

Leonie Zwienink - March-April '26

# DEFINING THE FRINGES

*Providing an understanding of the village fringes within the Roer Valley:  
an inventory atlas*



^ Fieldwork in the floodplain of the Roer with my family in December of 2025.

## THE INVENTORY ATLAS

This document functions as a collection of the analysis of the fringes of the Roer valley in Limburg. The document provides a takeaway to understand the spatial claim and relationship of the villages and the Roer river.

As Norberg-Schultz describes in his book *genius loci* (1979):  
““Planning” does not help much as long as the concrete, qualitative nature of the place is ignored.”

This analysis provides the base for the eventual formulated design briefs for the different villages within the Roer valley.

The Atlas is considered an external chapter as part of the research of the thesis *re-experiencing the Roer fringes*. The findings presented in the Atlas have shaped the design briefs and the place-sensitive intervention principles.

# 1. SINT ODILIËNBERG [12]



The historical village core has been built around the basilica, which is positioned along the Roer river. The open public space formed between the river and the cultural building symbolises Sint Odiliënberg's original relationship with water.

Today, this relation is only experienced within this small area of public space, as the Roer river is inaccessible and invisible behind privatised properties built over the years.

# 2. MELICK [22]



Built along the edge of the floodplain, not adjacent to the river, Melick has developed itself as a linear village over the years. Its position along the floodplain, together with the expansion of the linear village to the north, forms a historical 'ribbon of dwellings' from an axis facing the Roer to a main street that serves as the partition of the village and the Roer river. The floodplain and markers of the Roer river can only be experienced by entering specific areas that are perceived as entering privatised property.

# 3. HERKENBOSCH [32]



Herkenbosch is a village that borders the floodplain and not directly the river; the castle of Daelenbroeck used to be connected to the Roer. With years of development and the repositioning of the Roer river, the once clear relation of the cultural building and thus the village with the river faded.

Today, the castle is one of the main aspects of Herkenbosch and serves as a marker for history as well as the connector of the village core and the floodplain.

## 4. VLODROP [42]



While the village core of Vlodrop is not adjacent to the river, the fringe is the most connected to the river out of all four villages. The facades of the buildings face the river, and the public space forms the transition zone between the river and the village.

Due to the minimal height differences and location of the stream of the Roer, Vlodrop is prone to flooding, which entails that during extreme discharge of the river, the houses along the village fringe will become flooded.

## 5. FLOODPLAIN [52]



The floodplain is experienced differently throughout the seasons. Not only the vegetation changes, but also the river discharge changes with time. Flooding occurs yearly, transforming the valley and its floodplain due to the position and water level.

## 6. ASSESSMENT OVERVIEW [58]

	SINT ODILIENBERG	MELICK	HERKEN-BOSCH	VLODROP
ENTRANCES	✓/✓	✓/✓	✓/✓	✓
PUBLIC-PRIVATE	✓	✓	✓	✓/✓
HYDROLOGICAL EXTREMES	✓/✓	✓	✓/✓	✓
USE OF SPACE	✓/✓	✓	✓	✓/✓

The analysis of the villages of the entrances, public-private relation, hydrological extremes, materialisation and use of space provides an insight into the aspects and elements that could be improved to enhance the relationship of the village fringes and the Roer river. These conclusions form the base for the design briefs for the thesis.

*[All graphics and pictures in this Atlas are made by the author]*

## ASSESSMENT CRITEREA

As the villages within the Roer Valley are unique in their identity, configuration and relation to the Roer river. This also means that the village fringes are unique in this same sense, especially in regard to their projection towards the Roer and its floodplain.

Having unique village fringes within the context of the Roer Valley provides a versatile base for designing with different interventions and outcomes for those fringes. While providing a rich context, this comes with the complex task of assessing and defining these fringes as the starting point for the design exercise for this thesis.

This needed understanding and assessment of the village fringes has led to this analysis booklet. Each of the fringes is looked at from aspects of accessibility, spatial relation, use of space and hydrological impact.

[understanding the fringes]

To 'define the urban fringe' for each of the mentioned aspects there is assessed how this element positively or negatively impacts the relation of the village with the Roer river and its floodplain\*. A negative score (--/-) implies a limited relationship, in which the river is considered as the backside of the Valley. A positive score (+/++) showcases a well-established relationship in which the village and the floodplain are well connected, where the Roer is treated as a central component of the area.

The eventual assessment within these categories of the village fringes forms the base for the design interventions for the village fringes in the Roer Valley.

\*This assessment is done through my personal analysis and fieldtrips in conducted in december 2025 & January, March and April 2026, as shown in the atlas. The analysed themes could be perceived differently by another (urban) designer.

Point of departure criteria (research question):

How can place-sensitive interventions within the village fringes of the Roer Valley improve the experience and connection of its residents with the Roer River by 2050?

## ENTRANCES

- Entrances are not inviting or not clearly marked.
- +/-** Entrance is visible, but could be a more integral part of the village identity.
- ++** Entrances are an integral aspect of the village and represent a connected Roer Valley.

## PUBLIC-PRIVATE

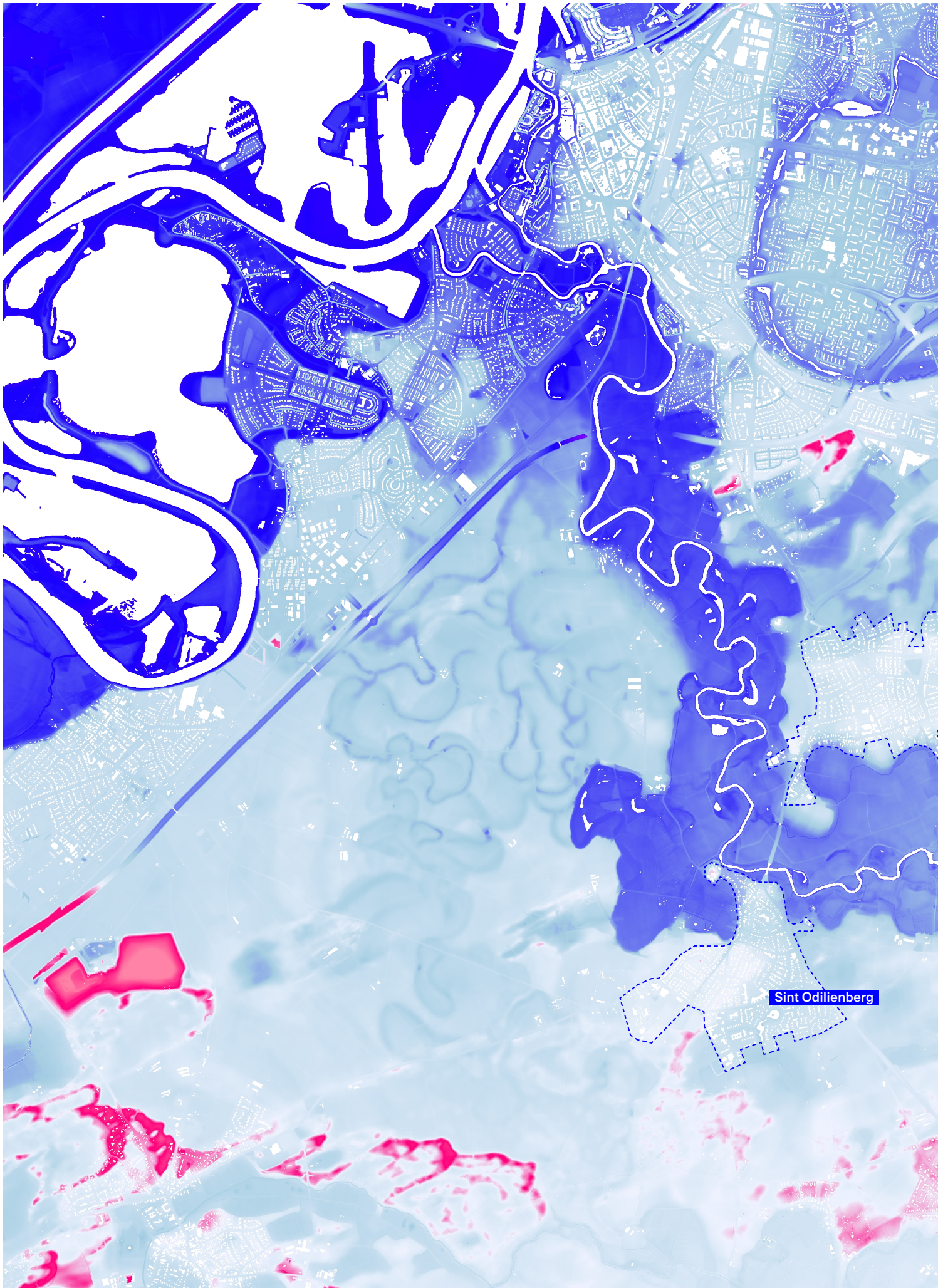
- Private areas are fenced off public areas. The two 'worlds' are not connected.
- +/-** There is a logical coherence in the division between public and private property.
- ++** There is a good transition between public and private areas, where the public realm is dominant and properly validated.

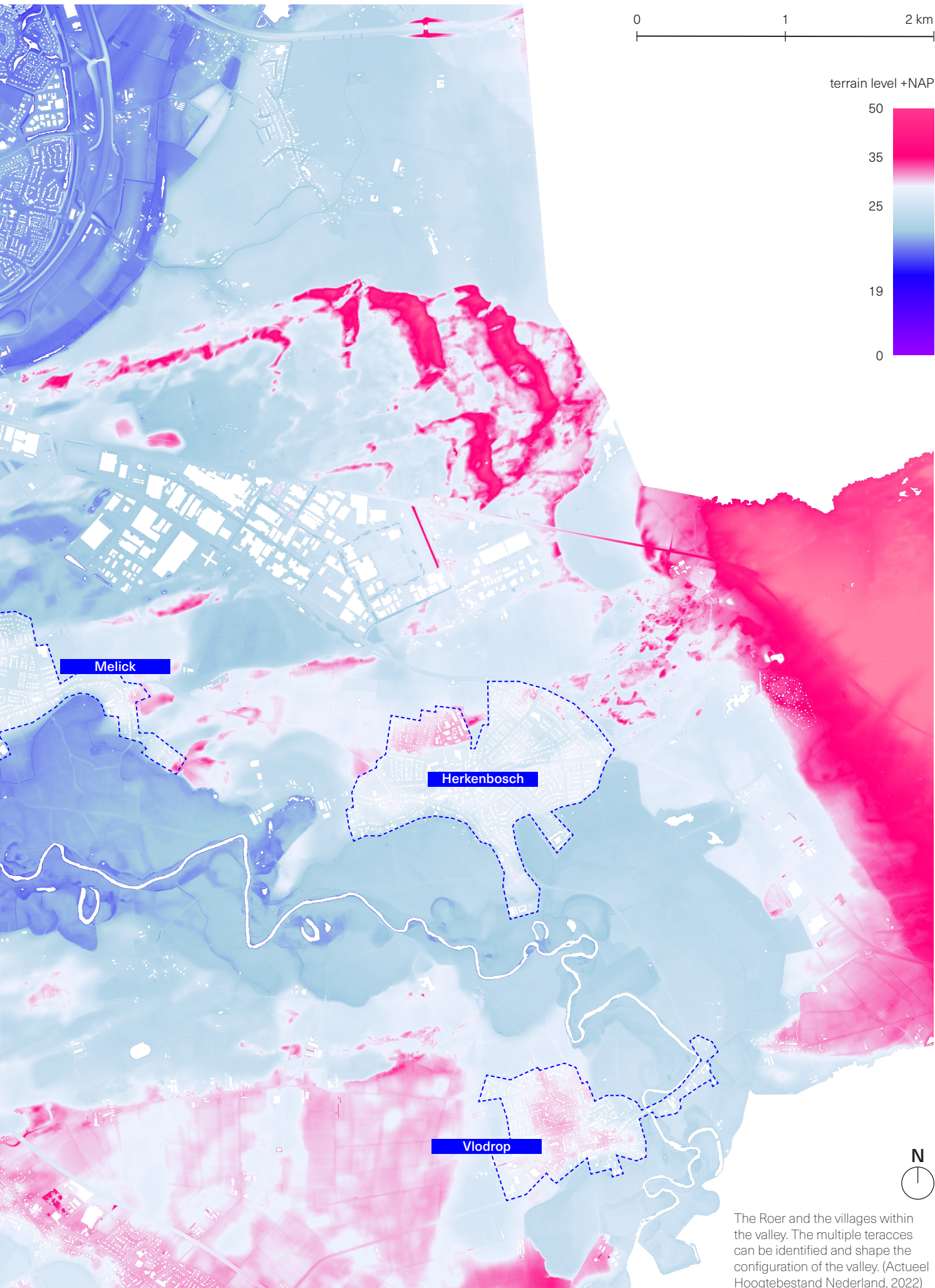
## HYDROLOGICAL EXTREMES

- The village fringe is strongly affected during a T100 hydrological event.
- +/-** Only infrastructure becomes affected during a T100 hydrological event.
- ++** The village fringe is able to adapt/protect itself to a T100 hydrological event.

## USE OF SPACE

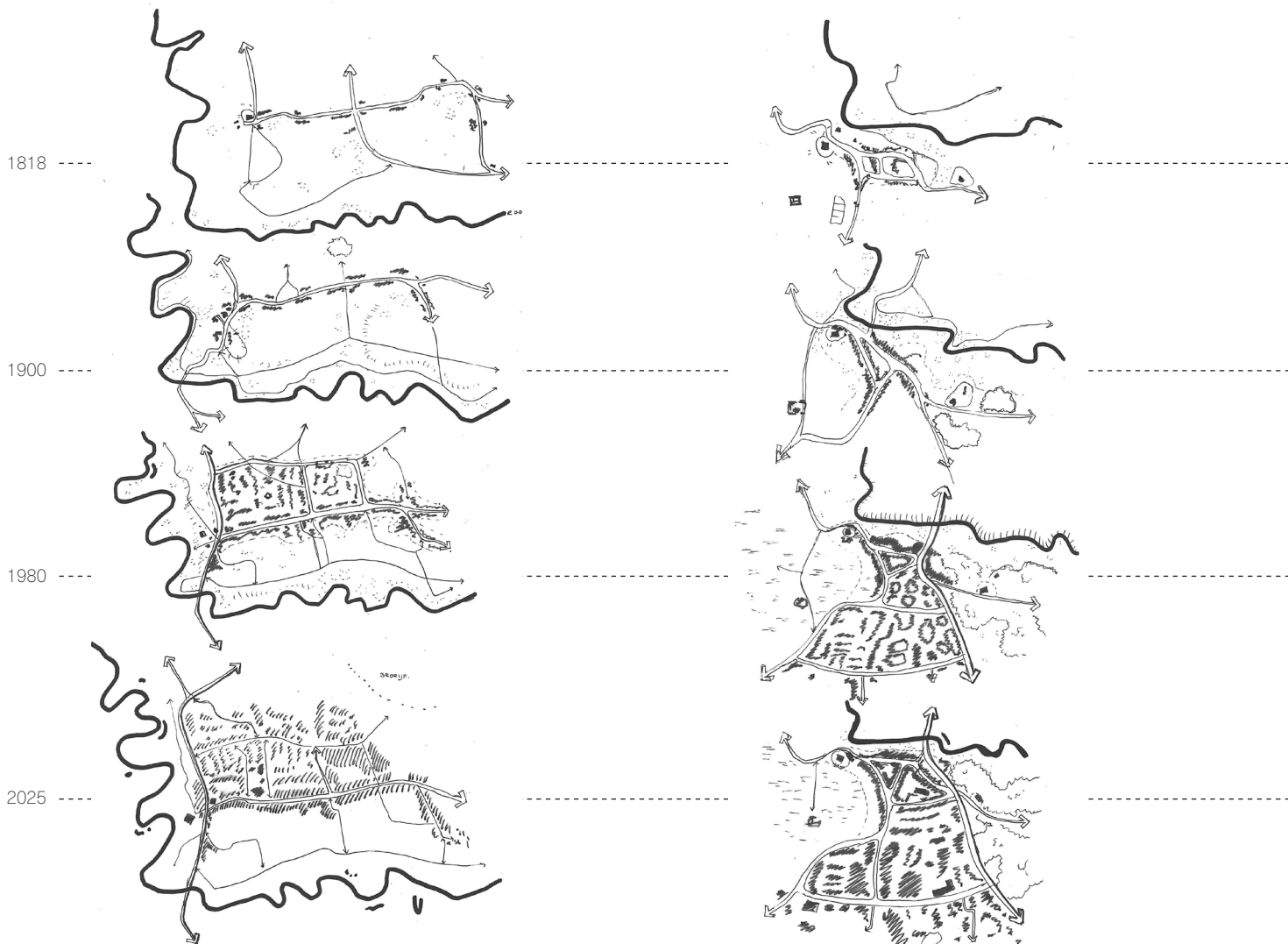
- Space is 'public' but is not optimised properly, resulting in non-places.
- +/-** Public space is defined, but is not fully integrated within the village and floodplain.
- ++** The public space is considered a place and is significant for the community





The Roer and the villages within the valley. The multiple terraces can be identified and shape the configuration of the valley. (Actueel Hoogtebestand Nederland, 2022)

# 0. Historical development villages



## MELICK

### Ribbon development

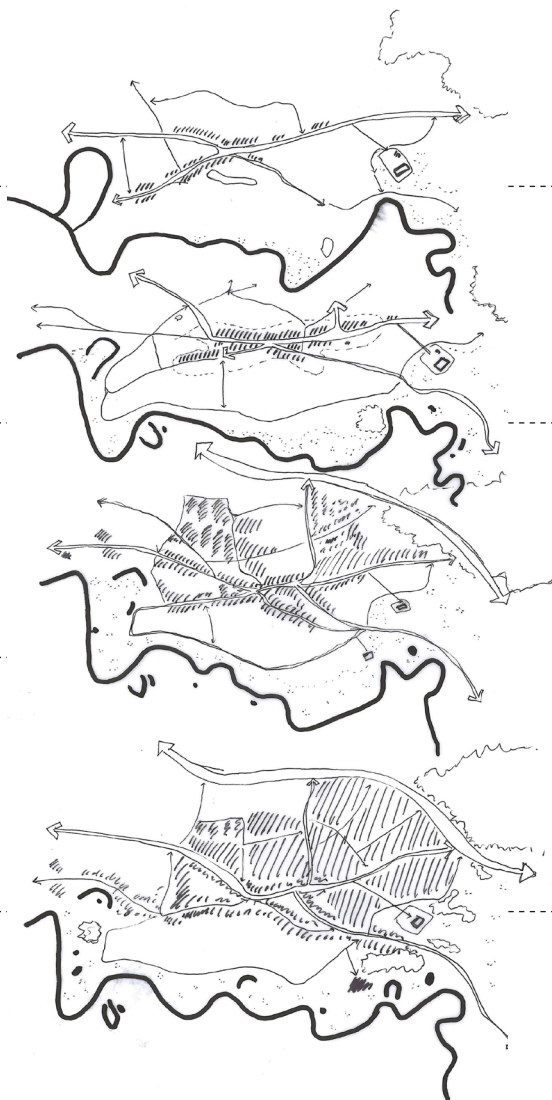
The village of Melick started with a church connected to a main street. This street became the central location for the linear development of Melick, a form of development common for Dutch and Belgian cities. The village has never come in direct contact with the flow of the Roer river.

With the development of the village, Melick grew to the northern side, away from the Roer river and established a new centre that is disconnected from the Roer and its floodplain.

## SINT ODILIËNBERG

### Roer-centred development

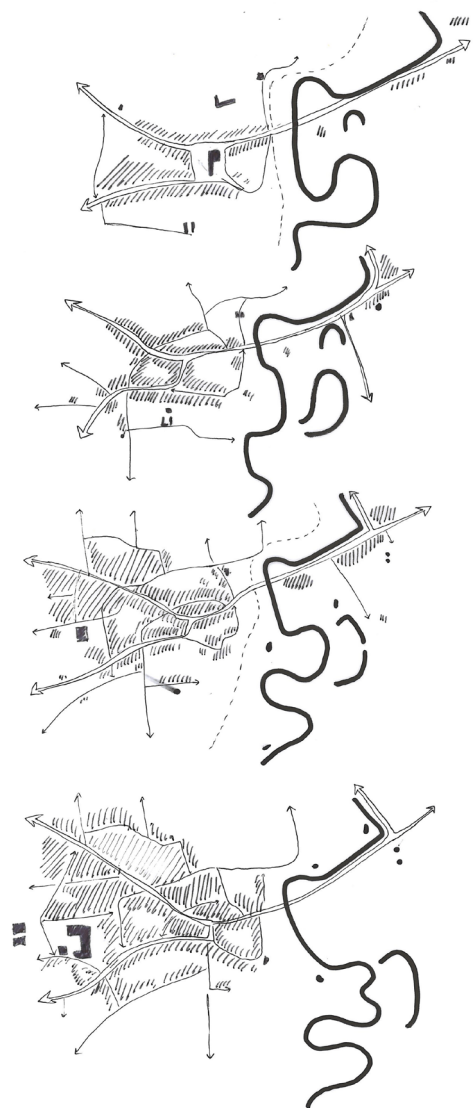
The basilica of Sint Odiliënberg has been established along a mound near the Roer river. During the Second World War, the bridge over the Roer was demolished, after which the Roer bridge was rebuilt to the eastern part of the village. This repositioning of the main infrastructure crossing the river shaped the later expansion of the village, limiting the growth of the urbanised area to the east and west (because of the position of the floodplain). The expansion led to a shift of the village core to the south of Sint Odiliënberg and not to its historical location along the river.



## HERKENBOSCH

### Expansion from core

The village core of Herkenbosch never moved throughout history. The core had been established along the higher terraces, forming a natural protection against the flooding. The castle, however, was positioned along the river. Throughout the years, the river flooded quite frequently and changed the course of the stream, making the river no longer flow along the castle property. The vast transformation of the river outline has led to a different composition of the floodplain, making Herkenbosch expand more toward the fringe of the floodplain as well as the northern area.



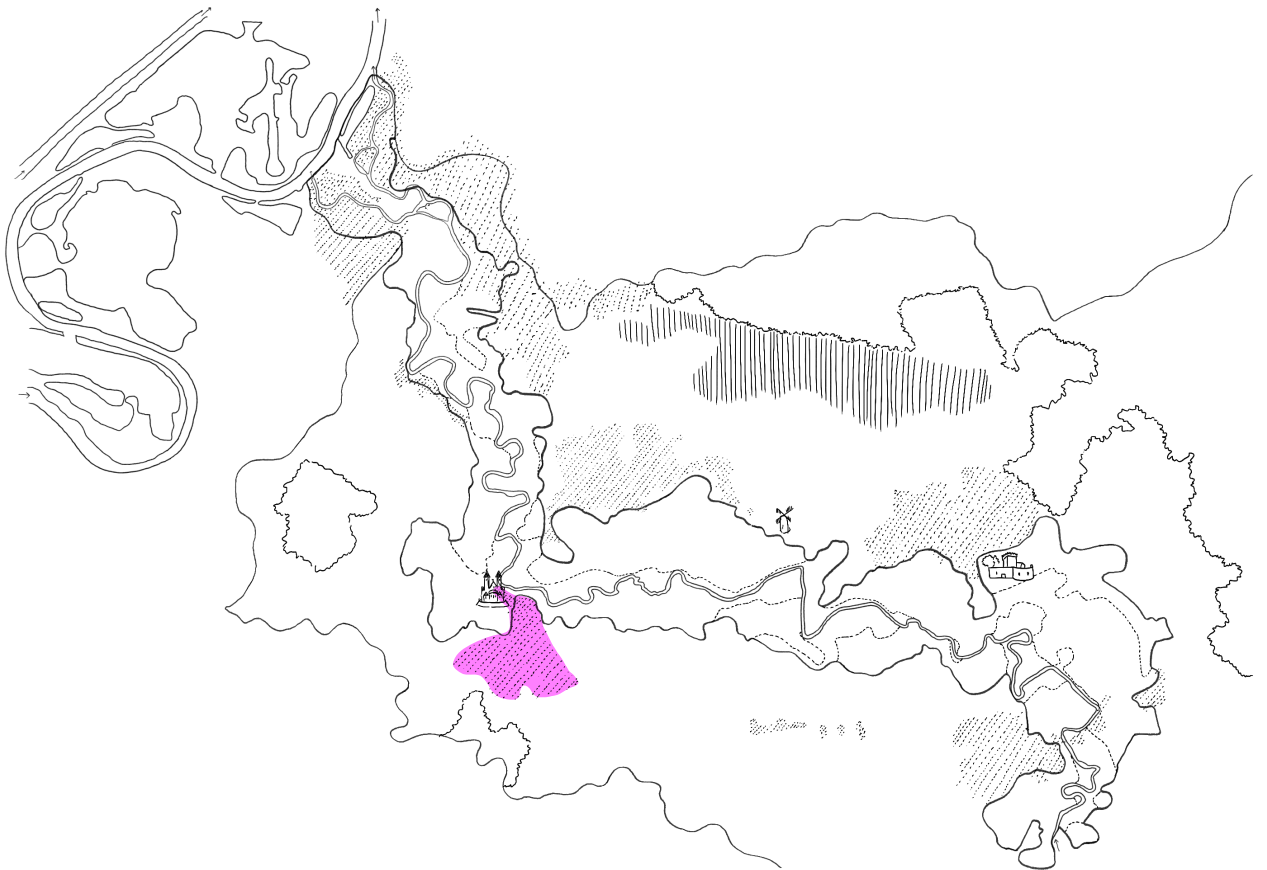
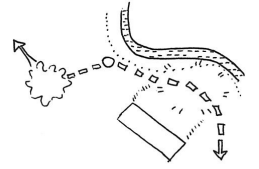
## VLODROP

### Defined village core

Vlodrop has a similar development to Herkenbosch. The main difference lies in the relation to the river and the castle of Vlodrop, being a less prominent aspect of the village. As can be seen in the drawings, the course of the river along the village fringe remains consistent. The development of the village in the area on the western side of Vlodrop resulted in a strengthened connection of the fringe with the adjacent floodplain, as the buildings have been established to face the waterfront. This unique development ensured that Vlodrop is still connected with the Roer today.

# SINT ODILIËNBERG





# ENTRANCES

[acesability]

+/-




Sint Odilienberg is located along a transitional corridor that connects the villages of the Meuse terraces to each other and the city of Roermond, with the N293. This road crosses the Roer with the Roerbrug.

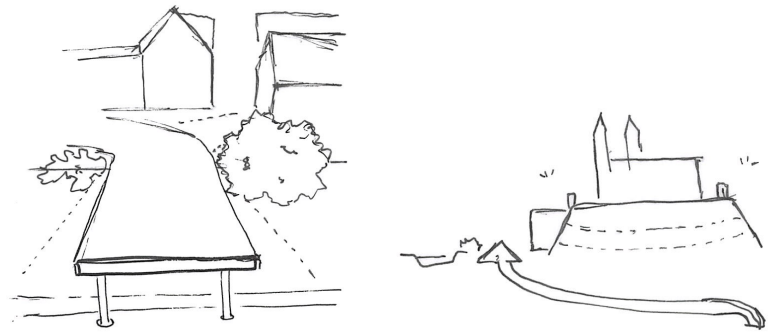
Although there is a larger transit network located next to the village, the actual roads that serve as the entrances to its centres are not so well defined. This makes a visitor become well aware of entering the village.

Further access to the floodplain is not directly connected to the village centres and their edges. There are direct

bikeroutes connected to Sint Odilienberg; however, entering the floodplain is possible a few 100 meters outside of the built area.

*This means that Sint Odilienberg is a well-connected village in terms of transit, but to actually enter the floodplain, there are more connections needed.*

-  Village fringe - edge
-  Primary transportation route
-  Infrastructure into village



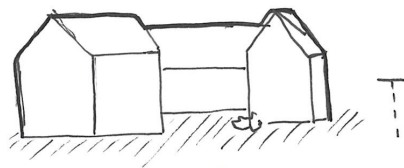
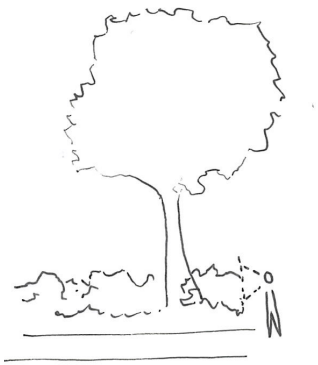
# PUBLIC-PRIVATE [fronts]





The old village centre of Sint Odilienberg is clearly marked because of the open space created around the Basilica. Next to this open space, which can be considered a 'square', a small area of ground is formed into a park next to the water.

*All the houses along the village fringe have large, fenced-off private property that is clearly marked as a difference between the public domain and individual ownership.*

This public garden is small and hindered in its continuation by the fences built around the houses adjacent to the park. Looking at the aerial pictures, it can be seen that this blockage by privatised property is causing the public park (and thus the connection to the floodplain) not to continue along the Roer river.



-  Privatised area
-  Boundry private area



# MATERIALITY OF PUBLIC SPACE [perception]

Clinkers are the main material used in the public space of Sint Odilienberg. Together with the bricks of the (often old) houses within the historical centre near the river, it provides a paved appearance to the streets. The pattern of the brick indicates the use and users of the public space. Small stone threshold bands divide the different brick patterns.

Only near the open public space between the basilica and the river, spots of open green areas can be found, which link to the naturalness of the river and the floodplain. In the streets, however, almost no vegetation can be found, contrasting with the vast natural area that lies behind the row of houses.

*By introducing a new material or pattern of brick in the public space, a route or connection to the Roer river could be marked.*

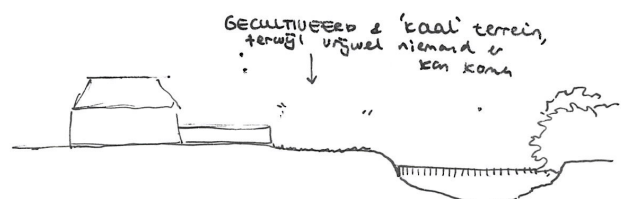
Route



Public space



KADE

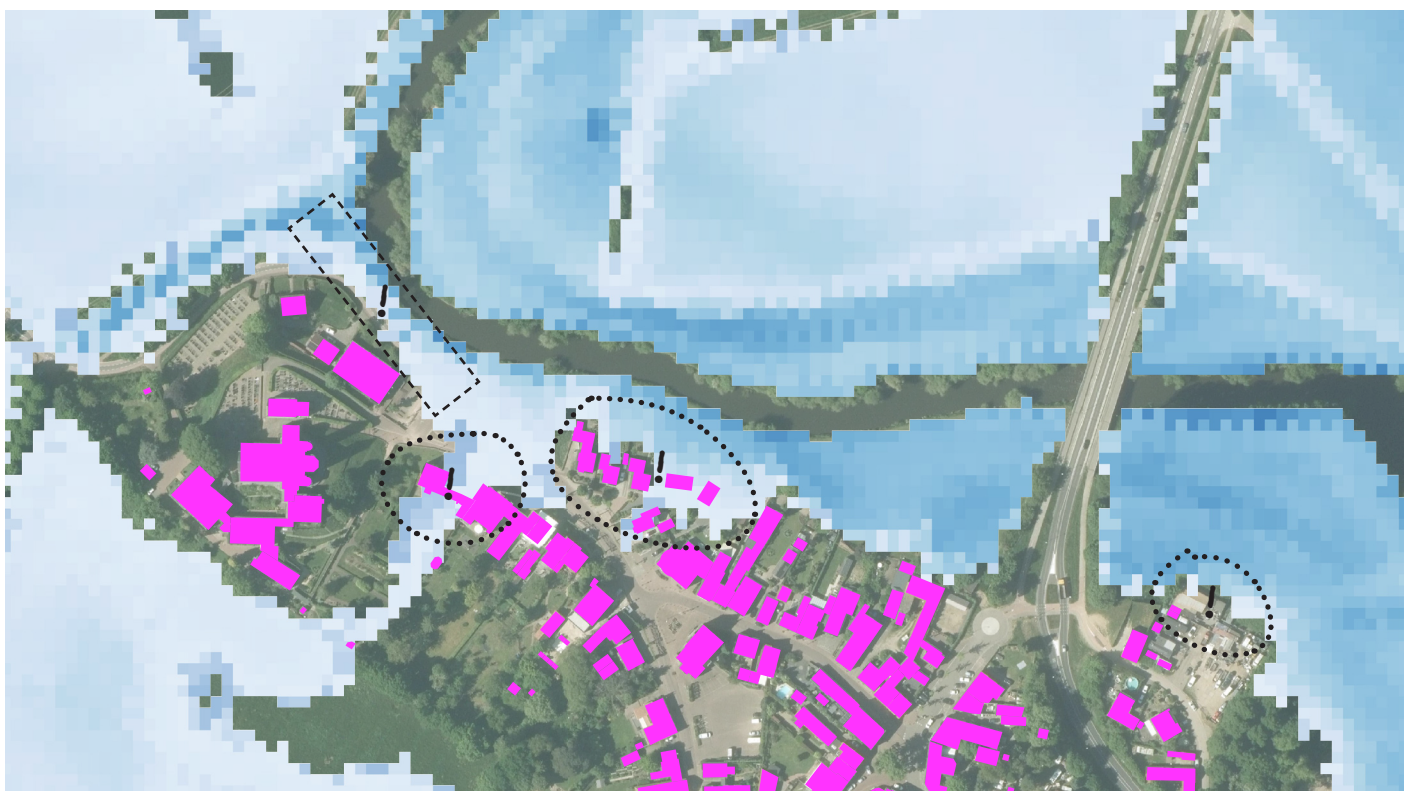
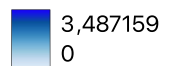
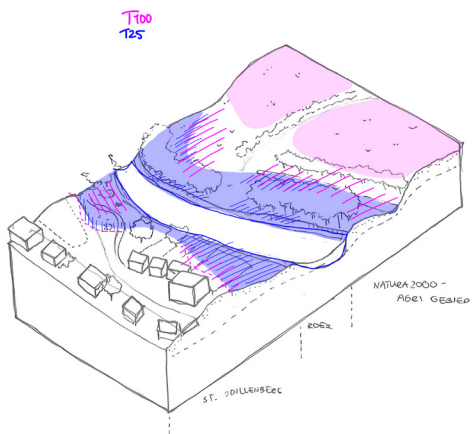


# HYDROLOGICAL EXTREMES [water]

+/-

Sint Odiliënberg is positioned along a curve within the Roer River. Projecting the spatial implications of the T100 scenario reveals that the water interferes with a handful of houses that are built along the river. The road towards Paarlo and Roermond is flooded and cannot be accessed,

and the central square becomes full of water as well. Because the village fringe is located next to the river, there is a high possibility that the water will be cleared within a couple of days.



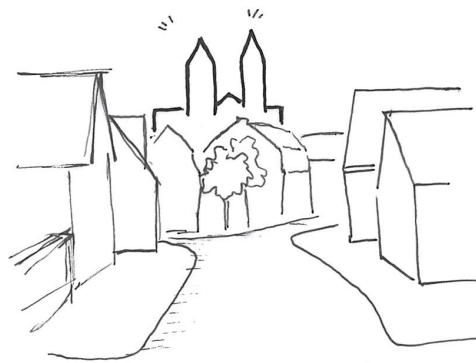
## USE OF SPACE [function & culture]

+/-

The basilica of Sint Odiliënberg is one of the prides of the Roer Valley and is often used for the representation of the village and the municipality of Roerdalen. The basilica was built in the 8th century, on top of a small hill, making the basilica visible from further down the Roer Valley, creating a coherent and iconic landscape around the church, but also protecting the basilica from possible flooding.

Adjacent to the basilica and its hill, a square is located that is used weekly by the local market. This central place of the village represents the former village centre and is directly connected to the Roer river due to its location.

*The basilica is one of the treasures of the Roer valley and serves as the 'business card' of Midden-Limburg. It is important to acknowledge the basilica by honouring and highlighting the historical connection of the basilica with the Roer River in the public space.*





The basilica has meant a lot to our family

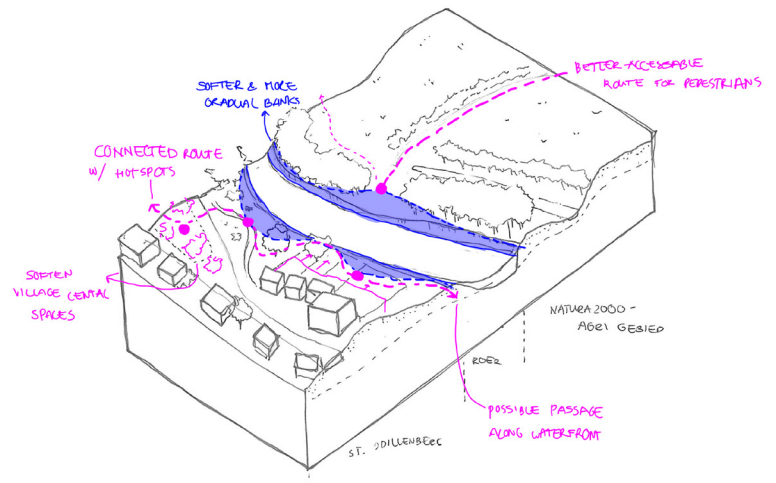
The basilica was founded as a monastery in the 8th century on a small hill near the Roer river. Later, the village of Sint Odilienberg was founded.

### OPENING THE FLOODPLAIN

The design brief for Sint Odiliënberg is formed by optimising the floodplain and privatised spaces. While the square and basilica are located next to the river, this is a relatively small space in comparison to the possible public space that can be connected to the floodplain of the river. Now, this area is part of the private gardens of the houses located on the village fringe. Opening this would create a continuation of the public space located in the cultural centre of Sint Odiliënberg, placing more emphasis on the Roer river and the interconnection of cultural heritage and the river.

### KEY FINDINGS:

- Access to river is fenced off by privatised property.
- Limited clustered public space, but most of the public space located along the river & floodplain.
- Entrances to the village are underdefined: the main focus is on the main traffic route.
- Landscape of the floodplain around Sint Odiliënberg is part of the Natura2000 network.





# MELICK





# ENTRANCES

[accessability]

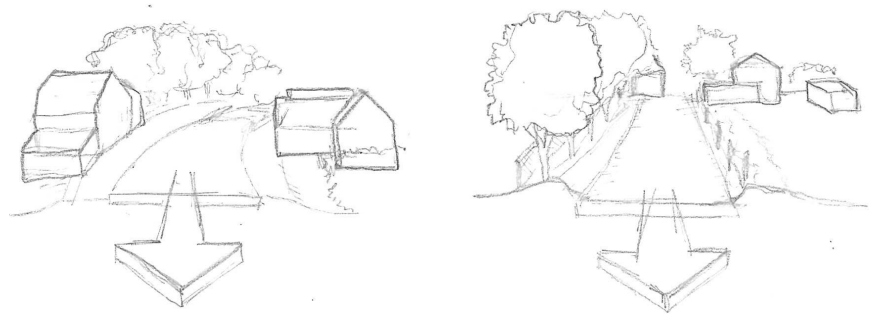
+/-




Melick is (similar to Sint Odiliënberg) located along a transitional corridor that connects the villages of the Meuse terraces to each other and the city of Roermond, with the N293. This road crosses the Roer with the Roerbrug.

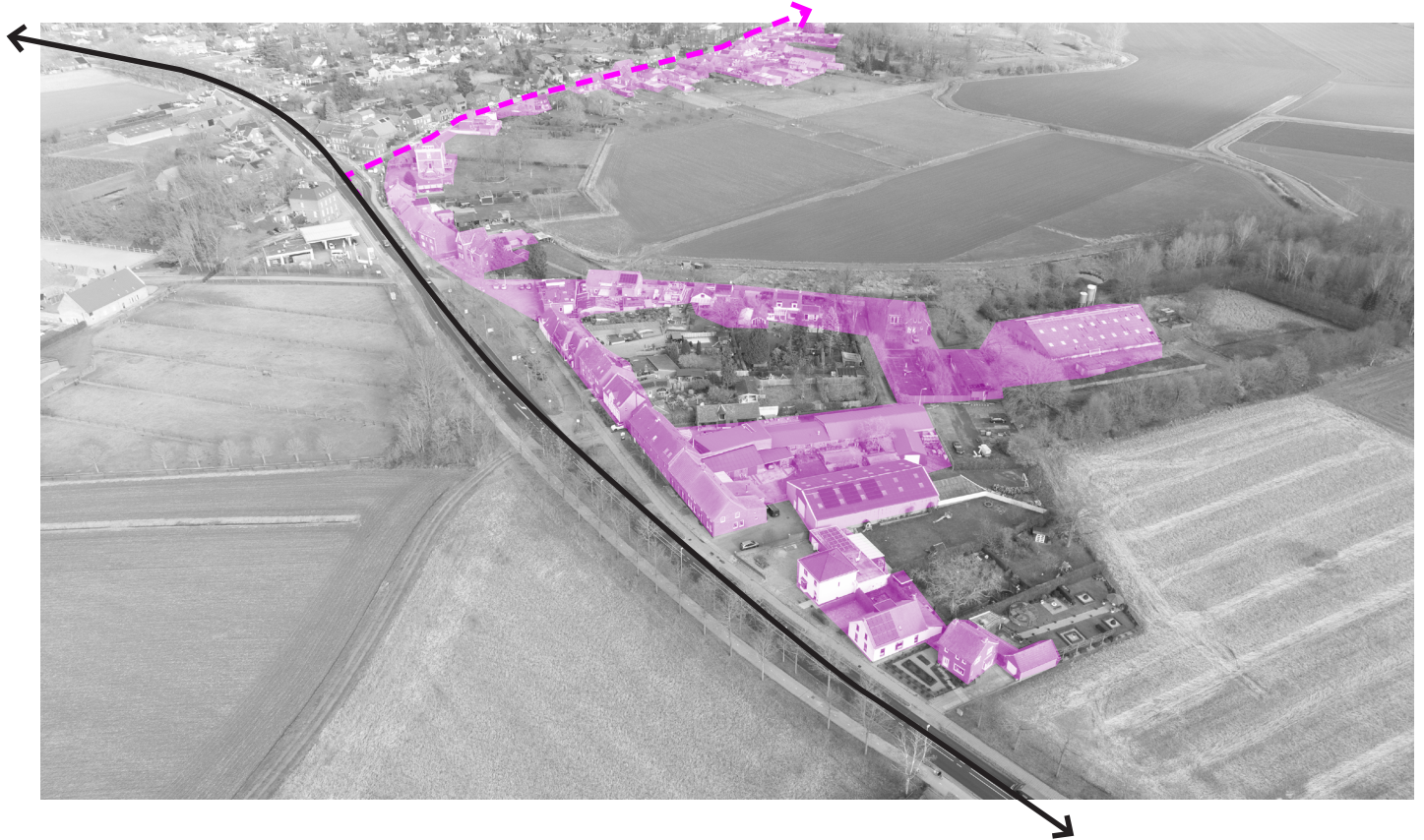
The village can be entered along this national road, where the 'Dorpsstraat' (translating to village street) is considered the main artery of the village. This is the oldest street, as Melick has been formed as a linear settlement. The street stretches through the length of the village and eventually connects to the entrance of Herkenbosch.

Because Melick has been established as a linear settlement, this morphology forms a barrier in the current day between the village and the floodplain and the river. The village has expanded over time, making it hard to pierce the physical boundary of dwellings.

There are a few 'entrances' to the floodplain, created by extensions of the village. These roads are not going into the floodplain but form a loop back to the main village road. The atmosphere within these sideroads is more connected with the natural beauty of the village, with the road that is closest to the river looking down the floodplain and the markers of the Roer River.



-  Village fringe - edge
-  Primary transportation route
-  Infrastructure into village



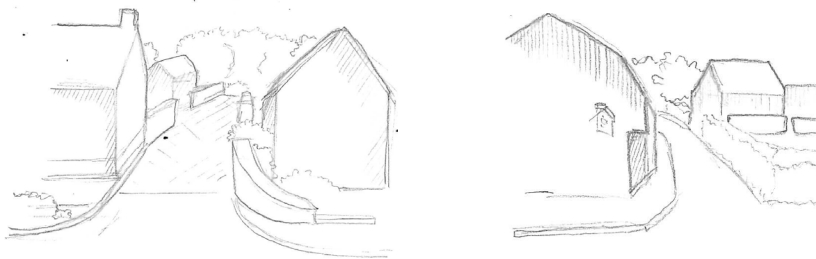
# PUBLIC-PRIVATE [fronts]





The sideroads become a crucial part within the connectivity of the village fringe and the Roer River, as they embody the possibility of a physical connection between the two worlds.

The entrances to these sideroads, however, feel privatised as the roads are small and are closely linked to the homes marking the entrance. While the sideroads could be a key component of the village, as an outsider, it does not feel accessible.

Within the sideroads, there is a lot of open land, contributing to the more interwoven atmosphere of these parts of the village with the floodplain. These open lands are not accessible because they are fenced off, often because pastures roam within these lands.



-  Privatised area
-  Boundry private area



# MATERIALITY OF PUBLIC SPACE [perception]

The main street of Melick is made from grey asphalt, with the connecting (smaller) sideroads being made out of clinkers or stones. This consistent use of materiality helps to mark the most prominent and used roads of the village, while providing a softer and more rural feeling to the sideroads that lead to the floodplain. Along the sides of the streets, a hollow composition of bricks creates gutters to guide and transport rainwater.

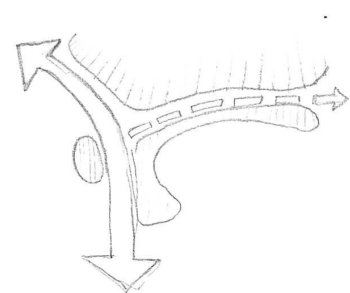
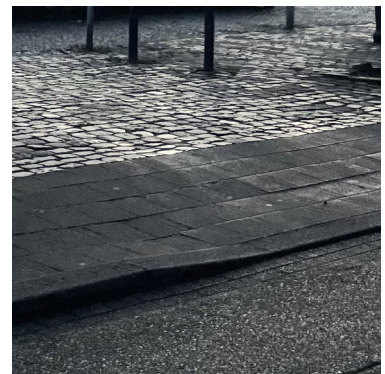
Public places to reside longer in are often accompanied by patches of green and trees. Pathways within these areas are made with more traditional paving stones, highlighting the transition from the main street to an area to reside in.

*The logic of material use in the public space in Melick should be followed when creating a new design, as it reflects the hierarchy and spatial logic of the village.*

Route



Public space

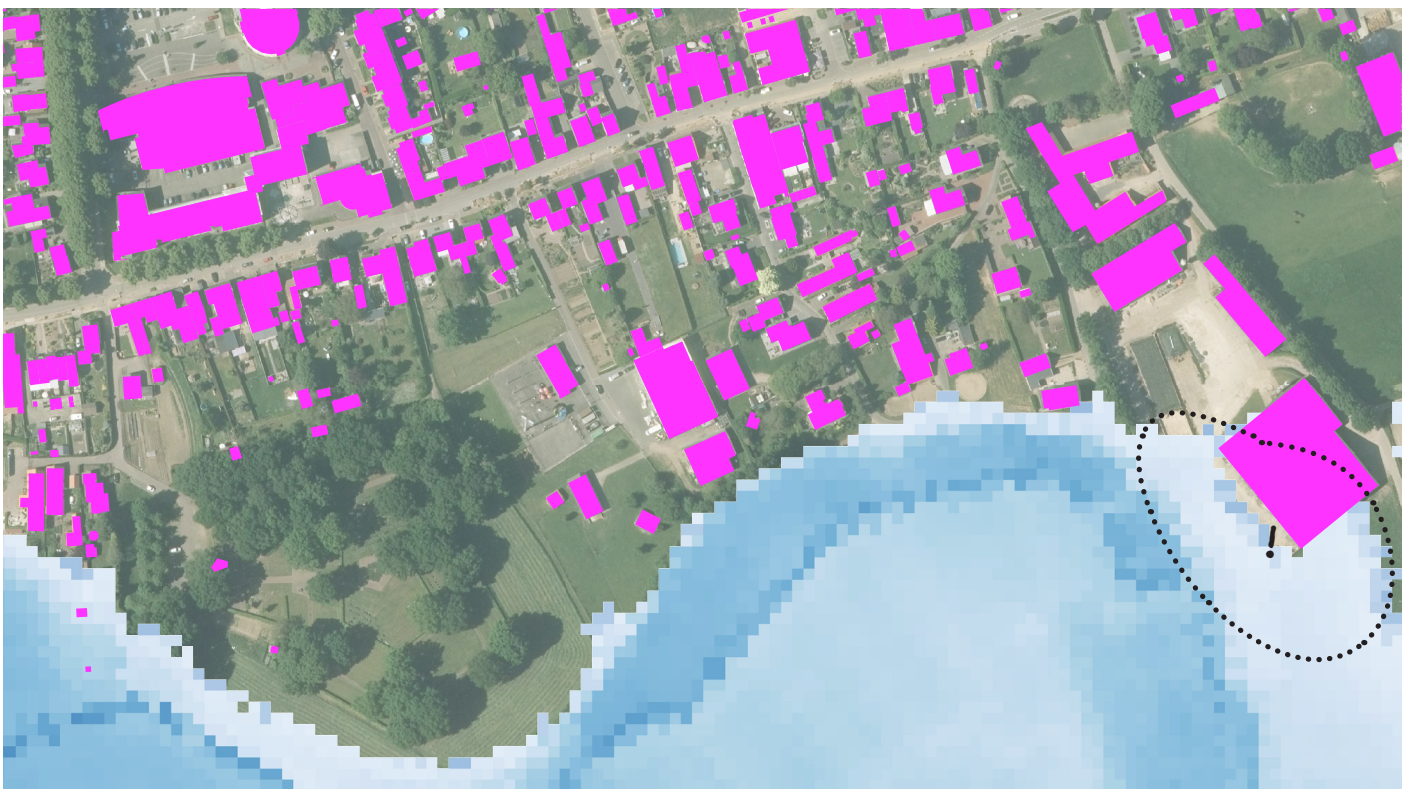
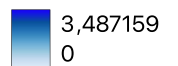
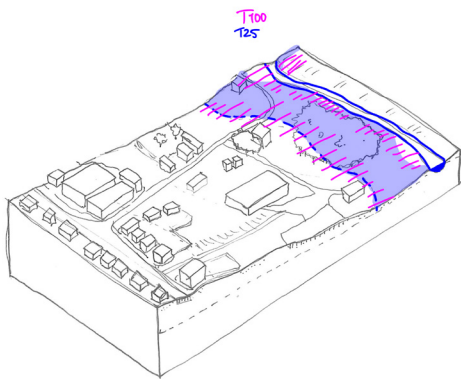


# HYDROLOGICAL EXTREMES [water]



Melick has been established on the higher ground levels along the floodplain. When projecting the T100 water scenario, there is no direct water safety issue. The main infrastructure around Melick is also not affected due to its strategic location on the higher parts of the valley.

During a T100 flood, the water would accumulate alongside the edge of the floodplain. This would temporarily transform the affected area into a wetland, which could last up to one week.



## USE OF SPACE [function & culture]

-

The main village activities take place around the 'Dorpsstraat', the main village road. The village core, as well as the sideroads to the floodplain, are attached to this main street, which is also the street that formed the base of the linear development of Melick.

The floodplain and elements of the Roer can only be experienced within these sideroads that lead south of the village to the river. These streets are residential, and its intimate nature results in a privatised appearance. The Roer river and its floodplain are only visible where these loops meet the floodplain.

Because these sideroads and loops are the key to connecting the village of Melick to the floodplain, it is important to make them accessible and to provide areas to reside in once reaching the edge of the village. The now privatised roads welcome visitors and residents to experience the river from the edge of the floodplain with a selective view of its natural composition.



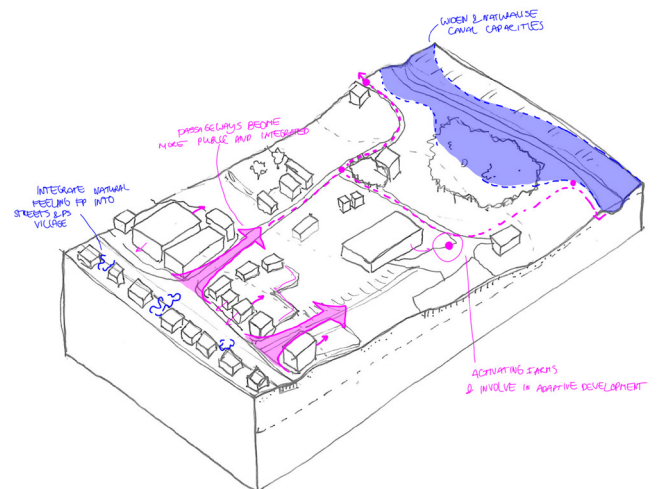
The sideroads of the Dorpsstraat lead to the floodplain, providing a selective and almost framed view of the floodplain and elements of the Roer river.

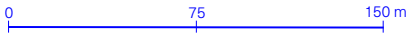
## OPTIMISING PASSAGEWAYS

The design brief for Melick entails optimising the sideroads that lead to the floodplain and view of the elements of the Roer river. By opening up these loops and enhancing the space along the edge of the floodplain, the now privatised sideroads can form a selective view and look at the natural watersystem. Emphasising the passageways and re-evaluating the beauty that is already present at the end of the sideroads, the orientation of the fringe of Melicks flips again towards the Roer river.

## KEY FINDINGS:

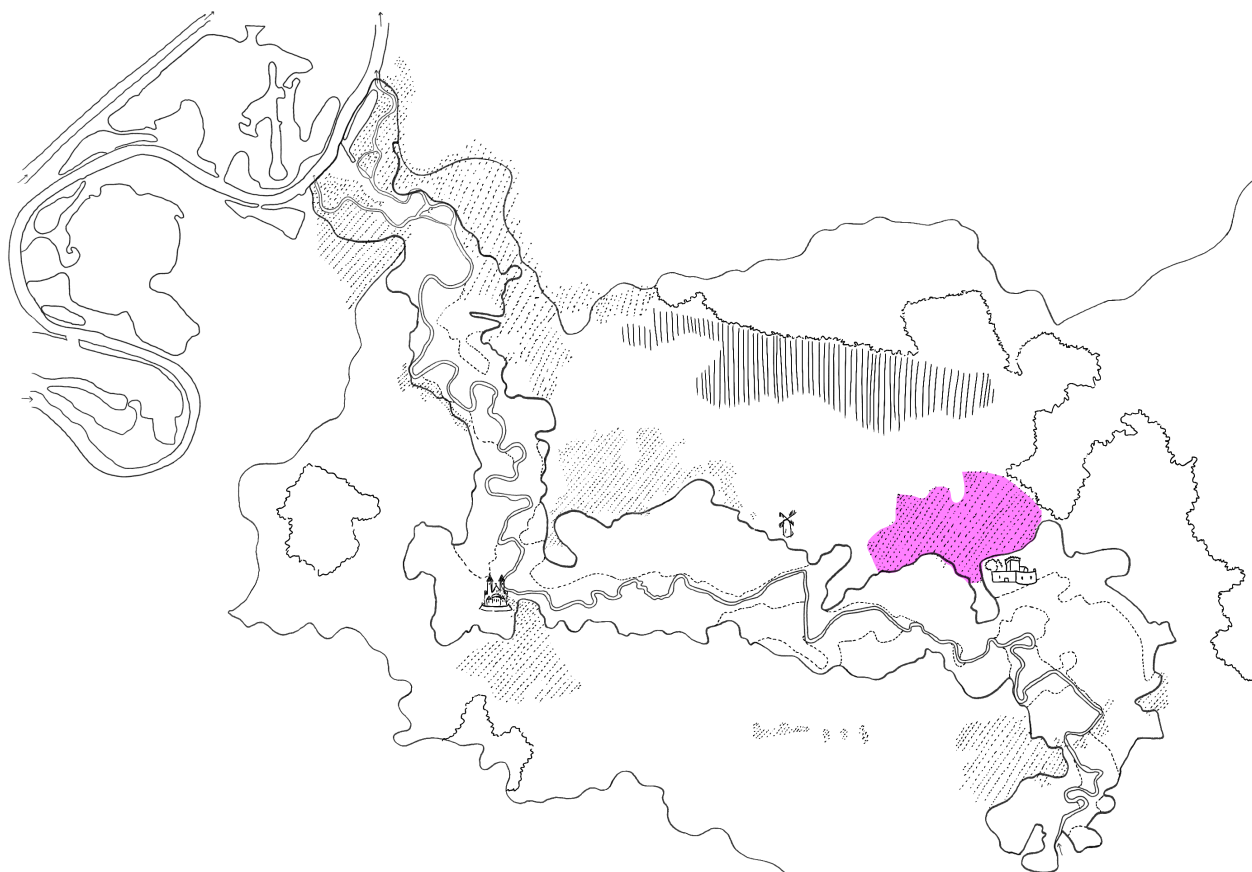
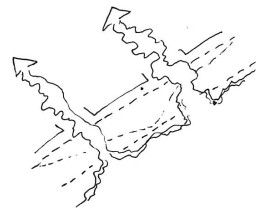
- The linear development of the village over time creates a disconnection of the village (core) and the naturality of the floodplain.
- Small roads are possible entrances to the floodplain -- could be considered for the small acapunctural interventions.
- Entrances to these floodplains are small and privatised.
- Possible intervention areas are located in the possible floodable zone.





# HERKENBOSCH





# ENTRANCES

[accessability]

+/-

The two roads that once formed Herkenbosch serve as the main roads through the village and merge into a larger infrastructure that connects Herkenbosch with its surrounding villages.

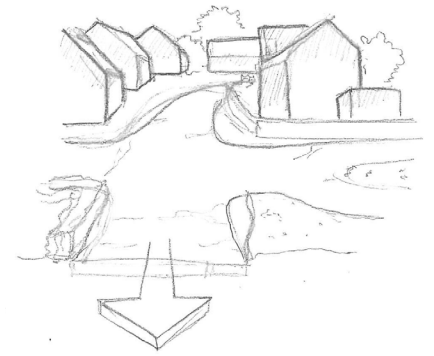
The N570 separates the national park 'de Meinweg' from Herkenbosch but ensures a good connectivity of the village to the larger infrastructural network and Roermond.

The Bondersweg is the main road that enters Herkenbosch from the floodplain, directly connecting Herkenbosch with Vlodrop.

The buildings within these entrance zones are often disconnected from the roads that enter the village. Large fenced or hedges mark the separation of the public and the privatised realm. Because of this, there is no clear mark where the village starts and where the fringe is exactly located.

The main cultural building of Herkenbosch is the castle of Daelenbroeck. Located on the edge of the village, the castle provides the ideal marking of entering the floodplain, as the shift in the landscape and view to the river becomes clearer than along the entrance roads.

- Village fringe - edge
- Primary transportation route
- > Infrastructure into village



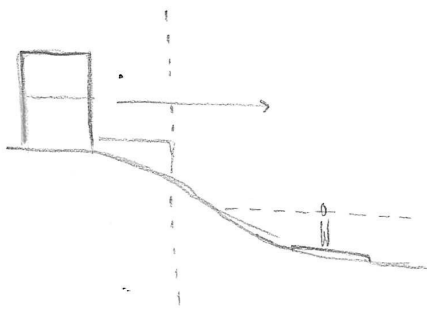
# PUBLIC-PRIVATE [fronts]




Next to the hedges that demarcate the public and private domain, Herkenbosch has a very present height difference that defines the village fringe and the relation between public and private property.

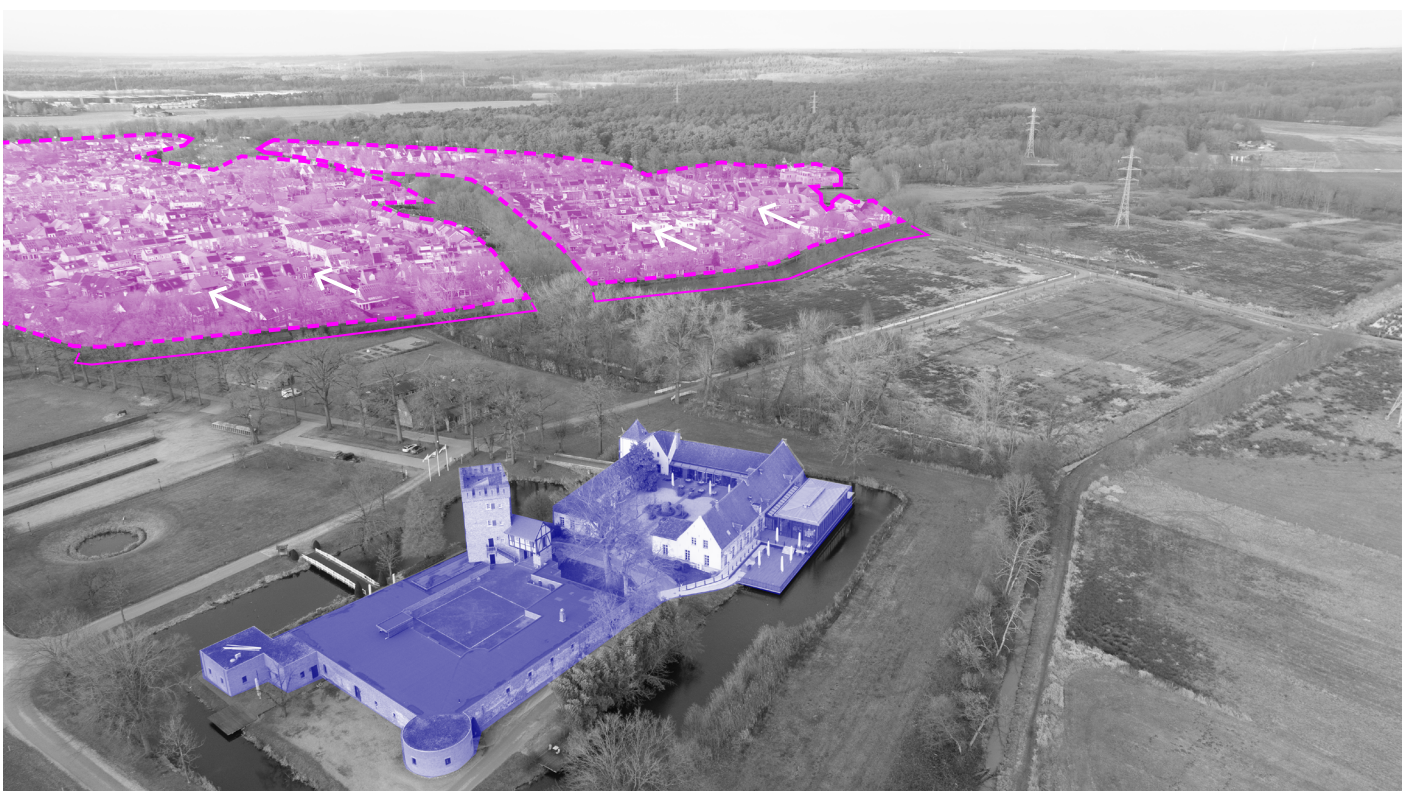
This height difference ensures safety from flooding, but also forms a limitation in experiencing the floodplain from the higher terrace. Because most houses are built along the edge and face away from the floodplain, the public fringe starts at the bottom of the terrace. This results in the height difference not only becoming the marker of public and private space, but also forming a limitation of the

experience of the Roer river. As the river can only be seen in the distance, this limitation in sight results in a lesser connection of the village with the Roer river.

Castle Daelenbroeck, however, is a semi-privatised property, meaning that it is open to the public but only during selective periods during the day. The public space around the ditch is accessible at all times. The location of the castle, better connected to the floodplain and elements of the Roer river, establishes a limited connection of the main axis from the village core to the floodplain.



-  Cultural/public function
-  Privatised area
-  Boundry private area



# MATERIALITY OF PUBLIC SPACE [perception]

In Herkenbosch, most of the streets consist of asphalt. The village core and some areas developed before 1980 are materialised with clinkers. Herkbosch therefore has a more 'modern' feeling to it, but the over-use of asphalt also results in the streets not reflecting the location of the village within the context of Midden-Limburg along the Roer river.

The road along the village fringe, at the foot of the slope, is made from semi-paving and therefore connects better with the adjacent natural environment of the floodplain.

The axis that connects the village to the castle functions as a green corridor, with an asphalted path leading to its property. Within this green corridor, a lane of trees is placed on both sides of the road, emphasising the route towards the castle and the floodplain from within the village.

There are a couple more green corridors that connect the village to the floodplain, but these are less prominent and smaller in size and are missing the trees as a mark to the floodplain.

Route



Public space

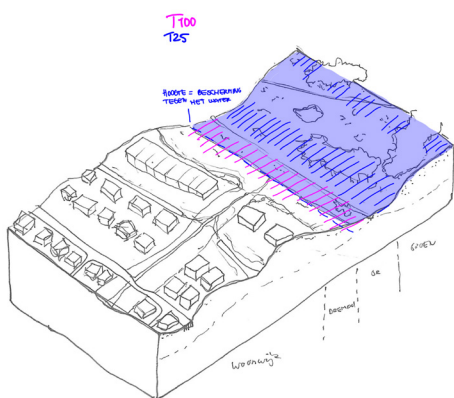


# HYDROLOGICAL EXTREMES [water]

+/-

The difference in height between the terrance on which Herkenbosch has been built and the floodplain is larger than in other villages. While this difference has a negative effect on the relation between the village and river, it ensures safety from flooding. During extreme discharges within the Roer river, the village is not endangered.

The castle, however, lies lower than the village and more into the floodplain itself. During extreme discharges, the castle will become flooded. Intervening with flood prevention measures needs to be carefully considered, as large-scale interventions could alter the moat and therefore the historical design of the castle.

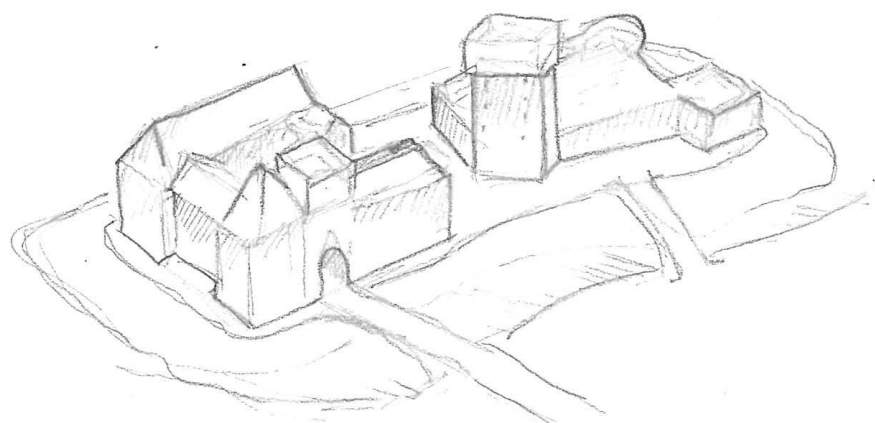


## USE OF SPACE [function & culture]



Castle Daelenbroeck is part of the cultural heritage of the Roervalley. The building and its semi-public function form together with the position of the castle an important landmark that connects the Roer and its floodplain to the village through accessibility, perception and experience.

The castle can therefore be considered as part of the floodplain, functioning as a cultural connecting element between Herkenbosch and the Roer river.





The main road to the castle of Daelenbroeck functions as a passageway through the village. The row of trees contribute to the appearance and importance of the castle for Herkenbosch.

## CULTURAL HERITAGE & CORRIDORS

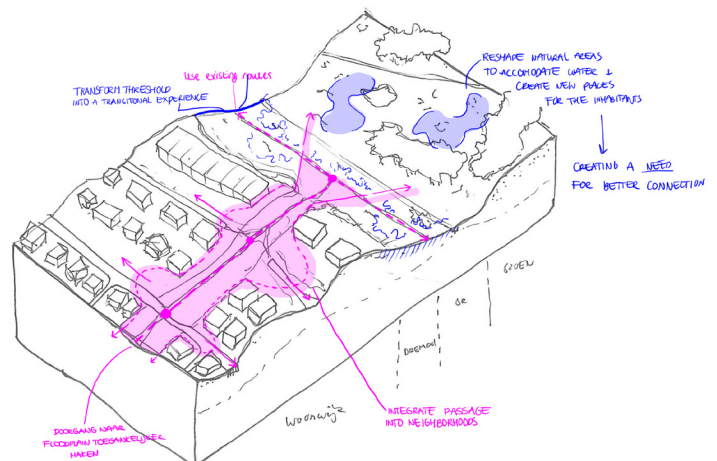
For Herkenbosch, the design brief is formulated by optimising the existing corridors to the castle of Dealenbroeck.

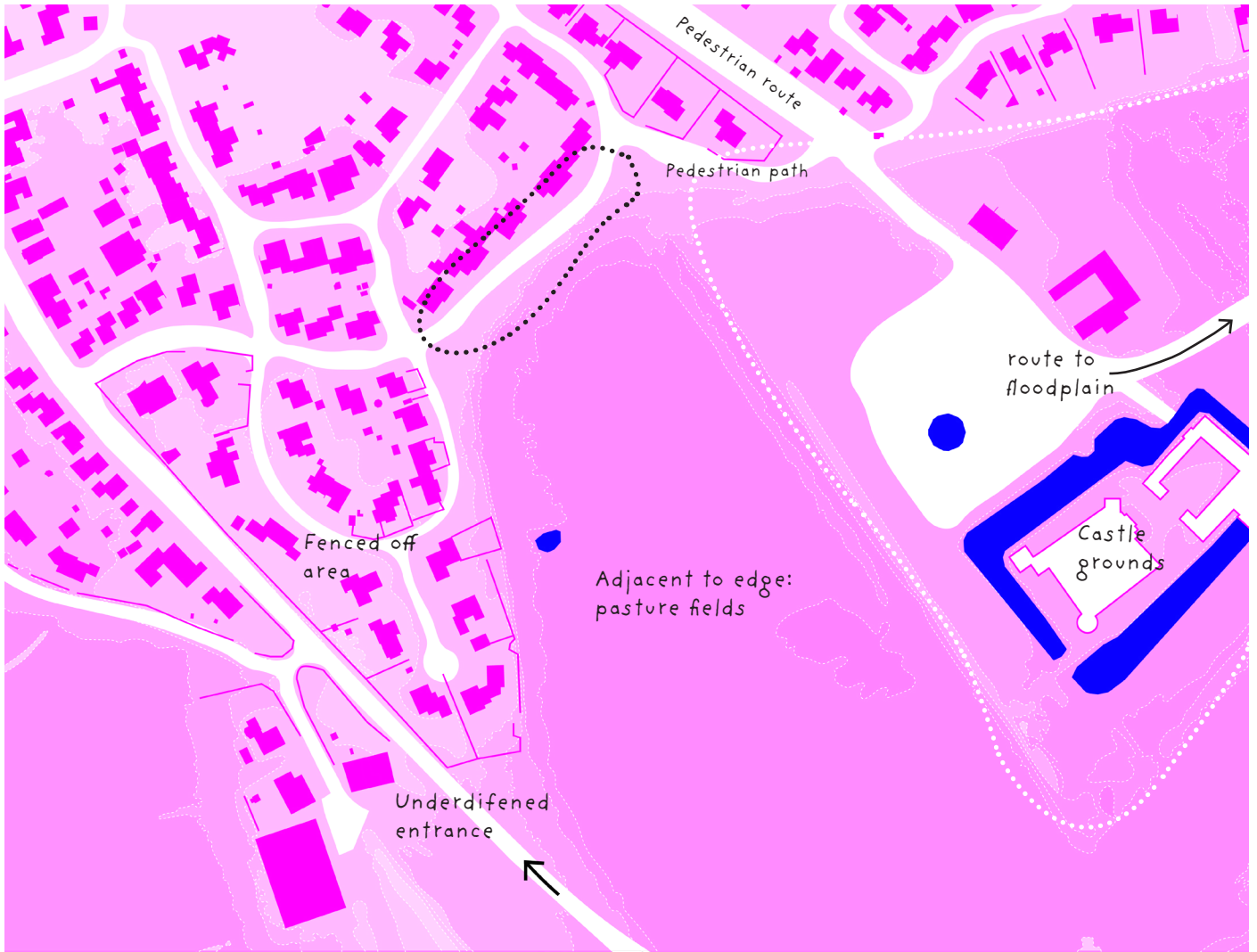
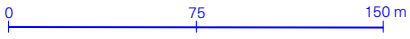
The castle functions as an extension of the Roer river, as the building used to be closely linked to the water system. Herkenbosch also has the largest height difference between the floodplain and the village, resulting in more disconnection between the transition zone and the residential areas. Bridging this height difference through the green corridors that already exist in the village would improve the overall connection of Herkenbosch to the floodplain and eventually the Roer river.

Because Herkenbosch is a village that is adjacent to the floodplain, the experience of the Roer river is mostly created through a visual connection. Implementing visual lookout points together with the existing village fringe and the Dealenbroeck castle will result in an overall well-integrated village fringe.

### KEY FINDINGS:

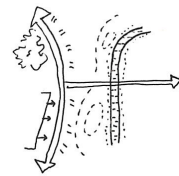
- The castle and its grounds are cultural significant for the Roervalley, but is fragile for extreme flooding.
- Limited routes to the floodplain.
- Along the entrances to the villages, the houses are fenced off - resulting in 'uninviting' entrances.





# VLODROP





# ENTRANCES

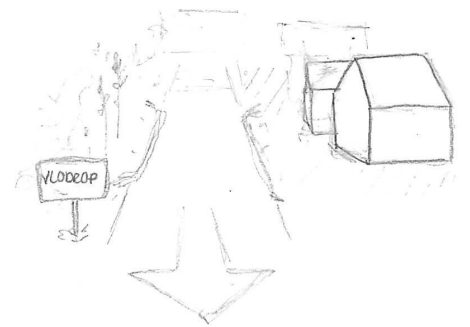
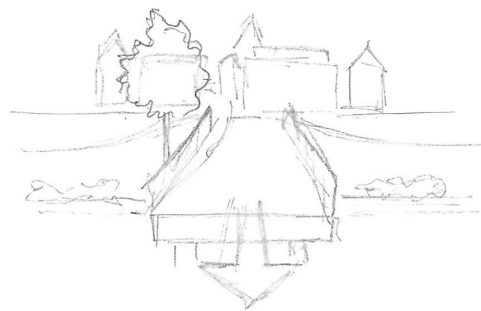
[accessability]






Unlike the other villages, Vlodrop is not directly connected to a provincial road. The largest infrastructure connects Vlodrop with Sint Odilienberg and Herkenbosch.

The main entry is through the bridge that crosses the river, where the village core can be reached almost immediately. The different spatial areas, the river, village fringe and village core transition well into each other, where each area has its own projection and relation of the buildings to the public space.

*The entrance of Vlodrop through the bridge marks the relation and importance of the Roer river to the village. Optimising the public space and the floodplain along this entrance will enhance the orientation of the fringe towards the water even further.*



-  Village fringe - edge
-  Primary transportation route
-  Infrastructure into village



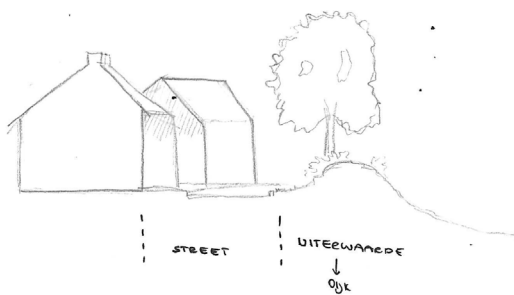
# PUBLIC-PRIVATE [fronts]





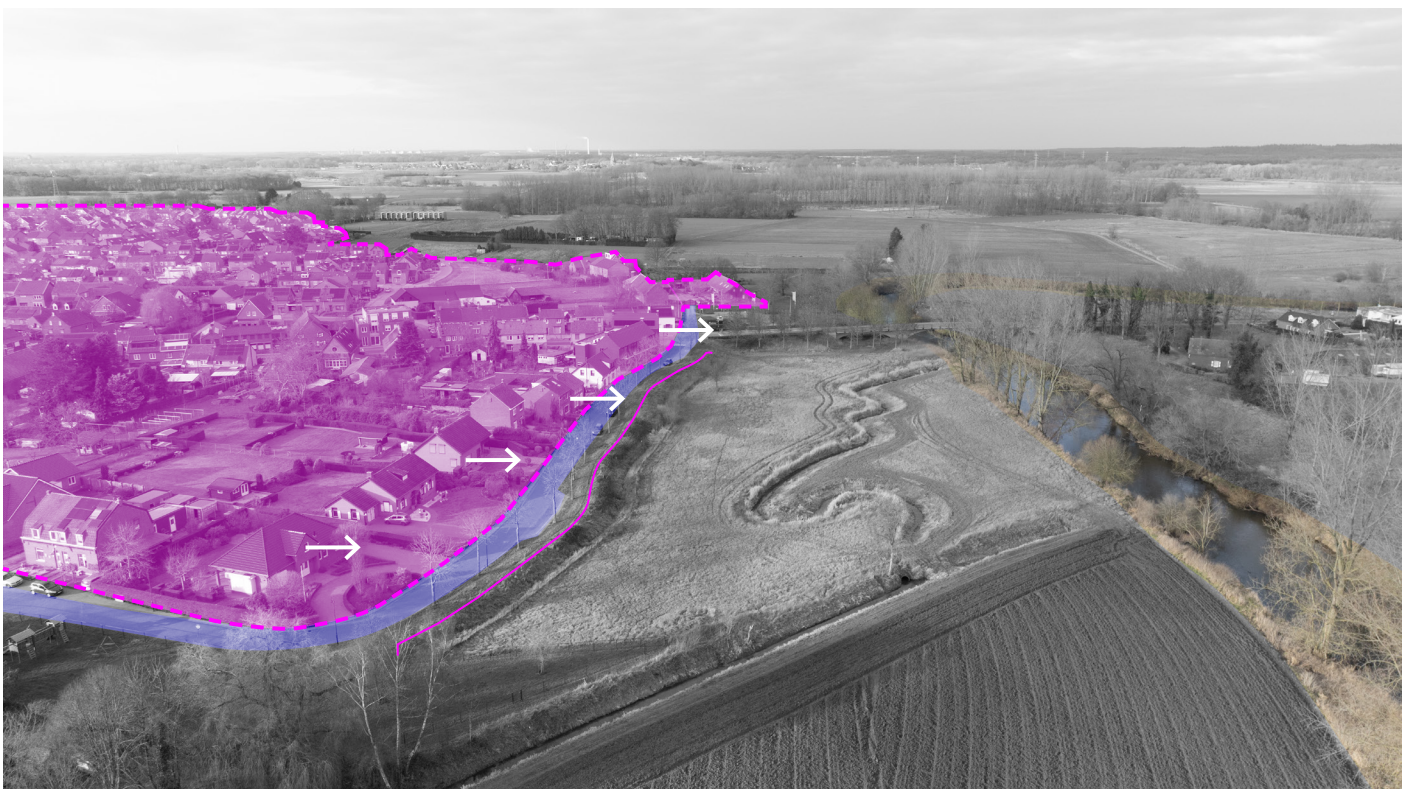
Vlodrop is the only village in which the buildings along the village fringe are oriented towards the Roer and its floodplain. The facades of the houses face the river.

This means that the public area (the street) that is adjacent to the floodplain becomes the transition zone of the village fringe, connecting inhabitants better and more often to the Roer.

This small difference in orientation and the placement of infrastructure results in the better transition of public and privatised areas, as well as the overall connection of the village to the Roer river.



-  Privatised area
-  Boundry private area



# MATERIALITY OF PUBLIC SPACE [perception]

The main axis through Vlodrop is made of asphalt, with the sideroads and crossings clearly visible, as those are materialised with clinkers. Along the main road, bikelanes are present and marked by a red colour.

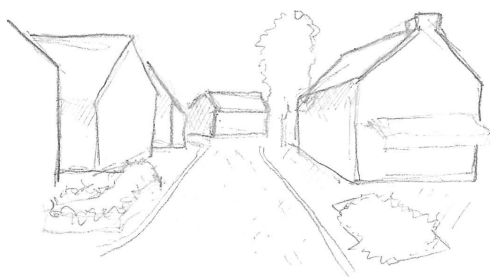
The sides of the streets are hollow and marked by a different pattern of bricks, draining the water during (heavy) rainfall and marking the edges of the street.

While the streets of Vlodrop are quite green compared to the other villages within the Roer valley, the public spaces along the river contain a relatively large paved surface. Most of this area is reserved for parking, but the full capacity will only be met a couple of times per year (during holidays/festivals).

Route



Public space

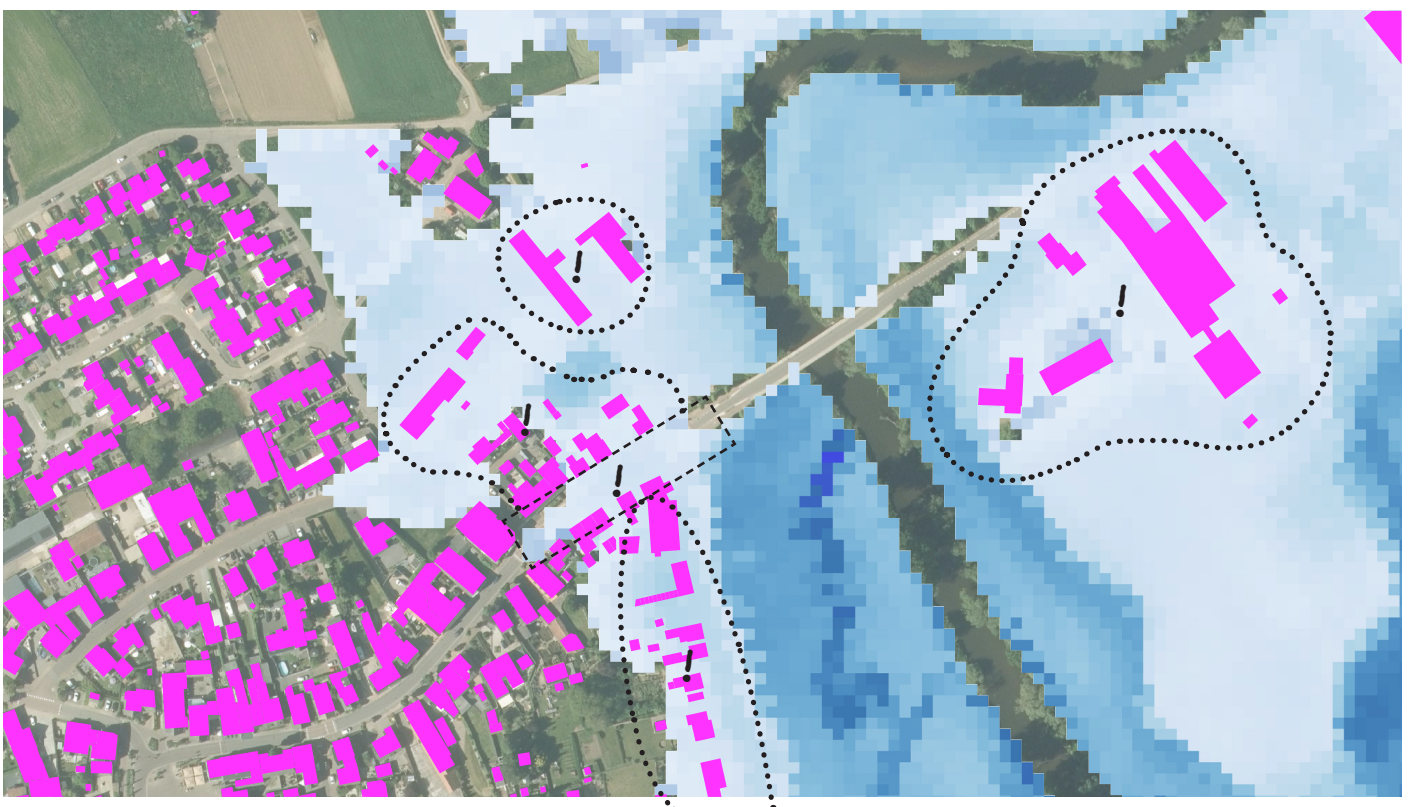
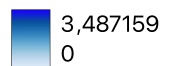
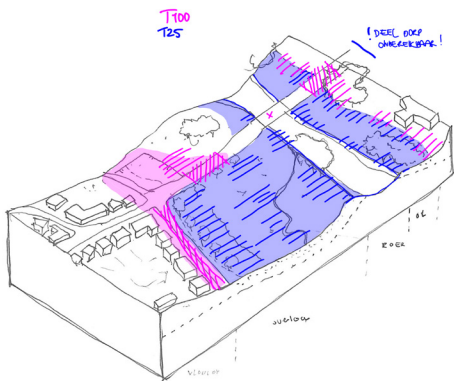


# HYDROLOGICAL EXTREMES [water]



Flood risk is an urgent issue for Vlodrop. During extreme discharge events that occur once every one hundred years (T100), almost all dwellings along the village fringe will get flooded. Next to this, the main road that crosses the Roer river becomes inaccessible, disconnecting the village core from the area east of the river. East of the river, a few houses and retail are located that are a part of Vlodrop. These houses are risking damage and disconnection from infrastructure, but are located within the floodplain.

Solving the issue of water safety is almost impossible in this area, according to the study of Deltares (2023). Creating space for the water flow or changing the vegetation of the floodplain would not directly impact the places that would get flooded during a T100 scenario. The Roer river is a rainfed river, so to make an impact on the amount of discharge that flows through the Roer river during a T100 scenario, alterations have to be made within the upstream area of the catchment of the Roer river.



## USE OF SPACE [function & culture]



As the village of Vlodrop is situated along the Roer River, one of its main public spaces is near the waterfront. Its position is strategic, as it not only acts as the transitional public space to connect the village to the Roer river, but it is also placed next to the main axis of the village and the bridge crossing the Roer.

While this recreational zone is quite important and significant for the village of Vlodrop, the majority of the floodplain on the opposite side of the bridge remains largely inaccessible. This space is considered part of the Natura 2000 area, but is not integrated with the adjacent street because of the positioning of the dyke. As can be seen from the hydrological extreme analyses, removing this dyke exacerbates flood risks. Integrating the floodplain with the neighbouring street is crucial, but design interventions can help to bridge the difference in height and perception of the river.



The open space along the water in Vlodrop can become the hotspot of activity for the village.

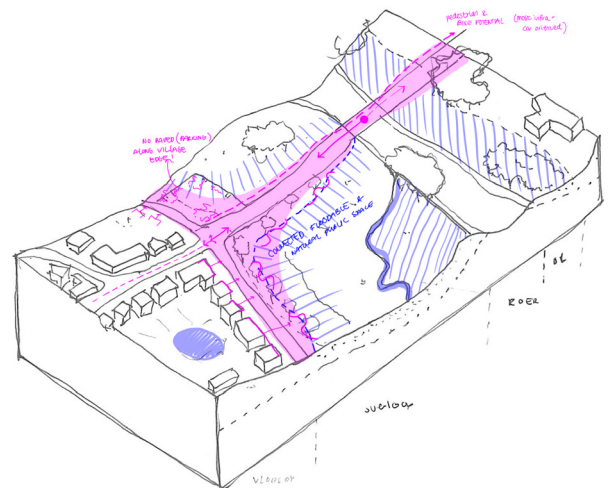
### ADAPTIVE OPEN SPACES

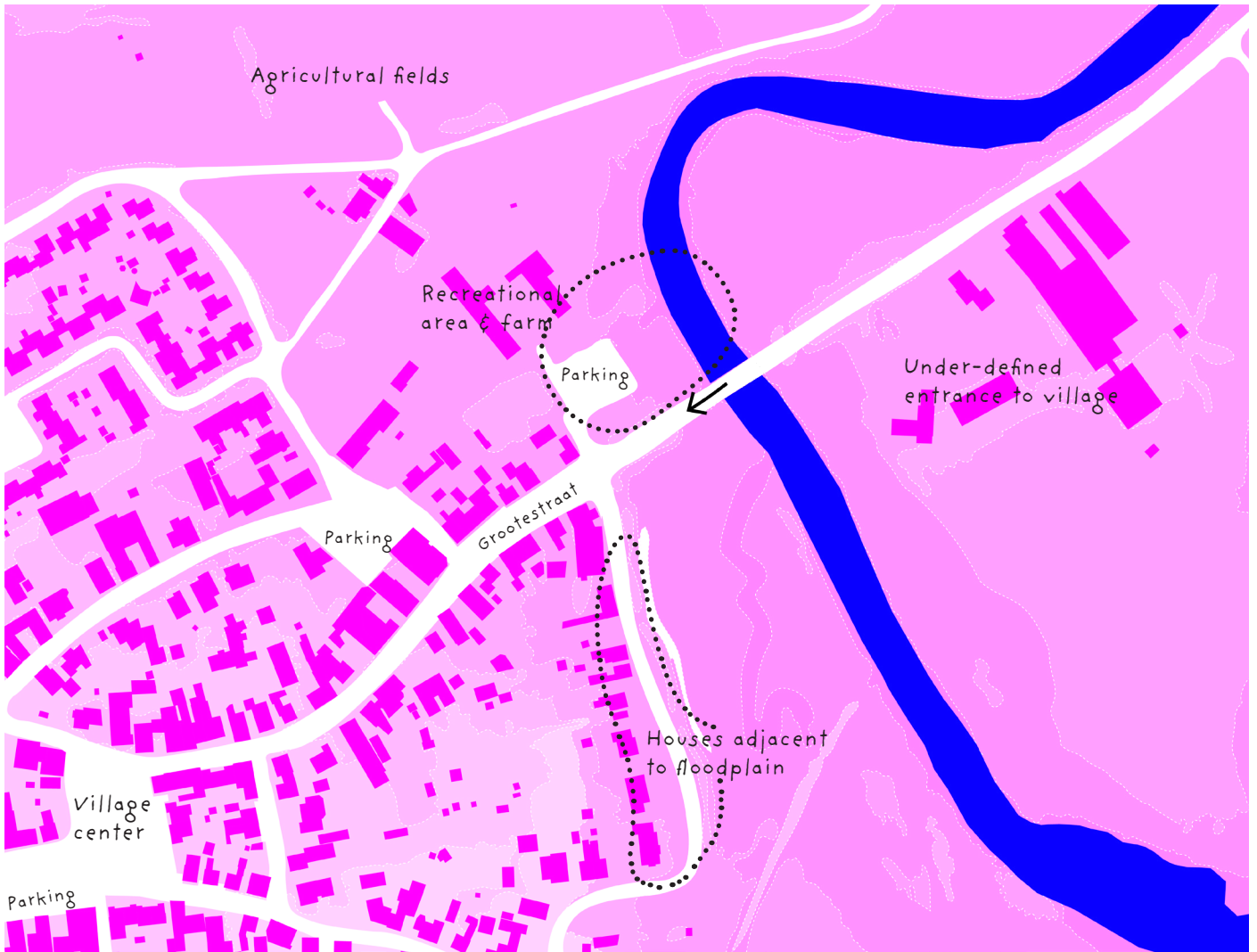
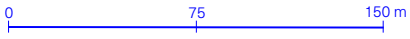
Vlodrop is a river-oriented village, in which the streets adjacent to the floodplain are oriented to the natural systems and areas. The design brief is therefore formulated to enhance the open spaces along the Roer river that are already there. For the open public space, an integration of the large parking zone into the natural materiality and atmosphere of the floodplain is required. The street next to the floodplain has a dyke, which cannot be removed as seen from the T100 flooding scenario. Interventions around the dyke are needed to make the floodplain behind the structure integrate with the street of the fringe.

The design brief for Vlodrop is different compared to the other village fringe design briefs, because the impact of the flooding is more urgent. To implement interventions that reduce the impact of possible flooding, the existing relation and orientation to the Roer river should always be considered.

### KEY FINDINGS:

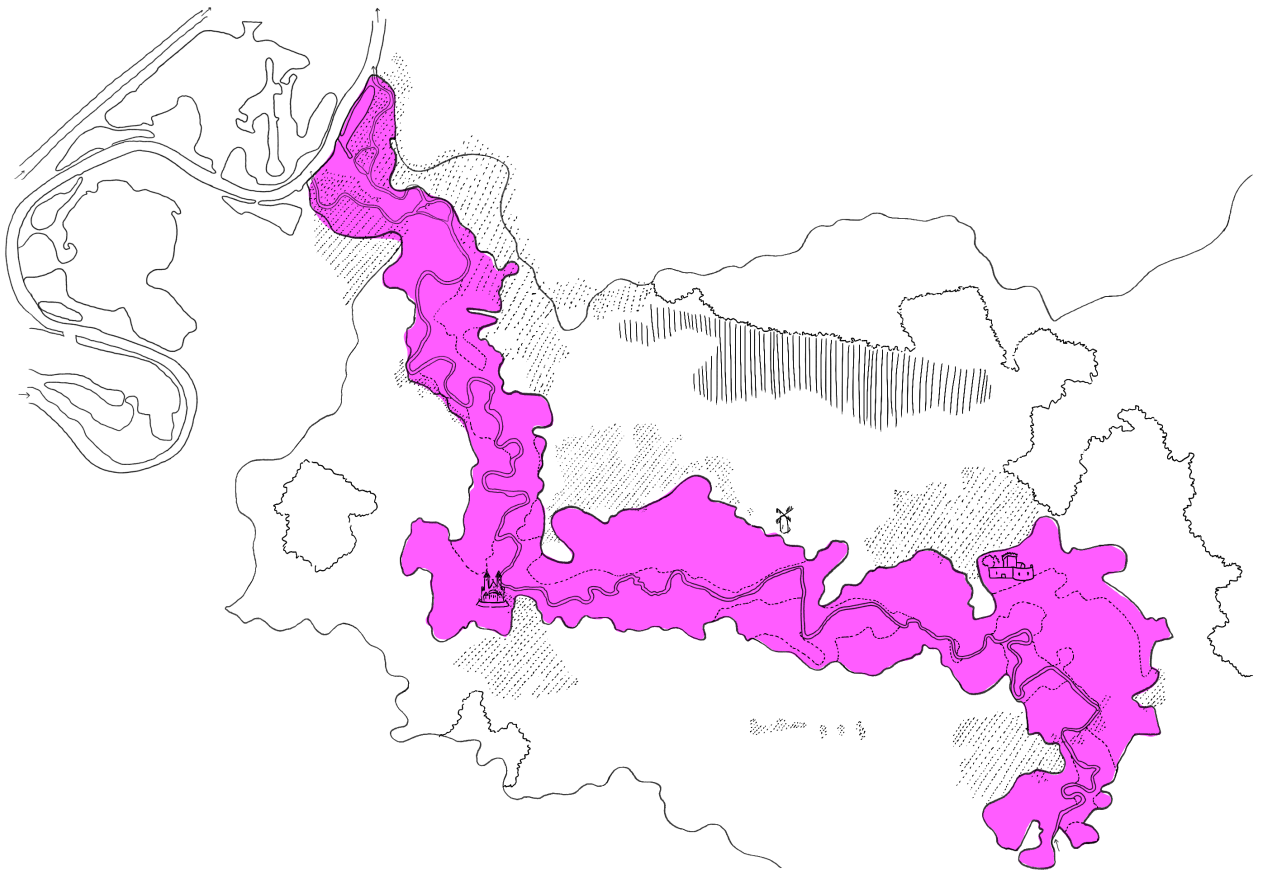
- Village fringe fragile for flooding
- Due to the position of the street in regards to the floodplain and houses, there is more public connection to the floodplain.
- Cultural activities along the floodplain make a social connection.





# FLOODPLAIN

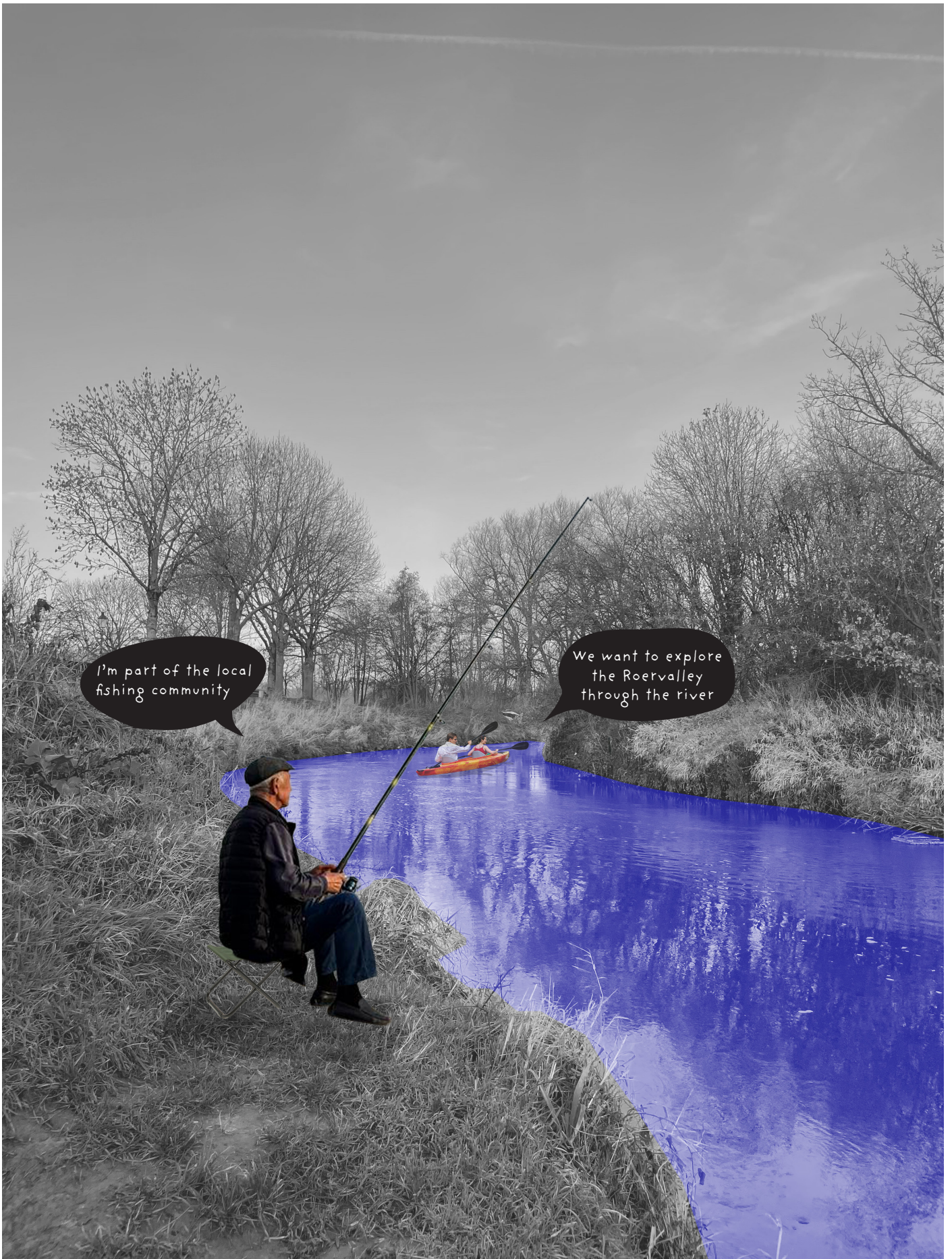




## USE OF SPACE [function & culture]

The floodplain of the Roer valley is a mixture of landuses, varying between Natura 2000 and agricultural landuse. Along the river, the land is considered part of the Natura 2000 network.

The floodplain is often used by the inhabitants of the surrounding villages to recreate. Cycling, walking, fishing, playing and residing are activities that are being undertaken within the floodplain. Sometimes the floodplain and the river are considered a part of the village, such as in Vlodrop and at other times the experience of the floodplain is separated from the village identities. The naturalness of the floodplain and the Roer river is strongly contrasting the paved materialised streets of the villages.



Mostly during summer, the Roer river becomes a recreational hotspot.



The Ohéweg is the main (bike)route from Herkenbosch to Melick.  
The route goes through the floodplain.



The majority of the floodplain functions as farmland. Potatoes, mais and beets are produced and distributed to the rest of the country.

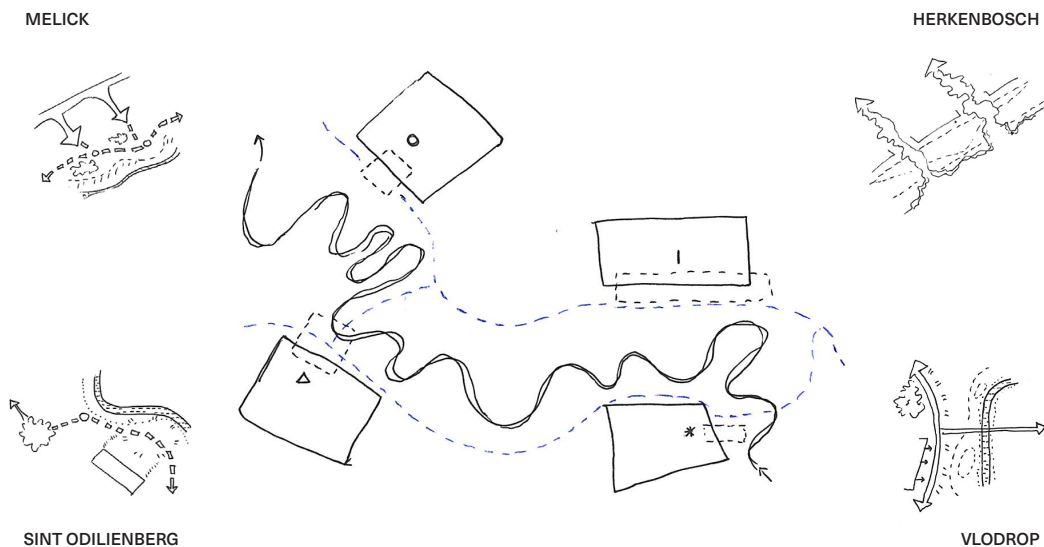
## ASSESSMENT OVERVIEW

Combining all the assessments made per theme across the different fringes, the design approach per fringe can be established. In pink, the main themes for improvement are highlighted, showcasing a need for a revision of the spatial relation of the Roer and the village fringes. When implementing the place-sensitive interventions, it is crucial to consider the public-private relationship of the inhabitants of the village towards the public space as well as the Roer.

### [APPROACH PER FRINGE]

Only Vlodrop is marked as a village with a need for interventions in terms of water safety.

All information gathered through the making of the analysis of the atlas is used in the further design process for the thesis *rethinking the Roer fringes*.



	SINT ODILIENBERG	MELICK	HERKEN-BOSCH	VLODROP
ENTRANCES	+/-	+/-	+/-	+
PUBLIC-PRIVATE	--	-	-	+/-
HYDROLOGICAL EXTREMES	+/-	++	+/-	--
USE OF SPACE	+/-	-	+	+/-

