

Kinderdijk

FROM START TO FUTURE

Background research



Wietse Haitsma Mulier

Kinderdijk from Start to Future

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W. S. Haitsma Mulier
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Main mentor
A. W. Hermkens

Building technology mentor
T. P. Bennebroek

Research mentor
M. T. A. van Thoor

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1. Introduction

The Alblasserwaard used to be a swampy area surrounded by water. To make it accessible and suitable for farming, the Counts of Holland and the Bishop of Utrecht let ditches be dug. This allowed the water to flow from the land to the rivers surrounding the Alblasserwaard.¹ To protect the land in the Alblasserwaard from flooding, a dike was constructed around a large part of the area in 1277.² In 1320, the western part of the Alblasserwaard was also diked.³ The dike and the water management within the dike was taken care of by the Waterschap (waterboard).⁴ The Alblasserwaard was divided into two waterboards: the Overwaard and the Nederwaard.⁵

Due to the dewatering of the peat grounds, the land subsided. Hence, discharging the water into the river became more difficult. According to Van Groningen (1992, p. 77), Duke Albrecht van Beieren arranged for a large canal to be dug to improve the drainage of the Overwaard. This canal, which was finished in 1366, ended at 't Elshout, currently called Kinderdijk. Here, the water level outside the diked area was the lowest, which made the natural discharge on the river Lek easier. Some years later, in 1369, Duke Albrecht van Beieren let a new canal be dug to improve the drainage of the Nederwaard as well. The new canal of the Nederwaard partly ran

parallel to the earlier dug canal of the Overwaard and also ended at 't Elshout. Four sluices were present there, two for the Overwaard, and two for the Nederwaard. When the water level in the river was low, the sluices opened and the water from the Alblasserwaard was discharged.

However, the land kept subsiding and windmills were needed to pump the water from the land into the rivers in the 15th century. Three centuries later, a new solution was needed, as the land kept subsiding. Van Groningen (1992, p. 78) states that the waterboard Nederwaard constructed a high reservoir in 1738. When the water level in the river was high, eight windmills pumped the water from the main canal into the high reservoir. When the water level in the river lowered, the water from the high reservoir was discharged into the river. This solution was copied by the waterboard Overwaard in 1740.

Eventually, mechanical drainage replaced the windmills. The steam pumping station Wisboom was built for the waterboard Overwaard in 1868. In the same year, the steam pumping station Van Haften was built for the waterboard Nederwaard.⁶ In the 20th century, the steam pumping stations were replaced by diesel pumping stations and eventually, these were replaced by electric pumping stations.

This sequence of pumping methods has largely been followed all over the Netherlands. However, Kinderdijk-Elshout is unique in the sense that

1 Van Reenen, 2023, p. 8

2 Van Groningen, 1992, p. 76

3 Van Reenen, 2023, p. 9

4 Van Groningen, 1992, p. 39

5 The events that led to the establishment of two waterboards are described by Henderikx (1988).

6 Van Groningen, 1992, p. 86

buildings of all these different pumping methods are still there and have not been demolished. Moreover, the reservoirs have developed into diverse natural areas which attract endangered bird species.⁷

Especially the scenic windmills attract visitors from all over the world. Already in the 1950s they attracted thousands of visitors, see Figure 1.1.⁸ The thousands of visitors have grown into hundreds of thousands of visitors. In 2022, almost 600.000 people visited Kinderdijk, of whom 260.000 were paying visitors.⁹ The income generated by the visitors is needed to maintain the buildings on the site. However, mass tourism does result in nuisance for the Kinderdijk inhabitants.¹⁰ Moreover, the very short visits are a thorn in the eye of the locals. Busloads of tourists visit the area to take a selfie, visit a mill, and leave again. Luiten and Berkers (2010) aptly described Kinderdijk as a “world-class sanitary stop”. The millers would like to see a different kind of tourism in Kinderdijk. Instead of the quick, mass tourism, one miller proposed slow, small-scale tourism. This lets the tourists experience working with the natural elements of wind and water.¹¹

All in all, mass tourism in Kinderdijk brings in the necessary money to maintain the buildings and

mills and is only expected to grow in the future.¹² However, the nuisance which is a result of the mass tourism should be reduced. I believe that a smart masterplan design for the village and the tourist area can help reduce the nuisance. Next to this, I propose to add slow, small-scale, quality tourism. Firstly, this functions as a gradual transition between the mass tourism zone and the village of Kinderdijk, which has only eight hundred inhabitants. Secondly, it supports the facilities in the small village. Tourists that stay in the area for a longer time will likely spend more money at local facilities. And finally, it provides a new way of experiencing the unique water management area of Kinderdijk-Elshout.

¹² Straub, 2023



Figure 1.1 - Already in 1954, the group of mills in Kinderdijk attracted thousands of visitors. From “Regionaal Archief Dordrecht,” in De Dordtenaar, 1954 (https://www.regionaal-archiefdordrecht.nl/proxy/archief/?mivast=46&mizig=91&miadt=46&miaet=14&micode=DD_1954&minr=6058461&mi-lang=nl&misort=dt%7Casc&mizk_alle=elshout&miview=ocr).

⁷ Natura2000, n.d.

⁸ “Wat Kinderdijk betreft”, 1954

⁹ Dordrecht Marketing & Partners, 2023

¹⁰ De Erfgoedstem, 2018; MAX Vandaag, 2018; Rijnmond, 2019-a

¹¹ Rijnmond, 2019-b

Chapter 2

Masterplan

2.1 Current situation

The tourists who visit Kinderdijk can roughly be divided into two groups: tourists who go on an organised trip, whom I call group tourists, and tourists who visit the site on their own, whom I call individuals. This also includes small groups such as families and the like, who do not go on a professionally organised trip. These two types of tourists arrive in the area in different ways and experience the area differently. That is why they are treated separately in the sequel.

Group tourists arrive by coach or river cruise and have their own entrance. The visitors who come on the river cruise have to cross the road. This is done under the guidance of the guides, which makes the road crossing fairly smooth. From here, the group tourists walk along a path to the group entrance where they can buy tickets. The SWEK offices are also located in this building. The group ticket building is located on the island where various exhibitions can be visited. A movie is shown in one of the buildings, and an exhibition about nature is held in another building. The eye-catcher on this island is the Wisboom steam pumping station, which can also be visited. Leaving the island, people walk past the ticket/souvenirs/café building, which opened in 2019. They turn left on the Molenkade and visit the visitors' mill. Most groups do not continue to the other mills, but turn around and go back.

Individuals can reach the area in different ways. Most arrive by car.¹ In winter, only the parking

¹ Defacto urbanism, 2019

spaces around the entrance are open. In summer, the transferium in Alblasterdam is open too. From there, visitors can reach Kinderdijk by shuttle bus or bicycle. The parking lot at the IHC terrain on the other side of Kinderdijk is open during the weekend. Others take the ferry or water bus from Rotterdam. This moors close to the Molenkade but at the opposite side of the dike and dike road. From here, visitors cross the dike and arrive in the area. A small percentage of visitors arrives by public transport. The bus stops on the dike, close to the pedestrian crossing that water bus passengers use to cross the road. From the dike, visitors walk past the parking spaces, the J. U. Smit pumping station, and the new ticket/souvenirs/café building to the mills. After the first visitor mill, the footpath stops and people have to continue walking on the cycle path or a small sand path. The sand path is located on a strip of land where native plants grow. If people decide to follow this route they will arrive at the oldest mill: De Blokker. After the mills have been visited and people return to the start, they can visit the exhibition spaces in and next to the Wisboomgemaal via a side road.

When both types of tourists have finished their visit to Kinderdijk, they either leave Kinderdijk or look for places to eat in the village. This concerns the bakery 'Ons dagelijks brood' and the restaurant 'De Klok'. To get to these facilities, they have to walk into the village along the narrow dike road.

There are several problems hidden in this story, which can be divided into two categories. The first is

the routing in the area. Individuals in particular suffer from this. They can only buy their tickets halfway, and easily walk past the ticket office, because of its inconspicuousness. The terrace that belongs to the entrance building is also illogically positioned on the other side of the pedestrian and cycle path. As a result, café guests must first cross the road to get to the terrace. The footpath that ends after the first visitor mill also causes problems, as it forces tourists to cross or use the cycle path to continue walking. The sand path is sometimes too wet to use, and plants have less space to grow on the strip of land year after year. Comparing satellite images over several years shows that the path is becoming wider and plants are getting less and less space. The route to the Wisboomgemaal and the adjacent exhibition spaces is also illogical. As mentioned, the visitors reach the 'exhibition island' via a branch of the main path. This makes it illogical to visit the indoor exhibitions on this island, which are already few and far between. The last major problem related to routing is the location of the facilities in the middle of the village. As a result, tourists walk through the village along a narrow road, which is likely to cause inconvenience to the residents.

The second category of problems concerns the layout and design of the area. The arrival is especially unattractive. The building called 'Windkracht 4', built in 1993, does not fit with the morphology of the ribbon development along the dike. It is too high, has a different roof shape, no regular facade composition, and a colour that is too dark. The colossus is unable to warmly welcome visitors. There is a parking lot next to Windkracht 4, which does not fit in with the natural character of Kinderdijk. At

the beginning of the mill quay there also is a lot of asphalt and little greenery, which again does not do justice to the unique water management and natural area.

Since the two main problems are routing and design, my proposal focusses on these two topics. It will benefit the village inhabitants, who will be less bothered by wandering tourists, and the local entrepreneurs, who will receive more guests by moving the entrepreneurs closer to the tourist area. The tourists will benefit from the redesign too. The entrance zone will be made safer by adjusting the traffic situation. Tourists will be offered multiple routes through the area, which gives more freedom, makes visiting all the exhibitions more logical, and spreads the tourists over a larger area. Finally, the redesign radiates more unity and introduces more greenery, allowing the tourists to experience more peace during their visit. The next paragraph will focus on the functional design and the traffic flows. The final paragraph will go into the design of the entrance area in more detail.

2.2 Masterplan design

The group tourists and the individuals will keep their own entrances. The group tourists will still walk from their river cruise or touring car to the group entrance building. However, the SWEK offices which are currently located in this building will move to another island. This makes that a souvenir shop can be placed in the group entrance building. When the groups of tourists leave, they will walk past this building again, which is the perfect time to buy a souvenir. It also creates more clarity to move the offices away from the tourist area. All buildings in the tourist area can now be visited by the tourists.

The SWEK offices will be moved to next to the reed cutter. Here, there is enough space to build offices, a workshop, and parking lots for the volunteers and employees. It is out of sight for the tourists and becomes a 'work island'.

Most changes will be made to the route of the individuals. It starts with a safer crossing of the dike for tourists who come by water bus. By creating a refuge island, a moment of rest is introduced, which allows for a safer crossing. The shuttle bus will have its own stop next to the dike road so that traffic is not hindered. This is where tourists both get off and onto the shuttle bus. Its location prevents these tourists from crossing the road. The public transport bus does have a stop on both sides of the road. Due to the short stopping time, it does not need a stop next to the road. Both the tourists who arrive by shuttle bus, water bus, and public transport bus now have arrived at the entrance of Kinderdijk.

When entering the area, tourists can buy tickets in the entrance building directly on the right. As with the group entrance, souvenirs are also sold here. On the left side, the parking spaces will disappear. Except for three disabled parking spaces, there is no longer any parking in the entrance area. Instead, the tourists park at the transferium in Alblasterdam in summer. From there they arrive in Kinderdijk by shuttle bus. In winter, the parking spaces at the Pot barn are used. This barn will be discussed later.

Instead of parking spaces, there will be an entrance square with a playground. The playground will be equipped with different water pumps, showing their development over time. As a result, children and adults will be introduced to the area playfully. It is useful to create such an entrance square so that people can get grounded in the area, as research by a fellow student has shown.¹ For example, whilst one of the parents of a family buys the tickets and souvenirs or needs to go to the toilet in the entrance building, the children can play in the playground. Such a square is also useful when leaving because it kills the time that the tourists have to wait for the water or shuttle bus. It is an important place that tourists will remember because of the activity and enthusiasm of the playing and learning children.

Moreover, this entrance square also offers a nice overview of the water system. The mills, pumping stations, and the sluice can be seen at a glance. From the entrance square, tourists can go in two

¹ L. de Keijzer, personal communication, February 1, 2024

directions. The already existing route to the J. U. Smit pumping station and the mills remains. A new bridge over the water along the sluice is the start of a second route. Here the visitors will experience how the water flows through the sluice to the river Lek, and they will walk past the boardhouse of the Overwaard. Another bridge along the Kok pumping station completes the route, making it possible to walk a kind of 8-shaped route. This creates several moments where the tourists can look over the water. The new route also makes visiting the existing indoor exhibitions more logical. In addition, it allows new exhibitions to open. The boardhouse of the Overwaard and the staff house next to the Kok pumping station can be opened to tell the story of the board members and the story of the workers. Besides, the J. U. Smit pumping station can exhibit the story of current and future water management. The new route and exhibitions complete the story of water management in Kinderdijk. Another advantage is that the tourist flows are better distributed over the area.

Along the routes, functional, logistical, and design adjustments will be made. The terrace of the café in the modern, 2019-building will be repositioned. By placing it directly next to the café, there will be no cycle and pedestrian path between the café and the terrace. Furthermore, the current ticket office and souvenir shop in this building are no longer necessary. Instead, a bicycle rental will be introduced. This is a convenient place for bicycle rental because the cycle path starts behind the building. In addition, quays will be made greener. Next to the Wisboomgemaal, the reed cutter, and on the Molenkade, paving will be removed and greenery reintroduced. Greenery

will also be reintroduced on the aforementioned sand path. This 'natural' walking path cannot handle the current number of visitors. By extending the current footpath, the sand path will again be taken over by plants and pedestrians will be kept away from the cycle path.

When tourists have finished their visit to the mill area, they can, just like in the old situation, eat and drink at the local bakery or restaurant. The only thing that will be altered is the location of these facilities. They will be located adjacent to the tourist area. As a result, traffic flows and tourist activities are concentrated in a compact area. The hordes of tourists remain outside the residential area, which increases road safety and quality of life. At the same time, the local entrepreneurs continue to benefit from the tourists.

Restaurant 'De Klok' will move to the building called Windkracht 4 and the house with a gambrel roof next to it. These will be connected. Consequently, the current restaurant building can be converted into apartments, which are in high demand in Kinderdijk.² The restaurant will share the Windkracht 4 building with the ticket office and souvenir shop. This allows facilities such as the elevator and toilets to be shared. Bakery 'Ons dagelijks brood' will move to the boardhouse of the Nederwaard. Bed & Breakfast accommodations will also be located here, housing slow, small-scale, quality tourists, which is written about in the introduction. The B&B and the bakery shop will share a dining room and toilets. The building in which the bakery is currently located can

² Personal communication with multiple brokers in the area, November 2023

be used as a house. In addition to keeping tourists away from the village, this configuration offers another advantage. There will be a gradual transition from mass tourism to the village. The ticket office and restaurant are located next to the mass tourism area, and the bakery and B&B are adjacent to the village. This position between the village and the tourist area allows both tourists and villagers to use the facilities without getting in each other's way.

The restaurant and bakery shop are located along the dike. To be prepared for the future, higher water levels in the river and therefore dike reinforcement must be taken into account. My plan assumes a height of the dike of NAP +6 m. This is higher than the free space profile of NAP + 5.36 m maintained by the water board, in order to be even better prepared for the future. Furthermore, the dike in the new design meets all requirements of the water board: a width of the crest of the dike of at least 5 meters and slopes of a maximum of 1:3.

On top of the dike the street profile changes. Currently, there are only two narrow sidewalks. This causes almost all pedestrians to use the bicycle path. In the new design, there will be a wide sidewalk along the entrance building and the bakery, and a wide sidewalk on the crest of the dike along the water. This footpath leads to the aforementioned parking spaces at the 'Pot Barn'. These parking spaces are used by tourists in the winter, and all year round by employees and guests of the B&B, the restaurant, and the bakery. The lay-out of the parking spaces follows the curvature of the dike.

The parking spaces and the pre-industrial timber barn will be situated next to the 'Elshout'. This is a forest. Two houses will have to be demolished for the forest to grow. These houses are located on the outer dike, low terrain and have no noteworthy qualities. Therefore, I believe that it is legitimated to demolish them. The forest that will grow there instead is based on the forest that used to be on the outer dike grounds of Kinderdijk up until the 18th century.³ The village Kinderdijk used to be called 't Elshout, after the forest. In an Elshout forest, there usually were black alders, willows, and common ash. These were wet forests where coppice was collected.⁴ The timber from the black alders is ideal for wood carving. Utensils such as wooden spoons and bowls were made from black alder wood.⁵ Willow wood was used, among other things, to weave baskets.⁶ The common ash wood was used to make handles for axes and spades.⁷ These and other timber products will again be made by the woodworker who will be working in the Pot barn. The woodworker can sell his products in the souvenir shops and can give woodworking workshops to quality tourists. The old timber barn, located next to the forest and river, will open up the creative minds of the woodworker and his workshop participants. Moreover, the forest will contribute to the historical awareness of tourists and the Kinderdijk inhabitants. Besides, the forest will capture CO₂, create a new ecosystem, help protect the dike, and provide recreation for the local inhabitants who will go there for a walk.

3 This can be seen on a 1774 map made by J. Burg (1774), see Figure 3.2.

4 Plaatsengids, n.d.

5 Botanische Tuinen, n.d.-a

6 Botanische Tuinen, n.d.-b

7 Botanische Tuinen, n.d.-c

2.3 Entrance area design

Many traffic flows converge in the entrance area for individuals. Most interventions will also be performed here. By zooming in on this part, a representative image of the entire area is sketched. The entrance area sets the tone for the larger area that will radiate unity and tranquillity. While keeping the unity of the area design in mind, I tried to preserve as much of the existing structures as possible for sustainability reasons.

The tourists will enter the area from the dike. From there, the pavement of baked clay pavers in a windmill pattern will begin and continue throughout the area. The material ties in with the earthy and artisanal character of the area, while the windmill pattern refers to the mills. Few vehicles will drive in the area. Only employees and maintenance vehicles will drive there, especially outside visitor hours. The few car movements will create a pleasant, quiet, and safe recreational environment.

At the start, to the right of the walking path, will be the entrance/restaurant building. This will consist of the existing Windkracht 4 building and the semi-detached house with a gambrel roof that stands next to it. The Windkracht 4 building is, as mentioned earlier, an eyesore. The height, roof shape, colour, and facade composition do not match the other buildings in the area. That is why one floor of the Windkracht 4 building will be removed and a hipped roof will be added. The load-bearing structure will be retained, but the facade cladding will be replaced by bricks similar to those of the

house. The composition of the facade will become more regular to fit in with the rest of the dike buildings.

This entrance building will house the ticket office and souvenir shop at dike level. The entrance to these functions will be located along and on the same level as the path that tourists take, so it is easy to reach. The entrance to the restaurant will be one floor lower. It will be located in a new extension to be built, which links the house to the Windkracht 4 building. The restaurant will be located both in the house, the extension, and the Windkracht 4 building.

There will be a height difference of three meters between the entrance level of the ticket office and the entrance level of the restaurant. A retaining wall will be needed to bridge this level difference. This wall will consist of bricks. Brick walls will be used more often in the area. They will also be used around the playground. People can sit down on some of the walls, while other walls will form the barriers that separate the land from the water. Steel signage can be placed on the walls where necessary. The walls will be illuminated from below so that high lighting poles are avoided. Where there are no walls, but lighting is required, this will be solved with low street lanterns so as not to disrupt the view of the landscape. Wooden planks will be placed on top of the brick walls. This natural material will continue on top of the fencing of the bridges. The floors of the bridges will be made of timber too. The bridges will have horizontal metal fencing that fits in with

the horizontal character of the landscape. By using baked clay, wood, and steel throughout the area, a uniform, soothing image is achieved. It also ties in with the natural, artisanal, and industrial history of the water management area.

Chapter 3

Gemeenlandshuis Nederwaard

3.1 History of Gemeenlandshuis Nederwaard

As explained in the introduction, the water management within a diked area was arranged by a waterboard or Waterschap in Dutch.¹ The Alblasserwaard was divided into two waterboards: the Overwaard and the Nederwaard. The boards of these waterboards needed places to meet. This happened in boardhouses, called gemeenlandshuizen in Dutch. According to Busch (1995, p. 35), the board could also eat, drink, and spend the night in this house. The boardhouse was often situated next to the sluices of the waterboard. In the house lived the lock keeper, who had to perform several tasks. First of all, he had to take care of the maintenance of the sluices. Secondly, the lock keeper had to stable the horses and store the carriages of the board members in a carriage house. Thirdly, he had to provide meals for the board members.

Both the boardhouses of the Nederwaard and Overwaard were situated next to the sluices at 't Elshout, one on either side. Both are still there today, and both are available to house new functions.² The boardhouse of the Nederwaard is part of my design and will therefore be elaborated upon.

According to Van Reenen (2023, p. 14), the boardhouse of the Nederwaard was built between

¹ Van Groningen, 1992, p. 39

² The boardhouse of the Nederwaard has been bought by the municipality to be used in the future plans for the entrance area (Kinderdijk2030, 2021). The waterboard has just started discussions about the future of the boardhouse of the Overwaard (Waterschap Rivierenland, 2024).

1726 and 1767, since in the latter year the boardhouse appeared on a map for the first time, see Figure 3.1. Perhaps, the boardhouse was built around 1737. In that year, the land for the construction of the high basin was bought by the waterboard. Moreover, a discharge sluice was constructed to discharge the water from the high basin into the river. A house for the lock keeper and a meeting place for the board were probably needed and placed next to the sluice.

The boardhouse of the Nederwaard probably was more than merely a house and a place to meet for the board. In the boardhouse, the board tendered the delivery, maintenance, and repair of the sails of the mills of the Nederwaard. The specifications could



Figure 3.1 - The first map with the boardhouse on it. From "Rijksmuseum," by B. Stopendael, 1767 (<https://www.rijksmuseum.nl/nl/collectie/RP-P-AO-14-12A>).

be read in the boardhouse by interested craftsmen.³ Other people also used the boardhouse to tender orders. For example, shipmakers F. and J. Smit used the boardhouse to tender the construction of a canopy.⁴ This indicates that the boardhouse was not only used by the board and the lock keeper, but it was open to more people.

In 1854, the waterboard of the Nederwaard moved to a new building in Alblasserdam. It sold the boardhouse in 't Elshout to the then lock keeper Bastiaan Pot (1812-1888) and his brothers Joost (1810-1879) and Adriaan (1811-1868).⁵ Being a lock keeper was a side job. Bastiaan Pot's main job was shipbuilding. He owned a shipyard across the street from of the boardhouse, outside the dike. Being lock keeper and shipbuilder had been combined by members of the Pot family from at least 1702 onwards, states Van Blokland (2011-a). It was Jan de Jongh Pot (1652-1719) who became the lock keeper of the sluices at 't Elshout in 1702. In the meantime, he owned a shipyard in Papendrecht. His son Joost Pot (1692-1765) moved to 't Elshout to work as a shipbuilder there. He succeeded his father as lock keeper of the Nederwaard between 1727 and 1747 and lived in the boardhouse of the Nederwaard. Probably, he was the first resident of the boardhouse. For his job as lock keeper, he was given a salary of five hundred guilders per year. His descendants took over the job as lock keeper of the Nederwaard and also continued to work in the shipbuilding business, which will be elaborated upon in Chapter 4.

3 "Heeren Watergraven en Waterheemraden", 1837

4 "De Gebroeders", 1825

5 Janik et al., 1993, p. 64; Van Reenen, 2023, p. 19

Until 1945, members of the Pot family lived in the former boardhouse. Already in 1920, the boardhouse was sold to wholesaler Boon.⁶ According to Schep (1982, p. 62), a beautiful mantelpiece was demounted before the Pot family sold the boardhouse. This mantelpiece stood in the meeting room, which was located on the west side of the first floor. The mantelpiece contained coats of arms of former Hoogheemraden, board members, of the waterboard of the Nederwaard. One source says that it was sold to the museum Boymans in Rotterdam.⁷ Another source says that the mantelpiece was moved to the office of the Willem Pot company in Maassluis, which made anchors and chains. A fire would have destroyed it in June 2003.⁸

At the beginning of Boon's ownership, there was a peanut roasting facility on the lower floor and the upper floor was rented out to two families. Later the whole building was used as a warehouse for Boon's wholesale company.⁹ It is said that Boon's barking dogs, which he used to transport his goods, made one of the Pot members who lived next to him buy him a horse so that Mrs Pot could sleep again.¹⁰

Around 1960, the boardhouse was sold to J. & K. Smit, a shipbuilding company in Kinderdijk. This company wanted to demolish the boardhouse to build their executive residence there instead, according to Fotobasebank (n.d.). The Monument Care department protected the boardhouse by

6 Deelen et al., 2002, p. 334

7 Schep, 1982, p. 62

8 Fotobasebank (n.d.)

9 Schep, 1982, p. 62

10 Deelen et al., 2002, p. 336

prohibiting its demolition. In 1975, the building was sold to Ms Van Gent who opened a restaurant in it. She transformed the attic from a meeting room into an apartment in 1976.¹¹ In 1977, Mr and Mrs Arnolds bought the restaurant and named it Aux Moulins. After thirty years, in 2007, the restaurant was sold to Mrs Stierman-Poldervaart.¹² Her restaurant was called Buena Vista. In 2021, the building was sold to the municipality Molenlanden but was still used by restaurant Buena Vista until the end of 2023.¹³ Since 2024 the ground floor is not in use, the first floor and attic are rented out as apartments, and the shed that was built in 2017 behind the boardhouse is used by a bike rental company.¹⁴

A list of owners of the boardhouse is provided here:

17xx - 1854:	Waterschap Nederwaard
1854 - ca. 1920:	Bastiaan Pot and descendants
Ca. 1920 - ca. 1960:	Mr and Mrs Boon
Ca. 1960 - ca. 1975 ¹⁵ :	J. & K. Smit, later called Industriële Handels Combinatie Smit (IHC Smit BV)
Ca. 1975 - 1977:	Ms Van Gent
1977 - 2007:	Mr and Mrs Arnolds
2007 - 2021:	Mrs Stierman-Poldervaart
2021 - 2024:	Municipality Molenlanden

Over time, many changes have been made to the

¹¹ Van Reenen, 2023, p. 24

¹² Fotobasebank, n.d.

¹³ Kinderdijk2030, 2021

¹⁴ I. Akcay, personal communication, March 18, 2024

¹⁵ It could be that IHC owned the boardhouse for a longer time period. In the archive I found a letter from the housing management department of IHC which agreed with the municipality to build a gas regulator station nearby the boardhouse (Koolmees, 1979).

boardhouse, especially to the southern part of the facade and plot, as described by Van Reenen (2023) and as illustrated in Figures 3.3 up until 3.8. The earliest shape of the boardhouse is best seen on a 1774 map, see Figure 3.2. Parallel to the dike was the main building of the boardhouse. Perpendicular to it, the rear house most likely served as a stable for horses and carriages and as a storage of tools and materials for the maintenance of the dike and sluice. Soon after the initial construction of the boardhouse, probably at the end of the 18th century, it was extended to the eastern side by the width of two bays.



Figure 3.2 - The first map on which the shape of the boardhouse can be seen in more detail. From “Nationaal Archief,” by J. Burg, 1774 (https://www.nationaalarchief.nl/onderzoeken/kaartencollectie/NL-HaNA_4.VTHR_4204?search-Key=0030ea72b96eb8705a8624c67c9441ef).

In 1906, the rear carriage house was demolished. Instead, a wooden chalet-style structure with a wooden veranda and a sunroom was built. At the same time, a smaller stone shed was placed southwest of the main building. This shed is still there. It was probably connected to the boardhouse with a small corridor in 1967.

In 1970, a transformer house was built at the back of the plot. In 1975, a smaller shed was placed next to the 1906 shed. In 1985, a small pump station was placed close to the transformer house at the back of the plot.

In 1985, an extension to the boardhouse was made. Toilets were added on the ground floor, on the southern side. Also, a new shed was built next to the other sheds. In the first quarter of the 21st century, this shed was replaced by a larger canopy, and a new shed was built. These structures were legalised in 2017.¹⁶

In 2012, the roof of the boardhouse was renewed. The complete roof and gutter construction were replaced. On the southern roof pane, two dormer windows and three skylights were added. The original bell was placed on top of the roof again. This bell probably indicated the hours of the day and warned in the events of (flood) danger.

Comparing Google Maps images from July 2017 with the current state of the sunroom shows that the facades and gutter of the wooden veranda and sunroom have been renewed in recent years. Before then, the original veranda and sunroom had already been altered. The poor condition of the wooden structure has probably led to these alterations. An overview of the condition of the boardhouse through time is provided in Figures 3.9 up until 3.26.

¹⁶ Putters, 2017

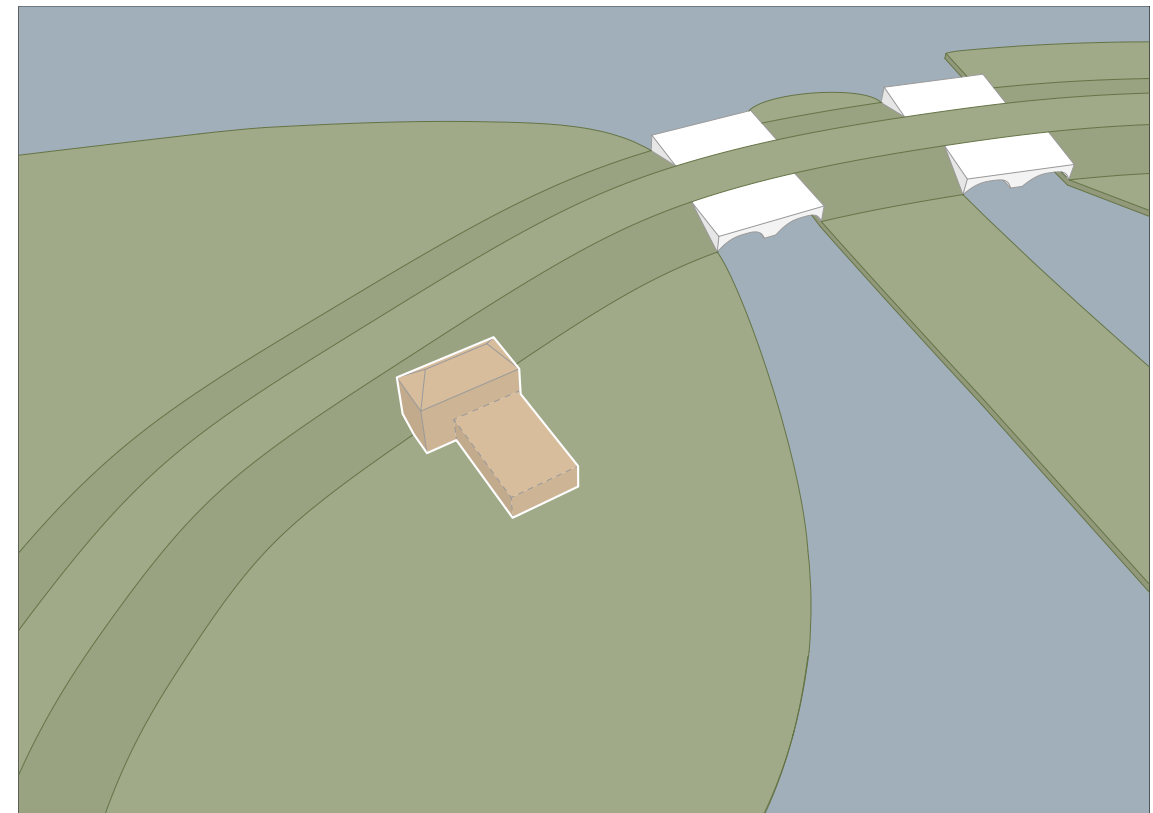


Figure 3.3 - Site in 1767

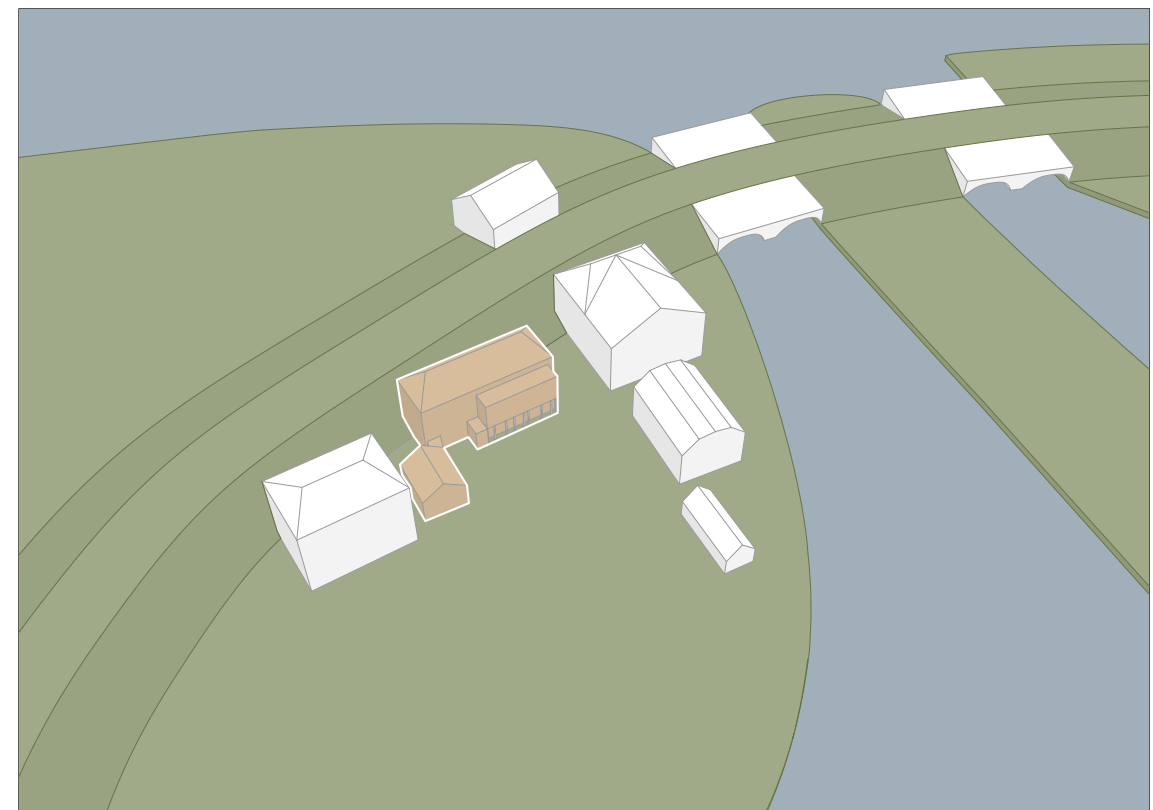


Figure 3.6 - Site in 1967

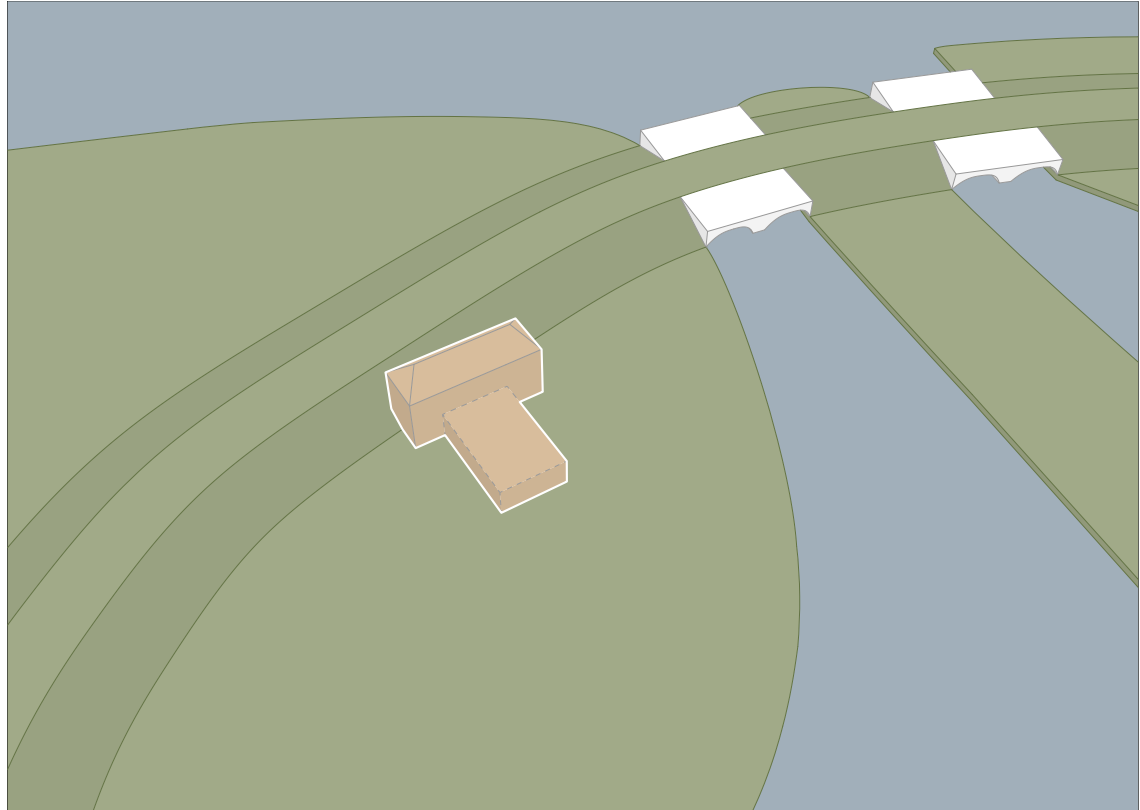


Figure 3.4 - Site in 1800

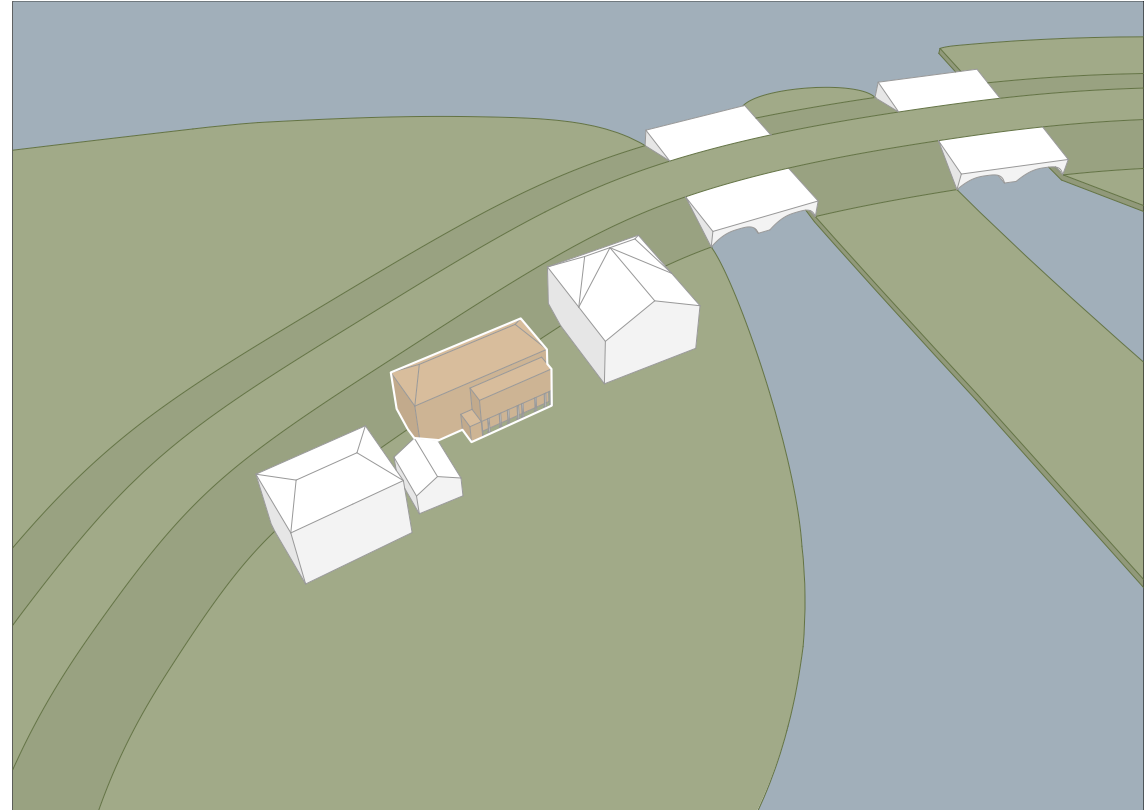


Figure 3.5 - Site in 1906

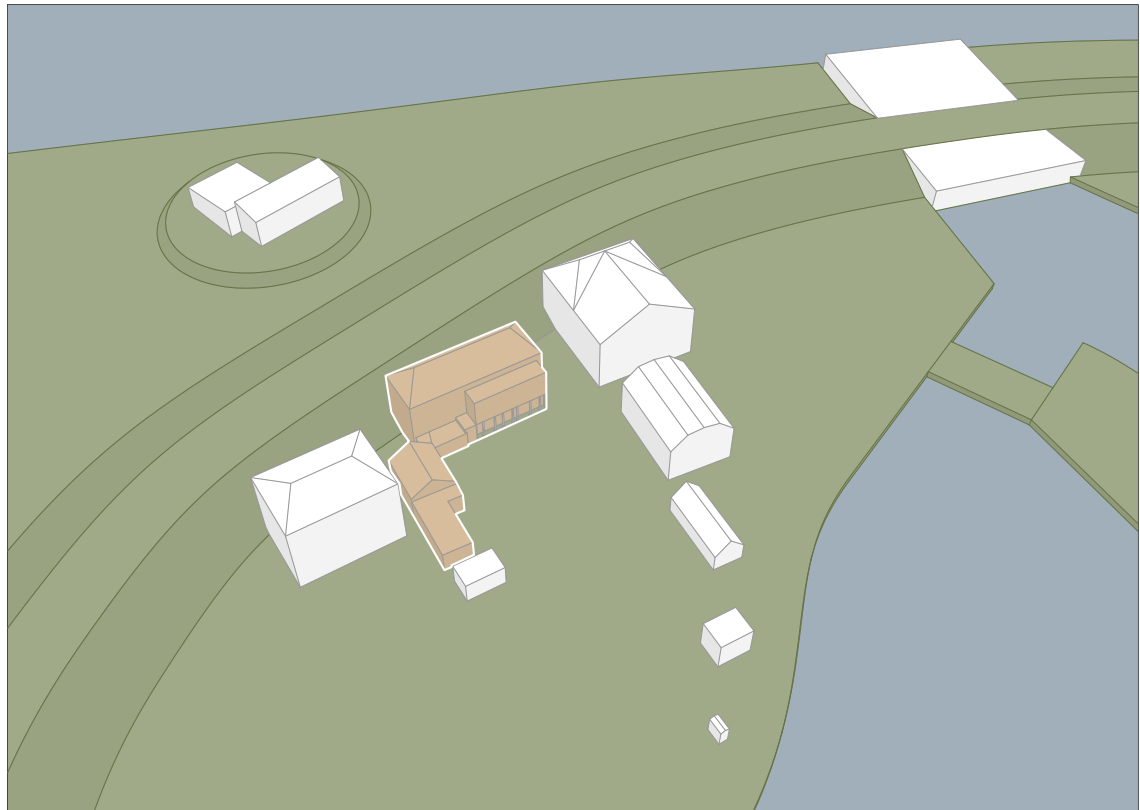


Figure 3.7 - Site in 1985

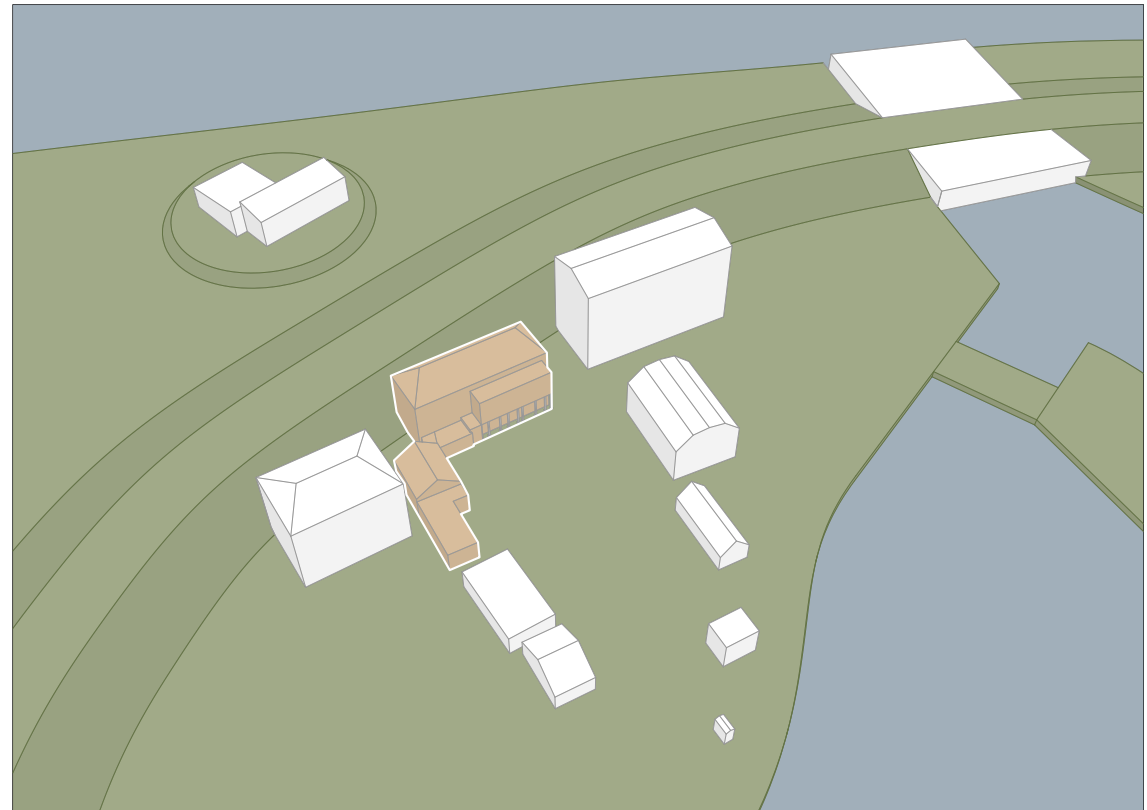


Figure 3.8 - Site in 2024

- Figure 3.9** - The sluices of 't Elshout with the boardhouse of the Nederwaard in the background on the left. From "Regionaal Archief Dordrecht," by J. van Strij, 1809 (<https://beeldbank.regionaalarchiefdordrecht.nl/search/detail/id/3C098928505693014B591B236E6DFFB6/showbrowse>).
- Figure 3.10** - One of multiple postcards with the boardhouse on it. Photograph taken in the 1910s. From "Regionaal Archief Dordrecht," collection of P. J. de Ruiter-Lolkus, n.d. (<https://beeldbank.regionaalarchiefdordrecht.nl/search/detail/id/3005E392A59411E6860400163E535DC5/showbrowse>).
- Figure 3.11** - The northern facade of the boardhouse in 1965. From "Beeldbank Cultureel Erfgoed," by G. J. Dukker, 1965 (https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/f433db0f-6e31-1156-b9af-0fae59707384/media/42ff92c9-4829-db7d-137e-217d44c5053f?mode=detail&view=horizontal&q=20125260&rows=1&page=1&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc).
- Figure 3.12** - The northern facade of the boardhouse in 1968. From "Beeldbank Cultureel Erfgoed," by H. P. van Beveren, 1968 (https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/e596d8ad-a790-e444-6164-d11ca9ec8381/media/03427d99-d7ca-80e7-1a80-6c440b0d3816?-mode=detail&view=horizontal&q=molenstraat%20230&rows=1&page=10&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc).
- Figure 3.13** - The front door of the boardhouse in 1968. From "Beeldbank Cultureel Erfgoed," by H. P. van Beveren, 1968 (https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/da8113e5-0854-f9f4-4d31-4d7f15118737/media/5f0847f0-33cb-f1fb-5b44-ca9e86f23333?mode=detail&view=horizontal&q=126950&rows=1&page=1&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc).
- Figure 3.14** - The northern facade of the boardhouse in 1978. From "Beeldbank Cultureel Erfgoed," by G. J. Dukker, 1978 (https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/7f212fb5-1ba4-3abb-6a0e-7a97422f2b1b/media/e6cbfcec-90a5-e631-2514-f69cf85e094c?mode=detail&view=horizontal&q=198553&rows=1&page=1&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc).
- Figure 3.15** - The northern facade of the boardhouse in 1991. From "Beeldbank Cultureel Erfgoed," by G. J. Dukker, 1991 (https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/6ca87ac0-ffc0-5e96-3a12-8f60384323ab/media/b0ac1789-7d93-ca93-2617-257d294d4de9?mode=detail&view=horizontal&q=288168&rows=1&page=1&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc).
- Figure 3.16** - The northern and eastern facade of the boardhouse in 1991. From "Beeldbank Cultureel Erfgoed," by G. J. Dukker, 1991 (https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/f2bb5351-5cfe-1e71-1903-b77a800e0f23/media/01e43647-fe5f-8e9a-106a-7bb875ef606b?-mode=detail&view=horizontal&q=288169&rows=1&page=1&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc).
- Figure 3.17** - The 1906 sunroom and shed in 1968. From "Beeldbank Cultureel Erfgoed," by H. P. van Beveren, 1968 (https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/04e2e124-75d7-f546-745e-ffcfe0ce78e2/media/567bec9f-aceb-5913-77d9-ec33ca060bd3?-mode=detail&view=horizontal&q=molenstraat%20230&rows=1&page=18&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc).



3.9



3.10



3.11



3.12



3.13



3.14



3.15



3.16



3.17

Figure 3.18 - The southern facade of the boardhouse in 1969. From “Beeldbank Cultureel Erfgoed,” by De Boer, 1969 (https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/a8f9d422-efc4-f81c-9c42-00a87acaa55d/media/1d13a9da-f642-dd32-02ac-94a3de771677?-mode=detail&view=horizontal&q=molenstraat%20230&rows=1&page=2&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc&filterAction)).

Figure 3.19 - The 1906 shed and southern facade of the boardhouse in 1968. From “Beeldbank Cultureel Erfgoed,” by H. P. van Beveren, 1968 (https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/485835ac-06a4-fe36-b884-a936e8eb6968/media/ea90fb62-5a20-9bfd-a44d-22f6df39d0ac?mode=detail&view=horizontal&q=molenstraat%20230&rows=1&page=14&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc).

Figure 3.20 - The western facade of the boardhouse in 1968. From “Beeldbank Cultureel Erfgoed,” by H. P. van Beveren, 1968 (https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/43861a87-1efd-6622-290c-2d91638099a2/media/9f9a4b82-5075-1ea0-dc2f-14dd0e986176?-mode=detail&view=horizontal&q=molenstraat%20230&rows=1&page=16&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc).

Figure 3.21 - Close-up of the western facade of the boardhouse in 1968. From “Beeldbank Cultureel Erfgoed,” by H. P. van Beveren, 1968 (https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/7a584efc-9e2c-dcca-42ff-9076b4ec1e85/media/3093cae4-4674-c8e2-c782-df20c5d-5d6b3?mode=detail&view=horizontal&q=molenstraat%20230&rows=1&page=13&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc).

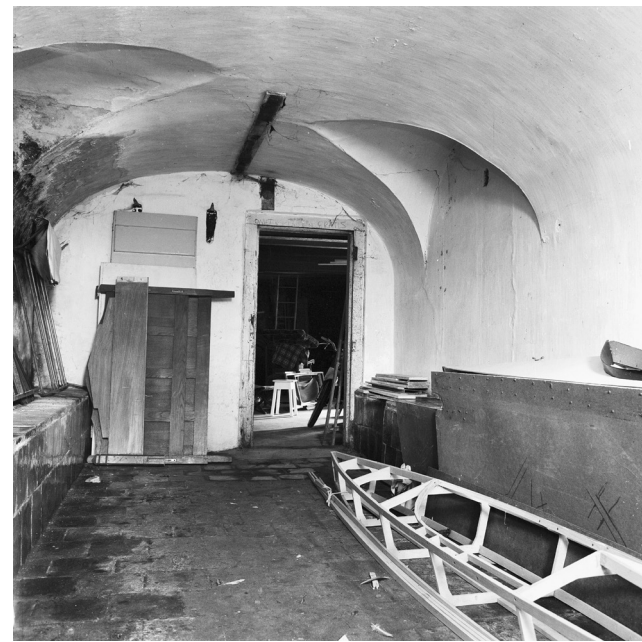
Figure 3.22 - The fireplace on the ground floor. From “Beeldbank Cultureel Erfgoed,” by De Boer, 1969 (https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/287a8f33-2e47-4ee7-935d-e1210d3404ad/media/bfd3d32d-de43-9874-b1ff-8fa56f3d8be1?mode=detail&view=horizontal&q=molenstraat%20230&rows=1&page=8&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc).

Figure 3.23 - Stucco on the ceiling. From “Beeldbank Cultureel Erfgoed,” by De Boer, 1969 (https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/a67e2a08-41d7-e19d-5523-978c895b01ba/media/882cbfba-a507-e899-4c4d-1ed168fe3657?mode=detail&view=horizontal&q=molenstraat%20230&rows=1&page=3&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc&filterAction).

Figure 3.24 - The southern basement in 1969. From “Beeldbank Cultureel Erfgoed,” by De Boer, 1969 (https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/faba693d-ffdc-014e-b06a-25ddb8bd3eee/media/f5945ee5-8c8a-aa04-5714-03707148b495?mode=detail&view=horizontal&q=molenstraat%20230&rows=1&page=7&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc).

Figure 3.25 - The northern basement in 1969. From “Beeldbank Cultureel Erfgoed,” by De Boer, 1969 (https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/346ac505-d647-6122-9068-394477cf6619/media/d5bc7134-7b31-0925-9b5e-960591c4ed9c?mode=detail&view=horizontal&q=molenstraat%20230&rows=1&page=5&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc&filterAction).

Figure 3.26 - The northern basement, looking to the western facade in 1969. From “Beeldbank Cultureel Erfgoed,” by De Boer, 1969 (https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/5564d1af-afa7-d6bb-2ba7-04deb414f268/media/8fbafab0-88b2-1b6e-6703-6526fe-92a00c?mode=detail&view=horizontal&q=molenstraat%20230&rows=1&page=6&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc&filterAction).



3.2 Current situation and value assessment

The current situation of the boardhouse of the Nederwaard is shown in Figures 3.27 up until 3.35. During the site visit, only the lower level and the terrain around the boardhouse could be visited. Van Reenen's (2023) report on the building's history and the drawings by Lakerveld Ingenieurs & Architecten (2023) were therefore used to complete the description of the current situation and my value assessment.

As seen from the dike, the boardhouse looks quite original. The volume of the main building is still the same as after the first extension at the end of the 18th century. However, some adjustments have been made. For example, the shutters are not original and not functional; the attached terrace blocks sunlight from the bottom floor; and the roof has been completely replaced. However, as seen from the dike, the roof with its dormer windows, chimneys, and the bell looks original. The same applies to the eastern and western facades. Few adjustments have been made here. The southern side of the building and terrain, on the other hand, is a mess. The extensions from different years do not match each other architecturally. Moreover, the escape stairs in combination with the different heights of the extensions create a messy appearance. The terrain is mainly covered with asphalt, due to its function as a parking lot. Only the southern part, along the high reservoir, is green.

The interior of the ground floor is fairly dark due to the low floor height and the terrace blocking light. In addition, the many partition walls create an unclear floor plan, making it difficult to read the original layout. Luckily, the original fireplace is still present. Because the southern 1906 extension only has one small window, it is very dark there. The first floor, on dike level, is almost completely original. However, the floorboards, wall panelling,

and two partition walls in the entrance hall are not original. Unfortunately, the plasterwork on the ceiling of the entrance hall is interrupted by the partition walls. The most representative rooms can be found on this dike level, especially the meeting room in the west. Here stands a mantelpiece from the first half of the 20th century, which replaced the aforementioned mantelpiece with the coats of arms of the Hoogheemraaden on it. The attic is used and furnished as an apartment. Although the dormer windows at the front contribute to the 'original' appearance of the boardhouse, the dormer windows and skylights on the south side detract from this appearance. Because the dormer windows are not evenly distributed over the roof surface and skylights do not fit in an old roof anyway, the southern facade has become even messier.

The most valuable of the boardhouse are all the facades, window frames, and other elements that remained from the first construction phases. This includes the beams on both floors and the stucco ceiling on the first floor. The roof of the boardhouse and the dormer windows at the front are valuable as volumes. The bell on the roof is valuable too. But the dormer windows and skylights at the rear are not valuable. Inside, the wall panelling and partition walls are not valuable. Furthermore, the extension and escape stairs are not valuable and even negatively affect the boardhouse's legibility. On the other hand, the volumes of the sunroom and the shed from 1906 are valuable because they indirectly refer to the old shed that was demolished in 1906. The materials of the sunroom and shed themselves, apart from the original trusses of the shed, are not valuable. The other buildings on the rear property, besides the necessary gas regulator station and the pumping station, are of no value. The use of the rear area as a car park also detracts from the boardhouse.

3.3 Redesign of Gemeenlandshuis Nederwaard

The redesign of the boardhouse focusses on two points. First of all, the legibility of the building volume and floor plan of the boardhouse will be increased. Secondly, the boardhouse will be prepared for future use.

The legibility of the building will be increased on the outside and on the inside. On the outside, all the extensions to the building will be demolished. The 1906 shed will be disconnected from the boardhouse and the other sheds will be demolished. The sunroom will be demolished as well because it is an improperly designed replica of the original sunroom. In its materiality and composition it is not true to the original version. Instead, another sunroom will be designed. This new timber sunroom respects the irregular composition and the arch motifs of the original facades. But large windows and an enclosed ground floor reveal that it is a modern version of the sunroom. It will be painted in the same colours as the painted wood of the boardhouse: white and dark green. This connects the two volumes.

The legibility of the boardhouse will also be improved inside. On the lower level, the partition walls will be removed, so that the two basements can be recognised as such. On dike level, the legibility will be increased by removing the partition walls in the entrance hall. This also gives the opportunity to restore the damaged stucco ceiling.

This entrance hall will be the entrance to the bakery shop and lunchroom that will move from within the village to the boardhouse, as per the master plan design. The bakery shop will be located on the eastern side of the first floor of the boardhouse. Here there will also be seats for a quick eating session. In the adjacent new sunroom, there will be tables for longer eating sessions. The sunroom is

dimensioned for this new function. On the western side of the first floor of the boardhouse, the former meeting room will be turned into a meeting room once again. This makes that the people meeting there can be served coffee, tea, pastry, and lunch by the bakery shop. Another meeting room will be placed in the attic, which can be reached via a new, more luxurious staircase. The western side of the attic will be used for storage and as a private room for the bakery workers.

The meeting and dining functions relate to the first use of the building. The board members met and dined together in the boardhouse. In addition, the lock keeper, and occasionally the board members as well, spent the night in the boardhouse. This will happen again on the lower level. The lower level will be turned into an apartment, which can either be used by the owner of the plot or be rented out. Other accommodation facilities will be placed in new buildings behind the boardhouse, which will be elaborated upon in the next paragraph. Similar to the people meeting in the boardhouse, the tourists who stay in the B&B facilities will use the bakery spaces to have their breakfast there. These combined functions save space and generate more income for the owner of the plot.

The apartment on the lower level of the boardhouse will be insulated well to provide a thermally and acoustically comfortable climate. On the contrary, the boardhouse will not be insulated on dike level for two reasons. Firstly, the functions do not require it and secondly, the insulation and finishing will reduce the historical awareness of the visitors. It is a space that many people will visit, and therefore it is not purely a bakery or meeting place, but also a kind of living exhibition space.

- Figure 3.27** - The northern facade in 2024
- Figure 3.28** - The northern and eastern facade with terrace in 2024
- Figure 3.29** - The sunroom connected to the southern facade of the boardhouse in 2024
- Figure 3.30** - The southern facade in 2024
- Figure 3.31** - The western facade in 2024
- Figure 3.32** - The fire escapes in 2024
- Figure 3.33** - The eastern part of the lower level in 2024
- Figure 3.34** - The northern basement in 2024
- Figure 3.35** - The 1906 hallway in 2024



3.4 Design for new barns and garden

As briefly mentioned earlier, on the back plot of the boardhouse, B&B accommodations will be built. Their volumes embrace the space that was left behind by the demolition of the original carriage house in 1906. The courtyard that will be formed by this gesture will be turned into an orchard. There are two arguments that support this choice. First of all, at the back of the boardhouse there used to be an orchard around 1832.¹ Secondly, the fruits from the future orchard can be used by the bakery shop in their pastries or breakfasts. This ties in well with the theme that the quality tourists will come to Kinderdijk for: working with local natural elements. The orchard continues behind the accommodations. Here, the spacious garden opens up to the water, providing views of the water and mills.

The mills can also be seen from within the aforementioned lunchroom in the sunroom. This is made possible by limiting the height of the B&B accommodations. They will be one level high and have a barn-like appearance. This fits with the existing 1906 barn and also shows its secondary importance compared to the more important boardhouse volume. The B&B buildings will adhere to the basic architectural principles of barns, like a gable roof and timber cladding. But they will be modern versions of barns. This is done by keeping the volumes simple, without canopies and with hidden gutters. Furthermore, both the roofs and facades of the barns will be clad with red cedar shingles. Shingle-shaped PV panels are integrated

¹ Van Dooren, n.d. (a); Van Dooren, n.d. (b)

into the roof panes. The simple volumes that remain, provide more tranquillity and accentuate the shape of the courtyard.

The barn's appearance also fits within the theme of nature-friendly design. Since the new barns will be located on the fringe of a Natura 2000 area, it makes sense to make them very nature-friendly. Insect hotels and birdhouses will stick out the facades to increase the tourists' awareness of the nature around them. The birdhouses replace the usual gable posts on barns and have a modern look that matches the design of the barns. The size of the birdhouse is large enough to house different bird species that live in Kinderdijk: the blackbird, lesser spotted woodpecker, house sparrow, starling, finch, great tit, blue tit, tree creeper.² Not all birds use birdhouses, however. Wrens and other bird species prefer bushes and hedges.³ These are present around the trees in the garden closest to the high reservoir.

The plants that will be planted around the trees in the orchard attract insects and birds. Sunflowers, roses, lavender, and marigolds attract bees and butterflies.⁴ Birds will be attracted to blackcurrant, Pennisetum alopecuroides, Sambucus, Rubus, dill, hawthorn, and redcurrant.⁵ In and around the garden will be paths of reddish brick pavers in waal size. These paths provide access to the B&B accommodations and the lower-level apartment in the boardhouse.

² Waarneming.nl, 2024

³ Vogelbescherming, n.d.

⁴ Mecklenfeld, 2018

⁵ Mecklenfeld, 2017

The natural feeling of the B&B barns continues inside the accommodations. The walls will be finished with loam stucco. The texture of this material has an earthy feel to it, which is strengthened by the light brownish colour that I give it. Moreover, the advantage of loam stucco is that it buffers heat and moisture. Together with the biobased insulation and absence of a damp-proof membrane, the loam stucco makes the building a 'damp open' building. This saves energy consumption. These materials not only result in less of a burden on the environment but also improve the indoor climate of the building.⁶

A thick package of biobased insulation, mechanical ventilation, PV panels, smart use of sunlight, and careful detailing make the B&B accommodations very sustainable. They will generate electricity for the whole boardhouse complex. Even the 1906 shed will be turned into a modern sustainable B&B accommodation. To prevent thermal bridges and make this shed energy-positive too, the current brick walls will be replaced by insulated timber frame walls. To connect to the new barns, red cedar shingles will also be used as cladding here. The rafters of the 1906 shed will be reused, which will cause this shed to have a slightly different shape and height, indicating its different history and functioning as a transition between the high boardhouse and the lower B&B barns.

To conclude, the boardhouse and barns will house the functions that the boardhouse used to house in the past: meeting, eating, and sleeping. The volumes embrace the outline of the former carriage house at the rear of the boardhouse. The ensemble celebrates

its location at the fringe of the natural area and builds upon this from the outside to the inside.

⁶ Aveco de Bondt, n.d.

Chapter 4

Pot Barn

4.1 History of the Pot Barn

During the Eighty Year's War for Dutch independence, a sponce was constructed at 't Elshout, the former name of Kinderdijk. This protective fortification was constructed by the Dutch in 1572, taken over by the Spanish in 1575 and finally taken over by the Dutch again in 1576.¹ Probably, it was at that location that Jan Blaseris, Jan Bleijssen, or Jan Blasius (1618-1670) started the first shipyard in 't Elshout.² The shipyard was taken over by his sons and grandson by marriage, after which the shipyard was sold to Joost Pot Janz. in 1753.³ He was a son of the first known shipbuilder in Papendrecht, worked as a carpenter at the shipyard of Blasius, and was the lock keeper of the sluices in 't Elshout.⁴

The next generations of the Pot family took over the shipyard: Ary (1731-1821), Joost (1754-1796), and Jan (1789-1856). The brother of Jan (1789-1856), Bastiaan (1787-1850), started a new shipyard together with his sons in 1839. It was located next to the shipyard of his brother Jan.⁵ The 'new wharf' would later be called Gebrs. B. Pot, when it was owned by two sons of Bastiaan: Joost (1810-1879) and Adriaan (1811-1868).⁶ In addition to ships, iron mill rods and iron masts for ships were also made on the new wharf.⁷ The owner of the 'old wharf', Jan

(1789-1856), had no grandchildren.⁸ This meant that one of the sons of Jan, Leendert (1834-1914), was the last owner of the 'old wharf'. Part of his inheritance, real estate, and money, went to the local church to construct a new church building in 't Elshout.⁹ More importantly for the shipyard, his house and shipyard with associated grounds were inherited by his second cousins Bastiaan and Cornelis Pot.¹⁰ Probably, they were descendants of Bastiaan Pot (1787-1850), and now owned both the old and new wharf.¹¹

In these early days, some remarkable things have happened on the outer dike grounds of the Pot family, also called 'het Joosteveldje', after one of the first owners.¹² The first newspaper articles about Pot advertised second-hand ships, which were stored at the Pot shipyard.¹³ Later, the ships built at the Pot shipyard were advertised.¹⁴ Next to advertisements, accidents on the shipyard were also reported. A piece of wood drifted away from the shipyard in 1852.¹⁵ In 1864, a fire on the shipyard destroyed a large barn and stored timber.¹⁶ An uprooted tree

1 Nederlof, A., 1985, p. 5; Hartog, F., n.d.

2 "Jan Bleijssen", 1985

3 Van Blokland, 2011-a

4 Van Blokland, 2011-b; Van Blokland, 2011-a

5 Van Blokland, 2011-a

6 Pot et al., 1869.

7 Van Blokland, 2011-a

8 Nederlof, A. 1981, p. 2

9 "Nieuw-Lekkerland, 6 Juni", 1914

10 Nederlof, 2007

11 A full genealogy of the Pot family can be found online on Scheepsbouw Alblasserdam, 2019.

12 Nederlof, A., 1981, p. 1

13 "Een aardappelschuit", 1807; "Een welbevaren gaffelship", 1807; "Een damschuit", 1810.

14 "Aanstaanden Woensdag", 1841; "Zaturdag namiddag", 1842

15 "Weggedreven", 1852

16 "Te Elshout", 1864

caused damage and blocked the road in 1901.¹⁷ However, most articles were about the launches of ships. Until 1920, barques, luggers, schooners, and lighters were built at the shipyards of Pot.¹⁸ Around 1920, the last ship was built.¹⁹ From then on, the main focus was on the production of iron and steel rods for windmill blades.

Adriaan Pot (1811-1868) had thought of a new way of constructing rods. Instead of timber rods, he made them of iron plates, which were riveted together to form a box profile. These were lighter and cheaper, needed less maintenance, and were almost visually indistinguishable from the timber rods.²⁰ Moreover, the steel rods made the mill run faster because they were stiffer.²¹ The production of the iron rods started in 1852 when King Willem III granted Pot a patent for ten years.²² The proximity of the many windmills in the Kinderdijk area and the different functions that members of the Pot family fulfilled in the waterboard of the Nederwaard helped start the business of the mill rods.²³ Besides their relations, the quality of the rods that Pot produced was so high that they were even used by millers abroad.²⁴ Even now, they are still used in mills.²⁵ When the thousandth iron rod was manufactured in 1876, all workmen and their wives were invited on a trip

17 "Storm", 1901

18 A non-complete list of ships built at the Pot shipyards can be found online on Scheepsbouw Alblasserdam, 2010 and Scheepsbouw Alblasserdam, n.d.

19 Visser, 1993, p. 64

20 Visser, 1993, p. 63

21 Keunen, 1988

22 Visser, 1993, p. 64

23 Visser, 1993, p. 62, 64

24 Keunen, 1988

25 Cabauwse molen, n.d.

to Rotterdam by steamboat. Here they visited the Maritime Museum, the Park and the Zoo, after which they dined in a hotel. Furthermore, the workers received a monetary reward.²⁶ Around 1900, Pot had around ninety employees.²⁷ Imagine how much this festivity would have cost.

According to Visser (1993, p. 63), over 2800 iron and steel rods have been manufactured by Pot. The last rod was produced in 1944. Around this time, welding would replace riveting. Moreover, there was no successor of Joost Pot, the last owner of the business. According to De Hollandsche Molen (1952, p. 74), the archives with moulds and instructions were stolen by the Germans. But the Pot rods that had already been manufactured served as an example for a factory in Hoogezand to start producing rods there, shortly after the Pot company stopped.

The terrain and barns in Kinderdijk were taken over by carpenters Gerrit (1912-1989) and Mattheus (1914-1953) van der Perk.²⁸ Probably their father Jan van der Perk (1881-1942) was already located on the terrain.²⁹ They worked, among others, on the sluices and mills in Kinderdijk.³⁰

Later, in 1950, they sold the terrain and barns to the contractors Bastiaan (1898-1966) and Willem (1914-1967) de Jager. Around 1965 they sold the business to their accountant Jan Kloet, who owned the barn for approximately one year.³¹

26 "Bij gelegenheid", 1876

27 Nederlof, 2007

28 Deelen et al., 2002, p. 348

29 Schep, 1982, p. 38

30 Deelen et al., 2002, p. 348

31 Deelen et al., 2002, p. 348

Around 1967, the contractor company Stam, owned by Leendert and his son Willem Johannes Stam, moved to the 'Joosteveldje'.³² Probably, they rented it from the shipyard IHC.³³ In 1988, Stam went bankrupt.³⁴

In 2017, the terrain and the only remaining barn were taken over by Stichting Werelderfgoed Kinderdijk (SWEK; Kinderdijk World Heritage Foundation) from the De Jooden family.³⁵

A list of owners of the terrain is provided here:

“Old Warf”

16xx - 1670: Jan Blasius
1670 - 1692: Neeltje Gerrits, widow of Jan Blasius
1692 - 1720: Arie Blasius Janz.
1720 - 17xx: Cornelis Blasius Janz.
17xx - 1753: Johannes Schop Philipz., son in law of Cornelis Blasius
1753 - 1770: Joost Pot Janz.
1770 - 1821: Ary Pot Joostz.
1780 - 1796: Joost Pot Aryz.
1821 - 1856: Jan Pot Joostz.
1856 - 1914: Probably children of Jan Pot; final owner Leendert Pot Janz.

“New Warf”

1839 - 1850: Bastiaan Pot Joostz.
1850 - 1868: Adriaan Pot Bastiaanz.
1850 - 1879: Joost Pot Bastiaanz.
1868 - 1xxx: Cornelia Smit, widow of Adriaan Pot

³² Deelen et al., 2002, p. 352

³³ Deelen et al., 2002, p. 348

³⁴ Veldhuijzen, 1988

³⁵ J.-W. de Winter, personal communication, March 5, 2024

Bastiaanz.

1868 - 1xxx: Adrianus Pot
1xxx-1xxx: Potentially other Pot family members
1xxx - 1944: Joost Pot
1944 - 1950: Gerrit & Mattheus van der Perk
1950 - 19xx: Willem de Jager
1950 - 1965: Bastiaan de Jager
1965 - 1966: Jan Kloet
1967 - 1974³⁶: Leendert Stam
1967 - 1988: Willem Johannes Stam
xxxx - 2017: De Jooden family
2017 - 2024: Stichting Werelderfgoed Kinderdijk

Over time, multiple buildings have stood on the outer dike plot of the shipyard. On an 1833 map, several small buildings can be seen next to two inlets.³⁷ On the subsequent 1879 map, three large barns have been added, as illustrated in Figure 4.1.³⁸ Next to the barns, there was a hoisting device with which the mill rods were loaded onto ships to be transported to more distant mills throughout the Netherlands.³⁹ The other buildings on the plot functioned as office or houses.⁴⁰ It is known that Jan Pot (1789-1856) lived in one of the houses on the outer dike plot with his family.⁴¹ Other people also lived on the outer dike plot.⁴²

To the west of the barns, there was a balkengat, which extended to the dike. In such water inlets,

³⁶ Probably, Stam rented the plot from the IHC shipyard (Deelen et al., 2002, p. 348).

³⁷ Departement van Oorlog, 1833

³⁸ Topographische inrigting, 1879

³⁹ Schep, 1982, p. 49

⁴⁰ Deelen et al., 2002, p. 328

⁴¹ Nederlof, 1981, p. 2

⁴² Schep, 1982, p. 61

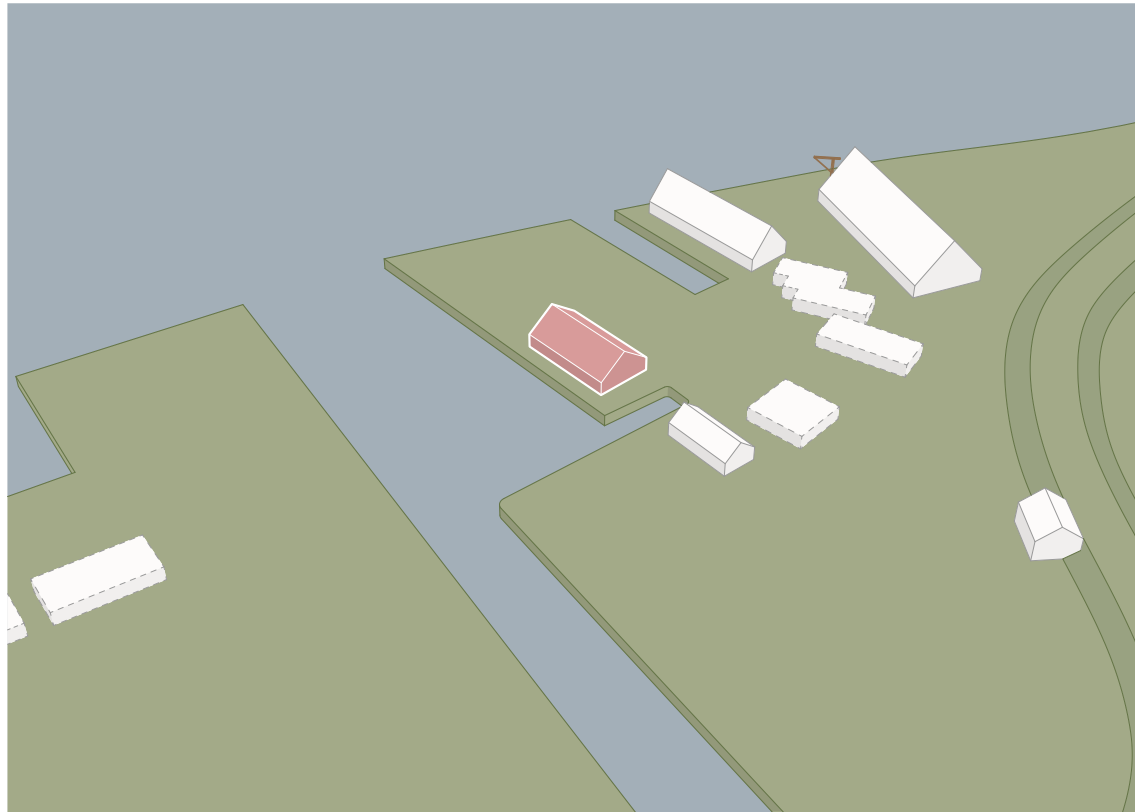


Figure 4.1 - Site in 1879

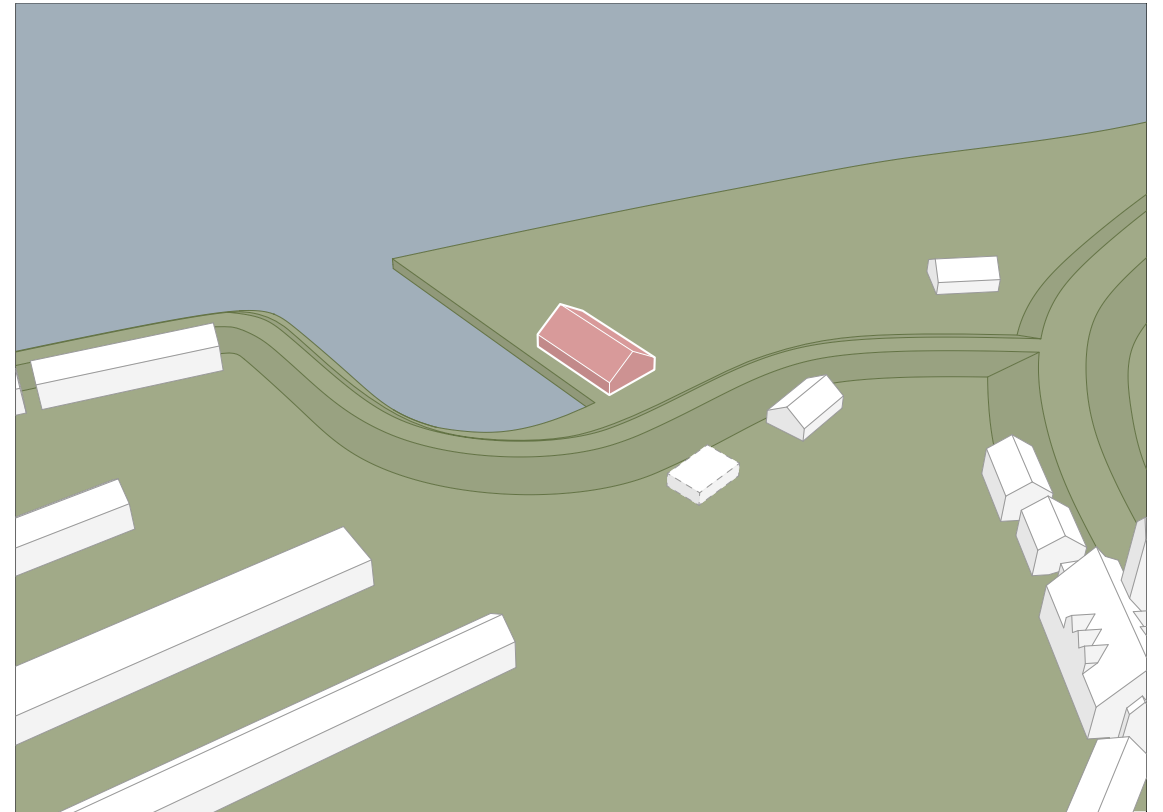


Figure 4.2 - Site in 1958

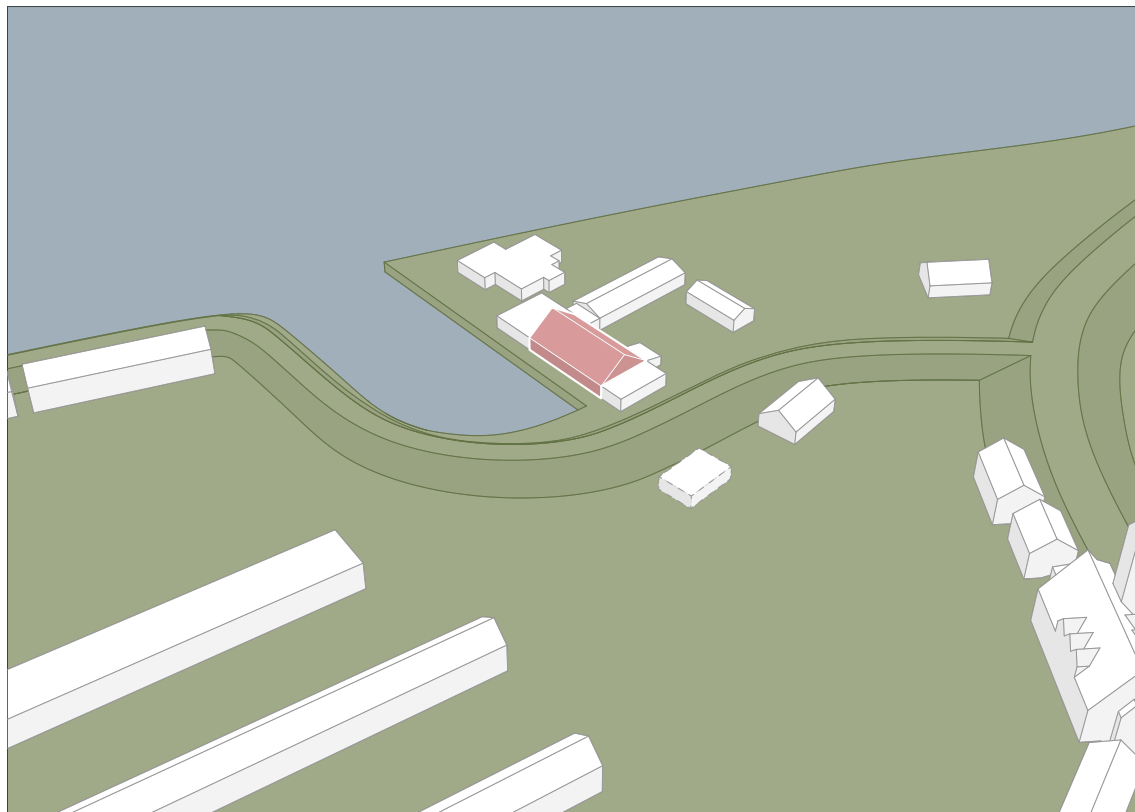


Figure 4.3 - Site in 1968

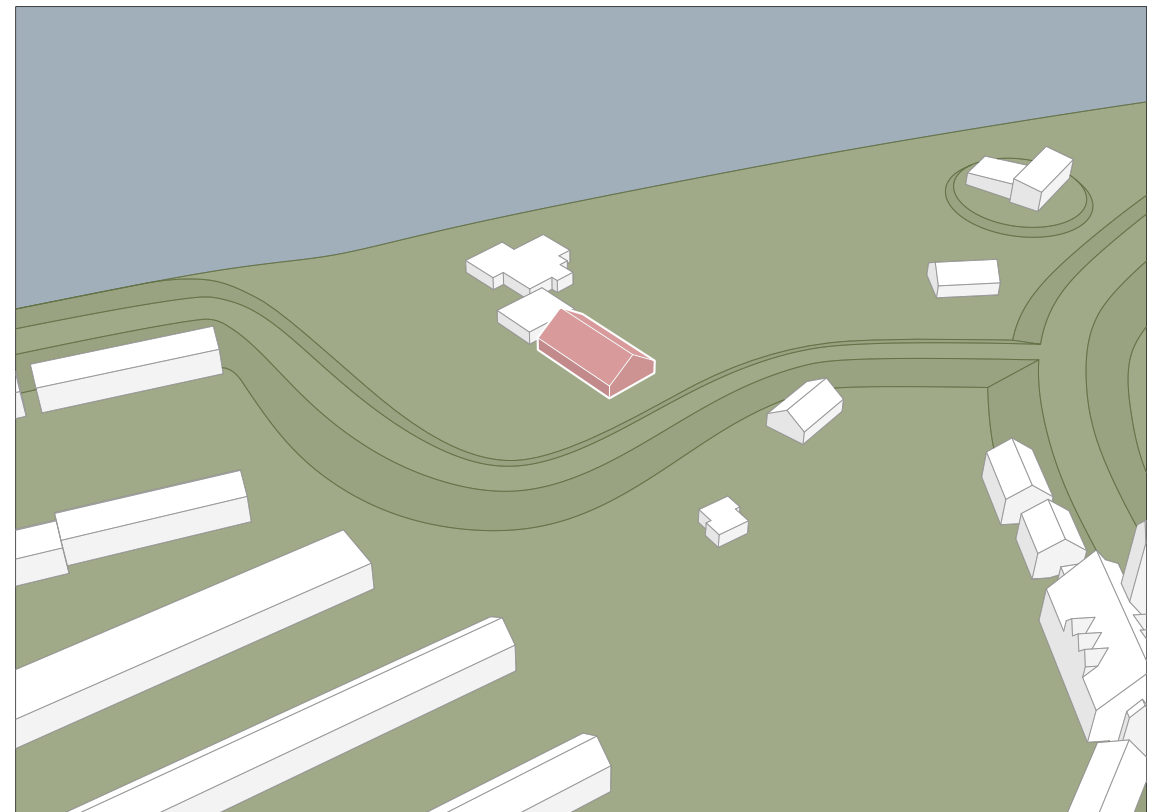


Figure 4.4 - Site in 2024

wood was stored to make it more durable. The arrangement with three barns and a balkengat remained till at least 1940. By 1958 two of the three timber barns had been removed and the balkengat had partially been filled in.⁴³ The filled-in part of the balkengat had been turned into a playground in 1949.⁴⁴ Financial and material support for the playground was offered by the two Smit shipyards in Kinderdijk. In contrast to Pot, the Smit shipyards continued to operate after the Second World War. The current IHC shipyard resulted from the Smit shipyards. The growth and modernisation have led to the demolition of the old timber barns of this shipyard. Because Pot did not develop into a modern shipyard, one of the timber barns is still there. Around 1968, new buildings were connected and placed next to the remaining timber barn.⁴⁵ Currently, these additions have been removed, and a house with a shed stands next to the barn.

The only remaining timber barn of the shipyard was probably built between 1833 and 1879. Two reasons support this hypothesis. Firstly, on the 1833 map, there is no building volume at the current location of the barn. On the 1879 map, a building volume appears at this location. Secondly, the timber load-bearing structure of the barn consists of Philibert trusses. These were mainly used in the mid-19th century.⁴⁶

The original appearance of the barn is uncertain since original drawings of the barn could not be found in the archives. However, there are archival

photographs of the barn, often undated. Although they do not show the original state of the barn, they do show what the barn has looked like at a certain moment back in time. The photographs mostly show the western facade. However, all facades have been photographed in the past, be it partially or in low quality, see Figures 4.5 up until 4.17. All facades seem to have consisted of horizontally oriented rebated planks. The photographs show five regularly positioned windows with twenty-five windowpanes each in both longitudinal facades. In the northern and southern facade, there were probably two windows on the ground floor and two on the first floor. In the northern facade, the windows consisted of sixteen windowpanes, while in the southern facade, both sixteen and twenty-five-pane windows were applied. The original placement of the door(s) is uncertain, but based on the historical pictures and comparison to other barns they probably were placed in the northern and/or southern facade. Also, shutters through which the first floor could be accessed have likely been present in the northern and/or southern facade. Finally, the decorated gable posts on the southern facade stand out. Not only were they used at the top of the bargeboards, but also along the bargeboards. It is uncertain whether they were there from the beginning or were added later as decoration.

Photographs and a painting of the other barns and an advertisement for the Pot millrods are shown in Figure 4.18 up until 4.22.

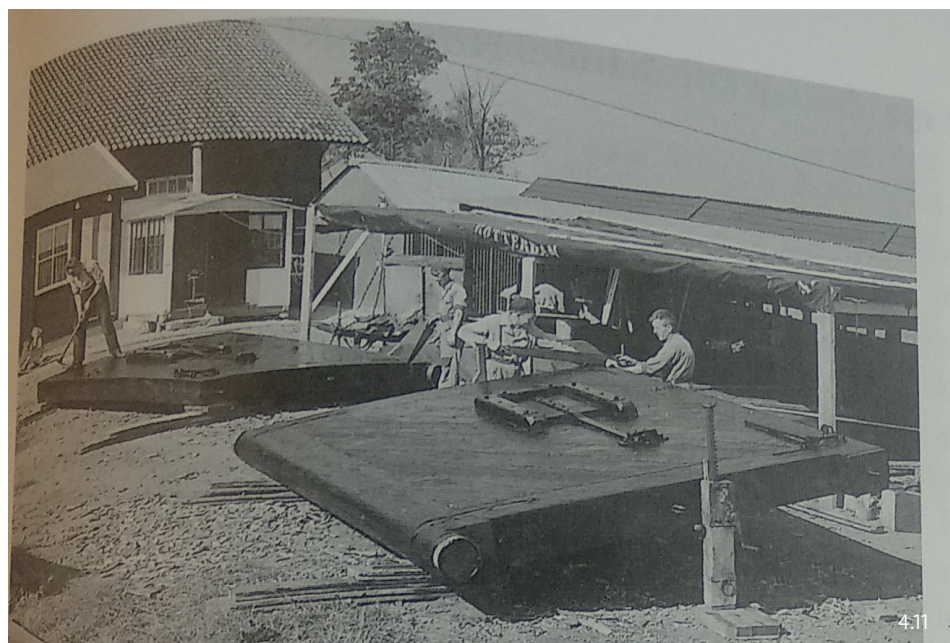
43 Topotijdreis, n.d.

44 “Nieuwe speeltuin”, 1949

45 Stam & Zoon, 1967

46 Janse, 1989, pp. 308-314

- Figure 4.5** - The site with the three barns seen from the northwest in 1931. The barn nearest to the photographer is the only remaining barn. From “Stichting Werelderfgoed Kinderdijk,” by KLM Aerocarto, 1931. Personal communication, September 20, 2023.
- Figure 4.6** - The site with the three Pot barns seen from the river Lek. The roof and part of the northern facade of the remaining barn can be seen behind the bushes. From “Fotobasebank,” owned by Stichting Cultuurbezit Familie Smit, n.d. (<https://www.fotobasebank.nl/public/zoeken.php> number A1150).
- Figure 4.7** - The two other Pot barns are clearly visible. The roof and part of the northern facade of the smallest barn can be seen behind the bushes. From “Fotobasebank,” owned by Stichting Cultuurbezit Familie Smit, n.d. (<https://www.fotobasebank.nl/public/zoeken.php> number A1148).
- Figure 4.8** - Another picture of the site seen from the river Lek. The roof of the smallest barn can be seen behind the bushes. From “Fotobasebank,” owned by Stichting Cultuurbezit Familie Smit, n.d. (<https://www.fotobasebank.nl/public/zoeken.php> number A1151).
- Figure 4.9** - The northern and eastern facade of the barn in Kinderdijk as seen from the river Lek. From “Fotobasebank,” owned by Stichting Cultuurbezit Familie Smit, n.d. (<https://www.fotobasebank.nl/public/zoeken.php> number A1154).
- Figure 4.10** - Another picture of the northern and eastern facade of the barn in Kinderdijk as seen from the river Lek. From “Fotobasebank,” owned by Stichting Cultuurbezit Familie Smit, n.d. (<https://www.fotobasebank.nl/public/zoeken.php> number A1147).
- Figure 4.11** - Part of the eastern facade of the barn. In the foreground, Theo and Gerrit van der Perk are repairing the sluiceways. From *Nieuw-Lekkerlandse winkels en bedrijven in vroeger jaren* (p. 349), by Deelen et al., 2002, Stichting Publicaties West-Alblasserwaard.
- Figure 4.12** - The site viewed from the west. From “Fotobasebank,” owned by Historische Vereniging West-Alblasserwaard, n.d. (<https://www.fotobasebank.nl/public/zoeken.php> number A0078).
- Figure 4.13** - The western facade of the remaining barn can be seen in the background. From “Fotobasebank,” owned by Historische Vereniging West-Alblasserwaard, n.d. (<https://www.fotobasebank.nl/public/zoeken.php> number A0064).



- Figure 4.14** - The remaining Pot barn seen from the northwest. From “Fotobasebank,” owned by Stichting Cultuurbezit Familie Smit, 1905 (<https://www.fotobasebank.nl/public/zoeken.php> number A1102).
- Figure 4.15** - The site, in the background, viewed from the west. The two other barns have been demolished. From “Fotobasebank,” owned by Historische Vereniging West-Alblasserwaard, n.d. (<https://www.fotobasebank.nl/public/zoeken.php> number A0200).
- Figure 4.16** - The western facade of the barn in the 1980s. From “Regionaal Archief Dordrecht,” n.d. (<https://beeldbank.regionaalarchiefdordrecht.nl/search/detail/id/2490116CB68C11EC99B7FA163E9D8C4E/showbrowse>).
- Figure 4.17** - Part of the southern facade of the barn in Kinderdijk can be seen in the background. From *Tussen Lek en Boezem* (p. 61), by T. J. Schep, 1982, De Klaroen.
- Figure 4.18** - The northern facade of one of the other two barns. In the background, the boardhouse of the Overwaard can be seen. From “Beeldbank Cultureel Erfgoed,” owned by Rijksdienst voor het Cultureel Erfgoed, 1900 (https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/372d36c8-258f-63aa-48b8-4482e4ba2042/media/c8c9c154-3566-425c-0943-9004bed56427?mode=detail&view=horizontal&q=kinderdijk&rows=1&page=410&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc&filterAction).
- Figure 4.19** - On the left, one of the Pot barns and a hoisting device are visible. From “Fotobasebank,” owned by Stichting Cultuurbezit Familie Smit, n.d. (<https://www.fotobasebank.nl/public/zoeken.php> number A1172).
- Figure 4.20** - The middle of the three barns and a hoisting device in the background. From “Fotobasebank,” owned by Historische Vereniging West-Alblasserwaard, n.d. (<https://www.fotobasebank.nl/public/zoeken.php> number A0236).
- Figure 4.21** - A painting of the Pot shipyard as seen from the sluices of ‘t Elshout in the 19th century. From “*Haarlems Dagblad*,” by J. Weissenbruch, n.d. (https://www.haarlemsdagblad.nl/cnt/dmf20181019_26464770?utm_source=google&utm_medium=organic).
- Figure 4.22** - An advertisement for the iron mill rods. From “Regionaal Archief Dordrecht,” by De Dordrechtsche Courant, 1863 August 27 (https://www.regionaalarchiefdordrecht.nl/proxy/archief/?mivast=46&mizig=91&miadt=46&miaet=14&micode=DC_1863&minr=7610715&milang=nl&-misort=dt%7Casc&mizk_alle=molenroeden&miview=ocr).



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IJZEREN MOLENROEDEN.
 De Ondergeteekenden maken bekend, dat bij hen gemaakt worden **MOLENROEDEN** van **Plaatijzer**, in denzelfden vorm als de Houten Roeden, welke zij drie jaren voor hunne rekening nemen. De prijs van ééne Roede lang 80 Amst. voeten is **f 350**; ieder voet wat dezelve langer wordt **f 10** meer tot en met de 89 voet; van 90 voet lengte iederen voet **f 15** meer.
 Ook zijn zij bereid de adressen op te geven van meer dan 20 Polderbesturen, alwaar men de noodige informatie's kan bekomen of dezelve voldoen.
GEBR. B. POT,
Elshout b/d. Kinderdijk.
Zie Nieuwe Rott. Cour. v. 28 Mei 1863.

4.22

4.2 Current situation and value assessment

Currently, the barn is in use by SWEK as a workshop and storage space. Photographs of the current situation of the barn are shown in Figures 4.23 up until 4.31. Only the ground floor is in use since the floorboards of the first floor are rotten. The bottom parts of the columns are also rotten. Their direct contact with the soil causes the timber to suck up water, letting the rot develop. Another reason for the brown and white rot to be present is the irregular settlement of the timber trusses. This has caused gaps to form between the roof tiles. The water that went through these gaps has caused considerable damage. Furthermore, the 1986 additions to the barn have left traces in the facades. The original rebated planks are often missing, objects have been added to the facades, and the composition of the facades has changed. Inside the barn, internal walls of Oriented Strand Board have been placed to create multiple spaces. There is one large space with machinery and another large space for storage. Moreover, there is a small kitchen and a toilet. The ground floor is tiled with standard 30x30 cm concrete tiles. Together with the internal walls, the concrete tiles diminish the historical awareness that should be present in the barn.

There still are, however, valuable features of the Pot barn. Highly valuable are the Philibert trusses. They consist of bent timber and have only been applied in a short period, as explained earlier. The Philibert trusses support the gable roof which is mostly covered with red Dutch pantiles ('Oude Hollandse pan' in Dutch). They probably are the original roof tiles, are

highly valuable and should be kept. Underneath the roof tiles is a layer of reed, which can be seen from inside the barn. This is also a highly valuable feature of the roof structure. The non-original facades and sliding doors do tell something about the historical practical approach to the barn. They are therefore considered valuable, which does not mean that all facades need to be kept as they are. The ogees at the sides of the southern and northern facade, just underneath the roof, are also valuable. Although it is not certain that they have been there from the beginning, they have been found in other barns in the area as well. Moreover, the size of the barn is valuable. Most other pre-1914 timber barns in the Waterdriehoek area are not as large as the remaining Pot barn. Finally, the fact that the barn is still there is highly valuable. My research has pointed out that this probably is the only remaining pre-industrial timber barn in the Waterdriehoek with an industrial function. It also reminds of the pre-industrial shipyards that were founded in the area because of the good accessibility by water. From a heritage perspective, we are lucky that the Pot shipyard did not grow into a modern shipyard. Probably that would have led to the demolition of the barn, just like it happened at the Smit shipyard on the other side of Kinderdijk.

4.3 Redesign of the Pot Barn

My research has let me realise that the Pot barn is unique. It probably is the only pre-industrial barn with industrial function in the Waterdriehoek that is left. Therefore, my approach to the barn is rather conservative. The age of the barn should be shown. That is the starting point for the redesign. However, the technical state of the barn demands a reconstruction of the barn.¹ This provides the opportunity to change the current structure, facades, and overall experience of the barn. The original facades and atmosphere can be recreated while adding details that tell the story of the barn.

In the new masterplan, the barn is situated next to a new forest that is based on the forest that used to be on the outer dike grounds of Kinderdijk up until the 18th century. The new function of the Pot barn relates to both this forest and to the former woodworking at the shipyard. The Pot barn will namely function as a workshop for a woodworker. The woodworker will organise workshops about manual woodworking. Locals and tourists who stay in the area for a longer period can follow workshops here. The woodworker can make art pieces to sell by himself, but he or she can also make wooden souvenirs to be sold in the Kinderdijk souvenir shops.

The new function allows the barn to stay a barn. No thick pieces of insulation or airtight connections are

needed for the new function. Also, no big machinery is needed for manual woodworking. This aids in showing the age and nature of the barn. The fact that I keep the roof wavy also helps in showing the age of the barn. Already from afar, one will see the wavy roof. The roof will not be covered with PV panels for two reasons. Firstly, the panels would hide the Dutch pantiles, which I value highly. Secondly, the PV panels diminish the age value of the barn. Instead, PV panels will be placed on a new canopy to be built. This canopy will function as a place for timber storage for the woodworker. The wood from the adjacent forest can be stored underneath this canopy. Furthermore, in the new masterplan, the barn is placed at the same level as the dike. This makes that the size and height of the barn are accentuated and experienced better than they are currently. It also protects the barn from future floods.

When approaching the barn, the facades come into play. Because parts of the facades are in poor condition they need to be replaced. This provides the chance to restore the beauty of the barn by bringing the facades back to their earliest known composition as shown in the archival pictures. Some use traces, like the vertically oriented planks in the southern facade and the large opening in the eastern facade will be kept. This will demonstrate the past practical approach to the barn. As a starting point, as much as possible of the original material should be reused, to keep the old identity of the barn. Both the old and newly added rebated planks

¹ A reconstruction involves returning the building to a known earlier state and introduces new material into the fabric (Australia ICOMOS International Council on Monuments and Sites, 2013)

- Figure 4.23** - The western and southern facade seen from the dike in 2023
- Figure 4.24** - The southern and eastern facade seen from the dike in 2023
- Figure 4.25** - Part of the southern facade, with ogee, and the eastern facade in 2023
- Figure 4.26** - The much-changed northern facade in 2023
- Figure 4.27** - The Philibert trusses and reed underneath the pantiles. By L. de Keijzer, 2023.
- Figure 4.28** - Close-up of a Philibert truss in 2023
- Figure 4.29** - Internal OSB walls and windows have been placed between the columns
- Figure 4.30** - Gaps in the roof, rotting floorboards, and a jack post which supports the beam that misses a diagonal strut in 2023
- Figure 4.31** - A rotting bottom of a column in 2024



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will be tarred with brown tar to fit with each other and to be protected against the elements. There will also be some modern changes to the facades. For example, large windows will be placed in the northern facade. In this facade there probably was a large door that opened to the river. In the new design, the large opening shows the forest and the river, creating an artistic setting for the woodworker and workshop participants.

Most changes will happen inside the barn. Here, the unique characteristics of the Pot barn will be highlighted. The Philibert trusses and the reed underneath the Dutch pantiles will be shown by removing the southern part of the first floor. This creates a void that allows people to stand on the ground floor and see the height of the barn and the roof structure. Most floorboards are rotten and likely have to be replaced, so no original material that is in good condition will be removed by this intervention. The bottoms of the columns are also rotten. Timber on brick bases will replace the rotten parts. This prevents future rotting while retaining the original appearance of the timber structure. The elements that will be newly introduced into the barn will refer to the past activities on the site. For example, the raster pattern of the railing of the stairs that I introduce refer to mill blades, of which the rods were produced by Pot. For thermal comfort, a loam stove will be built. This stove can be heated with waste wood chips from the woodworker or wood from the forest. Loam stoves can be created in any shape, which allows to refer to the history of the site

with the shape of the stove. The shape is based on the sails of the ships that were made here. Another reference to the shipbuilding past will be made with the toilet. The toilet is needed in the redesign as a purely functional space. But the internal wall will be made of curved planks, like the walls of the timber ships that were made here. In the more recent past, the sluice gates were repaired on the Pot terrain by the contractors. That is why the doors in the eastern facade will look and open like sluice gates. The old atmosphere in the barn will be reintroduced by using brick flooring. In an old picture, the only picture from within one of the Pot barns, some kind of brick flooring can be seen in the barn.² The brick flooring will also be used in the direct surroundings of the barn, to create a transition from the modern to the past world.

To conclude, the reconstruction of the Pot barn will uncover the barn's story and beauty. It will stay an old barn and its unique characteristics will be highlighted. The facades will mainly be reconstructed, but some use traces will be kept. The new interventions tell the story of the Pot shipyard, mill rod factory, and contractors. This story will be told to the woodworking workshop participants.

2 Pouwels, 2010, p. 9

Literature

Aanstaanden Woensdag, den 5 dezer, des namiddags ten 4 ure, zal, bij gunstigen waterstand, van de werf van den scheepsbouwmeester B. Pot, in het Elshout, te water worden gelaten, het schip Johannes Marienes. (1841, May 4). *Dordrechtsche Courant*. https://www.regionaalarchiefdordrecht.nl/proxy/archief/?mivast=46&mizig=91&miadt=46&miaet=14&micode=DC_1841&minr=7596668&milang=nl&misort=dt%7Casc&mizk_alle=pot%2Belshout&miview=ocr

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Bij gelegenheid dat jl. Donderdag avond in de fabriek van de heeren gebrs. B. Pot, te Elshout a/d Kinderdijk, de duizendste ijzeren molenroede gereed gekomen was, werden alle werklieden, de gehuwden met hunne vrouwen, uitgenoodigd den volgenden dag de gasten van hunne patroons te zijn. (1876, October 7). *Nieuwe Gorinchemsche Courant*. https://studiezaal.regionaalarchiefgorinchem.nl/detail.php?nav_id=1-1&index=38&id=11720843

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Heeren Watergraven en Waterheemraden, mitsgaders hooge waardsliden van en Nederwaard, zijn voornemens, op Zaterdag den 14 October 1837, des namiddags ten en ure, in het Gemeenlandshuis, bij B. Pot, in het elshout, onder Nieuw-Lekkerland, in het openbaar te besteden, voor den tijd van 5 jaren: De levering, onderhouding en herstelling van de benodigde zeilen, met aanhoorigheden, voor de acht Steenen Boven-Molens, in het Elshout. (1837, October 7). *De Dordrechtsche Courant*, p. 2. https://www.regionaalarchiefdordrecht.nl/proxy/archief/?mivast=46&mizig=91&miadt=46&miaet=14&micode=DC_1837&minr=7595542&milang=nl&misort=dt%7Casc&mizk_alle=pot%2Belshout&miview=ocr

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Zaterdag namiddag ten 5 ure is van de werf van den scheepsbouwmeester B. Pot in het Elshout, over Krimpen, met het beste gevolg te water gelaten het fregatschip de Vriendschap, groot ruim 500 lasten, en bestemd voor de vaart op Oost-Indie. (1842, August, 23). *Dordrechtsche Courant*. https://www.regionaalarchiefdordrecht.nl/proxy/archief/?mivast=46&mizig=91&miadt=46&miaet=14&micode=DC_1842&minr=7597078&milang=nl&misort=dt%7Casc&mizk_alle=pot%2Belshout&miview=ocr

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Figure 3.23: De Boer. (1969). Stucco on the ceiling [Photograph]. https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/a67e2a08-41d7-e19d-5523-978c895b01ba/media/882cbfba-a507-e899-4c4d-1ed-168fe3657?mode=detail&view=horizontal&q=molenstraat%20230&rows=1&page=3&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc&filterAction

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Figure 3.25: De Boer. (1969). The northern basement in 1969 [Photograph]. https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/346ac505-d647-6122-9068-394477cf6619/media/d5bc7134-7b31-0925-9b5e-960591c4ed9c?mode=detail&view=horizontal&q=molenstraat%20230&rows=1&page=5&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc&filterAction

Figure 3.26: De Boer. (1969). The northern basement, looking to the western facade in 1969 [Photograph]. https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/5564d1af-afa7-d6bb-2ba7-04deb414f268/media/8fbafab0-88b2-1b6e-6703-6526fe92a00c?mode=detail&view=horizontal&q=molenstraat%20230&rows=1&page=6&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc&filterAction

Figure 4.5: KLM Aerocarto. (1931). The site with the three barns seen from the northwest in 1931. The barn nearest to the photographer is the only remaining barn [Unpublished photograph from Stichting Werelderfgoed Kinderdijk].

Figure 4.6: Stichting Cultuurbezit Familie Smit. (n.d.). The site with the three Pot barns seen from the river Lek. The roof and part of the northern facade of the remaining barn can be seen behind the bushes [Photograph]. <https://www.fotobasebank.nl/public/zoeken.php> number A1150

Figure 4.7: Stichting Cultuurbezit Familie Smit. (n.d.). The two other Pot barns are clearly visible. The roof and part of the northern facade of the smallest barn can be seen behind the bushes [Photograph]. <https://www.fotobasebank.nl/public/zoeken.php> number A1148

Figure 4.8: Stichting Cultuurbezit Familie Smit. (n.d.) Another picture of the site seen from the river Lek. The roof of the smallest barn can be seen behind the bushes [Photograph]. <https://www.fotobasebank.nl/public/zoeken.php> number A1151

Figure 4.9: Stichting Cultuurbezit Familie Smit. (n.d.). The northern and eastern facade of the barn in Kinderdijk seen from the river Lek [Photograph]. <https://www.fotobasebank.nl/public/zoeken.php> number A1154

Figure 4.10: Stichting Cultuurbezit Familie Smit. (n.d.). Another picture of the northern and eastern facade of the barn in Kinderdijk as seen from the river Lek [Photograph]. <https://www.fotobasebank.nl/public/zoeken.php> number A1147

Figure 4.11: Deelen, J. W., Janse, G., De Jong, A., & Van der Wulp, A. (2002). *Nieuw-Lekkerlandse winkels en bedrijven in vroeger jaren*. Stichting Publicaties West-Alblasserwaard.

Figure 4.12: Historische Vereniging West-Alblasserwaard. (n.d.). The site viewed from the west [Photograph]. <https://www.fotobasebank.nl/public/zoeken.php> number A0078

Figure 4.13: Historische Vereniging West-Alblasserwaard. (n.d.). The western facade of the remaining barn can be seen in the background [Photograph]. <https://www.fotobasebank.nl/public/zoeken.php> number A0064

Figure 4.14: Stichting Cultuurbezit Familie Smit. (1905). The remaining Pot barn seen from the northwest [Photograph]. <https://www.fotobasebank.nl/public/zoeken.php> number A1102

Figure 4.15: Historische Vereniging West-Alblasserwaard. (n.d.). The site, in the background, viewed from the west. The two other barns have been demolished [Photograph]. <https://www.fotobasebank.nl/public/zoeken.php> number A0200

Figure 4.16: Regionaal Archief Dordrecht. (n.d.) The western facade of the barn in the 1980s [Photograph]. <https://beeldbank.regionaalarchiefdordrecht.nl/search/detail/id/2490116CB68C11EC99B7FA163E9D8C4E/showbrowse>

Figure 4.17: Schep, T. J. (1982). *Tussen Lek en Boezem*. De Klaroen.

Figure 4.18: Rijksdienst voor het Cultureel Erfgoed. (1900). The northern facade of one of the other two barns. In the background, the boardhouse of the Overwaard can be seen [Photograph]. https://beeldbank.cultureelerfgoed.nl/rce-mediabank/detail/372d36c8-258f-63aa-48b8-4482e4ba2042/media/c8c9c154-3566-425c-0943-9004bed56427?mode=detail&view=horizontal&q=kinderdijk&rows=1&page=410&fq%5B%5D=search_s_entity_name:%22Foto%27s%20en%20dia%27s%22&sort=order_s_objectnummer%20asc&filterAction

Figure 4.19: Stichting Cultuurbezit Familie Smit. (n.d.). On the left, one of the Pot barns and a hoisting device are visible [Photograph]. <https://www.fotobasebank.nl/public/zoeken.php> number A1172

Figure 4.20: Historische Vereniging West-Alblasserwaard. (n.d.). The middle of the three barns and a hoisting device in the background [Photograph]. <https://www.fotobasebank.nl/public/zoeken.php> number A0236

Figure 4.21: Weissenbruch, J. (n.d.). A painting of the Pot shipyard as seen from the sluices of 't Elshout in the 19th century [Painting]. https://www.haarlemsdagblad.nl/cnt/dmf20181019_26464770?utm_source=google&utm_medium=organic

Figure 4.22: De Dordrechtsche Courant. (1863 August 27). An advertisement for the iron mill rods [Newspaper article]. https://www.regionaalarchiefdordrecht.nl/proxy/archief/?mivast=46&mizig=91&miadt=46&miae-t=14&micode=DC_1863&minr=7610715&milang=nl&misort=dt%7Casc&mizk_alle=molenroeden&miview=ocr

Figure 4.27: De Keijzer, L. (2023). The Philibert trusses and reed underneath the pantiles.

Appendix A: Graduation plan

Personal information

Name Wietse Haitsma Mulier

Studio

Name / Theme Heritage & Architecture / Revitalising Heritage: Maritime Heritage

Main mentor Nol Hermkens Heritage & Design

Second mentor Thijs Bennebroek Heritage & Technology

Third mentor Marie-Thérèse van Thoor Heritage & Values

Argumentation of choice of the studio

Heritage buildings have always interested me for several reasons. Firstly, the atmosphere in many old buildings is unparalleled. Secondly, buildings from different ages make history tangible and tell stories of former practices and people. Thirdly, heritage buildings often display faded crafts, which make the buildings unique. Moreover, I am always amazed by how differently the buildings can be used after transformation while retaining their original character. Also, I find it interesting that buildings built centuries ago can still perfectly function in today's world. Finally, considering global warming and the impact of humankind on the environment, it is important to limit greenhouse gas emissions and save materials. Already existing buildings provide the opportunity to save on resources.

Water has always interested me, from primary school onwards. There are many different facets of the story about water. It plays an important role in, among others, geography, history, politics, and science. There is more than enough to learn about this multifaceted topic.

Both heritage and water are present in the Maritime Heritage studio. This studio provides a chance to learn more about the architecture and heritage side of the water-related story.

Graduation project

Title of the graduation project Kinderdijk: From Start to Future

Location Kinderdijk, Netherlands

The posed problem

On the one hand, the World Heritage site of Kinderdijk is visited by around one million visitors each year. On the other hand, the village of Kinderdijk consists of around eight hundred inhabitants. Some of the facilities that the tourists use, like a parking lot, restaurant, and bakery, are situated in or on the other side of the village, as seen from the World Heritage site. This forces tourists to walk through the village, which causes inhabitants of Kinderdijk to experience nuisance.

At the same time, there are two vacant buildings in the entrance zone of the World Heritage site. Furthermore, on the edge of the village there is a dilapidated timber barn.

One of the vacant buildings is a former souvenir shop built in 1993. The building does not fit the morphology of the ribbon development along the dike that runs through the village. It can however help solve the tourist-village friction.

The other vacant building is a former board house of one of the waterboards in the Kinderdijk area. Recently, the restaurant which was located in this building has left it. The building needs to be improved energy-wise and can serve as part of the solution to the aforementioned tourist-village problem.

The dilapidated timber barn used to be part of a shipyard. It is in poor condition and needs to be restored. The background, uniqueness, and technical state of this barn are not researched in depth.

Research questions

- What are the physical remnants of the pre-industrial wood-processing industry in the Waterdriehoek?
- How can the nuisance that the residents of Kinderdijk experience be decreased by masterplan design?
- How can maritime-related heritage buildings be preserved and prepared for future use?

Design assignment in which these result

- A masterplan design for the World Heritage site of Kinderdijk, focusing on tourist streams, experience of the World Heritage visit, and reduction of nuisance for locals.
- A redesign of the former boardhouse of the Nederwaard and the barns on its plot.
- A design of new barns on the plot of the former boardhouse.
- A redesign of the Pot-barn, a shed used by a former shipyard, situated in an outer dike area.

Process

Method description

The research will be done through a literature review, talks with experts and locals, analysis of old maps, and field research. By using these methods, I hope to find the remnants of the pre-industrial wood-processing industry in the Waterdriehoek.

The design will be the result of exploration through writing, sketching, and making digital and/or physical models. Moreover, discussions with tutors and classmates will aid the design process. The research will give input into the design themes and choices, not only of the Pot-barn but also of the other buildings.

Literature and general practical references

The bachelor's and first-year master's education will be my general practical experience that will help me with design and research.

Relevant books about the villages in the Waterdriehoek and the wood-processing industry in general were used from the library of the RCE and TU Delft.

The literature used for the research can be found in the research paper and the literature used for this booklet can be found earlier in this booklet.

Reflection

What is the relation between your graduation (project) topic, the studio topic (if applicable), your master track (A,U,BT,LA,MBE), and your master programme (MSc AUBS)?

The relation between my graduation topic and the studio is that both deal with the relation between buildings and water. The Kinderdijk site is designed to bring water from land to the river and the buildings often have a relation with either this process or the nearby river. The project will involve designing and revitalising buildings (Architecture) and the research involves landscape aspects as well. Moreover, my research contributes to the overall research about heritage in the Waterdriehoek, executed by professionals from multiple disciplines of the faculty.

What is the relevance of your graduation work in the larger social, professional and scientific framework?

The research part of my graduation project will contribute to the overall research about maritime heritage in the Waterdriehoek, which is initiated by the province of South-Holland. Local inhabitants and visitors of the area can be made more aware of the wood-processing past with the results of my research, which aims at finding tangible remnants of this industry.

The design project has a large social aspect because it will influence how tourists experience Kinderdijk and how locals will experience the tourists. A new masterplan will add to the World Heritage visit experience and will reduce the impact of mass tourism on the small local community.

Appendix B: Reflection

1. *What is the relation between your graduation project topic, your master track (A, U, BT, LA, MBE), and your master programme (MSc AUBS)?*

My graduation topic is about designing with, in, and around water-related heritage buildings. The design project will go into most detail when designing the buildings (Architecture), but the masterplan design also encompasses urban planning and landscape elements. In the research part of the graduation project, I searched for pre-1914 timber buildings and landscape remnants related to the pre-industrial wood-processing industry in the Waterdriehoek. This means that the Landscape track is again represented. Finally, the technical design of the buildings incorporates knowledge about biobased insulation materials, which are the most sustainable insulation materials available today. Therefore, the other AUBS tracks are represented in my graduation project, but the most attention is paid to the buildings and their architecture.

2. *How did your research influence your design/recommendations and how did the design/recommendations influence your research?*

My research project showed that the Pot barn probably is the only remaining pre-industrial timber barn in the Waterdriehoek area. This makes the barn worth preserving. Also, its age and use traces should be shown. During the fieldwork of the research, multiple old timber buildings were found, but their appearance was like they were brand new, not fully conveying their story. The restoration of the Pot barn therefore tries to keep its old and lived character.

The design of the Pot barn has influenced the depth to which the barn was researched. Its users, background, and technical state have been researched in greater depth because of the design project.

After finishing my research paper on timber barns, I researched the Waardhuis. This building is also part of my design project. The results from this research have influenced the functions it will house: living, meeting, and eating. The archival research also influenced the composition of the new sunroom.

3. *How do you assess the value of your way of working (your approach, your used methods, used methodology)?*

The approach to my research has worked very well. Extensive literature research, fieldwork by bicycle, and the consultation of local experts and inhabitants through attending meetings, a radio appearance, and newspaper articles worked well together.

The way of designing has worked, but not always to the same extent. Extensive archival research and consultations with entrepreneurs have let me understand what the problems are and what to base the solutions on. However, the design method could be improved. Rather than going into detail too soon, it is better to stay longer in the earlier design phases. This makes the concept clearer, and further decision-making easier. Nevertheless, keeping details in mind in the early design stages does help to achieve more holistic designs.

4. *How do you assess the academic and societal value, scope, and implication of your graduation project, including ethical aspects?*

The research part of my graduation project contributes to the overall research about maritime heritage in the Waterdriehoek, which is initiated by the province of South-Holland and executed by professionals from multiple disciplines of the faculty. Local inhabitants and visitors of the area can be made more aware of the wood-processing past with the results of my research, which aims at finding tangible remnants of this industry. The design assignment is not only a subject for my studies, but I have also developed it so that it can be carried out. The design choices are realistic, and the locals have always been considered: keep the facilities but keep the tourists away from the village.

5. *How do you assess the value of the transferability of your project results?*

Transferability refers to the results of one study or project being applicable to other studies and projects. The research was conducted specifically for the Waterdriehoek area, but the method has proven its efficiency. So, this method can also be used in similar studies.

The design is tailor-made for Kinderdijk, the Waardhuis and its new barns, and the Pot barn. However, general design decisions in the urban plan and the buildings can be applied to similar buildings as well.

6. *How has the feedback of my mentors influenced the design?*

Through our conversations during feedback moments, my interpretation of transforming a heritage location has been broadened. I now dare to add more to the existing buildings in addition to simply restoring the old buildings, while continuing to use my sustainable vision.

Furthermore, the feedback at P2 has made me realise that focus is important. My masterplan used to even include a part of Alblasserdam. But our conversations have led me to focus on a smaller part of Kinderdijk: the entrance area. This allowed to create more unity between buildings in and around the entrance area of the World Heritage site.

7. *How has natural sustainability (climate change and biodiversity) influenced my design?*

Climate change will result in rising water levels. This means that outer dike areas will flood more often than before. Therefore, new buildings will not be built in the outer dike areas. Instead, water-loving trees will be planted there, reconstructing the previous Elshout. Since a complete restoration of the outer dike Pot barn is needed, it might as well be raised to protect it from future floods.

Because of the rising water levels, the masterplan accounts for higher dike levels elsewhere in the area as well. Furthermore, I do not intervene within the dike, which reduces costs and improves the flood security of the Alblasserwaard.

To prevent future greenhouse gas emissions, the existing and new buildings will be insulated well with biobased insulation materials.

Finally, incorporating insects- and birds-attracting plants, insect-hotels (with local reed), and birdhouses in the design of the B&B dwellings will not only increase biodiversity but also improve the awareness of the special natural area in which the tourists find themselves.

