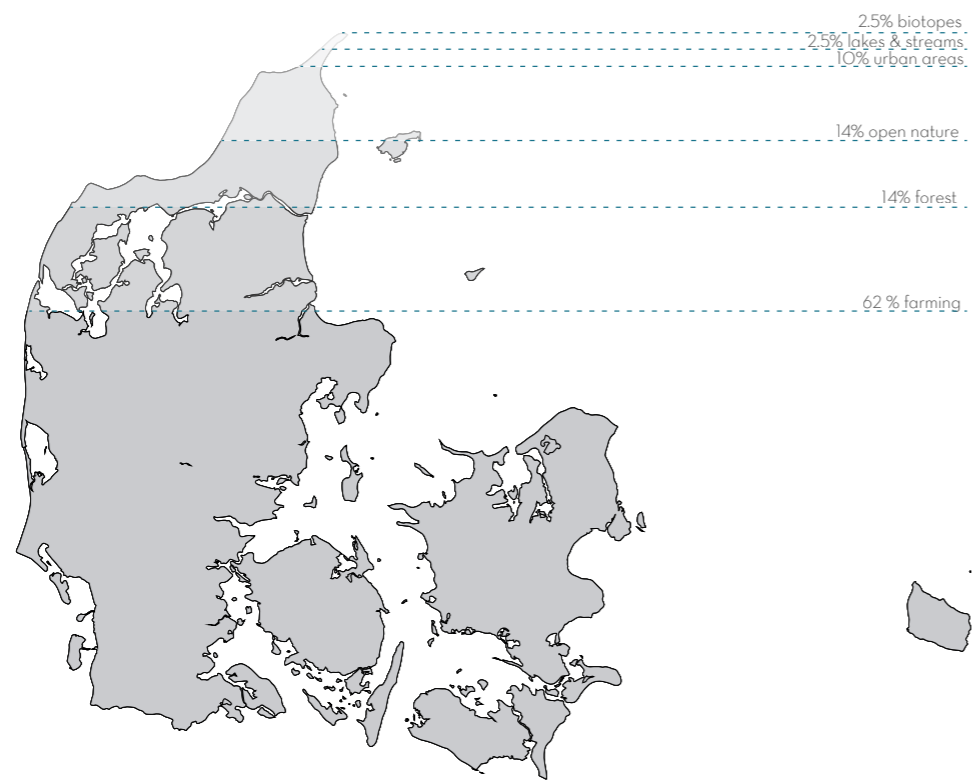


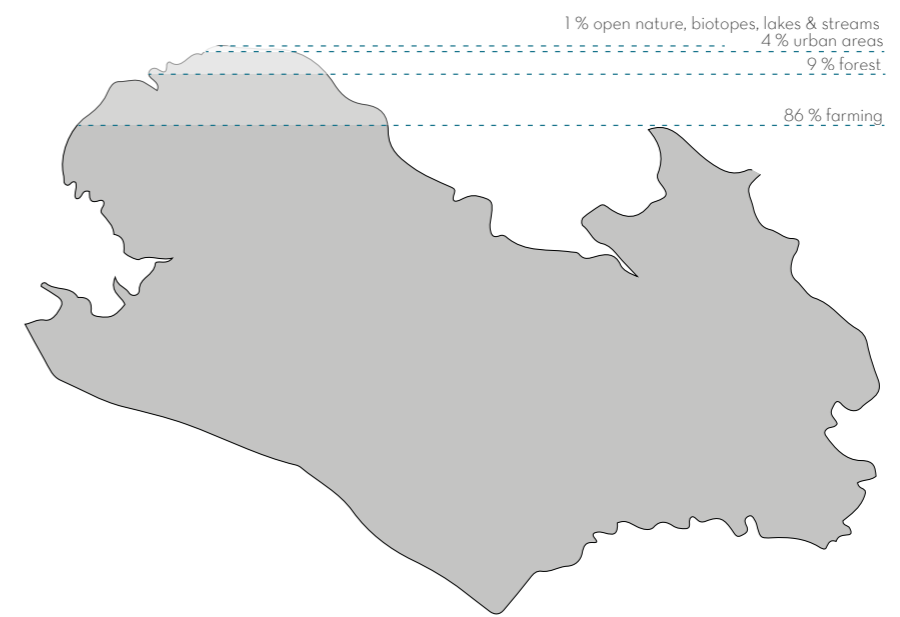
future farmland

a new cultivated landscape in the context of the struggling farming industry

Denmark has traditionally been an agricultural country. Today, farmed land occupy 62 % of the danish land and 86 % of Lolland. Consequently living in the countryside means living in a pig producing industry: Miles of fields, industrial buildings and patches of trees. But though soil in Denmark is very fertile, the farmers are struggling. Competition is hard on international markets selling conventional produce. Consequences of the structure of the industry is fixing farmers in a position where they can not afford to convert their farm into a profitable business, and political solutions are pointing in the direction of polluting more. The Future Farmland project has developed a new vision for the farming industry in the specific context of the area north of Maribo, Lolland, building on the existing municipal strategy of strengthening tourism. Suggesting a new configuration of land use the project introduce different types of crops creating a production landscape with a higher degree of spatial qualities and a variation of experiences together with an infrastructure that makes the area accessible for the tourists as well as inhabitants.

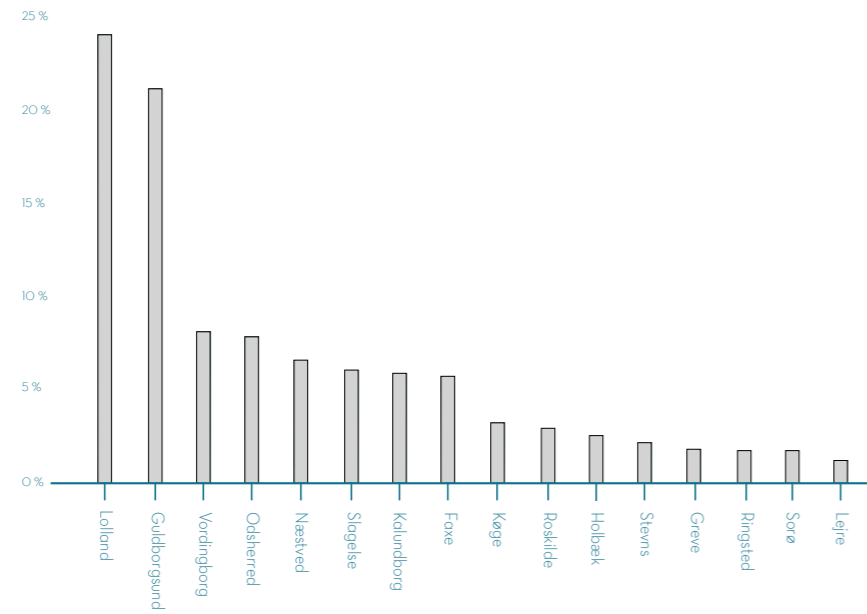


land use of denmark

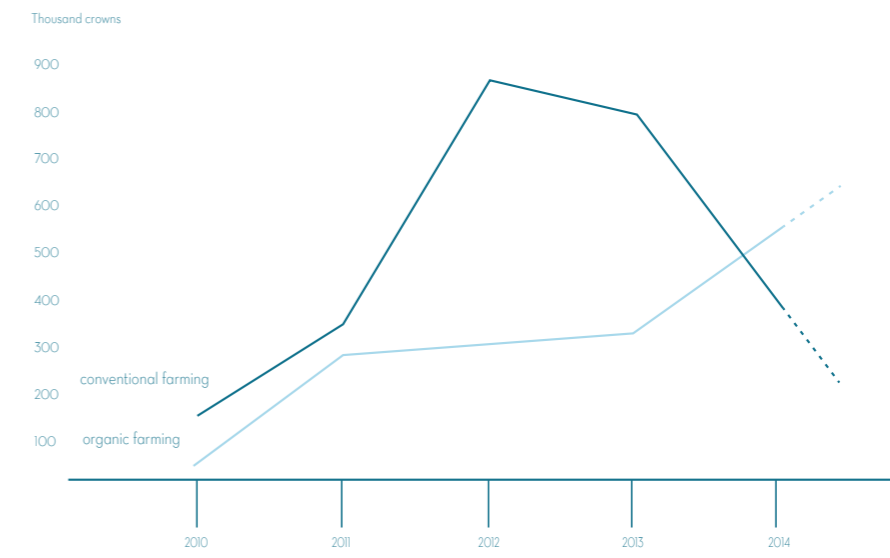


land use of lolland





tourism - nights spent in region of sealand



operating profit - conventional & organic farming

There is environmental issues of the farming industry as it functions today. Polluted water will be an issue due to the use of pesticides and make it very costly for the danish citizens because of the cleansing process of the drinking water. Oxygen depletion in the water streams because of nitrates and phosphorus used as fertilizer in the farming industry. Which again is lead into the fiords, where this is also an issue, because plants and fish dies.

ENVIRONMENTAL ISSUES



polluted drinking water



oxygen depletion



dead fiords

POTENTIALS

One of the potentials of the future of danish farming is the conversion to organic farming, that is more profitable than conventional farming, and doesnt polute. The other is all the square meters of unused farm buildings, that could be reused for other purposes. There is possibilities in the ideas of the cooperative movement, that historically has been a solution for a farm crisis. Though the situation is completely different today, the principles might be translated to match today's challenges.



profitable organic farming



unused farmbuildings



coop movement?

- Largest towns on Lolland. All the towns except Maribo has a declining number of inhabitants.

- The chosen site North of Maribo is chosen due to the centrality of infrastructure of Lolland. The train to Nakskov runs through, as well as the highway connecting sealand to the rest of Europe.

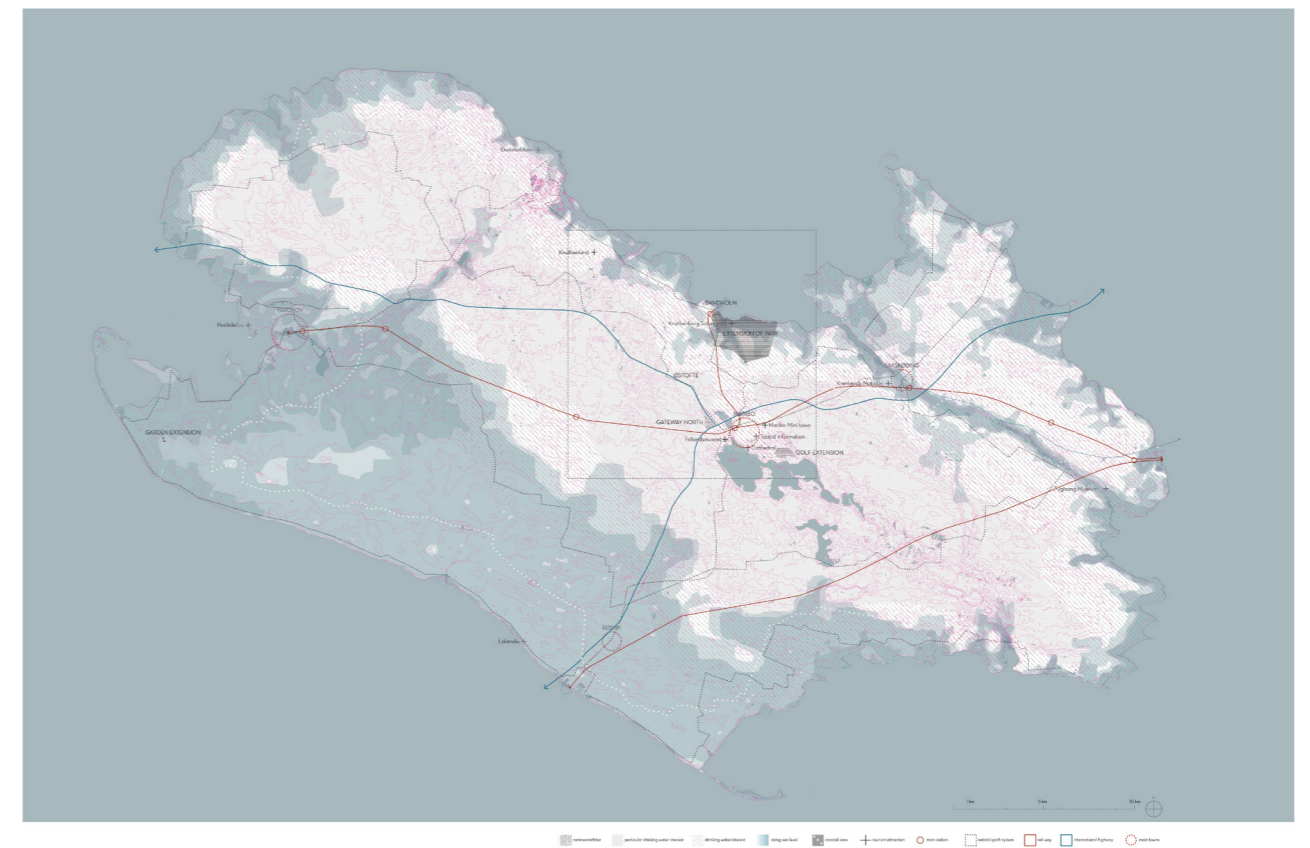
- Rising sea levels, one meter per layer. This shows which areas will be in trouble in the future unless dykes are extensively established.

- The coastal zone line shows the border of the coastal zone, where it is not permitted to built, unless the government gives the project dispensation.

- The hatch for Drinking Water Resources shows areas of interest in relation to drinking water, where the groundwater is used for drinking. These areas are vulnerable to use of pesticides that will pollute the groundwater. Municipalities often have an interest in establishing forest on these areas to secure their drinking water supply.

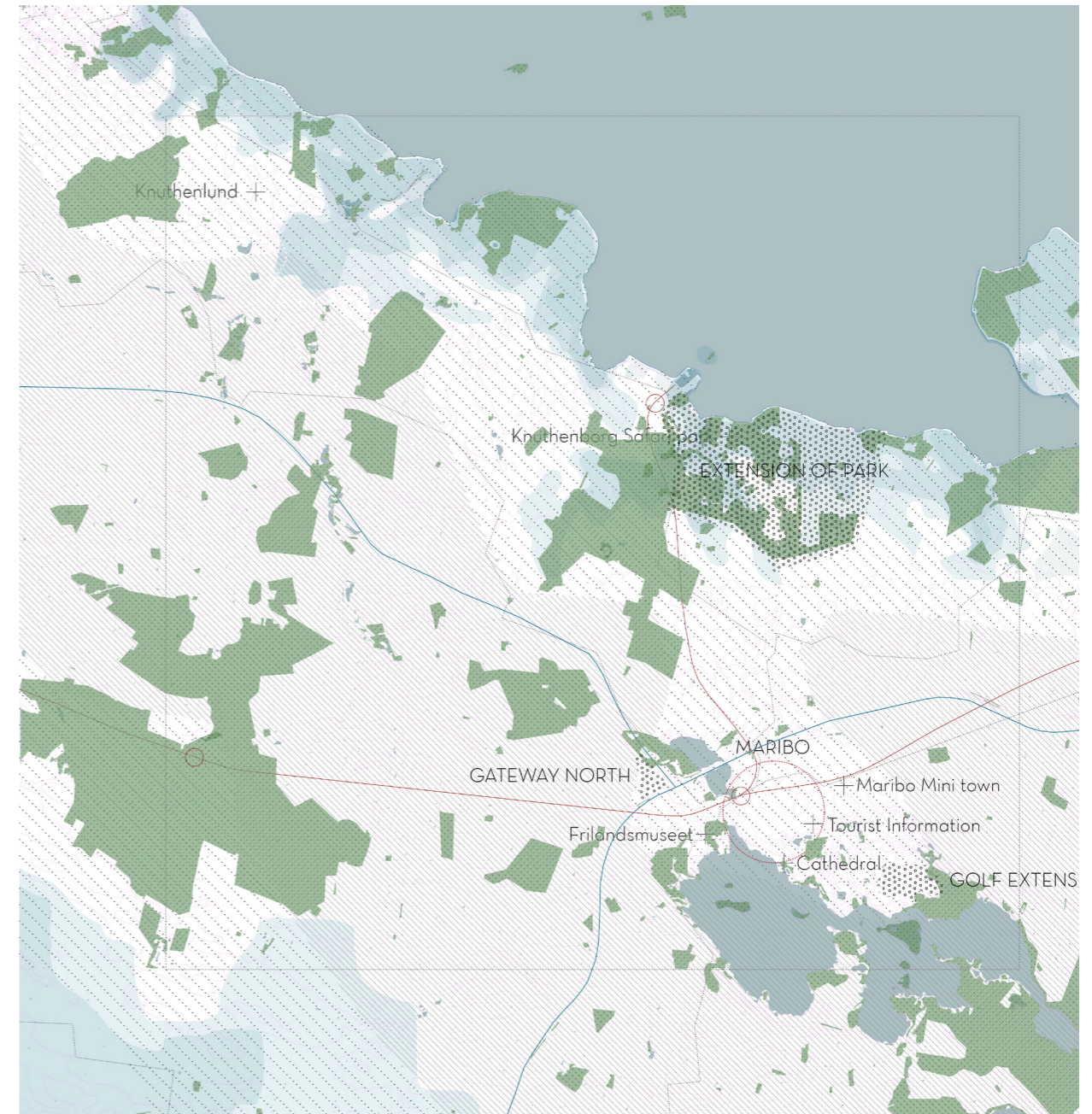
- The Tourism Development areas are pointed out in the latest municipal plan as places of development in relation to tourism. Bandholm, which is the small town by the coast in the site of Future Farmland, is chosen to be one of the tourism towns in Lolland municipality.

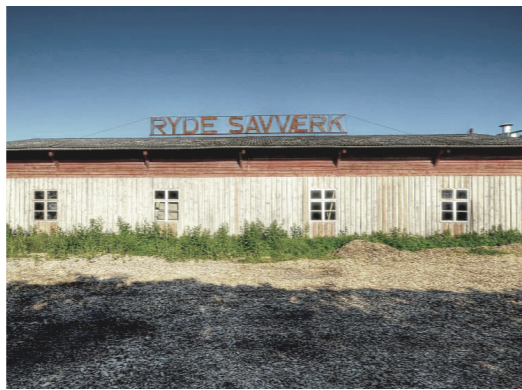
Mapping of Lolland



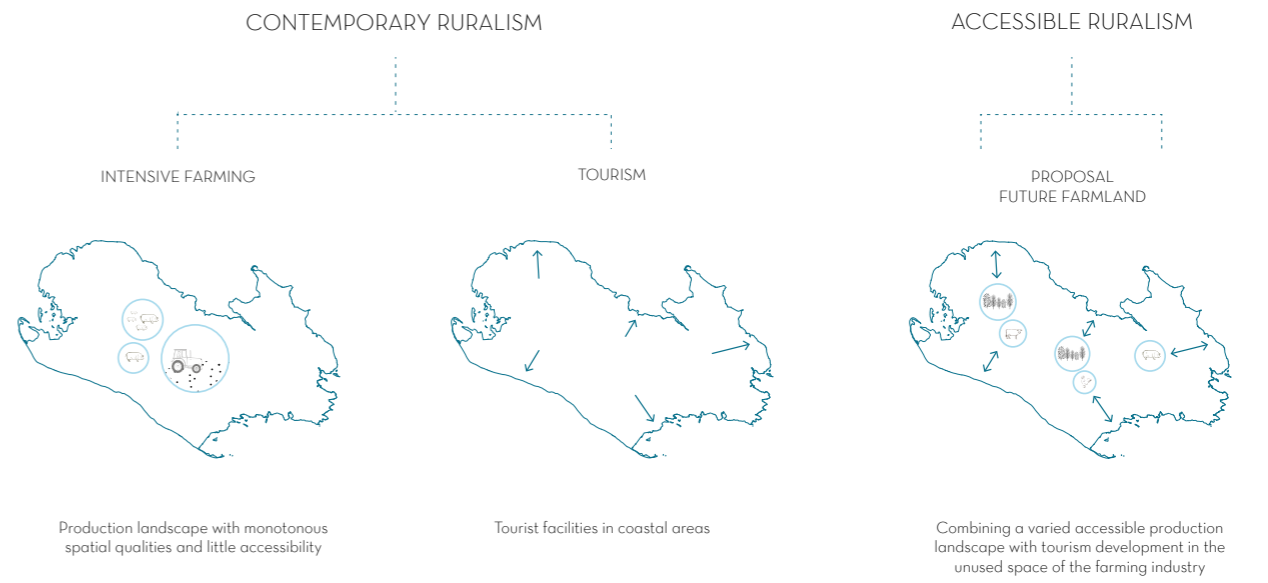
The site chosen is this area between Maribo and Bandholm. Maribo lake is a nature reserve for birds. The area mainly consist of farmed land where sugar roes, wheat, rye and rape seeds are produced and then patches of forest.

On the following pages there is pictures of the area showing the landscape, the presence of water and the building mass.

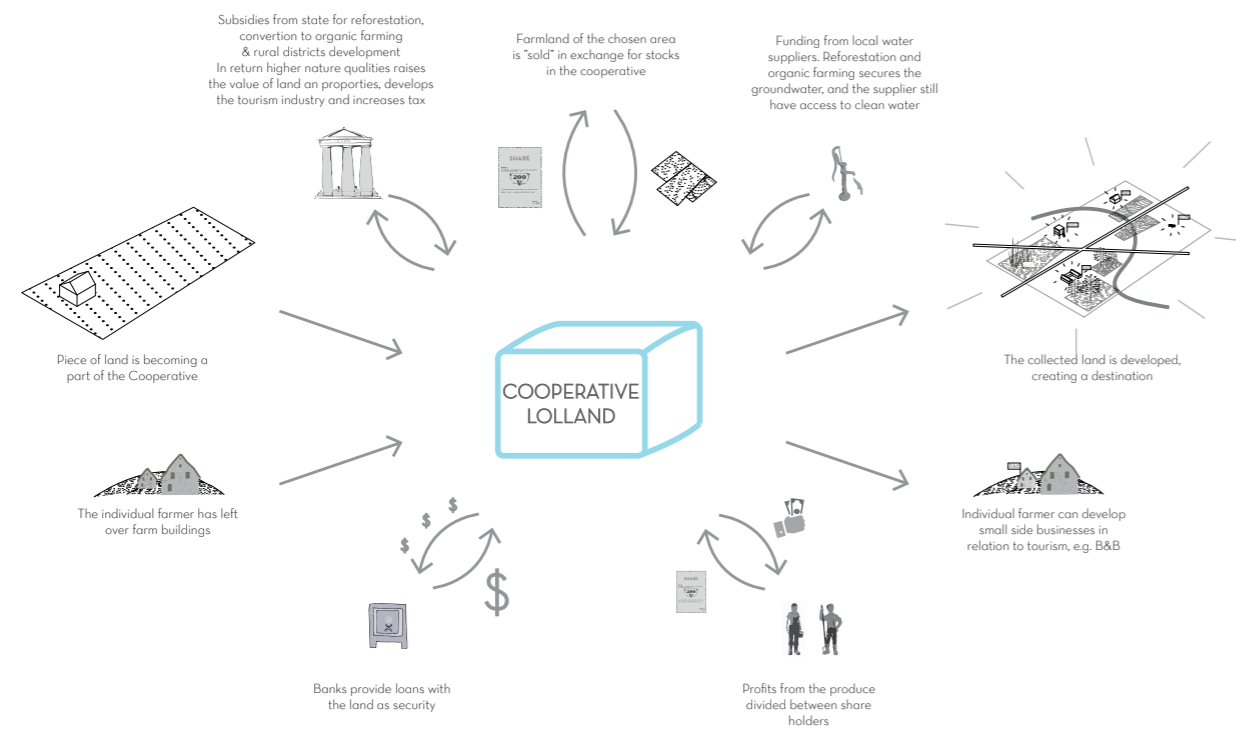




Concept

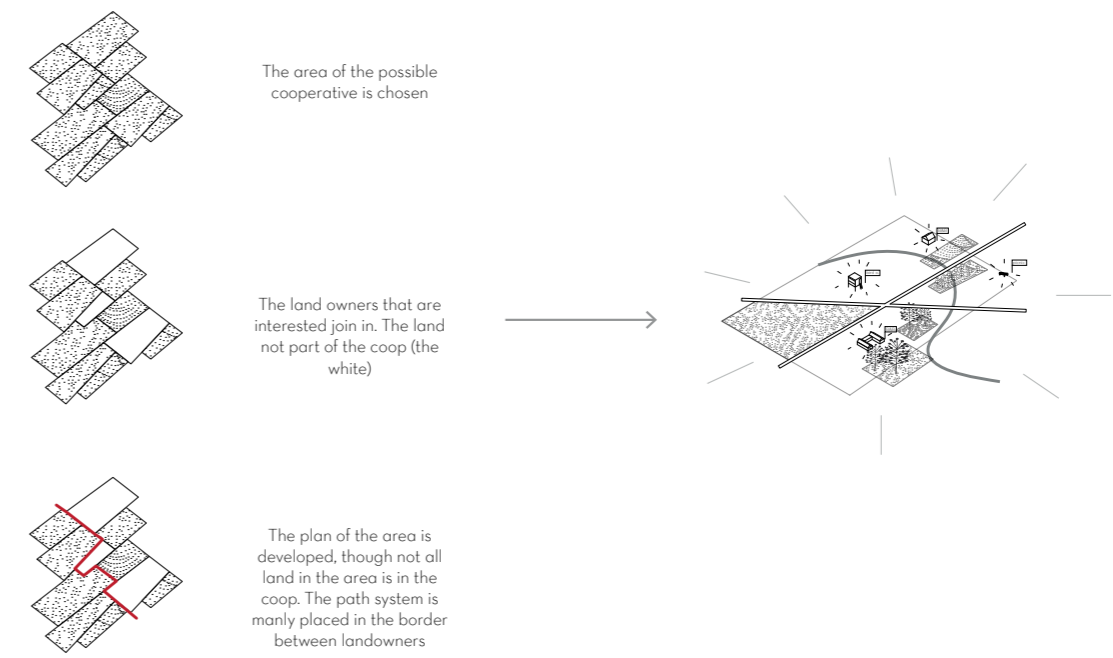


Cooperative lolland



Planning with Cooperative Lolland

what if not everyone wants to join?



Future farmland places it self in a context of national parks and parks for recreation. The future farm land is situated on a large piece of land, with a changing degree of recreational activities. The project differs from the parks and national parks by being a mosaic of different landowners and public spaces, semi public spaces to private spaces.

Definition; National Park.
 an area of scenic beauty, historical importance, or the like, owned and maintained by a national government for the use of the people. - Dictionary.com

Definition; Park.
 an area of land, usually in a largely natural state, for the enjoyment of the public, having facilities for rest and recreation, often owned, set apart, and managed by a city, state, or nation. - Dictionary.com

What is the project comparable with?



The strategy of the project is divided into 6;
3 Landscaping strategies and 3 organizational strategies.

The Landscaping Strategies

Forest belt

The area where forest is planned is on the basis of soil conditions, and the area is creating a green loop, connecting Maribo to Bandholm and the sea.

Production Landscape

This area is also planned on the basis on the soil conditions. Each type of produce is planned in order to local conditions: Eg. Apple orchards are placed in shelter for wind, energy willow are placed on lower areas that tends to flood.

Water

Using existing water streams and connecting them to create a stream that flows from the lake to the sea. Some lowlands are made into small lakes.

Organizational Strategies

Three Zones

On the basis of mapping out places of interest the strategy creates three zones in the area. The zone near Maribo is called Transition to nature, The zone around the the small town of Østofte is called Learning in Nature, and the Zone around Bandholm is called Leisure in Nature.

The zones are defined by the existing conditions, and are created to focus the main use of the particular area.

The Transition to nature is a zone where the residents as well as tourists can enter the nature. Here you can rent bikes and kayaks, and get information about the area.

Learning in nature mainly caters to the residents of that area, where the community center and school is anchors of the town and development.

Leisure in nature is the most touristy zone, where the recreational activities are the core, such as fishing, horseback riding and kayaking.

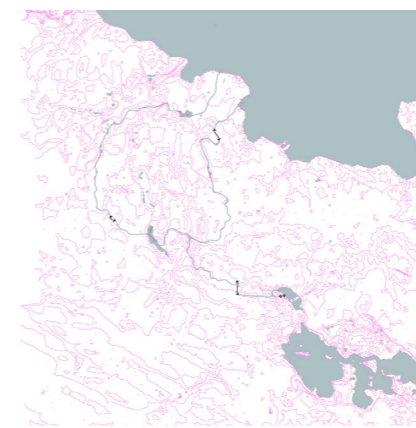
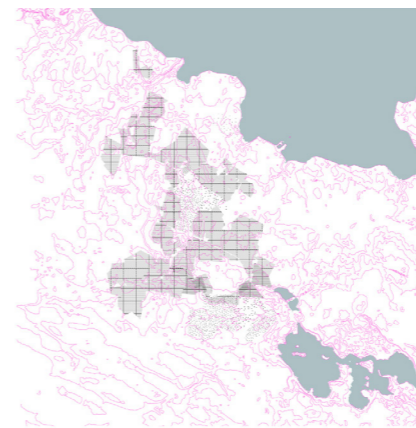
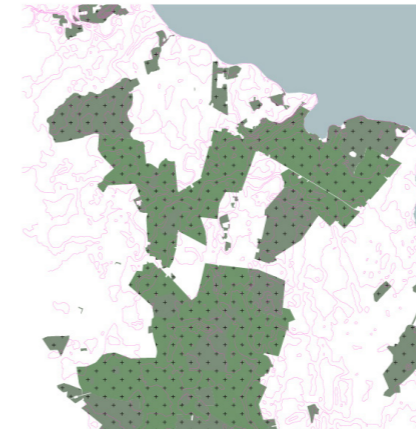
Infrastructure

The strategy deals with the existing infrastructure, and the path system is laid out in relation to the access points provided by the existing train stations and highways.

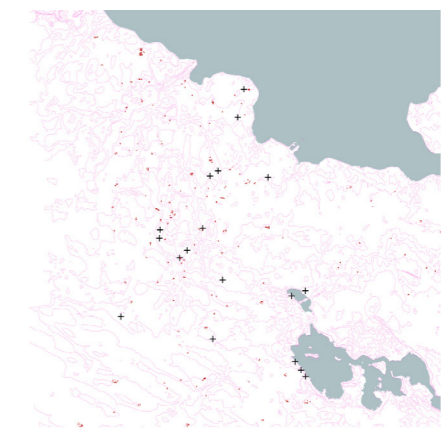
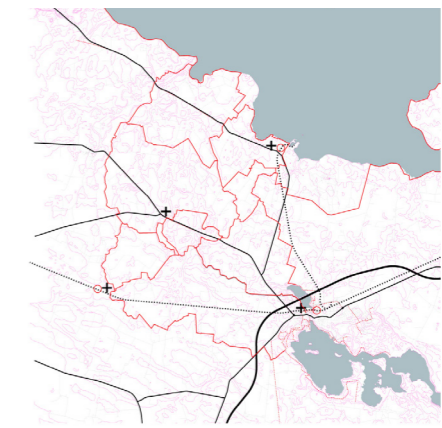
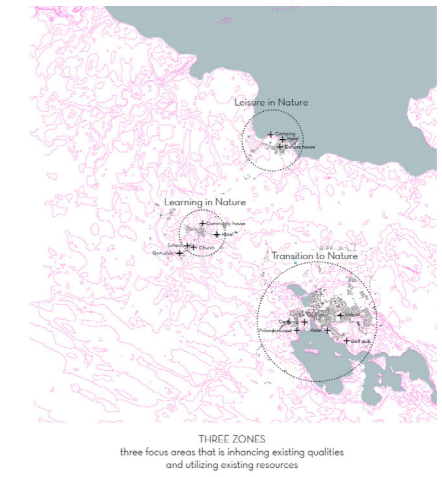
Designate Possibilities

Designating public spots in relation to existing facilities and a variation of the new farm land. About 40 % of the farm buildings are highlighted here, to show the possibilities of the development of the unused farm buildings.

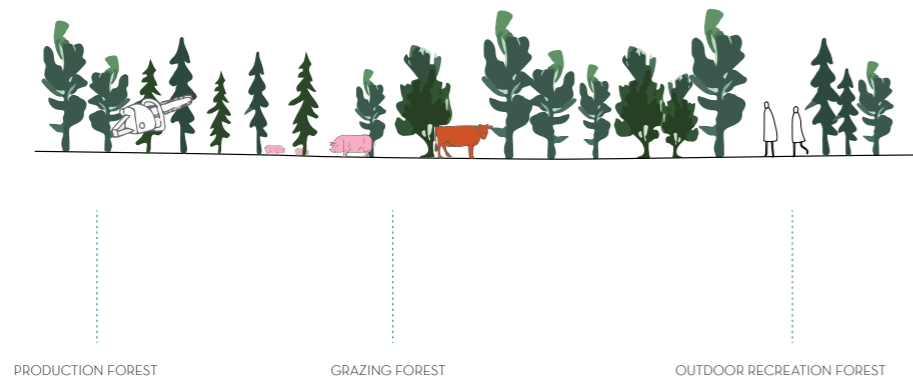
LANDSCAPE STRATEGIES



ORGANIZATIONAL STRATEGIES



THE FOREST LOOP



The forest loop will be a connected planted forest that integrate production, grazing and recreation.
The three types of use will be overlapping.

FOREST LOOP



PRODUCTION FOREST



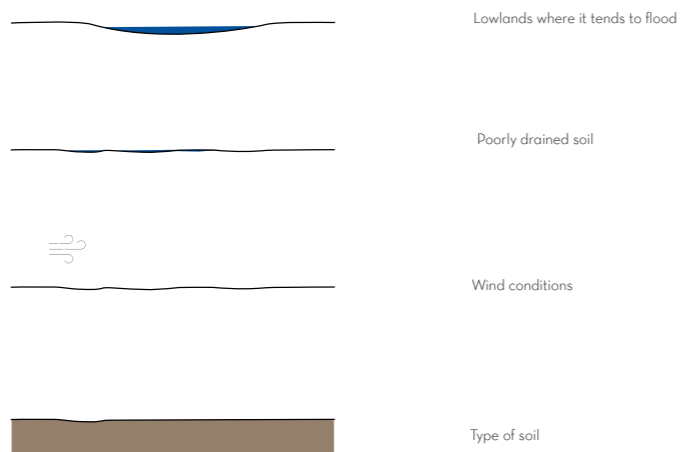
GRAZING FOREST



OUTDOOR RECREATION



LOCAL CONDITIONS



TYPES OF TREES



OAK

- light tree specie
- hardwood
- tolerant to all soil types
- thrives on rich and moist soil



LINDEN TREE

- shade tree specie
- softwood
- ideal for heavy soil and relatively poorly drained soil
- Important in grazing forest



SCOTCH PINE

- light tree specie
- softwood
- tolerant to most soil types
- tolerant to storm
- suitable near coast



BIRCH

- light tree specie
- hardwood
- tolerant to most soil types
- fast growing shot lived
- Important in grazing forest



RED ALDER

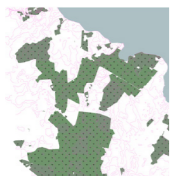
- light tree specie
- hardwood
- tolerant to most soil types
- grow well in wet areas and marshlands
- often used as nurse tree

When placing the right type of plants it is important to know the basic site conditions. Opposite is an array of species that are suitable for growing in the site.

FOREST LOOP



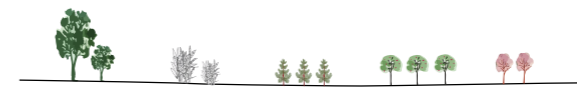
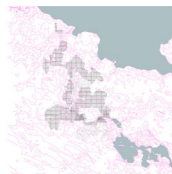
FOREST LOOP



Visualization of shelter in young forest

The different kind of crops are placed on the site in accordance to the conditions of the site and plot owners.

PRODUCTION



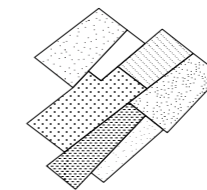
The different types of produce is disbursed to create a large degree of variation travelling through the area



Energi willow is placed on low lands, where the soil is wet and it tends to flood



Fruit tree plantations are placed in shelter for wind, and spread out to ensure stability against local issues such as hail storms.



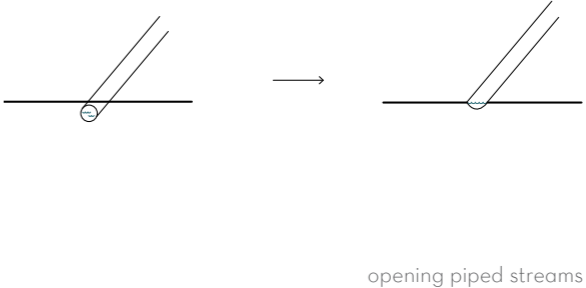
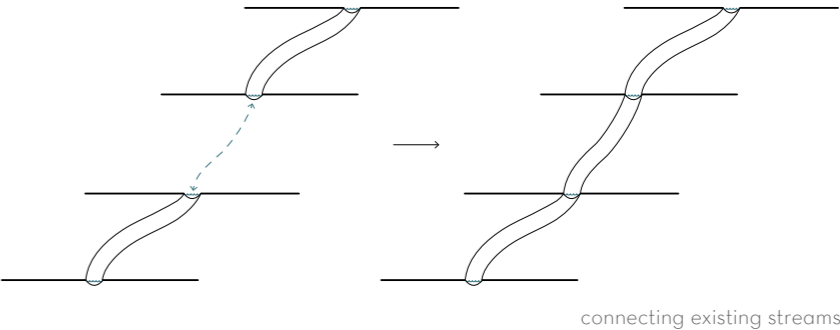
Different types of produce are placed on the basis of plots and ownership

PRODUCTION

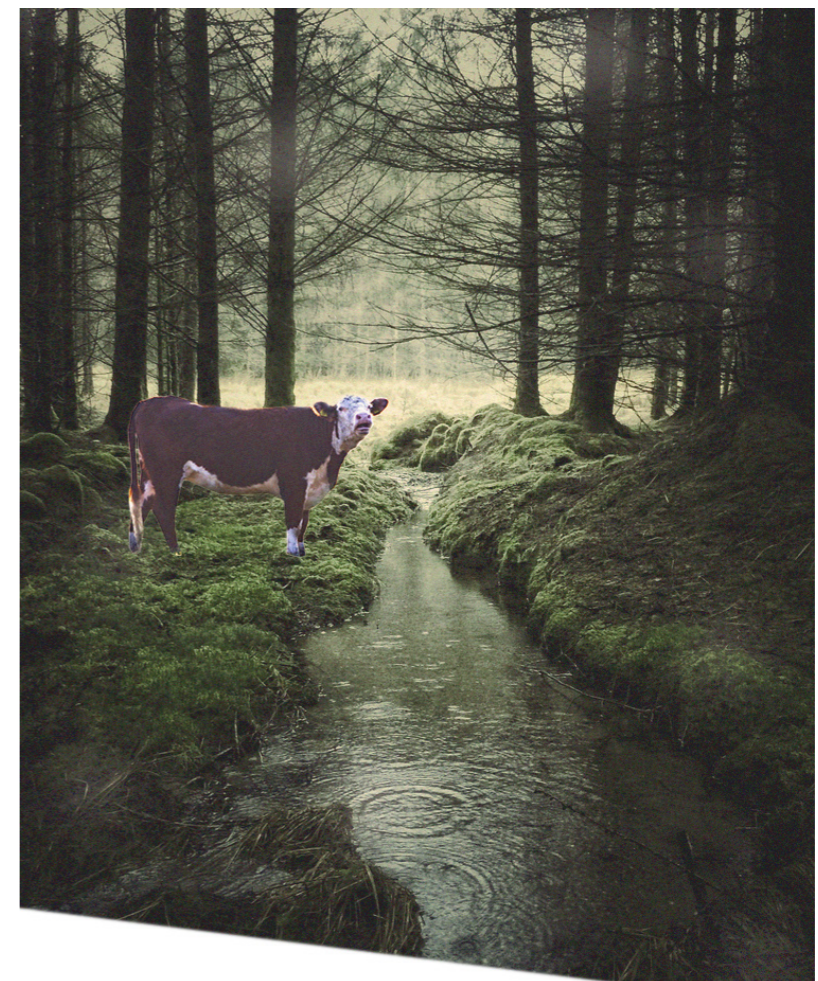


production landscapes

PRINCIPALS OF THE PLACEMENT

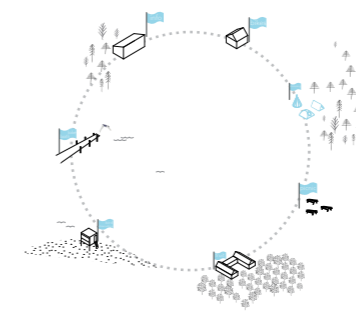


WATER

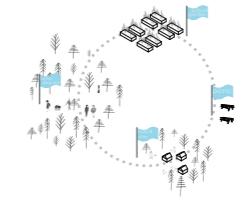


water stream trough forest

THREE ZONES



transition to nature



learning in nature



leisure in nature



Transition to nature



Learning in nature

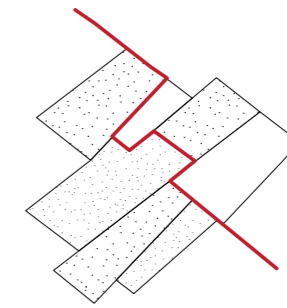


Leisure in nature

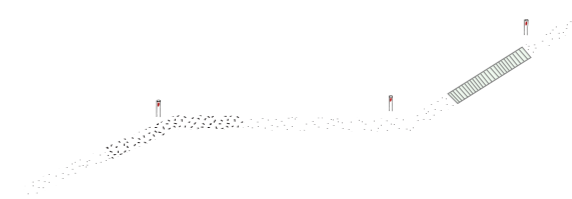
THREE ZONES



placement of paths



The paths are placed in divisions between plots



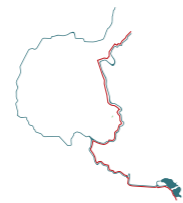
The changing paths systems has a wayfinding concept of a recognisable recurring colour

forest loop path



The forest loop is the longest route, and about 47 km long.

follow the water path



Follow the water is a 16 km long route, and can easily be walked within a day

secondary paths



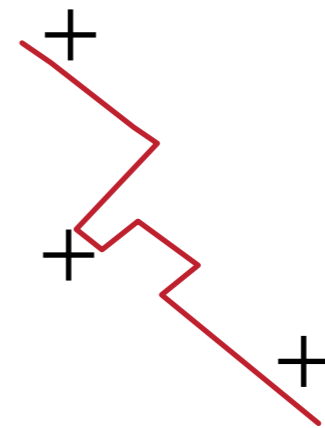
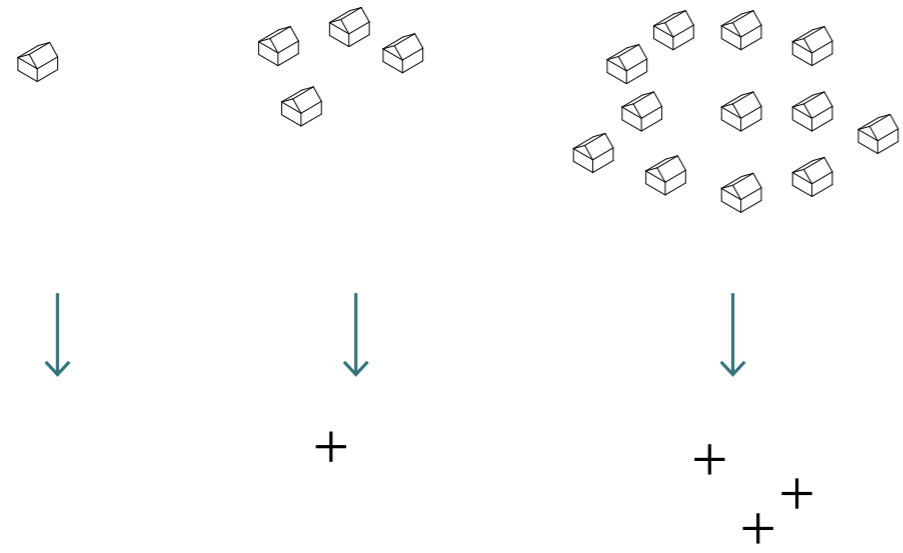
Local routes are a secondary route system, with loops that are 5-10 km long. The local routes are placed in the landscape to ensure a varied experience of the land and its spatial qualities

INFRASTRUCTURE



INFRASTRUCTURE



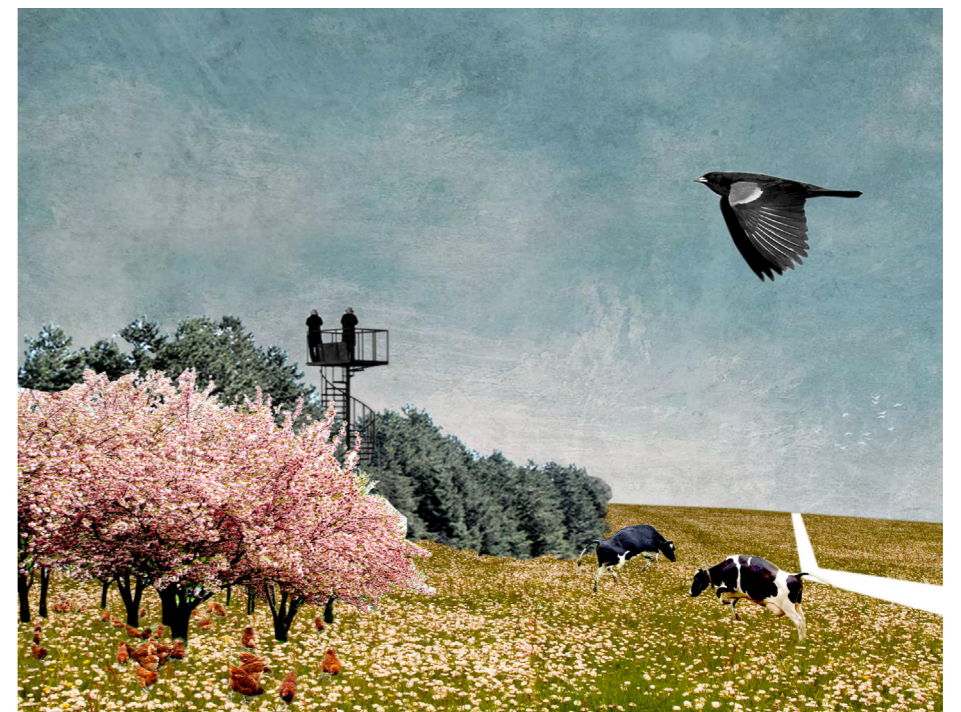


Public spots are placed along the path system

DESIGNATE
POSSIBILITIES

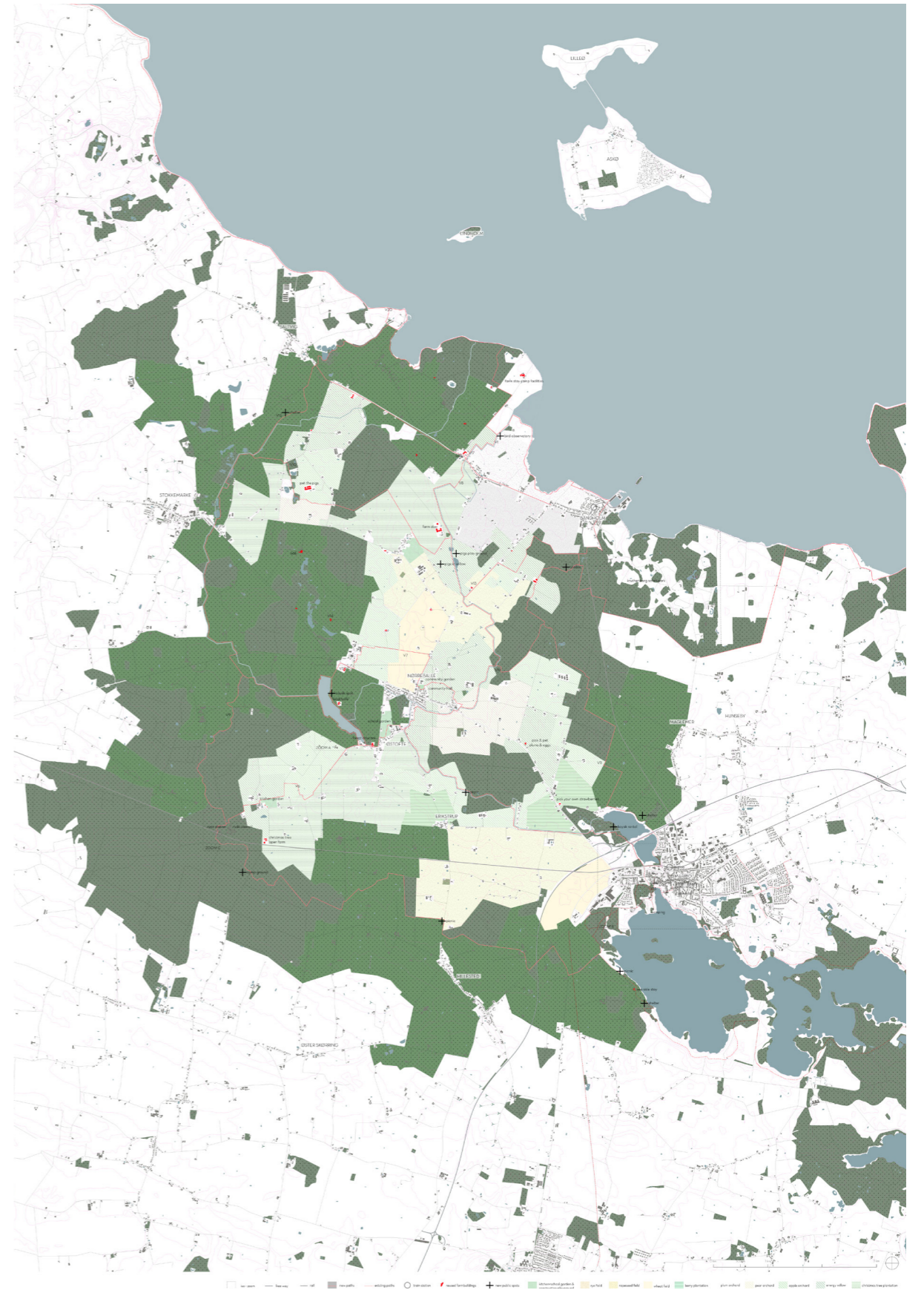


DESIGNATE
POSSIBILITIES

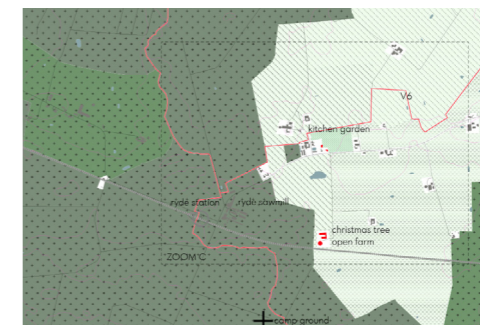


public spot - bird observatory

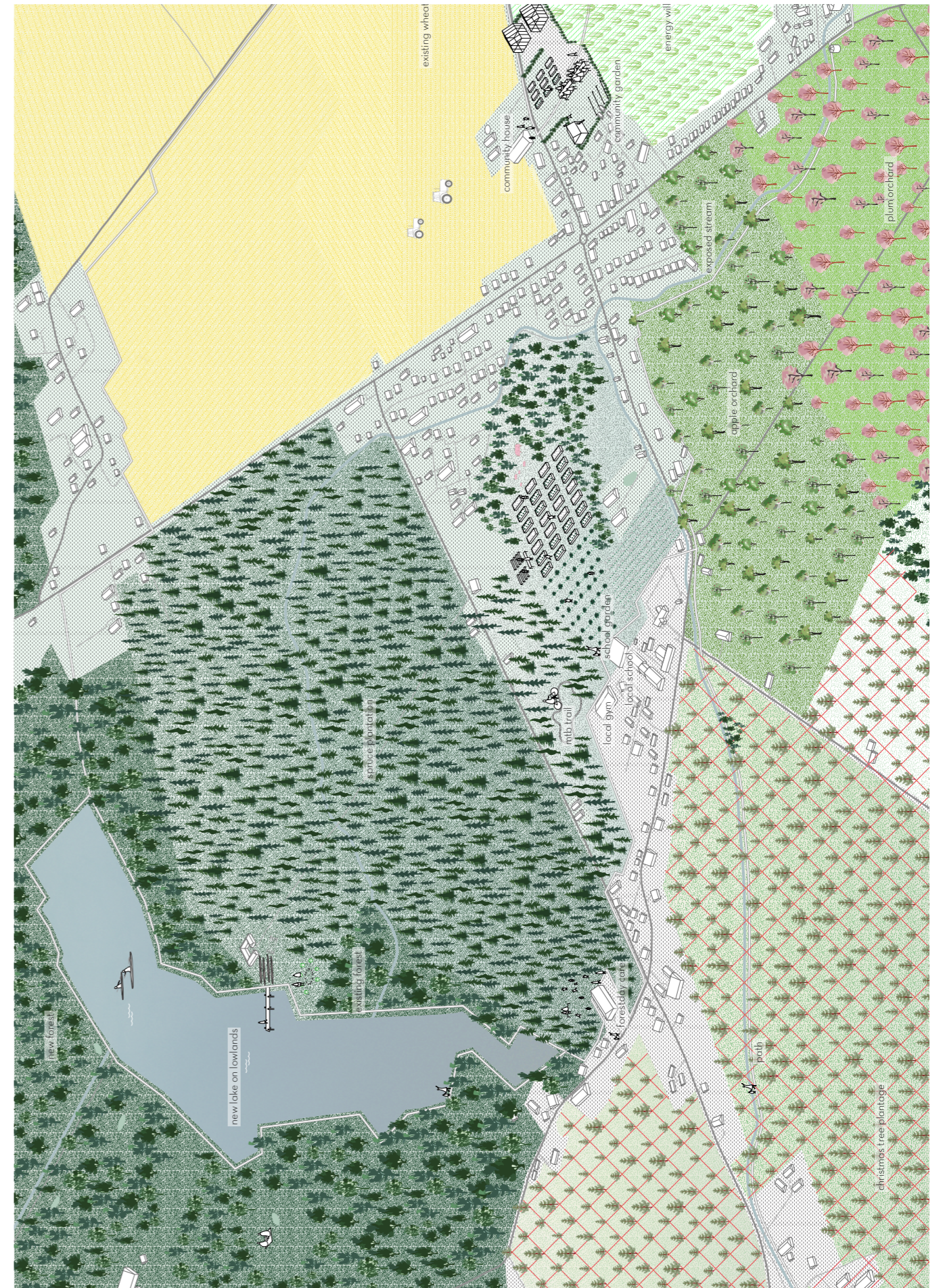
The overall plan 1:20.000 in A0



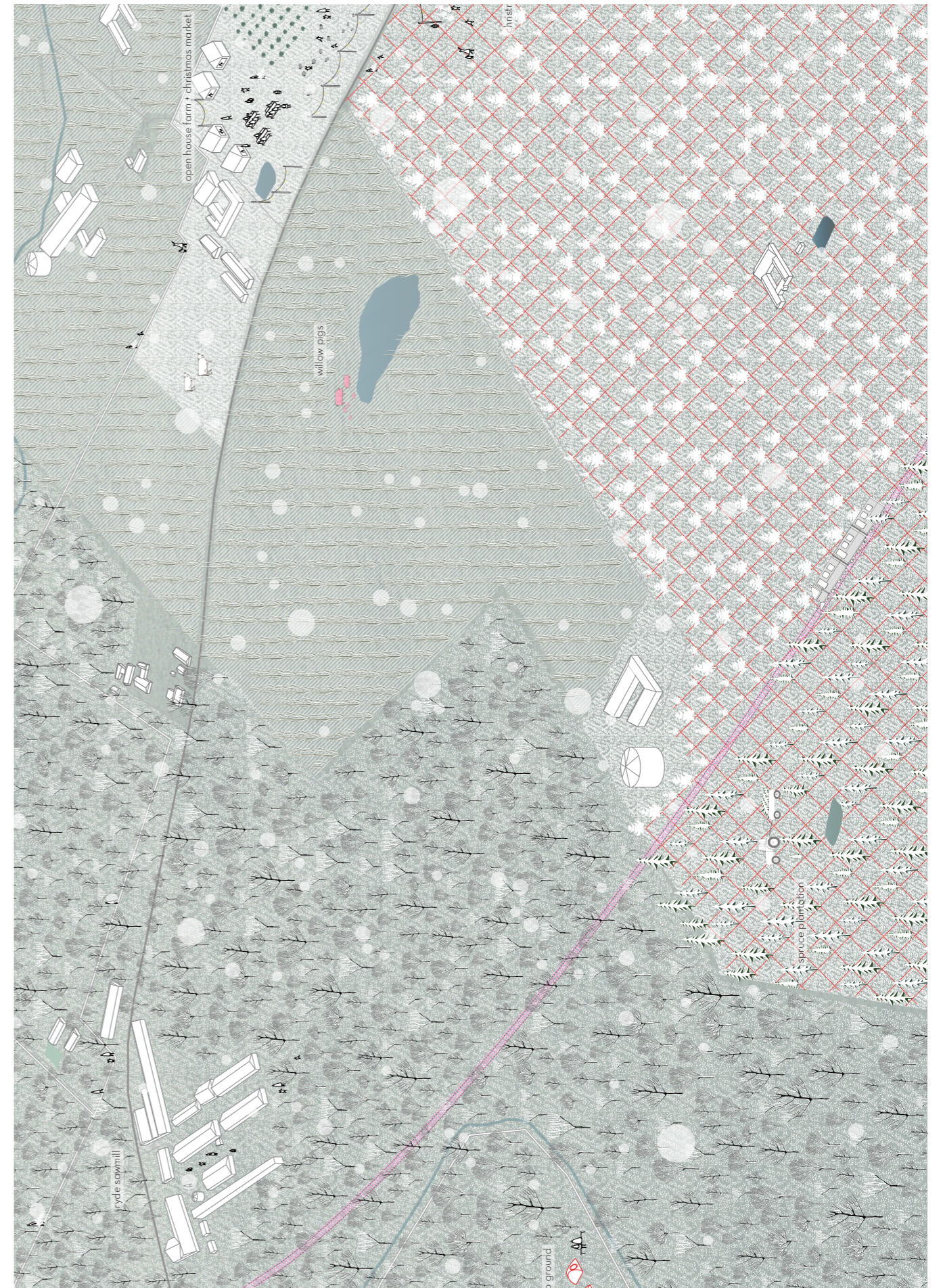
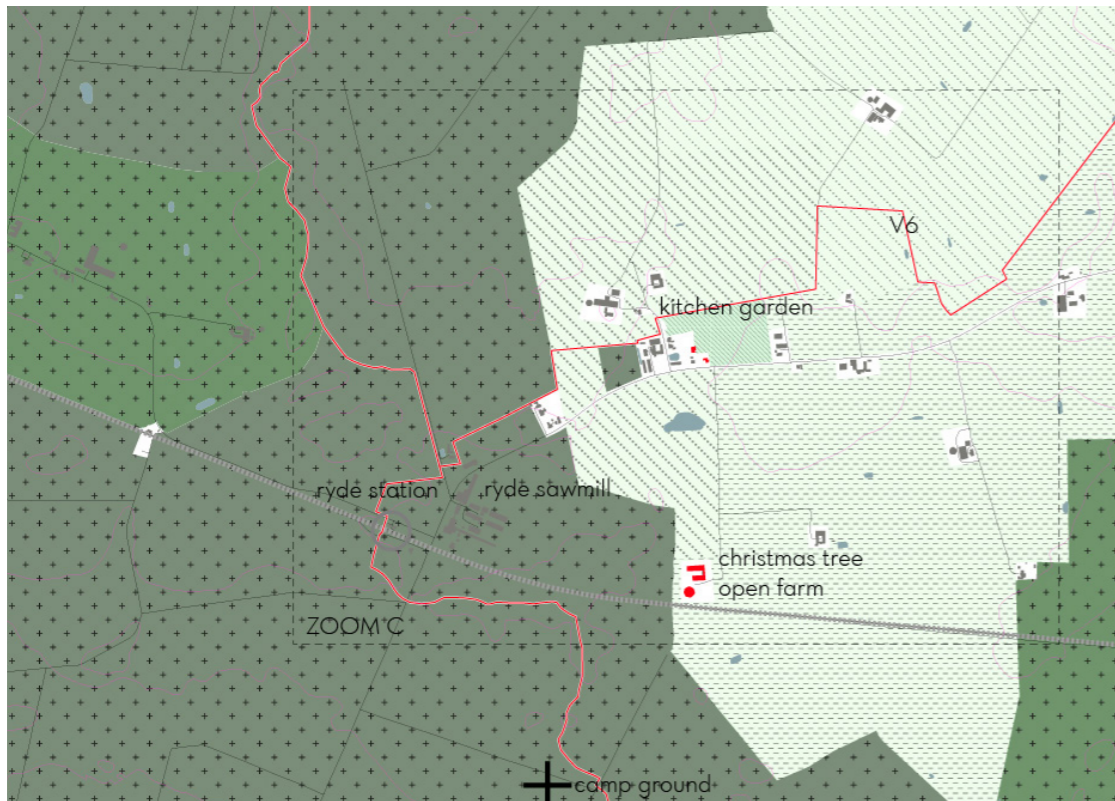
Three zoom ins



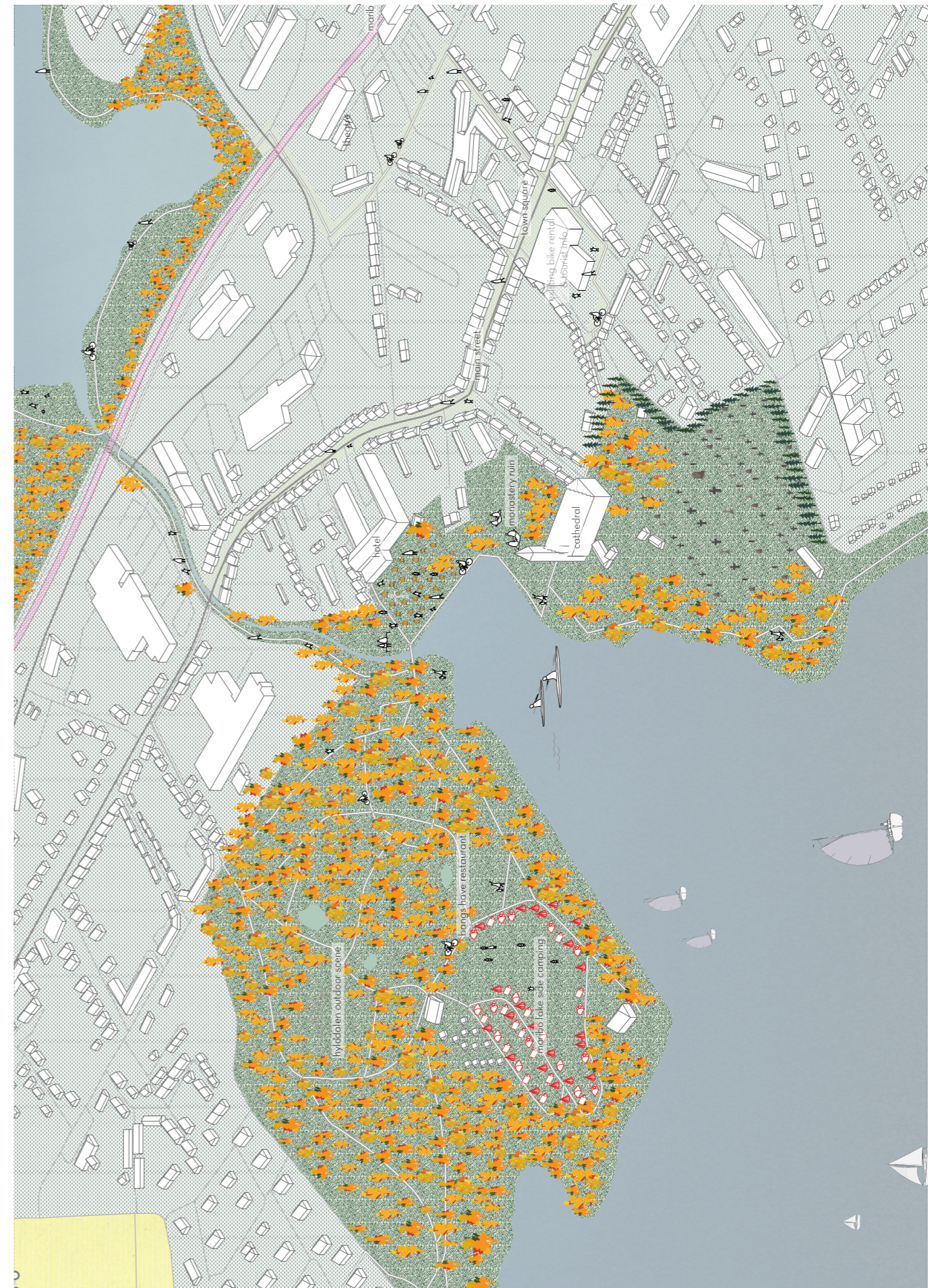
Summer in Østofte + Nørreballe



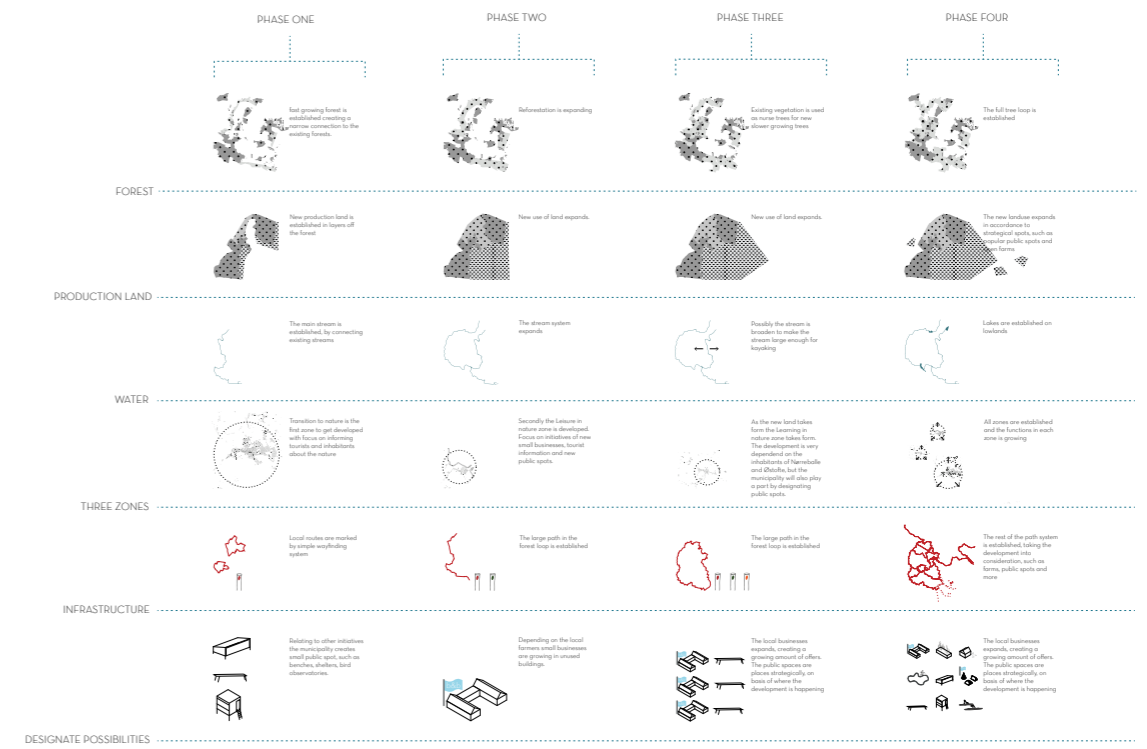
Winter in forest near Ryde



Autumn in Maribo



The Project will be conducted in phases, is in diagram





Webpages

<http://www.dlsyd.dk>

<http://www.lf.dk>

<http://mfvm.dk/landbrug/landbrugsstoette/>

<http://mfvm.dk/natur/naturplan-danmark/>

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Litterature

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Douglas, J. Sholto; Forest Farming, 1976

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Miljø- og energiministeriet, skov- og naturstyrelsen; Naturen ved kysten, 1994

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DR 1, 3.9.2015; Bag om Borgen; <https://www.dr.dk/tv/se/bag-borgen/bag-borgen-2015-09-03>

Articles

Pagh, Jesper, Post, Anders, m. fl, Tema: Planloven. Arkitekten11, November 2015

Abrahamsen, Sebastian; Kan det danske landbrug overhovedet betale sig? Information, 5.8.2015

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Maigaard Erhardsen, Helle; KORT: Her er jorden mest belastet med sprøjtegifte Ingeniøren, 16.01.2016

Handrup, Morten; Nyt etableringslån til yngre landmænd Landbrugsavisen, 29.09.2015

Rosenbeck, Camille; Nye tal: 285 landmænd må dreje nøglen om i år. Landbrugsavisen, 13.10.2015.

Press release, Landbrug & Fødevarer, 26.09.2015

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