From ambigious borderscapes to pluralism

An alternative landscape representation as a way of integrating ‘nature’ and ‘culture’ around the Hunze valley.

Colofon

Master Thesis

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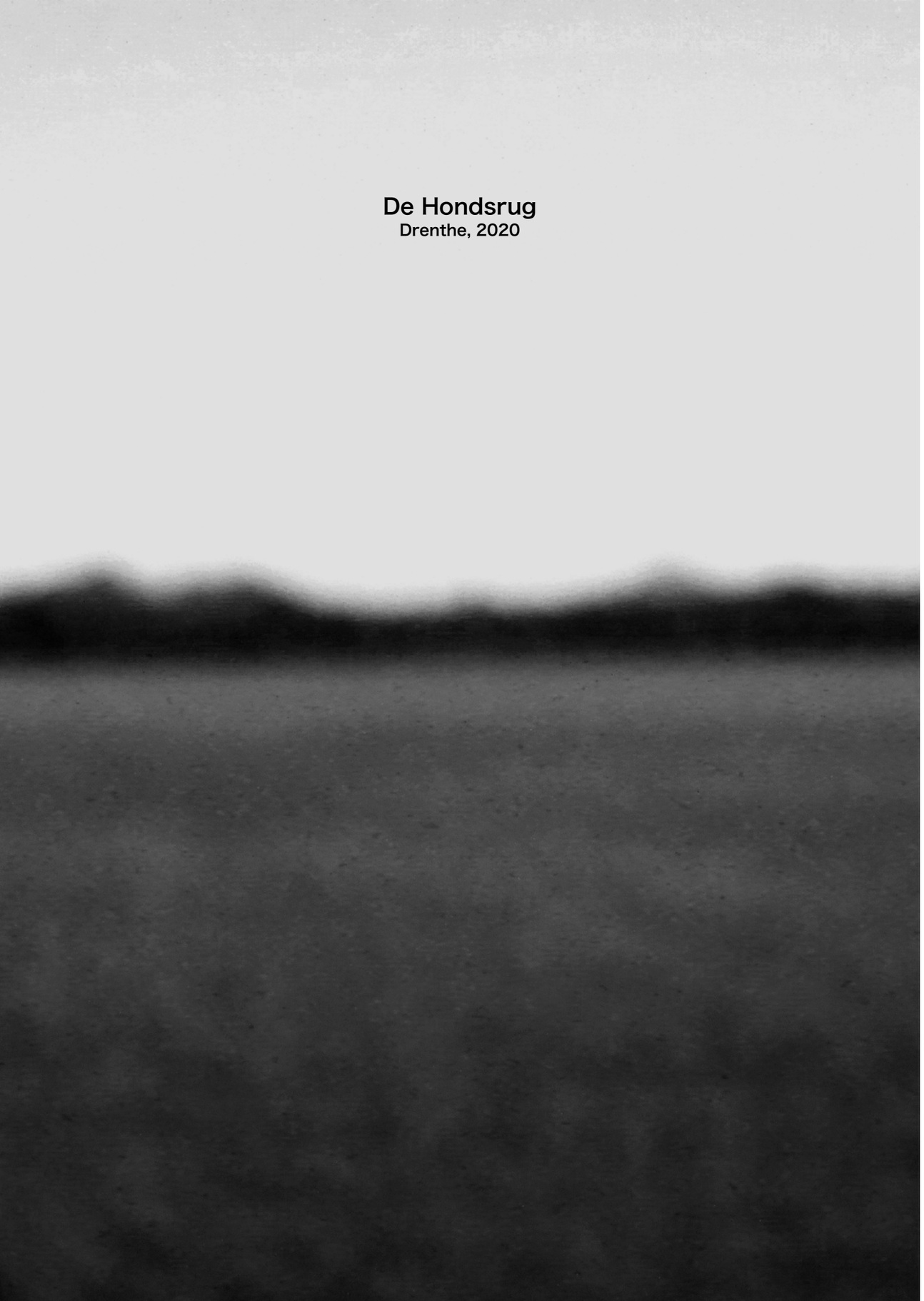
Keywords

nature, culture, representation, streamvalley, borderscapes, pluralism

Abstract

This research uses the notion of ‘pluralism’ as an alternative starting point for landscape architectural design by focusing on aspects of time and interactivity as opposed to strategies of re-configuration of both form and agency of the landscape. It explores the role of landscape architectural design in a rural landscape characterized by land ownership through the concept of ‘borderscapes’ as a political vacuum and area for minor interventions. The site of interest is located at the Hunze stream valley in the province of Drenthe, the Netherlands. The water conditions since pre-historical times have formed this territory through high and low plateaus, different soil types and dry or wet vegetation types. Located at a geomorphologically rich location but also vulnerable to land reclamation, the landscape of the Hunze valley has been influenced by ecological degradation. This research examines the spatial conditions that result from years of implemented policies and the effects on everyday experiences of nature. The Hunze stream valley has often been approached as a north-south water system that runs from highlands to lowlands, however this project depicts the area as an east-west system of material conditions and human inhabitation. Concluding that the territory is now characterized by separation (zoning of nature and culture), displacement of problem areas (soil movements), and the negligence of resource proximity. The east-west routing is used as a starting point for creating a new representation of site and experience on three traverses: the source, the crossing and the community.



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Site
Situation in Drenthe

The way that landscapes are cultivated has changed over the years. In the Netherlands the focus has been on land utility ever since World War II. The food production has been upscaled, following the lines of thought of the post-war minister of Agriculture S. Mansholt: “no more war, no more hunger”. In consequence, landscapes of many provinces had to be re-constructed. The early agricultural fields in the Netherlands were characterized by small parcels and fragmentation of land ownership. This had several negative influences such as the loss of land to infrastructure, time inefficiency due to the separation of land, and overall higher operational costs. Eventually, the solution was found in land consolidation.

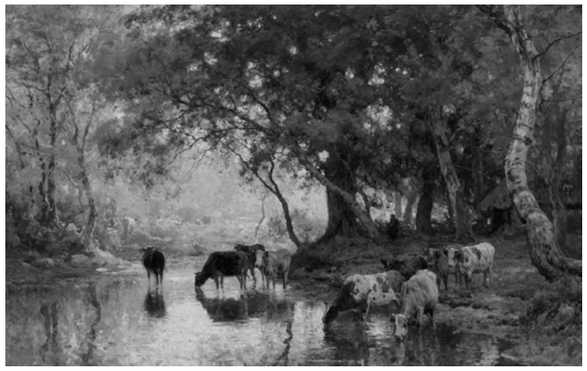
In the province of Drenthe wood banks were removed, heathlands and meadows turned into arable land, small land parcels merged together, and water streams were regulated and drained faster. All to increase the agricultural production. The government not only took a more leading position in land-use policy but from a socio-economic point of view, also stimulated economic growth through redevelopment programs. The latter was the case for the ‘Veenkolonieën’ (peat extraction area’s) in Drenthe and Groningen (Karel, 2012). From the 1980s onwards this top-down governmental attitude became to be known as the ‘malleability of society’ (in Dutch ‘de maakbaarheid van de samenleving’).

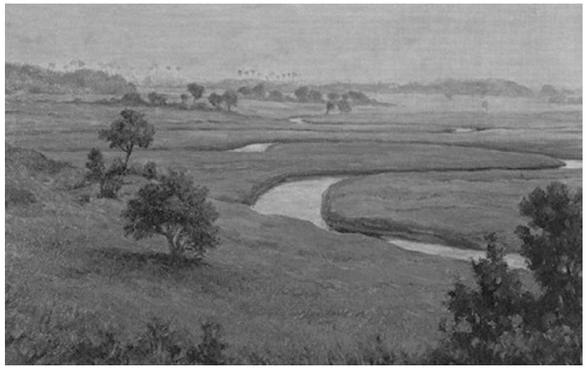
More recently, it has become evident that this agricultural intensification has resulted in multiple complications such as exhaustion of the soil, chemical pollution of surface and groundwater, a loss of biodiversity, and arid land due to the water drainage levels and climate change (Venter, Jacobs & Hawkins, 2015). Additionally, the clearing of forests and grasslands for agricultural use has caused oxidation of soil organic matter, multiplying the amount of carbon dioxide that is released.

In 1975, for the first time, policy was made on both the stimulation of farmers to implement nature conservation measures and the assignment of agricultural land to organizations such as the State Forestry Service. These systems however are not new. In many countries farmers are funded with financial compensation in order to reduce the use of fertilizers and protect botanical values and species among others. Yet, a clear shift towards these systems has not been made. In the Netherlands, in 1990 the ‘Ecological Head-structure’ (EHS) was introduced (Runhaar, Melman, Boonstra et al., 2017). The aim of this organization is primarily to create and reserve more space for nature. Thus, instead of integrating agriculture and nature, the two got spatially divided.

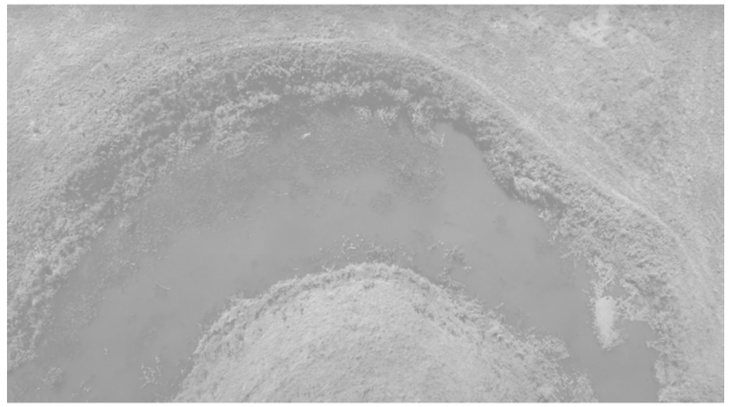
In the 21st century The ‘Anthropocene’ is often proposed as a new geological age. A notion that pleads for more unitary concepts of nature and culture as opposed to the Western ambiguous understanding of nature as something independent from human life (Prominski, 2014). Concepts such as ‘circular agriculture’ and ‘agroecology’ are often introduced. However, scientists from Wageningen University & Research (2018) argue that these concepts are not a blueprint and developing them asks for a shift in scope, comparible to the move towards high-production agriculture in the 1950’s and 1960’s. Runhaar, Melman, Boonstra et al. (2017) argue that the challenge involves other factors as well. They state that most studies on nature conservation start from an ecological perspective while fewer start from a governance perspective that focuses on interactions, choices and behavior.

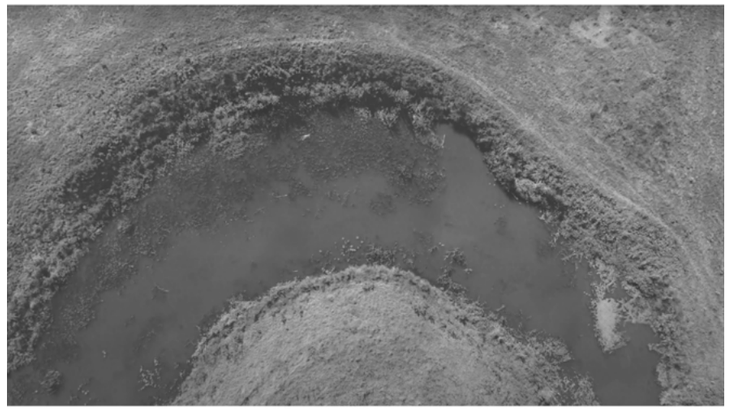
The same critique can be made for the field of landscape architecture where ecological knowledge or naturalism is used as an important source to design. But landscapes change not only objectively through soil, water, and vegetation, but also culturally. This leaves landscape architects with the task to create more relational designs between humans and their environment, rather than conventional landscape redevelopments and nature preservations. The latter being a situation where there is a clear distinction between the rural landscape, nature preservations, and patterns of inhabitation.





PART I
SITE DEVELOPMENT

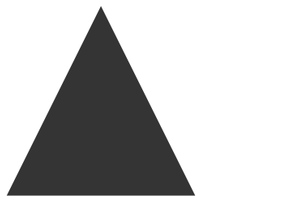


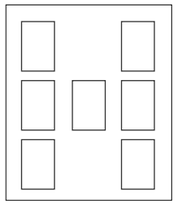


CULTURAL LINES - AN ARCHIVE OF VALUES OF A SOCIETY THAT CAPTURES BELIEFS ON NATURE

Sublime Nature

Rationalization of Nature

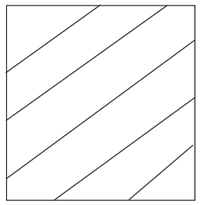


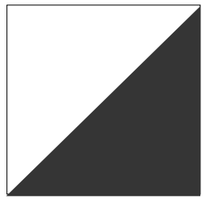


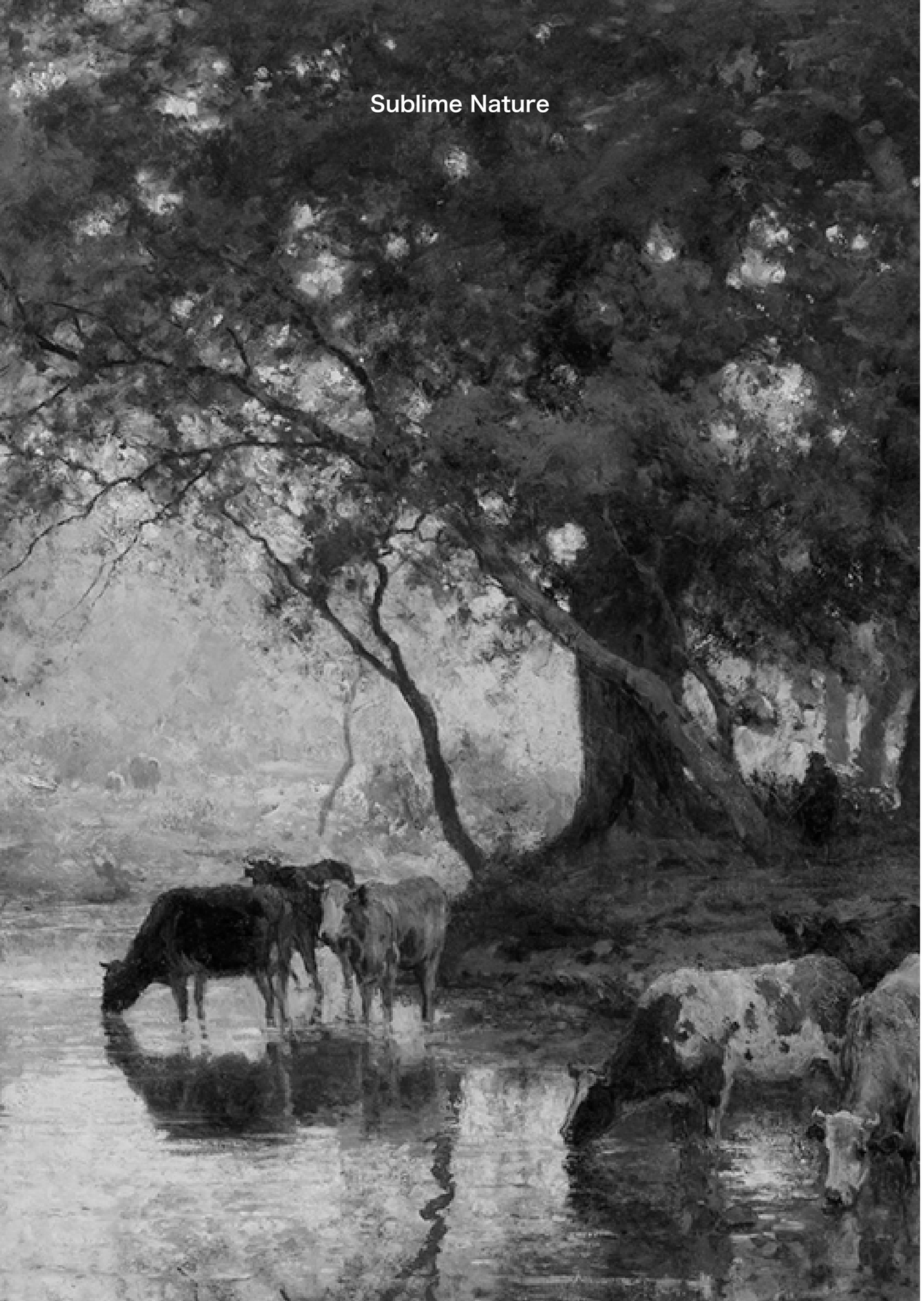
CULTURAL LINES - AN ARCHIVE OF VALUES OF A SOCIETY THAT CAPTURES BELIEFS ON NATURE

Productive Nature

Preservation of Nature



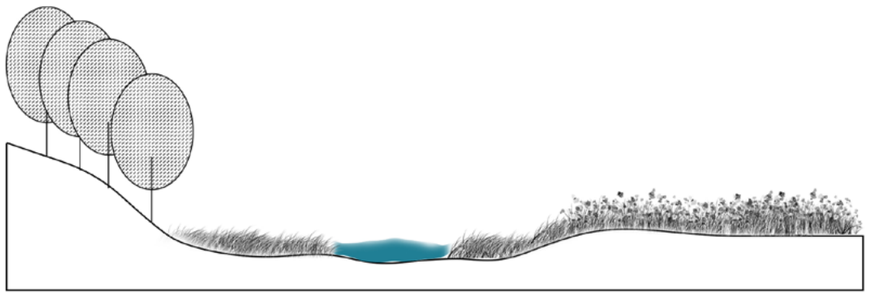




1.1 Sublime Nature

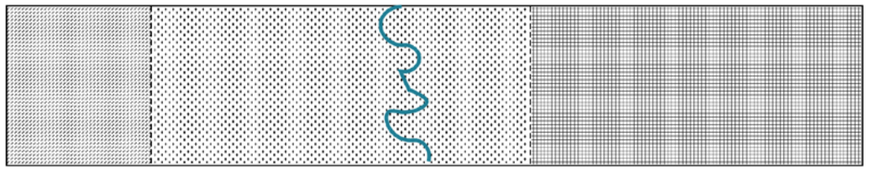
Prehistoric - Middle Ages

Nature as ‘sublime’ often refers to ‘wild’ or astonoshing natural sceneries. The scenic landscapes have a symbolic value of nature being something larger than us human beings. Mountains and wild rivers portray this image and represent a sense of hierarchy. In the landscape of the Hunze valley ‘sublime nature’ is characteristic for a large part of the development of the area until the 1400’s. Geomorphological processes have created a distinct landscape in the province of Drenthe compared to a a large part of the Netherlands. In the figures below a sense of this ‘sublime’ is re-created, but of course the pictures are from a much later era.

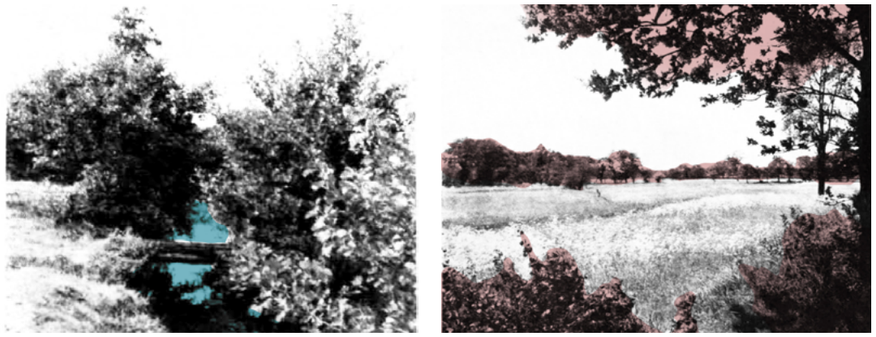


Differences in nature are attuned to geomorphological processes, thus boundaries created through height, soil, and age of the landscape

Diagrammatic Section

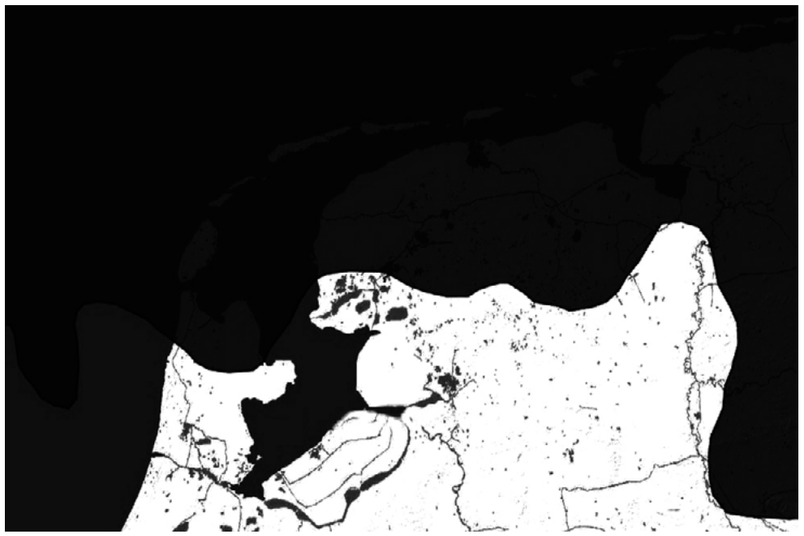


Diagrammatic Plan View

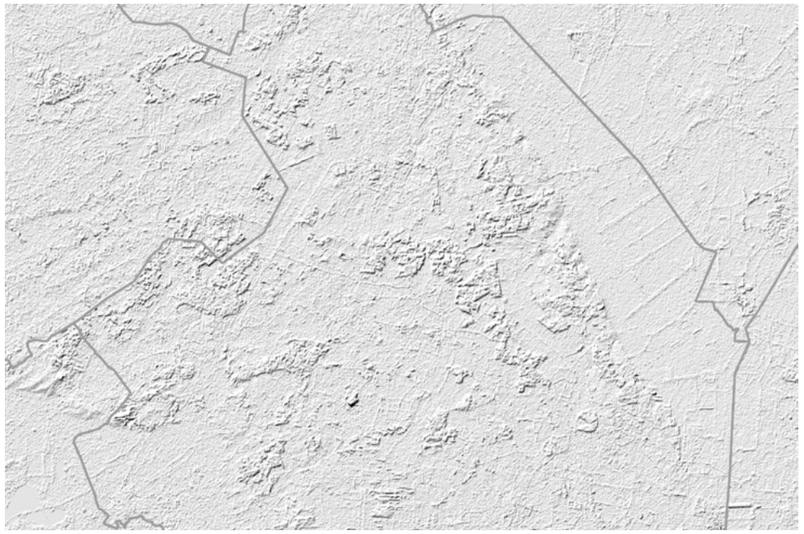


Spatial Composition

1.1 Sublime Nature & the Saale Glaciation



Since the last ice age shallow surface water had made its way through the landscape in Drenthe.



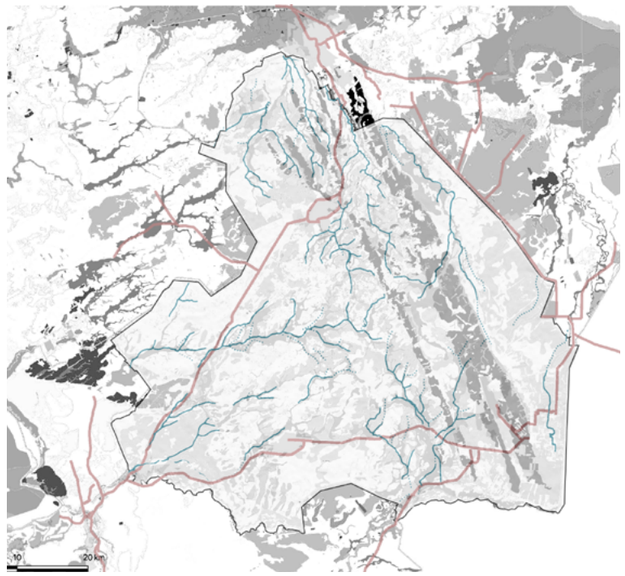
Differences in nature are attuned to geomorphological processes, thus boundaries created through height, soil, and age of the landscape

Location

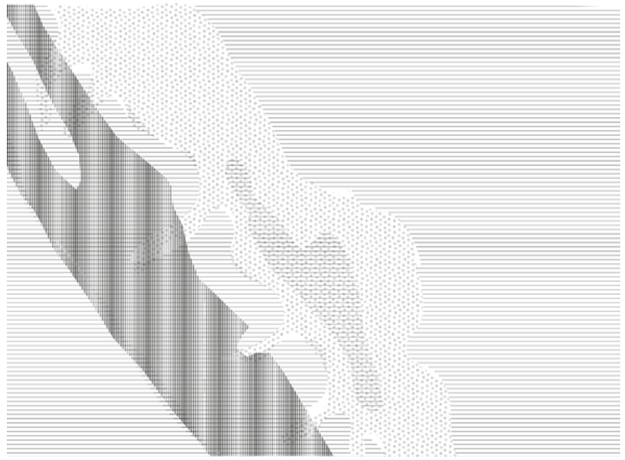
The landscape of Drenthe has developed during the Saale Glaciation around 150.000 years ago. The tectonic movements of these ice shelfs have created the topography as we know it today.

1.1 Sublime Nature & the Saale Glaciation

The history in geology has left its traces in the landscape and the way it is occupied. Small streams with upwelling water meander in between the higher located sand ridges. The figures below show the water system of streams and canals in Drenthe on top of a geomorphological map. There is a clear higher middle part with streams cracking through them and lower edges around the province were canalization has taken place. Two of the largest streams within this landscape are the Drentse Aa and the Hunze Aa. While large parts of the Drentse Aa are now protected by nature preservation area's, the Hunze Aa is still characterized by mostly a cultural landscape. In this research the focus will be on the Hunze Aa.



There is a natural water-system of streams running through the province (blue), connected to a larger catchment area by canalization in lower parts of the province (pink)

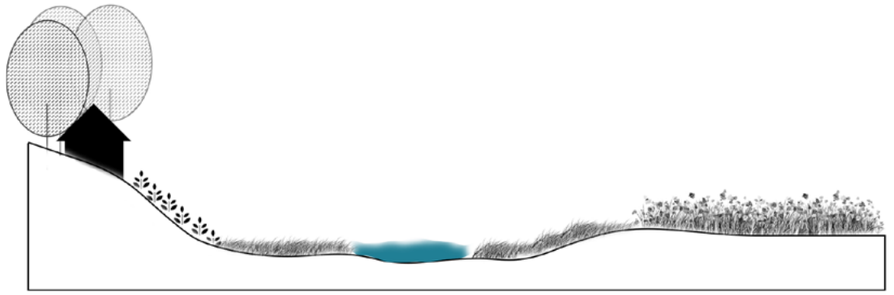


Differences in soil type between the high sand ridges and the lower parts of the stream valley.

1.2 Rationalization of Nature

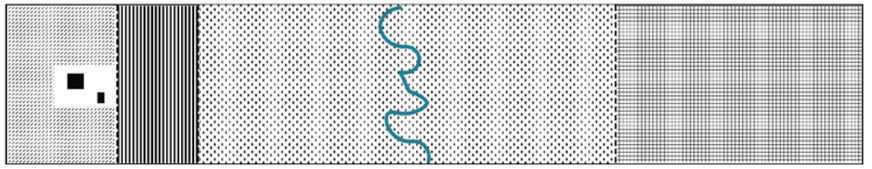
Middle Ages - Industrialization

The province of Drenthe used to be mostly a swampy area. For this reason the first human settlements during the Middle Ages were found on top of the higher parts. These are the so-called Es-villages, they are also called brink-villages because they lay on the brinks/edges of the high and dry parts but also close enough to the valley. These are the landscapes as imagined by painters. A sense of wilderness, difference in vegetation and humans moving and working around these differences.



Differences between nature and culture are attuned to geomorphological characteristics, thus boundaries created through height, soil, and proximity to water sources.

Diagrammatic Section



Diagrammatic Plan View

Spatial Composition

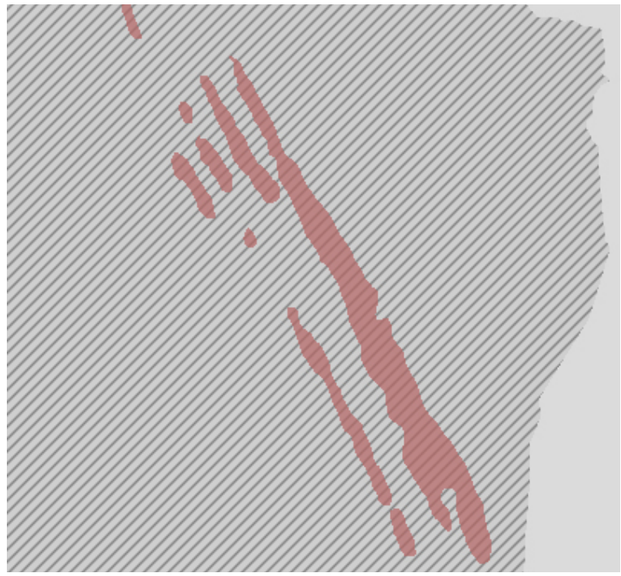
Work

Water

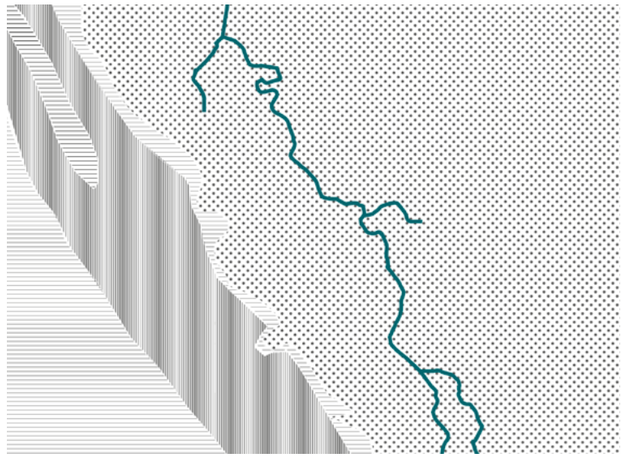
Living

1.2 Rationalization of Nature & Inhabitation: Sandridge Villages

After the 6th century the population of Drenthe kept growing, and ways of agriculture were starting to change drastically. The reclaimed Es-landscapes were fenced off to keep cattles away from the farmland. The lower parts were used for hayfields and meadowlands. This landscape lasted until the end of the 19th century. These high and dry sand ridges is were the first location of human settlements, creating a lineair pattern of Es-villages on top of the 'Hondsrug' with the valley of the Hunze on its Eastern side.



Sand ridges were created through tectonic movements during the Ice Age. These are now the highest mounds of Drenthe.

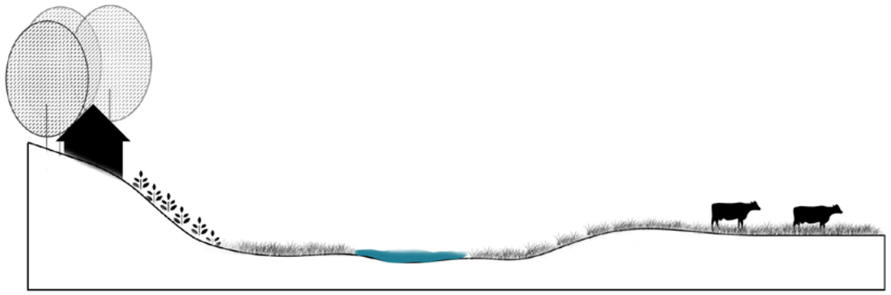


The differences between high and low plateaus created streams of seepage water in the valley of the Hunze.

1.3 Productive Nature

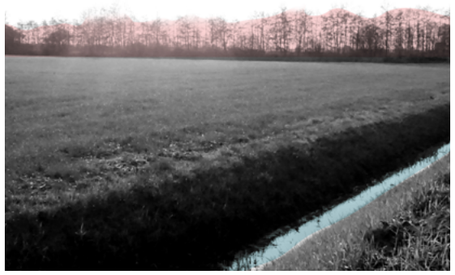
Modernization

After the 1700s much of Drenthe its lower peat areas were cultivated and used for fuel production. In order to transport this material streams were canalized to make them more navigable. Villages that developed in these areas are so called 'ribbon-villages'. Characterized by long line-air lines along historic waterways. This type of landscape is much more characterized by labour intensive work and efficiency, and is still considered the poorer area of Drenthe. The stream-valley of the Hunze Aa is located right in the middle of these two contrasting landscapes. Symbolozing both a different time and way of the human relationship with the stream-valley landscape.



Differences in nature and culture are more and more attuned to mechanized innovations in agriculture, thus boundaries created through ditches and new parcellation patterns of land ownership.
Diagrammatic Section

Diagrammatic Plan View



Spatial Composition

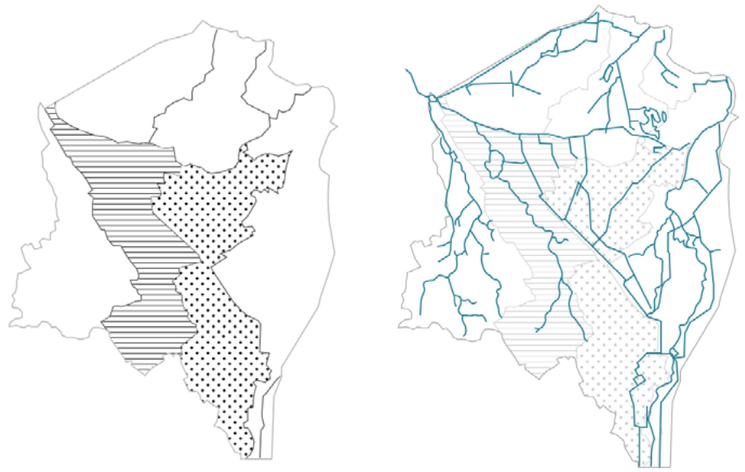
Work

Water

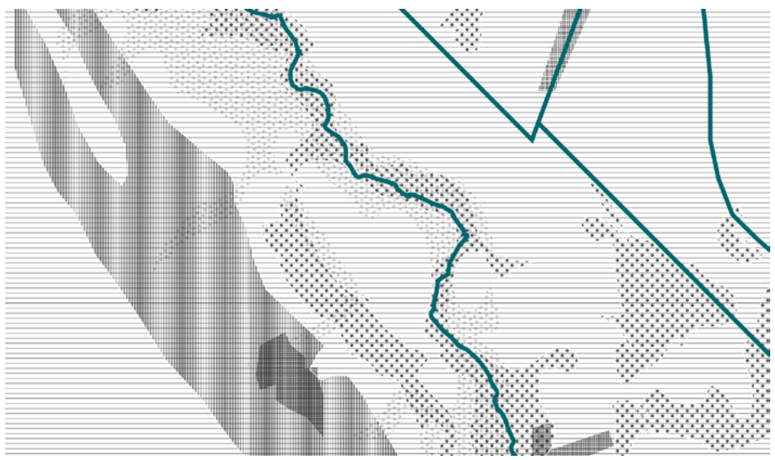
Living

1.3 Productive Nature & Inhabitation: Peat Colonial Villages

The stream of the Hunze is part of a larger water catchment area that runs through two provinces: Drenthe and Groningen. Water in this area comes from the IJsselmeer and has both an inlet point in the north and south, and goes in the direction of the Waddenzee. The Hunze that lies within this system however only serves as an outlet since the source of the stream is seepage water which takes place on the higher ground. The area of the Hunze is also characterized by a division between the higher located sand ridges and the peat area located on the Eastern part of the stream-valley. This difference in soil has created two different landscapes and occupation next to each other, divided by a small stream in the middle.



The water catchment area of the stream of the Hunze, lying in between two provinces Drenthe and Groningen, but also between the two material conditions of sand and peat.



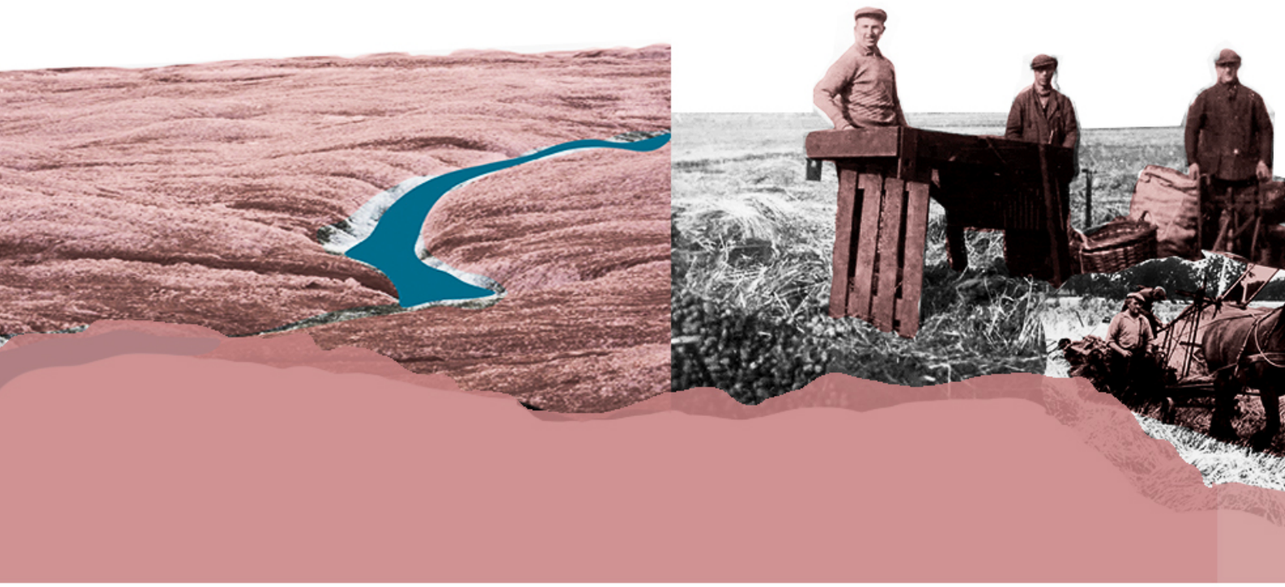
Zoomed in version of geomorphological conditions, from left to right: the Hondsrug, the valley with the stream of the Hunze, and an old 'peat canal' (turfvaart) marking the border between Drenthe and Groningen.

Meadows

Alder forests

Es-villages

Sand ridges



+/- 200.000 B.C

ICE AGE

+/- 1250

MIDDLE AGES

Cultural identity based on two different agricultural landscapes

Peat extraction

Ribbon-villages

Swamps

Raised peat bog soil

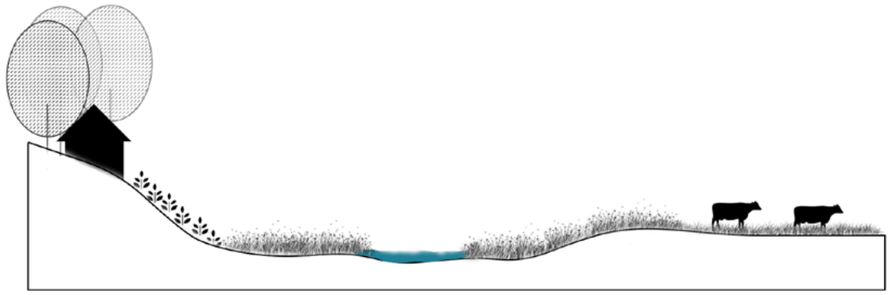
+/- 1850

INDUSTRIALIZATION

1.4 Preservation of Nature

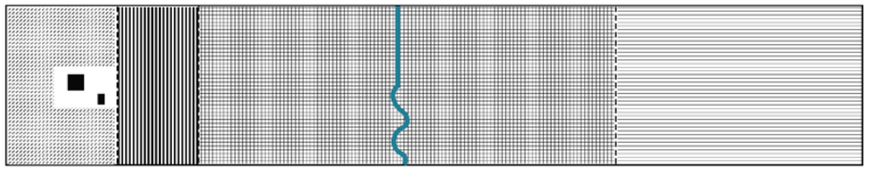
Current situation

On a regional scale the drainage of ditches in combination with climate change have led to a lot of arid areas around the many streams in Drenthe. Around the stream of the Hunze this has led to peat oxidation in the upstream. Aside from this also the quality of water and soil are degrading due to the many farmlands and the use of fertilizers. Both high levels of nitrogen and phosphorus are leading to decreasing biodiversity and soil exhaustion. For this reason, many (fragmented) parts of the stream of the Hunze are being re-naturalized again, bringing the stream back to its original course.



Differences in nature and culture are mostly created by land-use and policy.

Diagrammatic Section

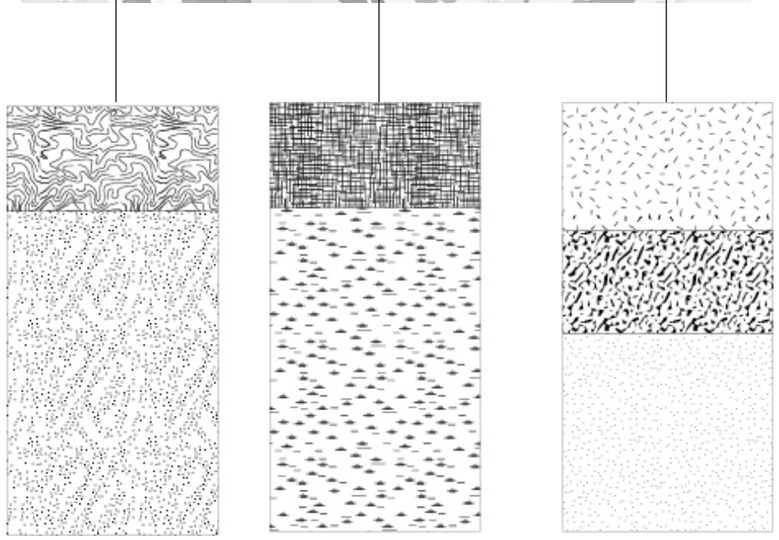


Diagrammatic Plan View

Spatial Composition

1.4 Preservation of Nature & the Hunze

Difference in original soil materials and soil conditions after years of land-use.



A. Gooreerdgrond; loamy fine sand

B. Madeveengrond; a peat layer on sand

C. Veldpodzolgrond; loamy fine sand

Manure rich toplayer

Fine sand without humus

A

Influenced by agriculture, mostly fed by rainwater

Organic top layer

Peat bog

B

Structure disappearing due to soil use and water drainage

Sandy humus layer

Less humus rich

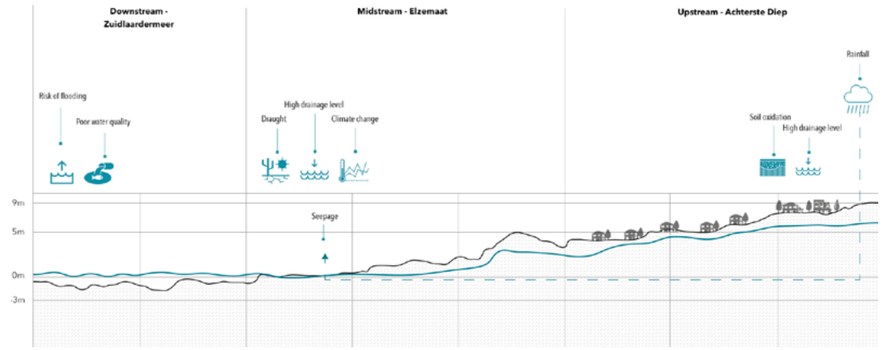
Fine sand

C

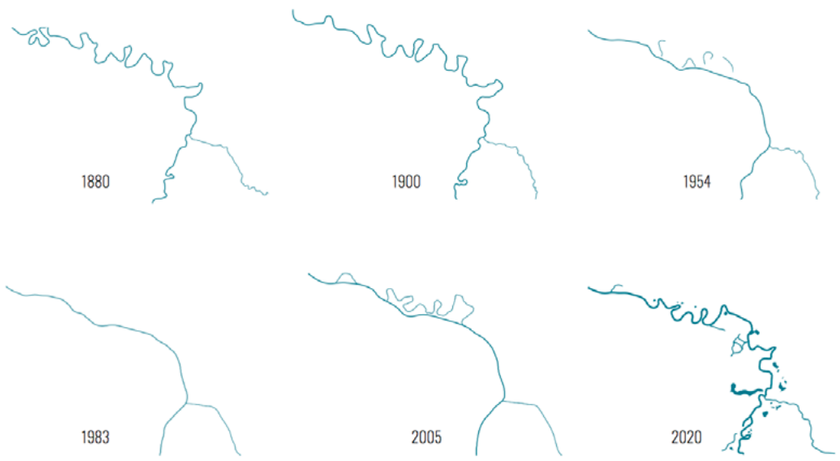
Top layer too nutrient rich, holds water well

1.4 Preservation of Nature & the Hunze

Re-naturalization plans are often based on the longitudinal characteristics of the stream that runs from south to north. In the upstream of the Hunze drainage levels are causing peat soils to oxidate. The midstream used to be canalized but because of draught problems this part has been re-naturalized again since 2005 and the old meanders are brought back into the landscape. This shaping and reshaping of the stream has been an ongoing process since the 1880s up until now. The result of only partially solving the challenges is that now the downstream still faces problems that are caused higher up the stream such as poor surface water qualities due to the use of agricultural fertilizers.

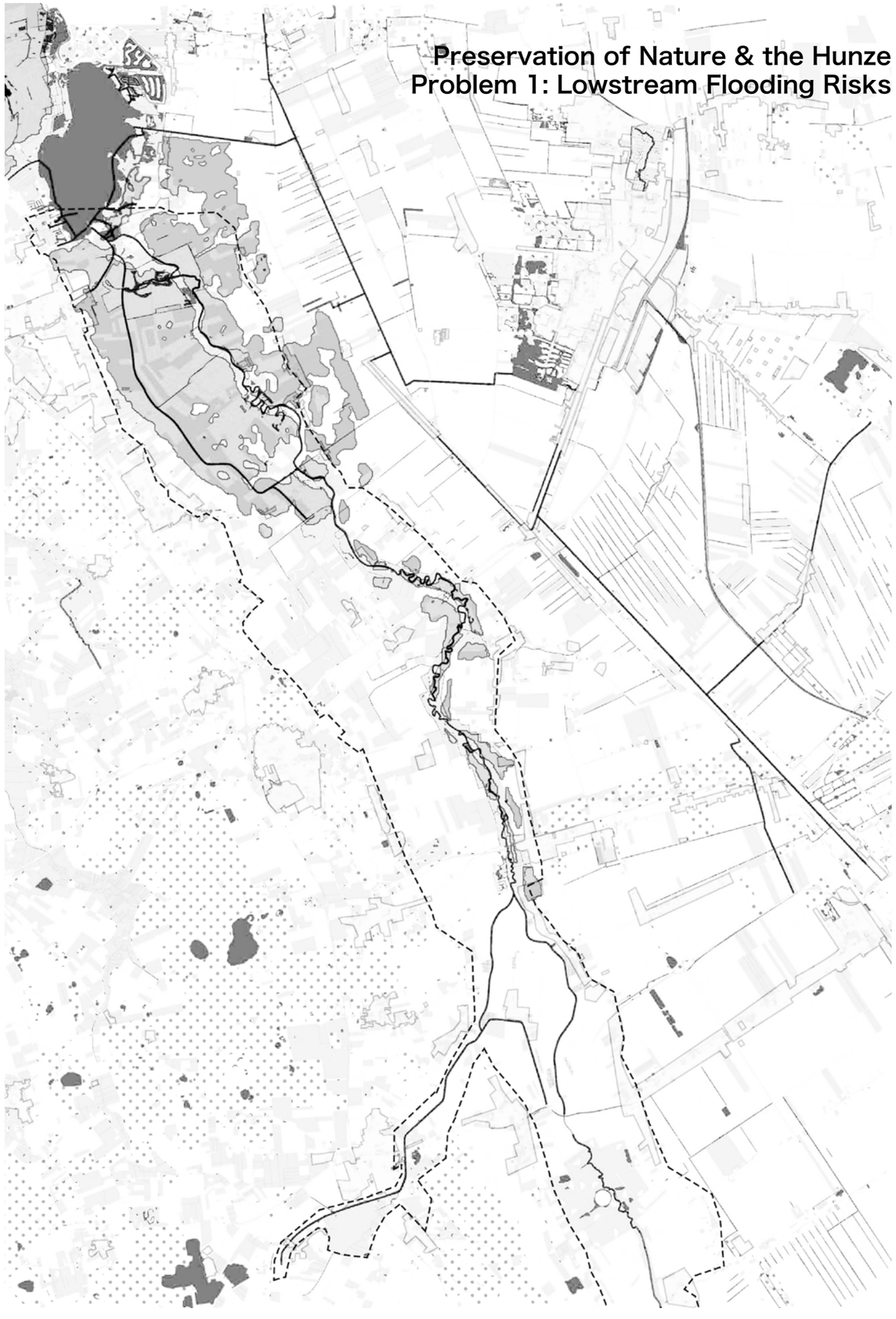


The stream of the Hunze from 'highlands' to the 'lowlands' marking areas of different challenges as a result of both modern land-use and climate change.



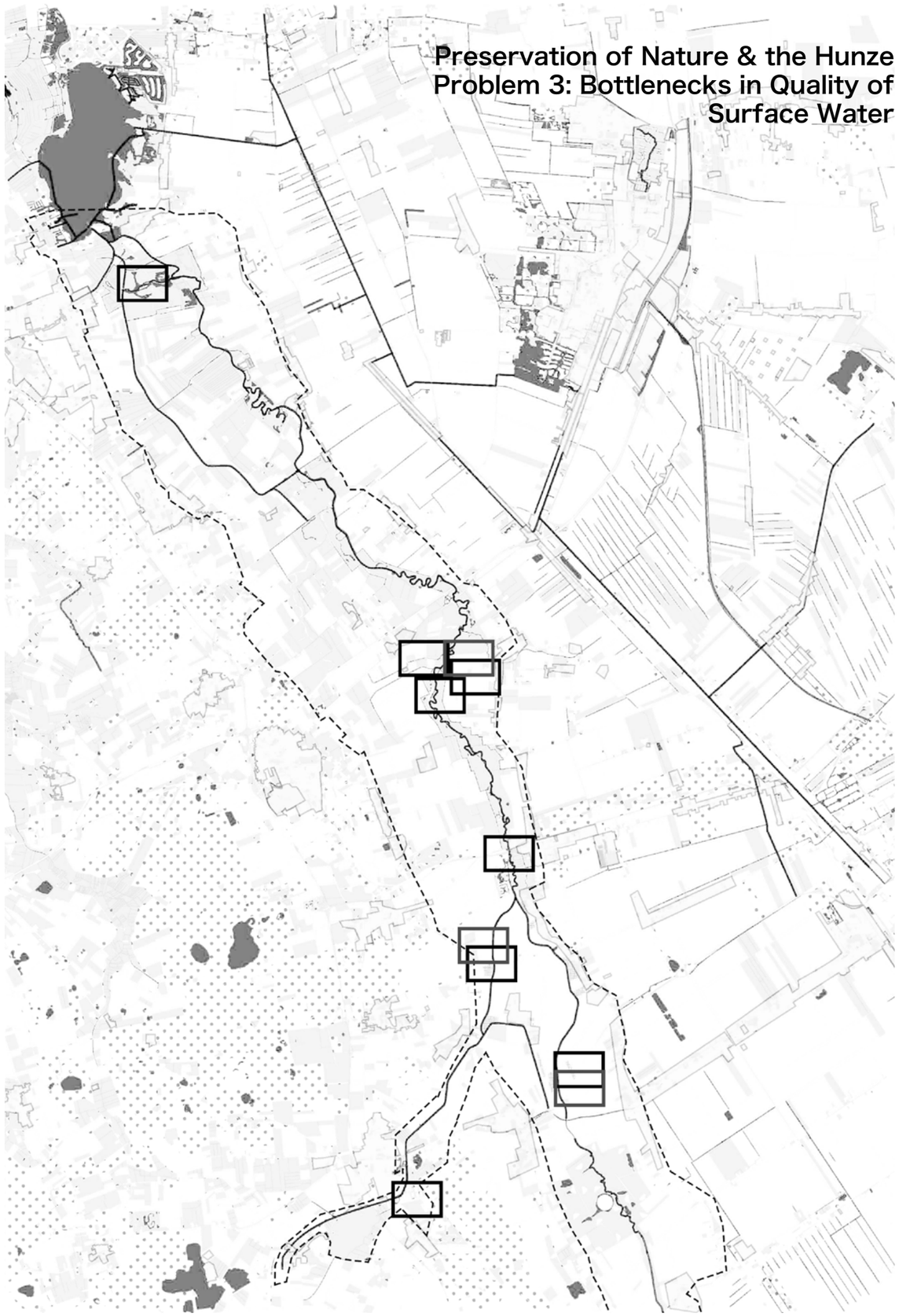
The development of the stream of the Hunze through the years after modernization. Going from a natural state to a canalized state, and back to natural again in the 2020s re-naturalization programs.

Preservation of Nature & the Hunze
Problem 1: Lowstream Flooding Risks

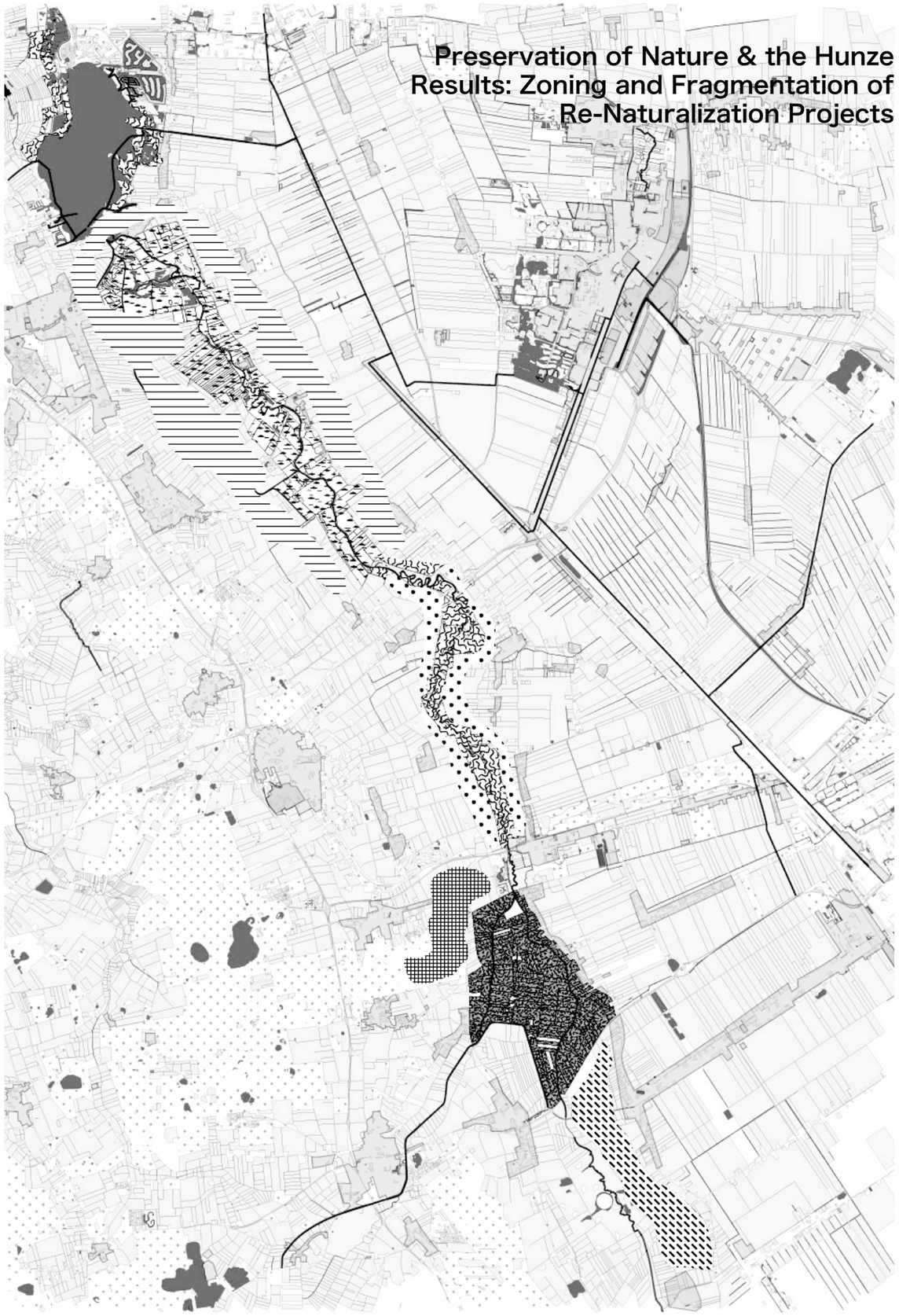


Preservation of Nature & the Hunze
Problem 2: Upstream Peat Oxidation

Preservation of Nature & the Hunze
Problem 3: Bottlenecks in Quality of Surface Water



Preservation of Nature & the Hunze
Results: Zoning and Fragmentation of Re-Naturalization Projects



Nature in the Anthropocene

1.5 Nature in the Anthropocene

Ever since the Middle Ages the Hunze valley has been under the influence of land reclamation. Among the first settlers in this territory of what once used to be swamp, there was a certain understanding and knowledge of the landscape and how to work with high and dry and low and wet areas. However, after modernization in agriculture and its environmental effects in more recent years, the adjacent parcels around the Hunze stream have been re-naturalized. This has created seperate arenas between the natural and cultural world.

The Hunze stream as creation of natural processes since the Saale Glaciation.

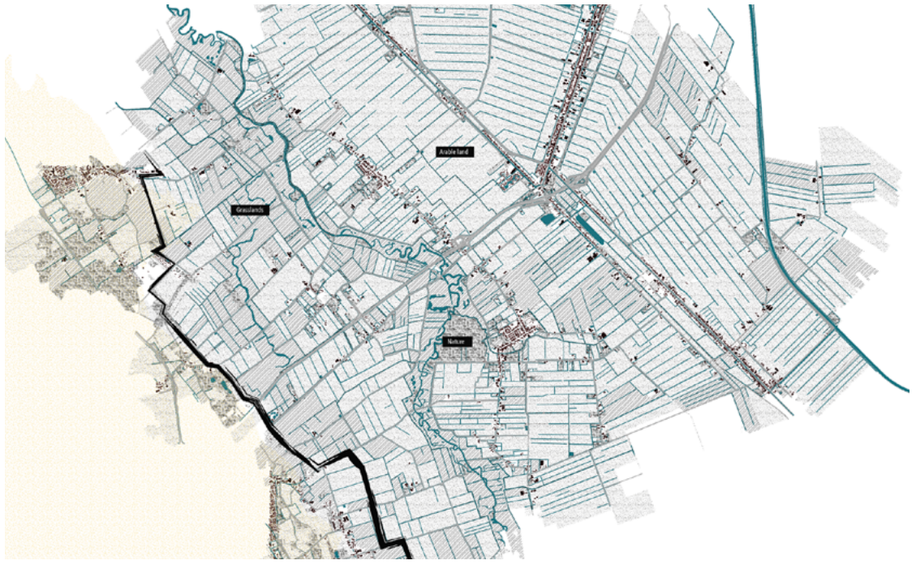
The first human settlements during the Middle Ages.

Agricultural expansion and understanding between dry and wet planes.

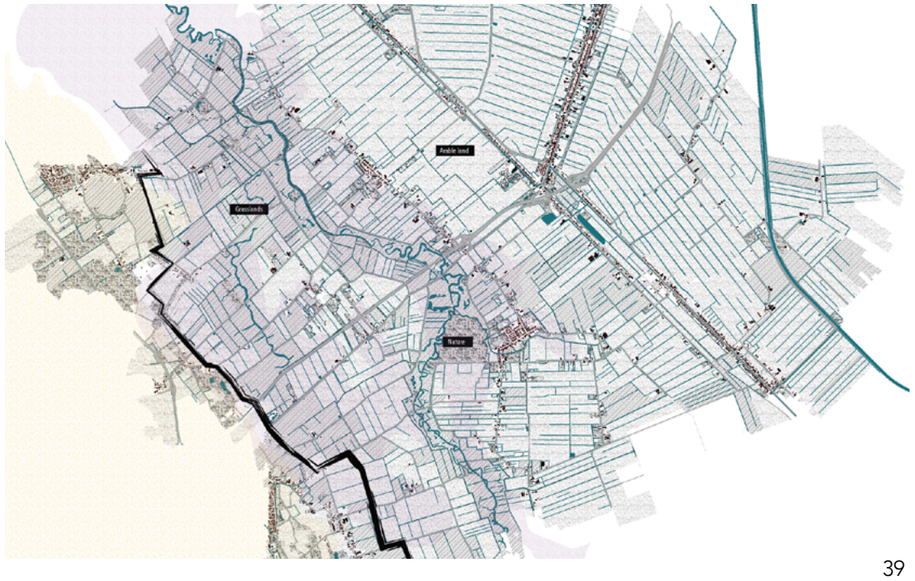
Re-naturalization and creation of boundaries between the two worlds of 'nature' and 'culture'.

1.5 Nature in the Anthropocene: historical remnants

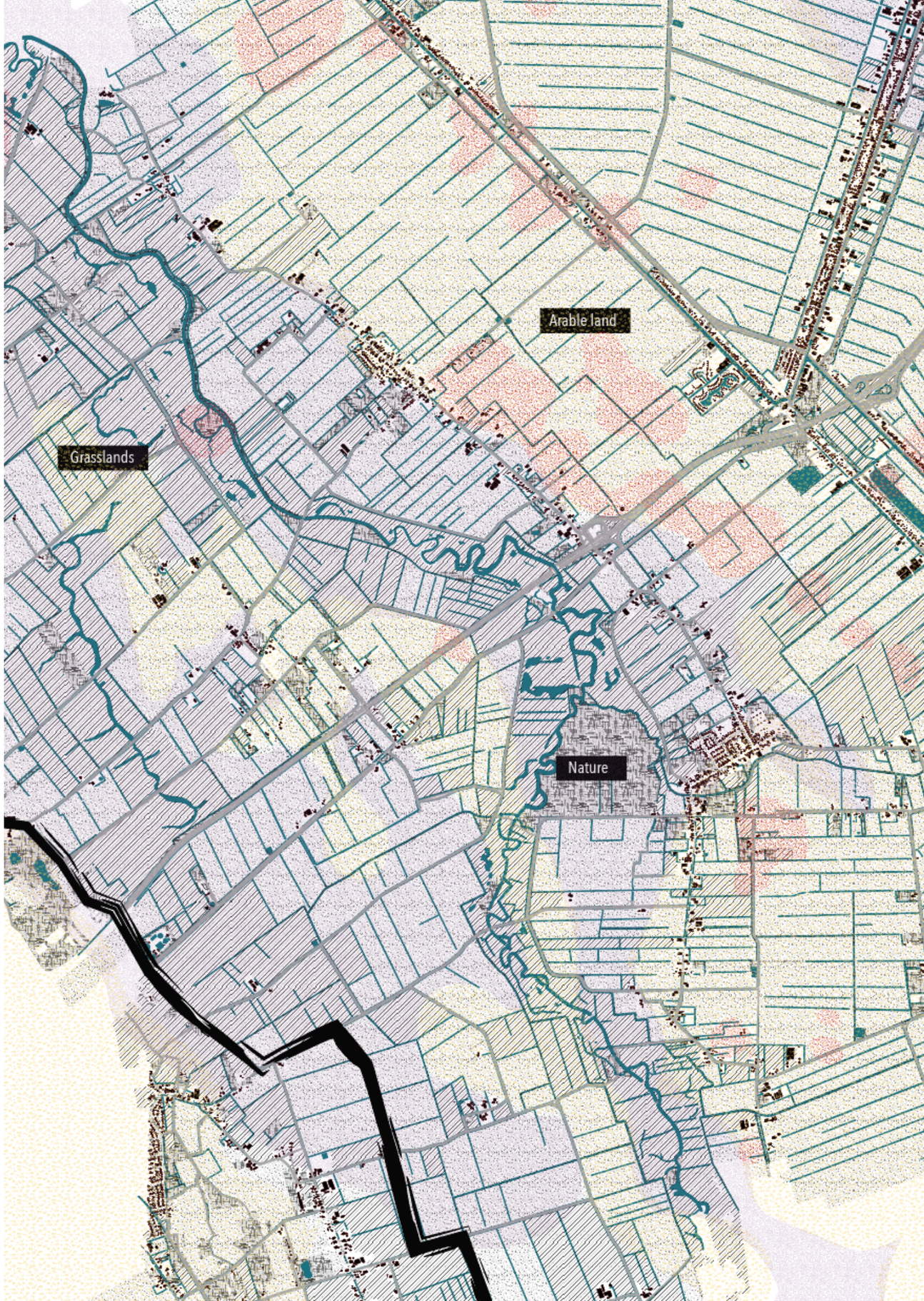
The geomorphological processes during the Saale Glaciation have created higher and lower planes in the province of Drenthe. Around the stream of the Hunze, these processes have created a gradient of soil type differences. The black line on the maps marks the transition from the 'Hondsrug' as the higher sand ridges to the valley of the Hunze. These soil type differentiation has had its influence on vegetation types as well. While the sand ridges are mostly characterized by 'Quercus Robur' (oak trees), the wood banks in the valley mostly contained of 'Alnus Glutinosa' (alder trees). On the next page some of the markers are shown that represent these different gradients on a chronological timeline.



The first area is the higher sand ridge of the Hondsrug which is characterized by a sandy soil.



The rest of the area is marked by height differences and ground water levels. A mixture of sandy and peat soils.



1.5 Nature in the Anthropocene: historical remnants

5000 B.C

Celtic Field

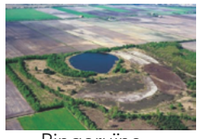
Grafheuvel

Heide

Hek

Hunebed

Kalkoven


Pingoruïne

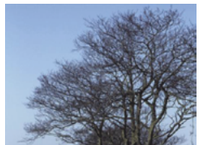
Poel

Spieker

Middle Ages: 1000-1250

Urnenveld

Kerkenpad


Elzensingel

Veenstroom

Ven

Voorde

Zandverstuiving

Zwerfsteen

Brink

Broekbos

Dobbe

Drift

Es

Geest

Holt

Hooiland

Hooiweg

Houtwal

Houtskoolmeiler

Huiskamp

Meent

Jeneverbesstruweel

Plaggenhut

S-vormige akker

Turfvaart

Vloeiweide

1600-1900

Aardappelkelder

Blauwgrasland

Boerenkuil

Eekschillersputje

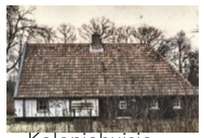
Kade

Gemaal

Ikenhiem

Karrenspoor

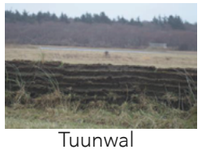
Populierenbosje


Koloniehuisje

Pestbosje

Strubben

Potstal


Tuunwal

Veenbaan

Veenplas

1980 - 2020

Overstapje

Vistrap

1.5 Nature in the Anthropocene: current state

In the last decades the effects of agricultural land-use on soil and surface water quality have become apparent. For this reason there has been a focus of governmental policies on re-naturalizing parts of the landscape back to its 'original' state. This has been the case for the Hunze valley as well. However, the current soil quality only creates room for pioneering species that can handle a nutrient rich soil. As a result, the gradients as mentioned on the previous pages are slowly turning into monotonous grasslands where the distinctions between dairy grasslands, arable land, and designated 'nature' areas are hardly noticable.

Re-naturalization of the stream-valley of the Hunze.

Grassland for mostly dairy farms.

1.5 Nature in the Anthropocene: current state

Now: Ambiguity

1.6 Problem area 1 - Zoning

While re-naturalizing is useful in order to 'save' space or get space back for nature, in hindsight it does not deal with the cause or root of the real problem which is the human-nature relation. Some authors state that this might have to do with our romantic and nostalgic sense of the past and dismissal of the current state. That it is for that reason that we often recreate the best fragments of genius loci. In Swaffield (2002) it is mentioned that the results can be pleasant but do nothing to challenge the placeless processes of modern developments. Zoning policies in that sense not only create a larger gap between 'nature' and 'culture' but also reduce what is perceived as natural to a singular, often bounded entity that needs to be enjoyed as 'recreation'.

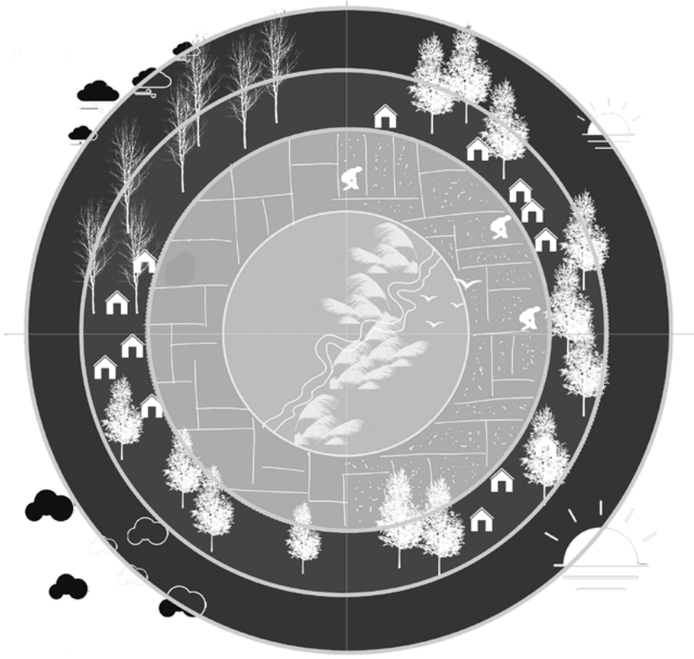
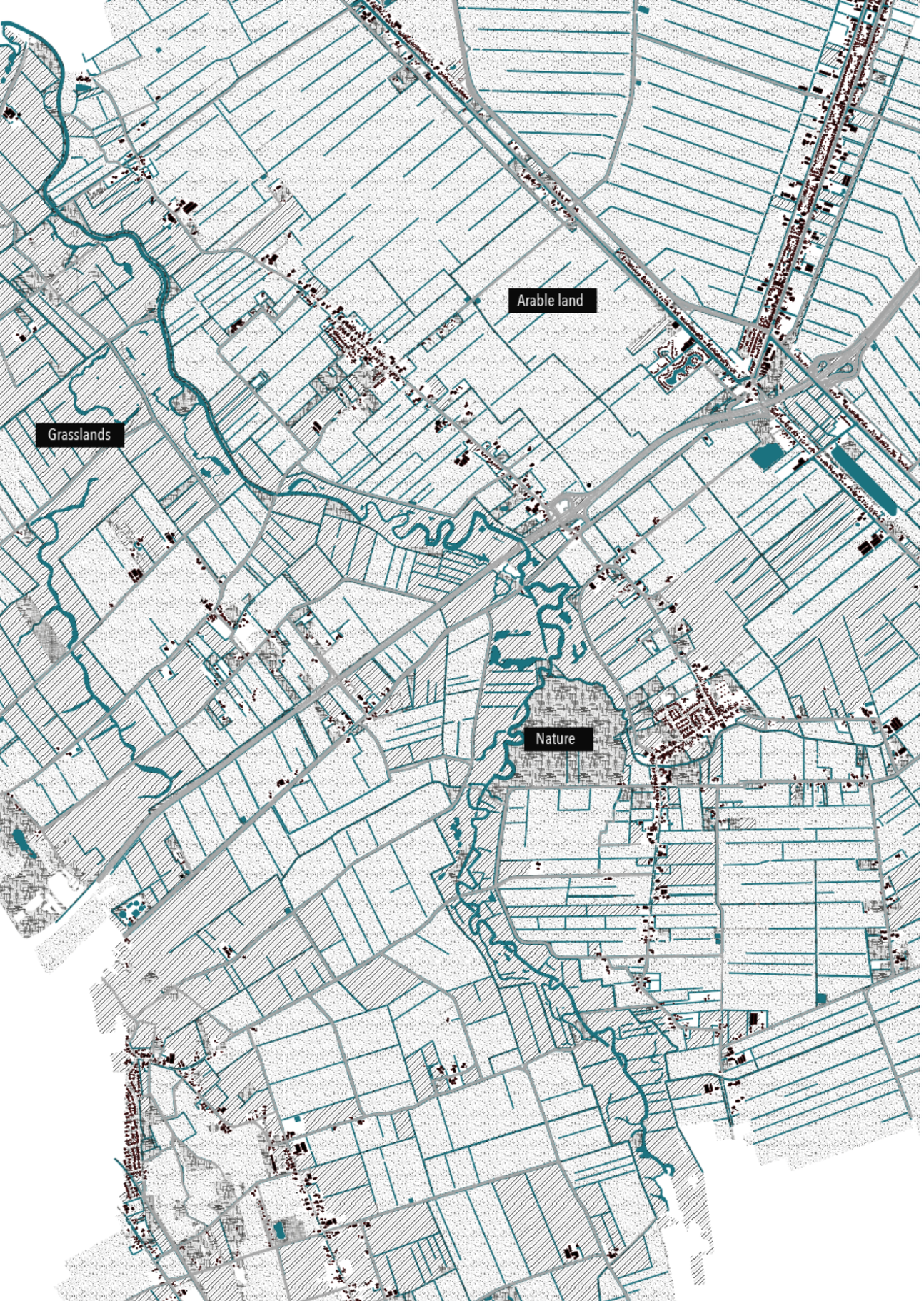
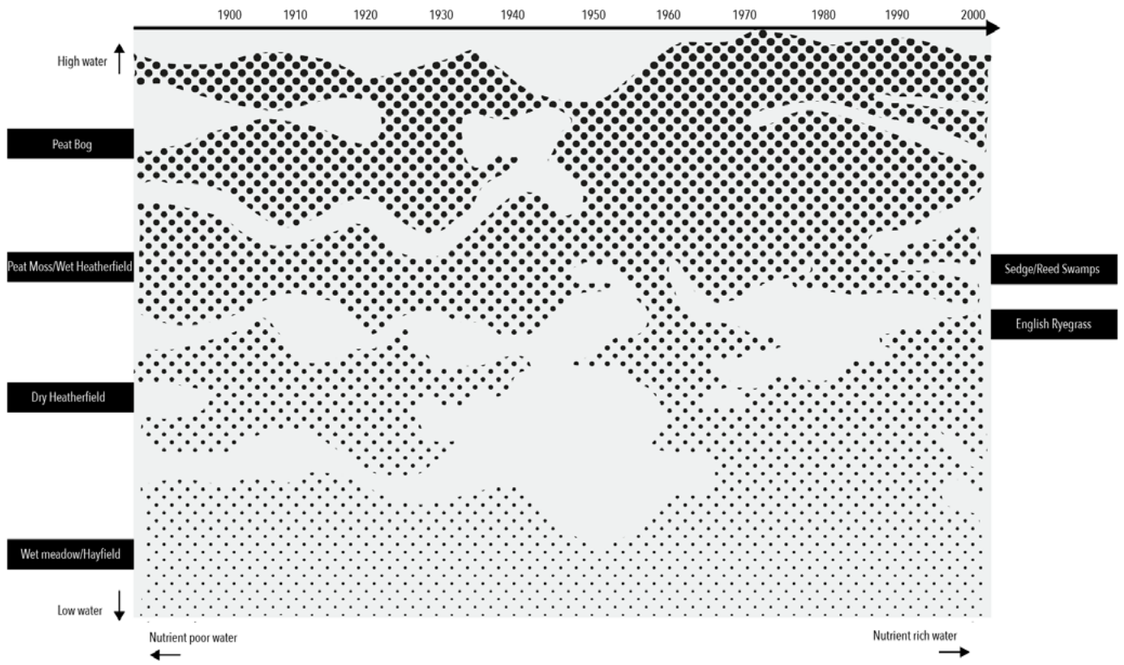


Diagram of zoning: nature, agriculture, housing and climate represented as seperate arenas.



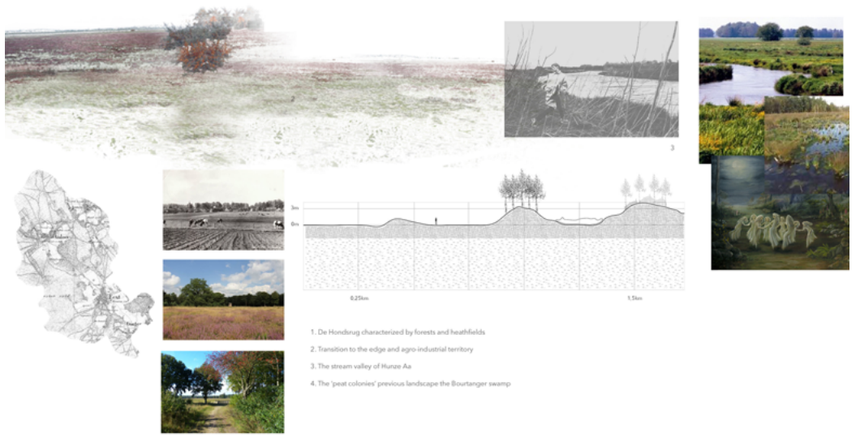
1.6 Problem area 2 - Soil quality & excavation

As mentioned before, the productive landscape of the past decades has had its effects on environmental degradation. Both water quantity (often influenced by drainage levels) and water (and soil) quality have an impact on biodiversity. The landscape of Drenthe used to have a rich strata of habitat types because of its geomorphological characteristics. There used to be a differentiation between heath fields, dry and wet meadows, and peat bogs. The type of land-use since the late 19th century has however changed this. This has lad to the impoverishment of vegetation types that are not always able to be restored. In consequence, the difference between nature, arable land and grasslands has become ambigious. All three being merely defined by reed swamps or English Ryegrass. As a solution soil excavation often takes place in re-naturalized areas. Under European law excavated soils are considered as waste and end up on the landfill which creates a blind spot in circularity and tackling environmental problems.



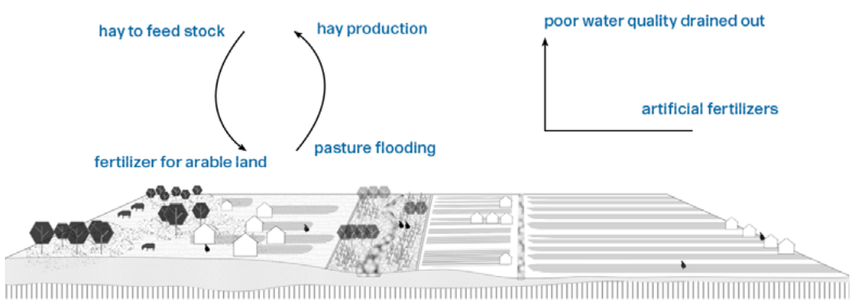
1.6 Problem area 3 - Knowledge & Agency

Drenthe used to be a marshland and through centuries people that inhabited these places, learnt how to live and work within this landscape. In the 'Es-villages' of the Middle Ages, there was a more or less circular way of farming and production. The landscape from highlands to the valley were defined by small forests or heath fields, bounded areas for livestock, arable land around settlements (housing) and meadows/hayfields around the stream. The agricultural system thus was based on a certain knowledge of land-use and proximity to natural resources. Current top-down governmental programs of re-naturalization or preservation then miss the point that the value is not only in recreating a certain tangible landscape form but also the intangible knowledge that is often shared among people that live and work in these areas. At the Hunze valley that would mean that it is not so much about bringing back a type of meadow or grassland but raise awareness and cooperation of local communities.



The history, topography and landscape typologies that were found between the Hondsrug and the Hunze valley

Collage of historical landscape



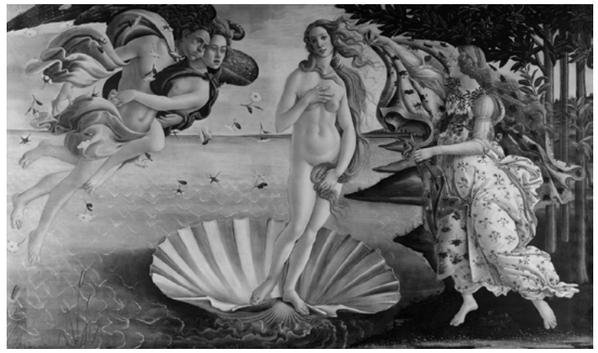
On the left part there is the system of the 'Es-dorpen' of the Middle Ages, on the right the modernized peat colonial area's.

Diagram of two agricultural systems

Area of Influence

PART II
RESEARCH

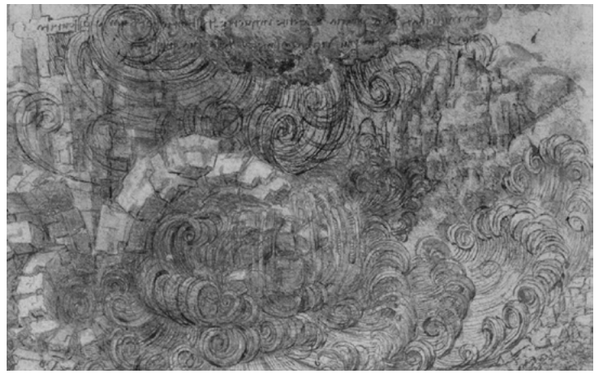
Nature in Society



Water painted in motion yet tranquil, determining the overall mood of the image.

Botticelli (1483) - The Birth of Venus

#2.1 Representation of water in art
Nature as 'sublime'



Preoccupation with the power of water, understanding the tides, erosion, floods, rivers and oceans.

Da Vinci (1512) - Water Studies

#2.2 Representation of water in art
Understanding of natural forces

A visual movement to realistic representations of everyday objects and water (nature) as a common good.

Hockney (1972) - Portrait of an Artist (Pool with Two Figures)

#2.3 Representation of water in art
Reclaiming elements of nature

Theoretical Framework
Nature in Society

On Nature/Culture

"There can be shifts of interest between the physical and the organic world, and indeed the distinction between these is one of the forms of the shaping inquiry. But the most critical question, in this matter of scope, was whether nature included man. It was, after all, a main factor in the evolution controversy: whether man could be properly seen in terms of strictly natural processes; whether he could be described, for example, in the same terms as animals." (Williams, 1980, p.74)

Paradigm shifts between more nature-dominant and more culture-dominant era's have been repeated many times through Western history. From wilderness as the threatening unknown, to early cultures that embodied natural elements such as water and wind with spirits of gods, and to the cultivation of nature. Williams (1980) suggests that a large influence on how nature is perceived in modern times has to do with the religious shift to monotheism and consequently the separation between a 'singular God' and a 'singular Nature' (Williams, 1980). According to the author this division has ultimately led to the idea of nature as the idea of man, and more importantly as the idea of man in society.

Pollini (2013) describes how 'nature' as a human concept becomes evident during the Enlightenment. In this period reasoning an rationalization became the common way to describe the natural world rather than through supernatural ways. It is also in this period that science was used to domesticate natural forces for the benefit of humankind. During the 18th century, the perception on nature changed again and sensibilities towards mountains and other wild places shifted in response to the rise of Romanticism. Appreciation of the landscape was shown in literature, poetry and art through words such as 'sublime' and 'delight'. It was a countermovement to the Enlightenment but also economy and society as a whole, believing that liberalist production methods led to alienation from land and nature (Oosthoek, 2015). This alienation can be noticed in the way the natural environment is treated. Vogel (1988, p.367) states: "Rather than learning from nature, from its complexity, its organismic and holistic character, we treat it as 'mere matter' to be manipulated for purely human purposes (…)".

For the Romantics, overcoming alienation lies in reconciliation or a certain mode of awareness. In appreciating our dependence on nature, recognizing it as the whole which includes humans as one of its parts. Latour (2007) also questions whether nature should be defined as a world that is not the outcome of social processes. He even suggests that within this sense the representation of nature is actually is the cause of real nature. Thus, separating the two will only contribute to a larger dualism between the two arena's. Others argument that 'environment' is not ambiguous in itself since we live in a single environment, and it is a natural one and a human one as well.

Prominski (2014) explains that in Japan nature and culture are not considered as separated realms but overlap. In a well known Japanese book 'Fudo' by Watsuji, the author argues that the world is made out of an unlimited number of milieus in different dimensions. These milieus are not based on the objects within that milieu but their relations. Thus, excluding humans from a milieu is not possible because of their relational character. The author continues to explain how certain 'concepts' are developed. One of them is by Imanishi, the concept of several layers in which things are organized, and above all in (and in between) which life is shared. Prominski (2014) unites these main ideas as 'andscapes', which is focused on non-duality and the emphasis on relations.

Theoretical Framework
Nature in Society

On Pluralism/Co-existence

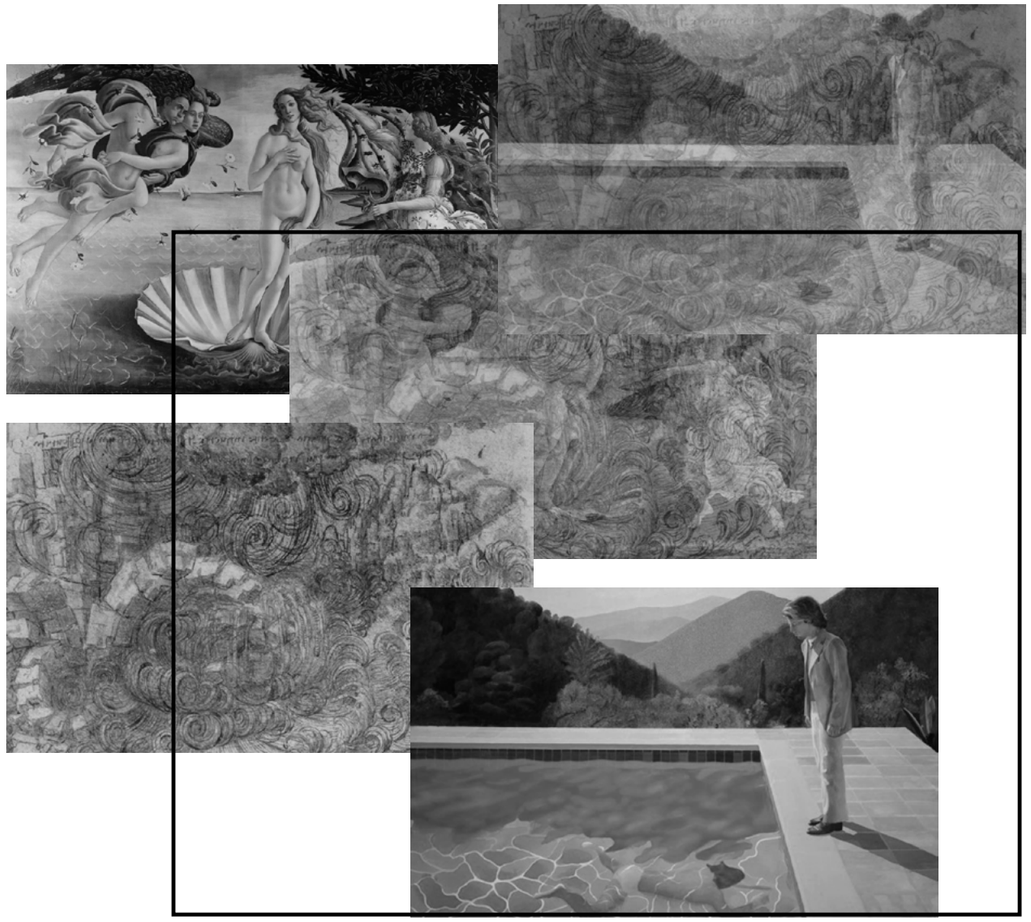
"Natural and cultural landscapes develop and change over time. Landscapes are dynamic. An observer witnesses a momentary 'glimpse' of an ever-moving and changing environment. Natural dynamics are the result of physical processes (such as erosion and sedimentation) and of biological processes (involving growth, blossoming and decay). … Society also changes, and shifting views on realities influence our perception of the real world." (Vroom, 2006, as cited in Akiko, n.d.)

Relph (1993) describes the idea of perfection in American's eyes, inventing a self-acting machine which would produce plans of cities and designs for buildings following a set of criteria. He sees this happening in the 20th century, a machine built on money and personal gratification, a machine steered by an unwavering need for growth and progress. Melles (2011) sees this as our modern day 'pragmatism' or 'common sense'. In philosophical theory the countermovement of pragmatism is often described as 'pluralism'. This notion is in essence about the concept of truth being plural, as opposed to 'monism' where there is a single truth. Aikin and Talisse (2016) explain monism by stating that for any two goods, there must be one better than the other or they are equally valuable. Pluralism on the other hand, is the view that there could be two goods that are not equally valuable, where neither is better than the other. From this point of view, pluralism then is not so much about diversity which also implies a conception of value, rather it is about coexistence.

In 1963 architect Robert Venturi takes a pluralist approach in his book 'Complexity and Contradiction in Architecture'. He discusses 'the limitations of either-or in modern architecture' and suggests 'both-and as a condition of hierarchy and contradiction' (Ozturk, 2014). This would mean, according to Melles (2008), that architectural thinking should be less about the space, the Utopian search for the new, and focus on time and interactivity. Some architects have applied such an approach for example by designing without a master plan so that the focus is less on architectural characteristics and more on possibilities for reorganizing the social. This line of thought is comparable to Relph's (1993) ideas on place making, focusing on one straightforward idea: that places have to made largely through the involvement and commitment of the people who live and work in them; places have to made from the inside out. Breaking free from ideology and technical abstraction and to contact people, things, and landscape directly. The task for landscape architects then is to design not only the elements in the landscape but also the relations or the dialogue between them.

For Heykoop (2015) 'relatedness' is about 'temporality', a phenomenological experience at a given time and space. This includes elements such as tempo, process, duration, imagination and layers. Tempo is determined by configurations in the landscape, affecting pace and mode of movement among others. Process involves living organisms, open-endedness or different outcomes, but also has the ability of making something apparent or concealing it. Duration contributes to a lasting period. Imagination can involve remnants of the past but it can also be about perception and engagement with the site. The last theme, layers, is "based on the multiplicity of temporal relationships combined with attention to consciousness and experience" (Burton, 1996, p.43).

Stephenson (2010) has created a model of the way landscapes are often portrayed. She sees potential in a dynamic-spatial-temporal model that is often seen in indigenous models, connecting places but also providing links between ancestral time and the present. What becomes evident is that there is not a single framework for 'pluralism'. The common ground seems te be more in an understanding that there is value in co-existence and so called 'relatedness'.



'Pluralism'

Nature from an 'either-or' to a 'both-and' point of view

Methodology
Problem Description, Research Objectives & Methods

Symbolic references in the landscape of the Hunze valley are based on polar opposites. On the one hand the traces are formed by slow natural processes over centuries, starting from the Saale Glaciation. On the other hand, the landscape has been altered by humans through local communities since the Middle Ages, and later re-altered through governmental policy. In its current state the landscape is mostly characterized by zoning of 'nature' and 'culture', through large patches of agriculture and fragmented areas of nature restoration.

This duality between the natural and the human world is discussed in the theoretical framework and shows the role of religion and the shift from a 'singular God' to a 'singular Nature'. Which includes the conception of nature as an idea of man. Some of the authors then rightfully question whether nature can be defined as a world that is not the outcome of social processes. In the 21st century the 'Anthropocene' is often proposed as a new geological age. A notion that pleads for more unitary concepts of nature and culture as opposed to the Western ambiguous understanding of nature as something independent from human life. What would it mean to push these notions into the same frame? To read them together as a story of human life and being part of nature?

There is a possible role for landscape architects to bridge this gap between 'nature' and 'culture' and show the value of an integrative approach through design. For this reason, in this research the philosophical notion of 'pluralism' is used as a starting point to design in a different way, to design for co-existence. In more architectural terms that would mean that the focus is less on 'either-or' programs but designing for 'both-and', between the social, political and environmental, where time and interactivity play a crucial role.

The design goal at the Hunze valley then is to create this kind of pluralistic intermediary space at the junctions where nature and culture come together. To create room for differentiated encounters at these locations that are now mainly characterized by boundaries. The main research question that follows is: How can the ambigious borderscapes of the Hunze valley be re-imagined towards a more unitary concept of 'nature' and 'culture'? The hypothesis is that this could be done by designing with the theoretical framework of 'pluralism'.

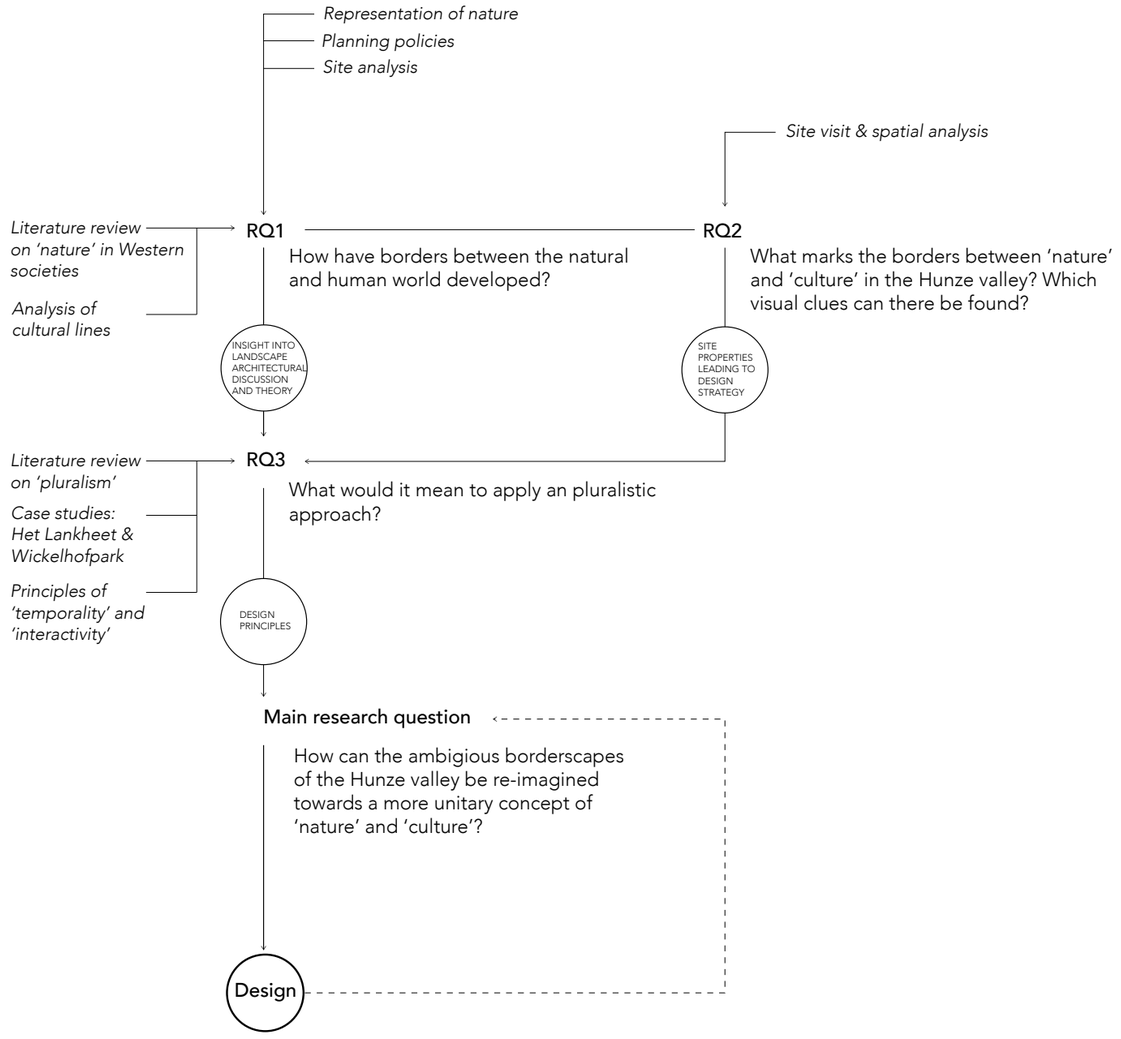
After site analysis the following design objectives were formulated:

1. Reframing the intangible value of the historical landscape
2. Creating new forms and typologies that are oriented towards public interaction
3. Making natural processes and temporal aspects more visible to experience

The first research question was the starting point of this report and has already been discussed in 'part I'. Based on literature research, a conceptual framework for 'pluralism' then was created which is presented in the following chapter. This framework was also used to re-organize spatial analysis of the second research question, in terms of the pluralism categories, being: both-and, temporality, and interaction. The analysis itself was done by mapping, site visits and photographing, short conversations with local inhabitants and farmers, sketching, and deducing this information into spatial schemes.

Through this entire process reference projects, readings on landscape narratives and experience, and general garden design principles have fueled the last chapter (and research question) 'part III', back and forth. I have not mentioned these specifically in the report in order to keep a coherent focus on 'pluralism'. Rather, the knowledge gained from these sources were used as inspiration and input for the design itself.

Methodology
Methods Description

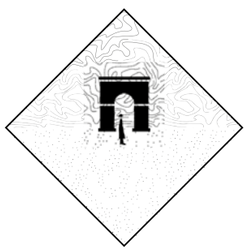


Framework for Pluralism

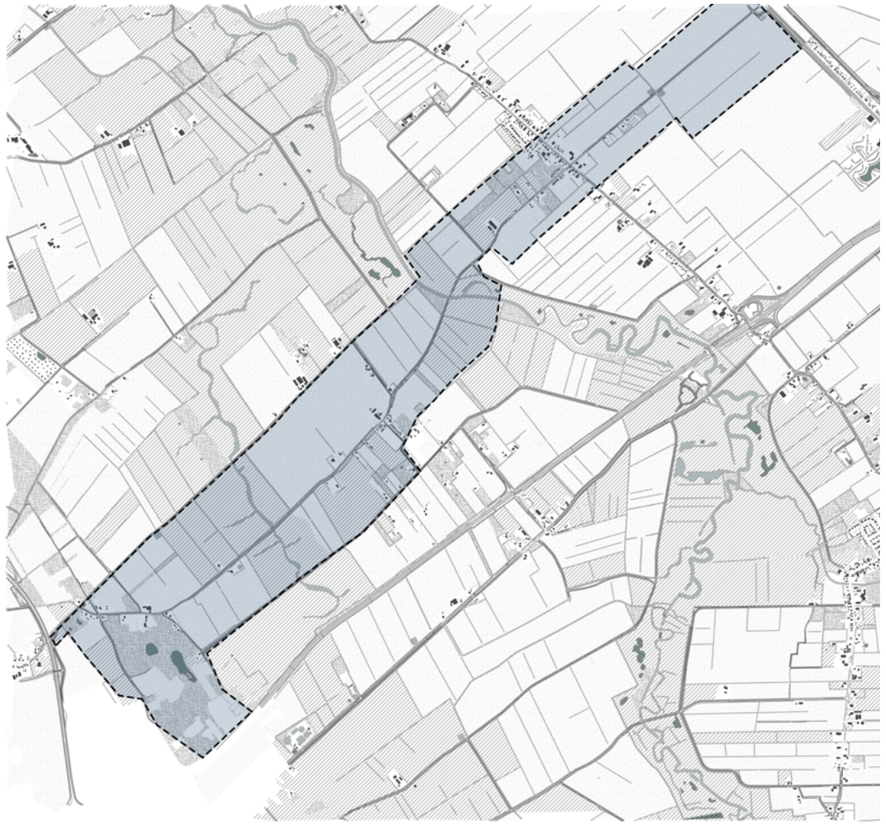
Based on literature research three categories for pluralism have been made. The first is the so-called 'both-and' approach, meaning that it can be both nature and culture, functional and recreational through the space it contains. Since water, vegetation and soil do not have symbolic distinctions in itself, it is the context that usually prescribes it to either one or the other.

The second category is 'temporality', which is about creating relatedness to a site its history and process through layering of several temporal aspects. Both natural processes but also tempo, the way a site or any junction in space and time is to be perceived.

And the third one about composing the new redefined typologies in such a way that it is 'open' or directed towards public interaction. Cause and effect contains a larger scale and is based on the princple of 'where there is smoke there is fire' while microcosm is more about a certain tree, plant or water type.

Category	Both-And	Temporality	Interaction
Method	Nature/Culture	Acces & Relating	Tropes/Associations
Contains	Soil	Tempo	Metonomy
	Water	Process	Synecdoche
	Vegetation	Imagination	
			
Principles	Historical locations	Slowness	Cause & Effect
	New forms	Visibility	Acceptance microcosm
Element	The Space	The Object	The (a)biota

The Site & Current Typologies



One of the many connections routes between the sand ridges, the valley, and the peat areas.

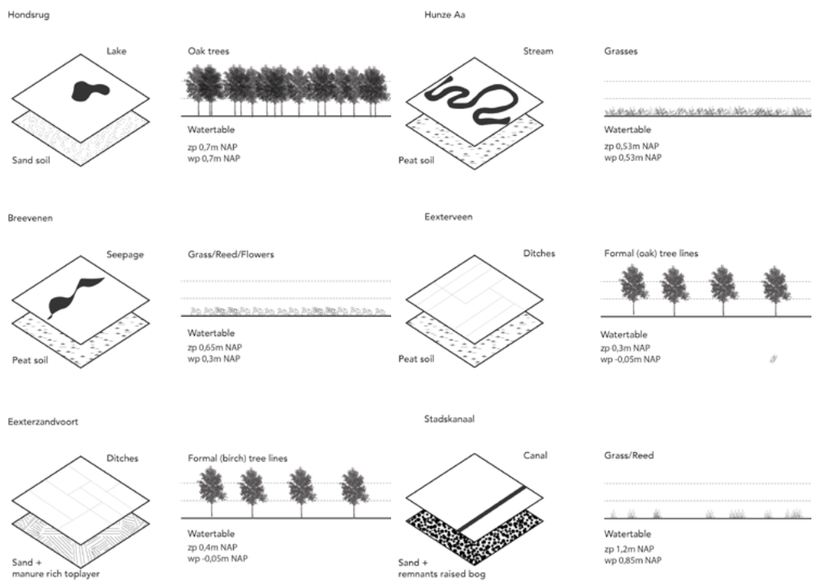
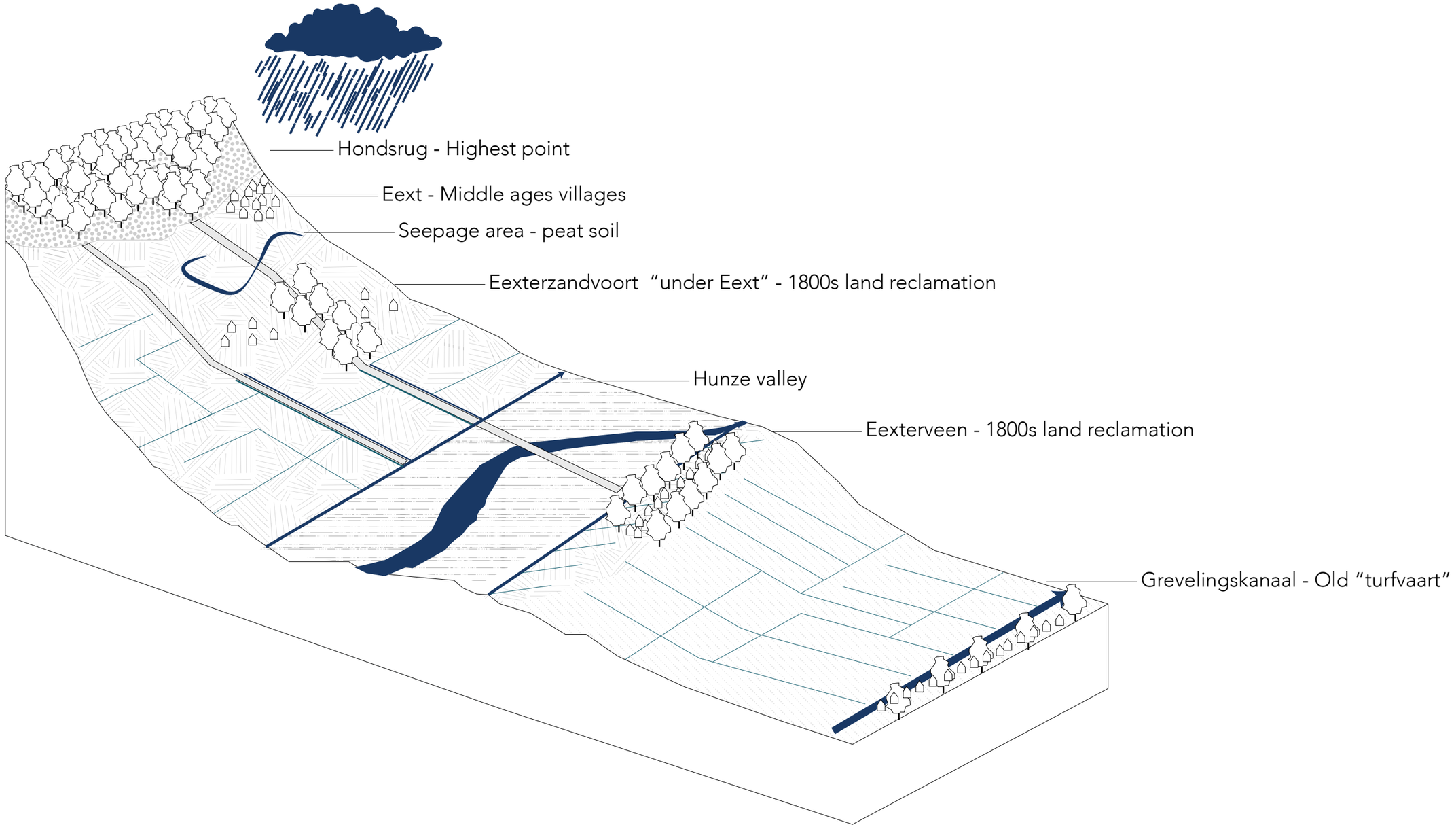


Diagram of water and vegetation typologies that can be found along this cross-section of the Hunze.

Pluralism I - Both-And

Historical space: soil, water, vegetation



Traverse 1

Traverse 2

Traverse 3

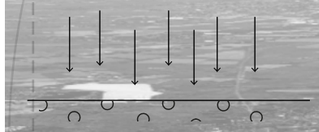
Pluralism I - Both-And

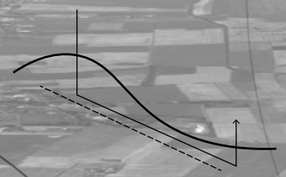
Possibilities for new forms of space

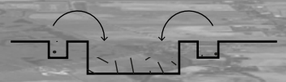
Water source, use & proximity

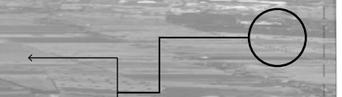
The seepage water of the Hunze offers water during dry months, acts as water retention during wet months, serves as water discharge for agricultural ditches, and a habitat for flora and fauna.

The aim is to enhance water resources and quality at a local level as an integrative system in order to remove pressure from the Hunze as a single source.









GROUNDWATER EXTRACTION

MAIN & SECONDARY DITCHES

STREAM

MAIN & SECONDARY DITCHES

CANAL

LAKES AND DITCHES

0km

1km

2km

3km

4km

5km

6km

Part 1

Origin: rainwater

Now: Hunze valley through weirs.

Part 2

Origin: rainwater

Now: man-madesee-page

Part 3

Part 4

Origin: stream/see-page water

Now: seepage/rain and adjacent ditches

Part 5

Part 6

Origin: groundwater

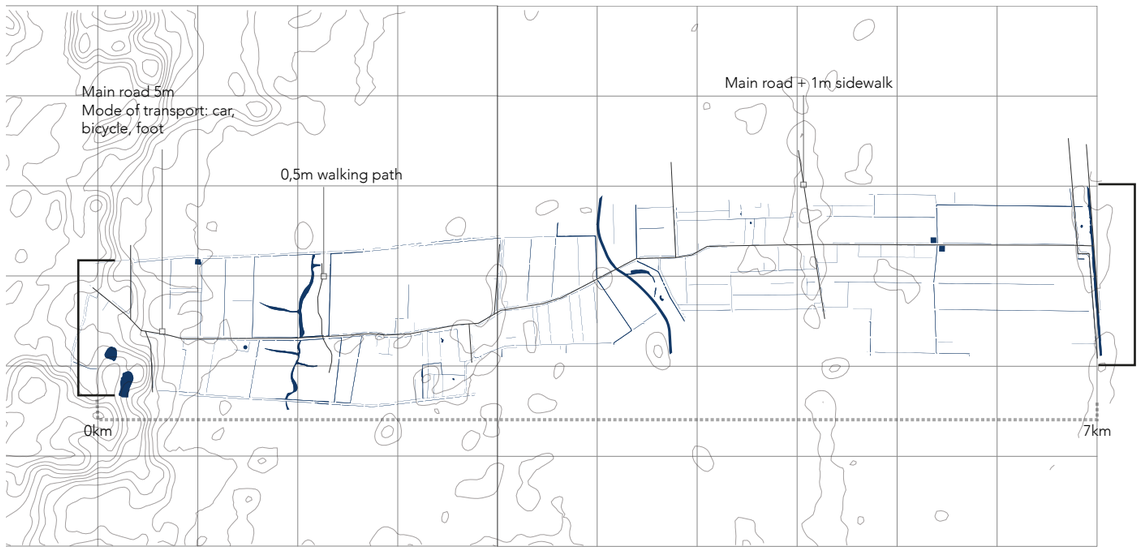
Now: IJsselmeer through canals

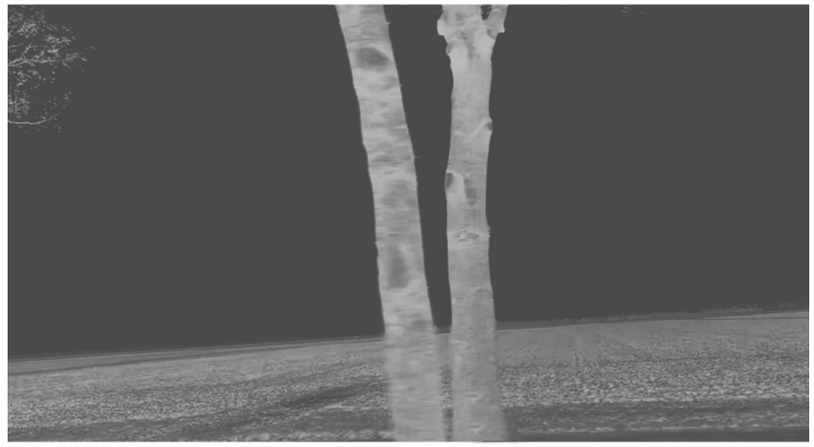
Pluralism II - Temporality: tempo

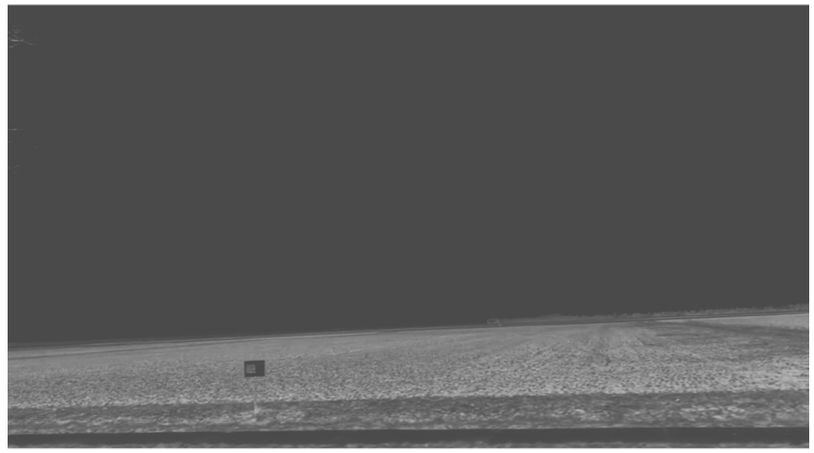
When talking about space time is often used as a measurement of distance, ‘two days away’ or ‘10 minutes from here’. But it can also be seen as ‘tempo’, a measurement of speed or pace as we pass things by which also creates or influences the possibility to experience the space.

From the Hondsrug to the Hunzevalley roads have been established perpendicular to the stream of the Hunze. The development of these roads has to do with how the site was developed. The higher grounds of the Hondsrug were the places that were inhabited, the marshes on the lower parts were used for hay productions. This is still notable in the street names for example being “Hooidijk” (haydike).

Through the years these roads have been asphalted and used as connections between Drenthe and Groningen. They usually serve a singular mode of transport which is the car. The experienced space then is framed by the car windows for a split second, mostly defined by the rhythm of trees and agricultural ditches. New modes of transport could possibly elevate this experience of both tempo and site.





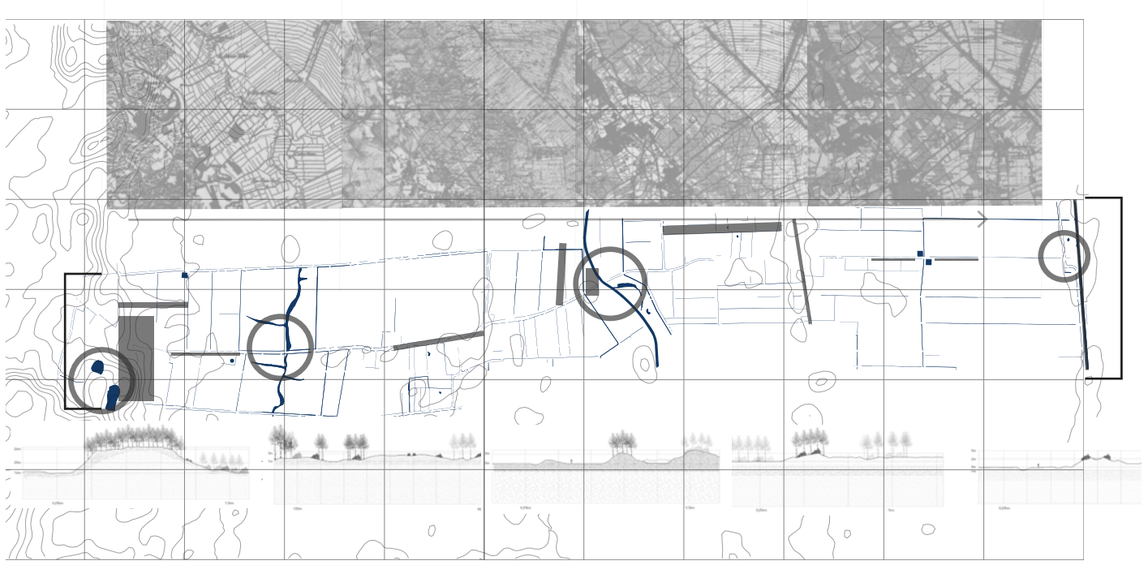


Pluralism II - Temporality: imagination

In literature, imagination as a sub category of temporality mostly refers to historical places or ‘remnants’ of the past. The term imagination then refers to the possibility of experiencing these previous stories. So in a sense, imagination then is about chronological time.

The history and development of the site has already been widely discussed. In spatial terms, most of these places such as the Hondsrug, the Hunze, and the old turfvaart (‘peat canal’) are characterized by a north-south movement which is the opposite from the infrastructural layer that lies on top of it.

The experience of these places from these existing roads then merely is a short traverse of around 20 seconds, which is often bounded by fences or ditches. Leading to the conclusion that the value and experience of the historical nodes are mostly notable to people that know the area.



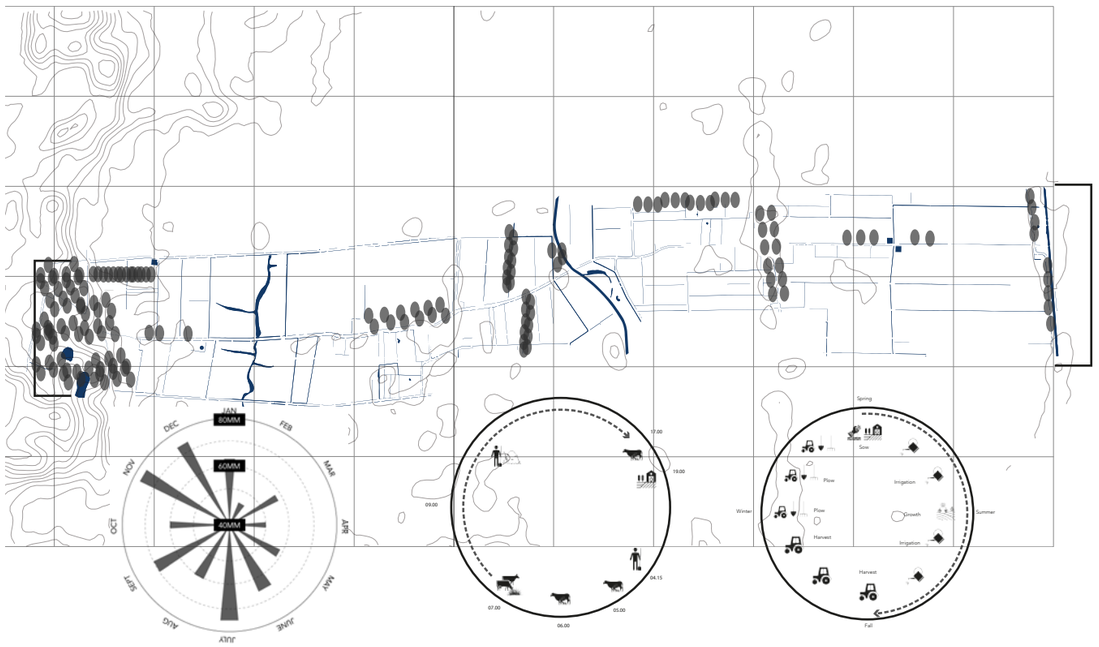
Pluralism II - Temporality: process

Process refers to seasonal or cyclical time which is characterized by repetition. Another sub-category of process is in literature referred to as ‘duration’ which is less about repeated time but more about the duration period.

In the Hunze valley, duration can be seen by a contrast between the collective memory of the landscape, the forests, the heathfields, streams, and peat area’s, and what there really is to be found: wide stretched agricultural fields, protected nature area’s, windturbine parks.

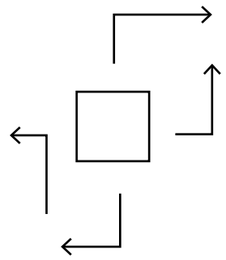
The cyclical type is represented by a couple of elements. The first are tree typologies and changes in leaves and colors. The second are waterlevels, however since these are mostly regulated seasonal time here mostly experienced through rainfaill and accidental pebbles. The third are agricultural fields. Arable land is defined by crop seasons over a year while dairy farms have both a seasonal and daily aspect. Usually the cows are only outside during summer months and at specific times during the day. Even though some modern dairy farms do not see the need in letting them out at all. The last element are the nature area’s which are also defined by seasonal time and frequency of mowing.

In my personal site visits in 4 different seasons, I did not encounter much difference in water, ‘nature’ vegetation, and the dairy farms. The two aspects that kept predominantly changing were the trees and the arable fields. Both enhancing the seasonal experience between winter and summer; between bare land and more lush growth of planting.

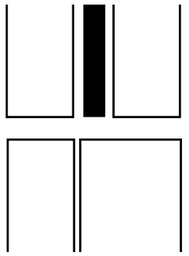


Pluralism III - Interaction - Macrocosm

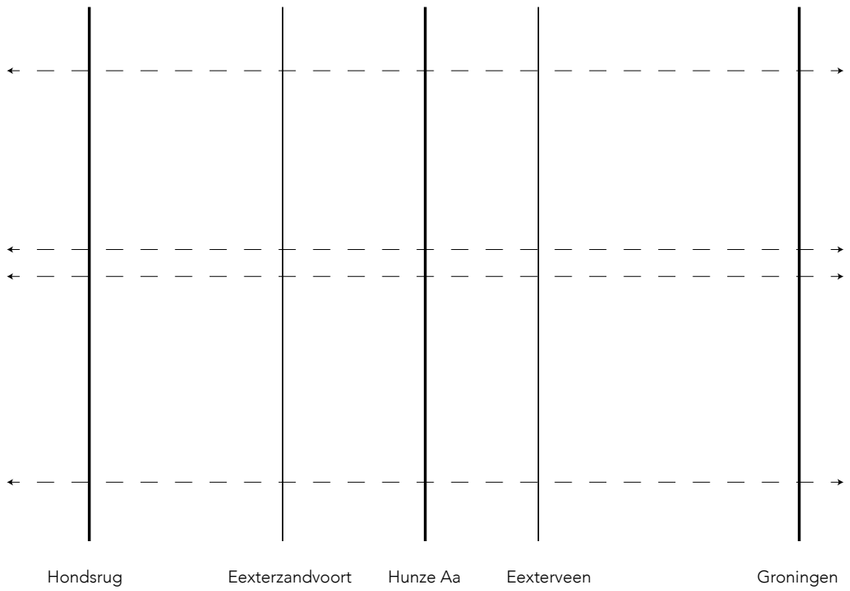
The possibility to really interact or experience different spaces is limited due to land ownership, details happen on the background hidden behind the farmlands, or the spaces are not accessible and bouded by fences or agricultural ditches. The space that there is then to interact with is what is directly adjacent to the main road. But due to land use (agriculture) and water regulations, there is only a little differentiation in experience.



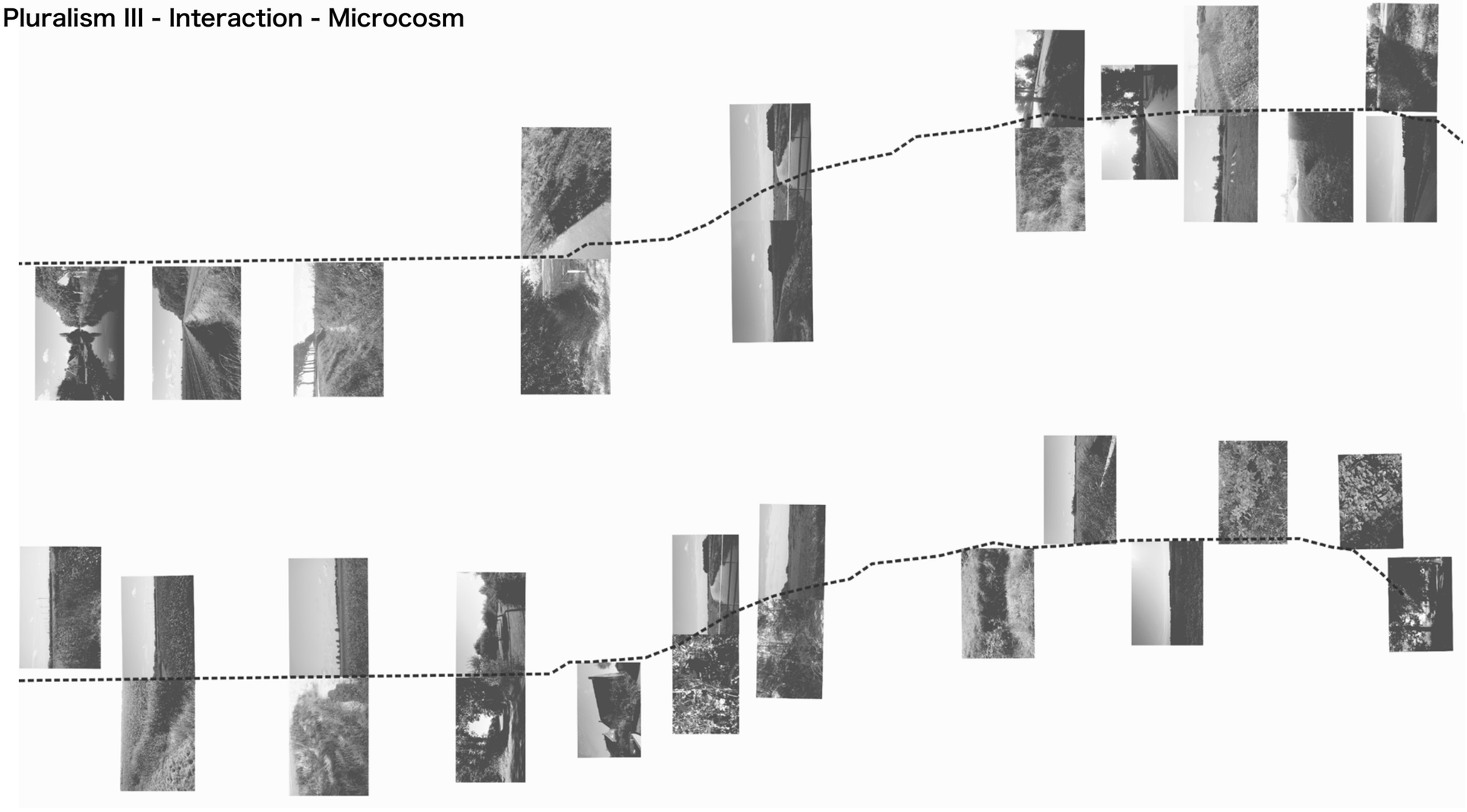
Sometimes the stories are outwards, fragmented from the route.



Sometimes they are turned inwards, hidden behind large farmlands.

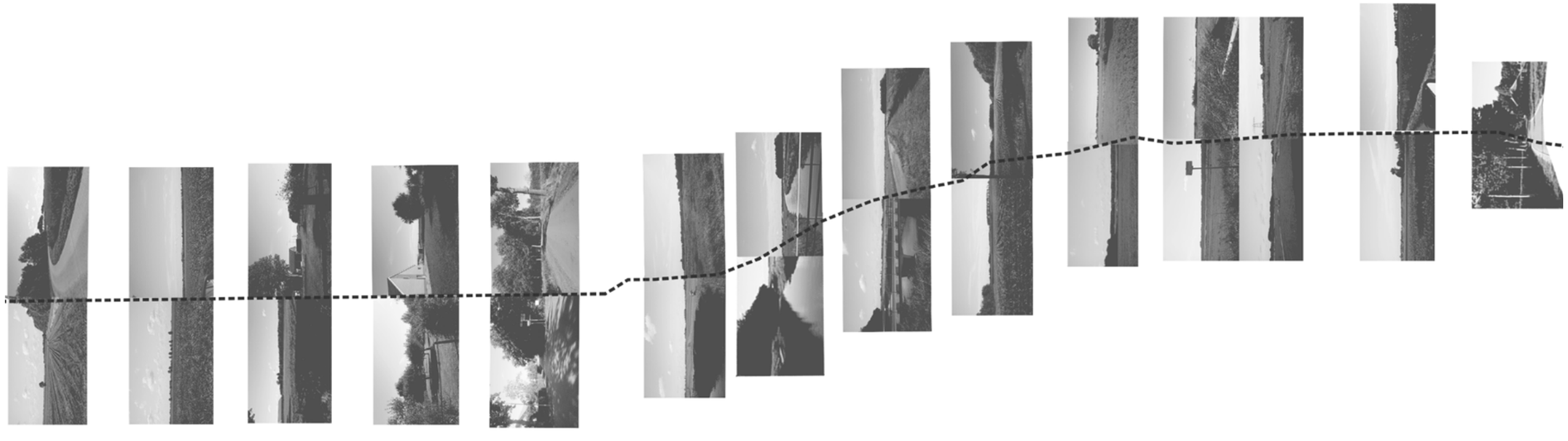


Pluralism III - Interaction - Microcosm



Differentiation
in water levels

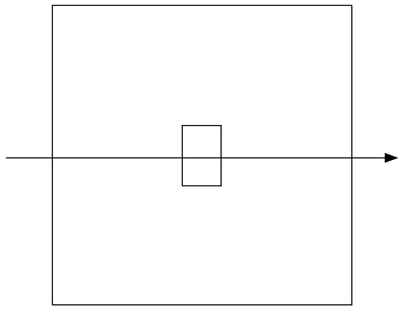
Differentiation
in species



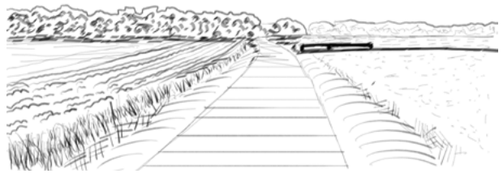
Hierarchy in
spatial clues

Design Strategy: borderscape to space

Space as a network of places; place as object of value

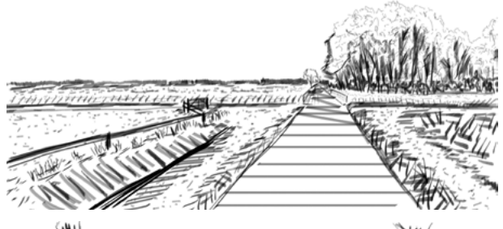


Now: Familiar places along the borderscapes. Nature is represented as a singular patch around the Hunze.

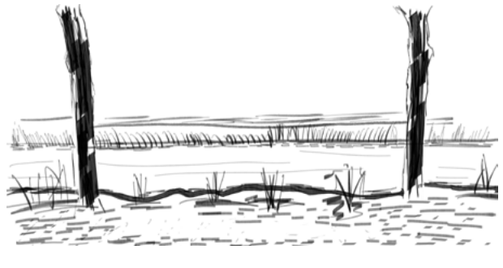


Transition from the Hondsrug to the valley.

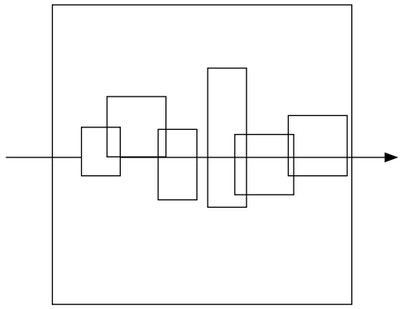
Transition from an open landscape to populated zones.



Transition from villages to the Hunze stream.

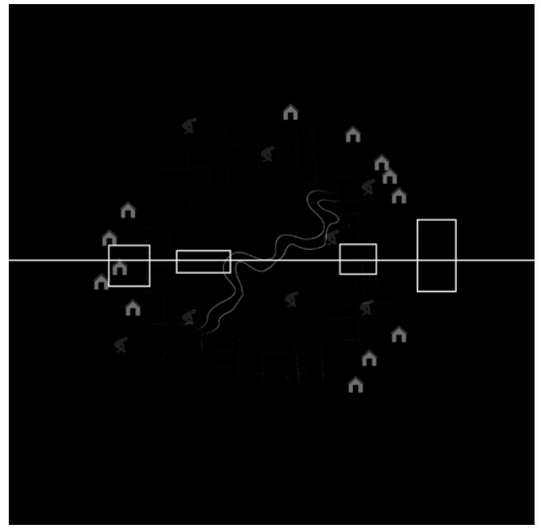


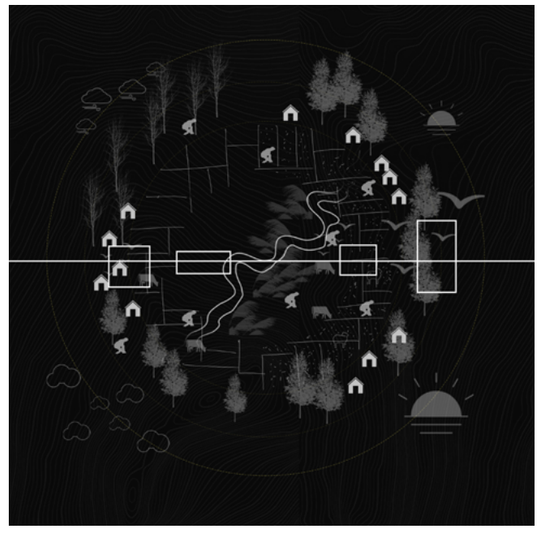
Transition from the Hunze valley to the 'peat colonial' areas.



Goal: Unfamiliar spaces between the familiar. Nature is represented as differentiated encounters.

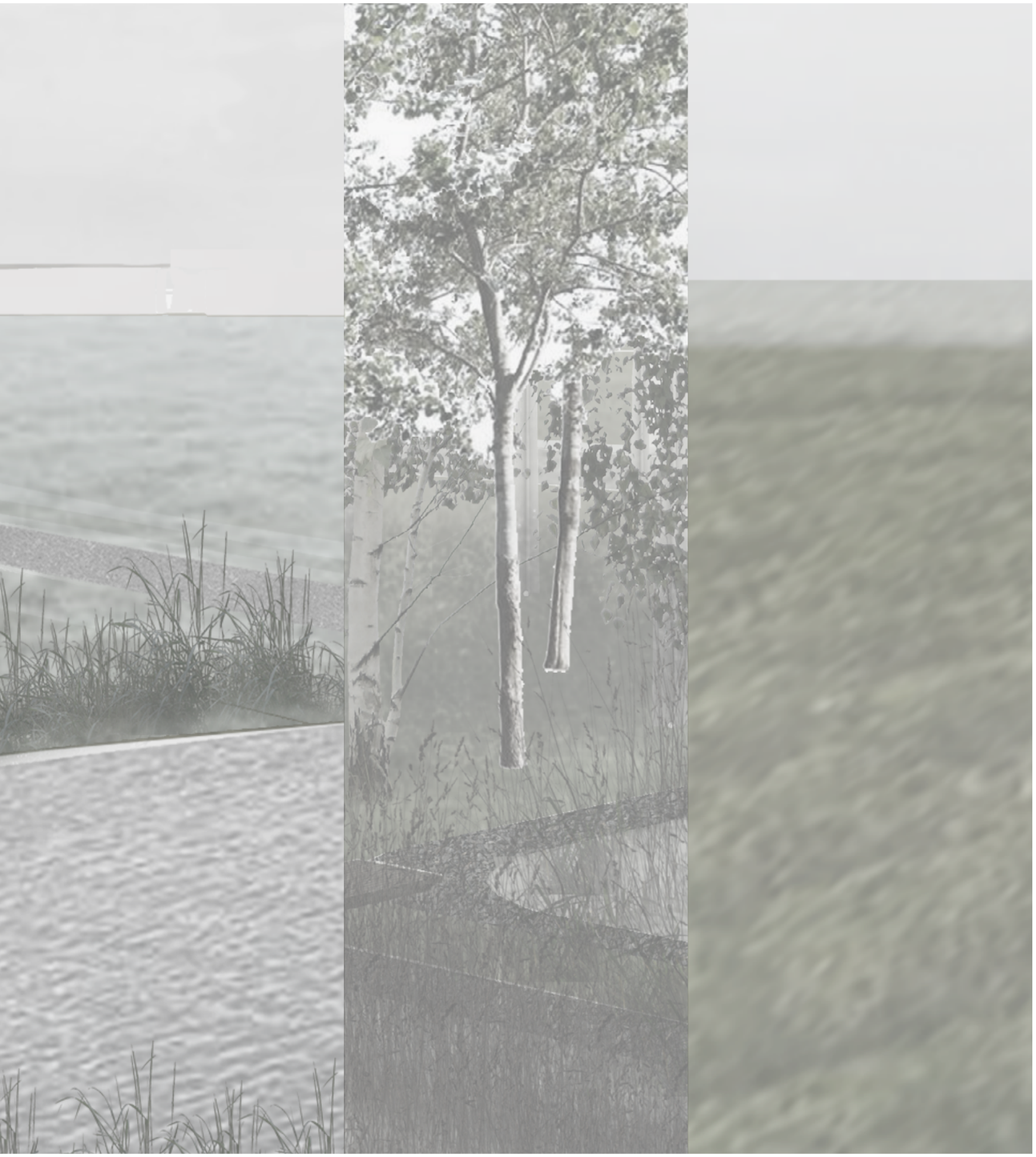
The aim is to 'stretch' space around the current borderscapes in order to create an intermediary space where the existing dichotomy between 'nature' and 'culture' is questioned and re-defined.





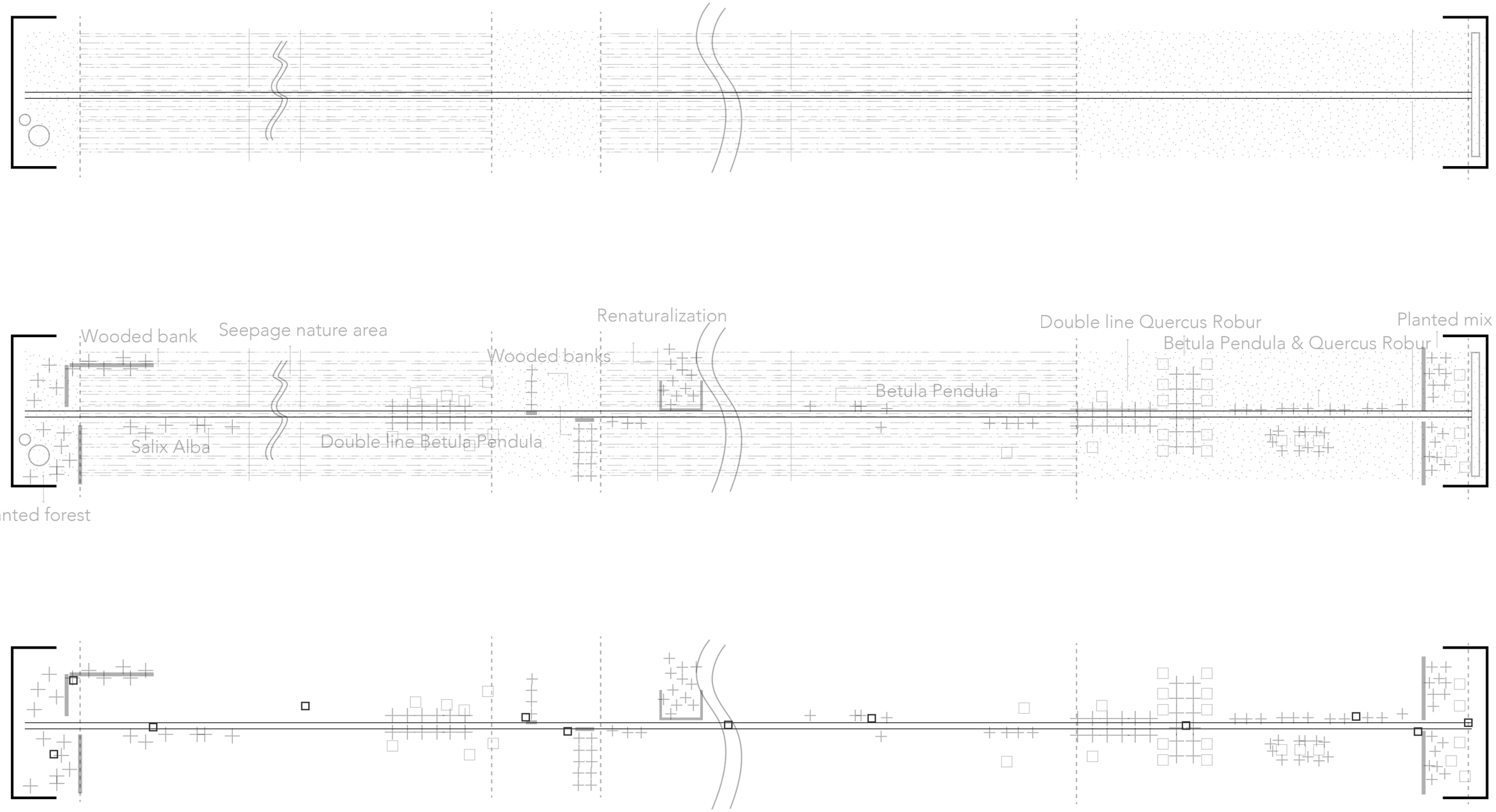
Borderscape

Borderspace

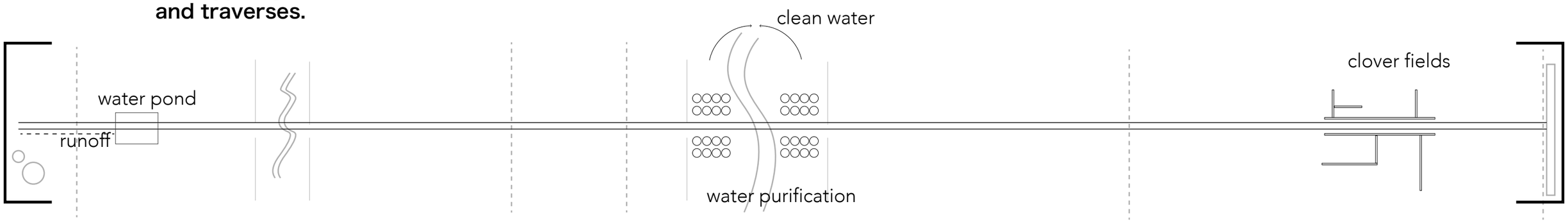


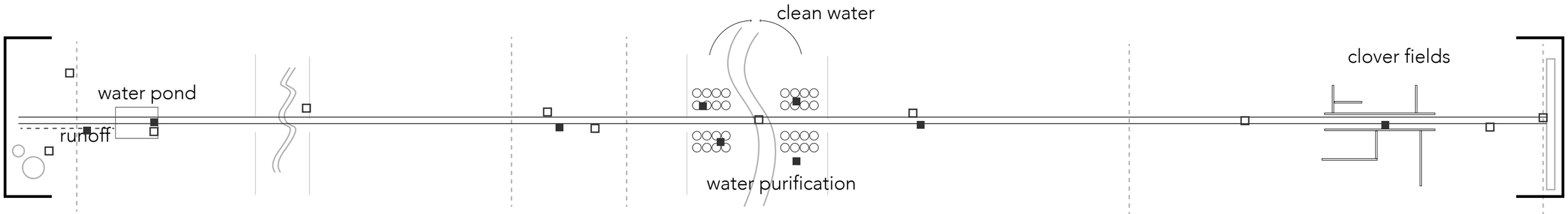
PART III
DESIGN

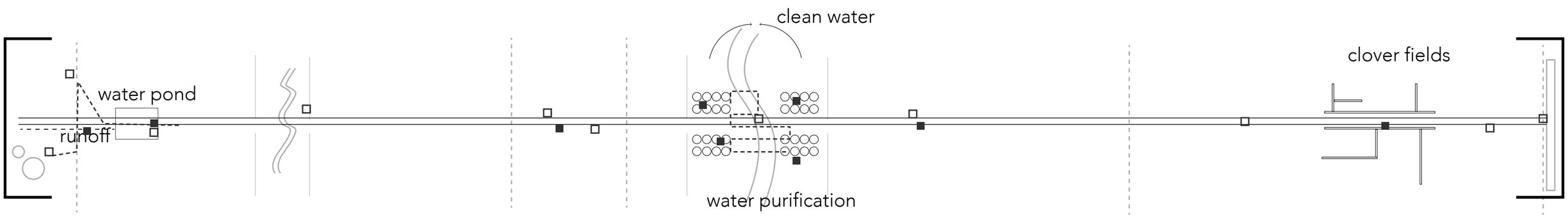
Spatial Schemes: soil borders, biotic composition and visual clues of traverses



Spatial Schemes: new spaces between borders, new biotic typologies and connections between visual clues and traverses.







Spatial Schemes: locations, typologies and aim of the architectectural intervention.

Interaction prototypes

A

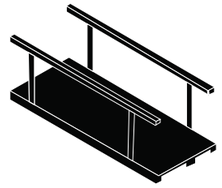
Located at historical reference in the landscape

B

Communicating front/back of the object

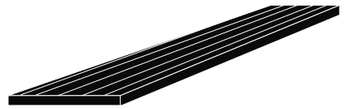
C

Reinforcing experience through bodily movement/touch



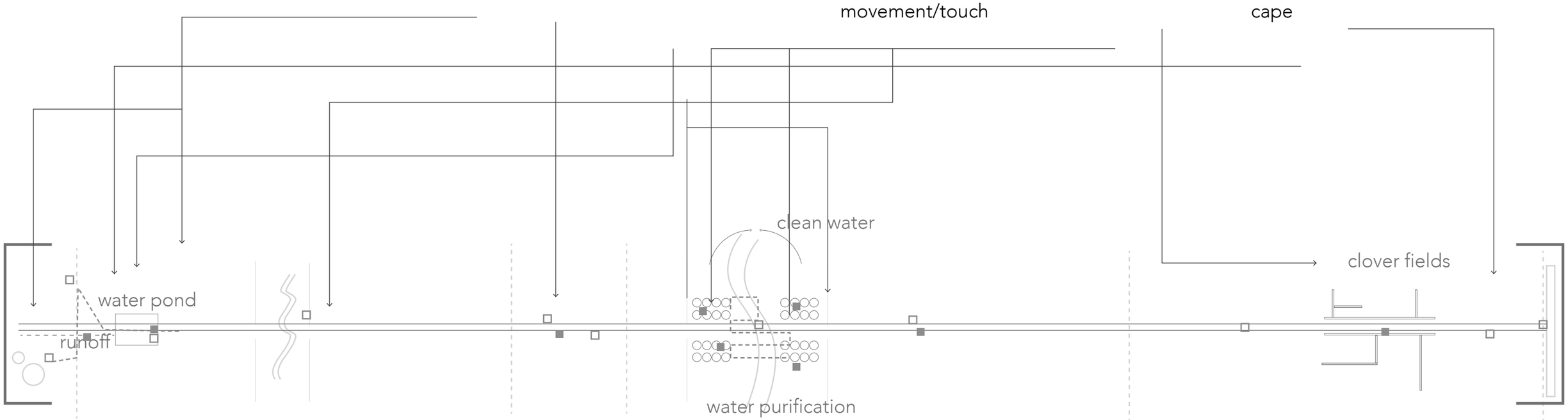
D

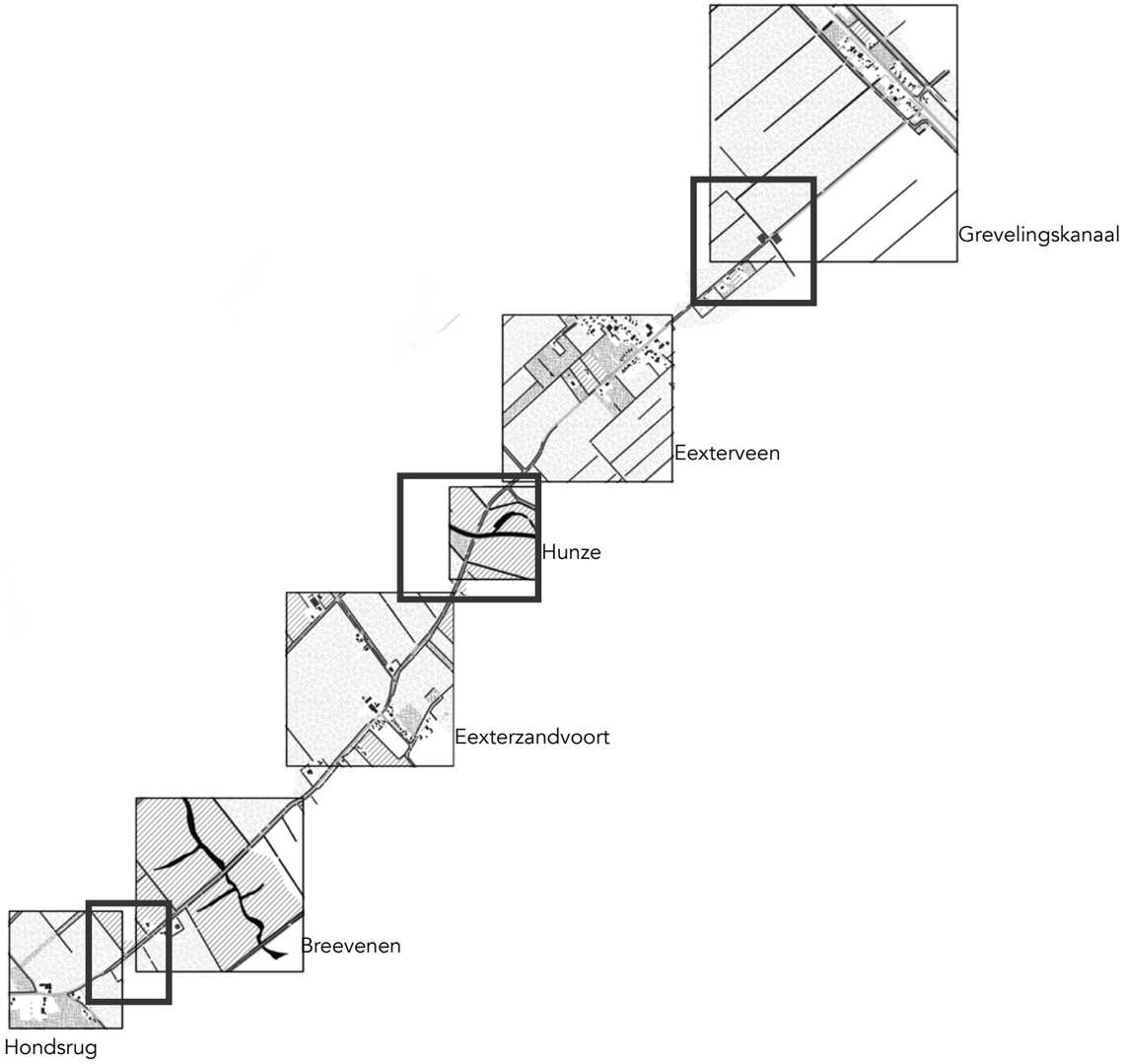
Bridge/ford differentiating hierarchy in waterways



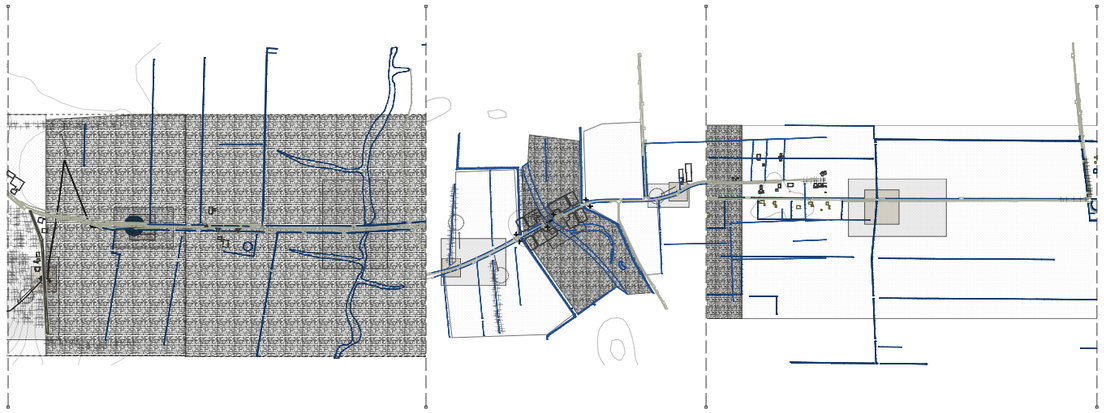
E

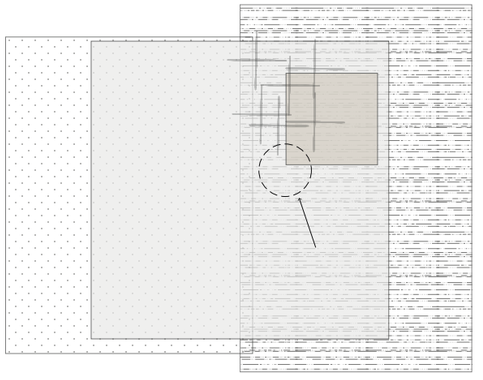
Balcony or overview of the totality on the landscape

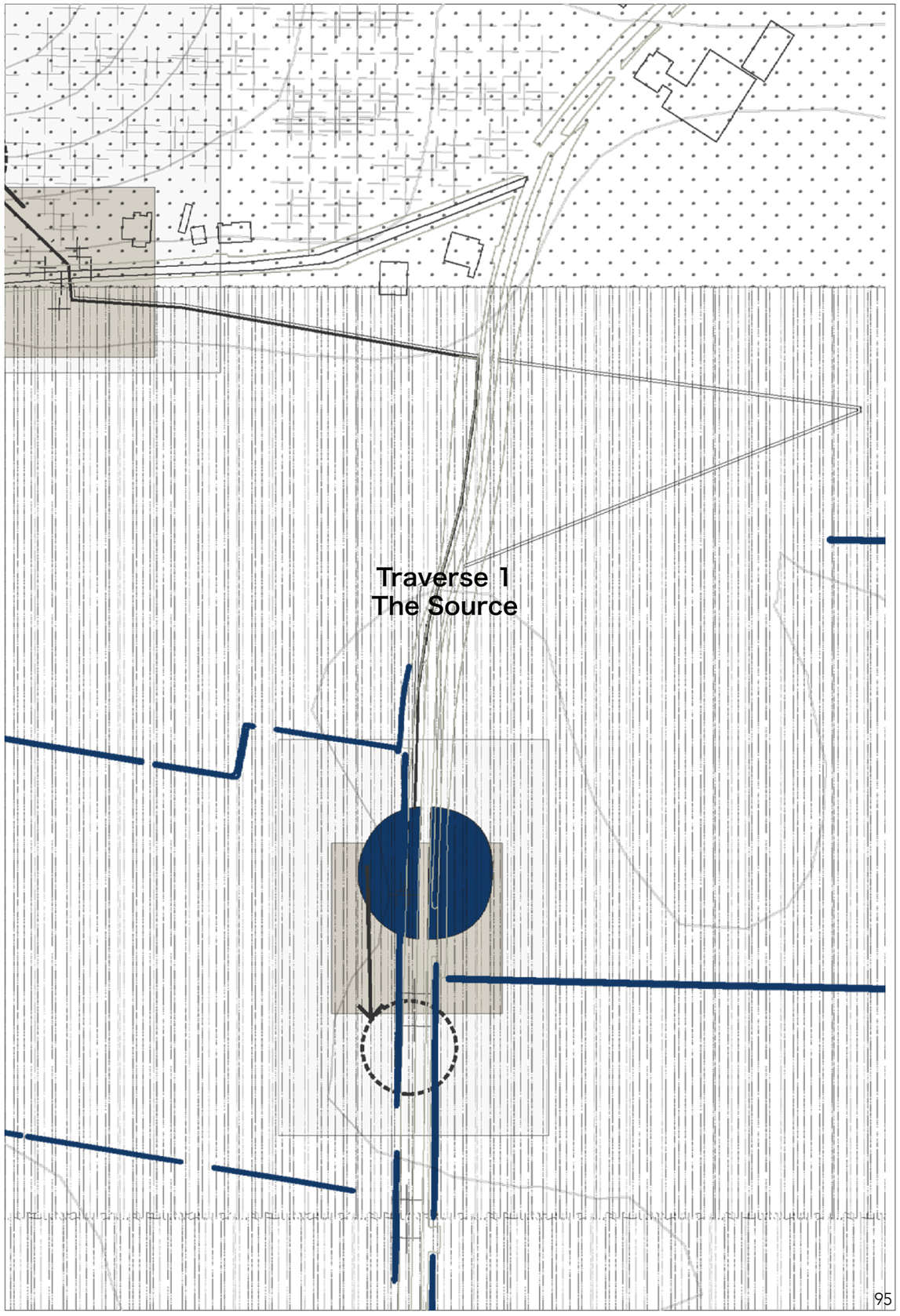




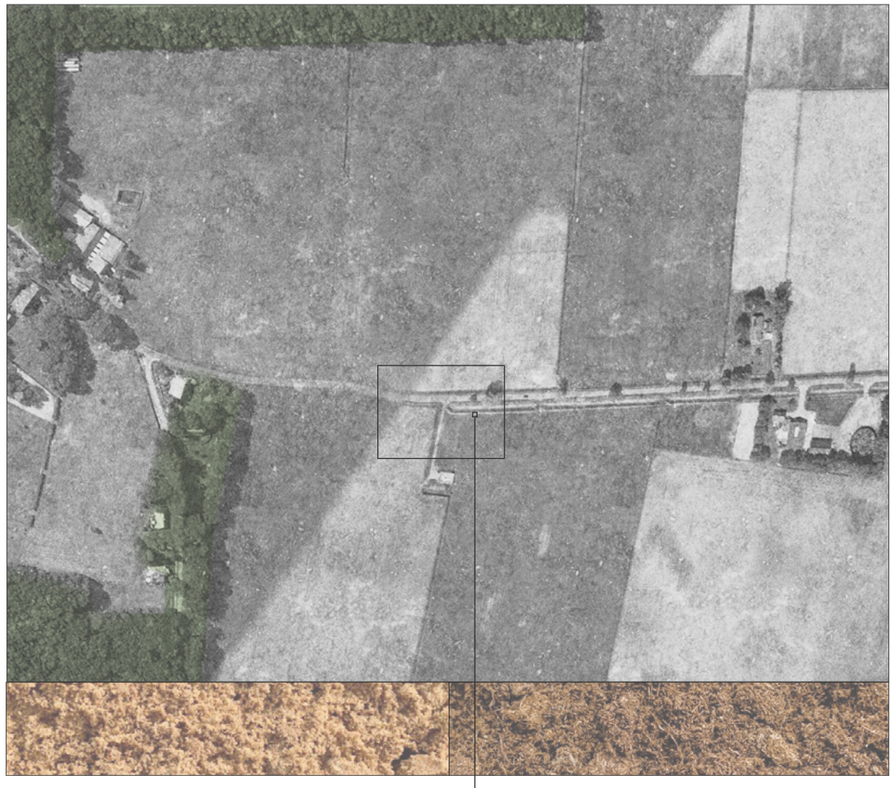
Marked Traverses: land-land; land-water; land-land



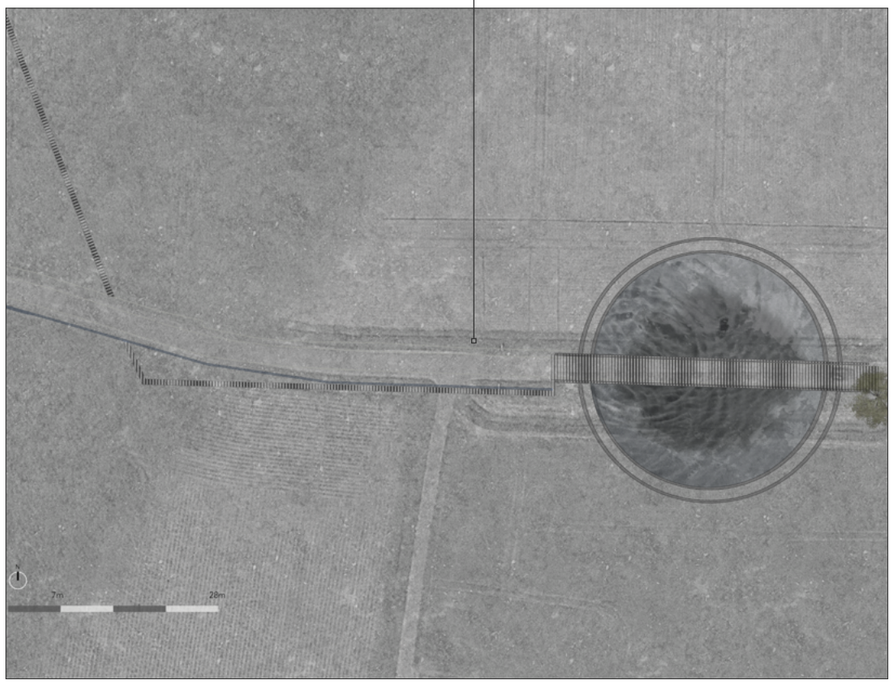




Historical typologies



Marked site and new form



Both-And

The first traverse between the sand ridges and the open landscape. Characterized by forested spots and after the border a wet seepage area.

Map of 'Hondsrug' border

The lowest point of the Hondsrug (12m NAP) towards the valley (1/2m NAP) causing a difference in soil organic material.

Due to future water needs a storage is placed on the borderline between 'dry' and 'wet', emphasizing the visual clues in the landscape and close to a current marker: the 'first' Salix Alba along the routing.

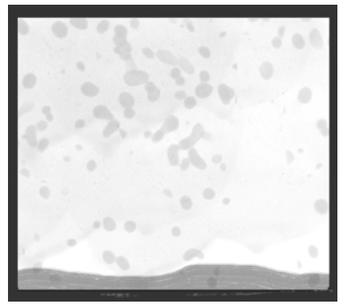
New map of Hondsrug border

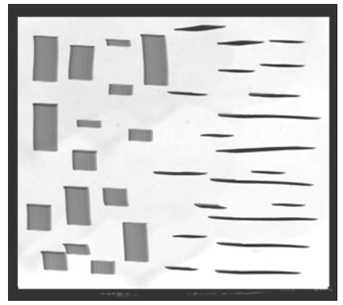
Temporality

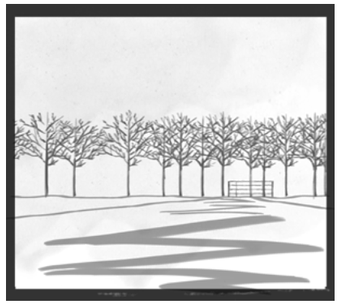
New temporalities

The principles are based on ‘temporality’ aspects (as discussed in the previous chapter). The new mode of tempo is a path that connects the historical site (imagination) with the new form. At the new location space is created for new processes in water and vegetation. Interaction is enhanced by the placement of an object and a differentiation in materials and vegetation. There is a level of control from inwards to outwards. Starting with the ‘bridge’ an architectural intervention as object of interaction, a deep water level and a more shallow one (allowing growth on the banks). Finally there is a strip on the outer ring that allows ‘events’.

Sequence







Interaction

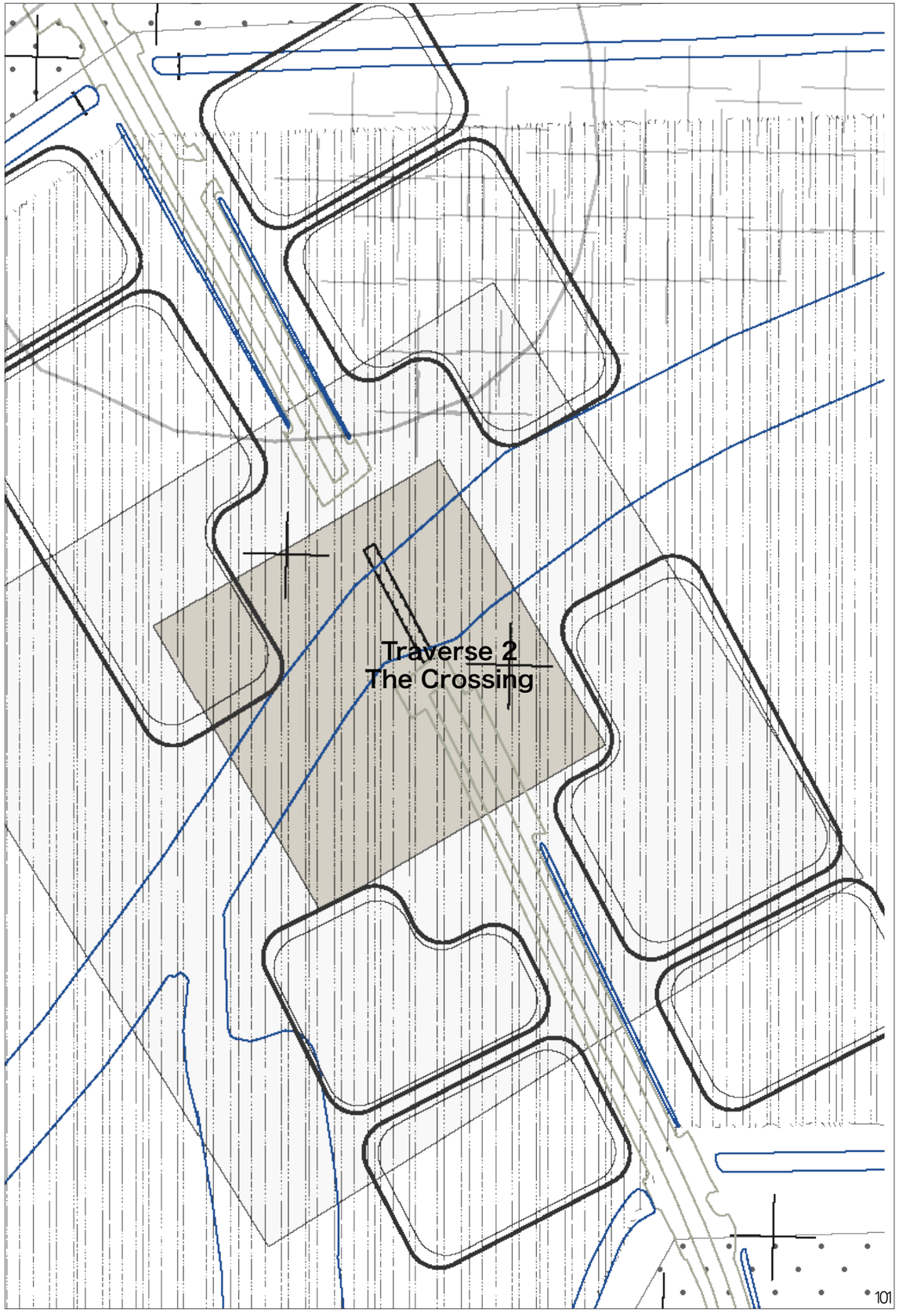
Cause

Object

Effect

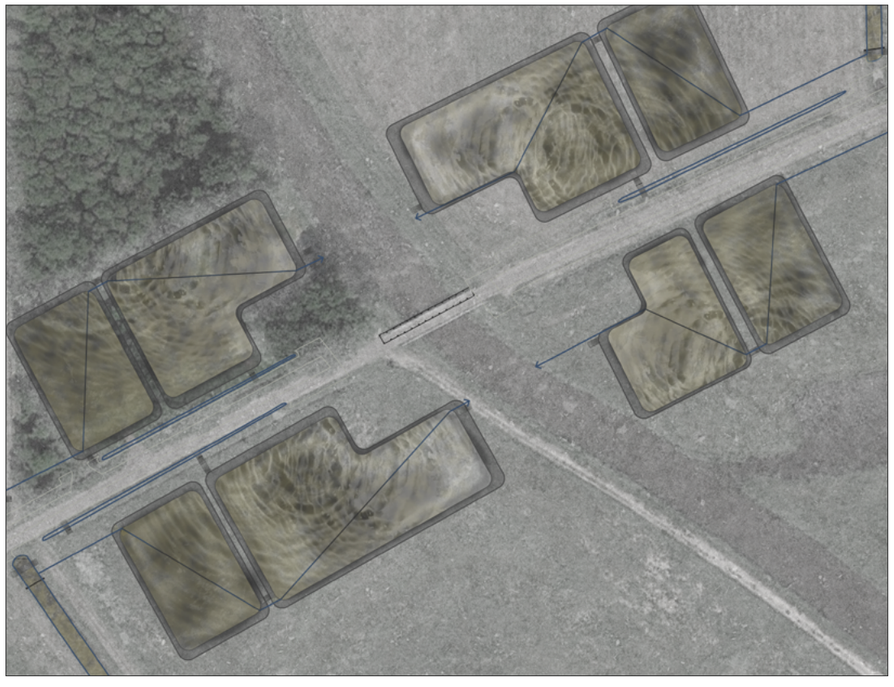
2,83m

0,7m



Historical typologies

Marked site and new form



Both-And

The stream of the Hunze in a current state, partially renaturalized but still influenced by drainage levels and the quality of surrouding surface waters.

Map of 'Hunze Aa' border

Both sides of the stream are peat soils, 'madeveen' (meadow peat).

Due to high nutrient levels in the adjacent ditches the water quality still needs improvement. The new site and form responds to this.

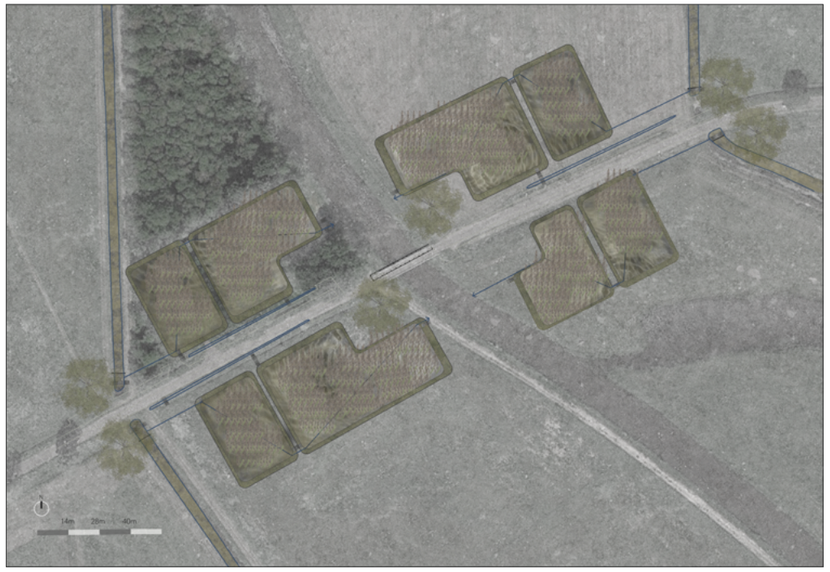
New map of 'Hunze Aa' border

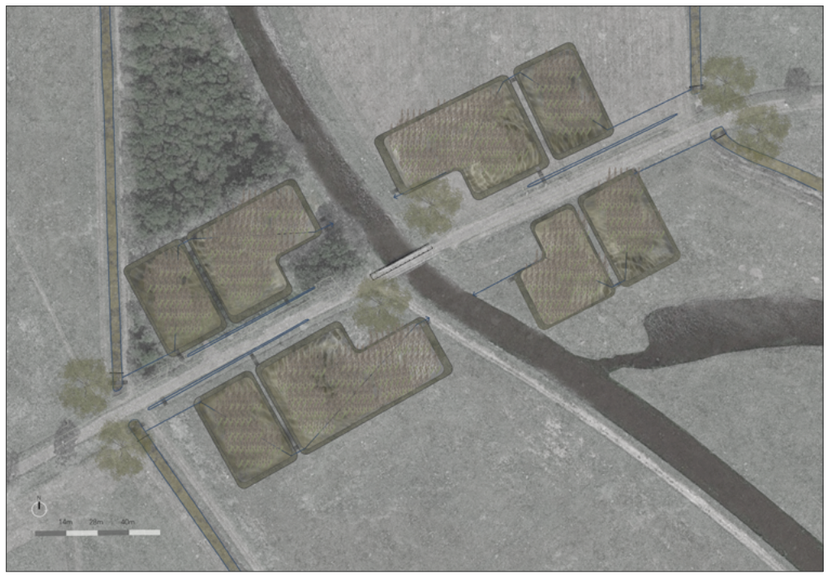
Temporality

New temporalities

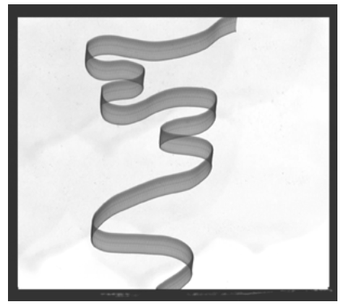
The stream of the Hunze has been under the influence of land-use for a long time. While re-naturalization helps the ecosystem of this landscape, it barely touches upon the experience of its historical value and the way the stream is still influenced by agricultural land. By enclosing the space with reed beds a hierarchy between the ditches, the reed fields, and the stream is created while encountering the water quality problems as well.

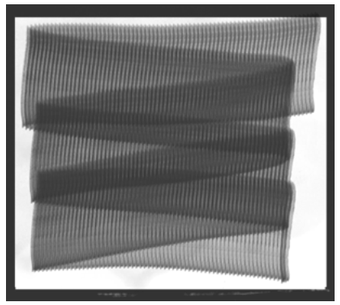
The principles are based on temporality (as discussed in the previous chapter). The tempo between historical site aspects and the new form connected through small platforms and a bridge. At the new location space is created for new process-based differentiation and interaction. There is a level of hierarchy from the outside ditches to the reed beds in the middle, and finally the naturalized stream as a goal to be reached.

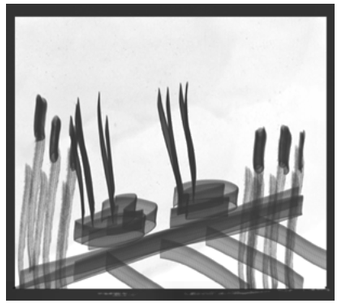




Sequence







Interaction

Effect

Object

Cause

1,52m

0,4/0,05m

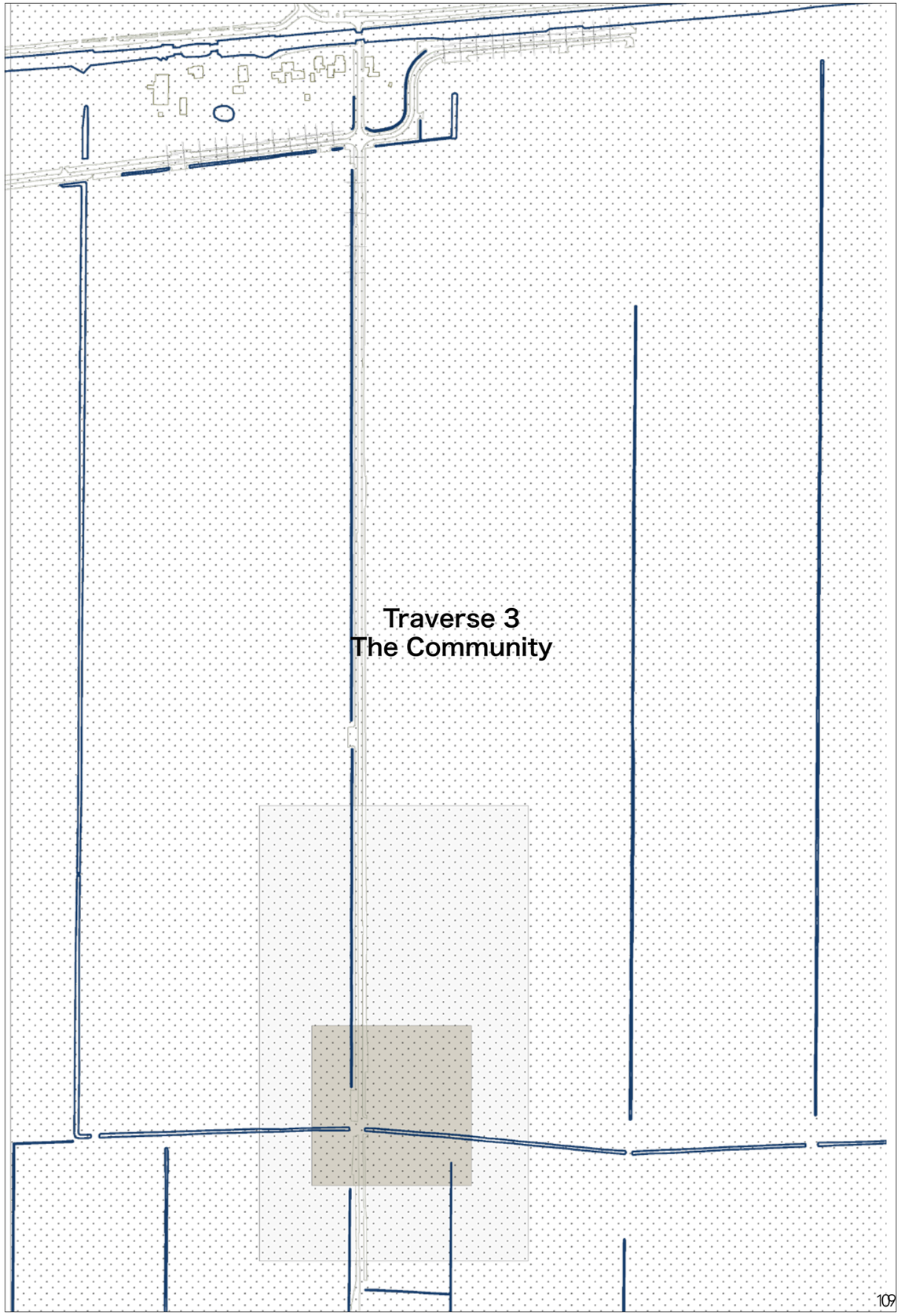
1,3m

Interaction

Effect

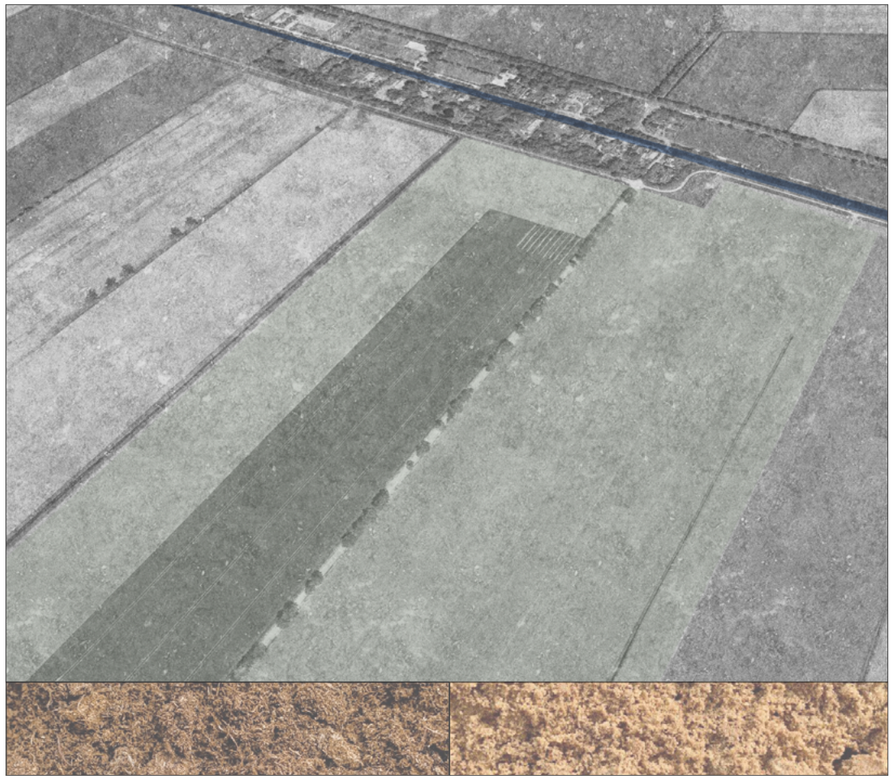
Cause

Object

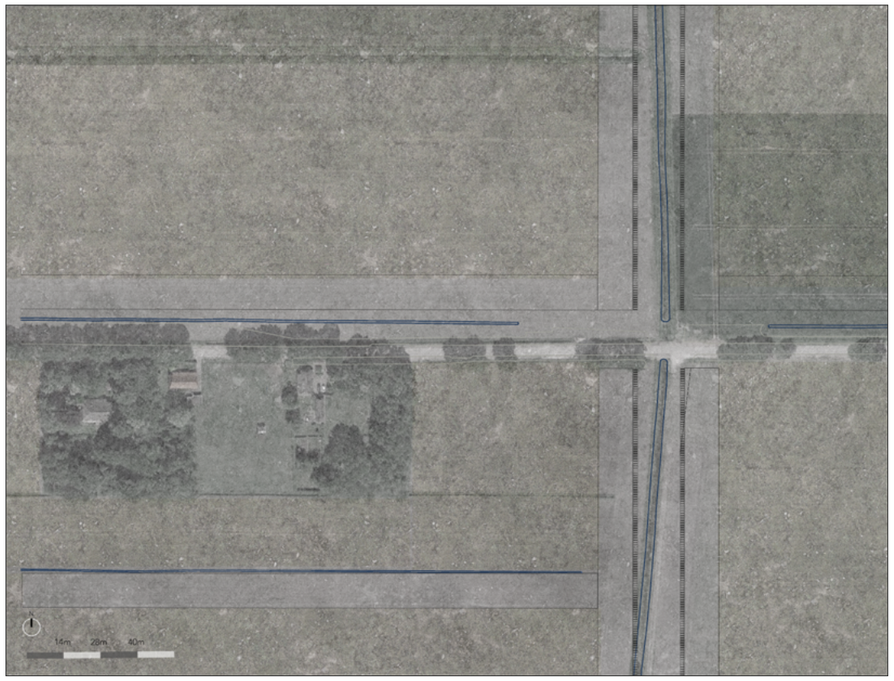


Traverse 3
The Community

Historical typologies



Marked site and new form



Both-And

The last traverse between the Drentse Veenkolonien and Groningse Veenkolonien. Both characterized by systematic parcellation of agricultural fields.

Map of 'Hunze Aa' border

The lowest point of the Hondsrug (12m NAP) towards the valley (1/2m NAP) causing a difference in soil organic material.

The marked location lies in the Drentse Veenkolonien right after Eexterveen. This is where the long stretched fields of arable land on sandy soils. Marking the spot of a different/new way of land-use.

New map of 'Hunze Aa' border

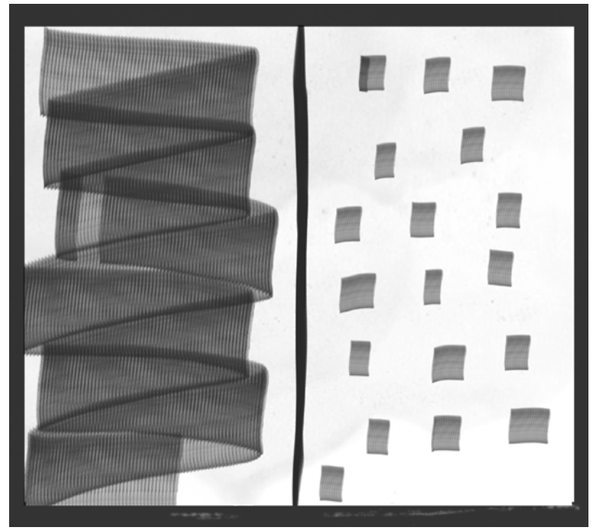
Temporality

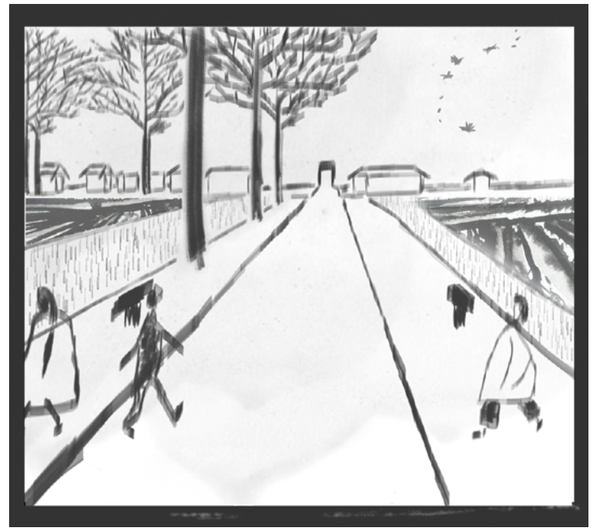
New temporalities

The created space here is meant to experiment with ways of soil quality ‘treatments’. A mixture of clover and grass can take up nutrients such as phosphor from the soil while attracting other living organisms that contribute to the the food chain. It takes around 15 years to ‘clean’ the first 10cm of the top soil layer. More polluted soils should be sown longer.

In terms of temporality, paths connect different parcels and neighbors together creating ways to exchange information. In cyclical time, the blossoming of the fields adds to the process layer during the summer and stay green in an brown colored arable field during the winter months.

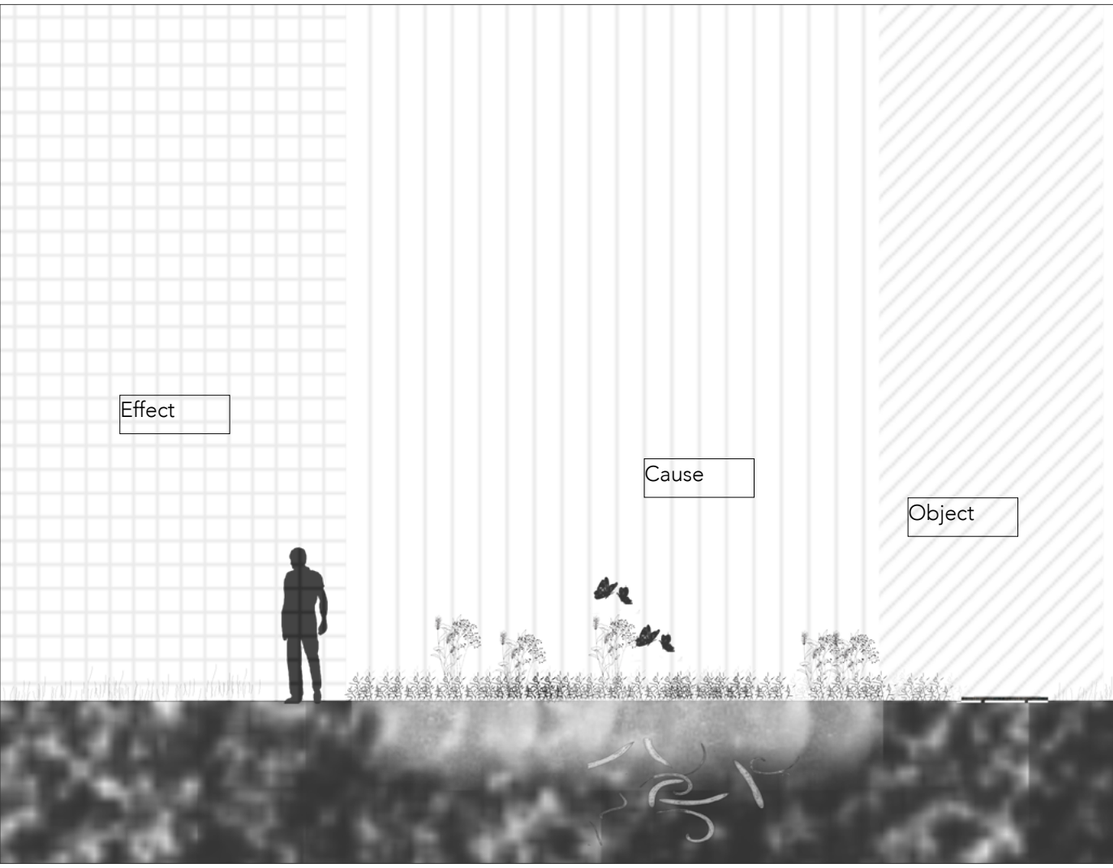
Sequence



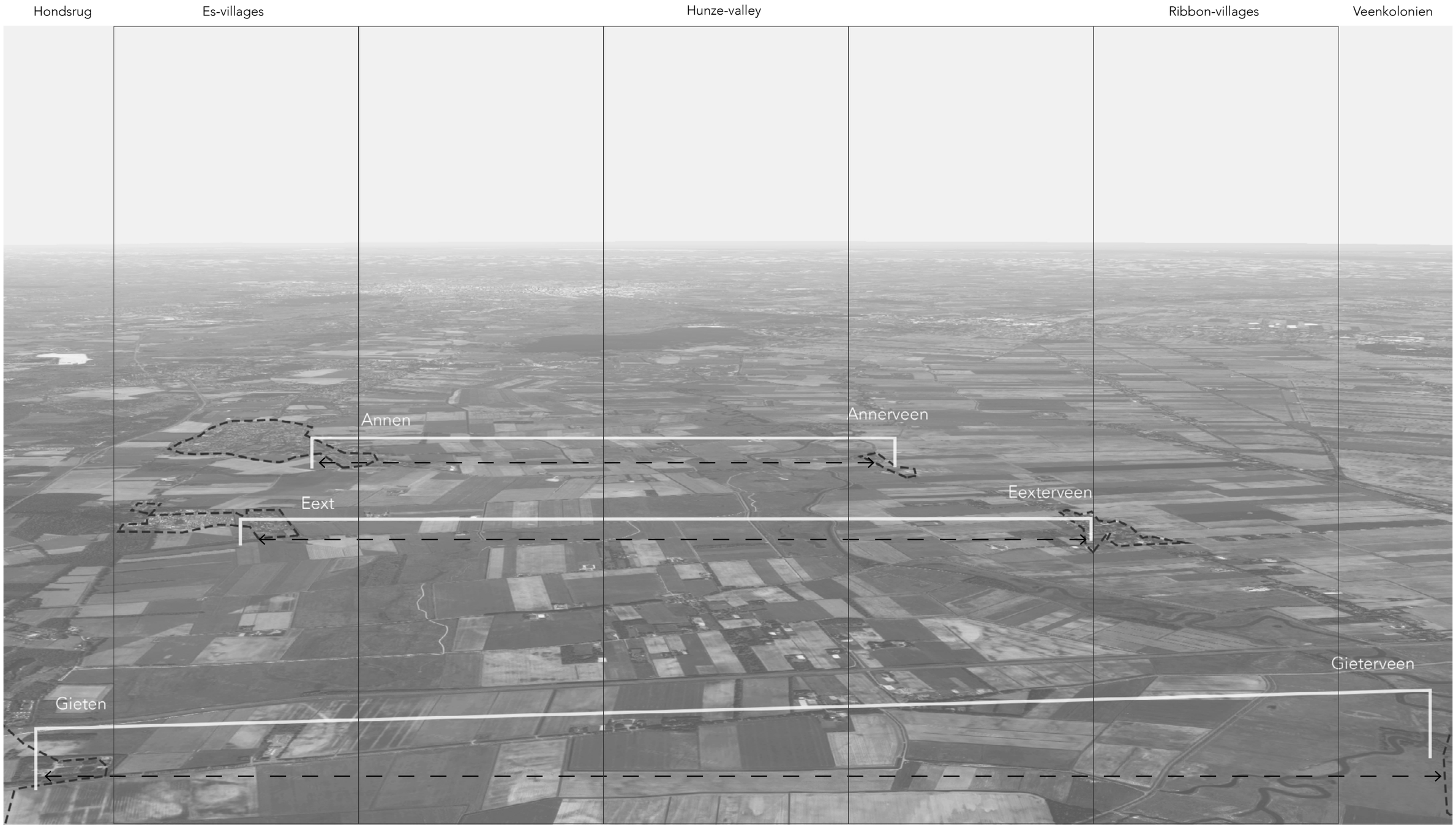


Interaction

Interaction



The existing structure of the Hunze valley - a grid for future inventions



Conclusion & Discussion

This research started off with a personal interest in ecologically degraded or neglected landscapes. These sites often seem to be associated with post-industrial landscapes or areas of de-forestation. However, degradation in the Dutch landscapeis usually hidden from what is visible to the bare eye. Due to years of agricultural upscaling the soil organic matter in the rural landscape has become either too nutrient rich because of high nitrate levels or too acidic because of phosphorus levels. Leading to a monotonous landscape of exhaustion. 'Onland', is an old phrase used by farmers to describe land that is not available for practice. While most of these current day environmental challenges are often approached from a 'naturalism' perspective on how landscapes can be improved physically or ecologically, this research took a more socio-political turn focusing on the relation between 'nature' and 'culture'.

The notion of 'pluralism' is used here as a different method for design. This philosophical notion comes down to that for any two goods, there is not one better than the other. Building on the idea of coexistence without the conception of value. Thus, in more landscape architectural terms, the 'cultural' landscape not being better than the 'natural' landscape and vice versa. When current ecological problems are encountered from this point of view, it is hard to assume that solely (re-)naturalization or nature preservation is the key to restoring landscapes without active involvement of the people living in them.

The chosen site of interest, the 'Hunzedal' or valley, resembles this friction between 'nature' and 'culture'. Historically, the site was impassable up until the Middle Ages because of its geomorphological characteristics and landscape typology. After centuries of land reclamation and alteration, the site today is almost impassable due to modern land-use and land ownership. Excluding 'nature' as a singular entity from agricultural fields through zoning policies, and excluding 'culture' from abiotic and biotic dynamics through the bounded representation of nature as a recreation area. For this reason, the chosen design strategy was to create or 'stretch' space for 'pluralism' along a mundane axis of routing: the public main road.

Through literature review a conceptual framework for 'pluralism' is created, pleading for 'both-and' solutions, temporality and social interactivity. Even though this notion is more often used in urban design and the creation of public realms, in this research it is explored what this could mean for the rural landscape. This resulted in three 'traverses' based on biotic and abiotic characteristics of this landscape, thus the historical elements of nature. But also the acceptance of new forms of 'nature' focusing on current and future environmental needs. These new nodes on the traverses are then used as means of a starting point for a more integrative or unitary concept of 'nature' and 'culture'.

The resulting design has a highly explorative tendency and is by no means proposed as a replacing solution to current pressing environmental challenges. Rather it questions the role of landscape architecture in social change and environmental involvement. By representing a different landscape typology, minor interventions and new experiences (or even awareness), I have tried to create a starting point for change as opposed to a holistic re-constructive vision for this vulnerable landscape and the way it should be used by its users. However, I do think that by the end of this process I have only now started to touch upon the different possibilities that a 'pluralistic' design approach could offer.

Reflection

The chosen approach of this research was in general more theoretical than site-specific. Current day environmental and agricultural challenges fueled the project and were the starting point for analyzing the role of 'nature' in society. However, the personal discussion of interest seemed to be less about the site (the Hunze valley) and more focused on the methodology or a certain stance within the field of landscape architecture. Through literature review on this subject, the research was again fed by new information. The research in this sense had a more inductive approach during the first half of the graduation year, rather than testing a preliminary hypothesis. Even though this gave me the freedom to explore my knowledge and interests as a future landscape architect, in the beginning of the graduation process it was hard to say were the design part then was headed to.

Eventually literature research in both landscape architectural as architectural theory led to the development of the theoretical framework of 'pluralism'. This notion focuses coexistence and design for social interaction, based on the idea that landscapes or cities are made 'from the inside out'. However, pluralism being a term that is rooted in philosophical theory, this notion made a very direct translation of theory into design principles more complicated during the design process. This chosen approach or methodology contributed to the before mentioned discussion of the role of nature in society but gives less architectural tools to work with. By reading about this subject the conclusion was made that pluralism, regarding to social interaction, is mainly about a sense of 'relatedness' which in more spatial terms then has to do with the experience of a junction in time and space. From this conclusion then a conceptual framework was created for a so called 'both-and' design containing both site, temporality and interaction.

Planning wise this approach took much more time than was anticipated on, and as often mentioned by the mentors there was still a lot of site specific analysis to do in order to implement the design principles onto the site. With that being said, the focus of this project was to rethink the way nature is represented in the landscape and the role of landscape architecture as a design field. Depicting that at the site of interest nature and culture are mostly separated through zoning policies and the landscape under continuous influence of (re-)construction. So in this sense, the project was much more 'abstract' by its focus on societal challenges and the professional field of landscape architecture, rather than tangible or measurable problems and solutions. The latter being a situation where design solutions based on naturalism principles respond to environmental problems, such as draught or flooding for example. Eventually, this resulted in nodes of interventions on a local scale which makes the proposed design hard to measure in terms of environmental effectiveness but at the very least hopefully shows a different way of designing our landscapes.

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