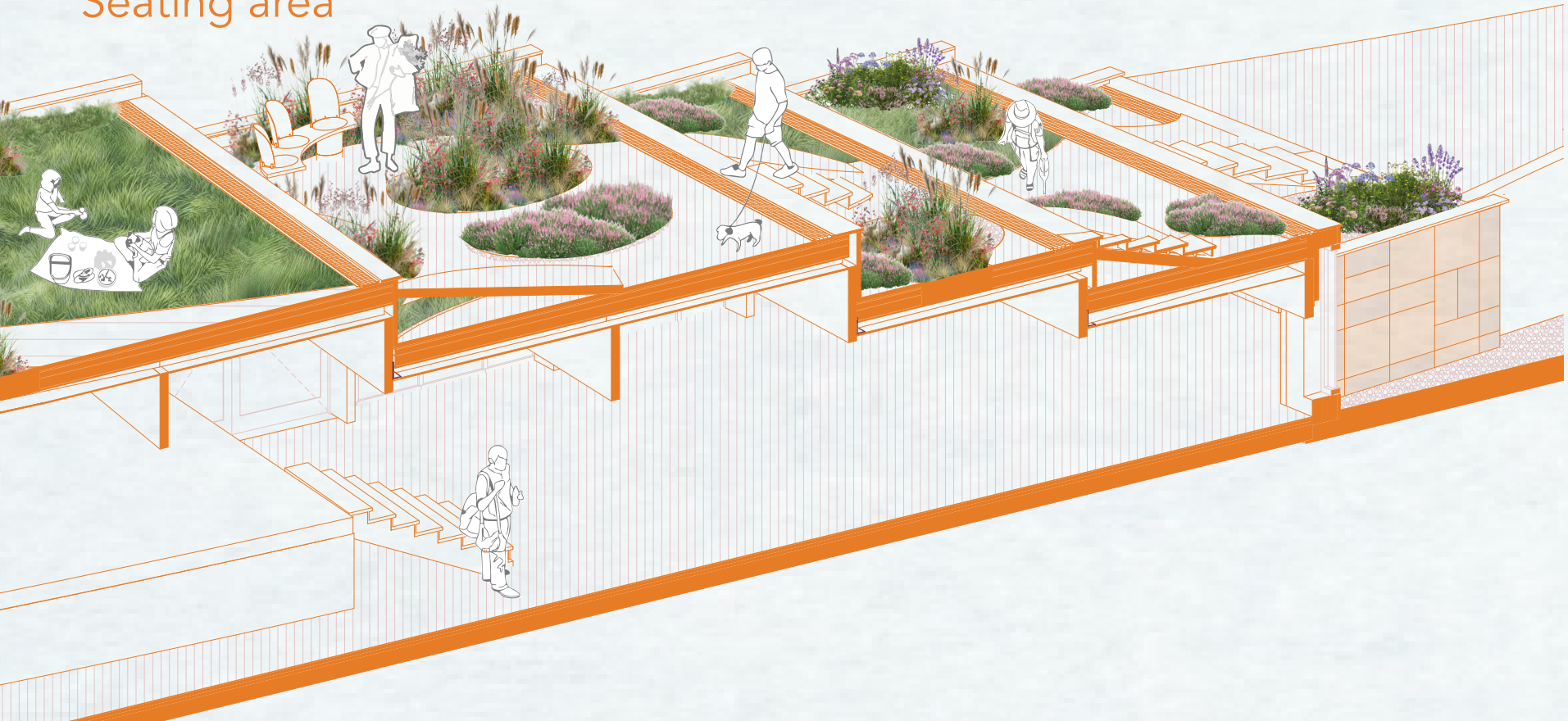
# Section Aa

scale 1:200



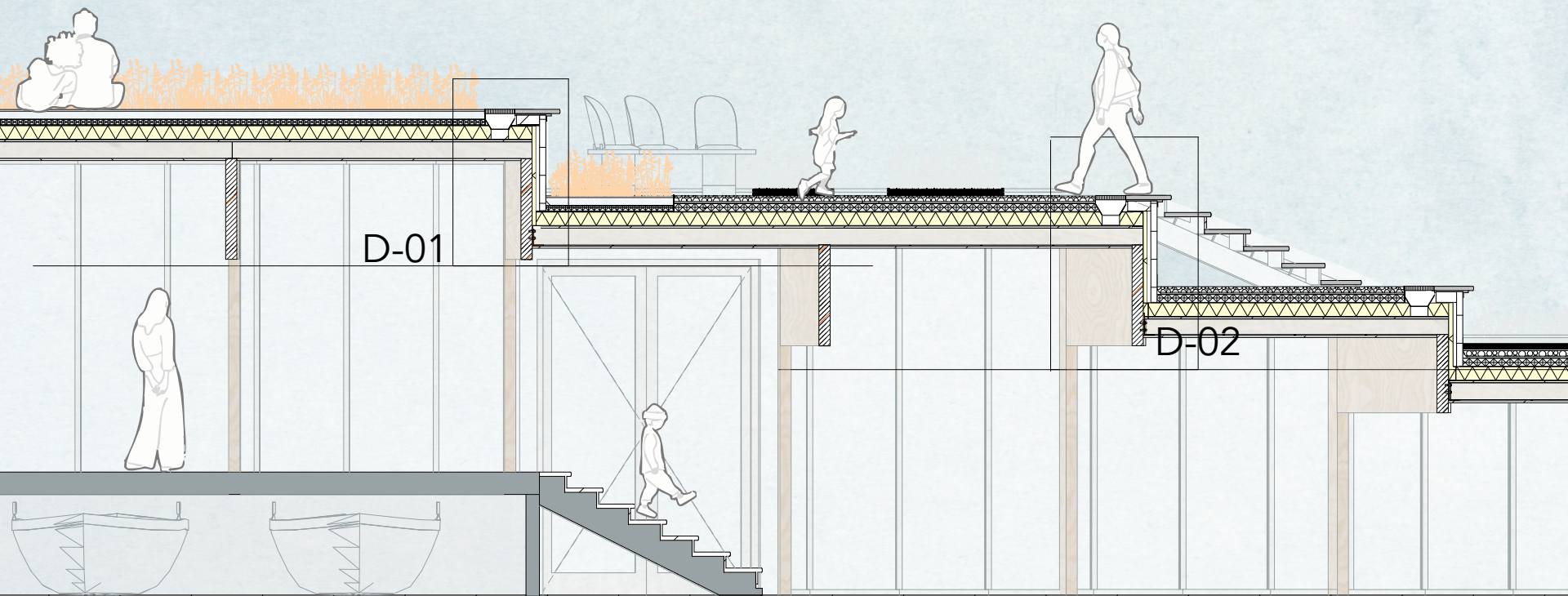
# Tactile tides

## Seating area



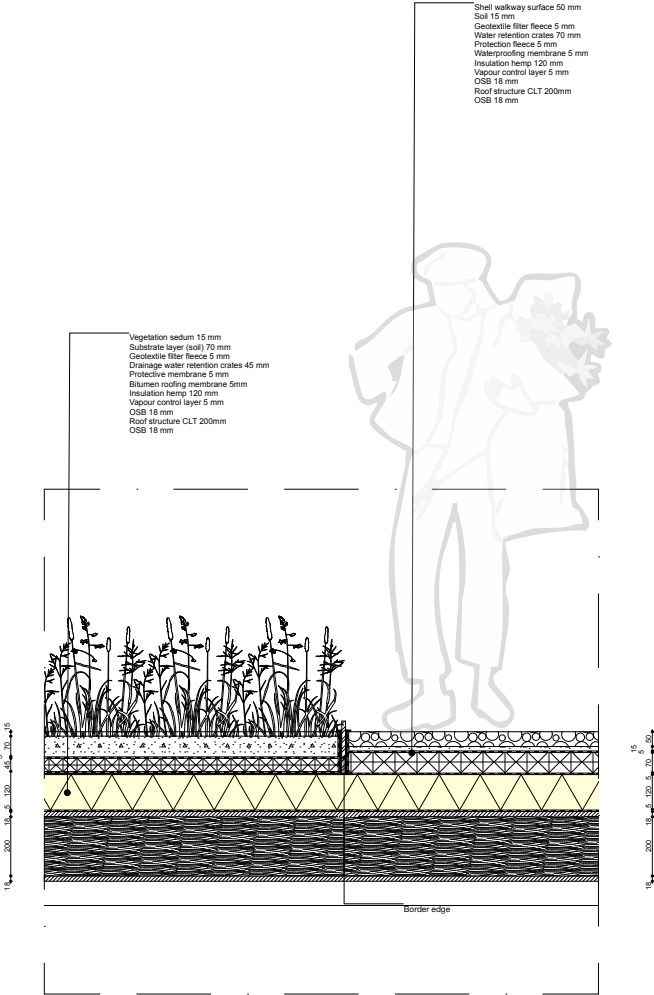
# Tactile tides

## Section Cc scale 1:100



# Tactile tides

## Detail scale 1:10



# Listening to the seasons

*Hearing, sight, smell*



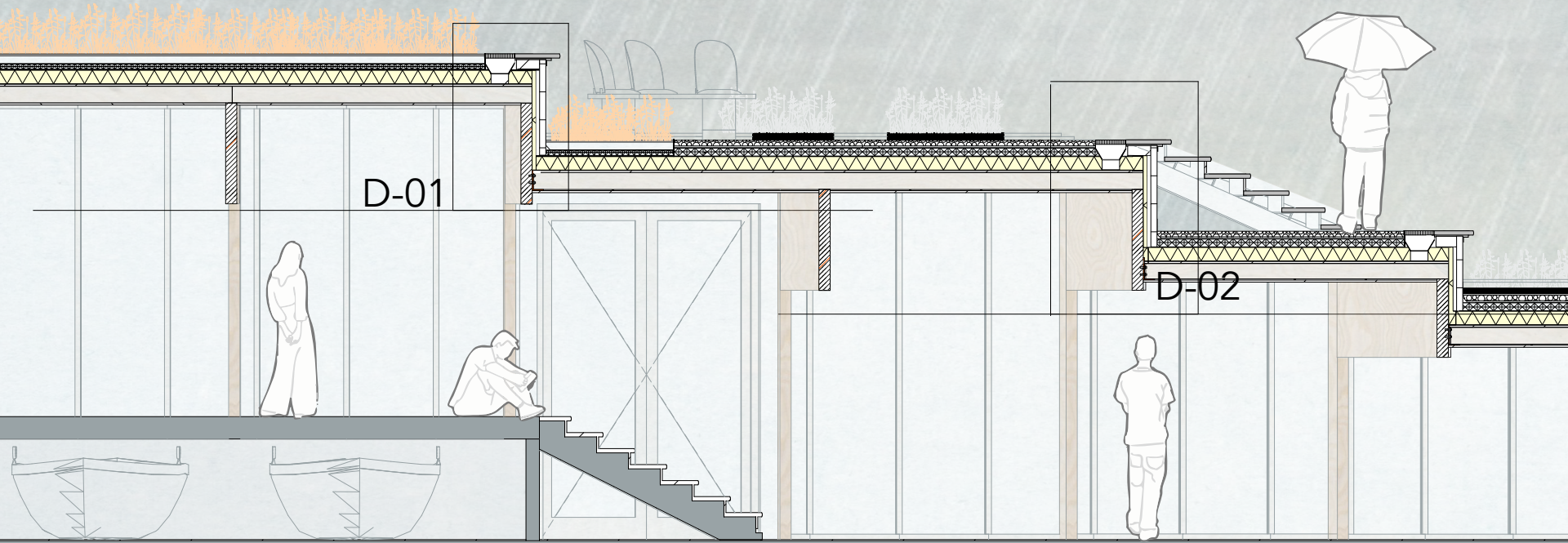
# Listening to the seasons

On a rainy day



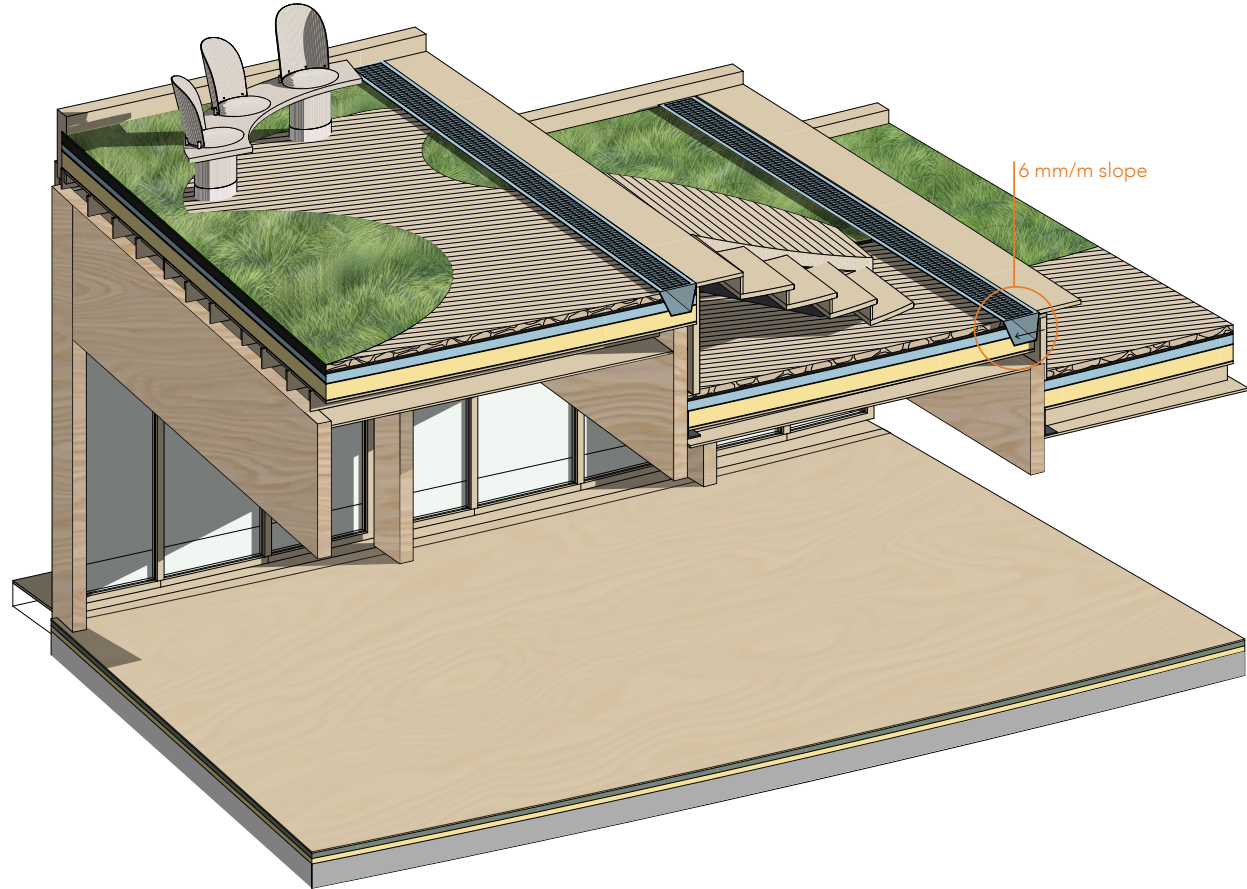
# Listening to the seasons

Section Cc scale 1:100



# Listening to the seasons

## 3D model



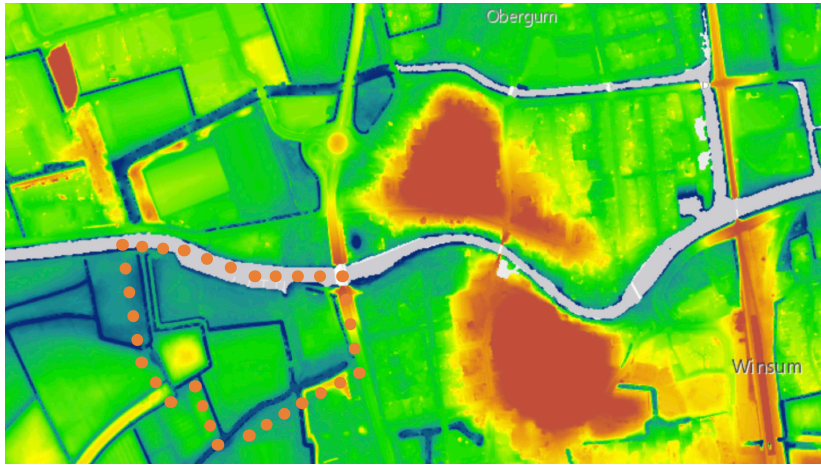
# Sensing the pull of water

*Touch, sight, hearing, movement*

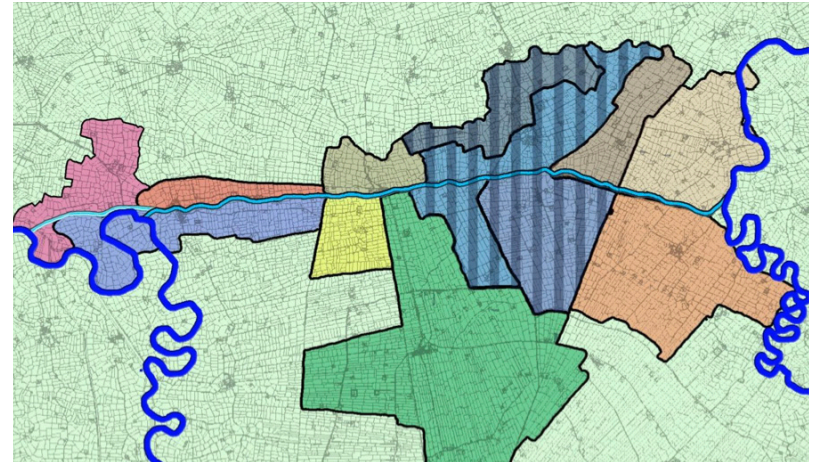


# Sensing the pull of water

## The Winsumerdiep



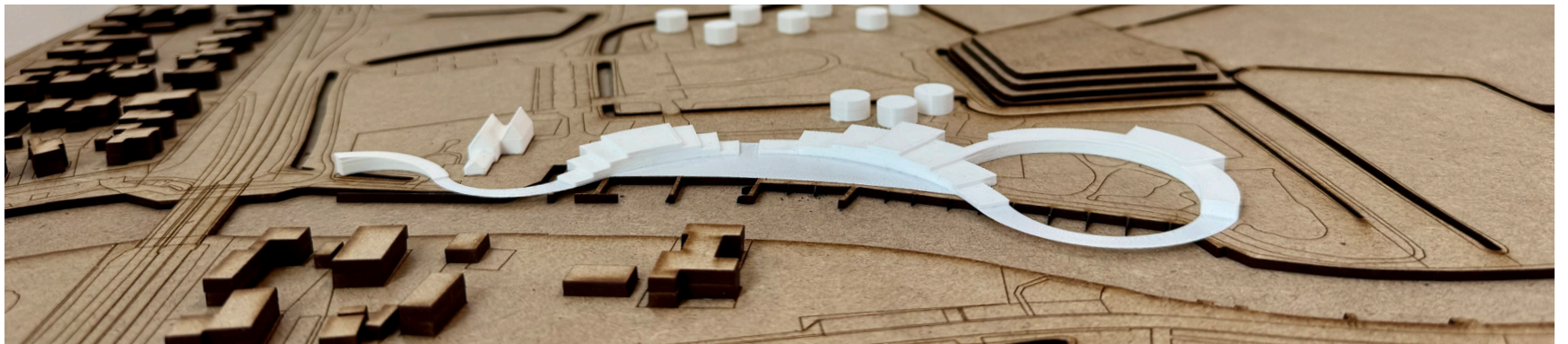
Height map (red = higher ground, blue = lower ground / water system)



The Winsumerdiep originates from De Delf (before 1000 AD), Lauwersto Eems report

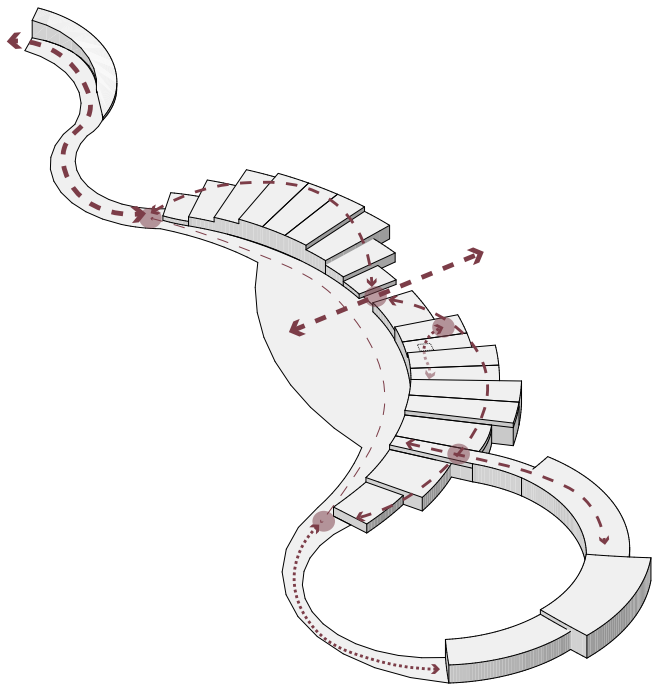
# Sensing the pull of water

Sketch model 1:1000



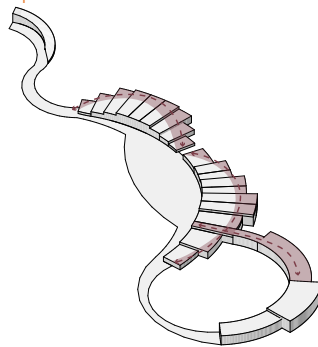
# Sensing the pull of water

## Circulation strategy



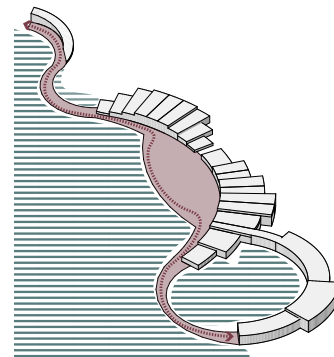
### Over the building

Elevated route across the roof landscape offering views over the surrounding landscape.



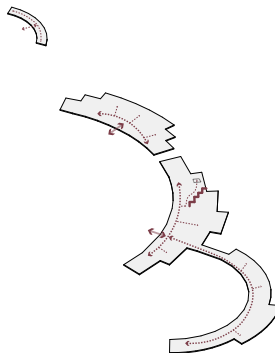
### Along the water

Strengthens the relationship with the landscape and water.



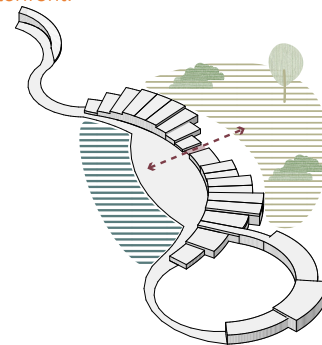
### Through the building

Connects the different programme spaces and brings visitors closer to the waterfront.



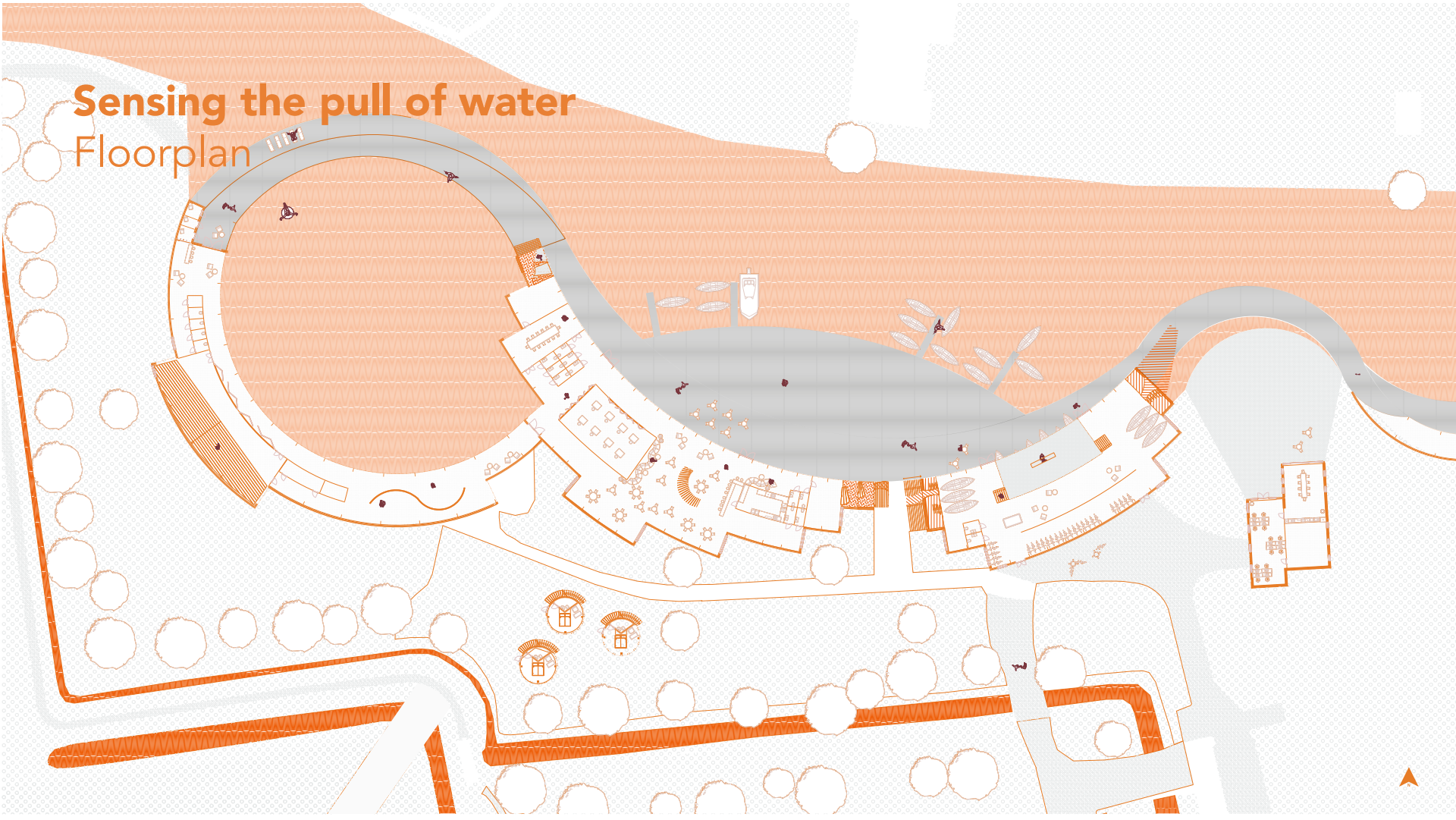
### Water axis

Direct spatial axis towards the water. Frames the landscape and attracts movement toward the waterfront.



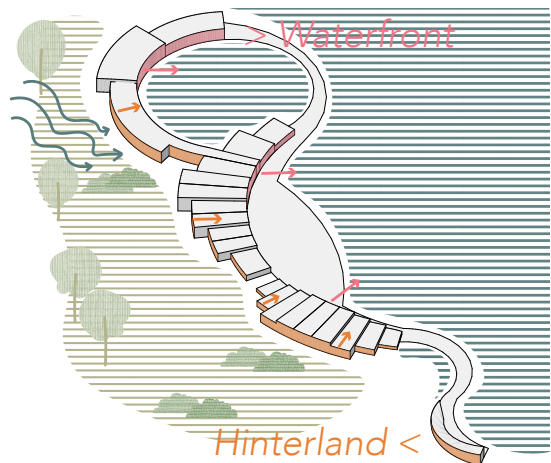
# Sensing the pull of water

Floorplan

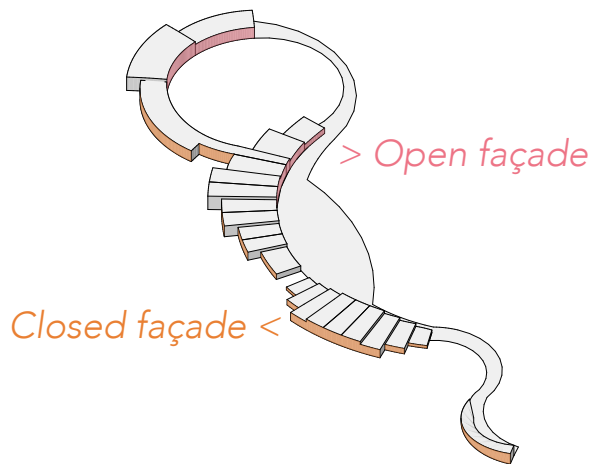


# Sensing the pull of water

## Façade



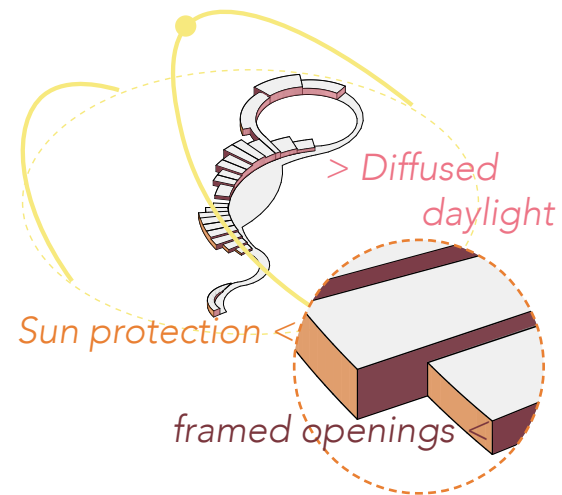
### Two landscape zones



### Open/closed

Open façade: water/views/light

Closed façade: wind/protection/calm



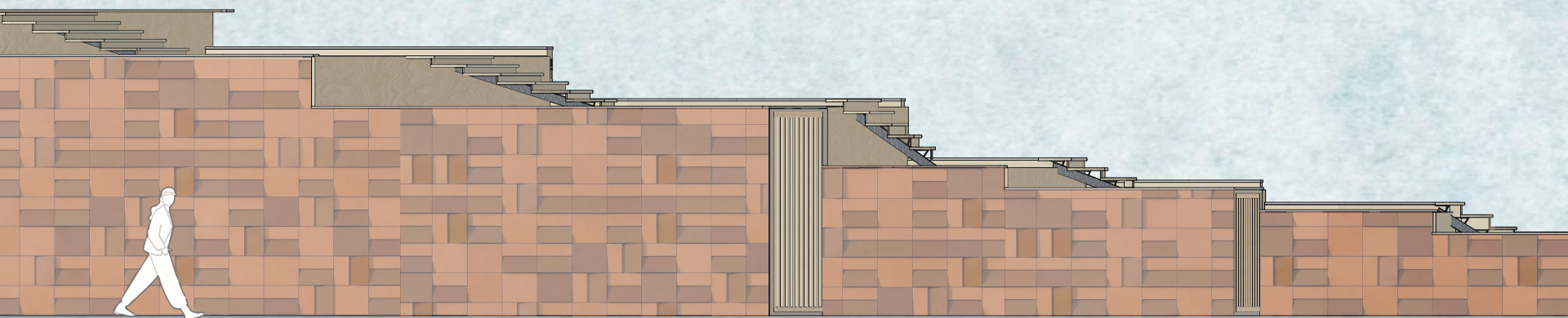
### Filtered façade

Controlled light/shadow

# Sensing the pull of water



North elevation



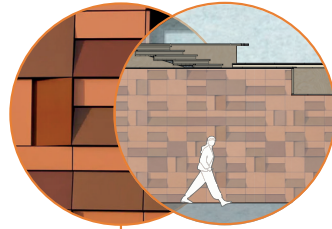
South elevation

# Sensing the pull of water

## Façade climate concept



**Sun orientation**  
Optimized orientation  
for daylight use and  
controlled solar gain.

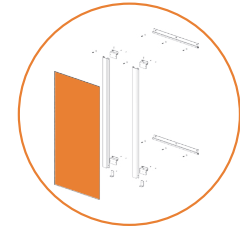


**Integrated PV  
façade**  
Closed façade  
areas are equipped  
with integrated PV  
panels to generate  
renewable energy.

### Estimated annual yield of the PV façade

Annual irradiation: 1053 kWh/m<sup>2</sup>/year  
Orientation factor: 70%  
Panel efficiency: 19.6%  
Performance ratio: 85%

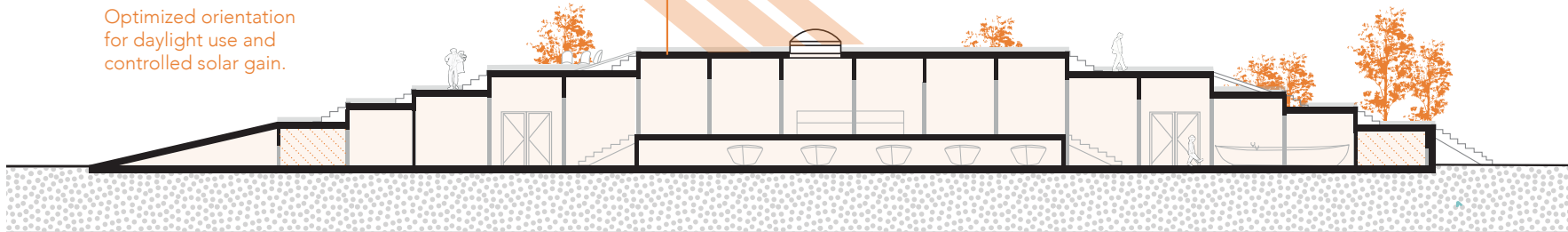
$$1053 \times 0.70 \times 0.196 \times 0.85 \\ = 122.8 \text{ kWh/m}^2/\text{year}$$



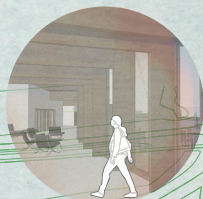
Solarix solar panel

PV façade area: 918.61 m<sup>2</sup>  
Yield per m<sup>2</sup>: 122.8 kWh/m<sup>2</sup>/year

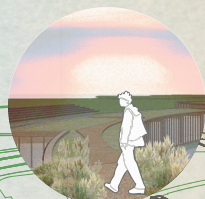
$$918.61 \times 122.8 = 112,823 \text{ kWh/year}$$



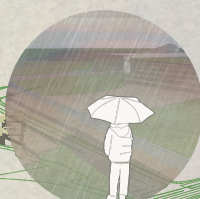
**See & feel  
the rhytm**



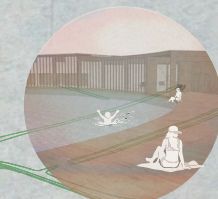
**Tactile tides**



**Listening to  
the seasons**



**Sensing the  
pull of water**



**Awakening  
the night**



## Challenge

Tourism growth vs. regional quality

“How can tourism growth contribute to the quality of the region and its local communities?”

## Challenge

Short stays

Current stay



**1.8 days**

Potential stay



**3-4 days**

## Challenge

Seasonal tourism

“We want people here all year round, not just passing through.”

**Robert van Barneveld**

Host Marenland

# Nij Begun



# References

- Acacia Water. (2019). Huidig verziltingsrisico.
- Bruns, D., Van den Heuvel, M., & Elffers, J. (2011). Live land art. NAI010 Uitgevers. (p. 198–205)
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