



Over de grenzen

BAARLE — NL | BE — 2020
CROSSING BORDERS STUDIO



Rotterdamse Academie van Bouwkunst
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Students

Margot van Bekkum
Iris Bol
Daan de Jong
Tijme Scholten
Ayla Stomp
Diederik Vane
Teun Vosters

Tutors / Editors

Carolien Schippers
Negar Sanaan Bensi
Nasim Razavian

Special thanks to

Edith Wouters
Hinke Majoor
Jens Jorritsma
Paoletta Holst

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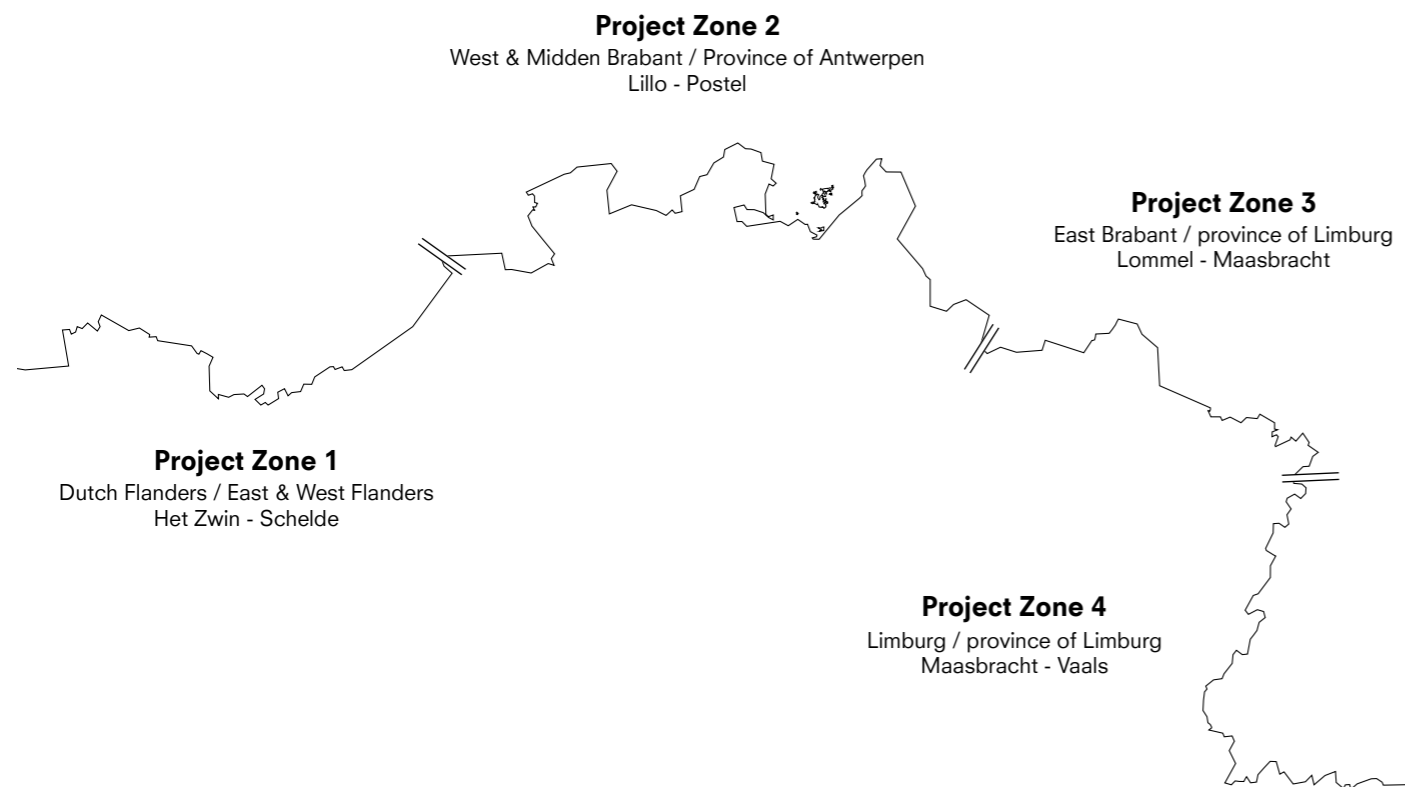
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1.1 RESEARCH FRAMEWORK

Carolien Schippers & Negar Sanaan Bensi

The Crossing Borders: Overslag studio at the Rotterdam Academy of Architecture was developed as part of the research project OVER DE GRENZEN. Below a short introduction to this research initiative.

Borders are territories where abstract political communities and collective identities come together in physical space. They are dynamic phenomena subject to political, economic and social influences. These influences present themselves in a multitude of spatial constellations. A border can take the shape of a wall, a fence or line in the sand, but it can also take the form of a more ambivalent zone, a no-man's land or a place of exchange.

OVER DE GRENZEN is a research project on the spatial development of national borders in Europe. The European Union's trajectory since WW II towards more integration and cooperation has come under increased pressure for being out of touch with the everyday experience of its citizens. And while the discussion surrounding the course of Europe is vivid, it only focuses on a united Europe as an idea but not as a physical place.

The aim of OVER DE GRENZEN is to contribute to the debate on the meaning of a united Europe and its borders from a concrete spatial perspective. Currently, European integration is focused mostly on a network of capitals connected by low cost air travel, but less so on the territories where the member states actually meet. What is striking is that border regions have the advantage of physical proximity to a neighboring economy, but this hardly ever materializes in their development. These regions are often characterized by economic and population decline resulting in a landscape of obsolete buildings and infrastructures.

In OVER DE GRENZEN we want to reflect and speculate on the possible roles these current fringe regions can play in the future of the European project.

The first phase of the project focuses on Dutch-Belgian border and examines its current state and recent development since it was abolished by the 1985 Schengen treaty. The border between the Netherlands and Belgium has been static and uncontested for decades. Apart from some minor adjustments initiated by the two countries in cooperation, it has not been subject to conflicts like many other borders in Europe. It is this semblance of stability that allows us to clearly examine the effects of the Schengen agreement. How has the "disappearance" of the physical border influenced the spatial development of the adjacent territories?

We started by dividing the 450 km long border region in zones forming characteristic territories along the border to be explored. In 2019 we explored the border of Dutch Flanders - from Cadzand to Doel close to the Antwerp harbour. In 2020 our initial plans were overtaken by the corona virus pandemic and subsequent developments in the border region. To still make our explorations possible we adjusted our plans for zone 2 and focused our explorations around Baarle Nassau - Hertog, an almost anecdotal anomaly in the Belgian Dutch border forming an archipelago of enclaves and exclaves.

With this studio and our previous and following explorations we aim to identify patterns of development, anomalies, frictions and exchanges along the border that can lead to a more profound understanding of the possibilities for the future of (open) borders in Europe and in particular the NL-BE territory.



Stone factory

1.2 CROSSING BORDERS: BAARLE

Carolien Schippers & Negar Sanaan Bensi

The era of renewed fortification

After a successful studio in 2019 with the exploration of Dutch Flanders we were in the midst of preparations of the next stage in our trajectory when the context of our border exploration changed abruptly. From a traversable ambiguous zone of transition, the border between the Netherlands and Belgium transformed overnight into a threshold of restricted access and control from a bygone era.

The police checkpoints and improvised barriers instated by the Belgium government led to kafkaesk situations in the cross border daily routines of inhabitants of the border regions. The most extreme situations materialized in the fragmented villages of Baarle Nassau and Hertog. Free movement across the small patches of Dutch and Belgian territory was not restricted but national lockdown policies were still forming a contrasting patchwork of regulations, policies and curfews. The anecdotal status of Baarle took on a new dimension, attracting the attention of broadcasters and newspapers such as the New York Times.

To us the spatial realities in and around Baarle also formed a special interest. It allowed us to continue our studio in the fall of 2020 and to cope with the uncertainty of travel restrictions. Here we could explore the border "without" crossing it. But rather than focusing on the anecdotal dimension of Baarle in a moment of crisis we focused our studies on investigating the enclave/exclave conditions formed by historical parcel trade from the feudal era and their relationships to the larger border territory.

As the studio moved through the fall of 2020 our political context continued to change and challenged our preconceptions. The overnight transformations of European borders due to the worsening pandemic and the looming Brexit once again underlined the urgency of investigating the topic of 'Border' from a concrete spatial perspective; mapping, projecting and studying the border territories as 'zones' of 'exchange'.

Research

In the studio Crossing Borders Baarle students investigated the border region of de Kempen. In duo's they explored the Dutch Belgian border territory from Doel to het Zwin and identified how the border expresses itself physically in the landscape and through more abstract cultural and social constellations. The interrelations between the tangible and intangible notions of the border were documented through a series of maps, representing the anomalies of the territory.

In addition to the territorial scale students individually focus on a fragment where different natural, political and cultural phenomena come into dialogue at a specific site on the border.

Design

Using the knowledge gained through the territorial and fragment maps students develop their program and project ensemble. Focusing on the scale between architecture and urbanism they design several structures that enter into dialogue with each other and their surroundings. Students present their work in three scales; site - project - fragment. Throughout these 3 scales they produce drawings and media to communicate the project.

The design process revolves around using the understanding of the tensions between connection and separation, presence and absence, end and beginning, line and zone, center and periphery in the ensemble and individual building design.

Communication

In the Crossing Borders studio, students developed their communication skills through the media of drawing and writing. In a series of seminars, literatures on the practice of mapping and the theory of the border-thinking were discussed. The process of mapping the territory and the expression of the border in Overslag formed the backbone for developing the spatial design. The result of the investigations into different drawing techniques are integrated into 3 panels. Each student also reflected on and summarized their process in a project statement.



Sand quarry near Castelre

1.3 PROCESS & METHODOLOGY

Carolien Schippers & Negar Sanaan Bensi

In this studio, we encourage the historical, cultural, and contextual study of complex spatial regimes and mechanisms as the prime forces for architectural intervention. We emphasize the various scales of design from territory to object and employing the various techniques of mappings and drawings not only as a medium for representation but also as a tool for investigation and research.

The studio includes both research and design as being intermingled. The focus was on the process and learning of how to argue for decisions made by students throughout the process, also an awareness on what methods and tools can be used in both research and design.

In our understanding, the method is not simply a recipe preceding the process of doing research or design. Instead, it is a way which slowly emerges throughout the process. As Agamben rightly states:

“Contrary to common opinion, method shares with logic its inability to separate itself completely from its context. There is no method that would be valid for every domain,

just as there is no logic that can set aside its objects.” (Giorgio Agamben, *The signature of all things: On method* (New York: Zone Books, 2009), 7.)

Method in this case is simultaneously connected to the object of study, i.e. the border landscape. This is especially important when the topic of the studio is dealing with a complex and layered notion such as ‘border’. In this sense, a multiplied gaze and reading of the site seem necessary to grasp such a spatial and territorial complexity. While the site exploration has been an important phase in our studio, this year due to quarantine restrictions, specifically incompatibility between Dutch and Belgium regulations in the border areas, it was difficult to plan the site exploration as a collective act and as a concrete part of the investigation process in larger territory. For that reason, the students had to do their site visits individually and more fragmented on specific areas within reach in a few hours. This limitation already poses constraints on how to investigate and later map this area.

As a general framework, the studio was divided in three main parts.



La Bonne esperance

Remote gaze

The first two weeks before the trip, can be defined as a 'remote gaze'. Students used different sources such as google map, archival materials, movies, images and desktop research to establish a general understating of the topic and the territory.

Initially we discussed some general themes which could open a window for the students to start their investigation and collecting of materials and documentation. The first series of maps presented in this booklet, are the results of this phase. In this part the students also worked collectively, shared information and established a collaborative platform to inform each other on their findings. After the initial inquiry the students found interest in certain topics or fragmented sites. This initial investigation helped the students to form some questions and pints of curiosity for further investigation with more focused gaze. Hence, the second part of the studio can be called as 'deep gaze' and it was related to the act of field research and site visit.

Deep gaze

During the trip and the next two weeks after, the students were encouraged to explore closely and individually the territory. They were asked to define a specific gaze to identify the spatial presence of the border. As mentioned before, due to circumstance around the quarantine restrictions, we had to do this trip in groups of one or two. Although, we were not able to have a extended visit on the larger territory as we had last year, however the crisis

around Covid 19 and the different systems of regulations between NL-BL border, made the importance of studying the border areas, specifically the complex condition of enclaves and exclaves much more visible.

The second series of maps which we call 'Fragments' are the result of this deeper gaze to the larger territory of the border area. Via these maps, each student developed an interest in specific dimensions to present the density and complexity of events and issues which are visible or invisible in the landscape. In these maps, the students used a detective gaze to explore and present an overlay of regimes in a seemingly 'usual' and 'normal' landscape. This phase helped the student to form concrete design questions and problem statements.

Synthesis and Design

In the third phase, departing from their research and individual interest, the students developed a design proposal for a defined problem to actually and spatially (re) form these zones.

Furthermore, we combined the seminar and design studio. In the seminar, every week, the students read two texts. One text focused on the theme of the studio, addressing the theory of border and one text focused on tools, addressing the techniques of mapping and drawings. The readings and discussion during the class also allowed the students to develop a broader vision to the topic, being able to also write a statement for their final proposal.



Mowed grass plains near N260 Grens road

1.4 DRAWING, MAPPING AND THEIR POTENTIALS

Nasim Razavian

In architectural practice, research and design are generally treated as independent phases, research being concerned with observing and analyzing a given reality and design being associated with creativity where a new reality is being constructed. Conventionally, the maps and drawings produced in response to each of these 'phases' are radically different. The maps or the 'research-drawings' normally intend to mirror and mimic the territory as realistic possible, while the 'design-drawings' intend to convince their audience of the creativity embodied in the project.

A map has many relations with the territory, but it should not be confused with it. A map is not an object which merely mimics a territory as a given reality, but it constructs a new reality. Jorge Luis Borges once wrote a short story about the cartographers who were so rigorous to make the map of an empire as realistic as possible that they drew it as big as the Empire itself. William Lutz writes that "the map is not the territory; no map can represent all aspects of the territory; and every map reflects the mapmaker's point of view." James Corner argues that the function of mapping is less to mirror reality than to engender the re-shaping of the worlds in which people live." Corner distinguishes between mapping and tracing. Tracing does not reveal anything new but mapping does as its agency lies "in uncovering realities previously unseen or unimagined, even across seemingly exhausted grounds. [...] It re-makes territory over and over again".

This shows two important potentials for mappings and drawings: Firstly, not only 'design-drawings', but also mappings or 'research-drawings' have the potential to already embody the poetical and imaginary components of the project. Secondly, the design process cannot be understood as a linear process consisting of two separated phases of research and design. Research and design are always entangled with each other and they inform one another constantly and in a reciprocal manner. Therefore,

the drawings and mappings constructed for both always share the fundamental aspects of the project.

Closely related to these first two aspects, is the third potential of architectural drawing and mapping: its being performative. Drawing and mapping are not only nouns but also verbs. The process of making them are as important as the final outcome. The tools, methods, materials, bodily actions, and the notation systems we use affect the process and the outcome. In that sense they have experimental qualities which should be taken seriously specially in creative discourses.

Lastly, drawing and mapping are socio-political and ecological constructs. We create maps and drawings based on the geospatial data we acquire from different databases created through different machines and technologies which are linked to certain institutions. This data is always subject to the specific interpretation and manipulation of the data provider. Neil Brenner writes that institutions "are actively trying to reshape the world's urban and territorial landscapes. In this sense, geospatial data hardly offer a neutral, passive lens for representing the 'real'. We thus also need to direct our critical representational capacities back towards that machine, revealing the agency of the lens itself." In that sense, our choice of the databases is already a socio-political decision and one needs to be extremely sensitive towards this choice. Moreover, architectural drawings have the potential to activate socio-political and ecological thought themselves. They can be constructs through which one thinks about the environment critically. They can also become agents of change, through which one can propose questions, concerns, or solutions about the conditions in which we live.

1. Borges, Jorge Luis "Of Exactitude in Science." Translated by Norman Thomas di Giovanni. In *A Universal History of Infamy*. Penguin Books, 1970 [1954].
2. Lutz, William. *The New Doublespeak: Why No One Knows What Anyone Is Saying Anymore*. New York: HarperCollins, 1996.
3. Corner, James. "The Agency of Mapping: Speculation, Critique and Invention." In *Mappings*, edited by Dennis Cosgrove, 213-52, 1999.
4. Ibid.
5. Brenner, Neil "The Agency of Design in an Age of Urbanization." In *Critique of Urbanization: Selected Essays*, edited by Elisabeth Blum, 224-37. Basel: Birkhauser, 2017.



Border in the souther part of the Baarle village

2 TERRITORY

Negar Sanaan Bensi

According to Oxford Dictionary, the word territory derives from the Latin word territorium, meaning the land around a town and terra (dry land and earth, as opposed to sea) and 'specifically a Roman or a provincial city. In addition terra originated from the Indo-European word ters (dry, to dry). This indicates the very early exercise of city-making (and the possibility of life) on the wet marshy lands of Europe, while in Avestan ters transforms to taršna (thirst) and in modern Iranian it is used as tešneh (thirsty), which means lack of water and thus what jeopardises life itself on the dry arid Iranian Plateau. In this case, as we will discuss in the next chapter, the 'thirst' both literally and metaphorically represents the urge and motive to search for ways and means of inhabiting the dry land. [Ali Nourai, An Etymological Dictionary of Persian, English and other Indo-European Languages (Bloomington: Xlibris, 1999), 476 and Persian Dictionary Dehkhoda]

In fact, initially territory was related to human exercise on land in order to inhabit it. Today, territory has vast implications in various disciplines. Like 'space', territory has constantly appeared in various fields, from political and legal science to architecture and urban design, and has been interpreted and implemented differently. As Jean Gottmann explains in his seminal book, *the signifiacnce of territory*, "to the geographer, it is the portion of space enclosed by boundary lines," the location and internal characteristics of which need to be described and explained. To politicians, "territory means its population and resources therein". To the military scientist, it is about the topographic features that influence "tactical and strategic considerations", distance and scope, and occasionally resources and local supplies. "To the jurist, territory is jurisdiction and delimitation"; "to the specialist in international

law it is both an attribute and the spatial extent of sovereignty;" and so on.

We consider territory to be a notion that, in the first place, is *spatial* and *temporal* and in the second place something consisting of interrelations between various concepts and practices, which make a specific way of life and management of land and space possible (i.e. it conditions life and at the same time it is the result of a specific way of life). In this sense, territory is not only a product or a projection but also a precondition.

The territory comprises a way of inhabiting the land, techniques for its management, as well as measuring and controlling. Hence, as Stuart Elden states in his article 'Land, terrain, territory':

"Territory is a historical question: produced, mutable and fluid. It is geographical, not simply because it is one of the ways of ordering the world, but also because it is profoundly uneven in its development. It is a word, concept and a practice; where the relation between these can only be grasped genealogically. It is a political question, but in a broad sense: economic, strategic, legal, and technical. Territory must be approached politically in its historical, geographical and conceptual specificity."

To investigate a territory one has to look into various regimes of ordering which are converging in a territory. This superimposition of various regimes not only concerns the intermingling of various scales of operation; it also refers to multiple regimes of occupation of the environment or of territorialities.

Therefore, in this studio, in the initial phase of our investigation, we delved into exploring this variety of forces, forming the territory of the Dutch- Belgian borderland.



Prison building of the Wortel colony

2.1 BORDER HISTORY

Parceltrade

Brabant has been a duchy from 1100 until late 1700's. In these centuries, lands often changed hands through marriage and successions as well as through pledges of loyalty and allegiance between the different feudal families. The most influential landtransaction for the Baarle area was the gift of land to the Baronie Breda at the end of the 12th century.

The Duchy of Brabant, Henry the first, got into a quarrel with the Duchy of Holland over the loyalty of the Baronie of Breda.

As a persuasion for his loyalty, Henry I offered lands in the Baarle region to the Baronie Breda to secure his foothold in the territory. However he only parted with parcels that did not generate

much revenue, mostly uncultivated woodlands. Through different routes of succession the lands of Duchy of Brabant fell to Baarle-Hertog, the southern Netherlands and later Belgium and the lands of Breda fell to Baarle-Nassau, the Northern Netherlands and form the archipelago of en- and exclaves Baarle is famous for today.

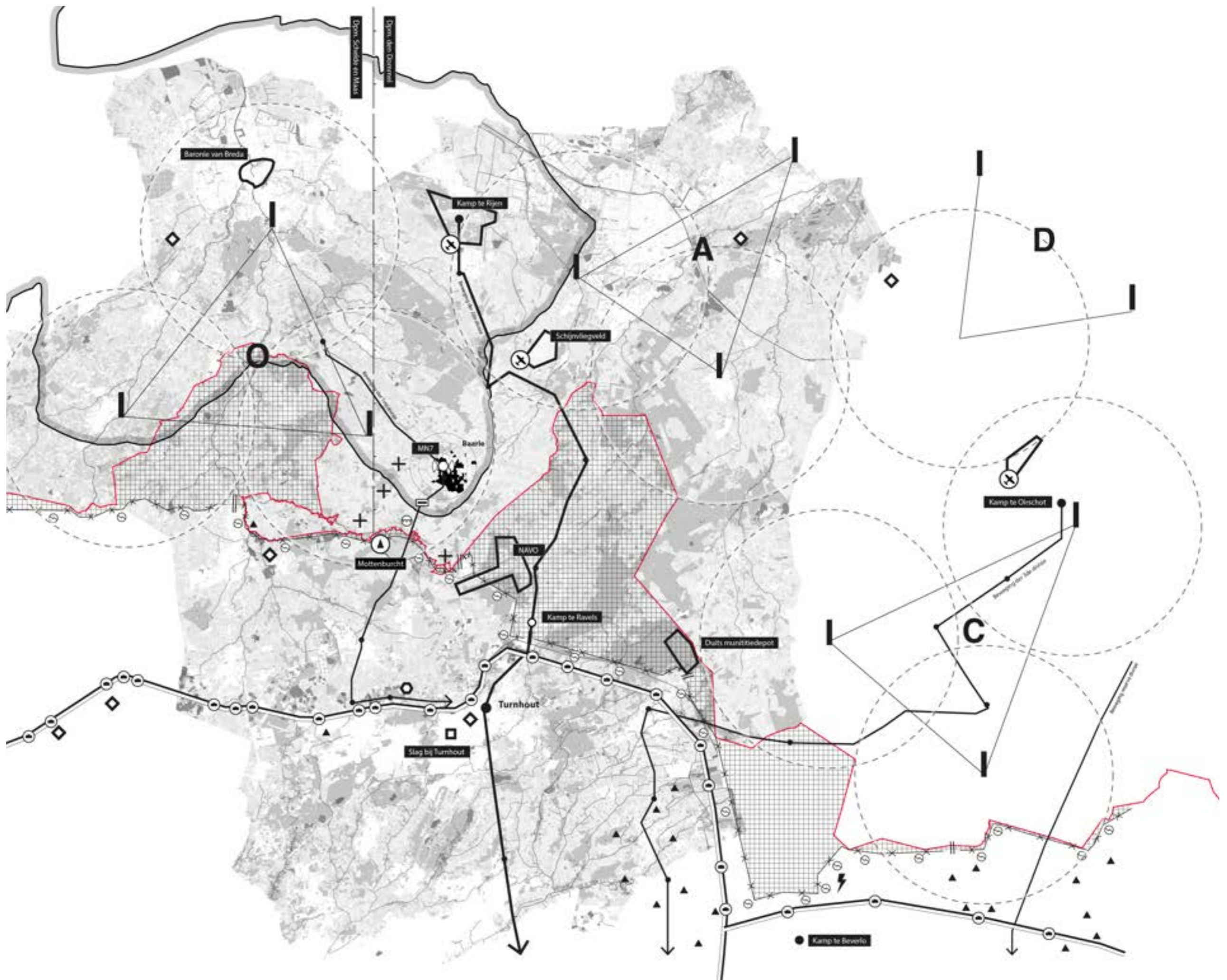
Apart from the enclaves the Baarle region has been the scene of multiple smaller and larger conflicts resulting in layered constellation of defence structures from the different eras.

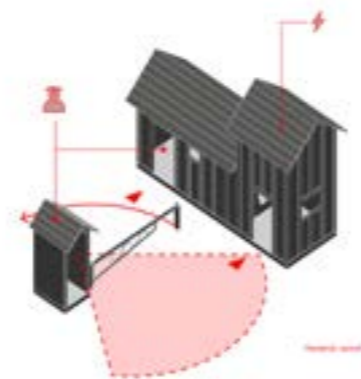
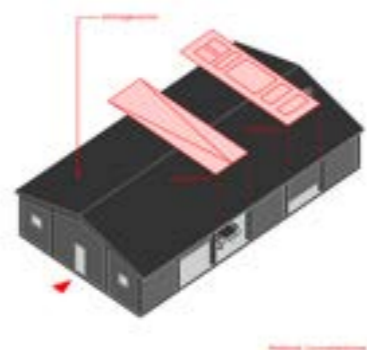
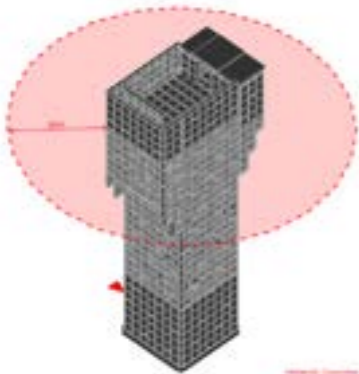
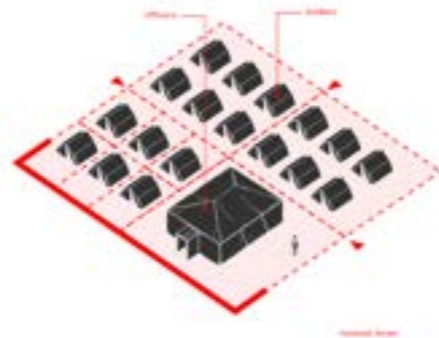
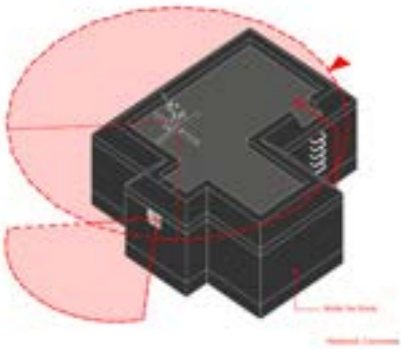
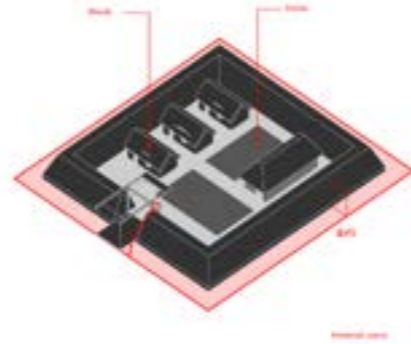
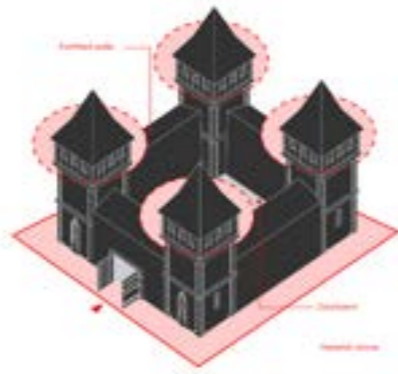
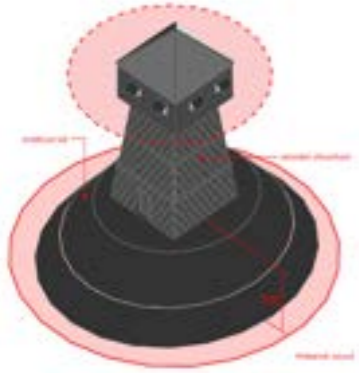
In the following maps these have been compiled and catalogued to provide an overview on the scale of the territory as well as the architectural object.

- Border
- Patrol route
- ==== Passage
- Airwatchpost ensembles
- Airport
- Airwatchpost scope
- ==== Turnout Kanalstellung
- Airport
- x-x- Deathwire
- Border transformations

- ||||| No-mans land
- Baarle-village

- ⊗ Airport
- ⚡ Waiting post
- ⊗ Trenches
- ▲ Moth castle
- ⊗ Bunker
- Battlefield
- ◇ Castle
- ⬡ Court
- Rest area
- ▲ Farmers entrenchment
- Air watchpost
- + Mobility complex
- ⊗ Transmission tower
- ⊗ Tank shelter





Moth castles

One of the first formalized architectural defence typologies that can still be found the area was the Moth castle. It was used for defending farmland in the Middle Ages. It consisted of a pile of sand and a wooden observation structure.

Eighty Years War

Philip II of Spain, son of Emperor Charles V, carried out idiosyncratic church reforms, which led to the Eighty Years' War in 1568. The Seventeen Provinces, headed by William of Orange, revolted against the Spanish Empire. The tide turned with the destruction of the Spanish Armada in 1588. The war ended with the treaty of Munster in 1648.

Willem van Oranje was the one that fought against Philip II from Spain and drove them away from the border in the battle at Turnhout. Around 1588.

Farmers entrenchments

Due to many burglar attacks, the farmers united as a collective, constructing entrenchments to prevent the supplies from being stolen. These farmers entrenchment are found in the south-western part of the region.

At the end of the Eighty Years' war, Spain gave the territory currently known as Noord-Brabant the status of generality land. The so called State-Brabant was part of the Seven Provinces. This resulted in more political power. The border trajectory as we know it today on the south of Brabant and the province of Antwerp became visible.

In 1795, An alliance was formed with the first French Empire. The Duchy was no more. The territory of State Brabant was divided in two departments; with their borders north-south Schelde Maas and Dommel.



French empire

Napoleon, ruler of the French empire had conquered all of the Netherlands up to Denmark. Brabant was divided in two french departments. When Napoleon fell in 1815, the departments were split into the current provinces; Zuid-Brabant, Antwerp and Noord-Brabant. Two of them belonging to Belgium. A well-known painting from this time is the Dutch virgin with the lance of freedom and a French military standing in the Dutch garden shaking hands.

Belgian Revolution - linen cities

The Belgian Revolution or Belgian Revolt is the armed revolt in 1830 against King William I of the Netherlands that led to the secession of the southern provinces and the independence of Belgium.

After the French Revolution and the fall of Napoleon, great powers such as the German states and the United Kingdom had created a buffer zone by allocating the Belgian territories

to the new Dutch Kingdom. This had happened without national participation.

The Belgian troops constantly patrolled the border. There were multiple routes. Along these routes camps were settled. These camps consisted of large amounts of linnen tents.

World War I - death wire

In the first World War (1914-1918) two coalitions were formed. The Triple Entente, consisting of France, Russia, and Britain; and the Triple Alliance of Germany, Austria-Hungary, and Italy.

Due to the smuggling of telecommunication technology from Belgium into Dutch land, the Germans decided to built the "death wire". An electric fence across the whole border. However it did not follow the border accurately cutting of several northern parts of Belgium from their main country resulting in "no mans lands" between the Dutch border and the wire.

Some trenches and concrete bunkers from these times can still be found in the landscape.



Mega farm near the border of Baarle

2.2 LAND USE

Industrialized farming

The Kempen region is an intensive farming region on both the Dutch and Belgian side of the border. And although the trend of industrialization and scaling up of live-stock farms have triggered discussions about their integration in the landscape the greatest impact of this trend on the land was until recently hardly topic of discussion.

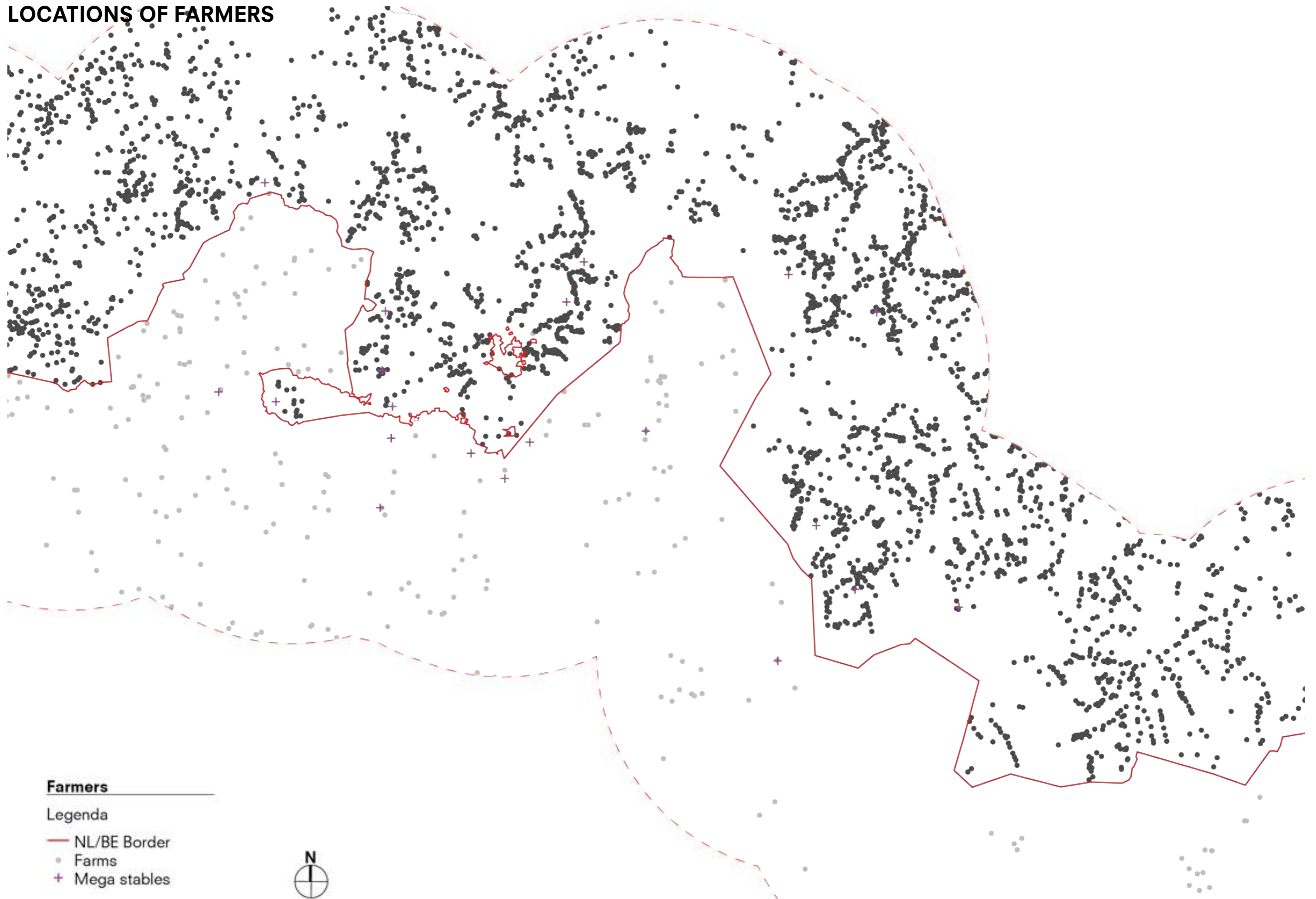
Until last year when the Dutch Raad van State limited the use of a law of postponement on the compensation of nitrogen emissions from intensive farming. Enforcing nitrogen caps nationwide triggered a national debate on how to use the available limited emissions forcing spatial choices between new farms, building projects in cities and industrial activities.

In the area around Baarle intensive livestock the main reason of nitrogen and ammonia emission on both sides of the border. Ammonia stays in the air for only a few hours and usually returns to the ground within a few miles especially affecting nearby nature reserves and natural structures.

Yet both countries differ in approach to legislate and even measure the emissions. On Dutch side regulations are getting more strict under the new legislative realities of the emission caps.

The consequence of the border is that Dutch farmers moved just a cross the border in Belgium and build mega stables still affecting the deposits and natural structures nearby as much as before.

LOCATIONS OF FARMERS



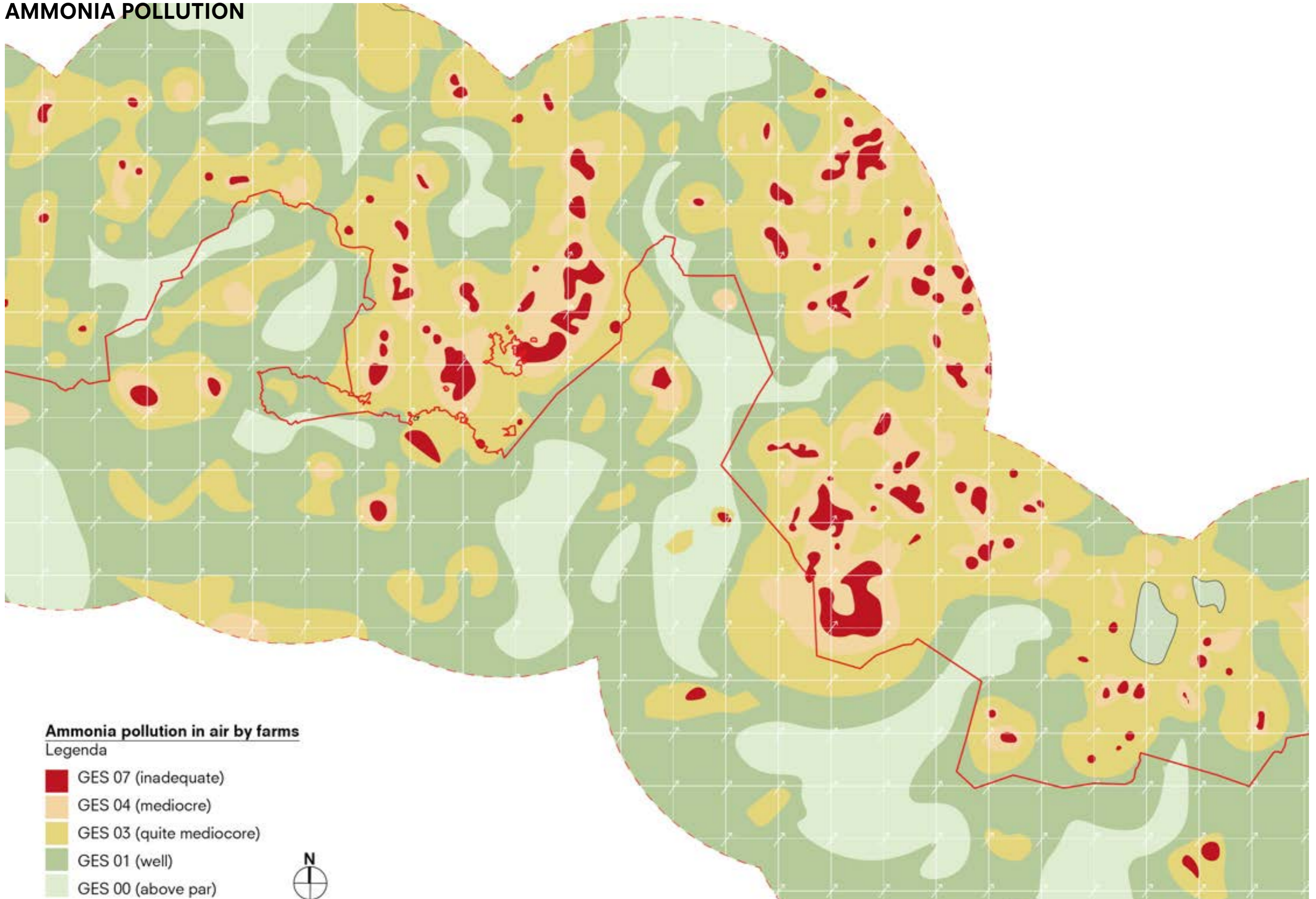
Farmers

Legenda

- NL/BE Border
- Farms
- + Mega stables



AMMONIA POLLUTION



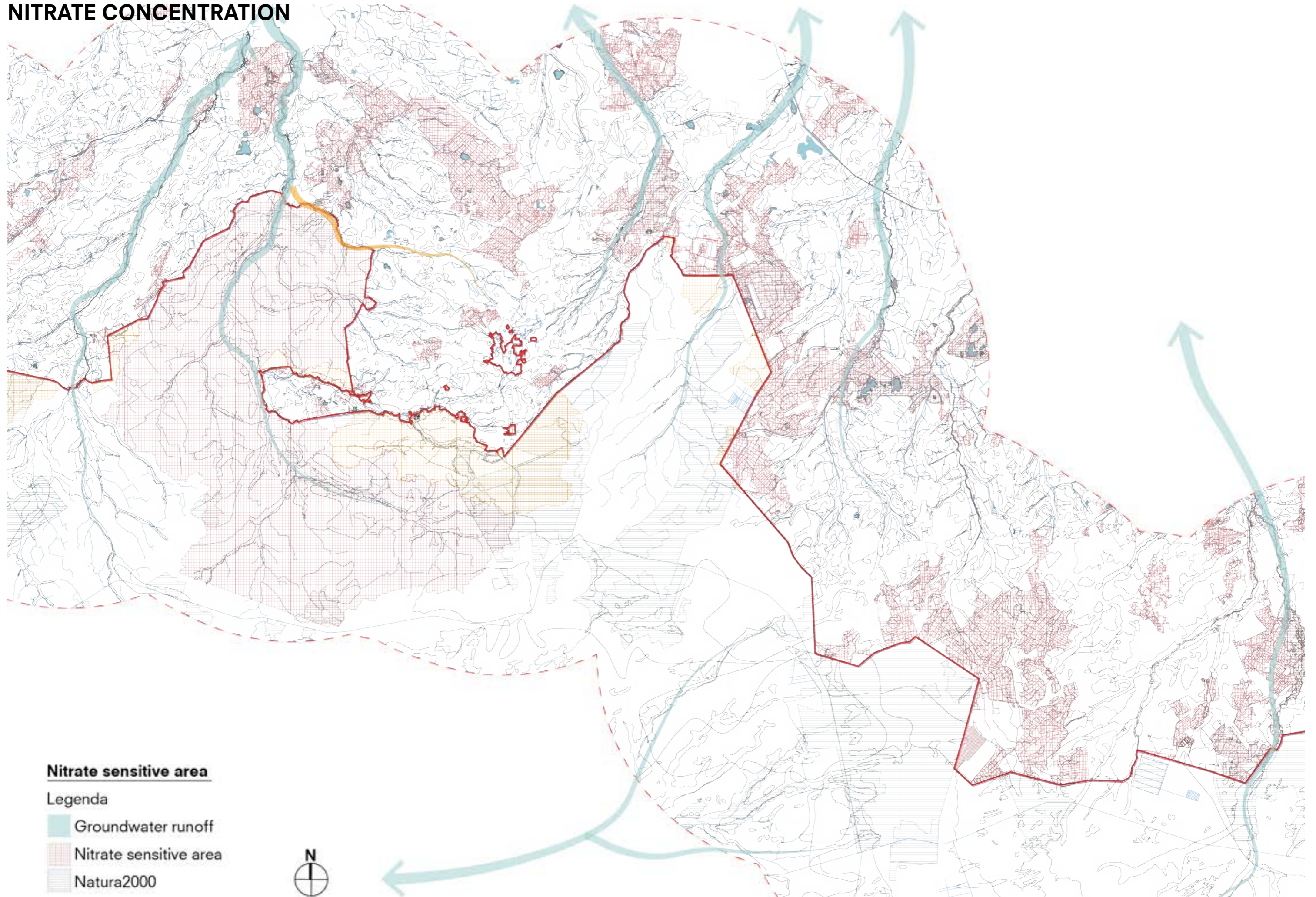
Ammonia pollution in air by farms

Legenda

- GES 07 (inadequate)
- GES 04 (mediocre)
- GES 03 (quite mediocre)
- GES 01 (well)
- GES 00 (above par)



NITRATE CONCENTRATION





View from the Kerkstraat on the St. Remigiuschurch

2.3 DEMOGRAPHY

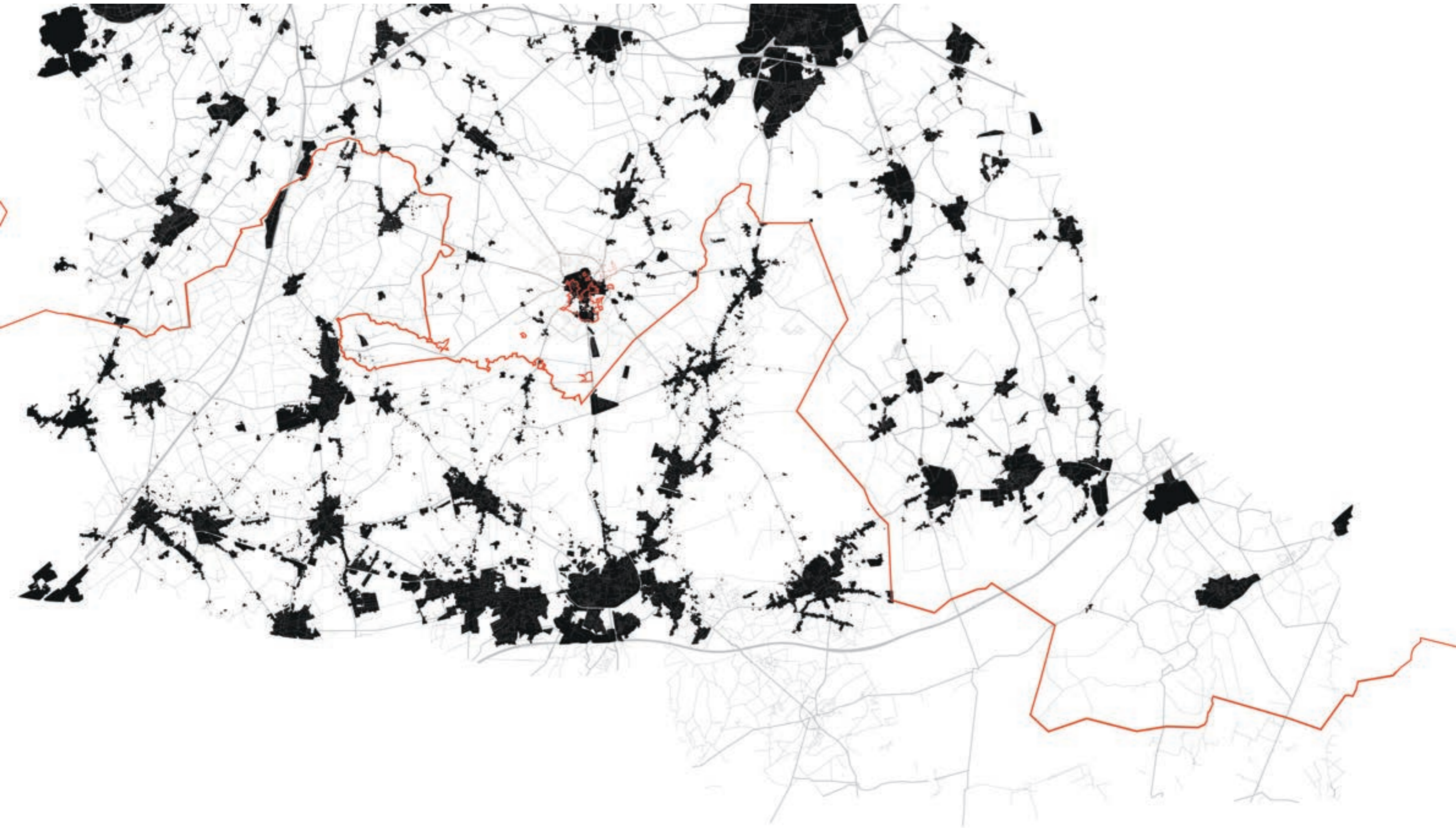
Density

The population density in Noord-Brabant is relatively low. Little differences can be seen throughout the region and between the mutual municipalities. Naturally, the population density is a lot higher around the big cities. Both Baarle-Nassau and Baarle-Hertog have the lowest population density in the entire region. Within the border area, a very clear difference can be seen in both the urban sprawl and the urban pattern. Dutch villages and cities are clustered and built from the neighborhood point of view. This translates into a fairly compact urban pattern within which specific typologies can be read. In Belgium the pattern is much more spread out. Since the 1960s, Belgium has had to contend with an enormous allotment rage. There was little policy on spatial planning. Many large tracts of land were split into smaller building lots. The typical ribbon development, as a result of the allotment rage, is clearly reflected in the urban pattern.

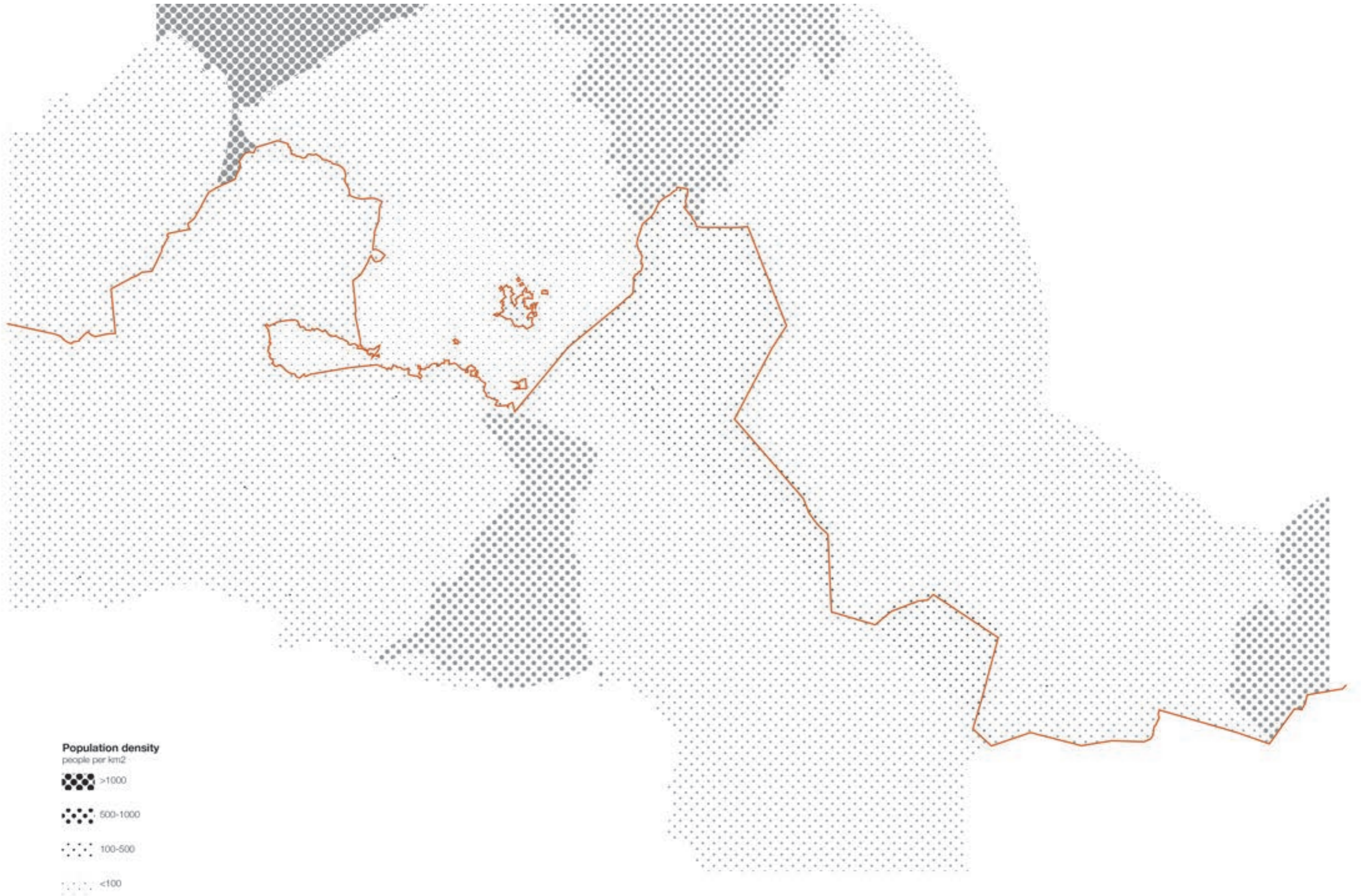
Income

There is also a big difference in per capita income. In the Netherlands this is much higher than in Belgium. The closer you are to the border, the lower the per capita income. The tax on certain products also differs per country. In Belgium, for example, the costs for fuel are lower, while in the Netherlands the tax on first foods is lower. You can see movement across the border from an economic point of view, especially right around the border.

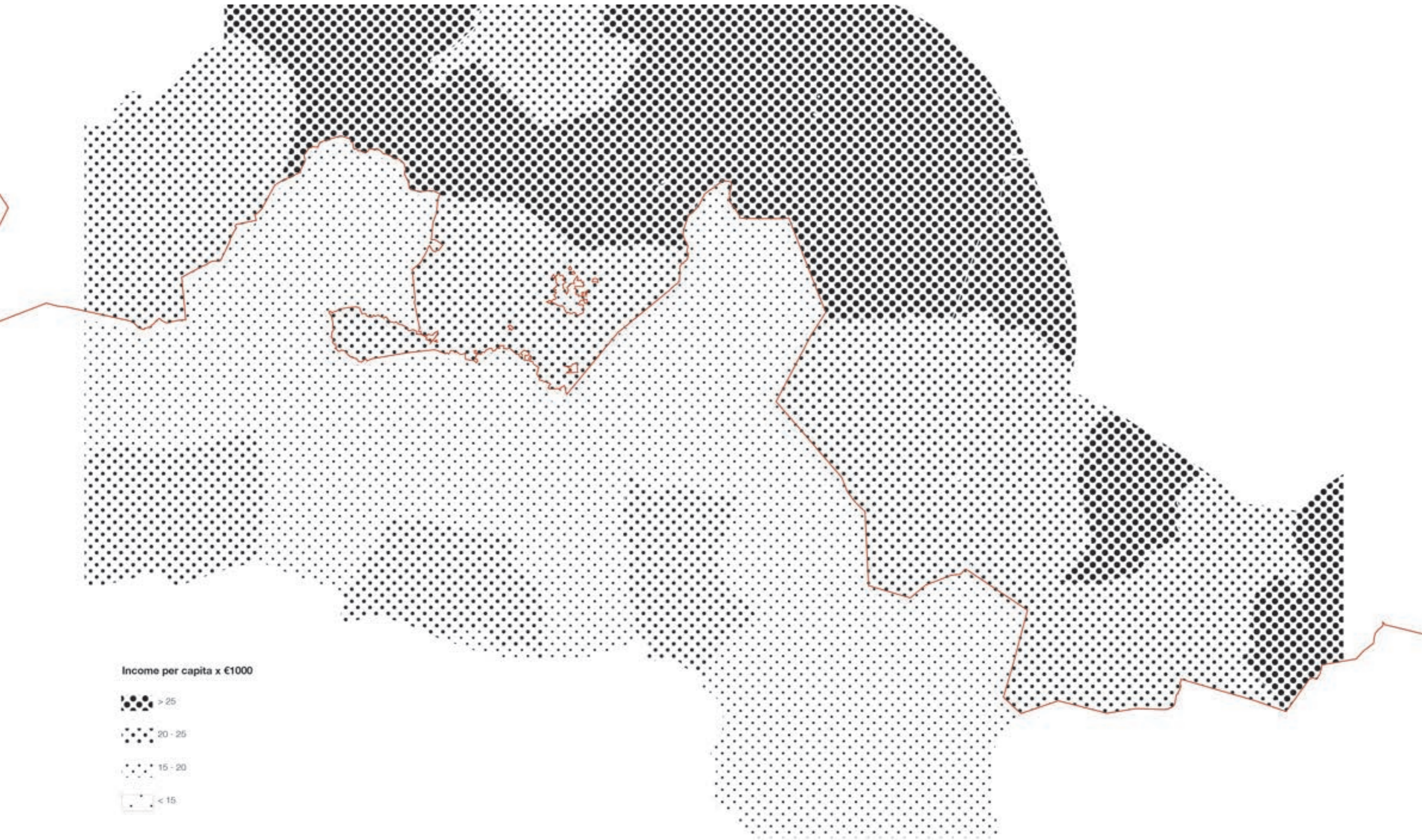
URBAN SPRAWL IN THE BAARLE REGION



POPULATION DENSITY



INCOME PER CAPITA



MORPHOLOGY OF VILLAGES IN THE BAARLE REGION



Hilvarenbeek [NL]



Baarle [NL/BE]



Hoogstraten [BE]



Weelde [BE]



Soil excavation in one of the sand quarries

2.4 GEOLOGY

It is hard to imagine, but until about a million and a half years ago the northern part of the Kempen was a transition area between sea and land. During this period a geological build-up of thin layers of clay and sand was formed.

In the centuries that followed, the seawater slowly retreated northward, forming a natural river system. An asymmetric ridge was created, called a Cuesta. As a result, the water system of the Kempen has become divided into two river basins: the Meuse basin in the north and the Scheldt basin in the south. The valleys in the northern Meuse Basin are characterized by the sandy subsoil alternated with layers of clay.

Until the beginning of the nineteenth century, the Kempen was an isolated corner of the low lands, a region that was hardly accessible. This all changed by the construction of an ingenious canal system which promoted both transport and irrigation of the land. The land use radically changed thanks to the construction of the canals. The barren heatherlands were made suitable for agriculture.

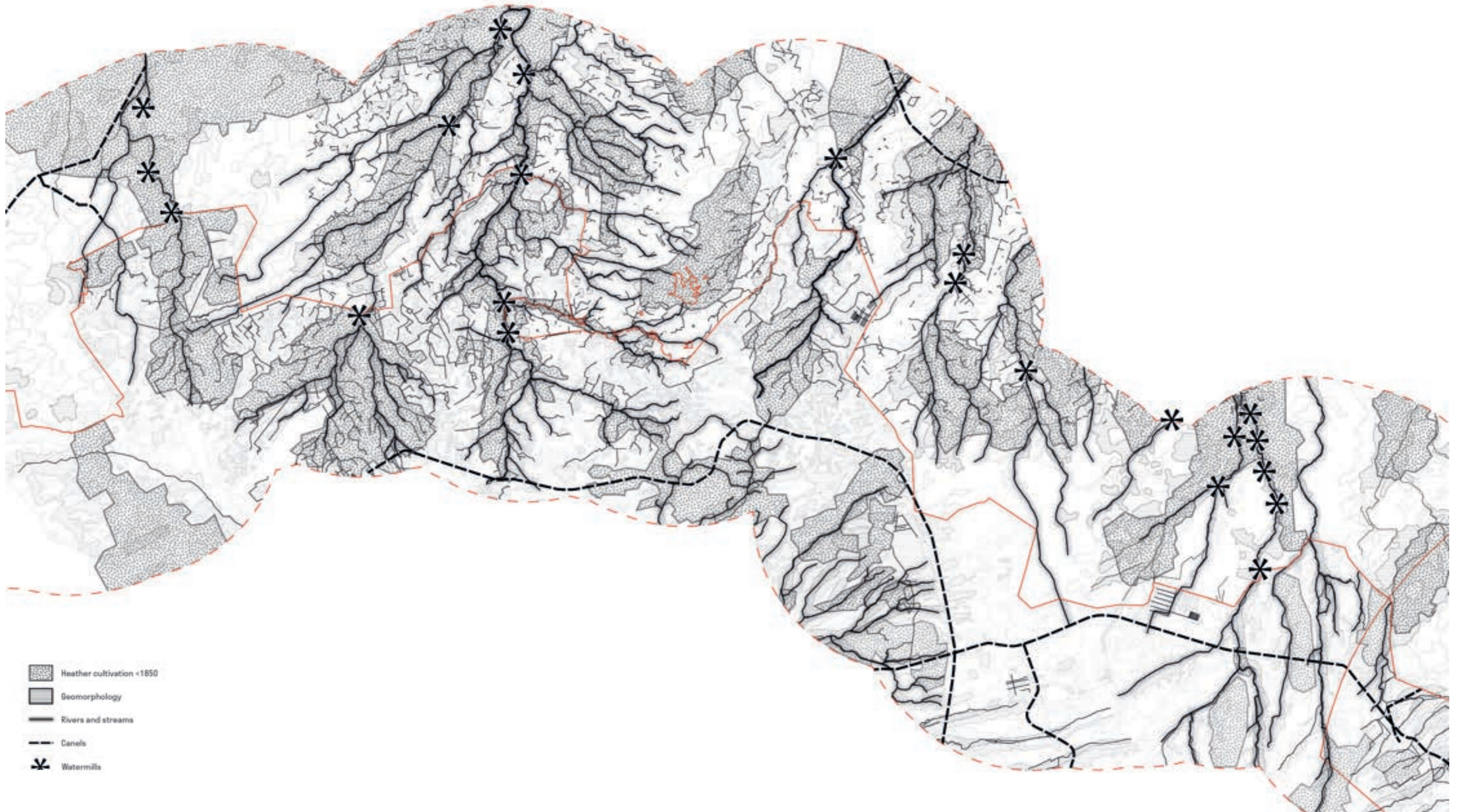
During the digging of the canals, layers of clay were discovered under the cover of sand. This provided a strong economic impulse in the form of clay mines linked to large brick factories and sand mining wells.

The name of the Kempen region originates from the word Campinia or Campina, which is Latin for open plain. For a long time, the Kempen area was known as a harsh and open sandy plain that was unsuitable for growing most of the crops and vegetation and therefore wasn't a place for settlement. That was up until the 19th century, when man discovered new ways of working the land and thereby radically changing it.

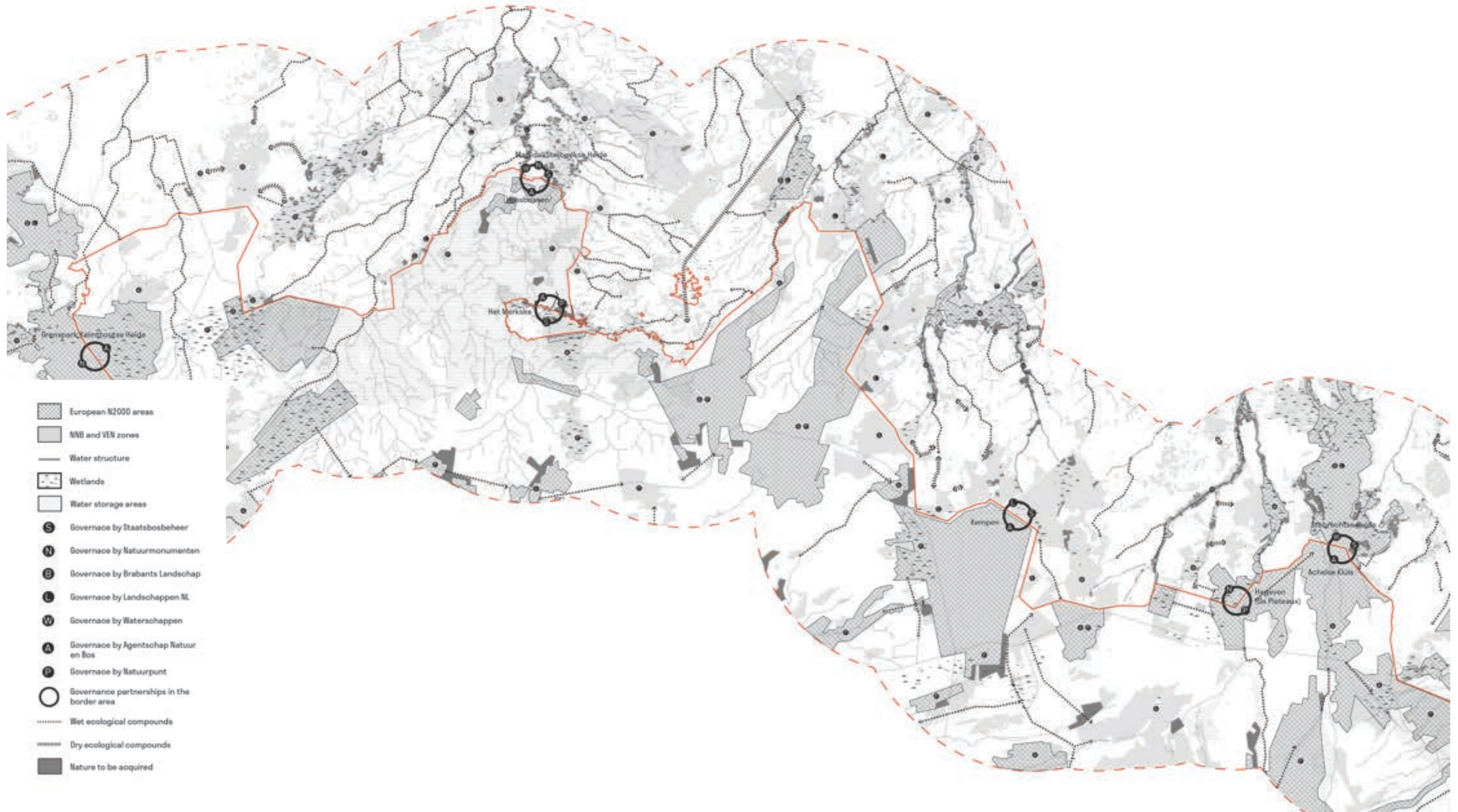
The landscape of the northern Kempen can roughly be divided into two main soil types; the higher and dry sandy grounds and the lower stream valleys.

The high sandy plains of the Kempen consist of fairly large chunks of quartz, a hard mineral. This makes the soil to retain little water or nutrients and is therefore unsuitable for the growth of most plants and trees. Subtle differences in soil composition are therefore crucial for the soil potential and land use. Because the soil in the Kempen is poor and acidic, heather plants grow in abundance.

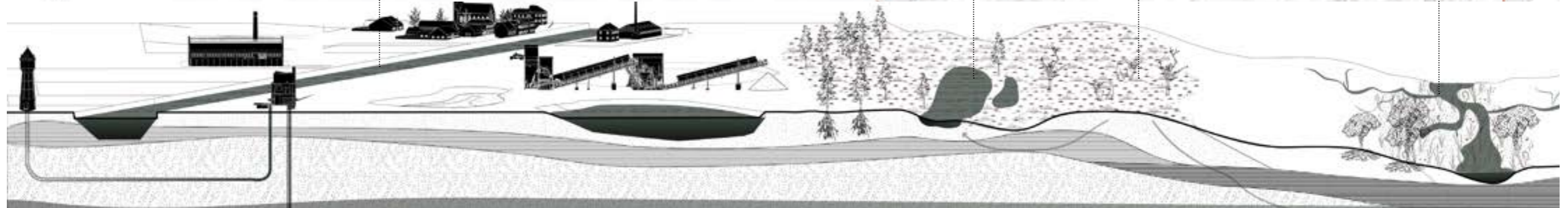
WATER IN RELATION TO HEATHER CULTIVATION



NATURE AND GOVERNANCE



A GEO STORY: WATER, SOIL, SYSTEMS





View on a shallow lake in the Wortel Colony

2.5 SMUGGLING AND SURVEILLANCE

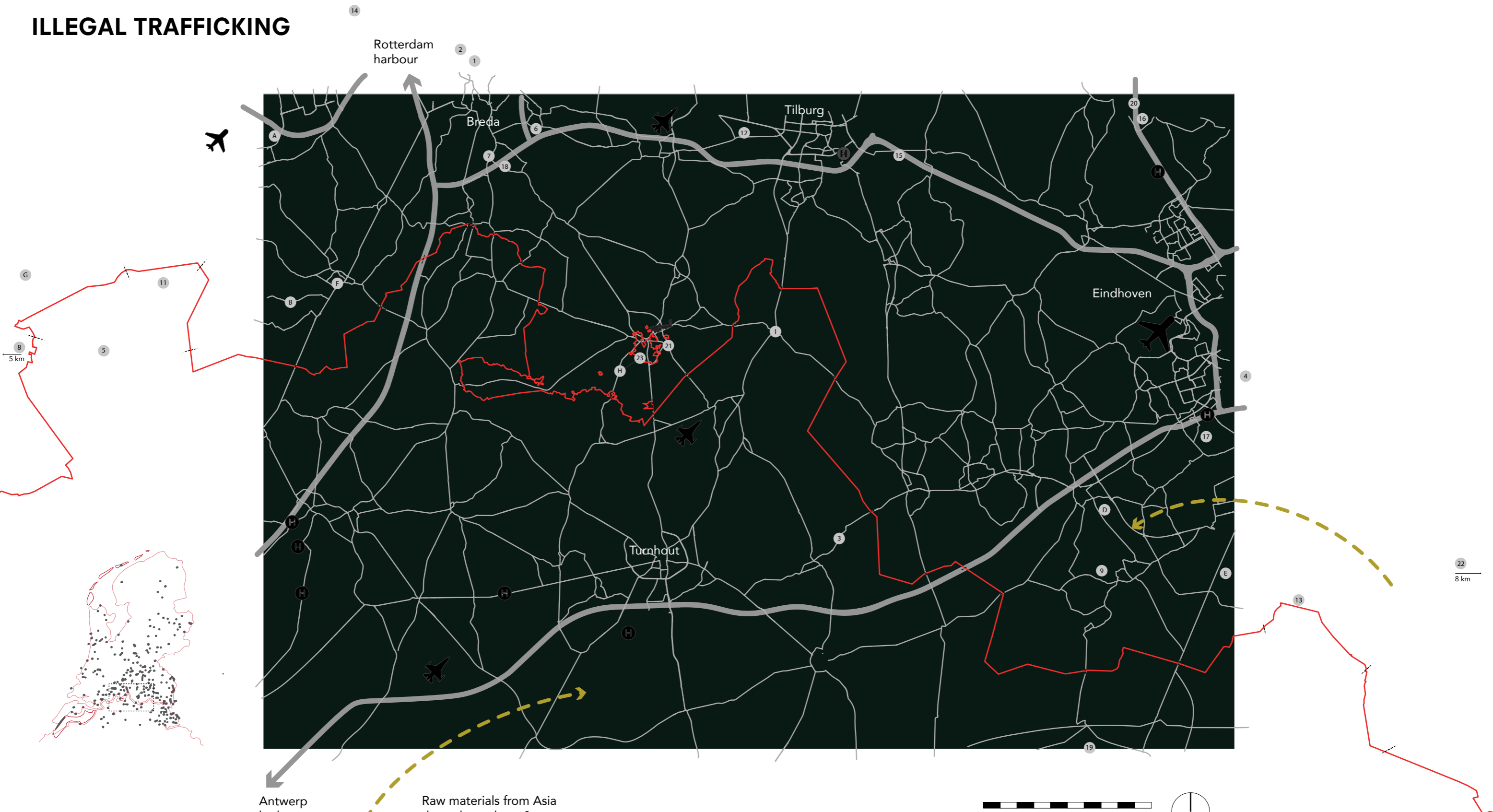
From Bokkenrijders to drug labs

The Kempen, located on both Dutch and Belgian territory, has a long history of smuggling and crime. After the Spanish occupiers left in 1648 groups of organized criminals started to form in the region, the famous 'bokkenrijders'. This was even before the border as we know it today emerged, yet it set the conditions for the smuggle system to come.

In both world wars informal systems of cross border exchange were used to smuggle information and food. These organized groups persisted after the wars ended but evolved with time in contraband and scale.

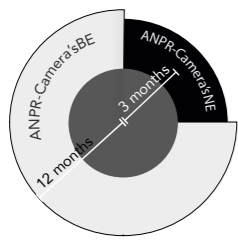
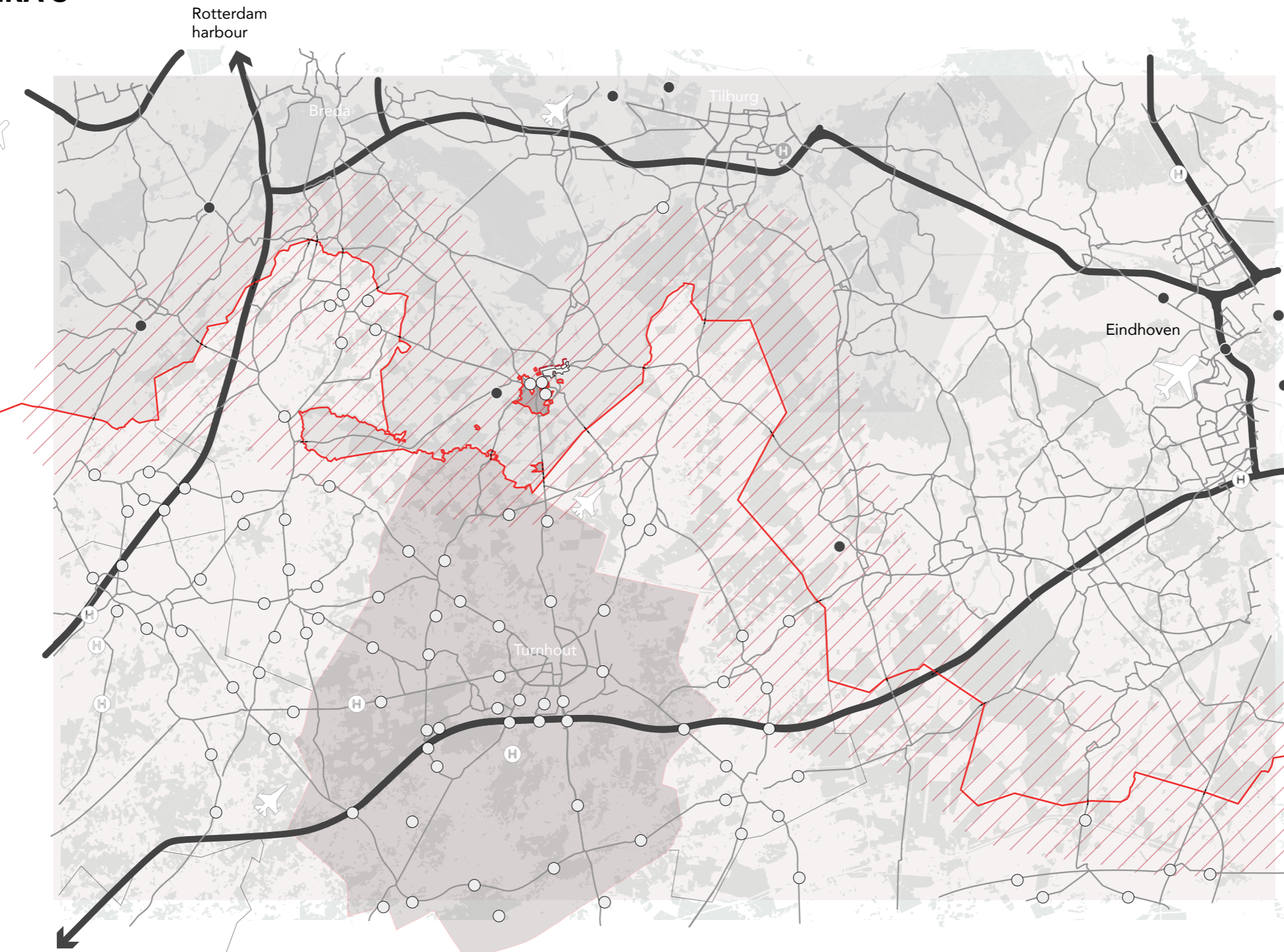
During World War II butter was smuggled, in the 1960 illegal distilleries were set up and now the area is globally known for its illegal production and distribution of amphetamine.

ILLEGAL TRAFFICKING



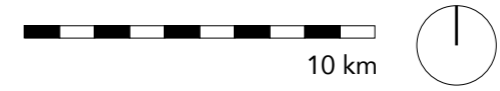
- 1 ANPR- camera BE
- A ANPR- camera NE
- Border
- Border-crossing road
- N-road
- E-road
- Forest
- ✈ Airport
- ✈ Military Airport
- Ⓜ Heliport
- Ⓜ Hospital Heliport

SECURITY CAMERA'S



Legal term for keeping data

- ANPR- camera BE
- ANPR- camera NE
- Border
- Border-crossing road
- N-road
- E-road
- Police-zone Turnhout (Baarle-Hertog)
- Police-zone Midden-west Brabant
- ▨ Cross border collaboration
- Forest
- ✈ Airport
- ✈ Military Airport
- Ⓜ Heliport
- Ⓜ Hospital Heliport





Sand quarry in the Baarle region

4 FRAGMENTS OF THE BORDER





One of the used smuggle routes in the Baarle region

3.1 THE SMUGGLE SYSTEM

Margot van Bekkum

Worldwide the Netherlands and Belgium are notorious for their large amphetamine production and export. This illegal economy has its roots and is concentrated at the borderline between the two countries.

Since the dissolution of physical border control due to the Schengen Agreement in 1985, the border area between the Netherlands and Belgium has seen a continued growth in drug production and associated problems. This has great effects economically, socially and spatially.

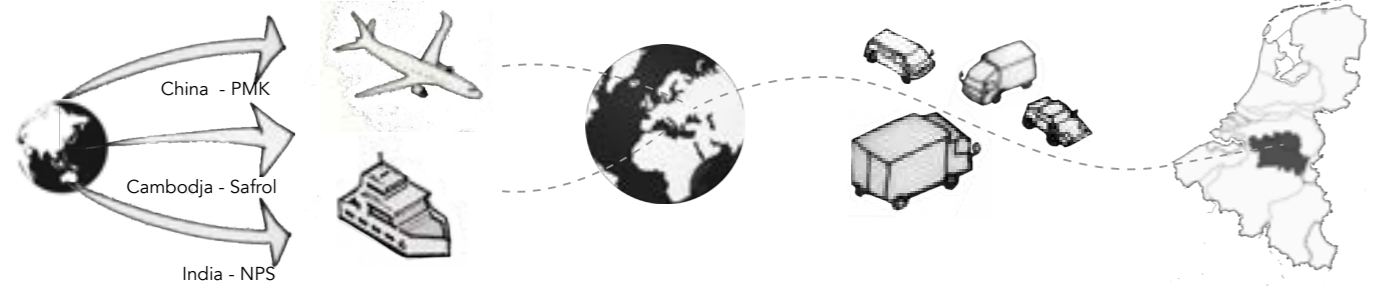
The production of drugs leaves a lot of chemical waste, which needs to be illegally disposed of by the producers. Unfortunately, it often ends up polluting the environment, in nature reserves, woods, crops and even in surface and groundwater. The current focus from the government in battling the illegal drugs economy is mostly on catching the criminals and the production sites but does not focus on protecting the environment.

SMUGGLE GROUND MATERIALS

RAW MATERIALS DRUGS

SOUTERN & EASTERN EUROPE

MDMA/AMPETHAMINE/ XTC
International production



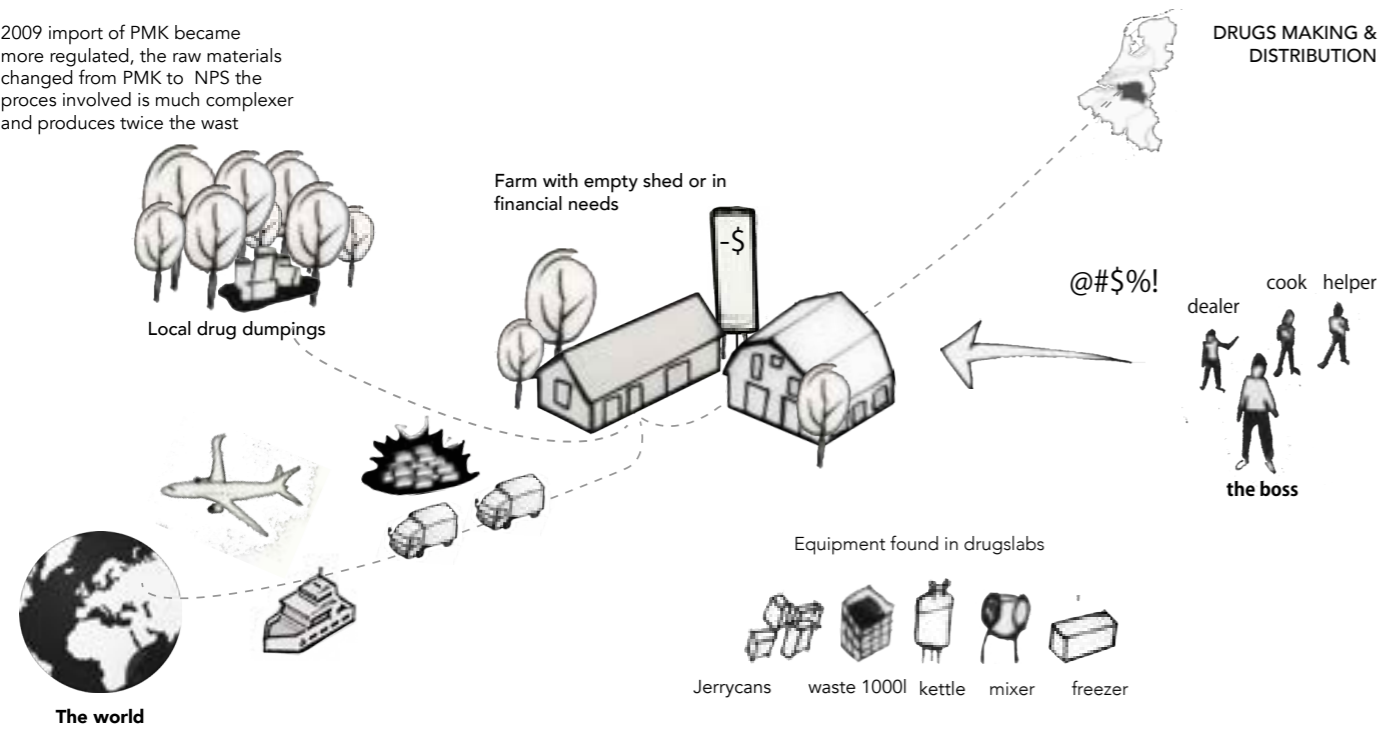
2009 import of PMK became more regulated, the raw materials changed from PMK to NPS the proces involved is much complexer and produces twice the wast

- smaller airport less control
- systems more corruption

Border of t he netherlands & Belgium: de kempen

PRODUCTION AND EXPORT

2009 import of PMK became more regulated, the raw materials changed from PMK to NPS the proces involved is much complexer and produces twice the wast



1 Breda - Park Valkenberg 2019



5 Essen - wilderste duintjes 2013



2 Breda - haventje Belcrumweg 2019



6 Ulvenhout - Koekelberg 2018



3 Arendonk - Pelgrimsplein 2018



7 Bergen op zoom - Linkdonk 2020



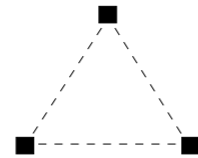
4 Eindhoven - Offenbachlaan 2018



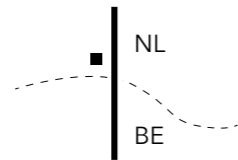
8 Bergeijk - Puttendijk 2018



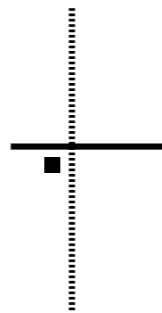
Watchtowers - cold-war
Surveillance



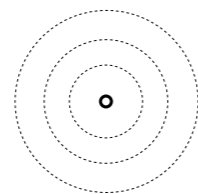
Military post - Dodendraad WO1
Surveillance border

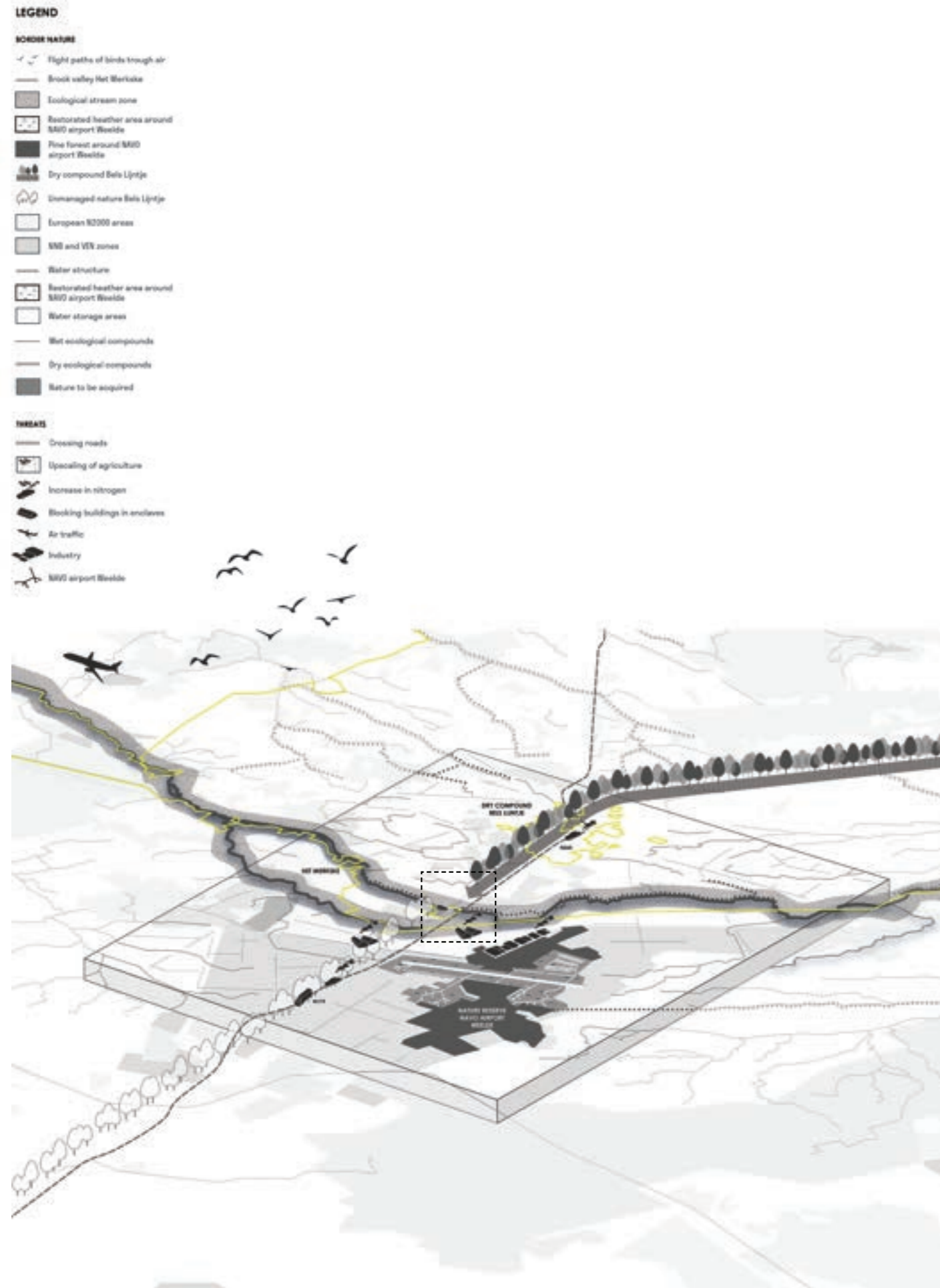


Watchtowers - cold-war
Safety



MN7 - transmission tower WO1
Technological





3.2 THE BORDER AS A STEPPING STONE

Iris Bol

Man has historically strived to dominate nature and ecology. The principle of the bird cage slowly translated to a larger scale through zoos and nature reserves. Currently only 2% of our nature is untouched and can be seen as wilderness.

The institutionalization of nature is particularly evident in border areas, which have evolved significantly over the years. Difference in governance and acquisition of nature between countries, have led to more and more boundaries in these areas. Ecological structures and nature reserves 'just do not touch' because of political mismatches. Due to the increasing number of animal diseases in the border area, crossing the border is furthermore prevented for animals. We can conclude that the border is fading away slowly for humans but the natural borders for fauna in the border zone are increasing.

The landscape around Baarle Nassau is a perfect example of where the above findings are clearly recognizable. South of Baarle Nassau, three ecological structures are found. 'Het Merkske, a years old typical stream valley, 'Het Bels Lijntje that used to be the old train

track between the Netherlands and Belgium and the nature reserve around NAVO Airport Weelde, that used to be part of a bigger heather area but was turned into a pine forest around 1840.

In the last years an increasing number of threats and conflicts emerged around the three structures. The conditions of original habits are clearly under pressure and some original flora and fauna have already been wiped out.

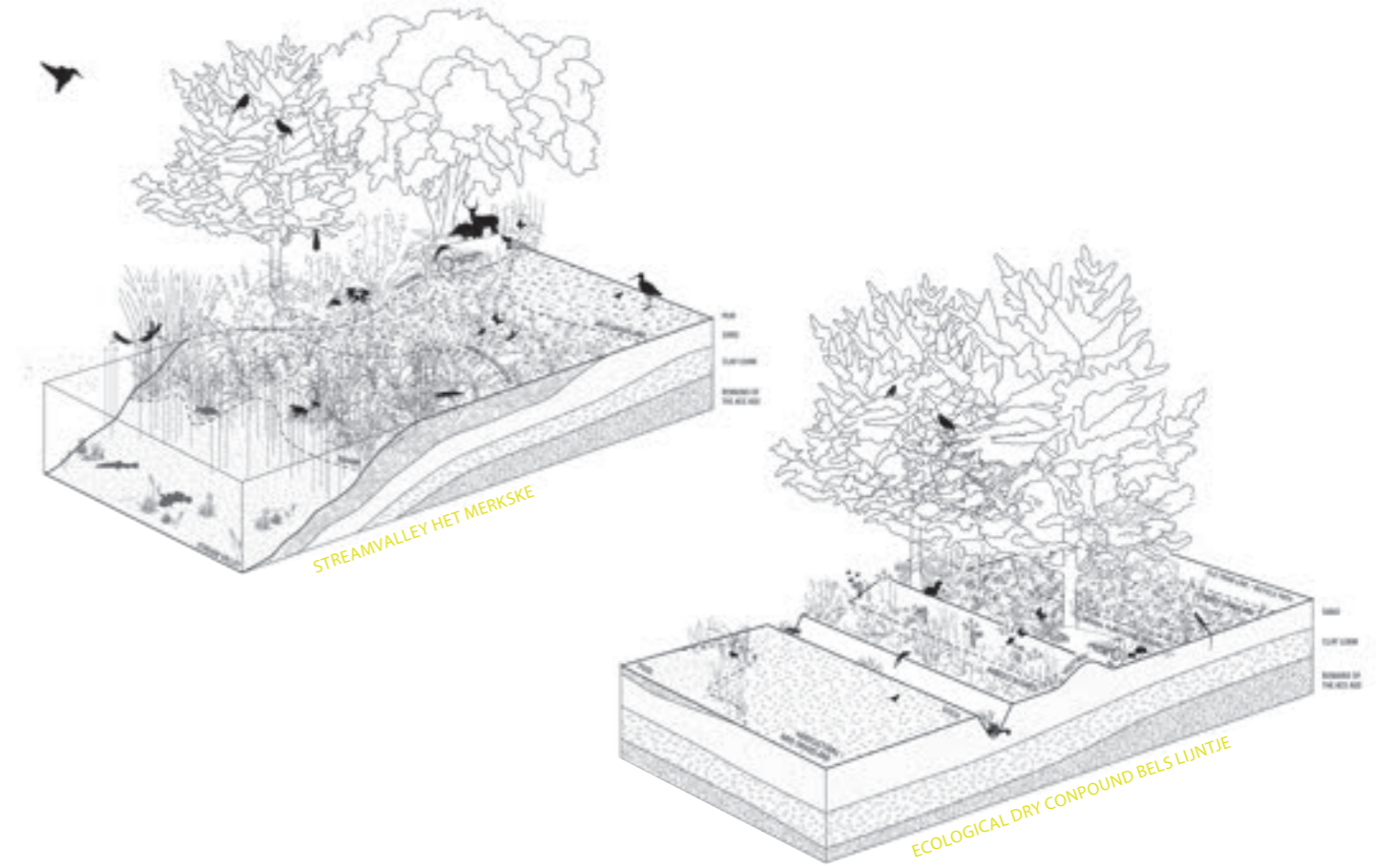
The stream valley of 'Het Merkske' for example is dehydrated on the higher grounds because of climate change and has as a result lost a lot of biodiversity. The natural structure has also been interrupted by a shed located on the stream valley in the Belgian enclave.

'Het Bels Lijntje' has formally been recognized as a dry connecting compound since a few years, but only at the Dutch side of the border. Its status on the Belgian side remains unclear. Agricultural activities, the increase of nitrogen, crossing roads and expanding business parks further contribute to the deterioration and pressure on the natural structures in the area.

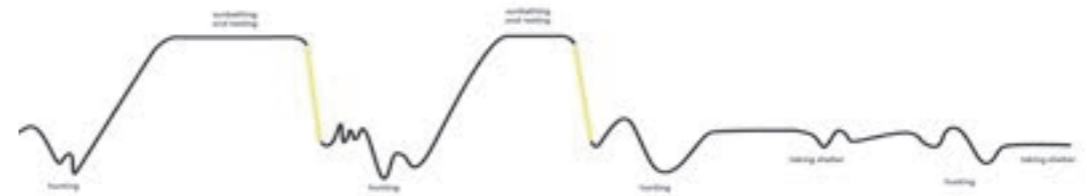


Dried up brook next to the Grensroad

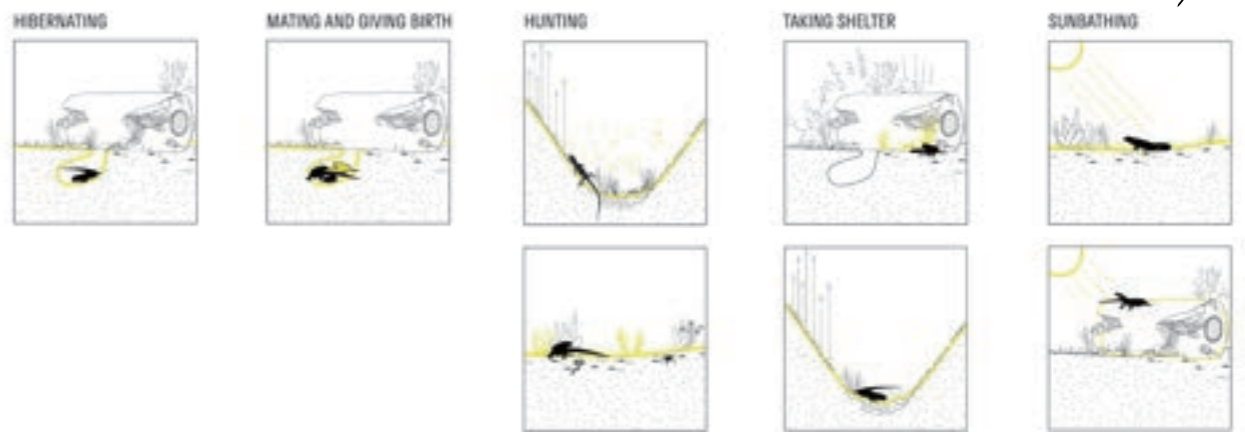
Original habits



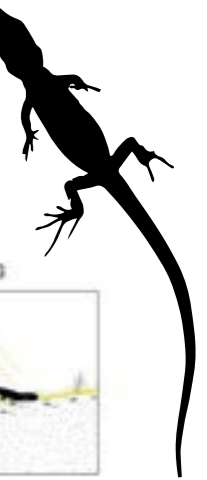
DAILY MOVEMENT



BEHAVIOR



DESIGN TOOLS





Excavation site near the Dutch-Belgium border

3.3 BORDER EXTRACTIVISM

Daan de Jong

When you take a close look at the Dutch-Belgium border in the Kempen region, you'll notice a strange protrusion creating a peninsula that is known as 't Merkske, named after the small creek, that gridles its way along the border.

For a long time, this region was a forgotten corner, so it escaped human intervention. That was until the 19th century when man discovered new ways to work the land and in doing so layers of clay were found underneath the sandy soil. It set of a thriving brick industry that would radically shape the landscape up until now.

A stone's throw from the border and the protected Dutch nature reserve, lies the Desta brick factory. It's industrial production of bricks goes back to the 1960's when the factory was established on the banks of the brook valley. On these banks layers of clay were formed by the deposition of sediments.

The excavation process takes place on the former agricultural lands in the direct

surroundings of the factory site, turning it from lush meadows into a lunar landscape in no time. In the process of excavation colossal pits are formed by taking away the sandy topsoil to expose the deeper bands of clay.

These pits, with a depth of 6 meters or more, slowly fill up with groundwater that's pushed up from the phreatic layers. As a result, the phreatic groundwater disappears locally. Outside the area to be exploited, a drop in the groundwater level is also to be expected as drainage takes place in a sand layer. This will affect both the neighboring farmlands that are already dealing with shortages to water the lands, as well as the protected nature reserve of 't Merkske that is seriously affected by recent droughts. To make matters worse, the Desta company recently announced the expanding of their extractivist operations, by purchasing more lands almost directly at the border.

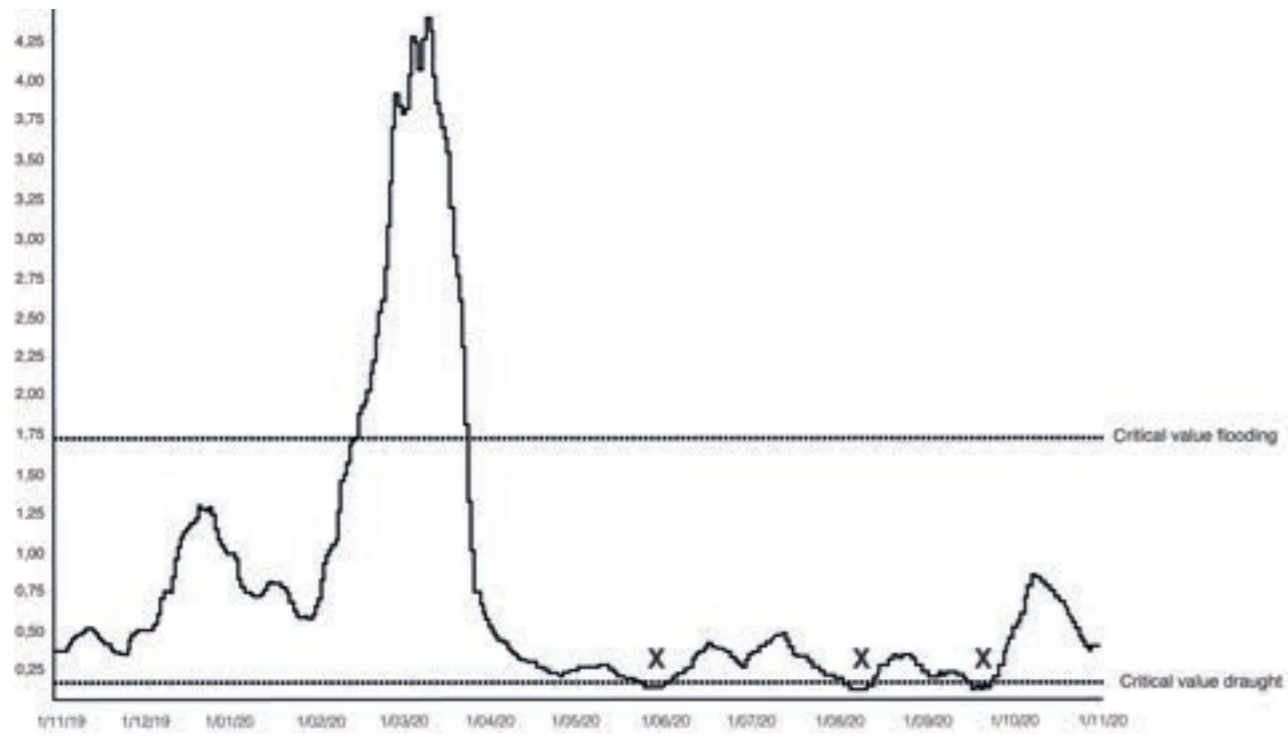
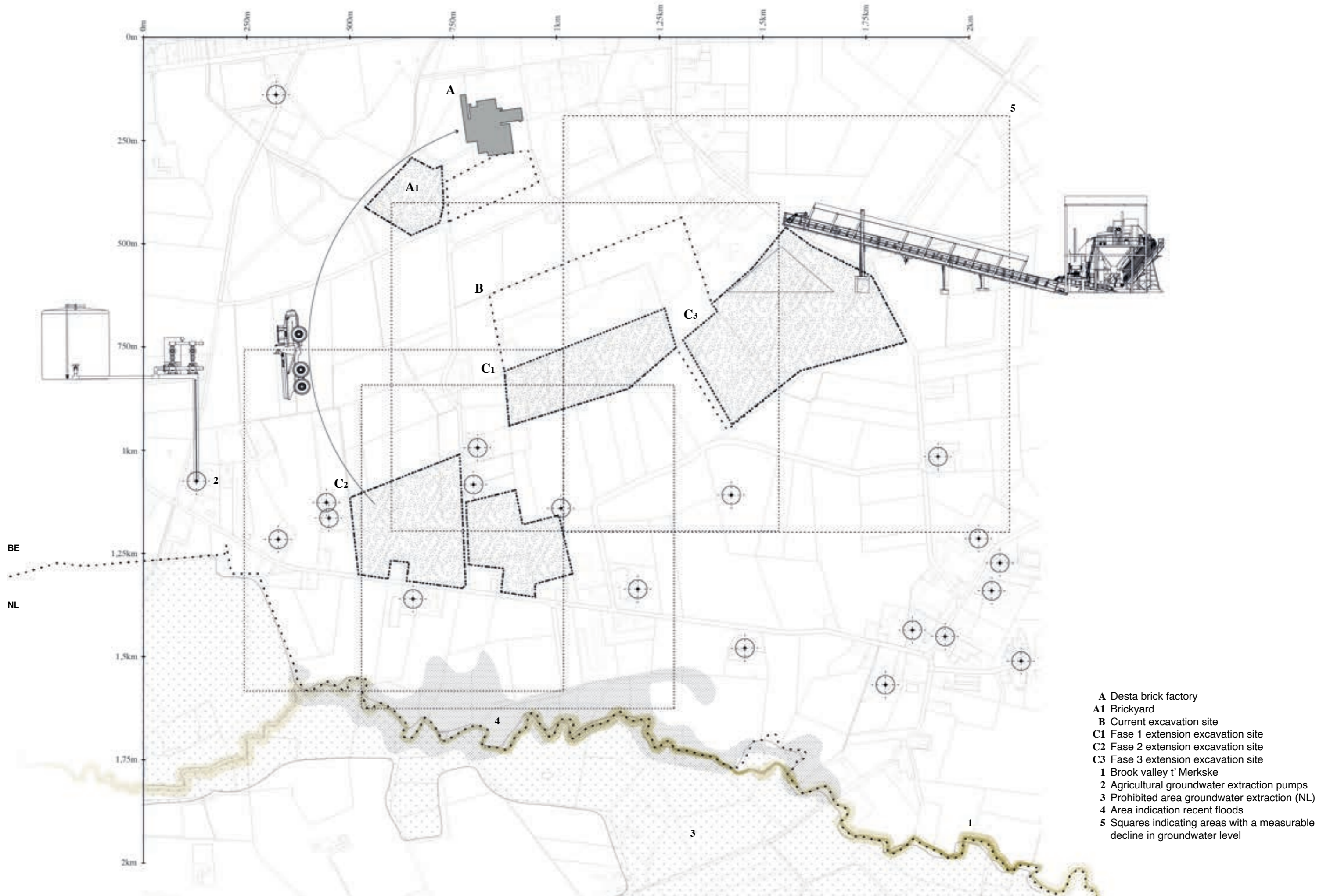


Chart above: showing the waterlevel of t' Merkske in the last year
 Section Below: schematic representation of the proces of groundwater extraction near t' Merkske







One of the bunkers of the Arendonk military base

3.4 NOMAD'S LAND

Tijme Scholten

In the forest around Arendonk a cluster of semi-submerged bunkers can be found right at the Dutch-Belgian border. The area was established in the 1960 and served as an ammunition depot for the German Army during the Cold War years until it was handed back to the Belgian army and authorities in 1997.

When the depot lost its military function and was no longer maintained a rapid decay set in. Squatters, rave organizers, wild campers and explorers cut holes in the fences and left their traces. The proliferating forest took over the existing road structures at the camp and wildlife from the Regional Forest Ravels, de Hoge Vijvers Arendonk and the forests of Mol-Postel invaded the area through the increasingly permeable fence.

Since 2001 the ancillary buildings on the south side of the base are in use as a refugee center for 420 refugees. The center is by nature a transient place, a place for temporary living. It is separated from the bunker area by fencing

and orients itself towards the community around the N139 road.

In 2007 the Flemish government designated the former military domain for nature and forest development. Connecting it to the nearby nature reserve Beleven in the Dutch side of the border. This reserve was actively established by removing 120.00m³ of soil and manure from the former agricultural land revealing 2 fens that were removed more than a century ago connected to a cross border stream leading to the Arendonk camp.

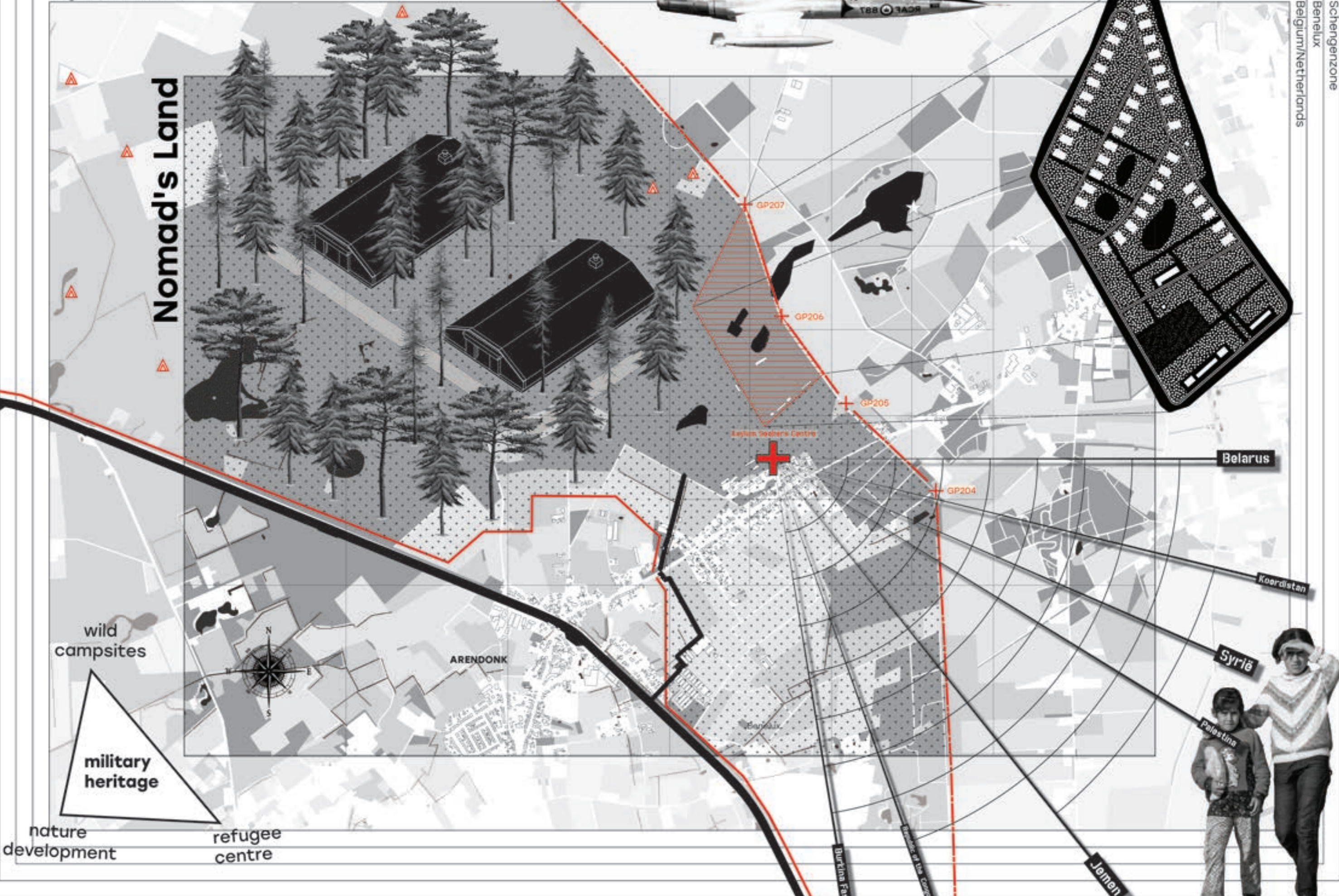
The overlay of different formal and informal camp structures, fencing and separations characterize the area and connect it to a larger national and international context.

At the same time the formalized structures in the area are in decline and meet an increased ecological development and strengthened existing ecosystems.

European Union
Schengenzone
Benelux
Belgium/Netherlands

European Union
Schengenzone
Benelux
Belgium/Netherlands

Nomad's Land





1. WALKING TOWARDS ABANDONED DEPOT



2. THE DEPOTS ARE EMPTY AND THE WALLS ARE COVERED WITH GRAFFITI



2. DEPOTS ARE COVERED BY TREES



1. OPEN/CLOSED CONTRAST BETWEEN BE (WOODS) AND NL (FIELDS)



2. IN THE BACK THE DEPOT AND IN FRONT WETLAND



2. NATURE DEVELOPMENT PROJECT SPACE FOR BIRDS TO BREED



St. Remigius church in Baarle

3.5 NETWORK OF CHURCHES

Ayla Stomp

Noord-Brabant has over 500 churches in the entire region. Almost every village has a church, often with a very central location anchored in the inhabited landscape. A strong relationship can be discovered between the creation of a church and the development of the surrounding landscape.

Formation

To understand this properly you would have to go all the way back to the Middle Ages, when the church was always built on higher ground because of the high level of the groundwater. People settled around the church and cultivated the surrounding land. With the development of our water system, with the result that the groundwater level dropped significantly, the settlements moved to fertile land. The church remained isolated in the landscape, and new churches were often built around the relocated settlement.

Eighty Year War

Important historical events have also strongly influenced the formation of the church landscape as we know it today. In times of the Eighty Years' War, the mostly Catholic churches came into the hands of the Protestant church community and barn churches were created where Catholics could exercise their faith in secret. Due to lack of money and poor maintenance, in some cases the nave of the Catholic Church was demolished while the church tower was preserved. Ownership was in the hands of the municipal government and aimed to inform the people in cases of emergency.

Triangular measurement

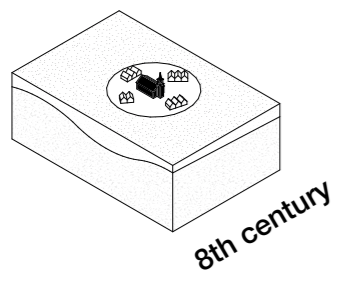
In the year 1500 a mathematical method was devised that was used in surveying. Through a network of triangles, in which height objects in the landscape served as a reference point, it was possible to map the whole of the Netherlands. During this time church towers were often the highest objects in the landscape, and the religious building also became a measuring instrument.

Post-war development

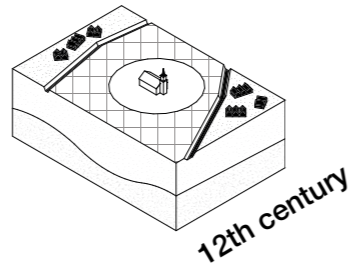
In the period after the first and Second World War the enormous demand for housing led to a strong growth in the number of churches. Partly under the influence of industrialization, modernization took place within the church. The building's typology was transformed, but the institution was also given an all-encompassing function, housing schools, monasteries and in some cases health services.

Secularization

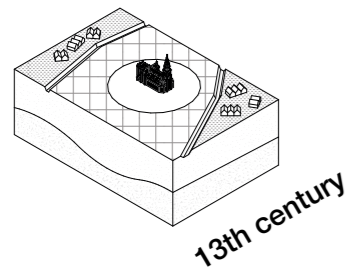
Nowadays, partly due to a large decline in the church community, the church has a lot to do with secularization. Parishes are merging and there is a growing vacancy. There is a big question of how we deal with our valuable religious heritage. Many of these churches have a rich history and were built over several centuries. As a result of the enormous demolition rage in the 1960s, we realize that this is not the solution and we focus on the transformation task. In order to succeed in this, it is valuable to look at the stratification that the church building has always had in relation to its function, its users, but also to the landscape.



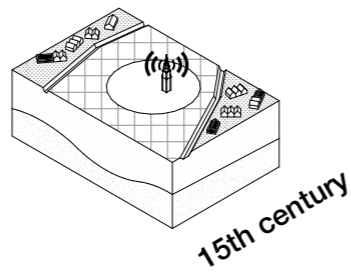
8th century



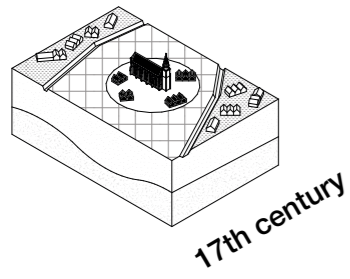
12th century



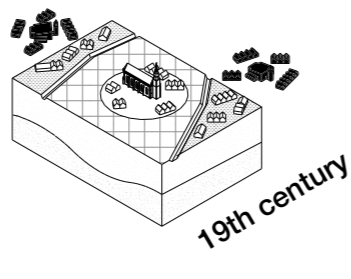
13th century



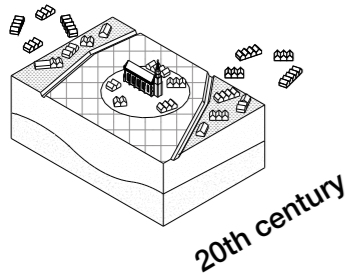
15th century



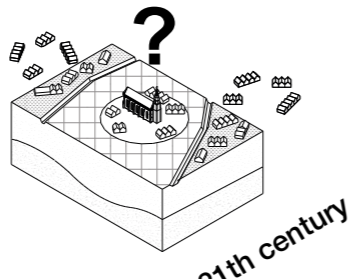
17th century



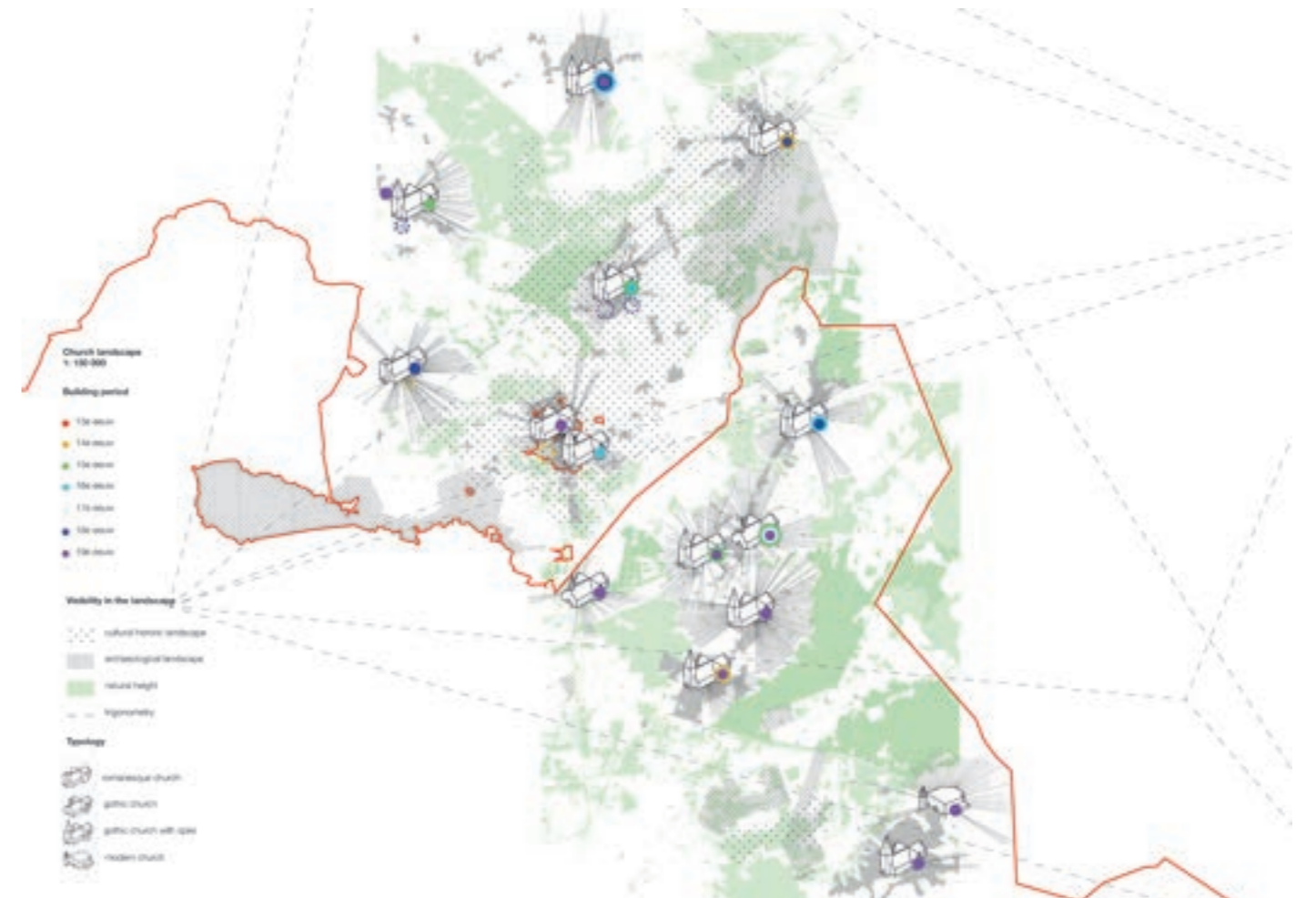
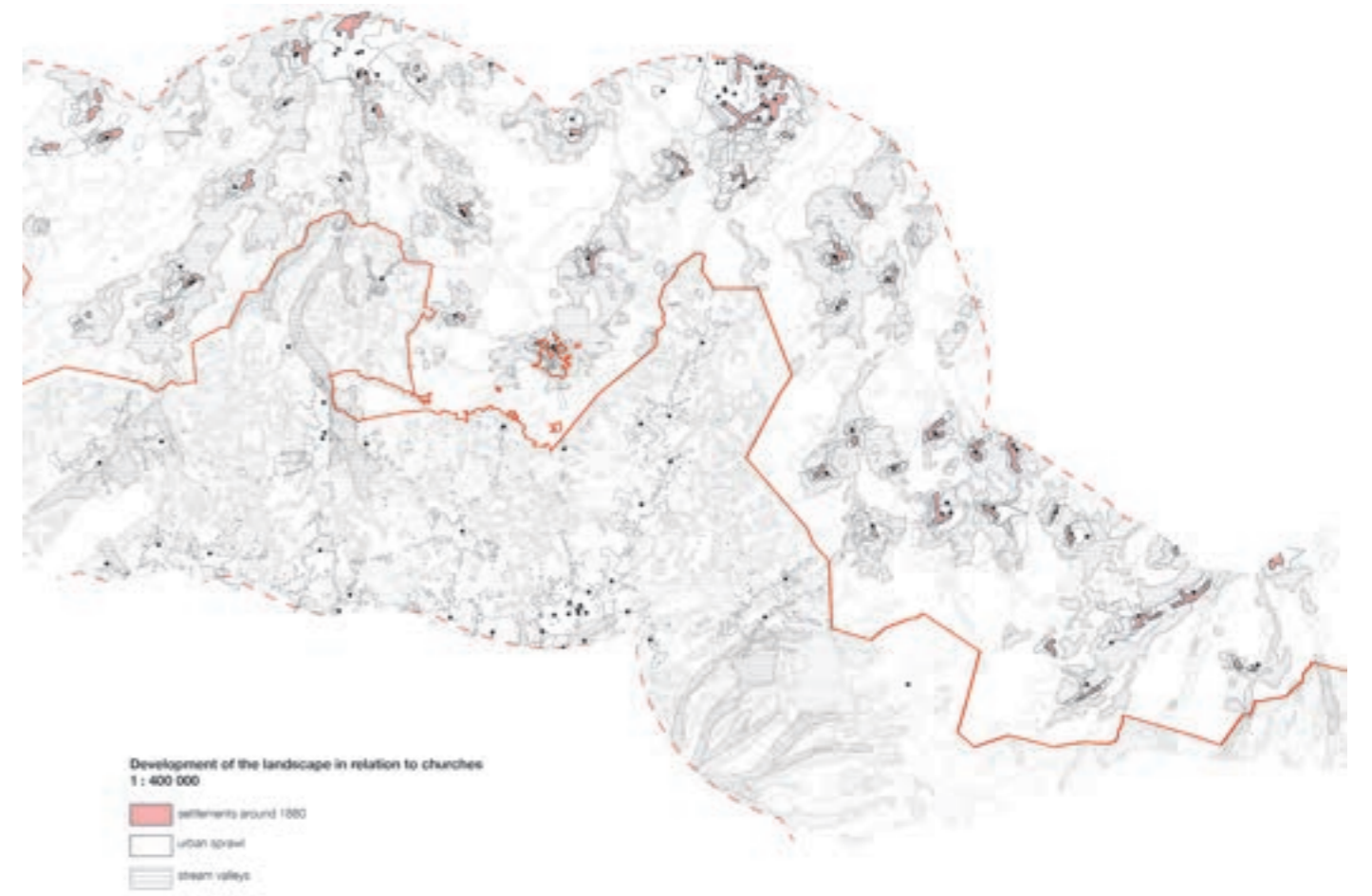
19th century

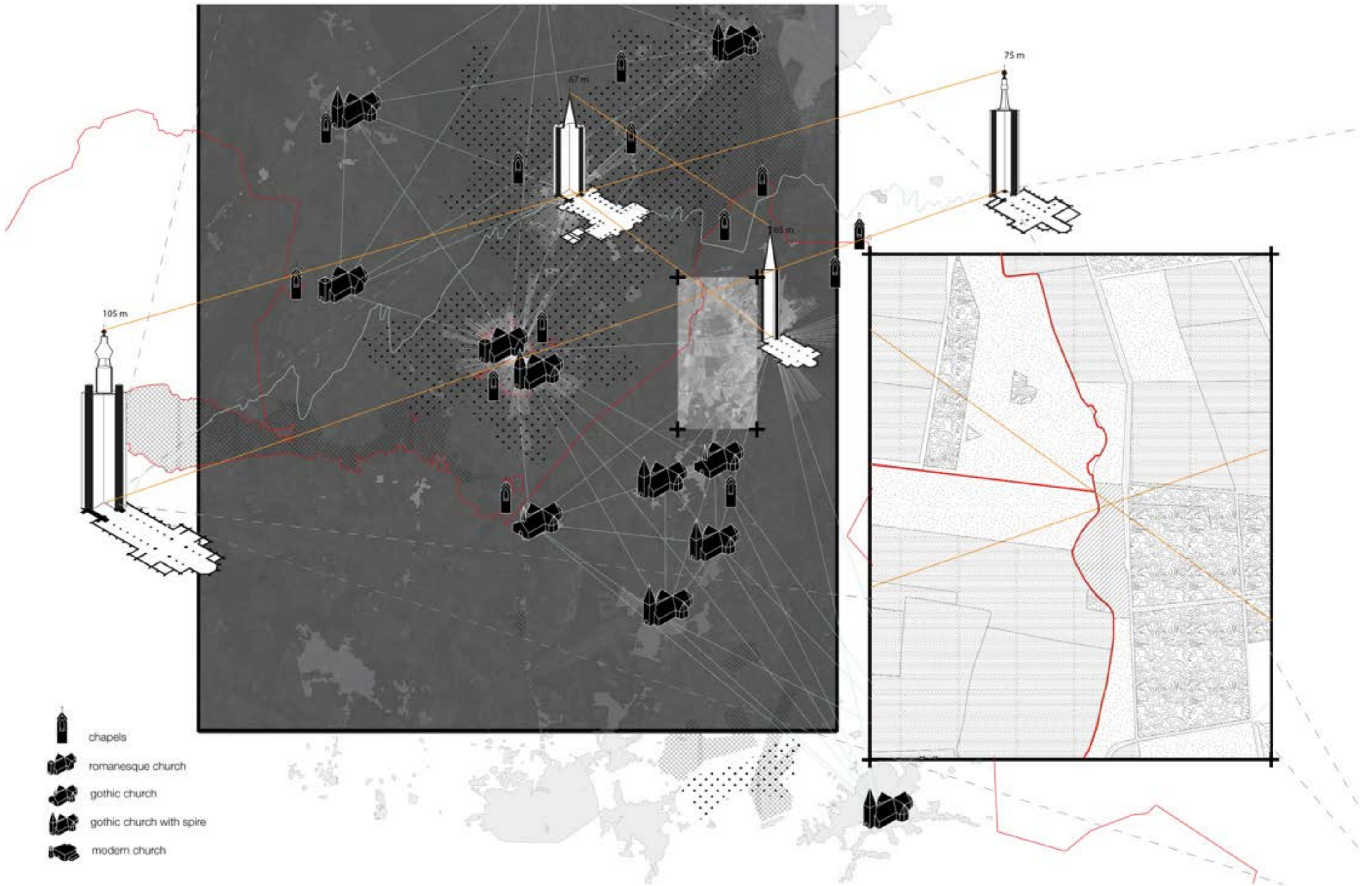


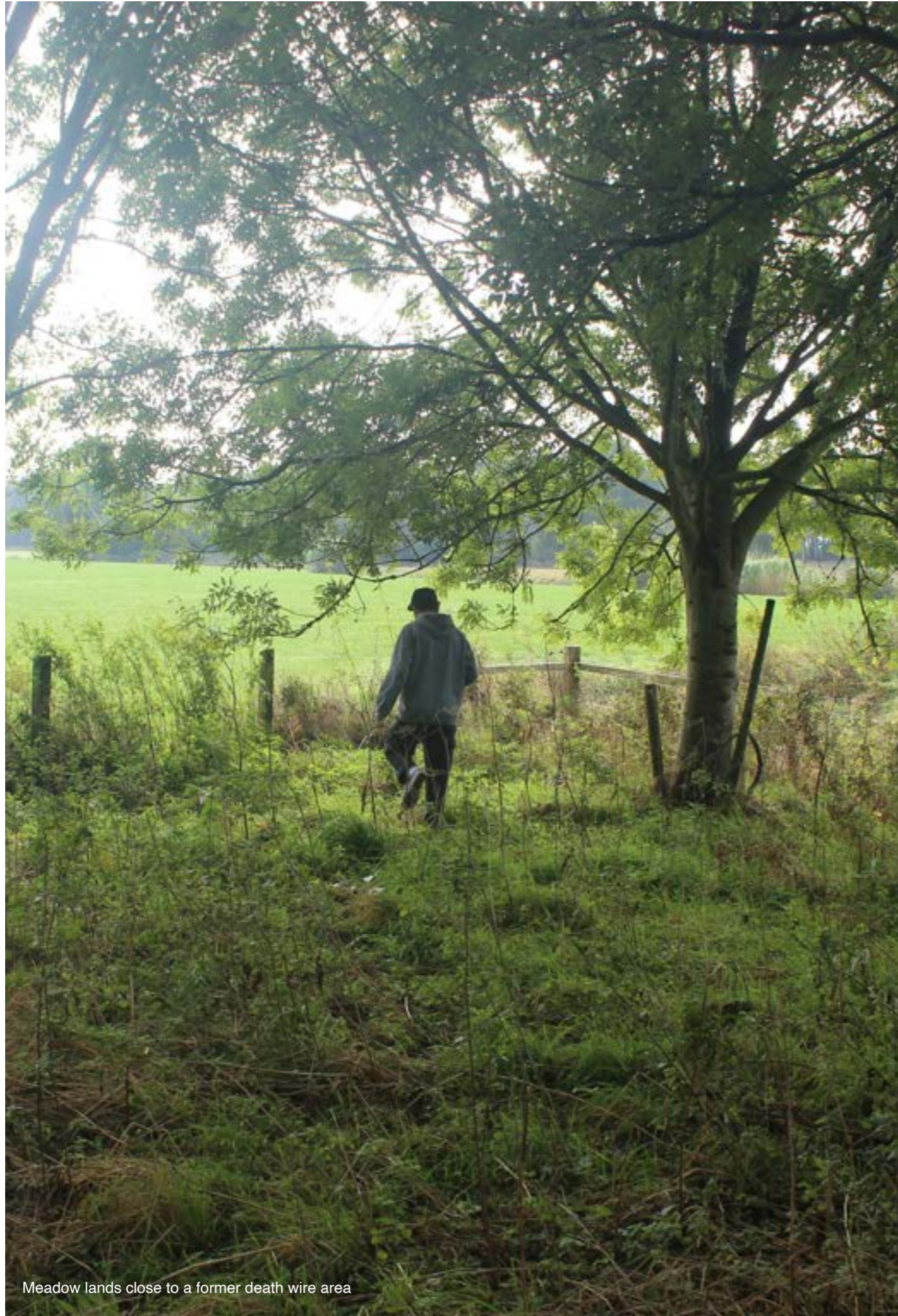
20th century



21th century







Meadow lands close to a former death wire area

3.6 THE MERKSKE

Diederik Vane

If we look closely we can see a small river swaying through a rich and green landscape. This natural habitat is called 'The Merkske'. Here we can find the highest variety of amphibia in the Netherlands and a huge diversity of plants. While walking through the brook valley, there is peace. Birds are chirping in the treetops, frogs are croaking next to the water, and beautiful unfamiliar flowers can be found.

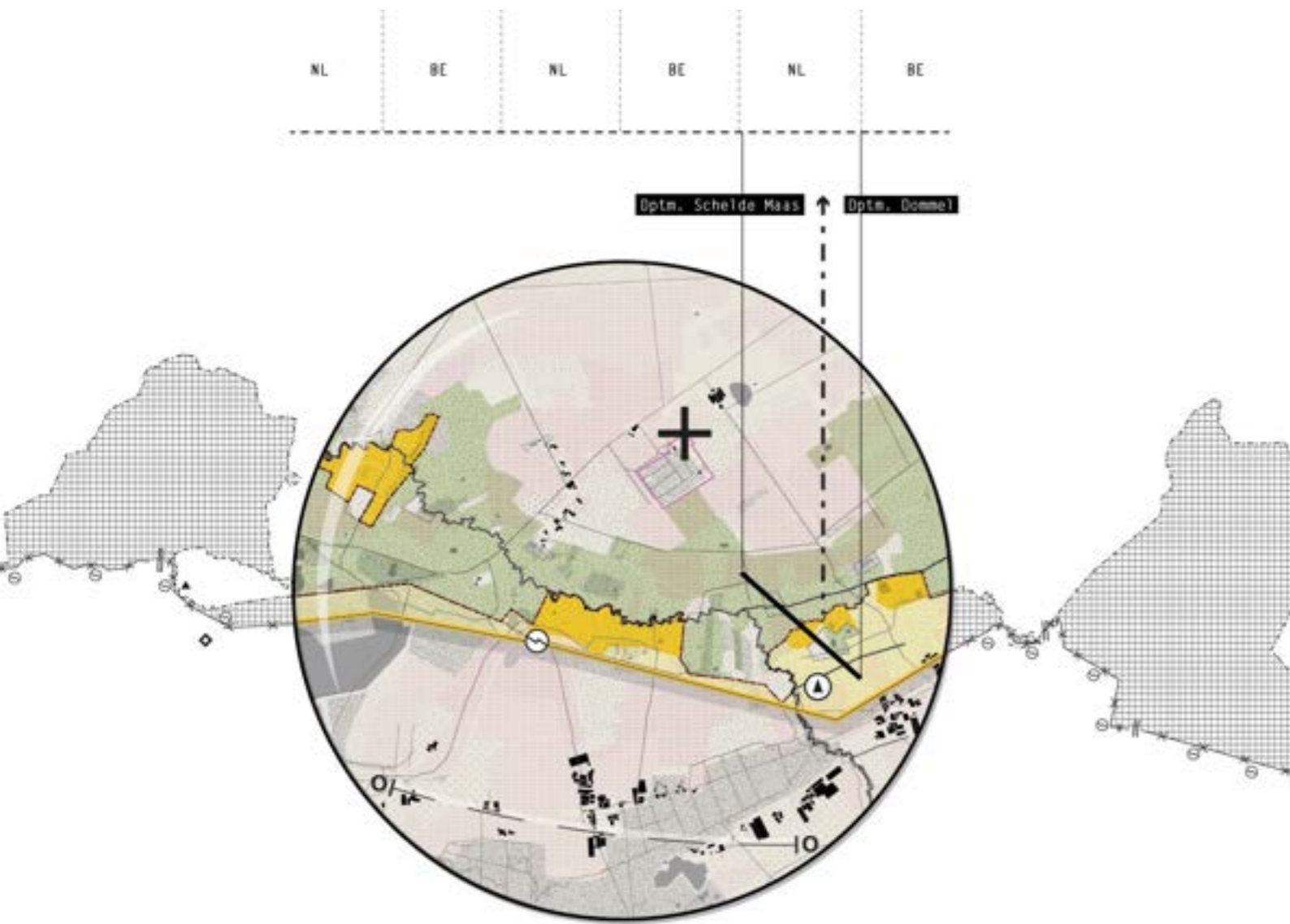
But the moment we cross the border or get to the edge of the forest, this feeling stops. On these 'edges' country politics don't focus on the same goals. The natural landscape makes room for something different. Something that prioritizes mankind.

Agriculture is growing alongside the borders of this area. We can see the mega stables coming closer and closer. They are threatening the Merkske area.

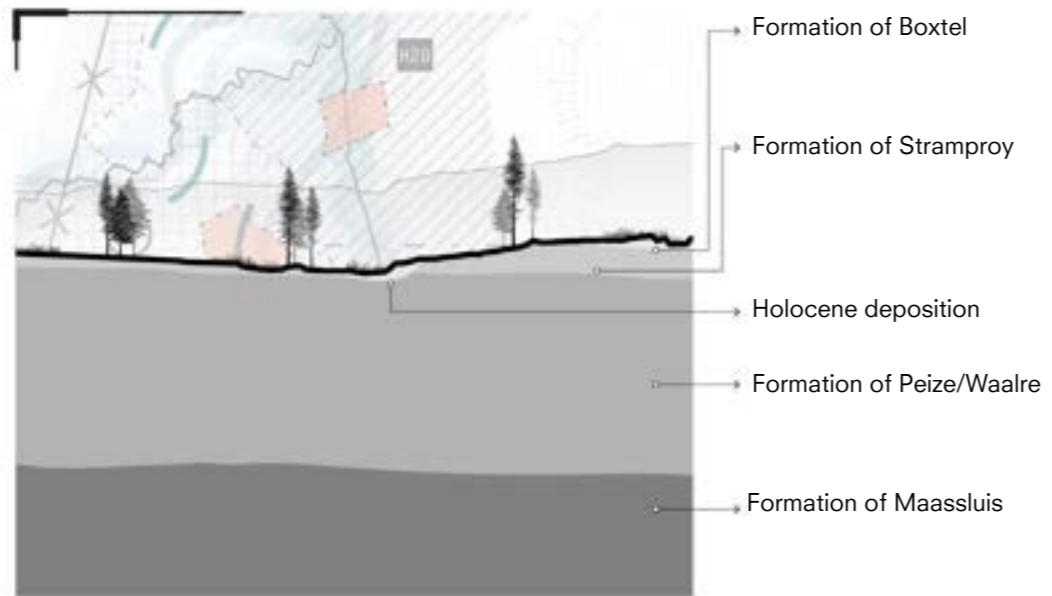
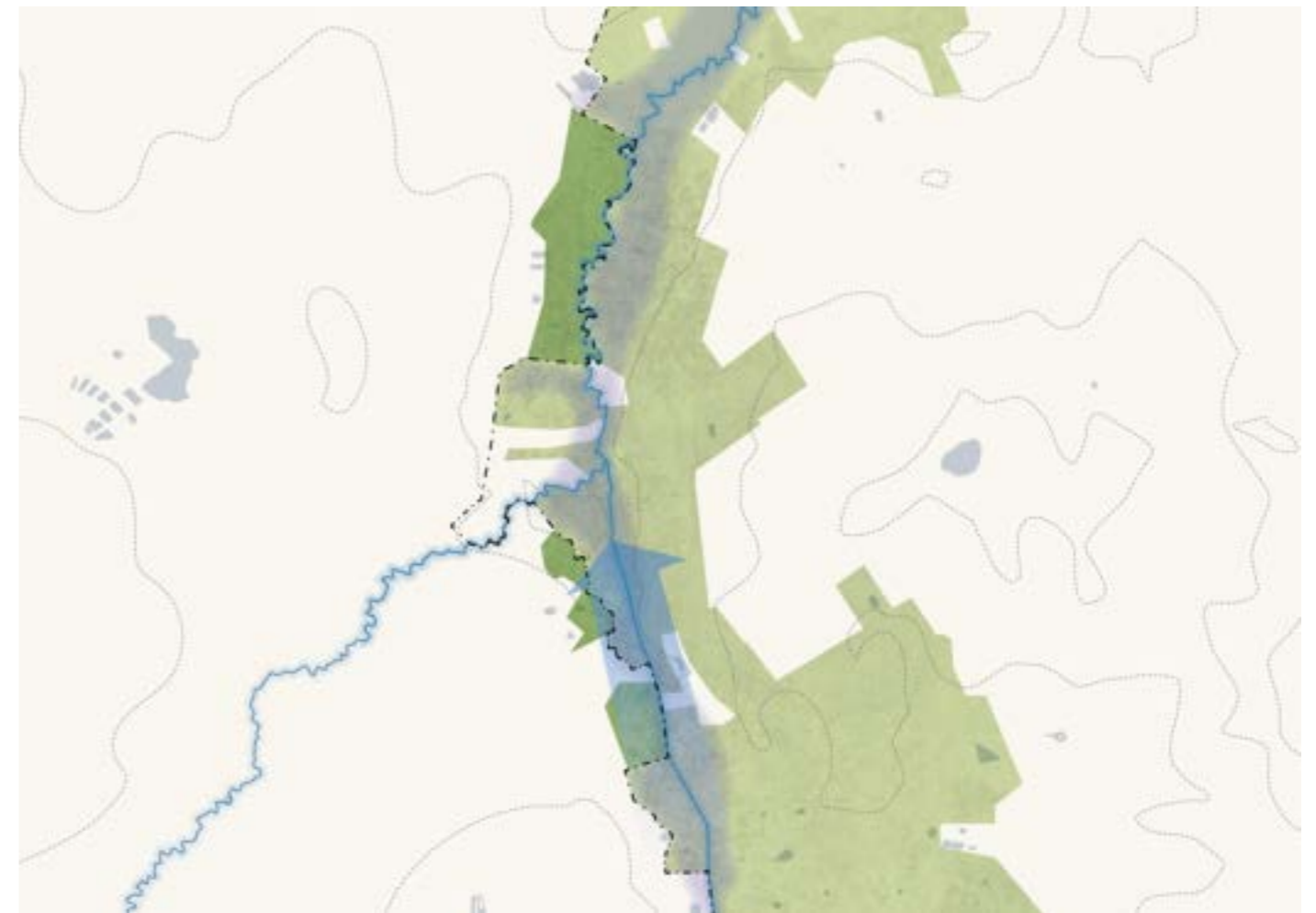
Drought, slurry, mowing policies, fertilizers and pesticides are the weapons of their choosing. Thanks to their battle vehicles soil is compressed together resulting in rammed earth. Because of this, groundwater washes away and plants start rooting horizontally, not being able to drink enough water. Also, harmful groundwater reaches the little brook and pollutes it.

The second threat is that big parts of the brook valley have been canalized due to industrial purposes, the water is flowing away at a fast pace causing drought in the fragile peat landscape. When too dry, peat breaks and disappears. Homes of hundreds different species will eventually be destroyed.

The Merkske is under attack.



Fragment of the natural area the Merk-ske, which is a nature 2000 area.





Zondereijgen area, looking at the only dutch enclave in the Baarle region.





Farm vehicles

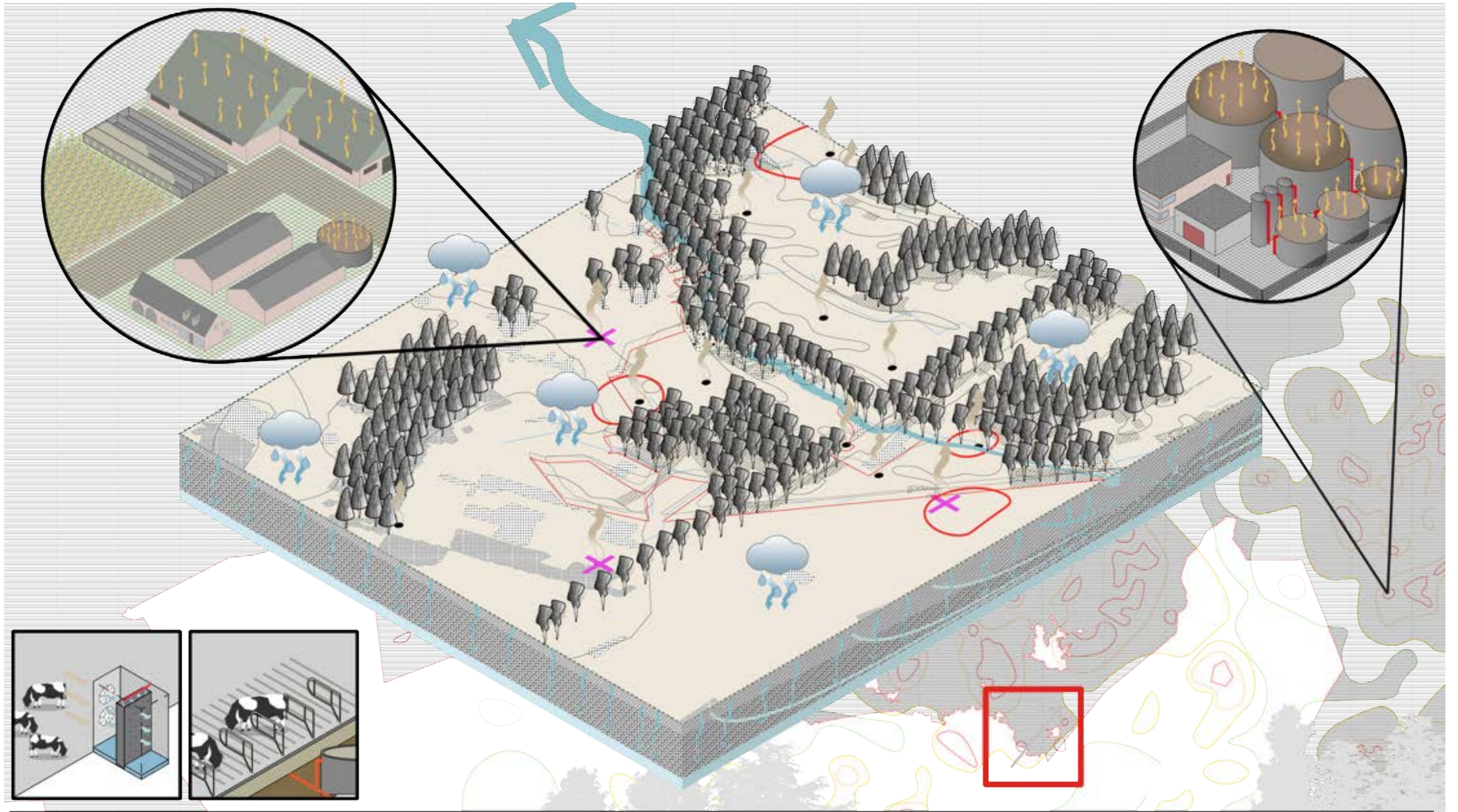
3.7 WEELDE - FARMING

Teun Vosters

Several large farms can be found around the border at Baarle Nassau. These farms produce nitrogen and are feeding it into the ecosystem. Nitrogen in itself is not a problem. It is a gas and is in everything around us. It is important to know that nature cannot live without it and neither can we. Nitrogen is a reactive substance that can take different forms. For example, together with oxygen or hydrogen, nitrogen can be converted into nitrogendioxide or ammonia. These substances are indispensable for all forms of life on earth.

But it starts to become a problem when too many of these gasses are created. One of the main causes of nitrogen pollution is intensive agriculture and livestock farming. As a result a surplus of nitrogen, nitrogendioxide and ammonia end up in natural ecosystems.

The soil starts to acidify, causing certain plants to proliferate and others to die. As a result a monoculture of plants emerges creating an unbalanced ecosphere.





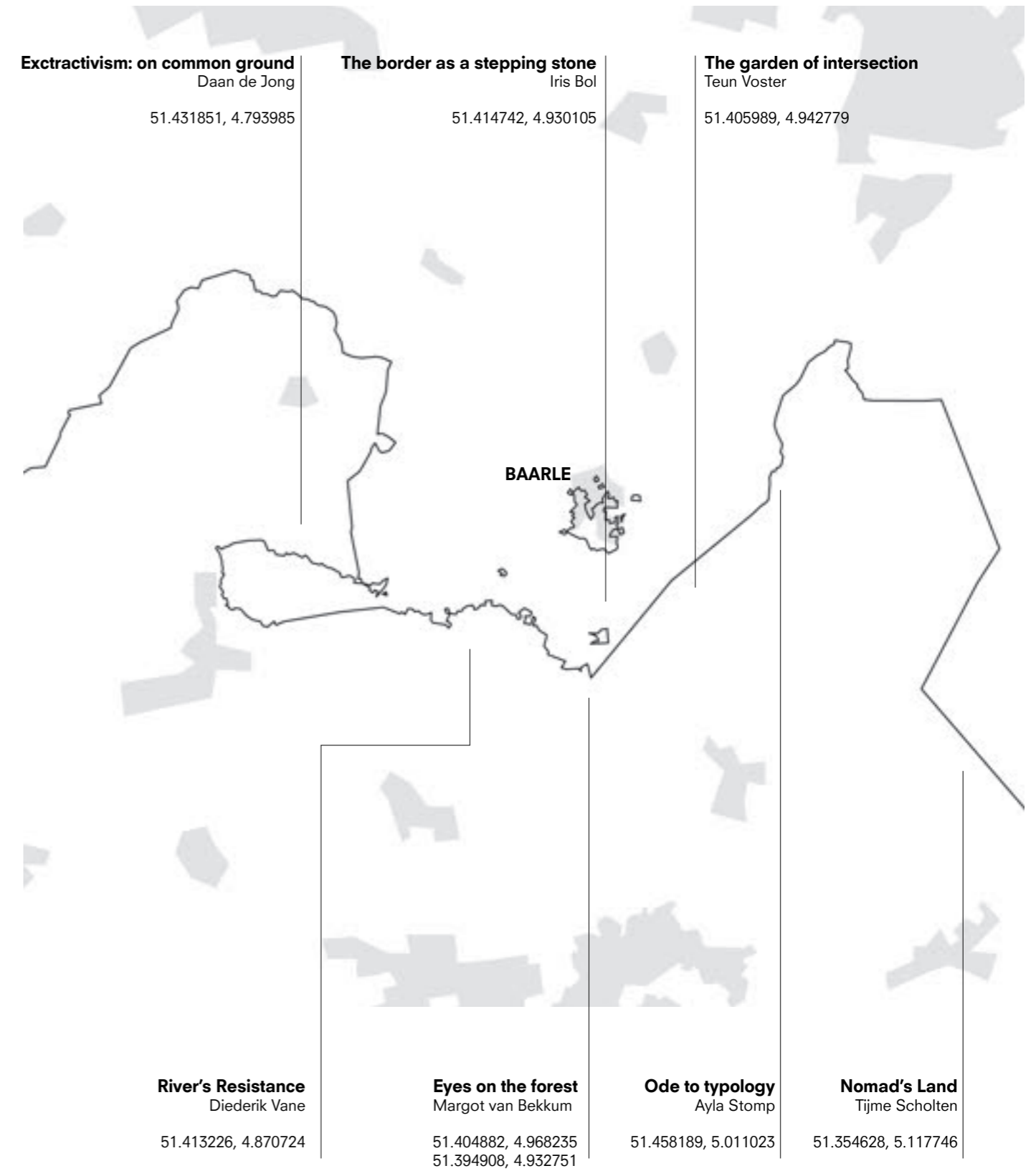
Death wire circuit building near Zondereigen

4 PROJECTS

- 4.1 **Eyes on the forest**
Margot van Bekkum
- 4.2 **The border as a stepping stone**
Iris Bol
- 4.3 **Extractivism: on common ground**
Daan de Jong
- 4.4 **Nomad's Land**
Tijme Scholten
- 4.5 **Ode to typology**
Ayla Stomp
- 4.6 **River's resistance**
Diederik Vane
- 4.7 **The garden of intersection**
Teun Vosters



Road on the edge of the border near the Blokken





4.1 EYES ON THE FOREST

Margot van Bekkum

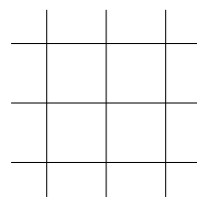
A physical and sensory presence

I would like to propose a new kind of surveillance network placed in the area. To decide the placing of the network, a grid is placed across the map of the border area. Within each quarter of the grid there will be a lab with an intricate network of data surveillance posts. The posts contribute to the preservation of the natural environment and deter dumpings in the vulnerable areas that according to research have the most ideal conditions for drug dumpings. The posts stand out of their surroundings and communicate that they are surveilling the area. Like a panopticon, they signal the feeling of being watched. The desired effect is that the post creates a radius that deter criminals of dumping their waste. If these dumpings were still to happen, they are detected early by the sensors and the damage to the environment can be minimized. The data of such an intricate network could also contribute to the localization of the source.

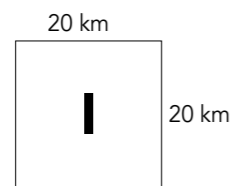
Each lab gets assigned to a quarter on the map. The area the lab oversees is a district. The goal of the lab is to collect and analyze all the data from the surveillance posts. This information could be used to locate drug dumpings and production sites. For the gathering of data the lab has three different types of posts at its disposal: the Watcher, the Forester and the Connector. There can be any number of posts within the district and the amount and placing should be decided by the lab in the district itself. However, the posts can only be placed at certain conditions.

The posts have different technologies and sensors. The three pre-defined types of posts provide the basis for the site-specific conditions. Additional sensors/elements can be added to these types by the lab team to make the post even more site and situation specific.

BORDER GRID



LAB QUARTER

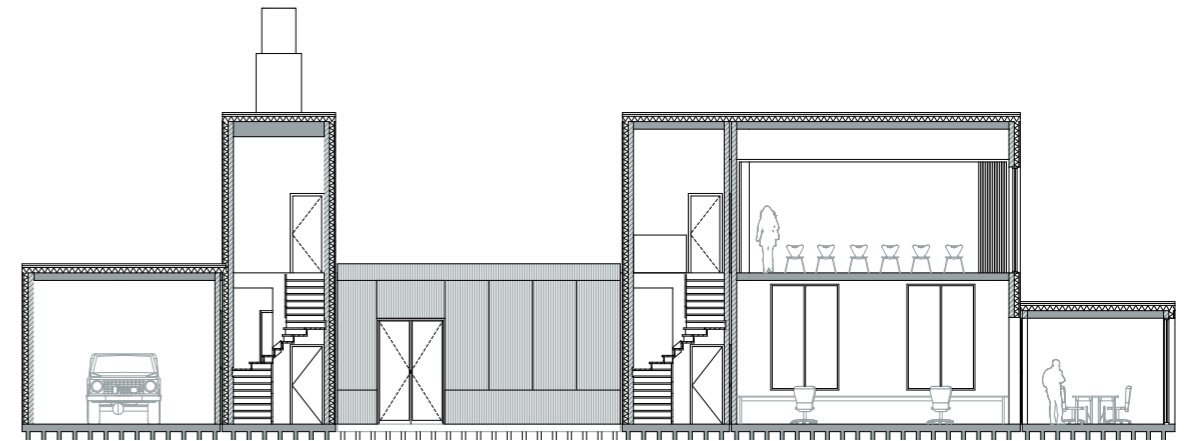


DATA POST

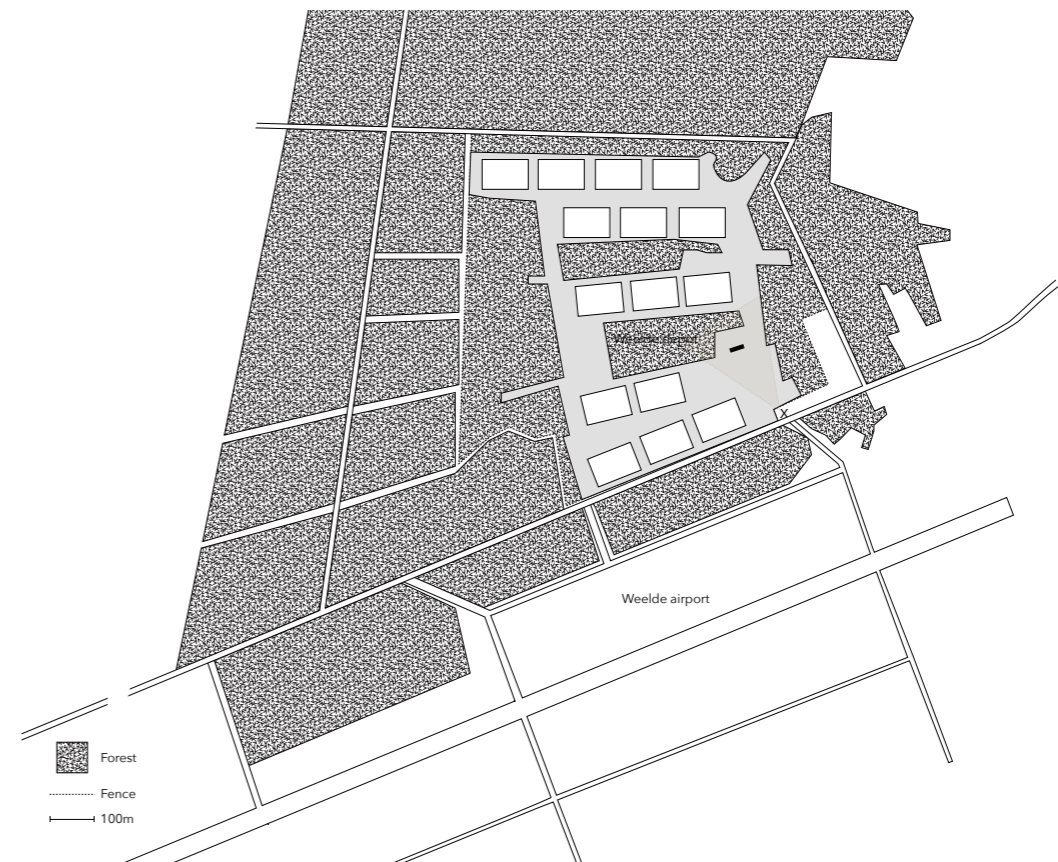




The Lab

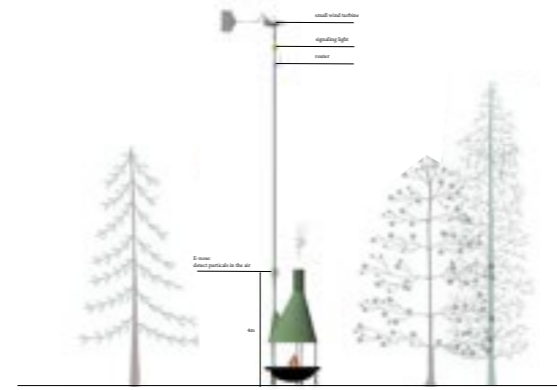


oversees a quarter area, each of these quarters have different needs and therefore the lab team determines the amount and type of post within the area. The lab itself is designed with pre-determined modules. These modules are the basis for the 7 different element which the lab should contain. With this modular system each lab can have its own focus and specialty. Some might have a bigger laboratory while other focus on the visitors center. Therefore the lab will have different configuration at every quarter. There are numerous of possibilities, however each element should contain a pre-fixed module combination.



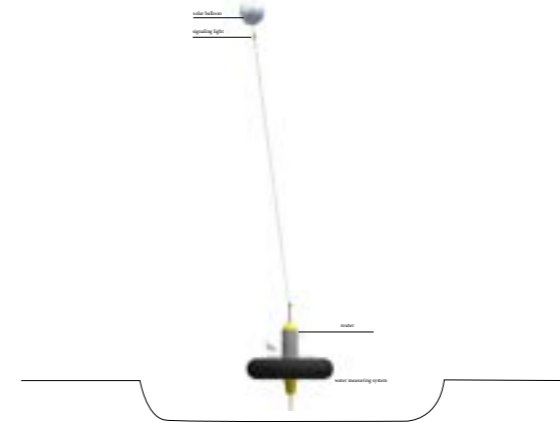


The post



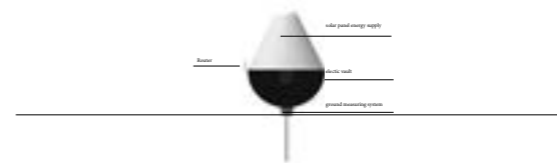
The Forester

is placed within the woods nearby a public road. It has a fire-pit, this attracts people to use the forest at night and create a social security, light and smoke state there presence. It also has the capability to detect drug dumping residue in the air and reports this information back to the lab. To make its visibility known, it should stick out above the trees.



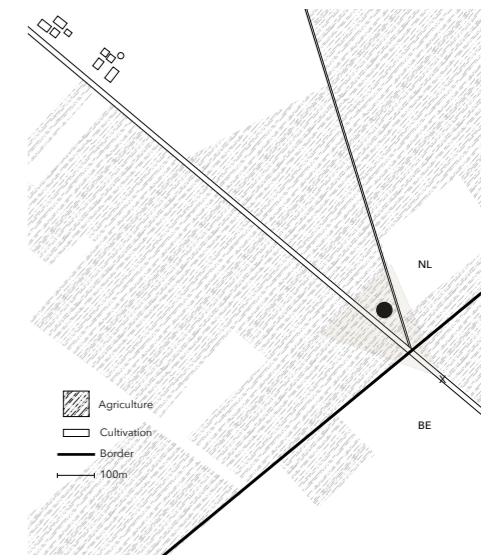
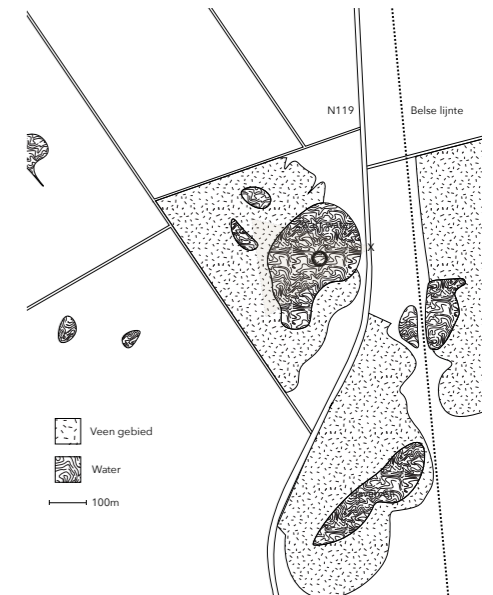
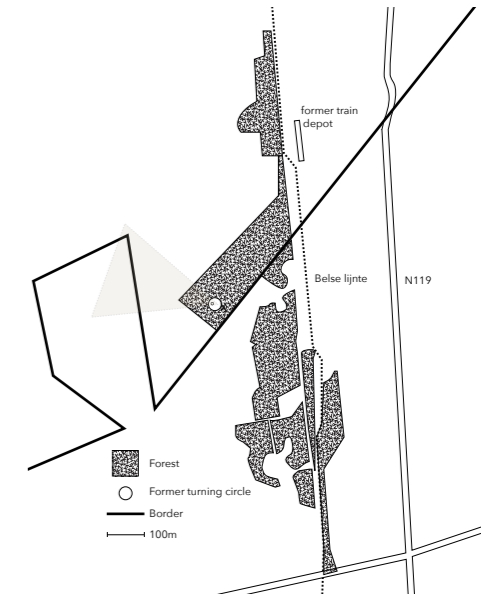
The Watcher

is placed at a nature reserve nearby a public road. It has the capability to detect any drug residue in the water and reports this information back to the lab. The post floats on the water and has no permanent structure that causes harm to the environment. It should be visible from the road to create the awareness of surveillance and scare off any dumpers.



The Connector

is placed next to a crossing of farmland roads. It is placed on the open fields and therefore clearly visible. It has the capability to measure the ground water and collect the manure and ground samples which the farmer provide voluntarily. It connects to the lab and visitors center to establish better relations between the government en the farmers.





Mowing policies near the Grensroad

4.2 THE BORDER AS A STEPPING STONE

Iris Bol

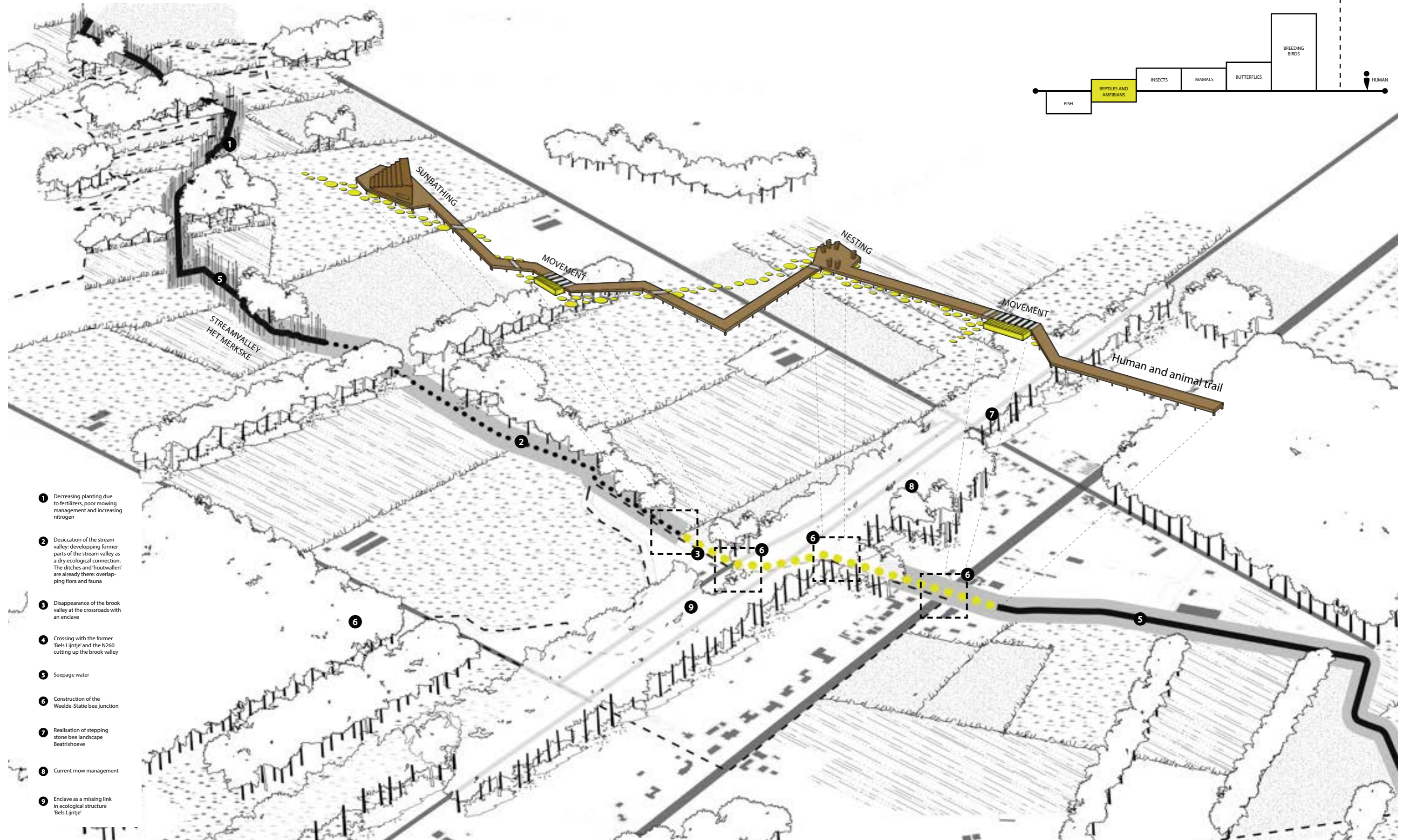
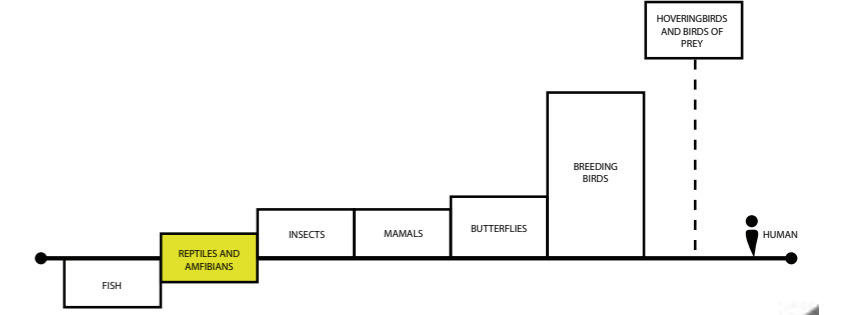
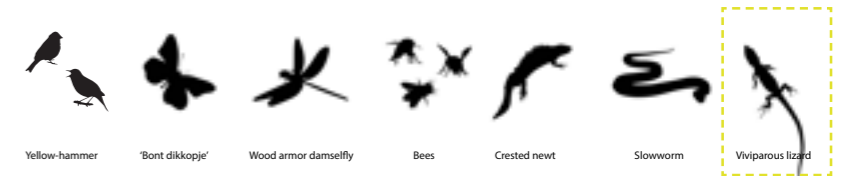
The complete restoration of original ecological structures is not realistic due to the major changes that have taken place over time. Instead opportunities lie in the healing of existing structures by means of minimalist interventions and by searching for overlapping habits, plants and animal species, wherefrom smart connections can be made. In the area between the Merkske and 'Het Bels Lijntje', where the dry stream valley is redesigned into a dry connection. In this case, the existing hedgerows, thickets, ditches and open grass fields offer potential as habitat for the viviparous lizard.

The design intervention consists of a continuous structure that, by means of minimalist interventions and the addition of

stepping stones, ensures that animals can move safely through the border area.

At the same time, the ensemble of elements also forms a route for human beings that tells the story behind the border nature. By deliberately revealing the natural habitat, behavior and movement of the animal, that humanity has lost sight of and stimulating interaction between humans and animals, awareness of the importance of the border area as a stepping stone is being increased.

The shape and use of materials of the objects reflect the monofunctional character of natural elements.



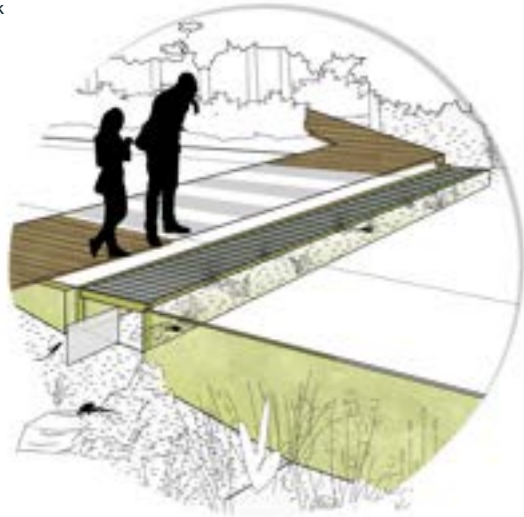
- 1 Decreasing planting due to fertilizers, poor mowing management and increasing nitrogen
- 2 Desiccation of the stream valley: developing former parts of the stream valley as a dry ecological connection. The ditches and 'houtwallen' are already there: overlapping flora and fauna
- 3 Disappearance of the brook valley at the crossroads with an enclave
- 4 Crossing with the former 'Bels Lijntje' and the N260 cutting up the brook valley
- 5 Seepage water
- 6 Construction of the Weelde-Statie bee junction
- 7 Realisation of stepping stone landscape Beatrixhoeve
- 8 Current mow management
- 9 Enclave as a missing link in ecological structure 'Bels Lijntje'

Technical materialisation trough human perspective

Sunbathing
Sunbathing hut



Movement
Boardwalk



Nesting
Peekholes



Natural elements trough animal perspective

Sunbathing lawn



Faunapassage

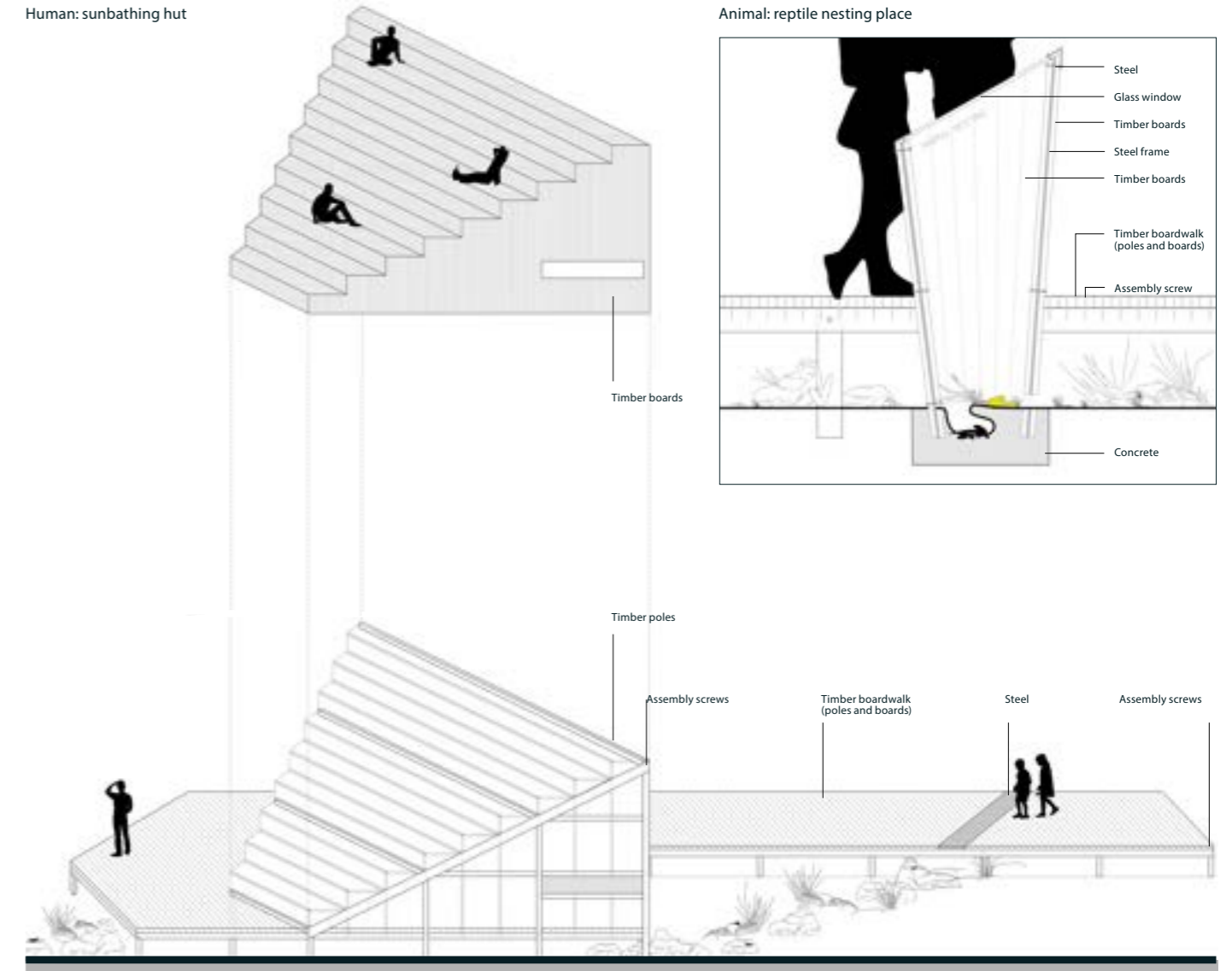


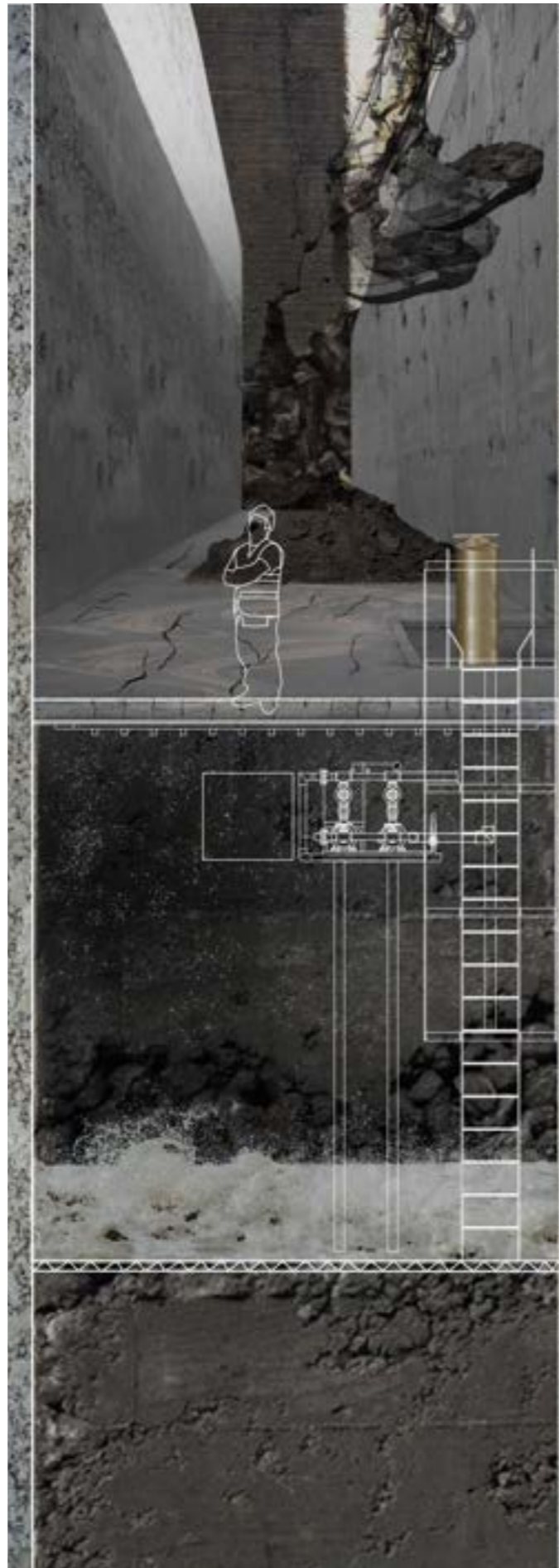
Nesting places



Detail of the fragment

Human: sunbathing hut





4.3 EXTRACTIVISM: ON COMMON GROUND

Daan de Jong

We have become witness of the immense environmental impacts of an ever-expanding human need to manage, commodify, and harness natural resources that became known under the label of extractivism. This project reveals the depredations of extractivist logic in the border zone around Baarle and aims to dislodge its hegemony by bringing it back on common ground.

When you take a close look at the Dutch-Belgian border in the Kempen region, you'll notice a strange protrusion creating a peninsula that is known as 't Merkske, named after the small creek, that gridles its way along the border. For a long time, this region was a forgotten corner, so it escaped human intervention. That was until the 19th century when man discovered new ways to work the land and in doing so layers of clay were found underneath the sandy soil. It set of a thriving brick industry that would radically shape the landscape up until now.

A stone's throw from the border and the protected Dutch nature reserve, lies the Desta brick factory. It's industrial production of bricks goes back to the 1960's when the factory was established on the banks of the brook valley. On these banks layers of clay were formed by the deposition of sediments. The excavation process takes place on the former agricultural lands in the direct surrounding of the factory site, turning it from lush meadows into a lunar landscape in no time. In the process of excavation colossal pits are formed by taking away the sandy topsoil to expose the deeper bands of clay. These pits, with a depth of 6 meters or more, slowly fill up with groundwater that's pushed up from the phreatic layers. As a result, the phreatic groundwater disappears locally. Outside the area to be exploited, a drop in the groundwater level is also to be expected as drainage takes place in a sand layer. This will affect both the neighboring farmlands that are already dealing with shortages to water the lands, as well as the protected nature reserve of 't Merkske that is seriously affected by recent droughts. To make matters worse, the Desta company recently announced the expanding of their extractivist operations, by purchasing more lands almost directly at the border.

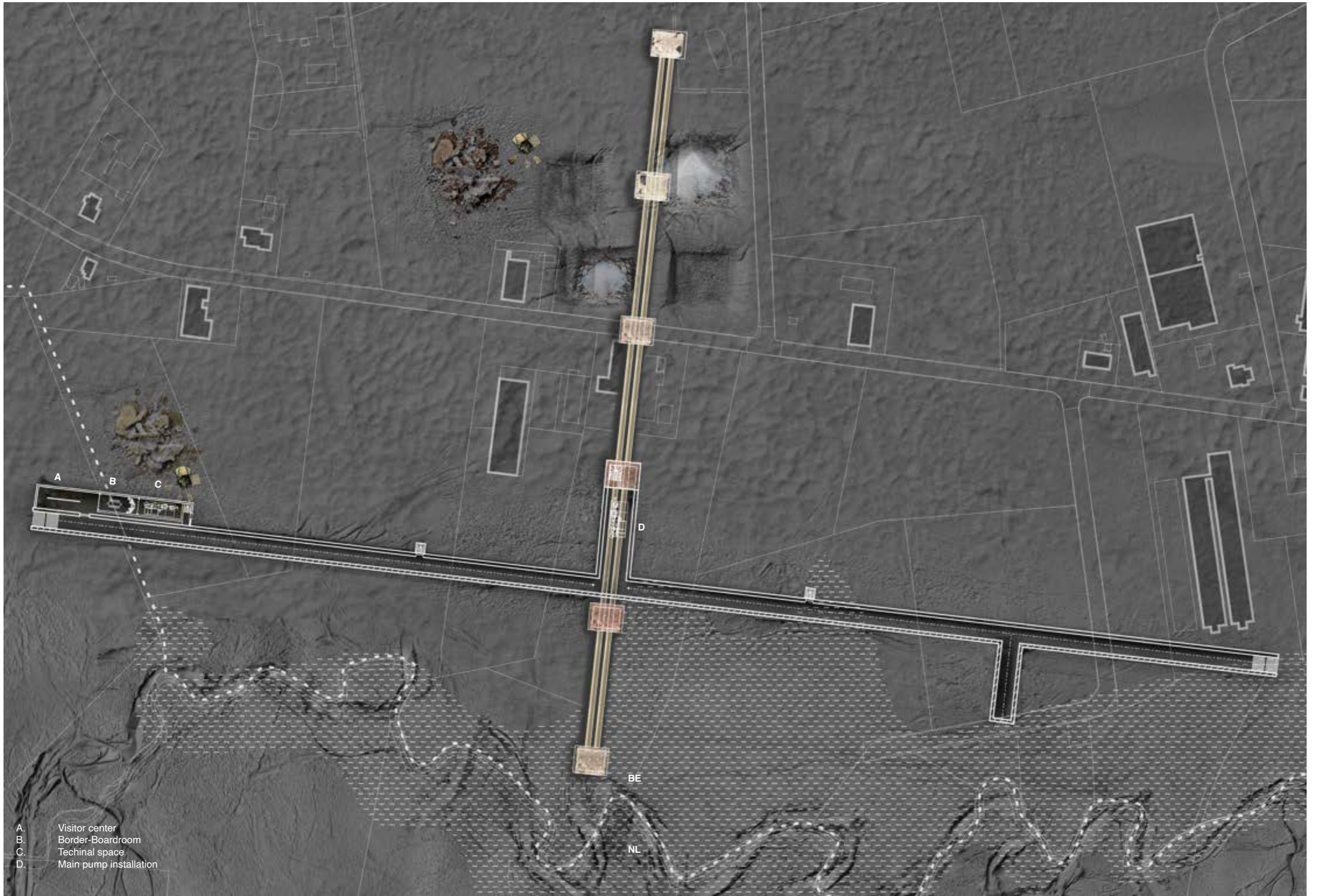
Border as a place of negotiation

To deal with the correlating issue of extractivist activities and the management of drought and floods it needs to be scrutinized and addressed in a cross-border approach. This project seeks to dislodge the unevenly felt effects of the excavations by offering ways to start renegotiating the distribution of water in order to get back on common ground. By taking the manufacturability of the landscape as a starting point, two structures are added in a concept of dualism to act as seemingly opposite or contrary forces that actually become complementary, interconnected, and interdependent.

One acts as an underground dam to hold back the groundwater from seeping away towards the excavation sites. Pits start to form in the process of making the dam that become the mold for the second and opposite force; the towers that form an aqueduct for the distribution of water. These water towers have the ability to retain, filter and eventually discharge water. The extent to which the towers either hold water or let it through is defined by the materiality of which they are composed of. For instance, in the case of a flood in the brook valley the water needs to be drained from the dam that functions as a gully at the same time.

An elaborate system of pumps distributes the water from the dam towards the excavation pits nearby where the stormwater can be collected. The swift discharge of water requires a highly porous tower to let the water seep through easily. This in contrast to the towers that are located on the edge of the brook. These should have a more solid character, so the water slowly absorbs into the ground in periods of drought.

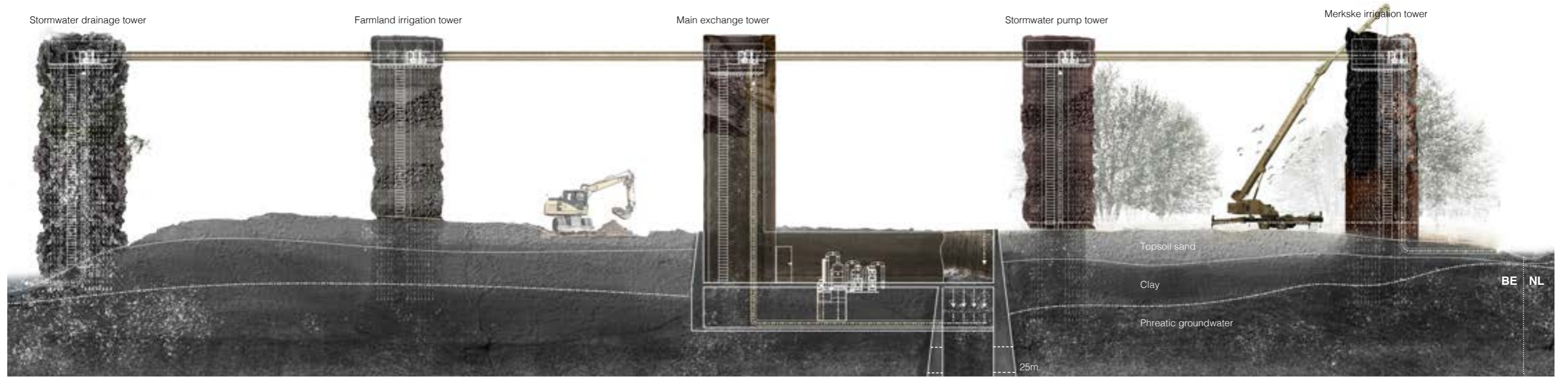
Apart from the functional aspects of this infrastructural intervention more so it aims to ritualize the process of re-negotiating water that's becoming extremely relevant in the epoch of climate crisis we live in. The project springs from the conviction that the invisible and intangible effects of extractivism in conjunction to the topic of climate change demands to be made legible to the senses.



- A. Visitor center
- B. Border-Boardroom
- C. Technical space
- D. Main pump installation

BE

NL





Arendonk military camp 1970

NOMANS-CAMP

Tijme Scholten

Border and fence

The identity of the military camp partly derives from being an closed introverted entity that is literally hiding in the landscape. The camp itself feels very serene and is a great place to wander around. The terrain is still under surveillance of the Belgium army, but all the bunkers and buildings are abandoned. The fences are cut open by squatters, copper thieves, urban explorers and illegal party people. There is a lot of vandalism and graffiti going on, although this became part of the identity of the military camp this should be more discouraged.

During my site visit I noticed that most of human activity takes place at the border of the camp. People hike and camp in the wild and people from the refugee camp exercise outside. The deeper you walk into the military camp the less movement you notice and the quieter it gets. This sense of abandonment and enclosure is an important quality of the area and one that should be embraced.

Looking at an aerial view of the military camp you can hardly notice that it's actually there. This because the bunkers are covered by a layer of dry soil with 20 meter high trees on top of it. Nature is literally growing over the buildings and in that sense it is the perfect symbol for the dominance of nature. This project aims not to intervene with this process of nature taking over.

Nature and ecology

The military camp is located on an important intersection of two ecological systems. The camp is an important link between different large nature reserves along the border: the Regional Forest Ravels, de Hoge Vijvers Arendonk and the forests of Mol-Postel. The link is especially important for the migration of birds and mammals. The lakes and the density of forest makes the camp a great resting place for animals. Unfortunately in the current situation the fenced enclosure of the military camp blocks the movement of mammals.

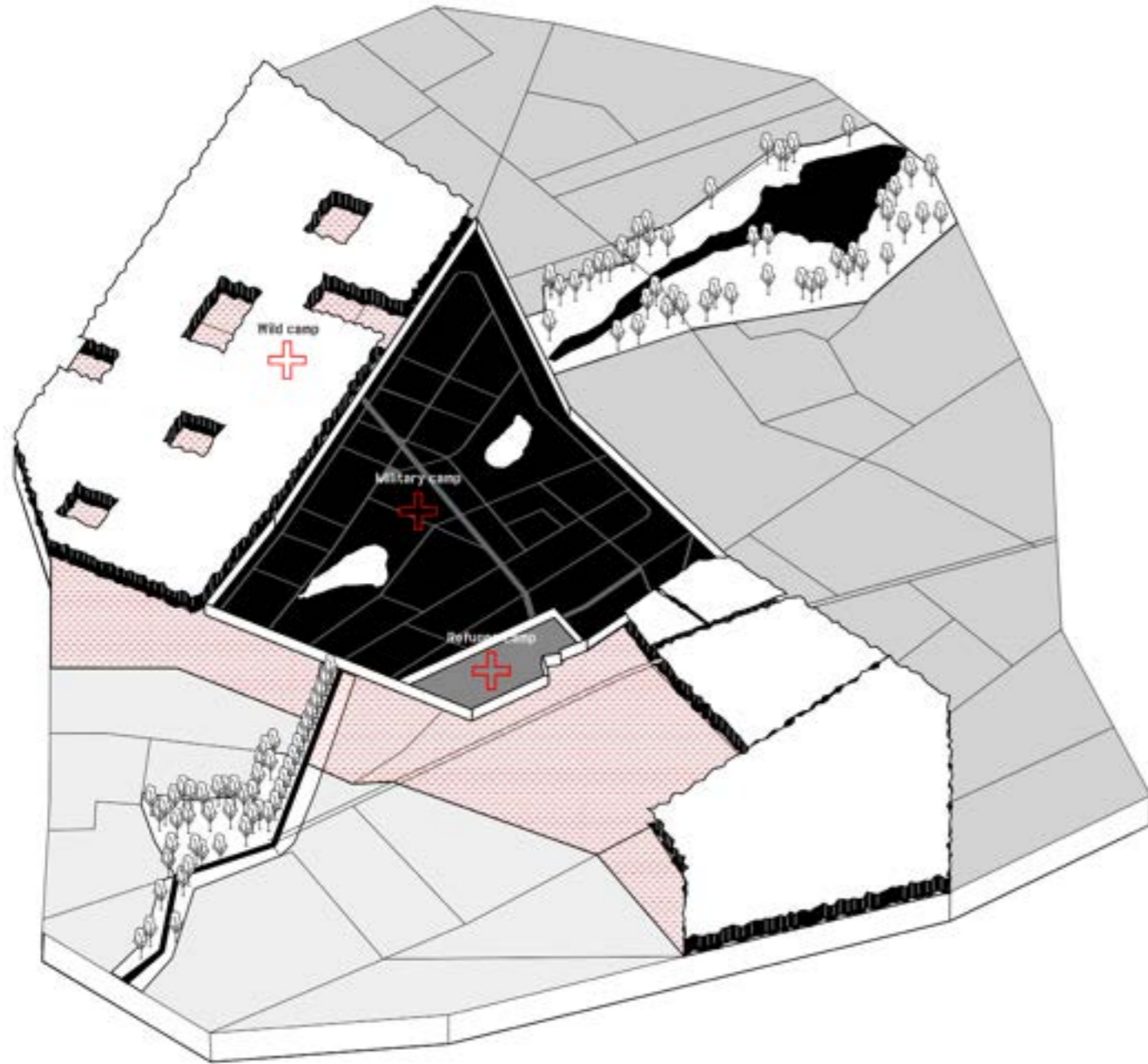
The border crossing water connection between the Turnhout-Dessel canal on the Belgium side and the creek de Reusel on the Dutch side is also from big importance in terms of water management. The lakes located in the center of the camp are important steppingstones for the distribution of water between Arendonk and Reusel. Unfortunately at the edges of the camp the water system is in bad shape and not functioning accordingly, so there is an opportunity to strengthen this water system at the edges of the camp.

Design intervention

What I want to stress with this project is the ambiguity of the fenced border around the military camp. The fenced border is experienced as a relatively seamless continuity for people who want to visit the camp but for the refugees, animals and water the fenced border may appear as a discontinuous division across which they can hardly pass. It is important to stimulate the flow of water and animals across the terrain but also generate awareness for humans that the military camp was an formerly highly secured, closed entity. The focus point is about creating a certain threshold and permeability through the architecture of the wall to stimulate the flow of water and animals and preserve the enclosure of the camp.

The fenced border is not only its sides that touch the inside and outside; it is also a third thing: the thing in between the two sides that touch the two areas. The fenced border becomes an in-between-area that could literally make it an inhabitable space for animals and humans. In this way the fence gets thickness that empowers the notion of border.

This project tries to reimagine the purpose of neglected military artifacts. By reframing the site a new role for the military camp is defined, ecologically as part of an landscape with specific ecosystems and culturally by means of military heritage and recreation.



MOVEMENT ANIMAL



Badger
 Size:
 L:70 H:30 B:20
 Climb/jump: NO NO
 Swim:
 Stay:
 Hollow underground



Deer
 Size:
 L:165-200 H:110-160
 Climb/jump: YES (max 2m)
 Swim: YES
 Stay:
 No fixed residence



Marten
 Size:
 L:40-50 H:20 B:10
 Climb/jump: YES YES
 Swim:
 stay: YES
 Hollow tree

MOVEMENT HUMAN



Climb

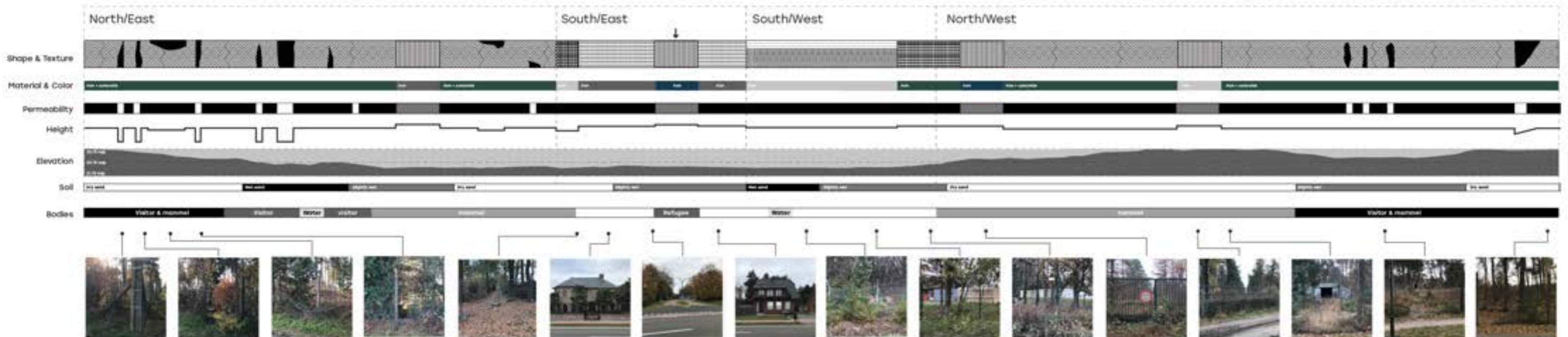


Jump



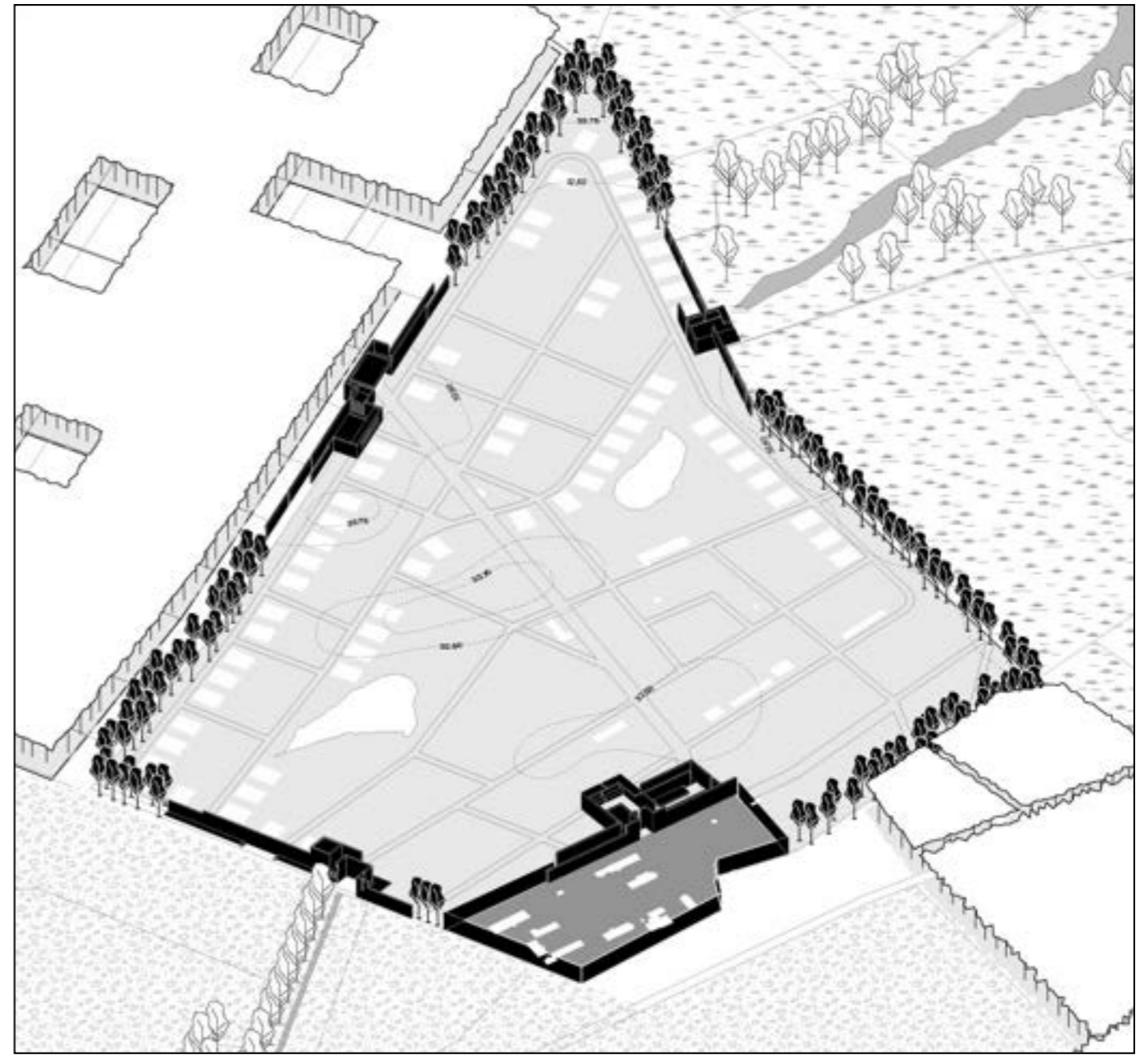
Crawl

ANALYSIS FENCED BORDER MILITARY CAMP

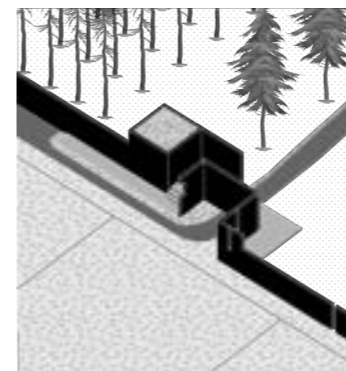




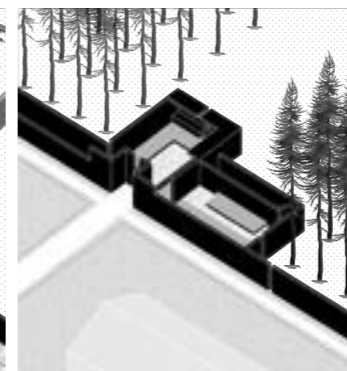
Arendonk military camp 1990



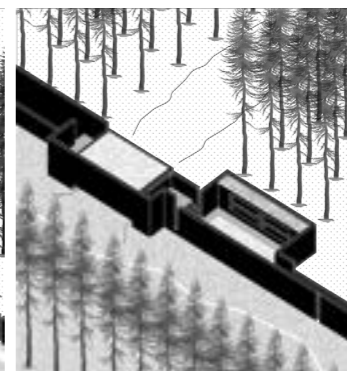
Masterplan



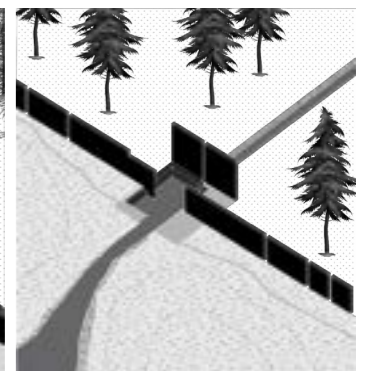
Watergate



Refugeegate

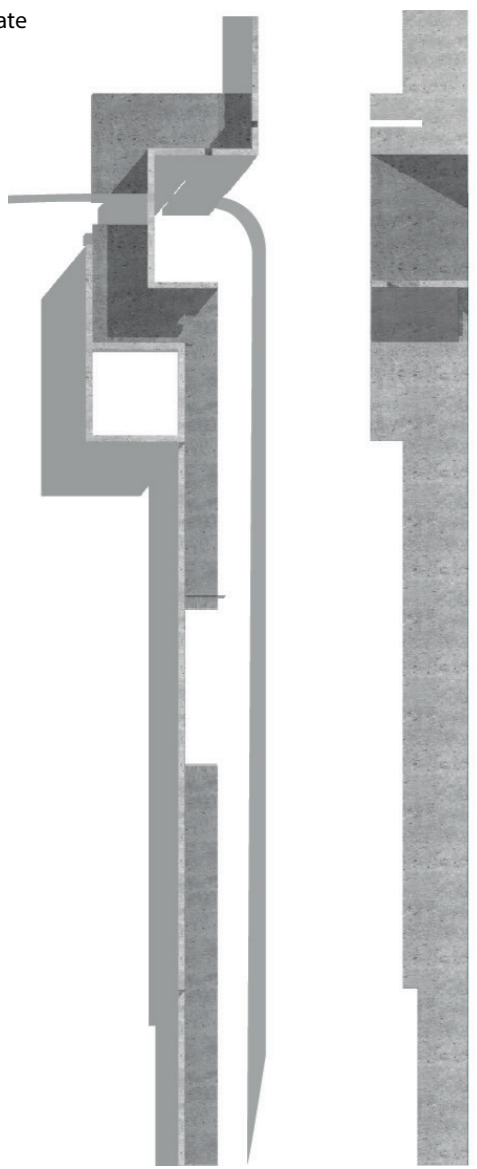


Wildgate

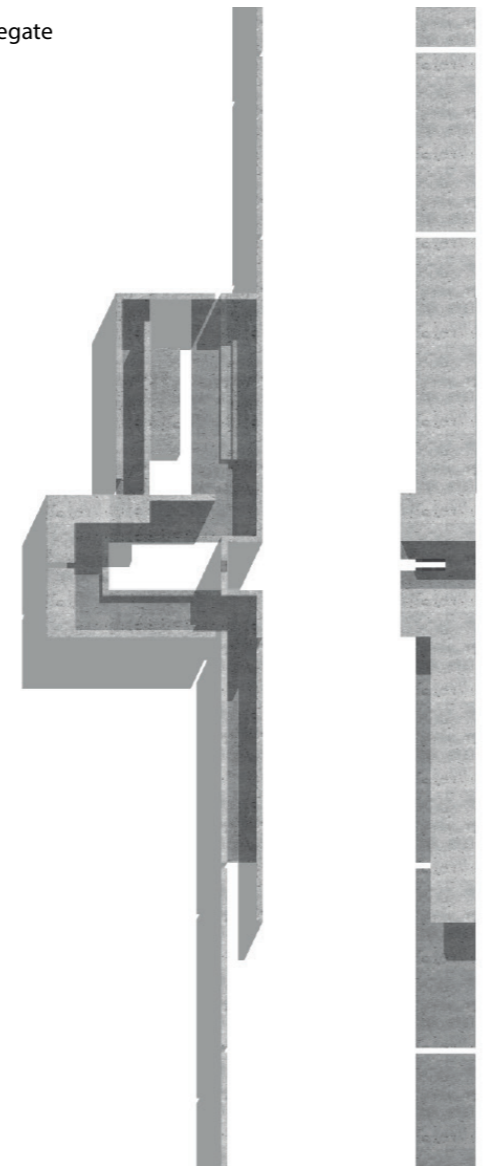


Watergate

Watergate



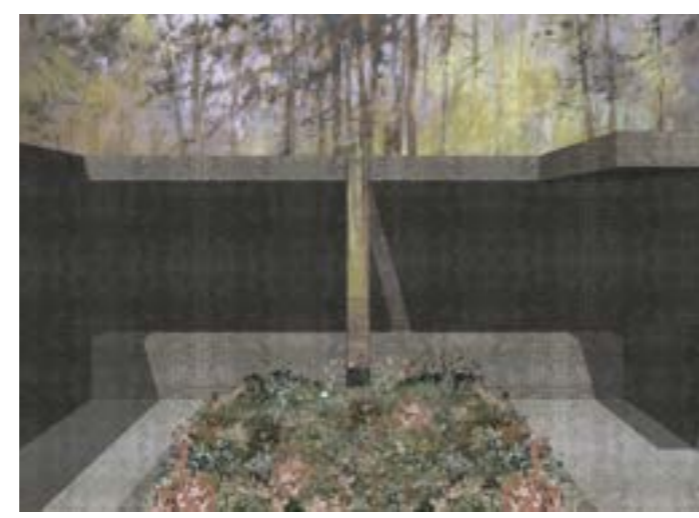
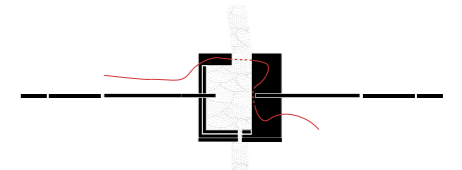
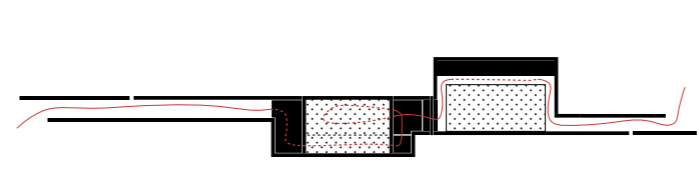
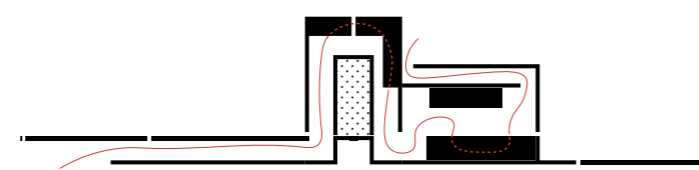
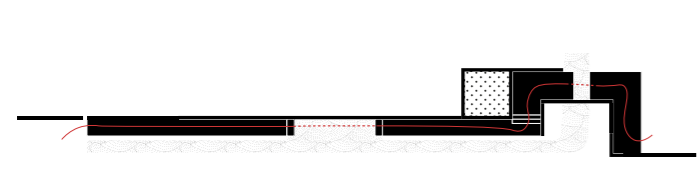
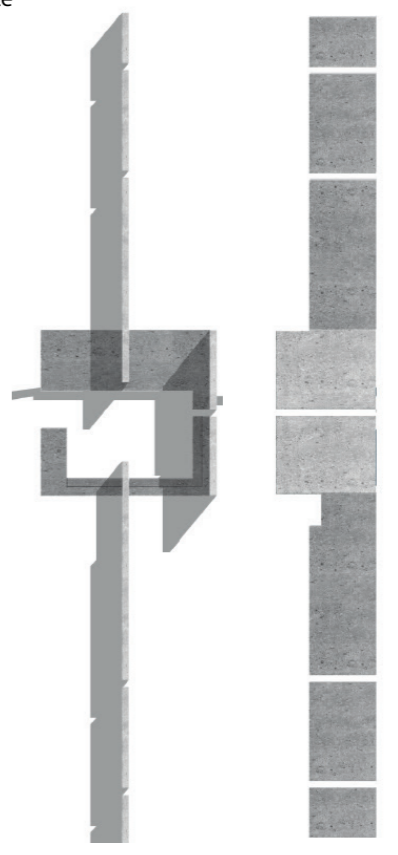
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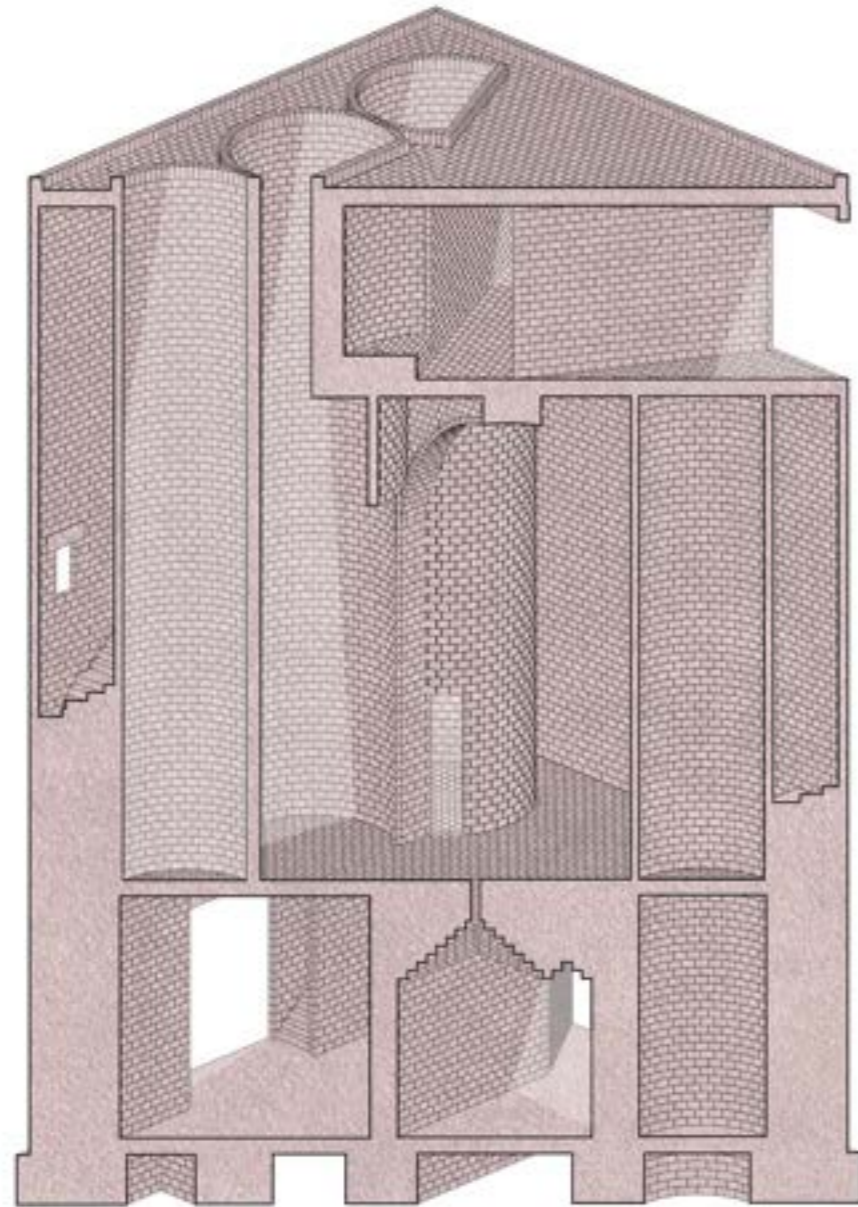


Wildgate



Watergate





sectional perspective

4.5 ODE TO TYPOLOGY

Ayla Stomp

Introduction

This work examines the transitory meaning of an architectural object in the landscape, in this case: The church. A rich history tells the story of the transformation of the typology of the church in NL- BE border zone around Baarle in relation to the [re]formation of the landscape, and its users.

Research

The religious building, once anchored as a self-contained entity in the landscape, brought with it strong currents of movements. Historical events caused people to initially settle around this entity and later on to leave. The church and the landscape can be seen as a continuous space for small-scale migration and remigration within this territory. Old settlement patterns can still be recognized in the landscape today. The cultivation of surrounding land as a result of these settlement patterns can also be traced back to the church.

Building as a palimpsest in the landscape

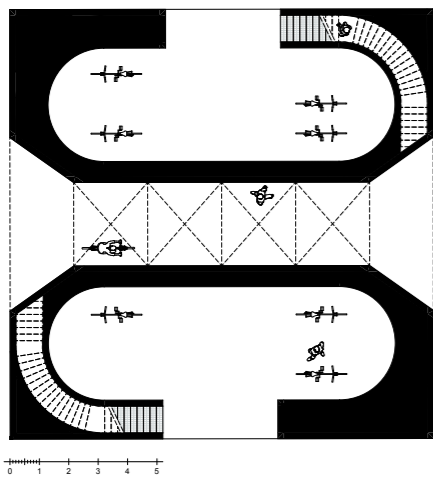
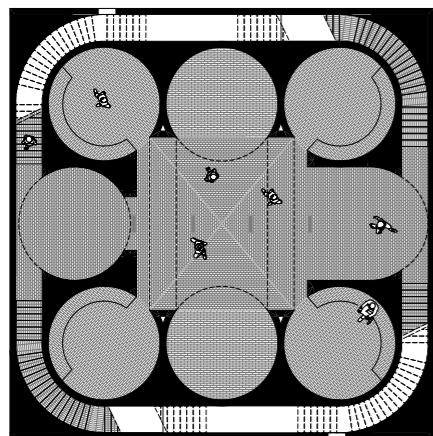
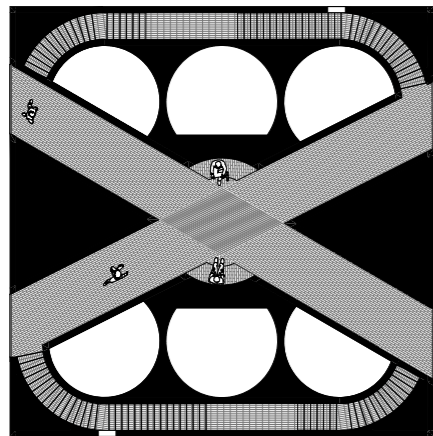
While initially the church was conceived and designed mainly as a religious institution which can be seen very strongly in its typology and organization of its plan, it also took other forms throughout its history. Important moments in history gave this entity in the landscape new meanings. It was no longer just about the religious institution as one of the most important places in society. It managed to wring itself free from this and was transformed into an object in which could establish new relationships with people and the landscape, being used as a mathematical model to map the land and its distance. But it also became an identity and a point of reference for a specific place.

Approach

These diverse entities are fused together in a single typology. But what if we peel off this layering, thinking of it as separate objects, and then put them back together? Can the power of typology give new meanings to the relationship between object (church), man and landscape? The awareness of this layering gives us tools to look at our built environment in a different way.

Design

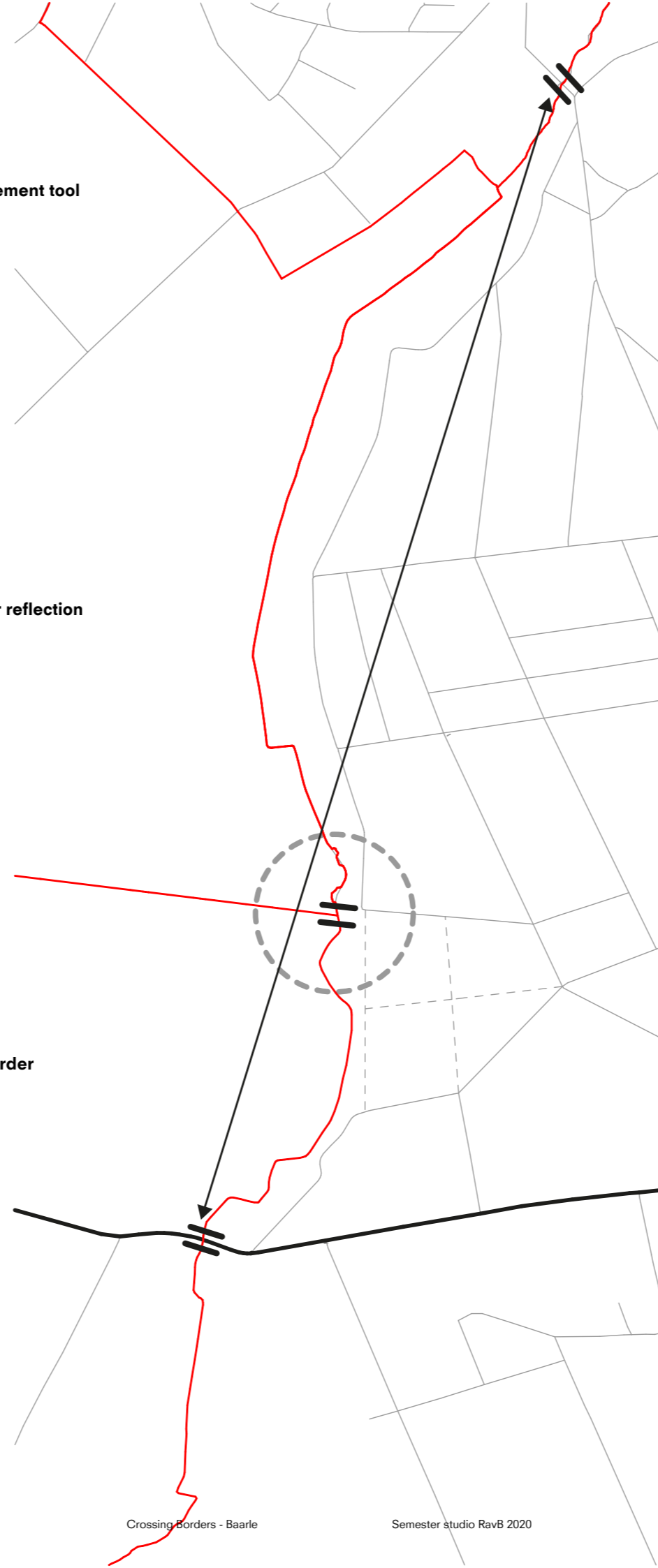
The design translates into a stack of self contained entities, at the intersection of a number of important historical axes. With this, the object anchors itself as very location specific in the border area around Baarle. The mutual layers symbolize the different identities of the church as an object which can affect the reorganization of its surrounding landscape and a different perception of a larger territory and are designed in a self explanatory ensemble. They are housed in a monolithic volume, referring to the church as an unambiguously designed typology. This tension field is designed by an interaction between the positive and negative spaces within the volume. The access that connects the spaces like a spiral staircase acts as a continuous space in the monolithic object. The eventual assembly tends to re-interpret the historical transformation of the church as an object bounded in its landscape and its relationship to the larger territory.

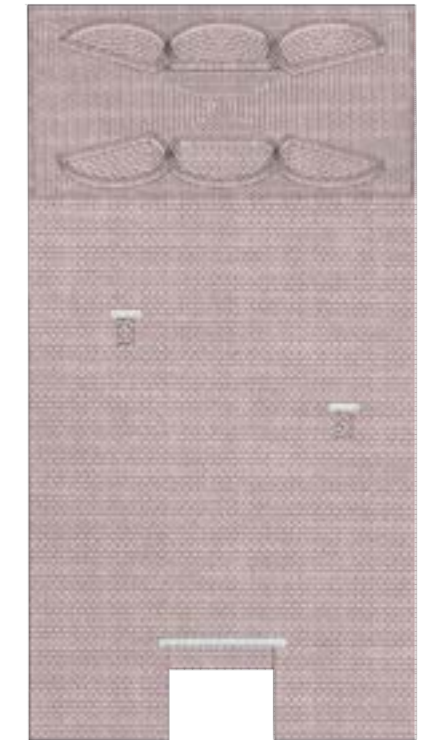
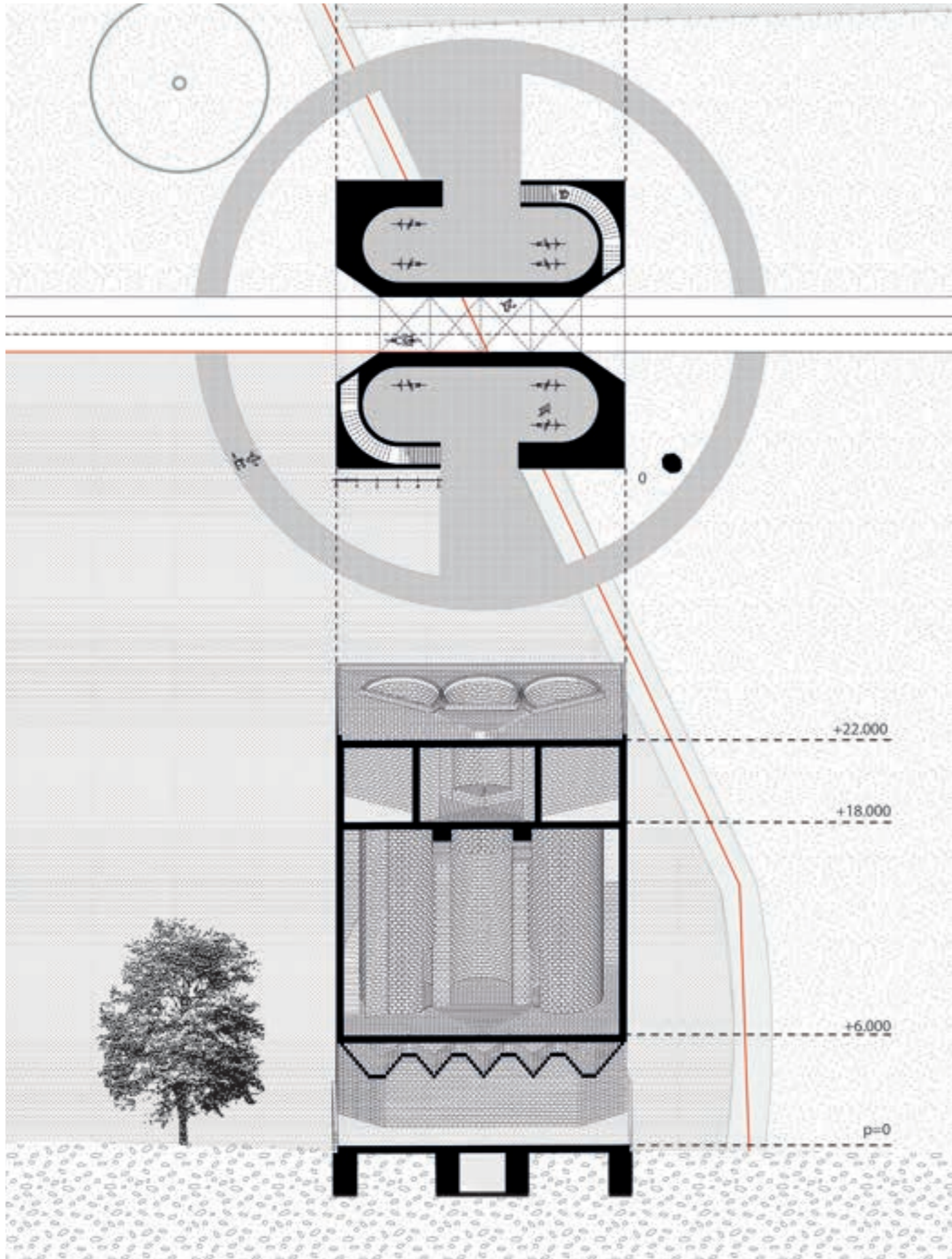


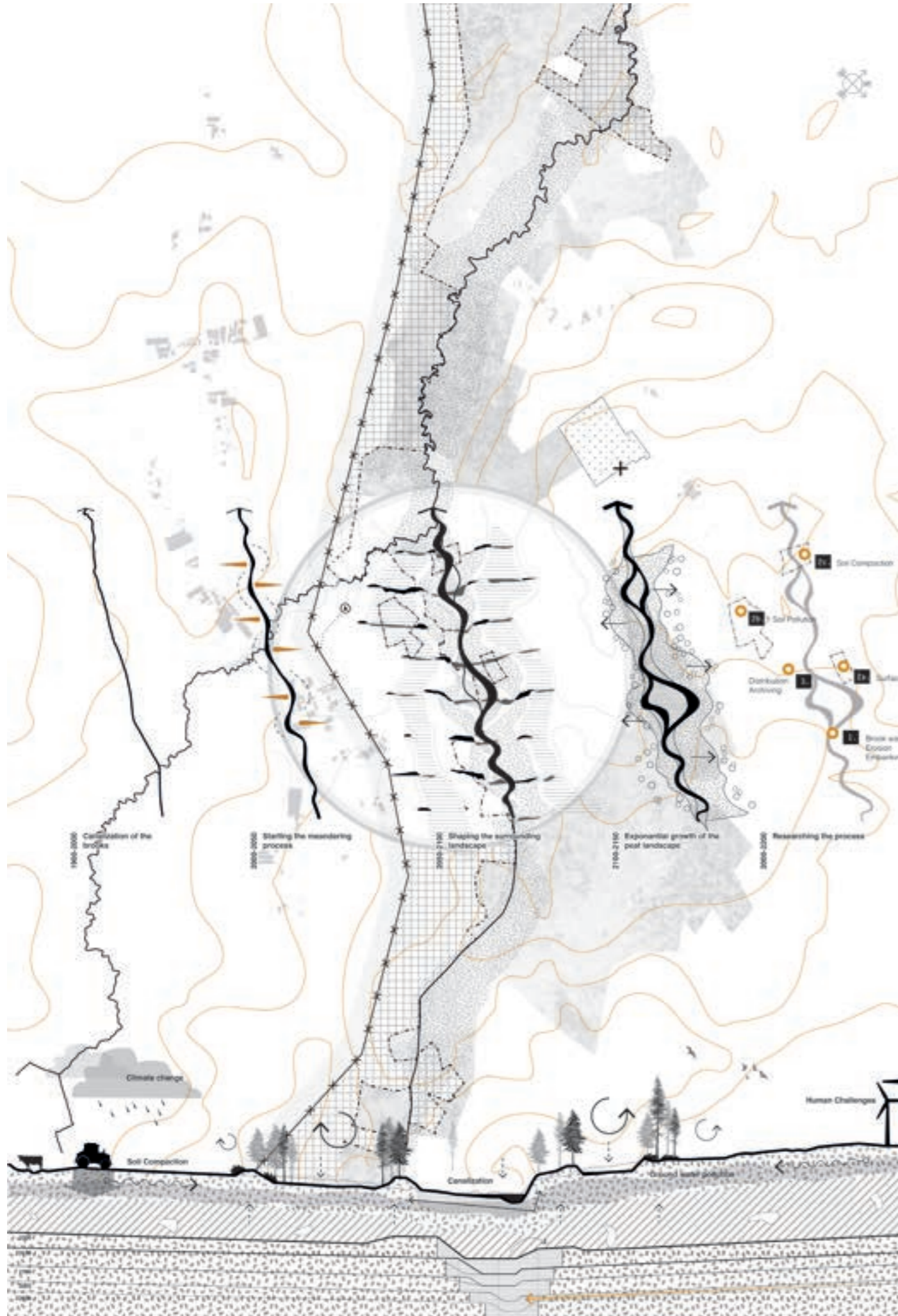
2.
The object as a measurement tool

1.
The object as a place for reflection

1.
The object as a border







4.6 RIVER'S RESISTANCE

Diederik Vane

Staatsbosbeheer and Vlaamse Land Maatschappij have started building defenses. They are trading parcels and invest in natural preservation. But it is not enough. In order to survive we must fight back.

First, we allocate different area's in the brook valley where we compress the soil, resulting in a hardened ground. Other area's, mostly on the opposite side, will be excavated. This excavated ground can be used to create height differences. The differences between hard and soft ground and higher and lower area's will start the water to slow down and meander again.

The next phase is to start buffering water on the sides of the brook, creating wetlands in the landscape that form a first line of defense. They make it more difficult for unwanted trespassers. They'll also come in handy in case of extreme drought throughout the year.

Third, we must increase the amount of fauna. Trees, bushes and plants hold water, filter groundwater and due to leaf loss, create a better circumstance to stimulate the peating process.

Where water often functions as a line-shaped border determined by politics, we must start seeing it as an area. The inside of this area

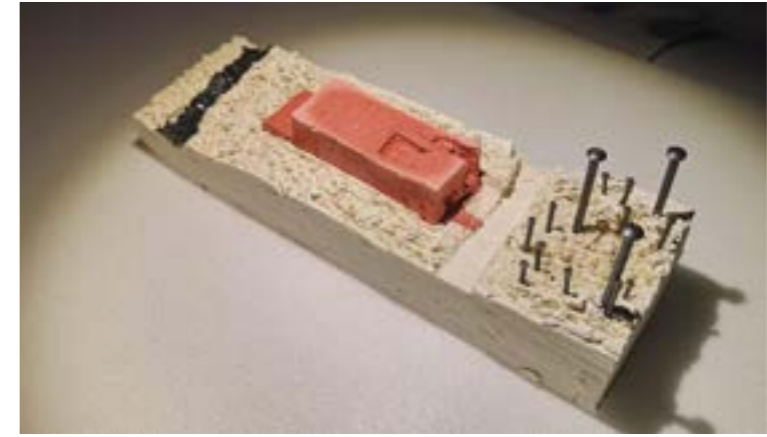
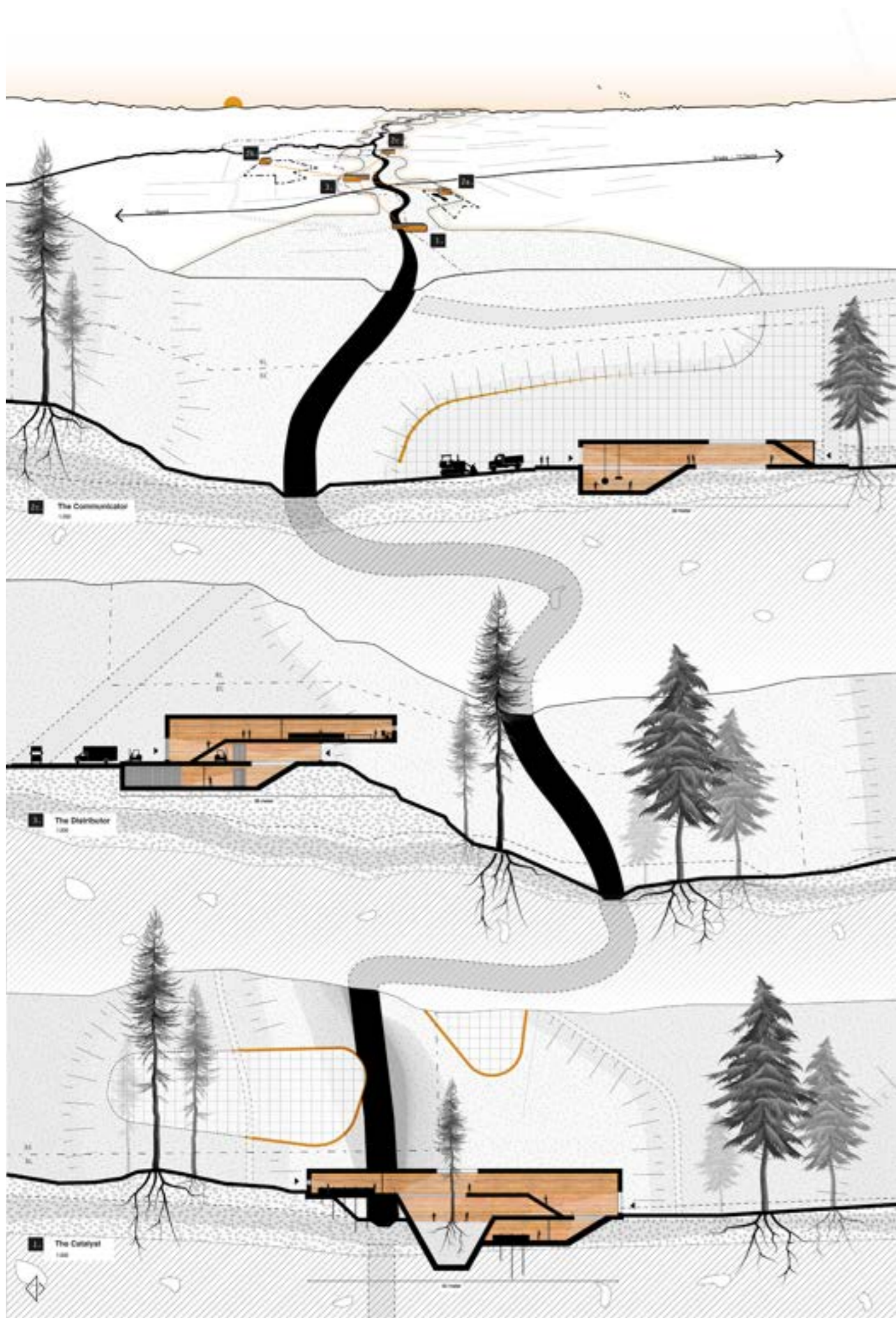
needs to be regulated by different rules and a different agenda. If these steps are managed, we might have a successful resistance.

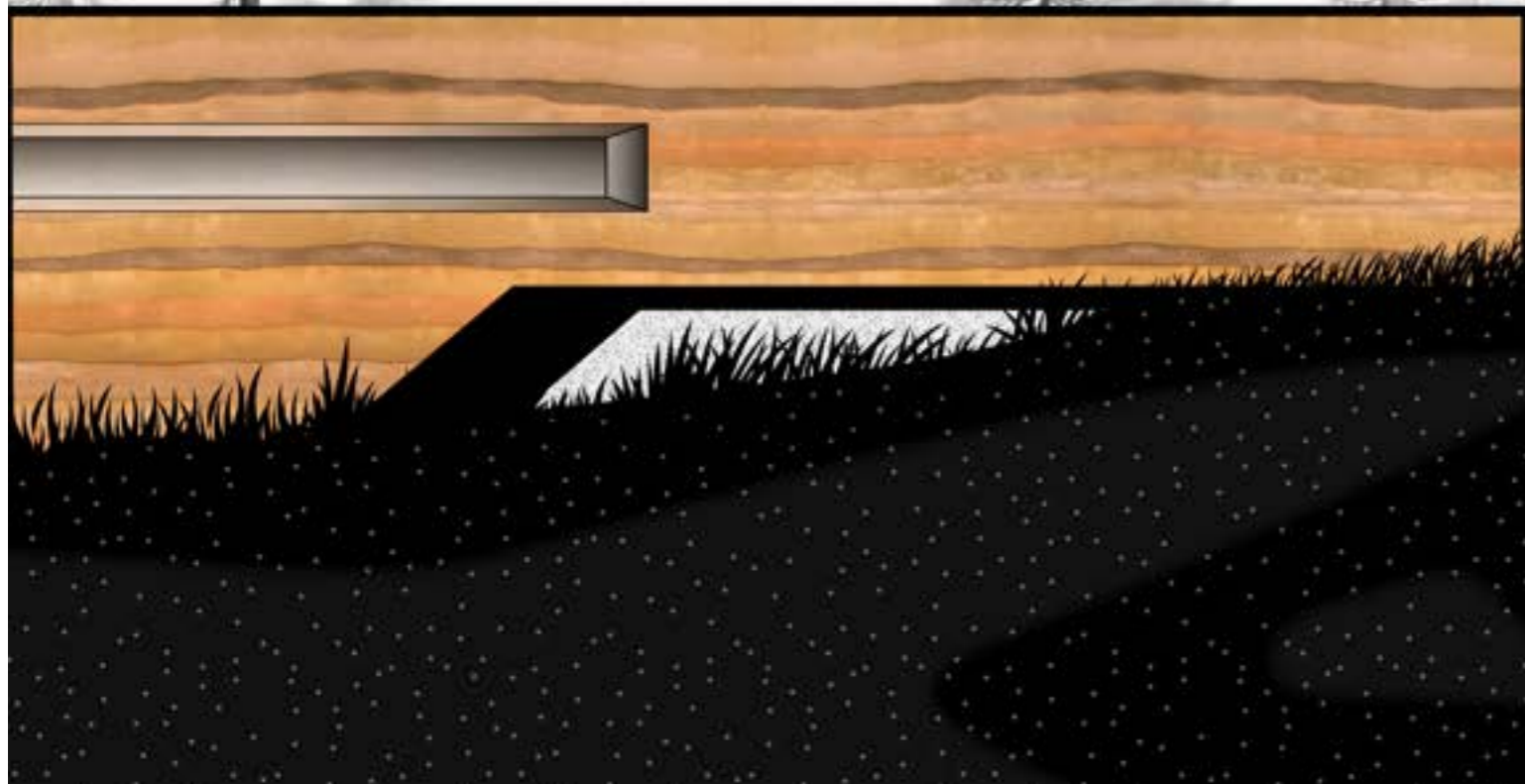
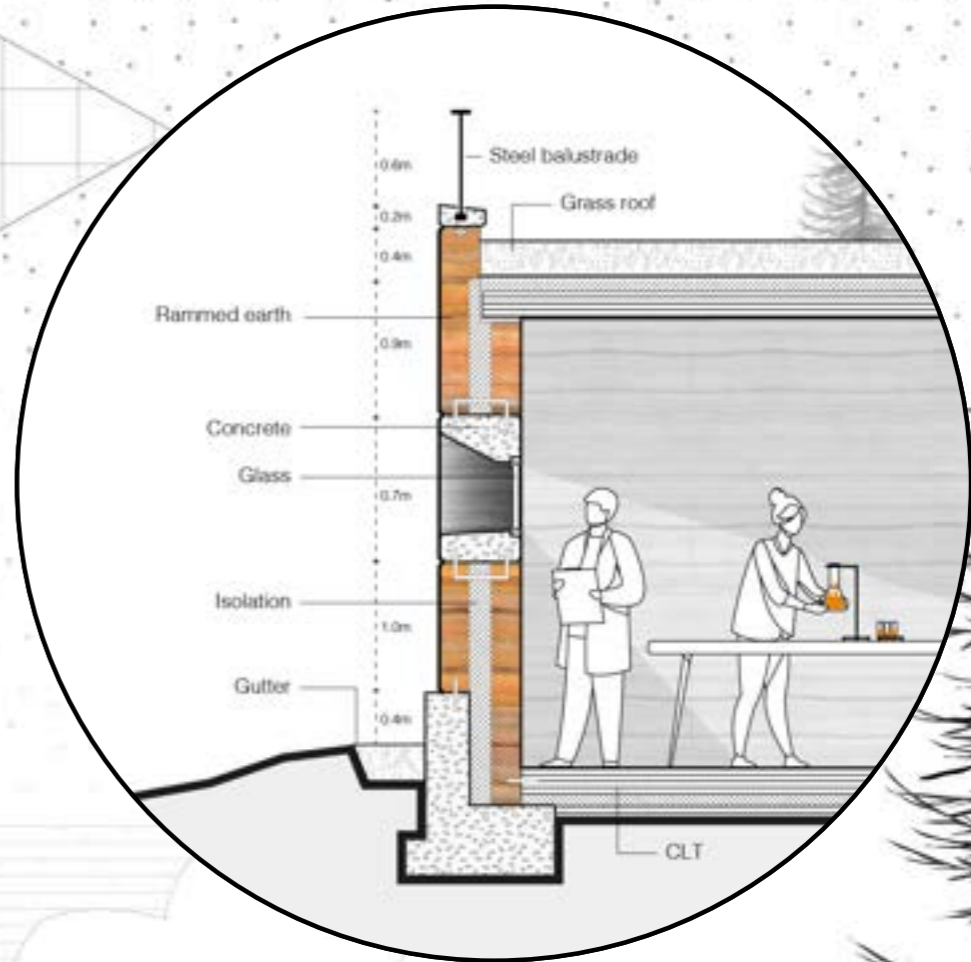
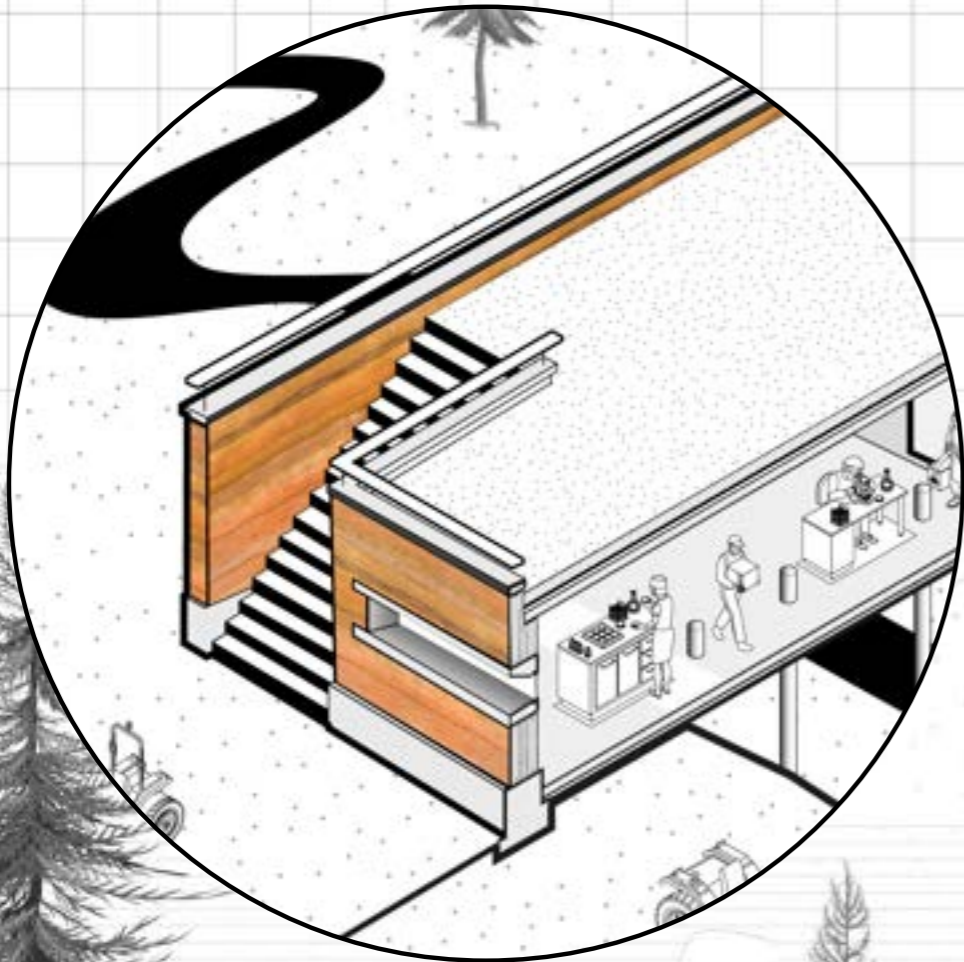
But the area also has to be observed and monitored. That is where 5 volumes in the landscape come into service. These volumes have 3 different ranks; The catalyst is the one that sits at the beginning of the meandering process. It is located partly in the water and with its form creating a public route over the brook. The shape slows down the water and pushes it out of her rigid form. It inhabits a lab that studies the quality of the water, vegetation and wet soil.

Communicators are monitoring the adjacent landscape. Compressed soil, erosion, embankments or pollution and can be found on the flanks of the valley. The test results and soil samples are eventually taken to the distributor. He archives all the samples and moves them to educational facilities in the nearby cities.

Using rammed earth and grass roofing as the main materials, the buildings disappear in the landscape.

If we succeed with this mission we might be able to resist the challenges of these crucial upcoming generations.





4.7 THE GARDEN OF INTERSECTION

Teun Vosters



The project "The Garden of Intersection" is an intervention around a mega stable in the Belgium village, Baarle Hertog. This project is a response to nitrogen emissions around farms.

Most farms are located in remote and quiet places leaving room for interventions in their direct surroundings. Surroundings that are transformed by ammonia and nitrogen into pollution zones - ecological no-go areas.

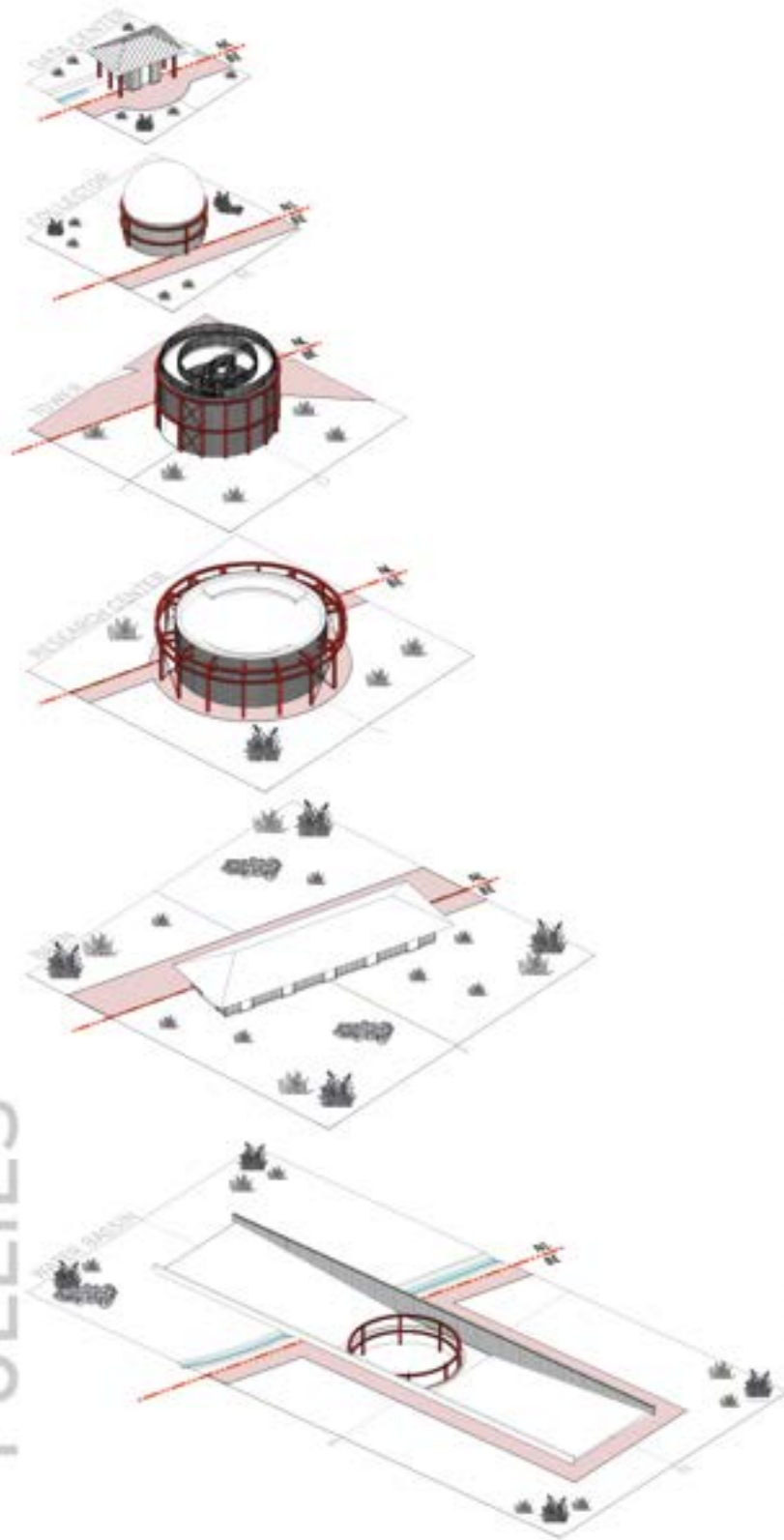
We intervene by making these zones into gardens. The garden - an enclosed piece of land or terrain - strictly regulated by human beings. The garden a place to be. Where a composition is made of species and spatial interventions. Based on different rules and laws the garden is formed by three measuring instruments. By

placing technical instruments around the mega stable on a grid, emission will be measured around the farm.

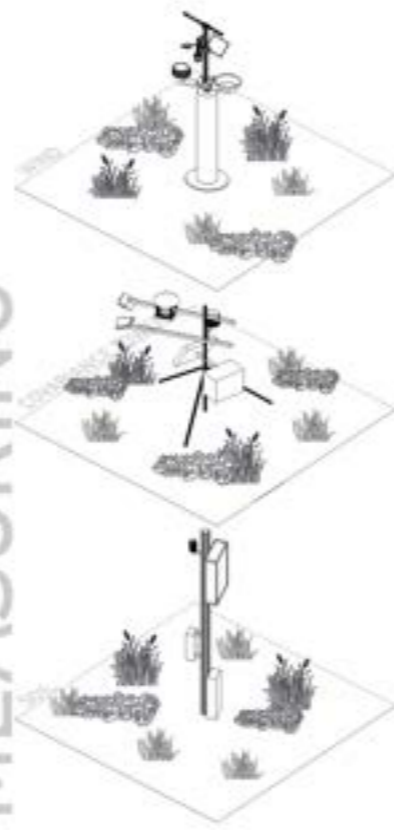
The three modes of measuring, by wind, by amount of particles and accumulation dictate the composition of the garden grid. The border is the transition in between.

By placing 5 types of follies on the border trajectory through the measuring grid a path is formed to traverse the garden. Among other functions it houses a pavilion for research and monitoring of nitrogen and ammonia in the area. In the Garden of intersection the migration of nitrogen becomes a visible part of the rural border. Documenting it as well as creating a space for reflection and change.

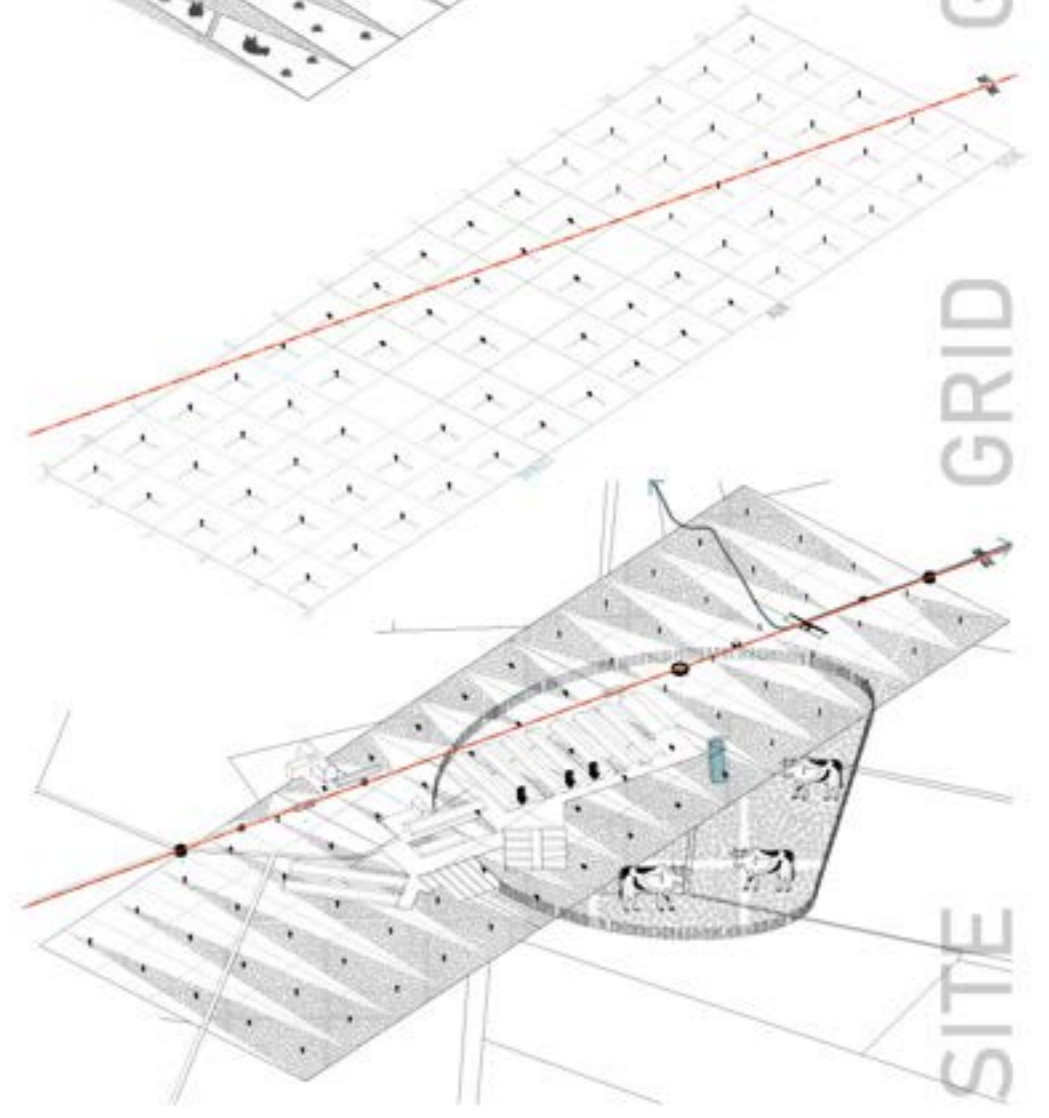
FOLLIES



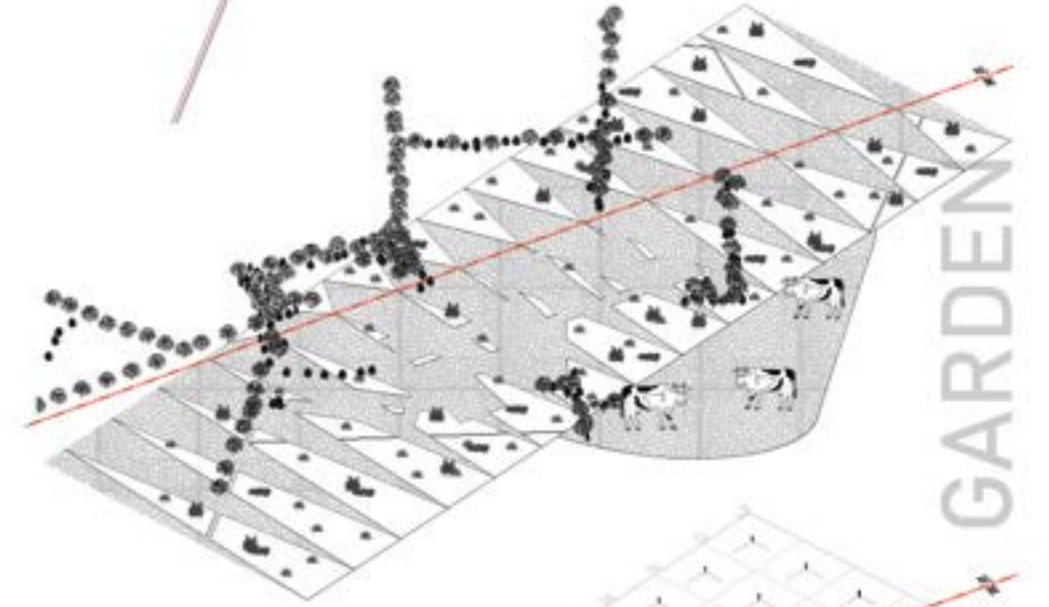
MEASURING



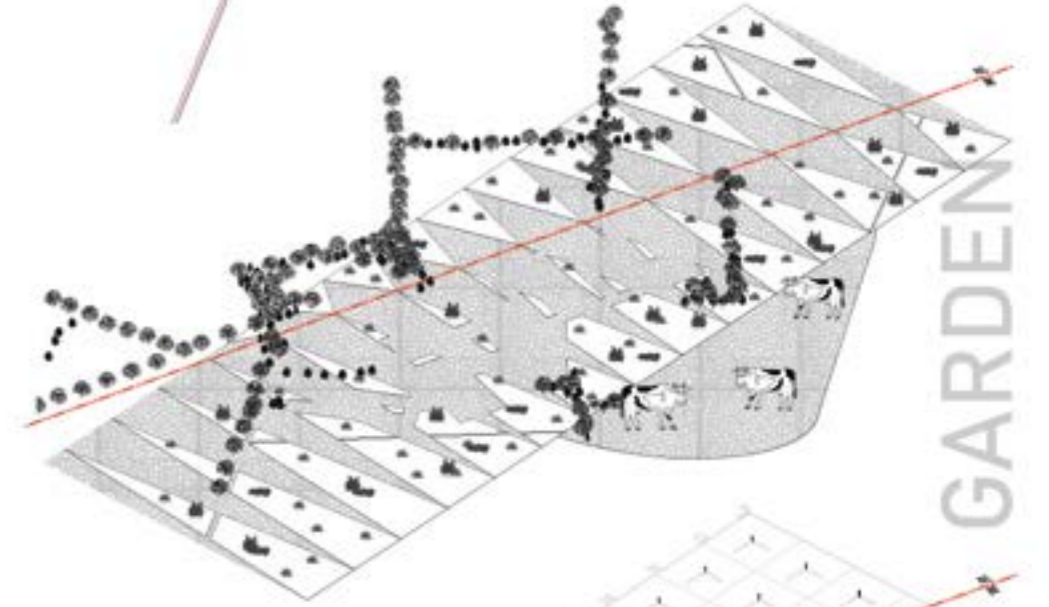
SITE



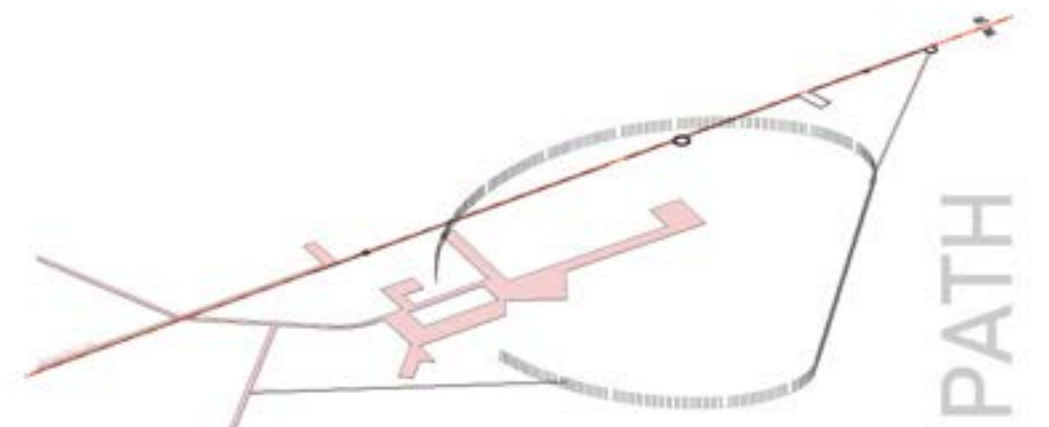
GRID

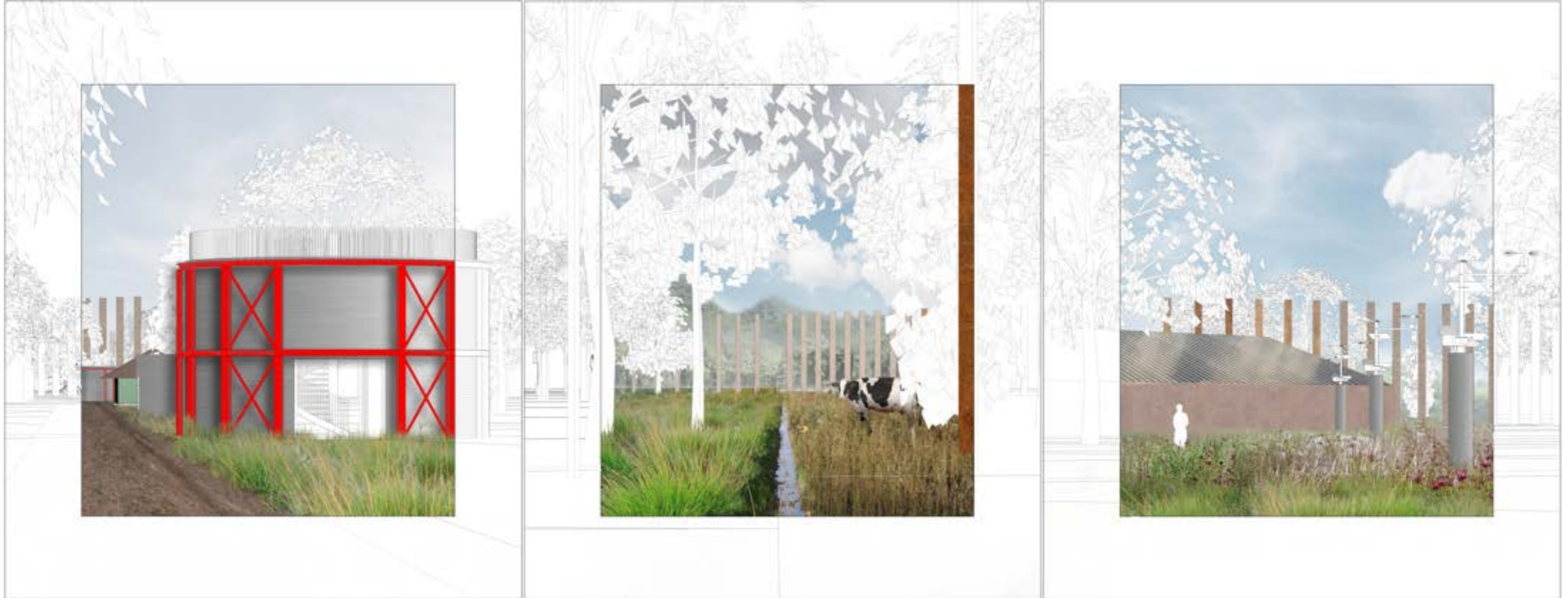


GARDEN



PATH







Vennen area

5.1 TUTORS

Carolien Schippers -C-A-S-

Carolien is an architect and researcher working in Rotterdam. She graduated from Delft University of Technology in 2009. Her graduation project received an honourable mention and nomination in the National Archiprix 2010. Since her graduation she practiced architecture in Copenhagen, London, Rotterdam and New York with Foster + Partners, OMA, and BIG.

In 2018 she founded C-A-S (Collective for Architectural Scenarios). The practice takes an explorative and scenographic approach to its projects and combines project based work with an independent research agenda.

Carolien was nominated for the longlist Prix de Rome 2018 and her independent work was exhibited at the Venice Biennale 2018, Het Nieuwe instituut and the Victoria and Albert Museum London. She was a guest teacher at TU Delft and the Rotterdam and Amsterdam Academy of Architecture.

Negar Sanaan Banesi ZUS/TU-Delft

Negar Sanaan Banesi is an architect, educator and researcher. She received an honourable mention in National Archiprix 2011 in the Netherlands for her graduation project. She holds a PhD in History and Theory of Architecture from TU Delft. She is part of the research group 'Border Conditions and Territories' and an UKNA fellow. Her research focuses on the relation between architecture and territory, infrastructure and inhabitation, specifically in the context of the Iranian

Plateau and Middle East. She has taught at TU Delft, Tilburg Fontys Academy, Rotterdam Academy, Syracuse School of Architecture in NYC, and IUST Tehran University and lectured at the University of Antwerp and International Institute for Asian Studies in Leiden. As a practicing architect she has collaborated with GFC, ZUS and Import Export Architects. She has contributed to several publications, among them, she co-edited the Footprint Journal 19: The Architecture of Logistics, A book chapter in Adaptive Strategies for Water Heritage edited by Prof. Carola Hein (Springer, 2019), co-authored peer-reviewed papers in Sustainability Journal 2020 and the journal Volume 27.

Nasim Razavian

Nasim Razavian is an architect, researcher, architectural educator, and the founder of studio ilinx. Nasim is currently a PhD candidate at the Borders & Territories research group in the Faculty of Architecture at Delft University of Technology where she is conducting her research with the topic Play of Architectural Construct. Her doctorate thesis is situated at the intersection of architectural theory, art philosophy, play studies, art, and architectural design. Nasim has received her master's degree in architecture from Delft University of Technology (honourable mention). She is teaching design studios, theory courses, and architectural drawing at Delft University of Technology and Fontys School of Fine and Performing Arts. Since 2010, she has been a practicing architect with several built projects including houses, villas, public buildings, and landscape design.



Expanding extraction site

5.2 VISITING CRITICS

Edith Wouters

Edith Wouters is an architectural engineer. Since 2007 she has been the artistic director of AR-TUR, the centre for architecture, urbanism and landscape in the Kempen, the sandy region in the north of Belgium. She initiated the 'Kempenatlas', a book and exhibition, which was presented as a project for the region. The Kempenlab is a means of sharing knowledge and building alliances in order to have the greatest possible impact on space. In 2016, after having worked as an architect for 20 years, she set up CAPasitee, a cultural architecture practice where she is, among other things, project coordinator for Parcum, the Centre for Religious Art and Culture. CAPasitee is a continuation of her work as an architect at TEEMA and as project manager at the Flanders Architecture Institute. She is author of several publications of AR-TUR (e.g. Kempenatlas, Architecture in de Golden Sixties: De Turnhoutse School, the series of cahiers), publications of the province of Vlaams-Brabant, and published articles in magazines like A+Architecture in Belgium, MAJA/Estonian Architectural Review and Ruimte.

Jens Jorritsma

Jens Jorritsma (1981) is an urban designer (RAvB) with a degree in urban land use planning (RuG). He has worked as an urban designer, researcher and public space designer for several offices in Rotterdam and Amsterdam. The main focus in his work is on the relationship between climate, water and urbanism, with a strong emphasis on the role of public space. With his graduation project he was nominated for the Archiprix in 2012. After working for several architectural offices (Urbanisten, ZUS and Delva amongst others) and collaborating with his partner on Prix de Rome 2018 they set up their own studio; Obscura. He was involved in the design and execution phase for the first watersquare in the world, the Rotterdam Adaptation Strategy, Rebuild by Design in New York and several projects connected to the Dutch Deltaprogramma.



Arendonk Military base



Weelde Trainstation

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Students

Margot van Bekkum
Iris Bol
Daan de Jong
Tijme Scholten
Ayla Stomp
Diederik Vane
Teun Vosters

Tutors / Editors

Carolien Schippers
Negar Sanaan Bensi
Nasim Razavian

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