Country / City	The Netherlands, Amsterdam
University / School	Academy of Architecture
Academic year	4th year
Title of the project	Finite landscape
Authors	Jelmar Brouwer

PERFORMATIVE NATURE

Barcelona International Landscape Architecture Biennial

September 2018 Barcelona

SCHOOL PRIZE

X International Landscape Architecture Biennial

Máster d'Arquitectura del Paisatge -DUOT - UPC
ETSAB- Escola Tècnica Superior
d'Arquitectura de Barcelona
Avenida Diagonal, 649 piso 5
08028 Barcelona-Spain

TECHNICAL DOSSIER

Title of the project	Finite landscape
Authors	Jelmar Brouwer
Title of the course	Master thesis, graduated with honours (cum laude)
Academic year	4th year
Teaching Staff	Hanneke Kijne, Ruut van Paridon, Bruno Doedens
Department/Section/Program of belonging	Landscape architecture
University/School	Academy of Architecture, Amsterdam

Written statement, short description of the project in English, no more than 250 words

The Dutch water culture is known throughout the world. It resulted in a unique man made landscape however, an irreversible natural process is happening at present. Dewatering of peatland for agricultural purposes from the 12th century onwards resulted in subsidence and the emission of C02. Now, hundreds of years later the land is located under sea level, an advanced and costly water system is needed to facilitate agriculture, while agricultural revenues are decreasing. Finite landscape overturns the current engineering culture and puts an end to subsidence and C02 emission. It takes the natural process as a starting point for a future proof strategy.

Instead of a more complex and costly water system with hundreds of water levels, this study shows that simplifying and just one water level result in vital prospects. Existing height differences become conditions for new crops which are more tolerant to wetter conditions, take in C02 and give a boost to the economic downward spiral the farmers are in. Testing of the water level related to new and existing crops resulted in a plan with three zones with each a slightly different character. Characters which blend with the existing monotone landscape and add a broad range of unique recreational opportunities to the metropolitan landscape and individual farmers. The project is the first showing the landscape architectural qualities of stopping land subsidence and decreasing the emission of C02. It is proven to be a new chapter in the ongoing political debate.

For further information
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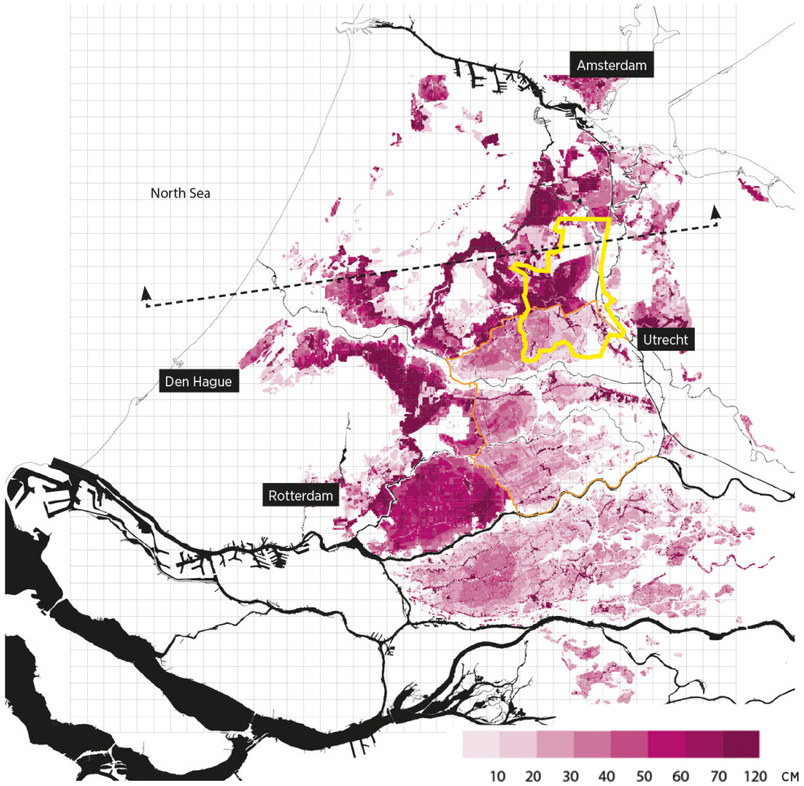
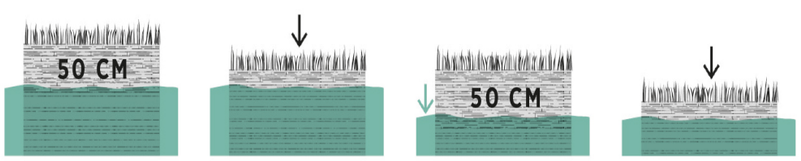
Subsidence of the land in Western parth of The Netherlands versus the rising sealevel.



The expected subsidence of peat until 2050 in centimeters. Generally the land susbsides yearly by 10 to 30 mm. While subsiding, large amount of C02 are emitted.

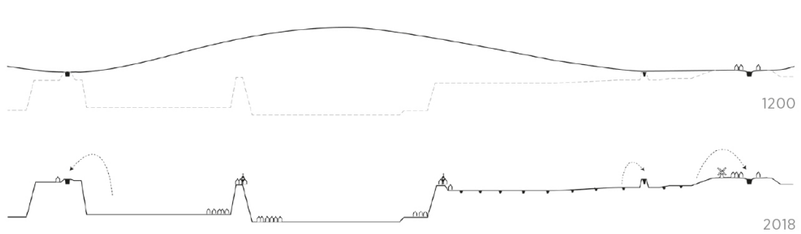


Typical drainage height for dairy farming

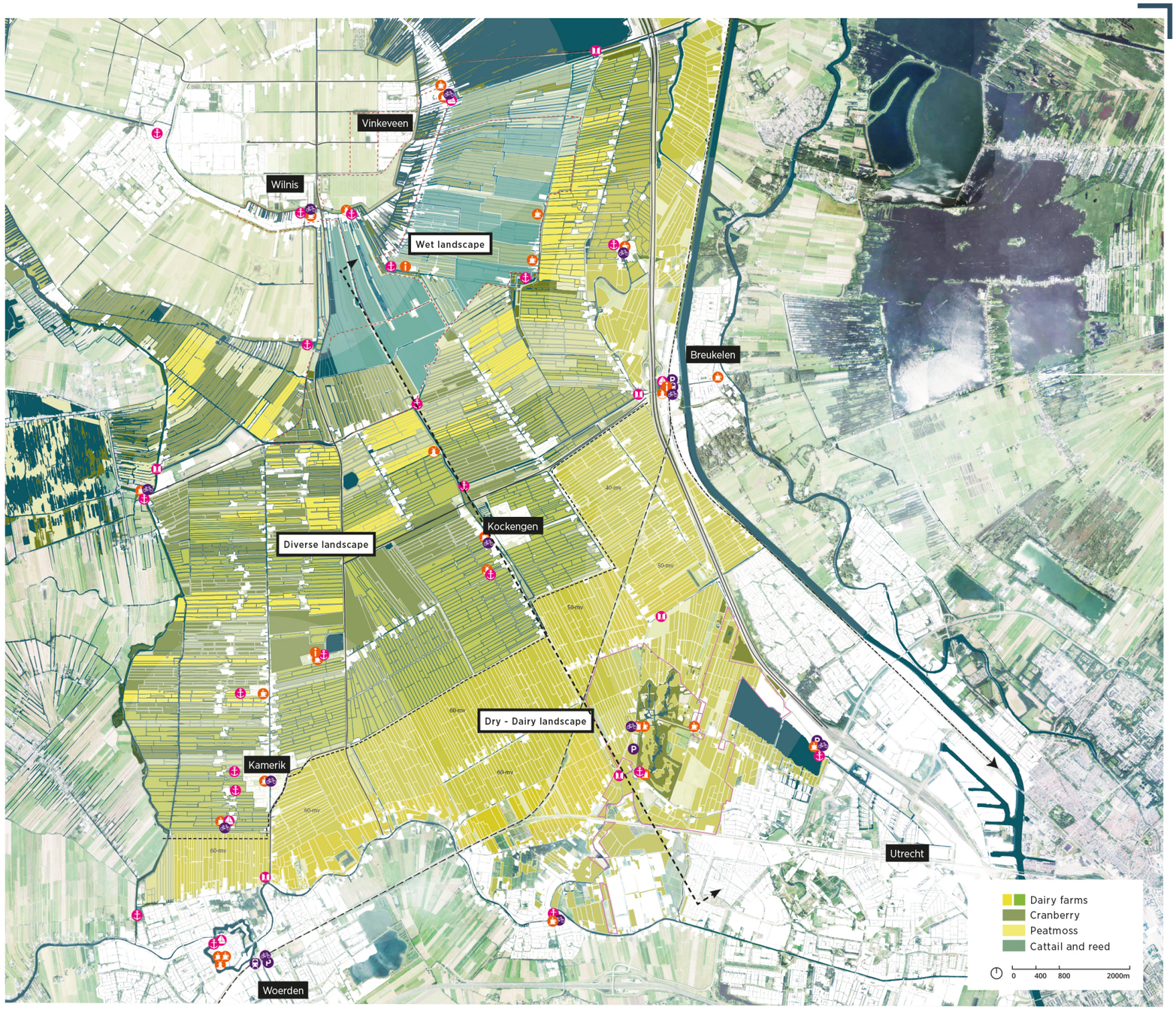
By dewatering the land starts to subside

Every 10 years the waterlevel is lowered accordingly

The process repeats

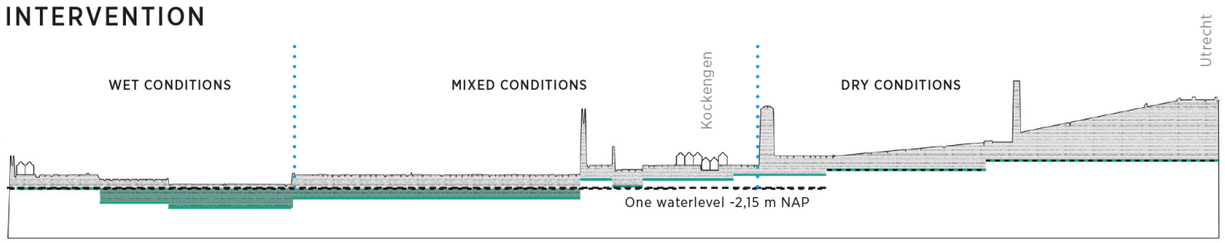


A major landscape transformation has taken place after starting to cultivate the land in the 12th century.



Masterplan showing the three different areas with slightly different characters and the recreative potentials. The three zones are naturally defined by the new waterlevel, existing height differences (from earlier susidence) and the conditions the different crops require.

INTERVENTION



History shows that our culture of engineering and advancing cant control subsidence. This study shows that the solution is to the contrary simplifying our watersystem.

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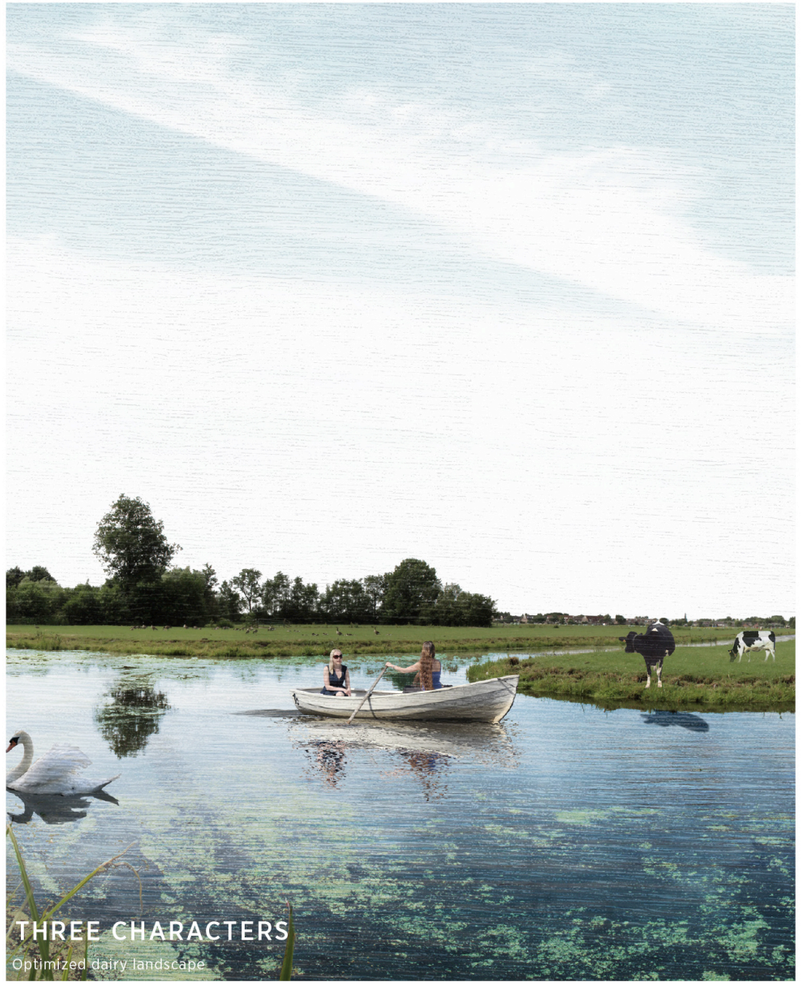
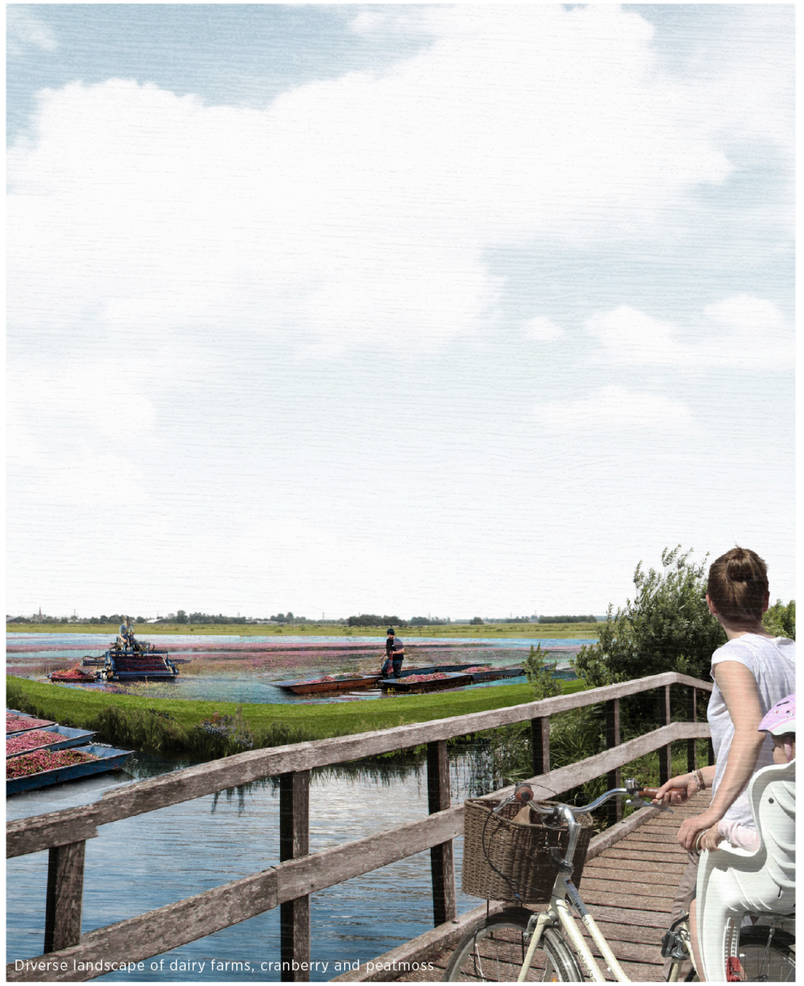
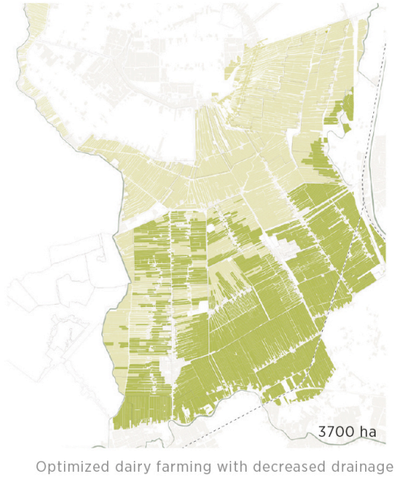


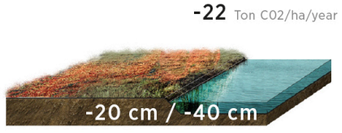


-15 Ton C02/ha/year



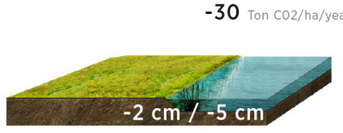
Optimized dairy farming with decreased drainage

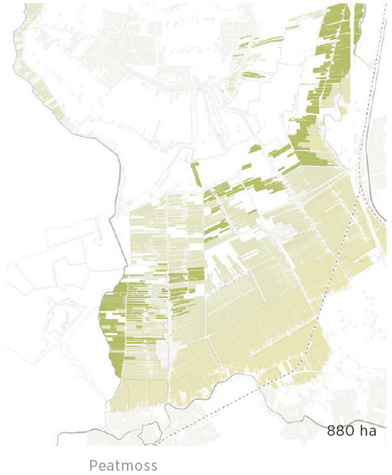
-22 Ton C02/ha/year



Cranberry crops

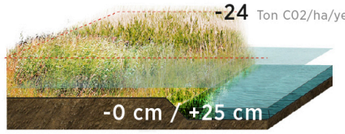
-30 Ton C02/ha/year

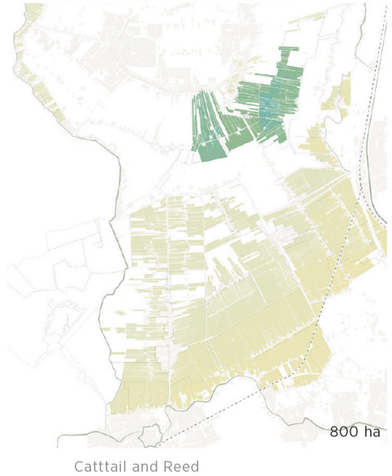




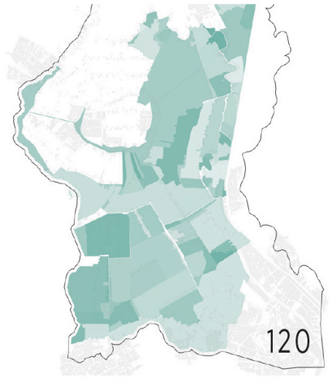
Peatmoss

-24 Ton C02/ha/year

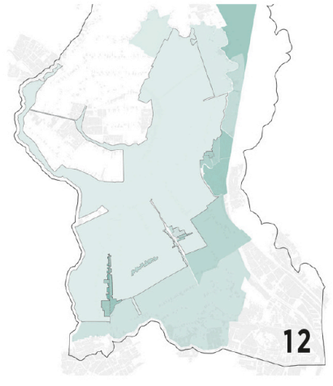




Catttail and Reed



Waterlevels today



Simplified watersystem with one level

WATERSYSTEM

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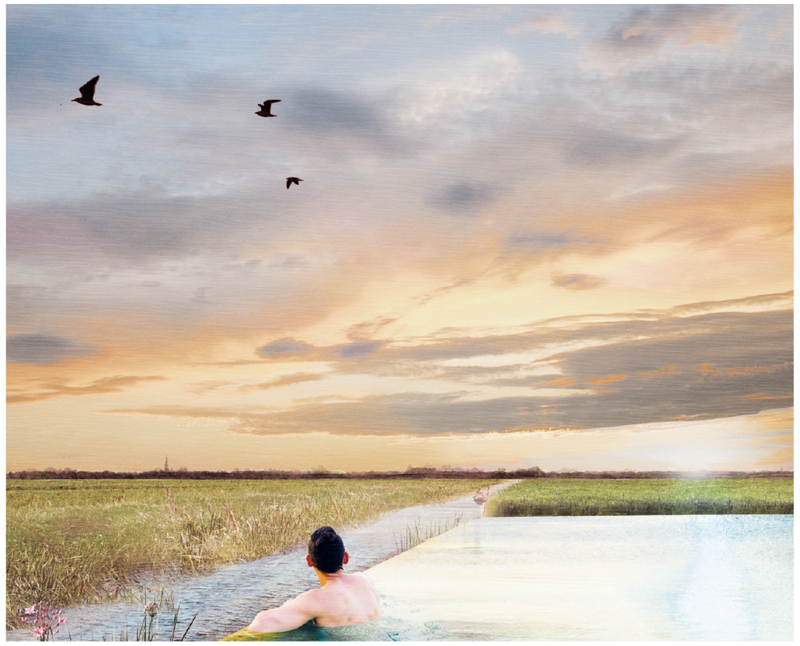
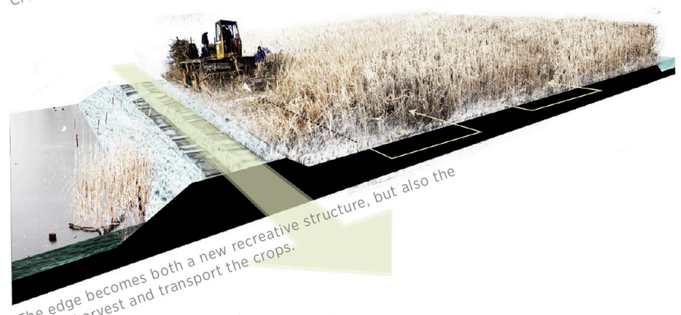


New recreative functions on the farms. Clean water, naturally purified by cattail and reed is used in a new spa. The landscape becomes performative.

Vacant buildings on the farm have the opportinity to adapt to the recreative landscape

Existing situation

Creating an edge around the plot to be able to raising the waterlevel.



The edge becomes both a new recreative structure, but also the way to harvest and transport the crops.

By changing crops, some farms will loose there original function. Processing of the crops towards construction materials, food or medicines have to be organized more centrally. This create possibilities to adapt farms to the new recreative landscape.

Performative landscape. Besides being harvested, cattail and reed also purifies water and removes nutrients. Individual plots become waterfilters and storage basins for heavy rainfalls to be used again in dryer period. The new crops add new biotopes to the monotone landscape from today.