

EXPOSING THE ELEMENT

ROUTED VISITOR CENTER FOR DROWNED VILLAGE

In the beautiful Rijnwaardense Uiterwaarden, at the exact location where the old village Herwen lost its battle against the water more than 250 years ago, lies this visitor center. The visitor center makes the visitor experience the large history of the area in both fighting against and living with the water. Located at the borderline of land and water, it also functions as a hub in a landscape that is dynamic and changing.

Although water is the most distinctive element in WaalRhineValley, it causes problems. To manage the large water level fluctuations in the near future, an increased discharge capacity in winter and the possibility to buffer water in summer are required. The water in the area has great historical value. For example, it served as a natural barrier from which the area was protected. Cultural-historical heritage related to the water is present in abundances, but it is hard to get a coherent overview. This fails to meet the demands of the new tourist, who is increasingly lookingforexperienceandmeaning. Currentlythe most popular leisure activity in the area is routed outdoor recreation, which mainly concerns well developed walking and cycling routes. A clear connection or transfer point between existing route networks and the increasingly important water network is missing.

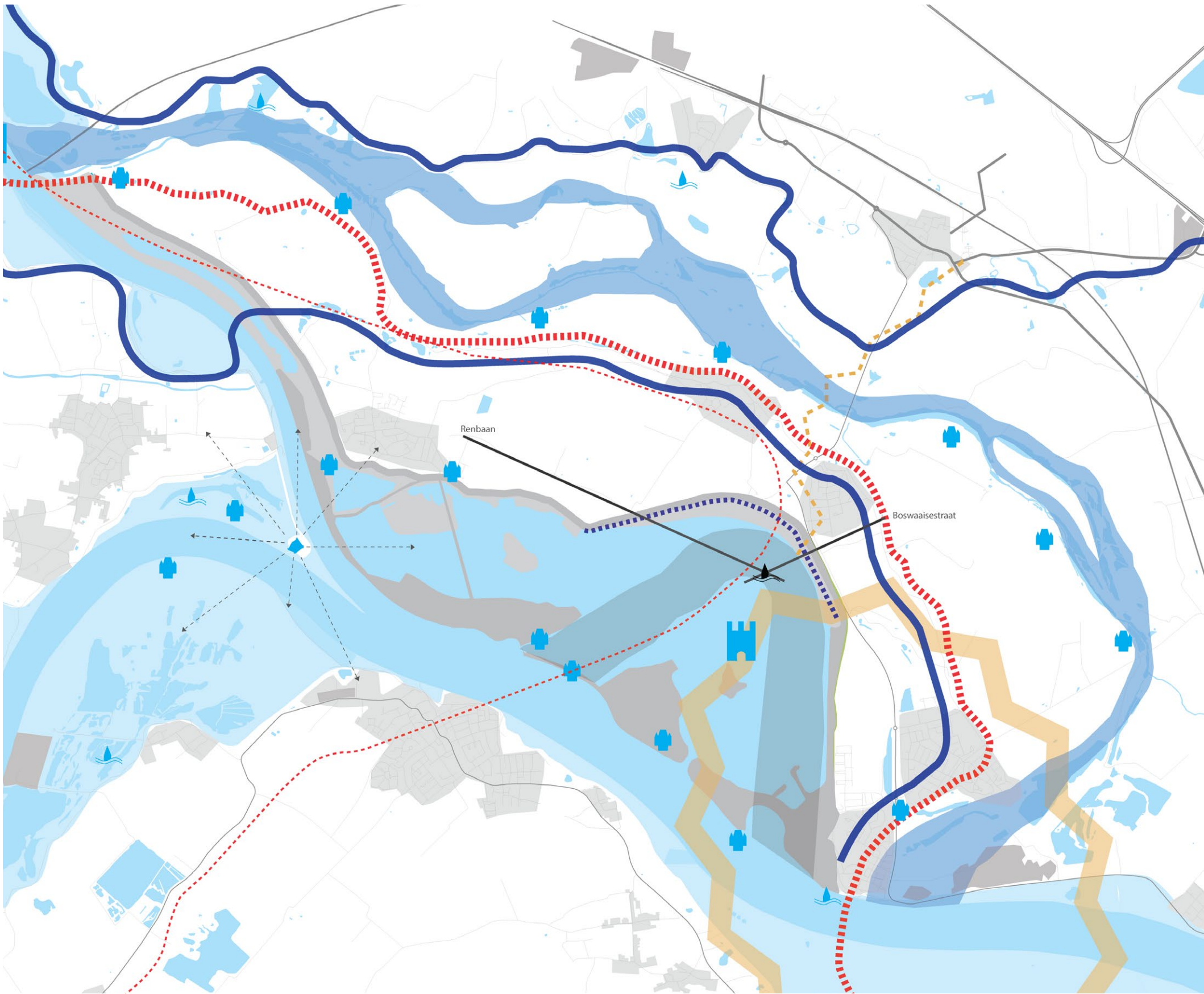
The visitor center answers the posed problems. It is located in a future water retention area, at the intersection of land and water. It thereby serves as the neccesary connector of the route networks. It is surrounded by cultural heritage and Natura 2000 landscape and lies at the exact location of drowned Herwen, which is a symbol of the ambivalent relationship with the water. To experience this relationship with the water, the visitorcenterhasbeen constructed as a route that begins inside the dike and descendingly passes the bottom of the river where once Herwen was located. By walking the pathway, the visitor can experience the beautiful dynamics of the water landscape and can learn about the history of this area in exhibition spaces. It enables the visitor to read the landscape better and give the visit a deaper meaning. The static project fights its fight with the water forces to expose and emphasize its dynamic surroundings. This way the most important element of this area, the water, is exposed in different ways: the visitor center exposes the history of the water in the routed exhibition and the building exposes the water forces still present in the area today.

TOURIST NETWORKS



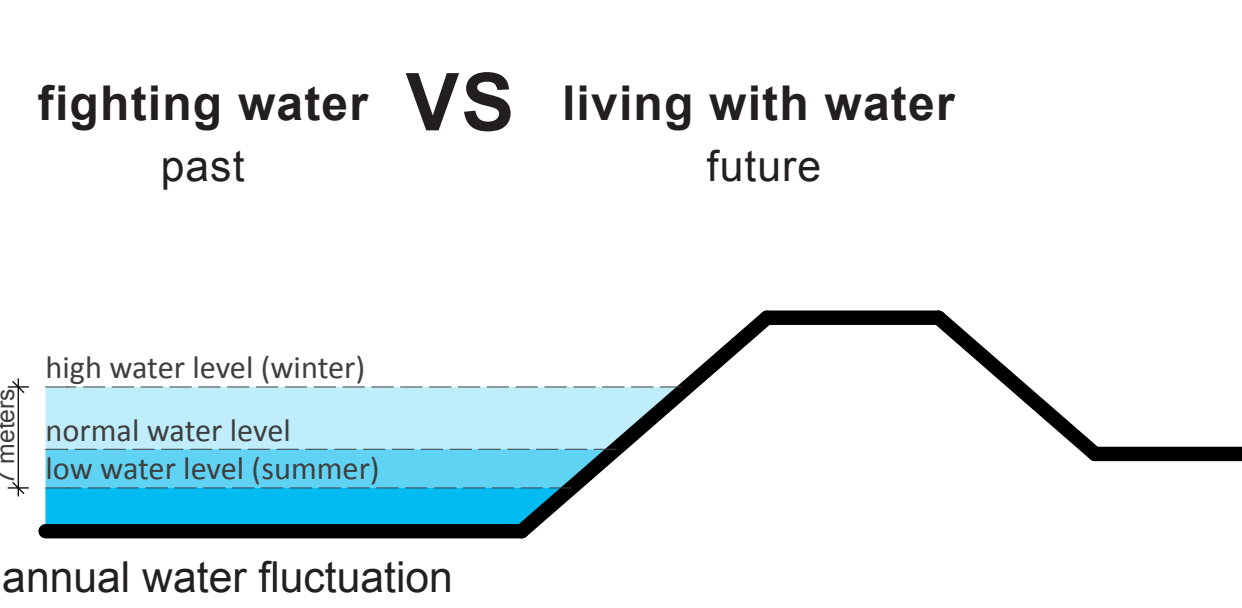
tourist networks and visitor centers WaalRhineValley

CULTURAL HISTORY



cultural history Rijnwaardense Uiterwaarden

- fort (Roman Empire)
- Limes (Roman Empire)
- Roman road (Roman Empire)
- redoubts (Eighty Years' War)
- development board Frederik Hendrik (1635-1636)
- drowned village
- dike (1769)
- old Waal (to 1775)
- old Rhine (to 1812)
- fortress Nieuwe Hollandse Waterlinie (1872)
- disappeared tank ditch (1944-1945)
- zone of the dike with traces of past flood



CURRENT SITUATION

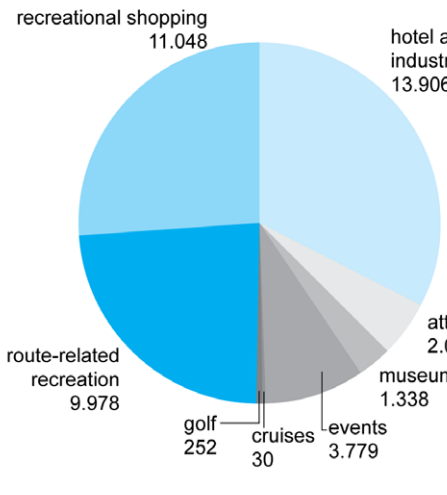


high water level (14,5 m + NAP)

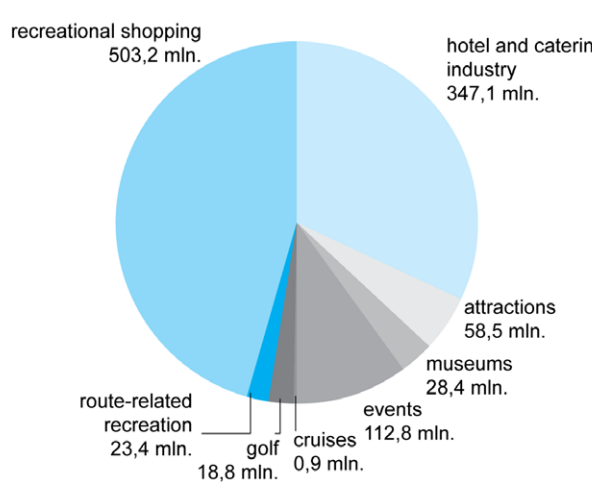
FUTURE SITUATION



low water level (7,10 m + NAP)



type of daytime excursions WaalRhineValley 2011 (x 1000)



economic value of daytime excursions WaalRhineValley 2011 (in euros)



high water level (14,5 m + NAP)

DROWNED VILLAGE



old Herwen (1742)



flooding of Herwen (1760)

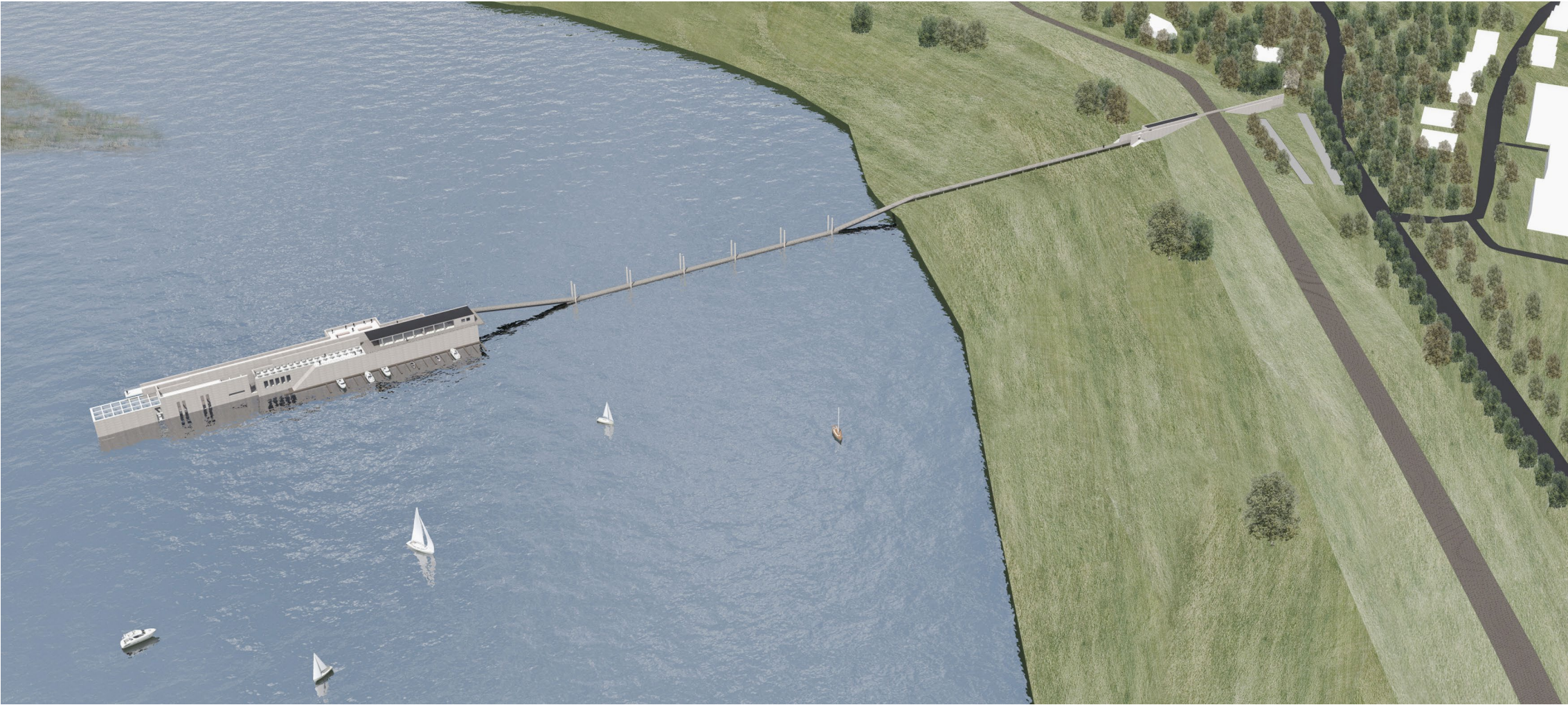


current location



current location

DYNAMIC LANDSCAPE



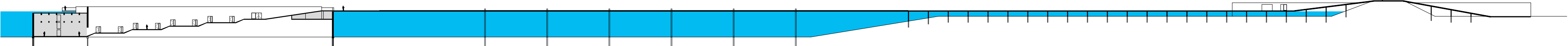
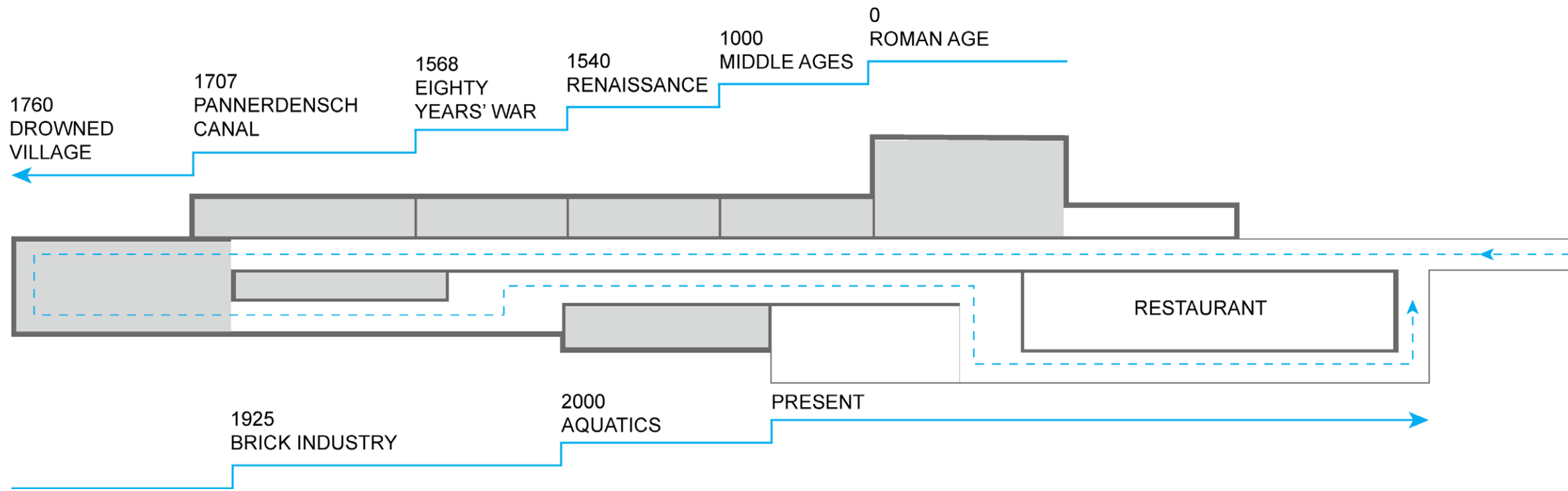
normal water level (9,78 m + NAP)



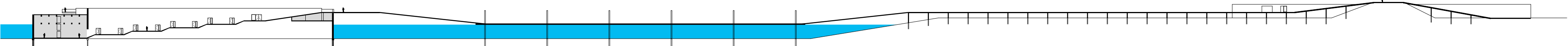
high water level (14,5 m + NAP)

TIMELINE ROUTE

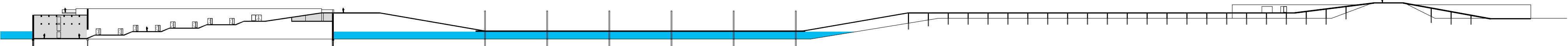
The route in the visitor center acts as a timeline of the history of this area. Each exhibition space reflects an important period in this whistory. The visitor can take cognizance of the impact of the water through the ages. Descending along the timeline, the visitor passes the bottom of the river, where the village Herwen has been flooded by the water in the 18th century. Then the route continues and ultimately ends up in the present.



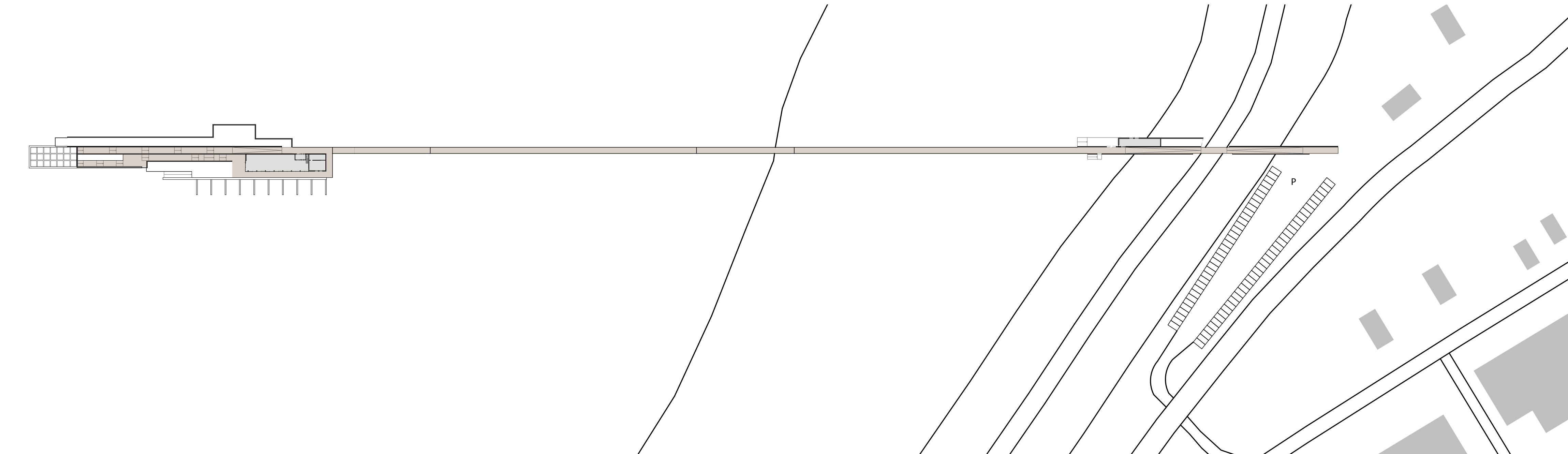
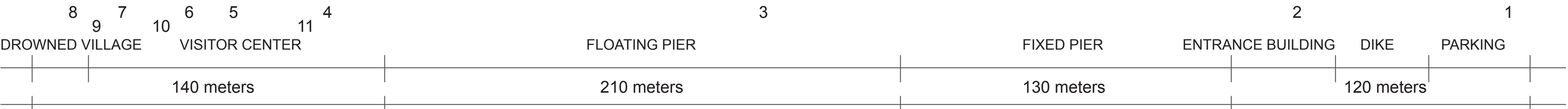
high water level (14,5 m + NAP)



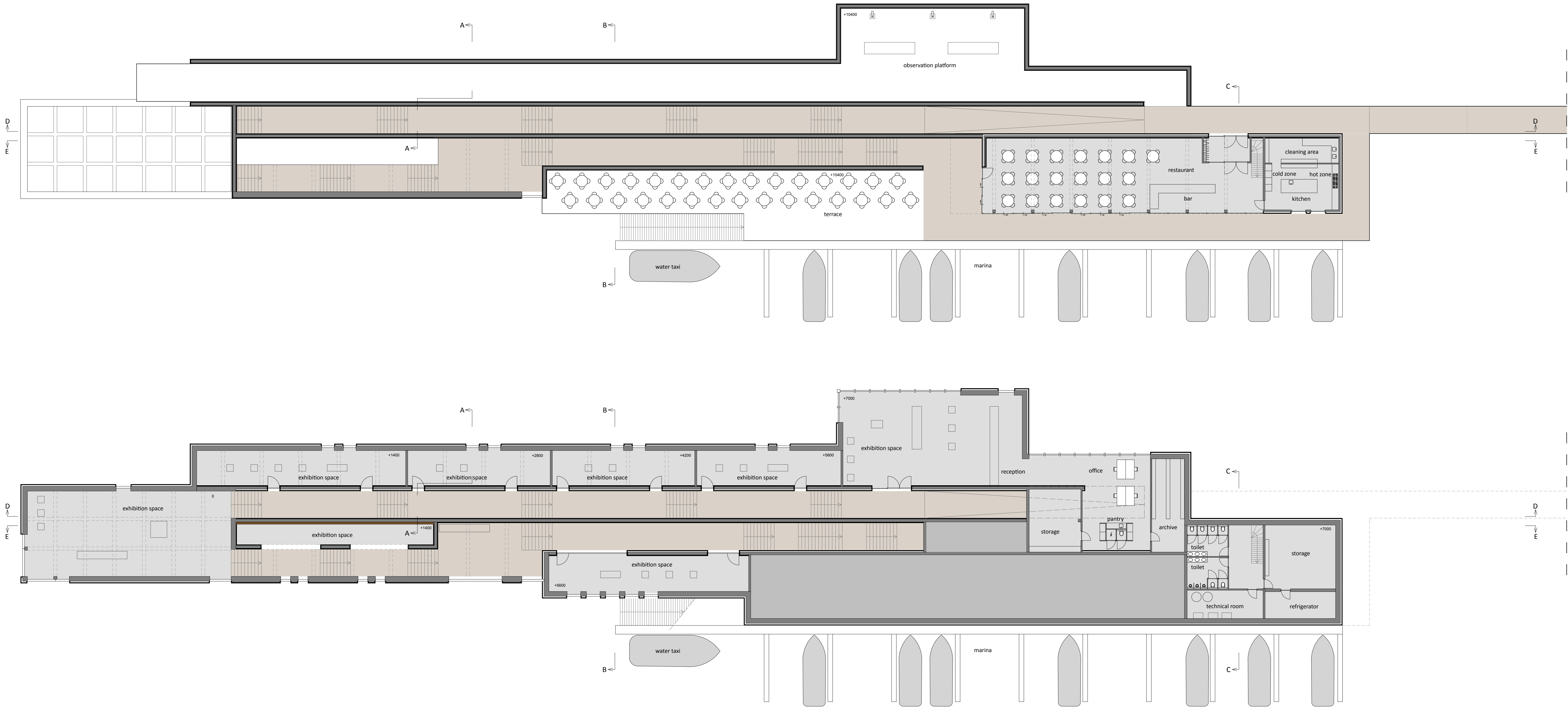
normal water level (9,78 m + NAP)



low water level (7,10 m + NAP)



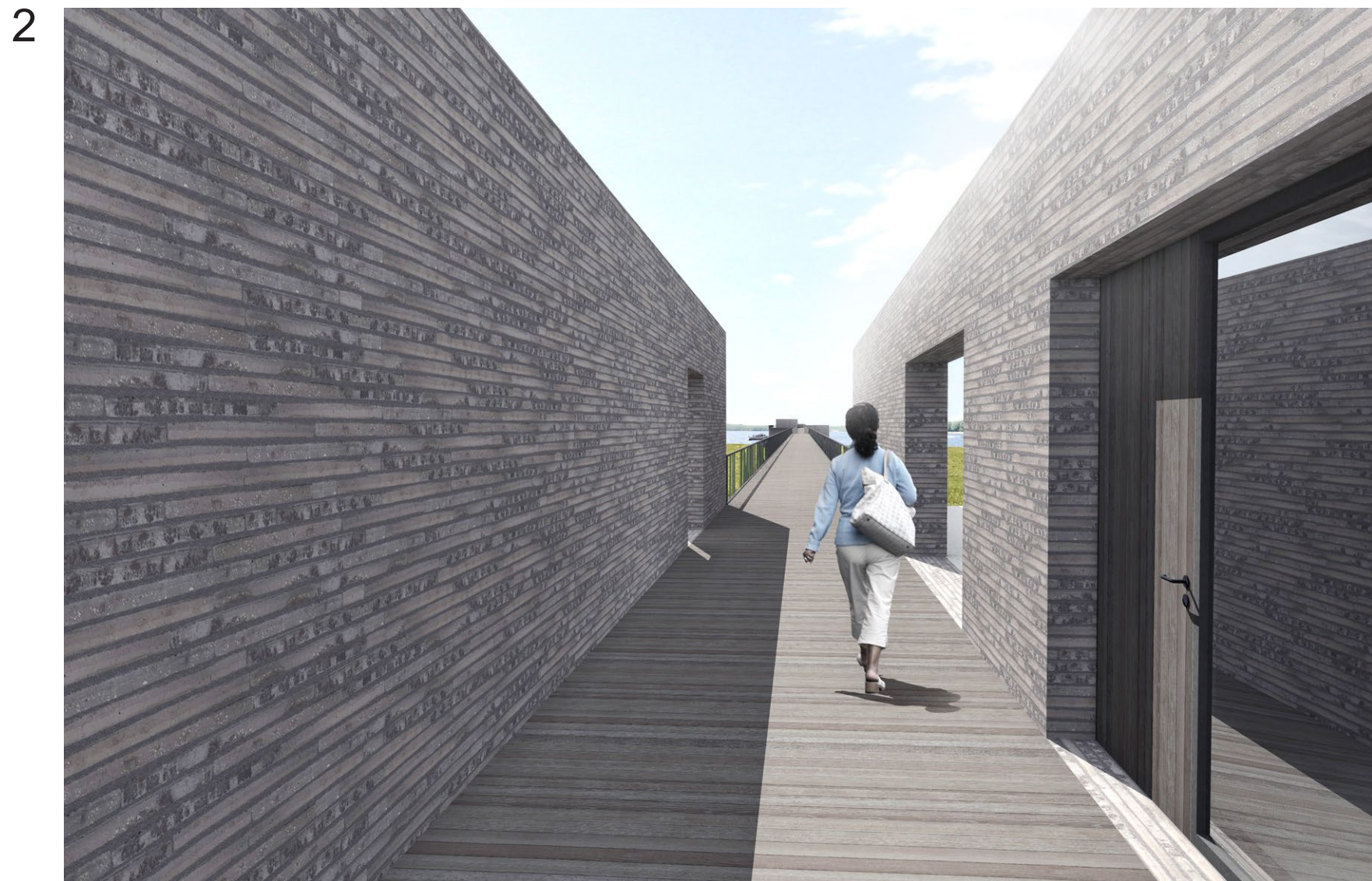
PLANS



ROUTE



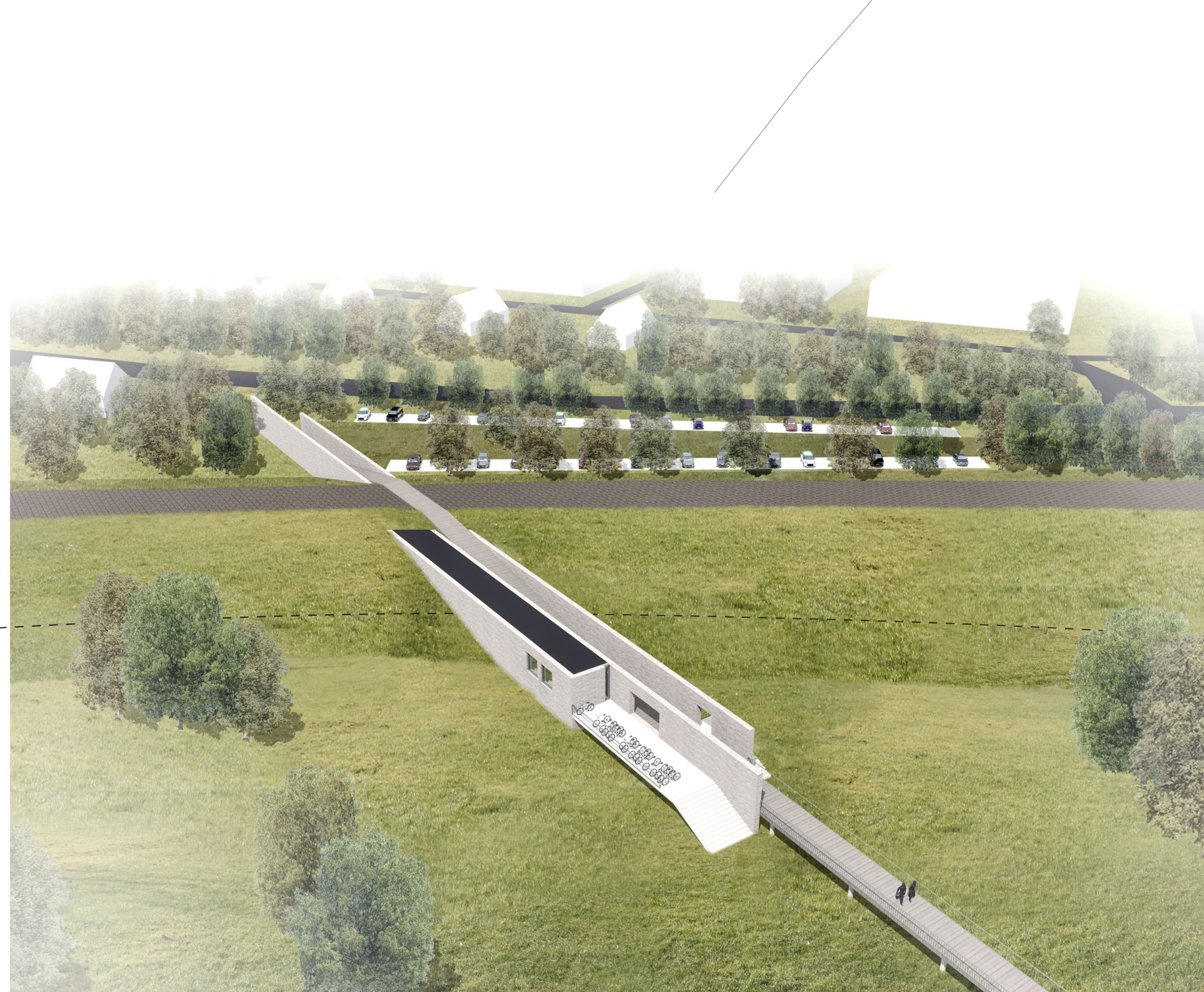
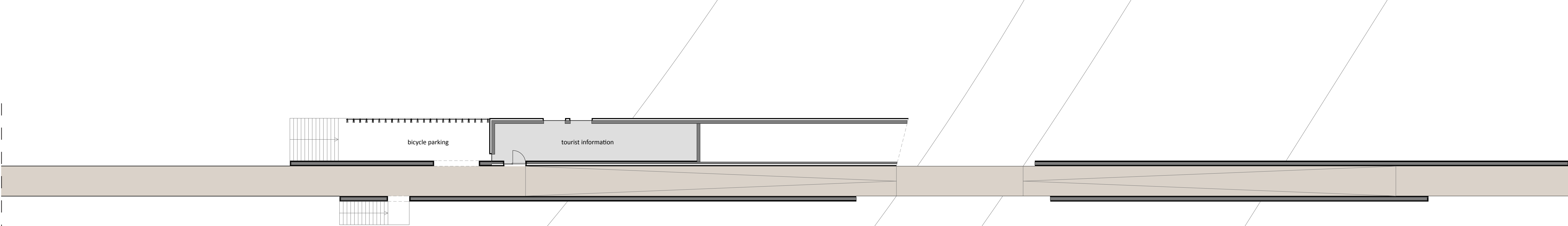
Inside the dike the onset of the route is marked visibly; two walls protrude out the dike, with an inviting wooden carpet in the middle, which leads over the dike. On top, the visitor sees the walls transpire it. The walls' orientation refers to the structure of historical hedges, once used as field boundaries. The dike has cut through the hedges like a sharp knife.



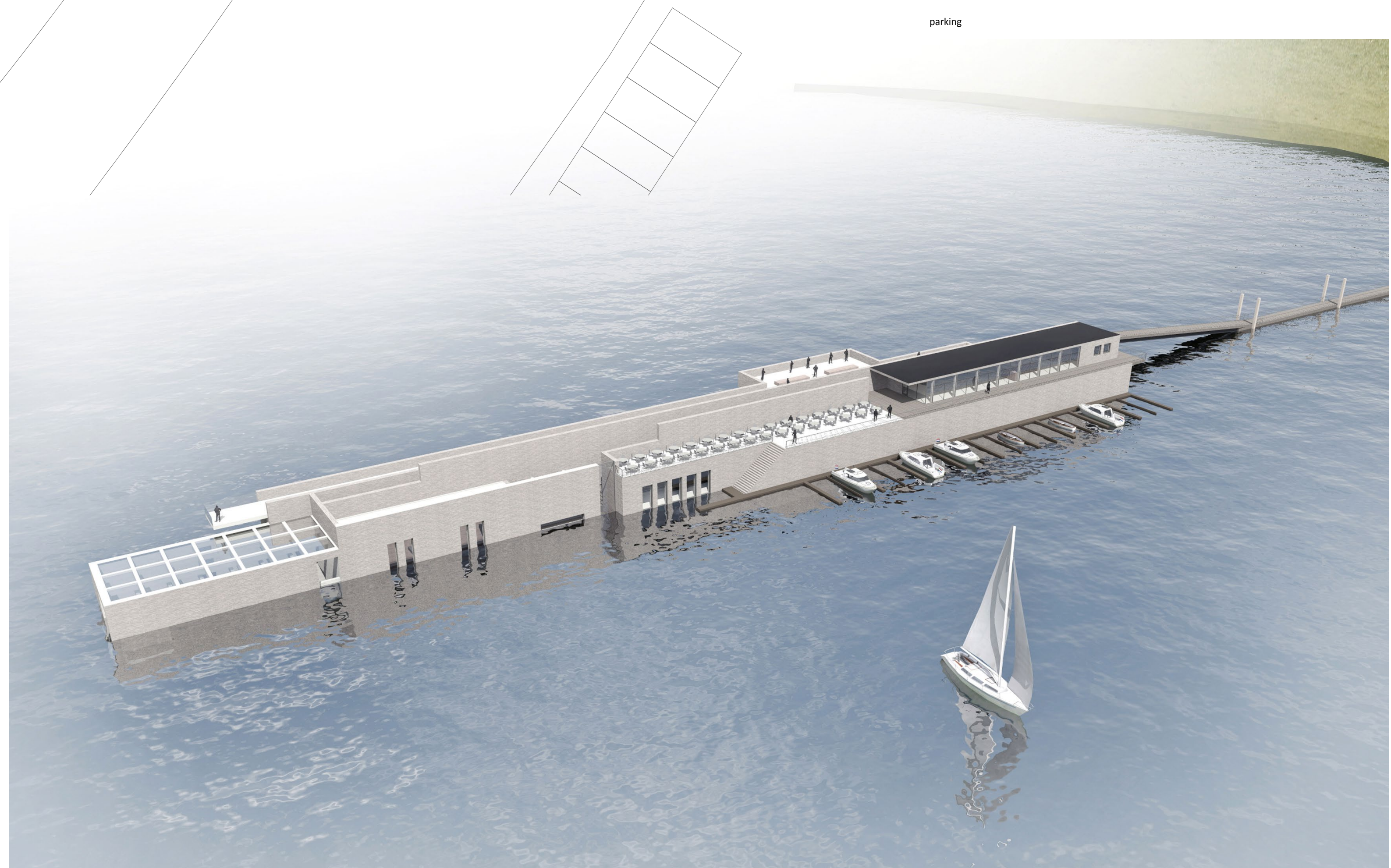
With walls left and right the view is directed at the visitor center. Through an opening in the wall, a room with tourist network maps is entered, providing information to explore the area. Also, information about the visitor center invites visitors to cross the pier and experience the drowned village. The pier functions as a hub from land to water and vice versa.



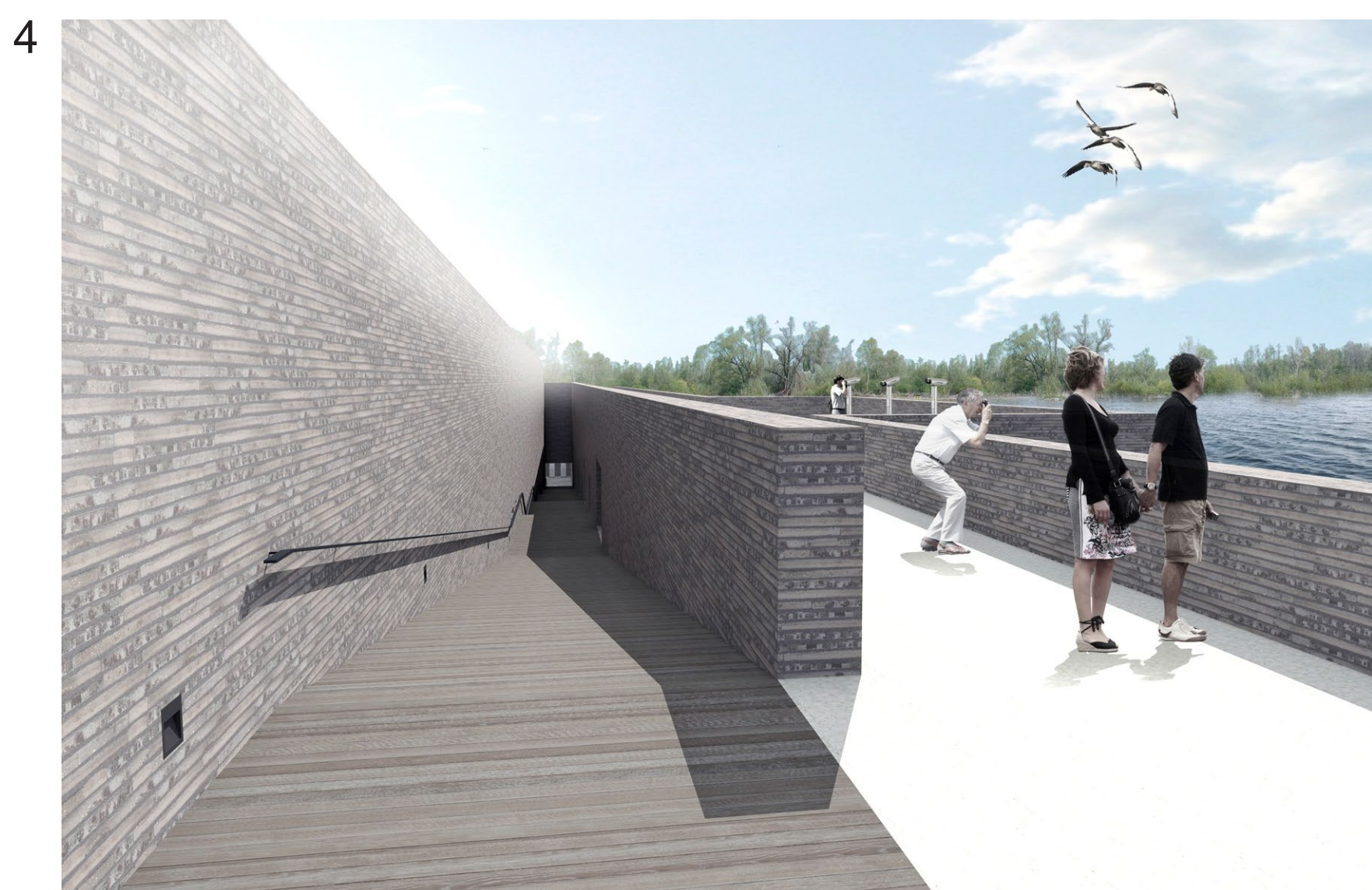
In this area the water level fluctuates heavily, up to seven meters per year. Because this pier is partly floatable, the visitor can experience the dynamics of the water while crossing it. The moving pier is a reference to the former and current inhabitants of this area, who have been challenged through time to adapt to the ever changing water.



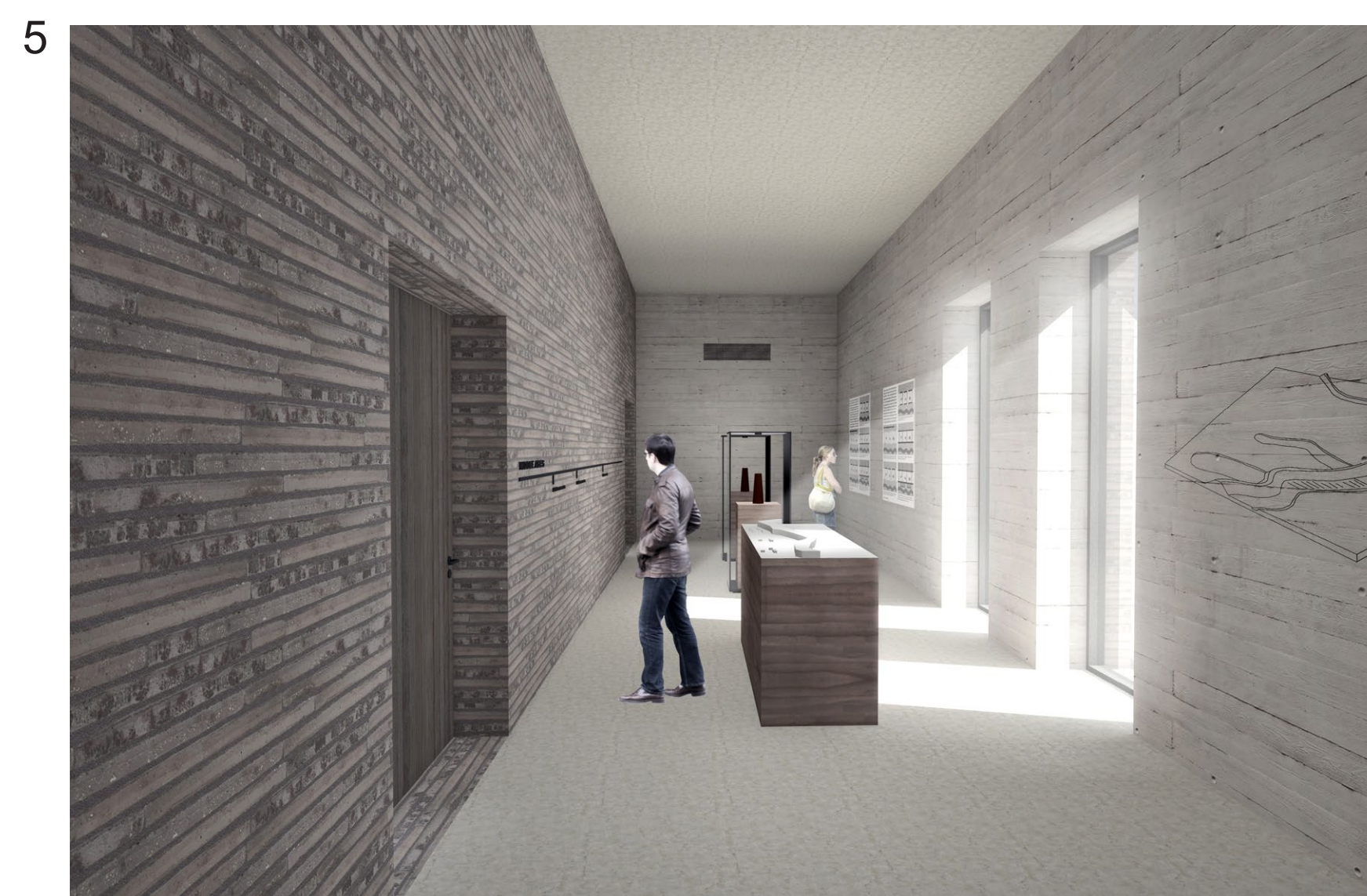
normal water level (9,78 m + NAP)



normal water level (9,78 m + NAP)



The route flows from the pier into the building. One can choose to follow the descending pathway straight ahead towards the drowned village. Descending, one passes several exhibition spaces. At this point, the construction of the building isn't visible yet because this space doesn't connect directly to the surrounding water. On the right, at the nature side, lies the observation deck.

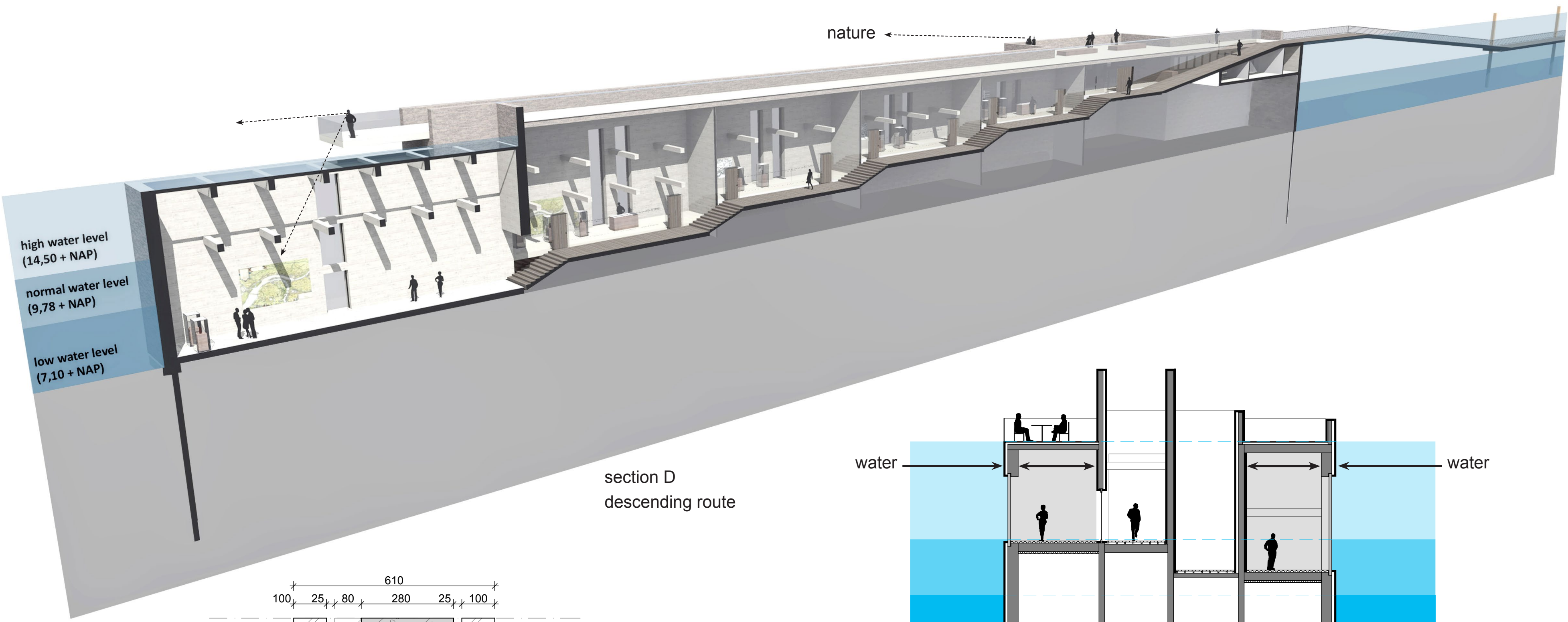


The second exhibition space, about the Middle Ages, lies above water level most of the time and therefore is a light room. The long windows give the visitor a perspective on the surrounding landscape.

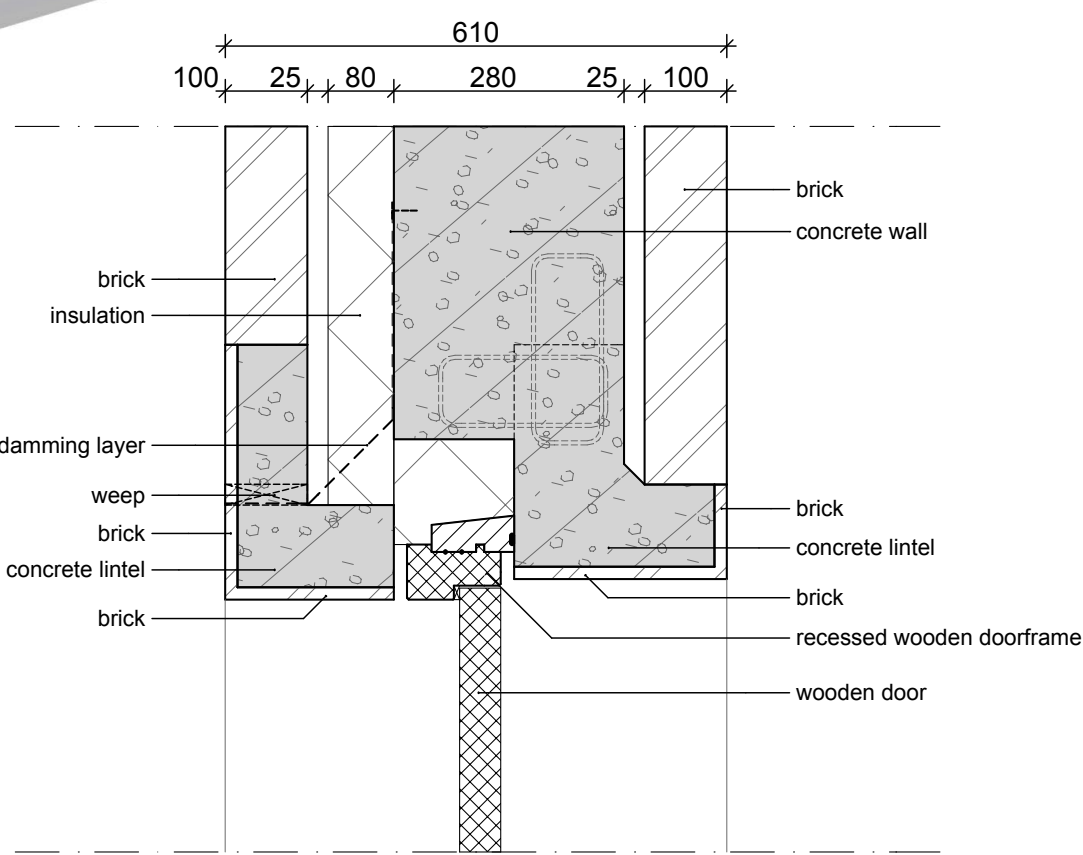


Descending further, the rooms get higher and darker. The lower the room, the more visible the construction; concrete beams are placed to dominate the water pressure.

SECTIONS

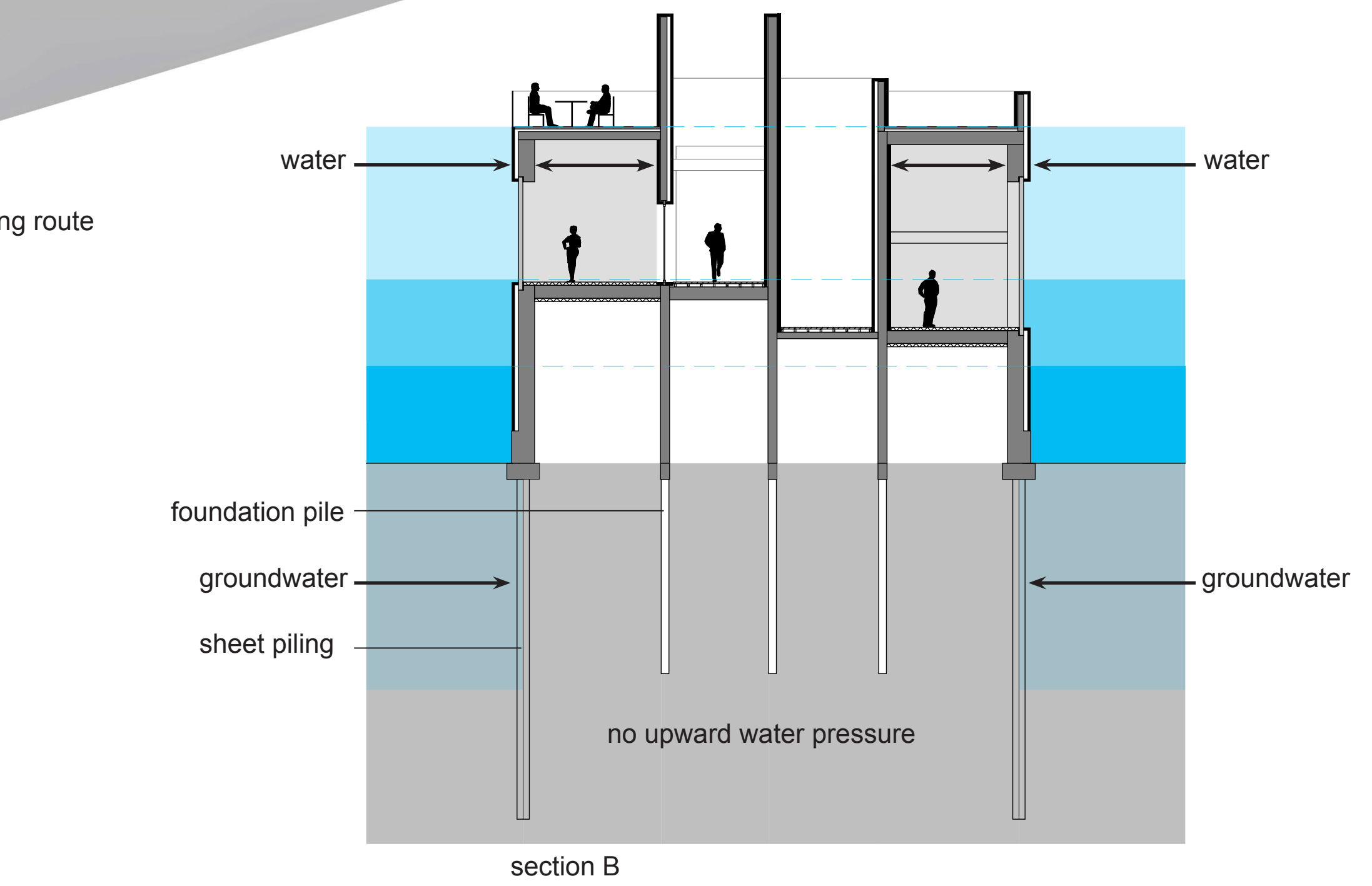


section D
descending route

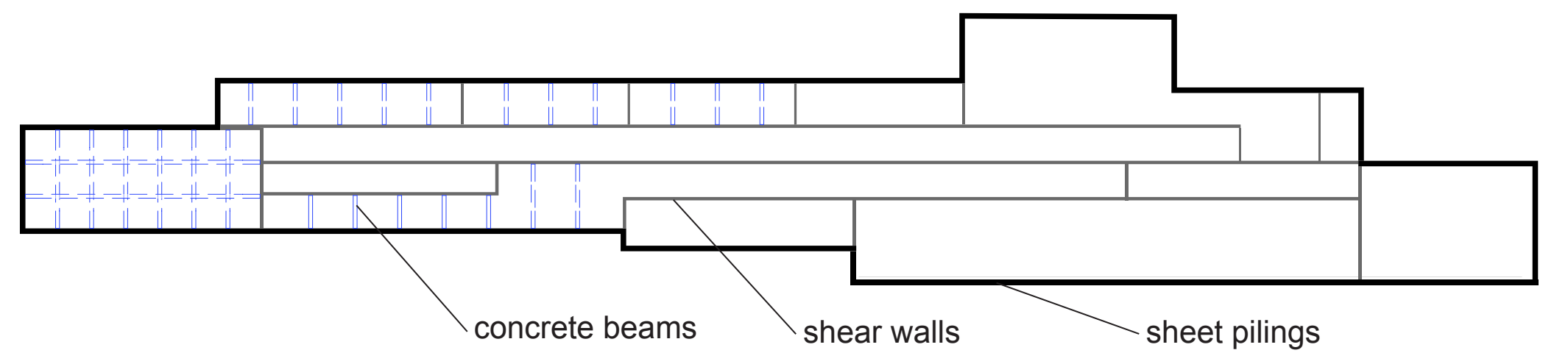


CONSTRUCTION

In order to counteract upward forces, sheet pilings are placed beneath all external walls. These sheet pilings also act as a foundation. The external walls are made of concrete and are deliberately made thinner than necessary. As a result, concrete beams have to be placed. This makes the force of the water visible to visitors. By isolating at the outside of the concrete walls, the construction is visible in the interior.



section B



concrete beams
shear walls
sheet pilings



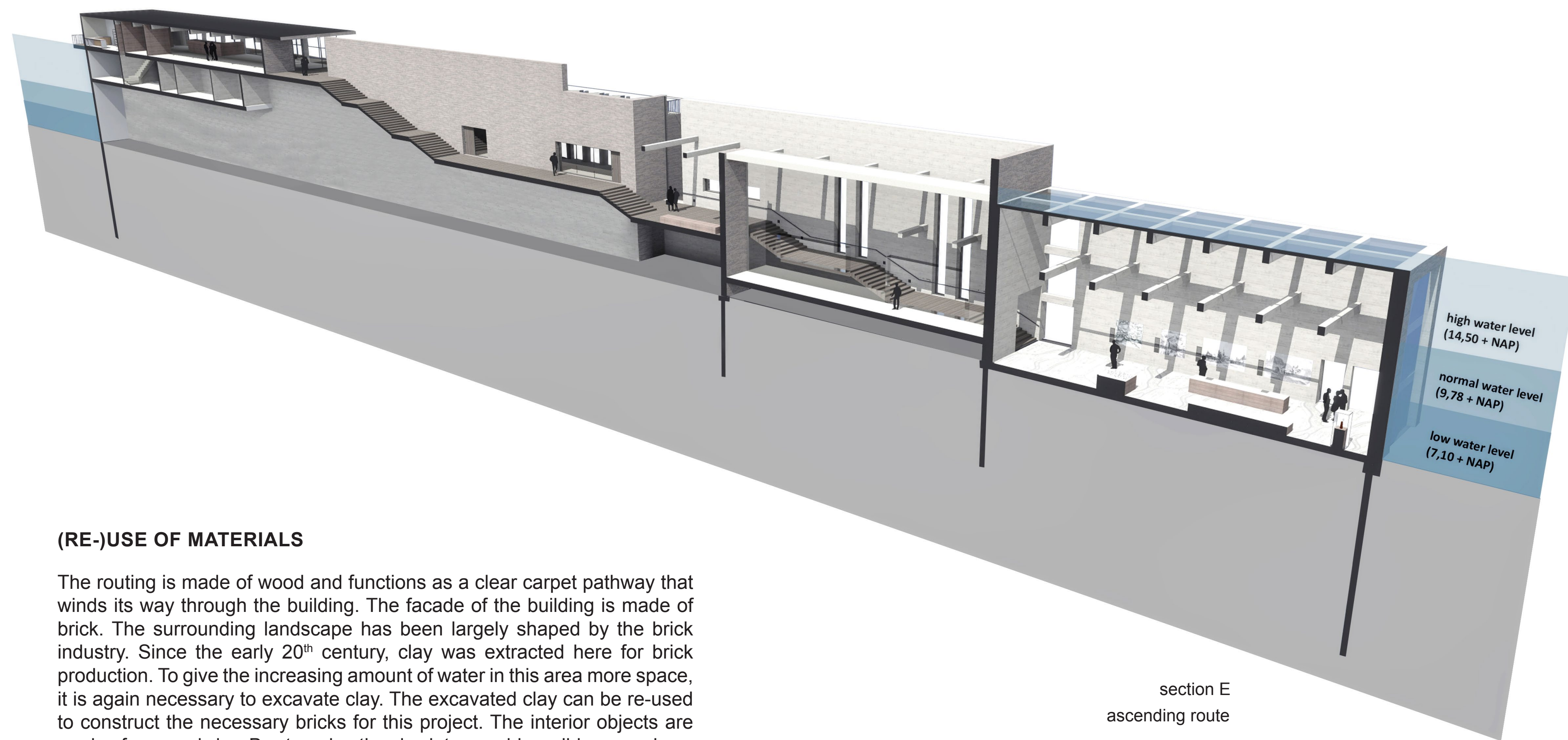
The dynamic landscape controls the atmosphere inside the exhibition spaces; the illumination changes depending on the current water level. To be able to experience this changing landscape, instead of the whole space, only the exhibition material is lighted.



The descending pathway eventually leads to the bottom of the river, the exact location of the drowned village. This room is very light, just like when the city was still above water level. Standing here, the visitor can look up to the sky through the glass ceiling. Through the oblong windows, he can experience being under water. Somewhat further, there are residues of a Roman fortress.

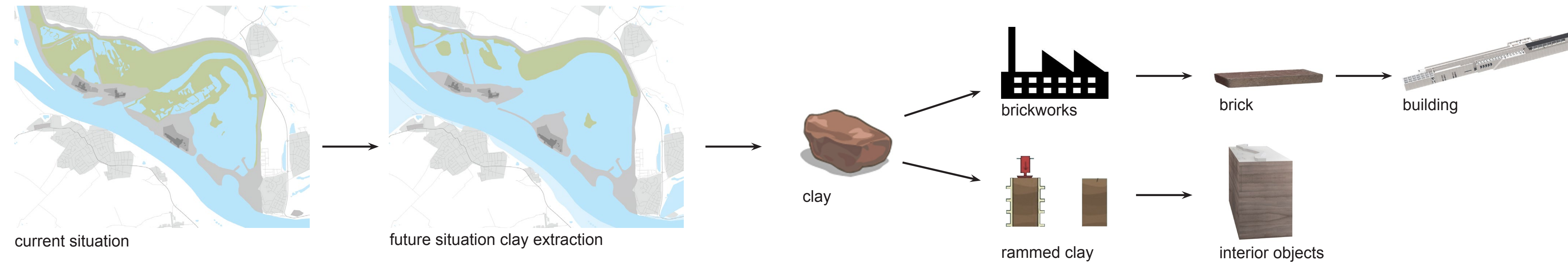


Once every year, the water level is so high that even the glass ceiling is under water. The room is darker then, and the visitor has been 'drowned'.



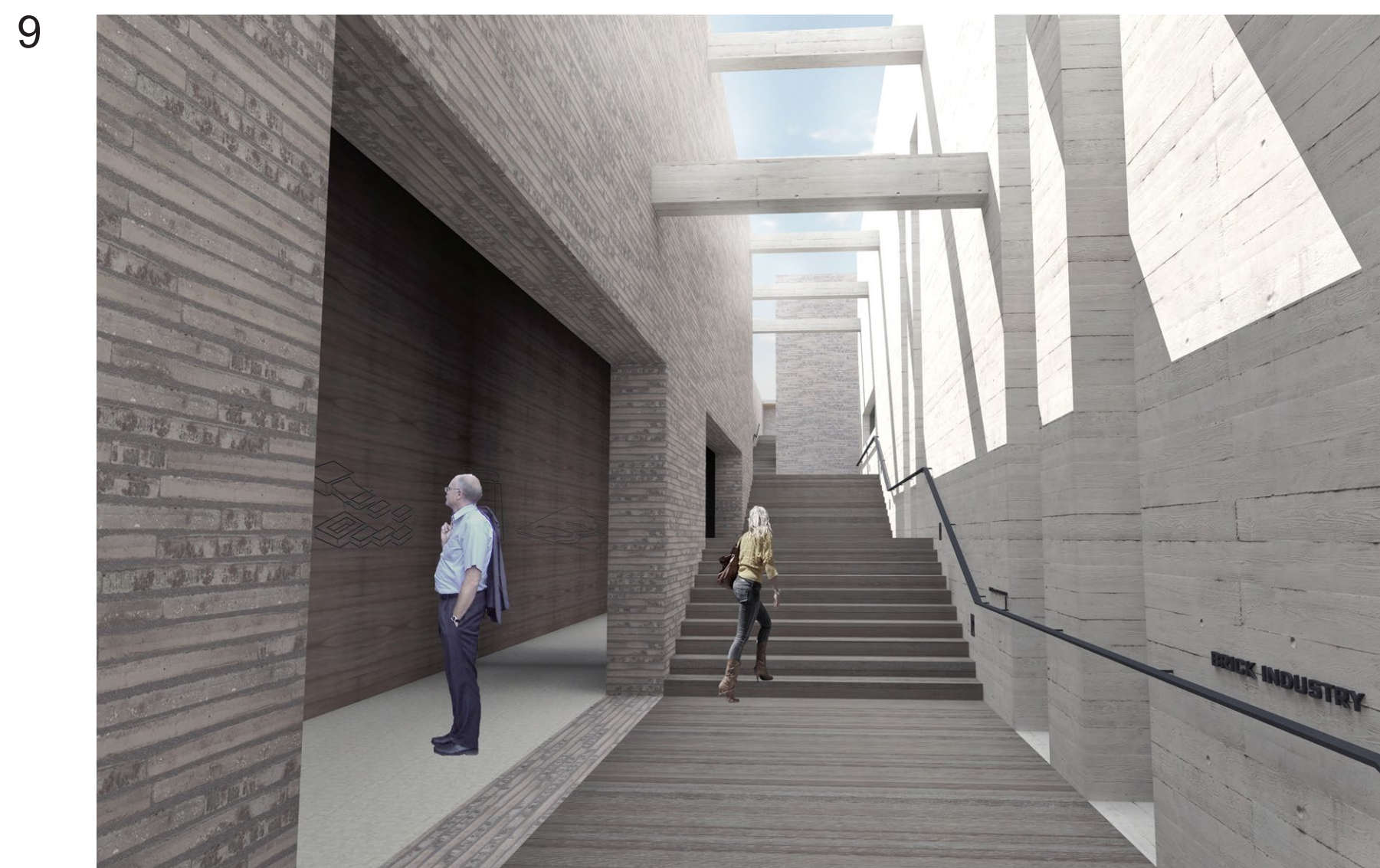
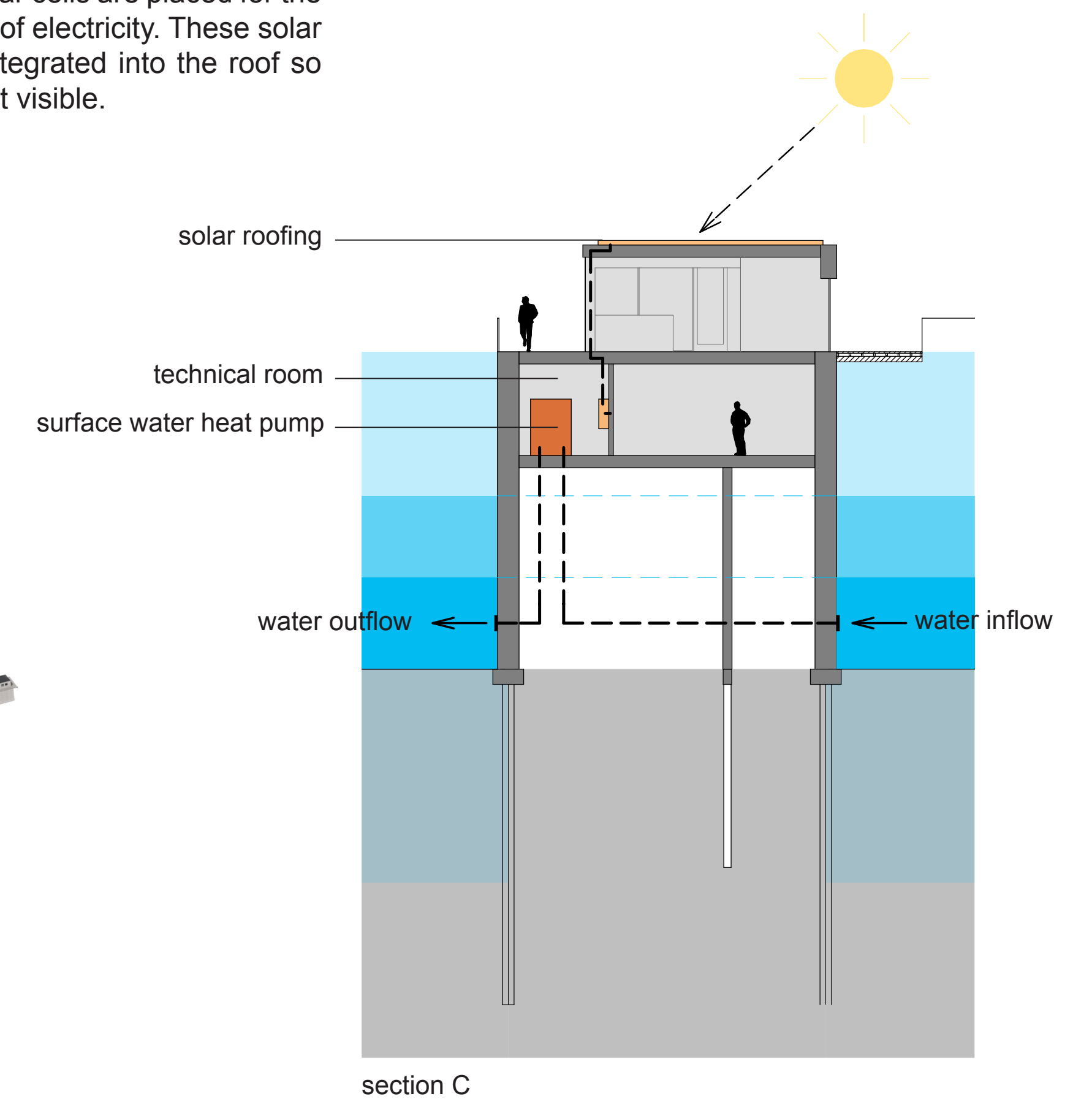
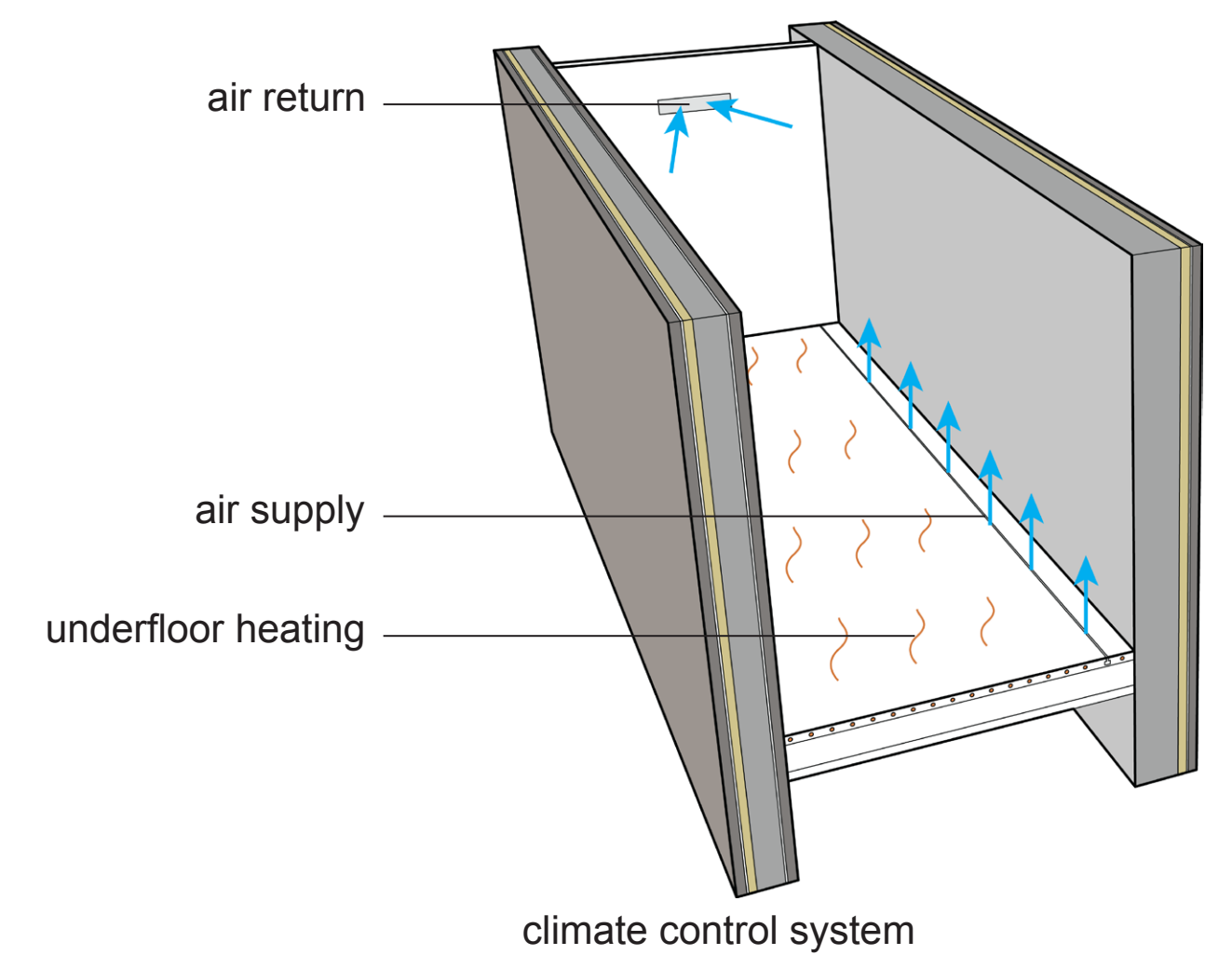
(RE-)USE OF MATERIALS

The routing is made of wood and functions as a clear carpet pathway that winds its way through the building. The facade of the building is made of brick. The surrounding landscape has been largely shaped by the brick industry. Since the early 20th century, clay was extracted here for brick production. To give the increasing amount of water in this area more space, it is again necessary to excavate clay. The excavated clay can be re-used to construct the necessary bricks for this project. The interior objects are made of rammed clay. By stamping the clay into a mold a solid mass arises. This can be made into sofas, desks and pedestals, for example. In these objects the layer structure of the clay from this area becomes visible.



INSTALLATIONS

The building is heated and cooled with a surface water heat pump using floor heating and cooling. A surface water heat pump that uses the surrounding surface water as source is extremely suitable for heating and cooling the building with minimal energy. The supply of fresh air is coming from a thin slot in the floor, the drain comes from a central grid in the partitions. This way the external walls remain 'untouched' and can stay at their optimal thickness. This air conditioning system can also be deployed for rapid cooling and heating of the building. At the flat roofs of the restaurant and the dike building solar cells are placed for the generation of electricity. These solar cells are integrated into the roof so they are not visible.



Opposed to the straight descending pathway, the ascending pathway is meandering. Where the straight downward pathway symbolizes the damming of the water in the past, the meandering pathway symbolizes the present, where the water needs and gets more space. On the left, the history of the brick industry is explained in a wall of clay; the main material for making brick.



The ascending pathway leads the visitor towards the present and it has a direct relation to the surrounding landscape, where the downward pathway has no direct relation to the landscape. This symbolizes the fighting against the water in the past, by trying to control it by locking it out, versus living with the water in the present and using it as part of the landscape.



Eventually the pathway passes the restaurant, with a fantastic panorama view at the new aquatics landscape. Because the restaurant lies above water level, this room is less massive than the other rooms. The restaurant isn't challenged by water forces, so that the facade has been conducted leaner and more transparent. In the restaurant, local products are served.