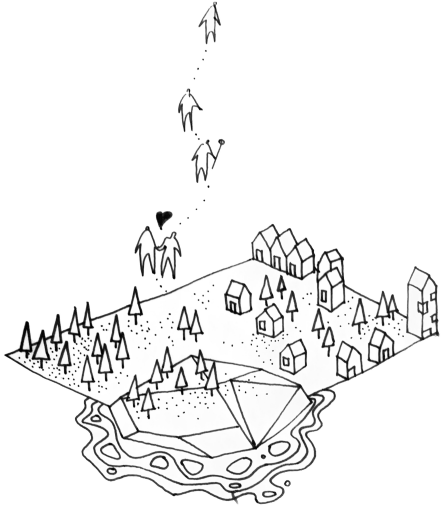
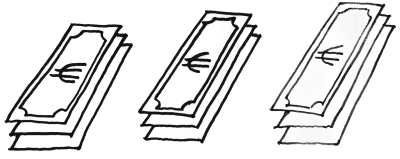


Ecotourism

A meaningful landscape for ecology and economy

Wenxin JIN | 4617452
Mentor
Taneha Kuzniecow Bacchin
Dr. Steffen Nijhuis

P5 PRESENTATION
2018.07.03

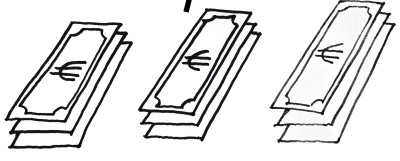


Imagine that, you save up all year for the perfect holiday, so where do you go?

A city break?

A beach holiday?

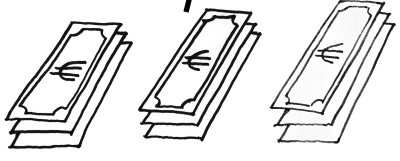
Safari?



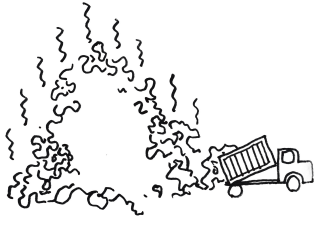
A city break?

A beach holiday?

Safari?

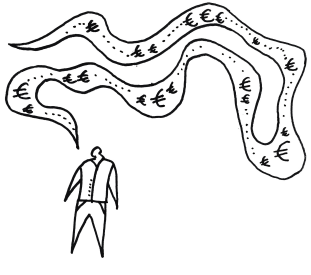


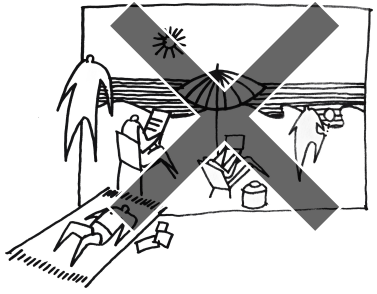
Waste?

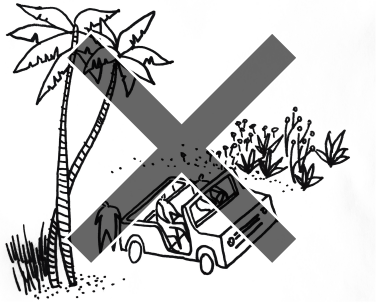


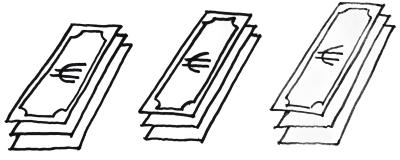
Pressure on scenic landscapes ?

Stop money getting through to the local ?

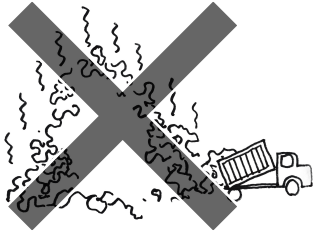


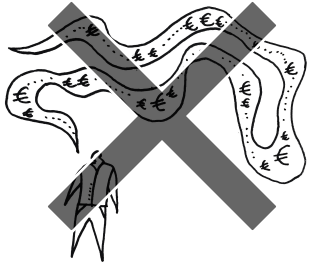


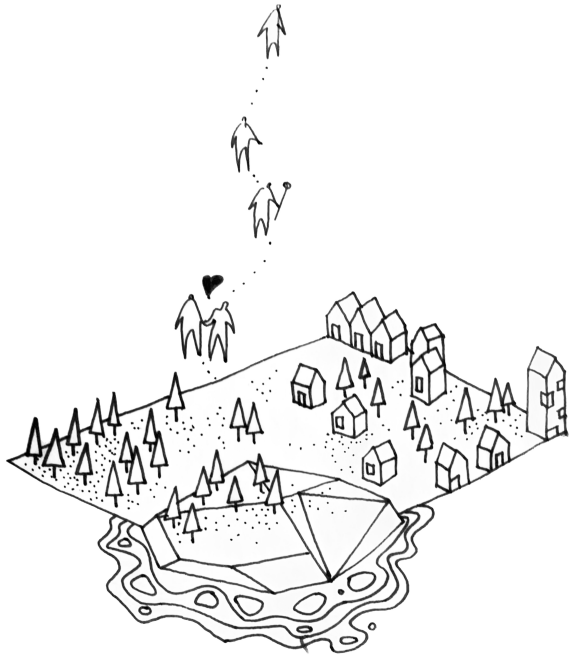




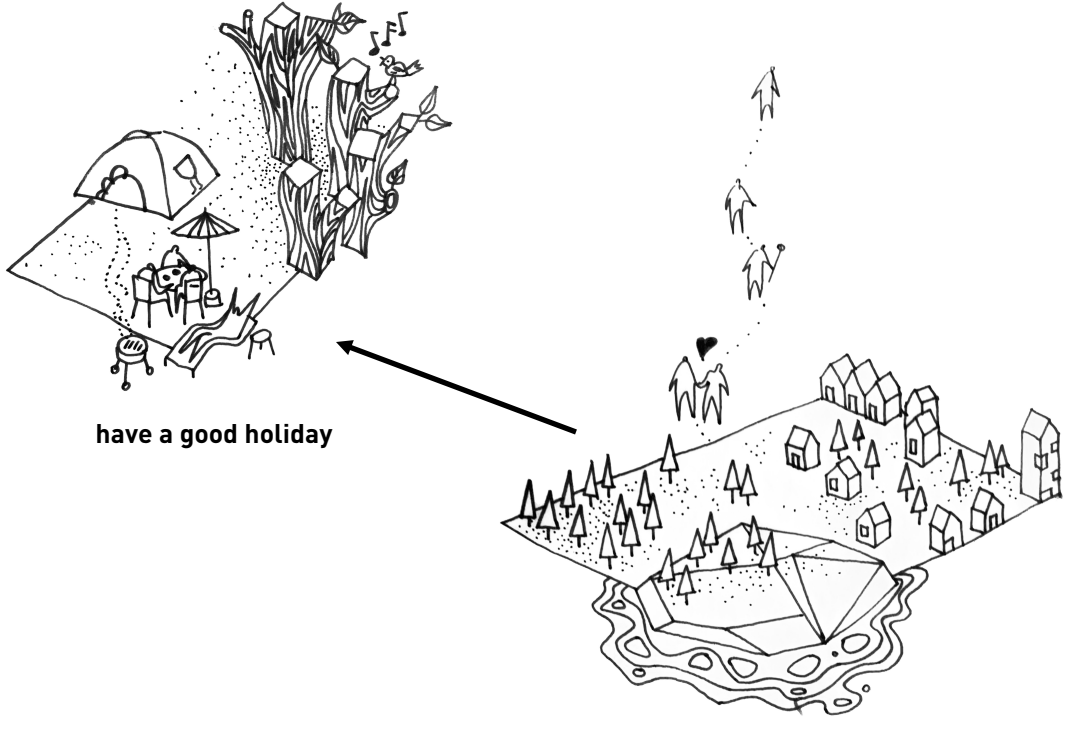
So what is the alternative?



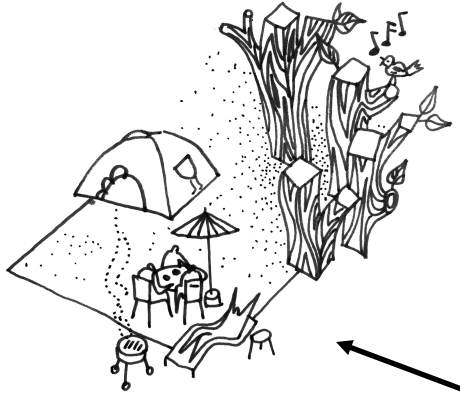




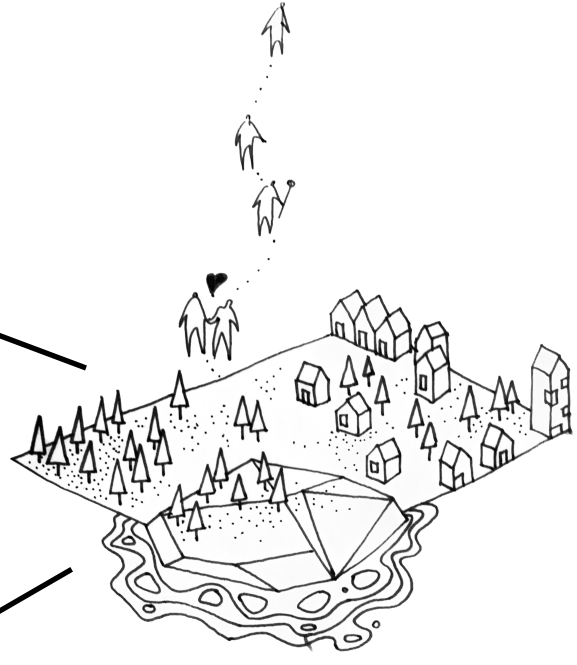
ECOTOURISM

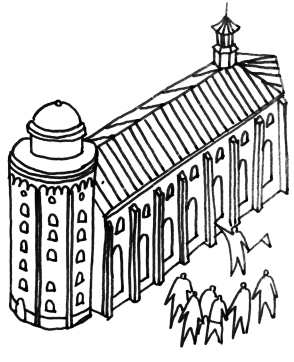


have a good holiday

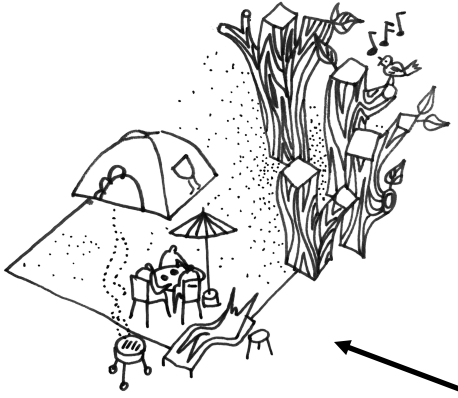


have a good holiday

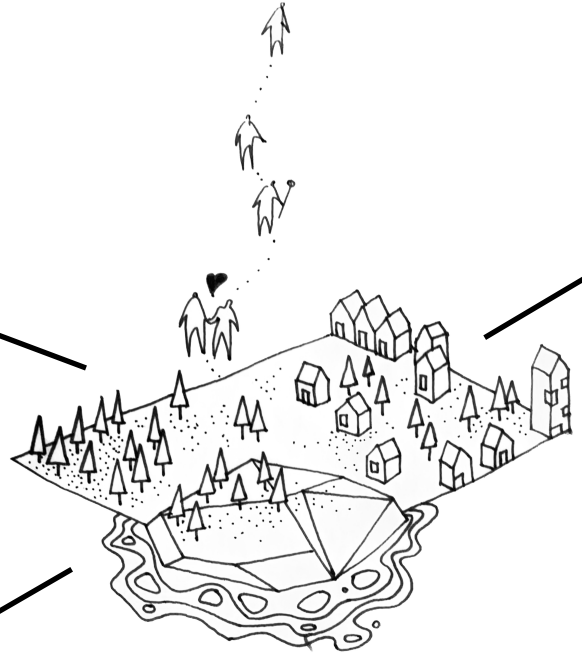


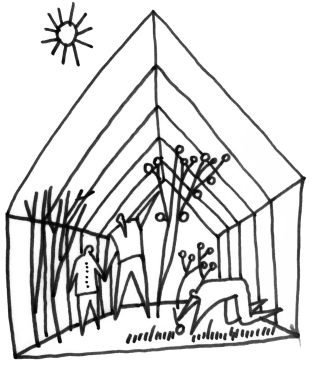


respect the local culture

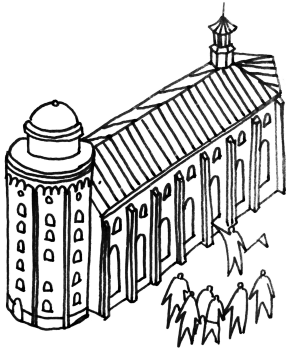


have a good holiday

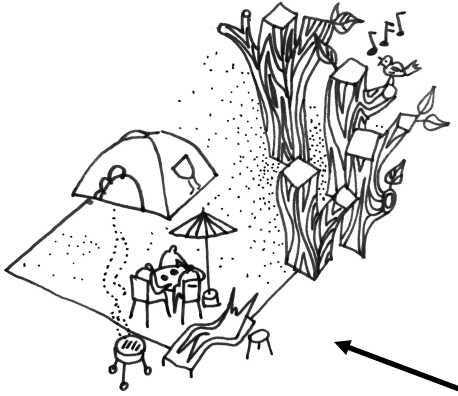




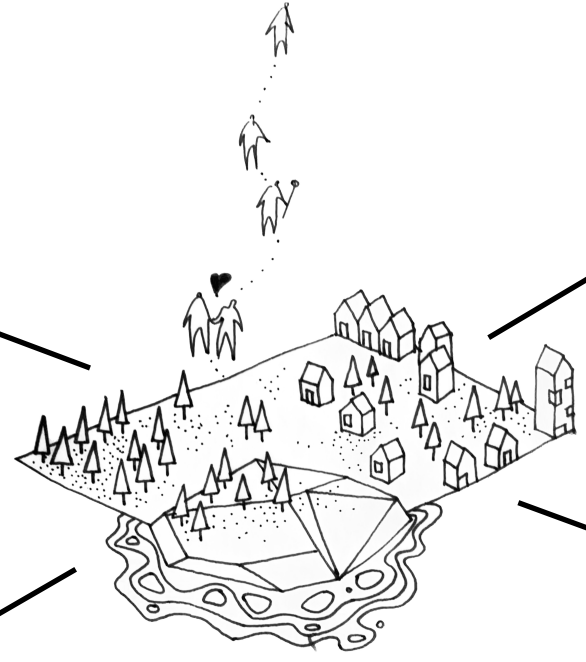
Learn to protect environment

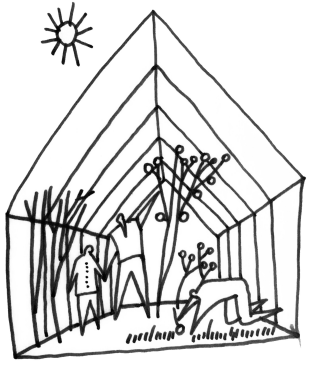


respect the local culture

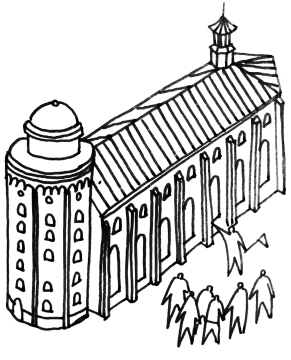


have a good holiday

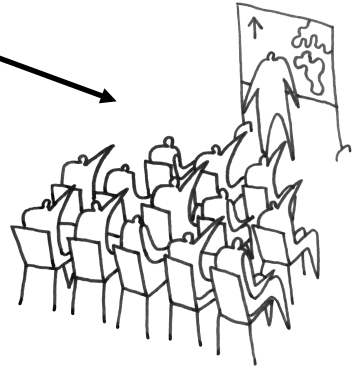




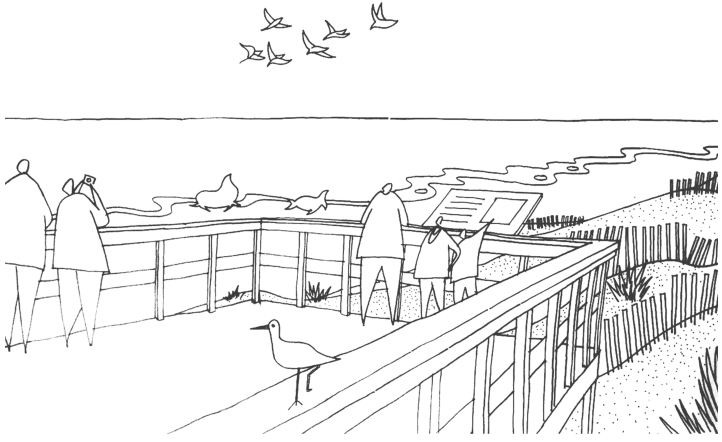
Learn to protect environment



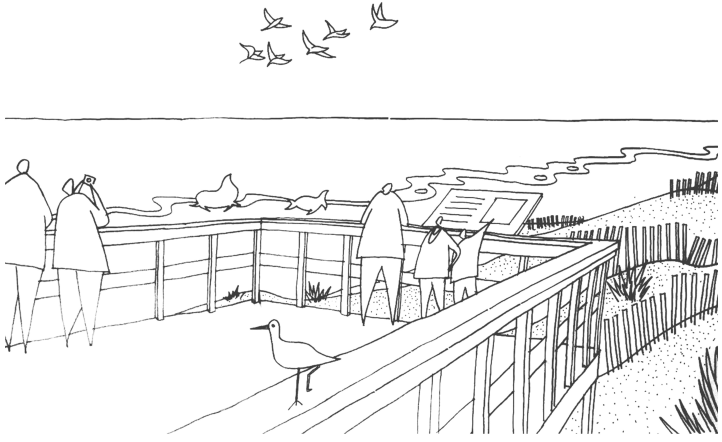
respect the local culture



local people take part in decision making

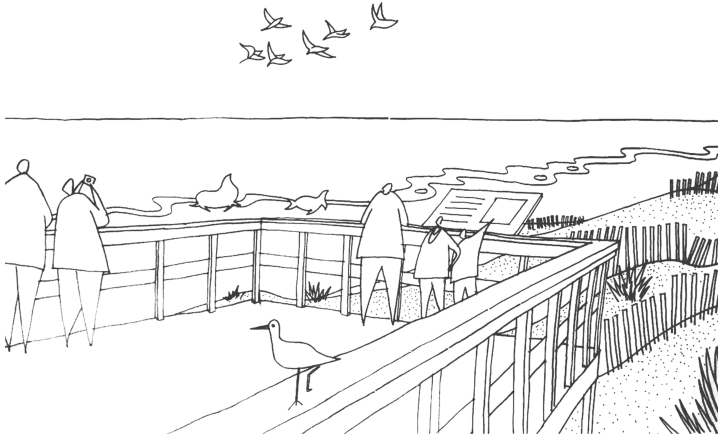


touch and watch the local animals



touch and watch the local animals

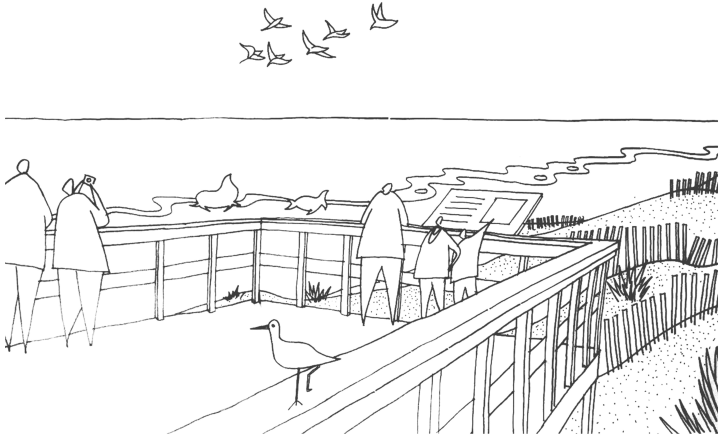
protect wildlife by planting local species



touch and watch the local animals

protect wildlife by planting local species

experiencing the old cultural of the village



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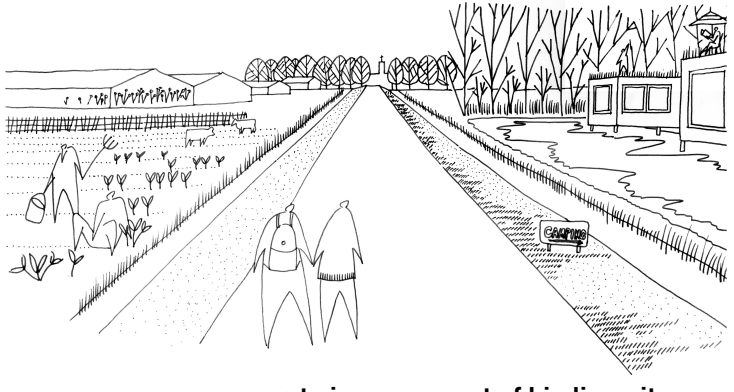


your money goes to improvement of biodiversity

Dutch Southwest Delta

dunes, beaches, salt lakes, polders, etc.



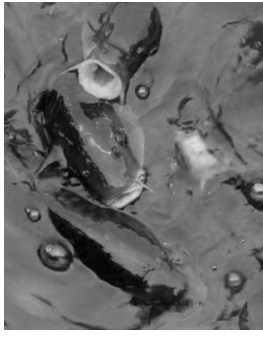


Dutch Southwest Delta

tourism is also creating pressure on the ‘head’ of the islands

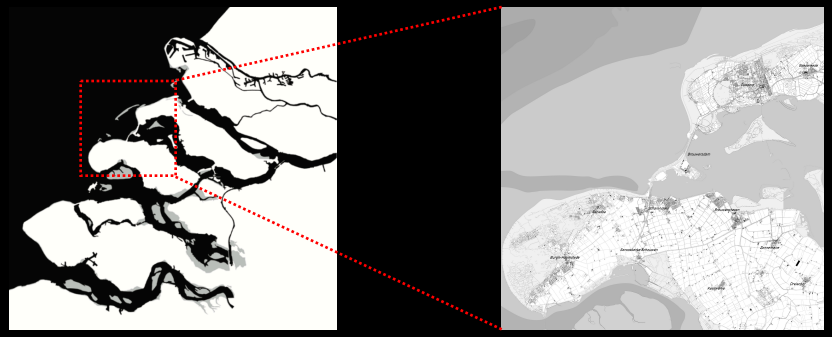


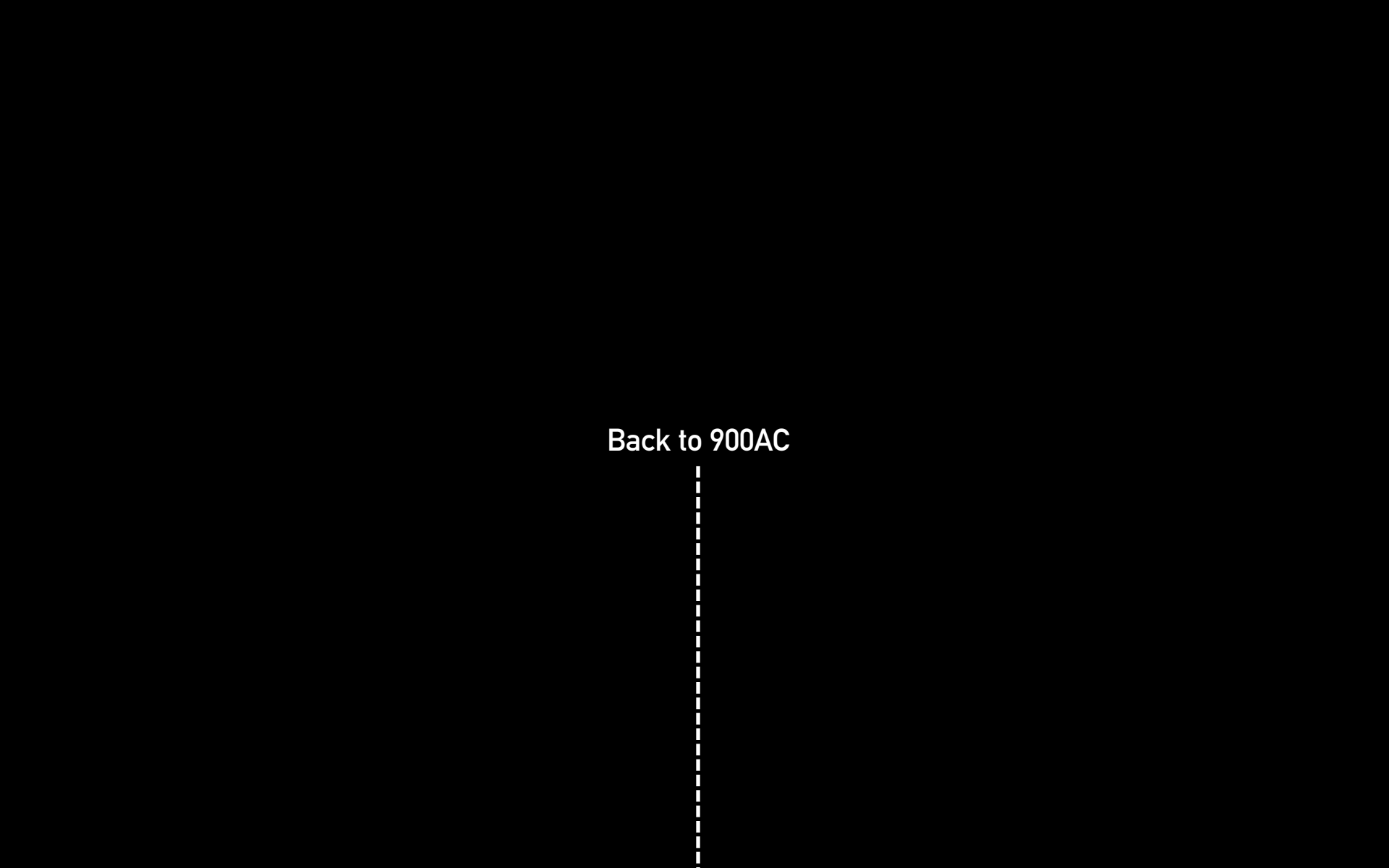




Research Question

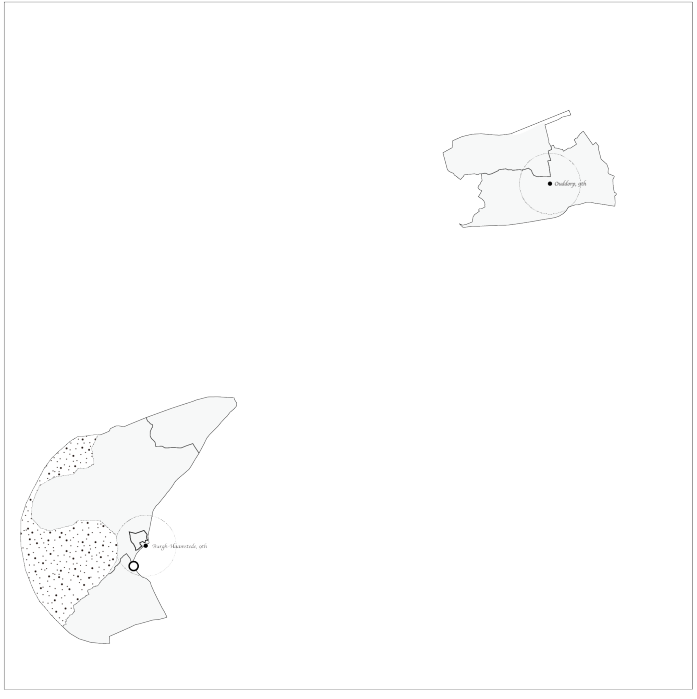
How to rethink landscape in Brouwersdam area as an opportunity to develop eco-tourism, that in an integral process improve the sustainability of Ecology and Economics in Dutch Southwest Delta?




Back to 900AC

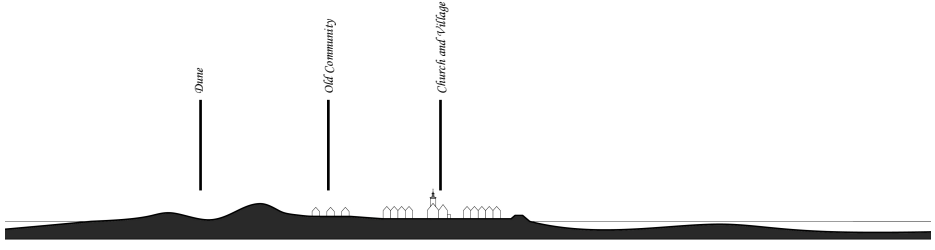
Dune Lanfscape by Jan van Goyen

Protected by this dune, people lived high and safe enough and escape from many storm floods through the centuries.



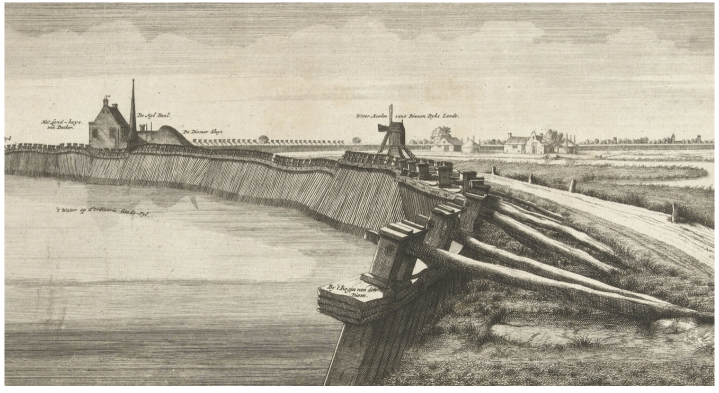
1300

Langs het tuinpad van mijn vaderen, Rien Poortvliet.

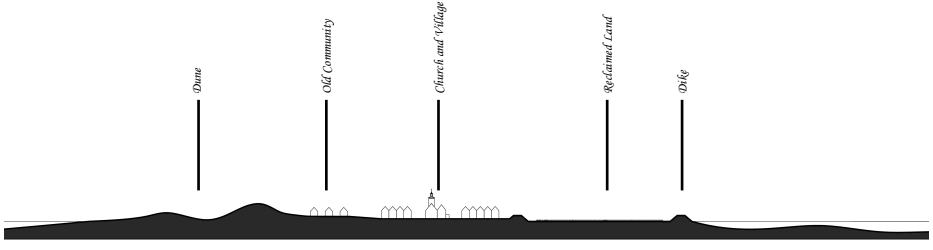


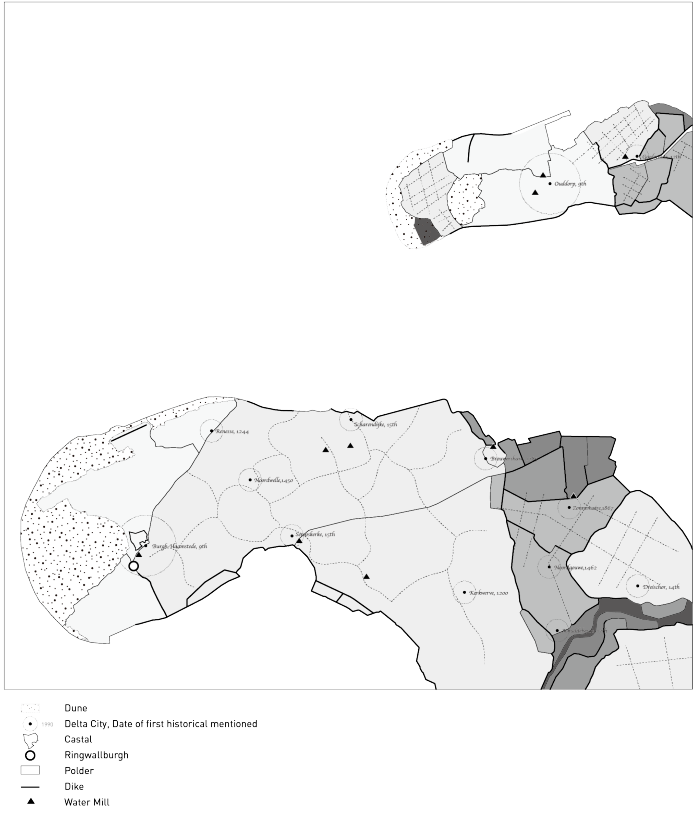
Although the life style has change now, parish churches still exist and became a important element of the landscape.

1750



De slechte toestand van de Zeedijk vanaf Diemen, Jaap Hannes (second part) 1705, Anonymous 1705

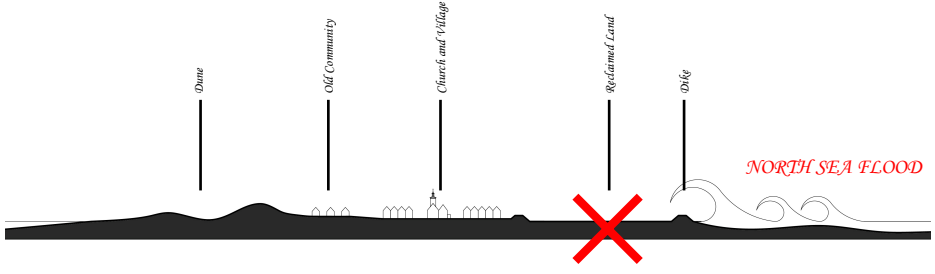


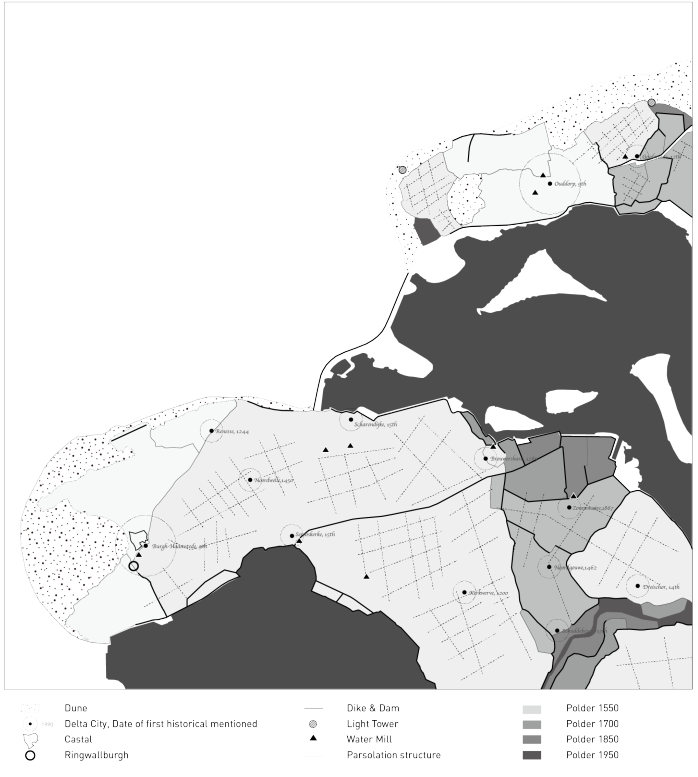


To support the growing population, more and more land was reclaimed.

1960

Construction of the dike-in-boulevard, 1960

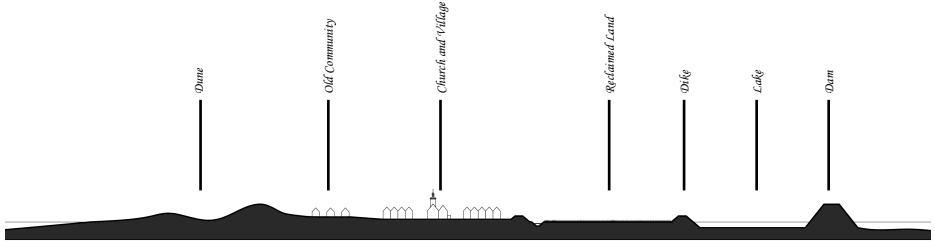




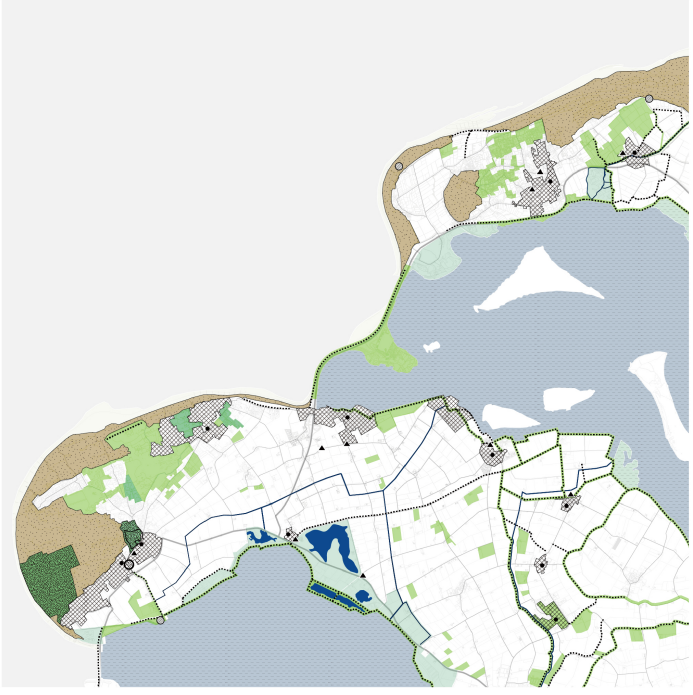
After the North sea flood in 1953, the water defense system Deltawerken was developed.

CURRENT

Productive landscape, 2017



This introduction of large scale mono-agriculture and the land consolidation vanished a large amount of biodiversity.



3. Regional Plan

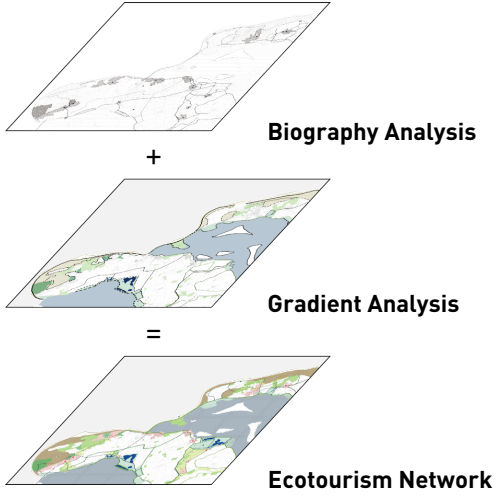
General Design Principle

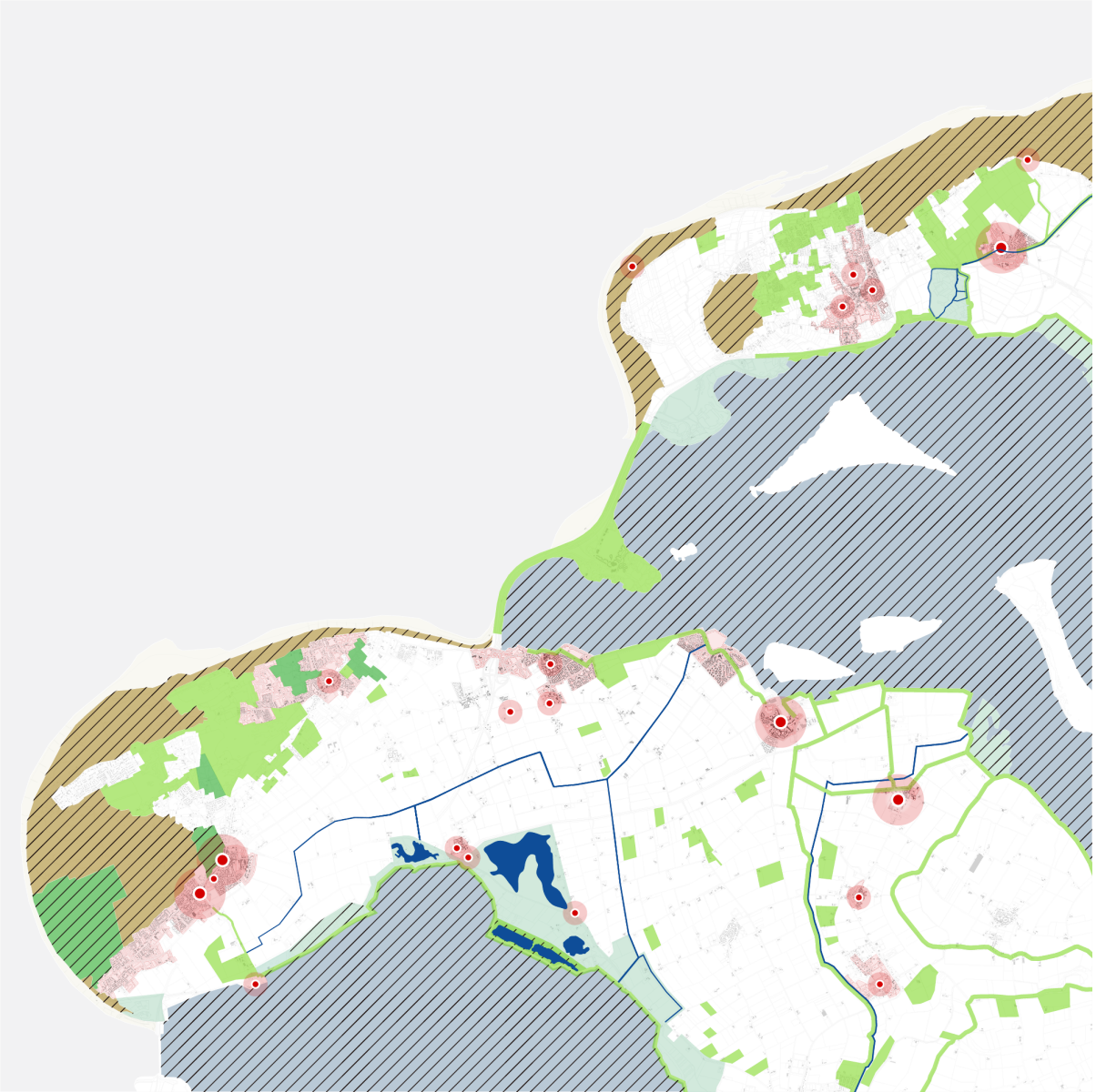
General Principle 1 : Respect Biography

Protect and Reinforce the cultural identity and the heritage that formed in the long history.

General Principle 2 : Re-establish the gradients based on Biography

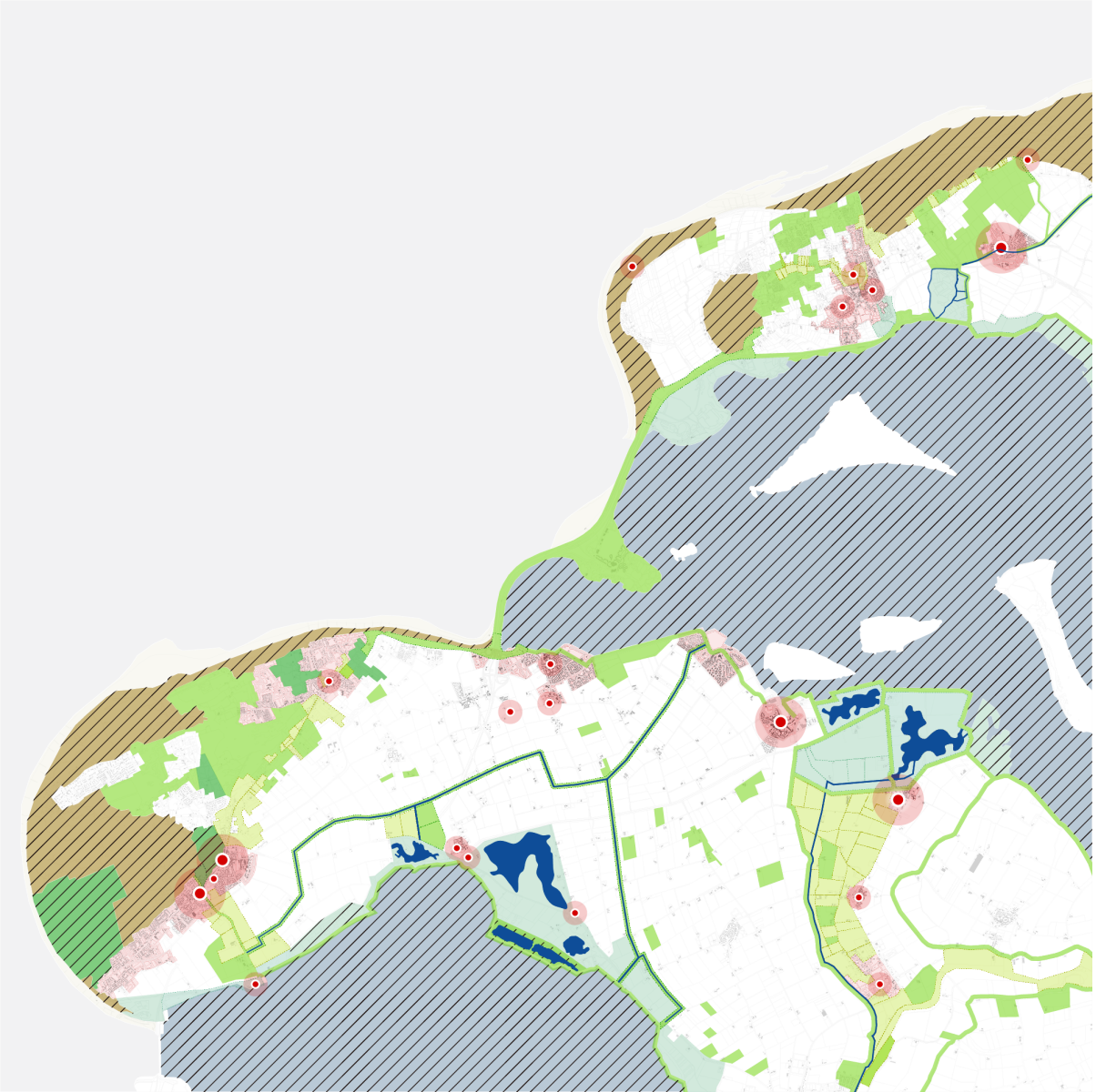
Make use of natural gradients to reinforce the cultural identity of place and promote the changing meaning of the landscape.

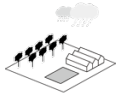




Conservation Area
Maintain the cultural and ecological quality

Landmark formation
Points of orientation in visual

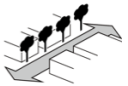




Multi-activity Farming
Optimize biodiversity in farm land

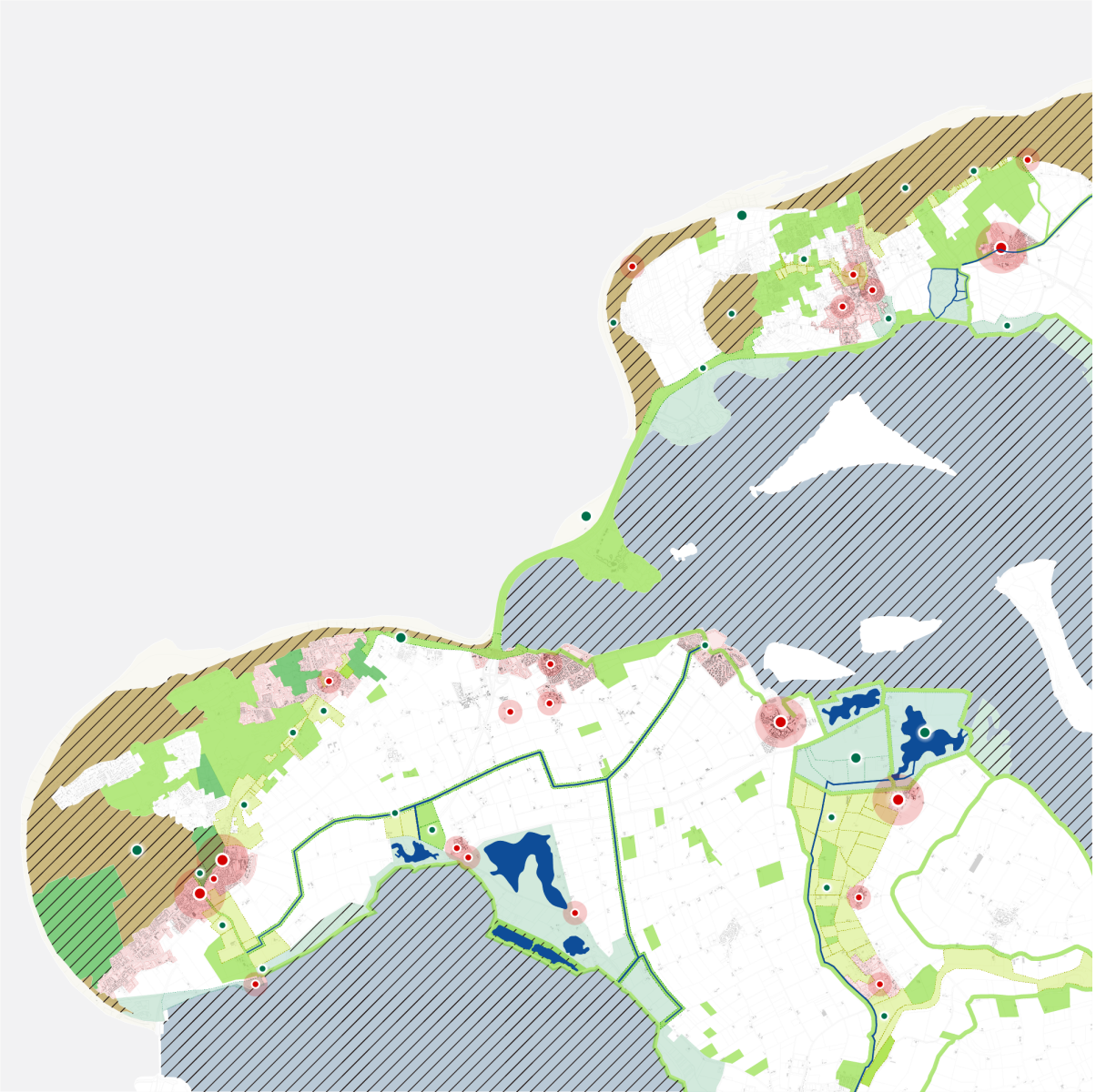
Conservation Area
Maintain the cultural and ecological quality

Landmark formation
Points of orientation in visual



Green Trails
Continues connection to improve ecological value

Wetland Restoration
Recover wetland by ditch



Multi-activity Farming
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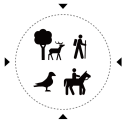
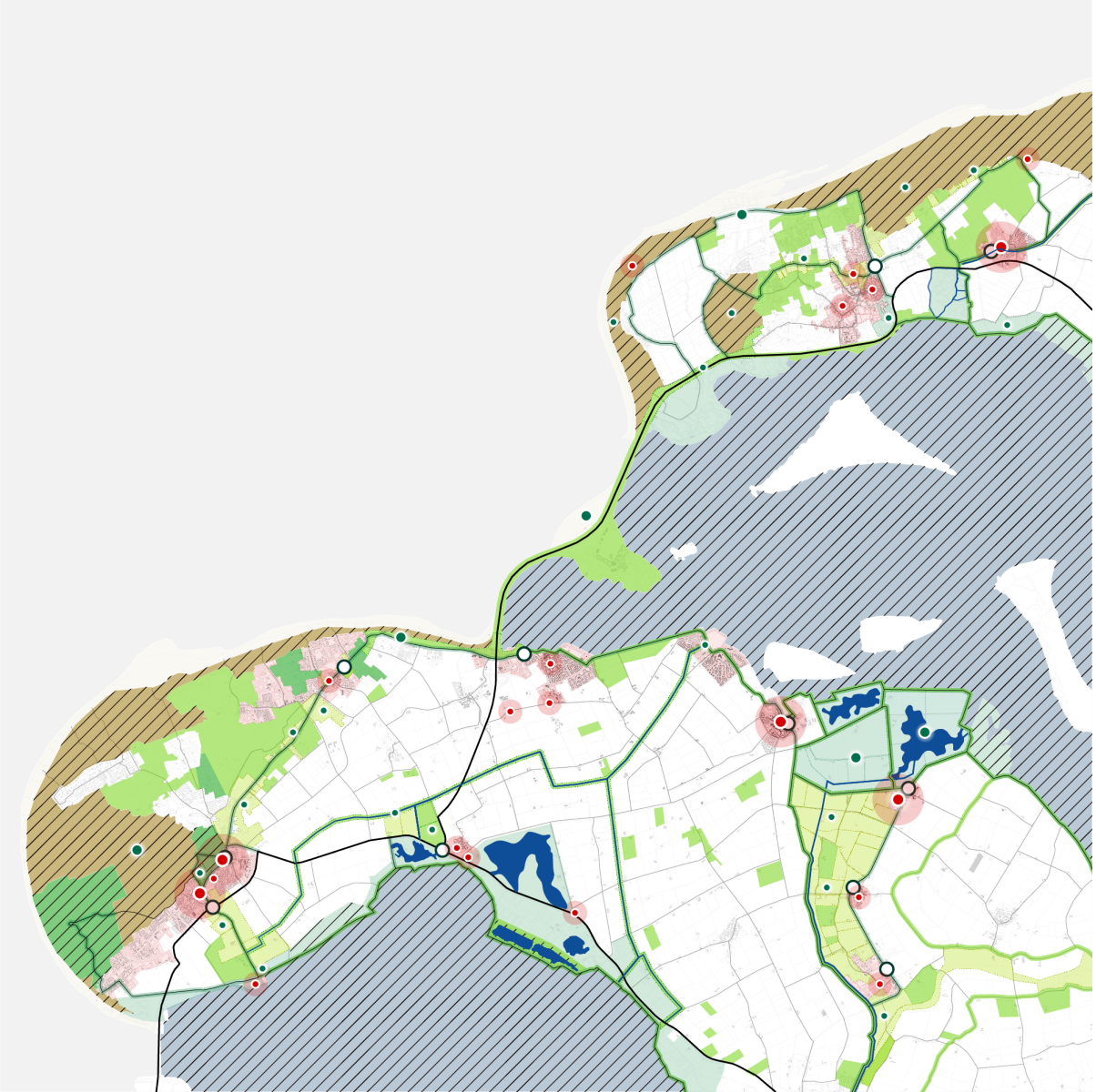


Programing
Points of orientation in visual

Landmark formation
Points of orientation in visual

Green Trails
Continues connection to improve ecological value

Wetland Restoration
Recover wetland by ditch



Multi-activity Farming
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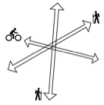


Access to Landscape
Link between landscape strengthen by slow mobility

Green Trails
Continues connection to improve ecological value

Multi-Service Station
Activity to increase the awareness of people

Wetland Restoration
Recover wetland by ditch

4. Design Intervention

4.1 Case Study : Burgh

4.2 Test Site

SITE PLAN

1- Dune and local species Groenknolorchis

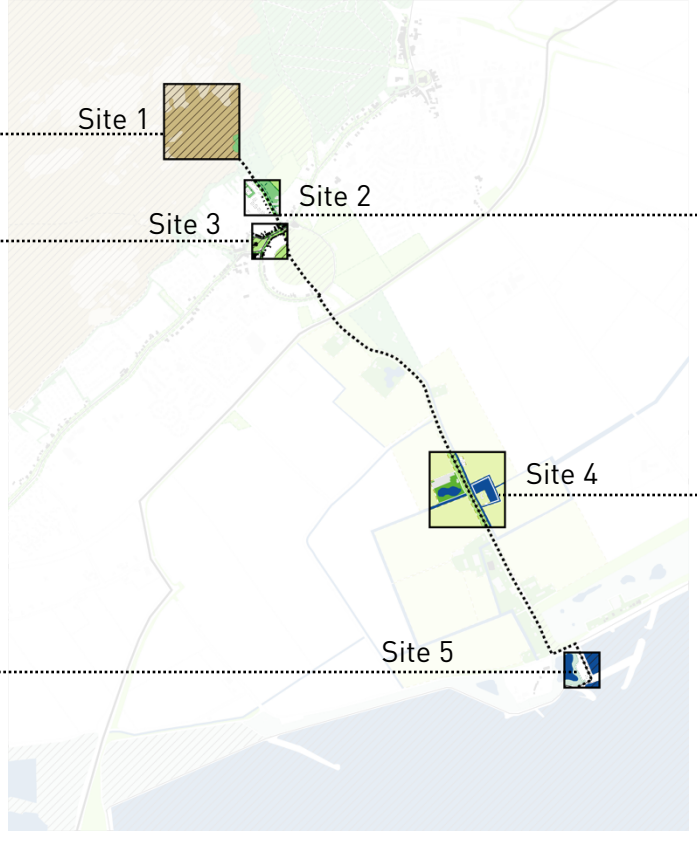
1- Dune used for water defence

3-Urban habitats with fruit tree

3-Burghse Ring and The Burgh Friends Church

5-Wetland with Acorus calamus

5 - Oosterschelde Lake and Light Tower



2-Wooden banks with alder, willow and thorn

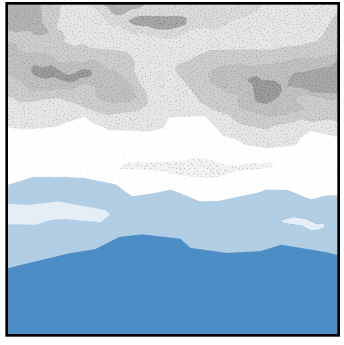
2-Emergency house built in 1950 at Duinwegje

4-Agricultural Habitat and Corn

4 - Meeldijk and the polder landscape

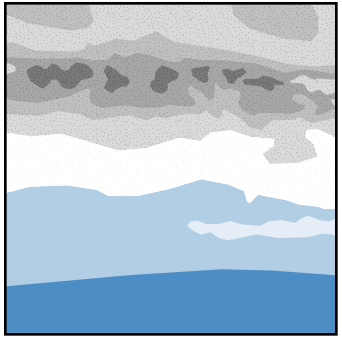
Test Site 1 : Current

PAST

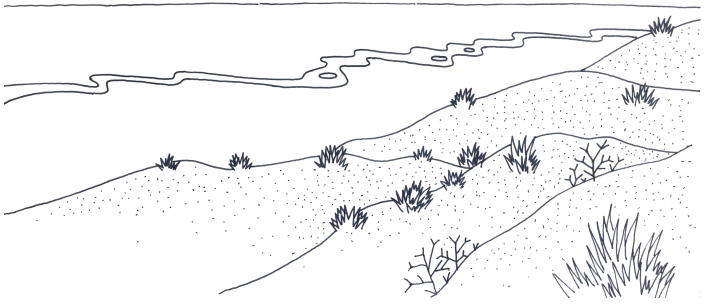


The dune used to have the dynamic habitat which can support the biodiversity.

CURRENT



Currently, the dune habitat become more fixed and the dune interspersed with small patch of native plants



CURRENT : Along the old small path, the old wooden banks are distroied and the ditch is also abondened.

1- Dune and local species Groenknolorchis

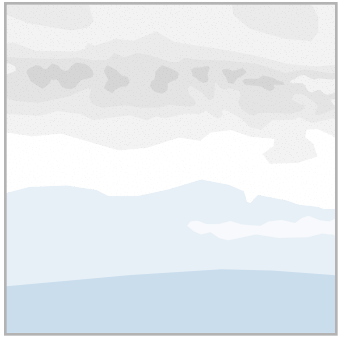
1- Dune used for water defence

Test Site 1 : Conservation Area and New Road

PAST

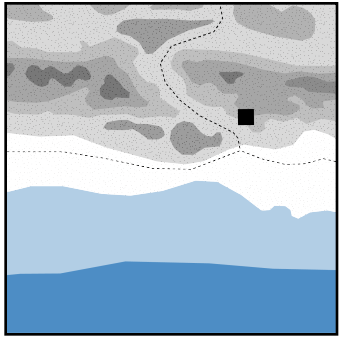
The dune used to have the dynamic habitat which can support the biodiversity.

CURRENT



Currently, the dune habitat become more fixed and the dune interspersed with small patch of native plants

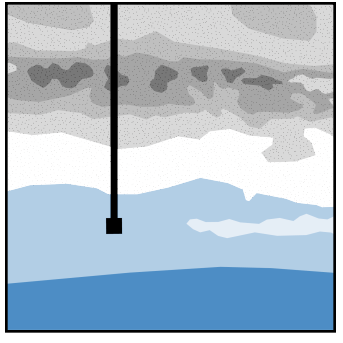
FUTURE : Option 1



A "Better" Design

1. Function in the long term
2. Access more flexible

FUTURE : Option 2



A "Worse" Design

1. Function in the short term
2. Barrier added in large green patches

Test Site 1 : Proposed

POTENTIAL ACTOR

National Government
Conservation area managed to preserve values and minimize impacts of invasive species

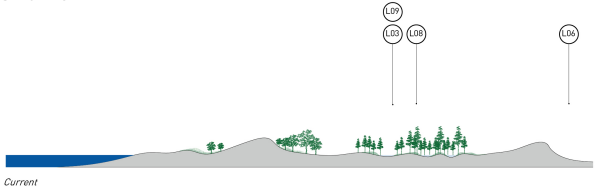
Municipal South Holland
Deepen ditches to lower water level and to increase water storage

NGO
Development of eco-educational program

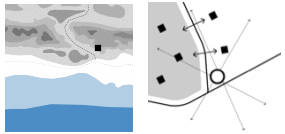
Farmer
Make use of grazing or mowing to maintain or create certain habitats

Tour Operators
Development of economical program by private actor

SECTION

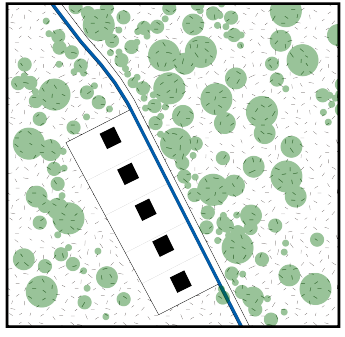


PROPOSED : The strategy which used to conserve the dune ecosystem also provide chance for the development of eco-educational program.



Test Site 2 : A green trail

PAST



The site used to be the natural area with the wooden bank or forest.

CURRENT

Currently, the development of new house has replaced many wooden bank.

CURRENT : Along the old small path, the old wooden banks are distroied and the ditch is also abondened.

2-Emergency house built in 1950 at Duinwegje

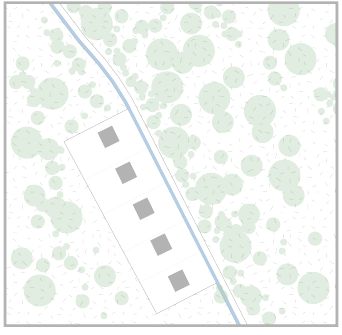
2-Wooden banks with alder, willow and thorn

Test Site 2 : A green trail

Local Design Principle

L03 Protect local Species and wildlife
L04 Reinforce cultural identity

PAST

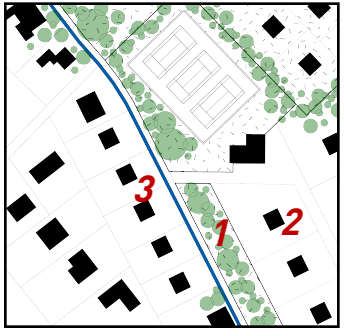


The site used to be the natural area with the wooden bank or forest.

CURRENT

Currently, the development of new house has replaced many wooden bank.

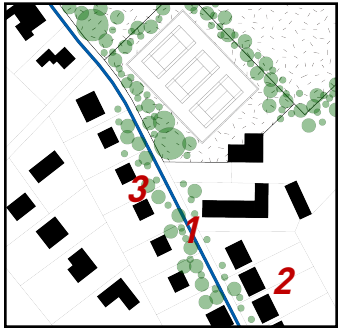
FUTURE : Option 1



A "Better" Design

1.Continuous vegetated corridor recovered by replacing the old house
2. Housing setbacks maximum from corridor
3. Heritage (emergency house) can be highlighted more

FUTURE : Option 2



A "Worse" Design

1. Vegetated corridor narrow and broken
2. Housing setbacks minimum from corridor
3. Heritage (emergency house) cannot be involved along the trail

Test Site 2 : Proposed

POTENTIAL ACTOR

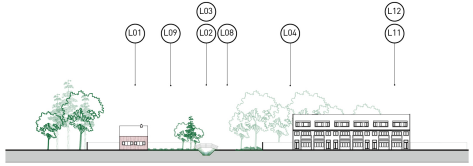
Real estate company
Development of new house

Local Government
Deepen ditches to lower water level and to increase water storage

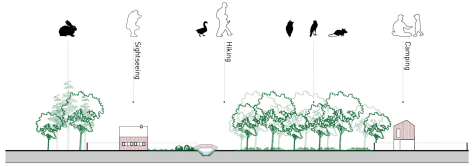
Local residents
Make use of existing heritage to develop cultural visiting

Landscape Authority
Forest and local grass land restoration

SECTION

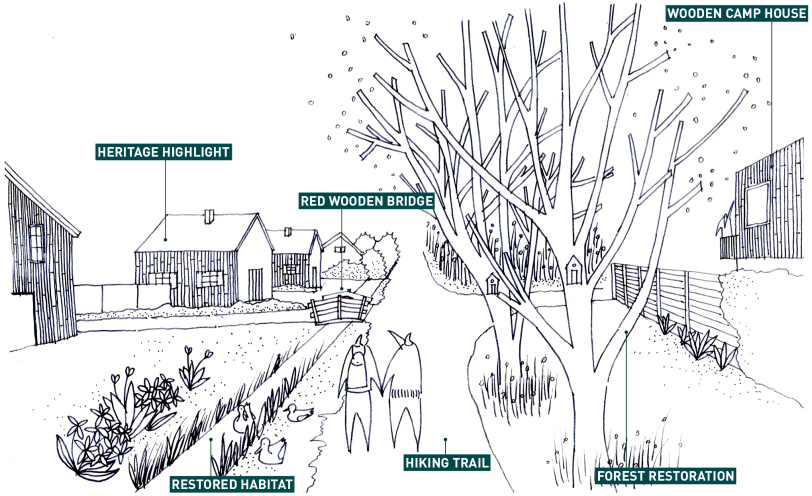


Current

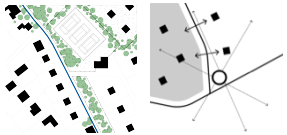


Possible Future

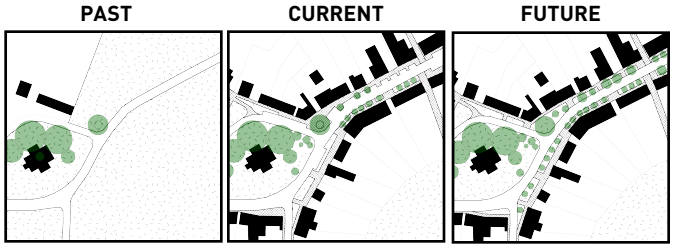
Calamus *Hydrangea* *Alder* *Willow* *Thorn bushes*



PROPOSED : The front yard of the emergency house will be modified and the wooden bank will be reconnected to highlight the view toward the emergency house to commemorate the 1953 flood.



Test Site 3 : Current



L01 Highlight Heritage

L03 Protect local Species and wildlife

L05 Slow Mobility

L08 Eco-educational program

L09 Involve Local Community

CURRENT : Along the old ring, fruit trees have been installed, matching the central location of these roads, but this structure does not continue everywhere.

Test Site 3 : Proposed

POTENTIAL ACTOR

Municipal South Holland
Green Street along the main touristic route

Local Government
Make use of existing heritage to develop cultural visiting

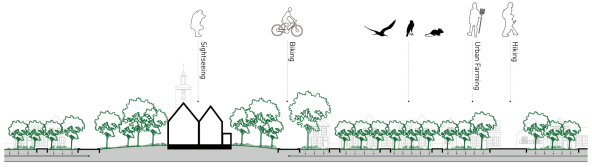
Local residents
Forest and local grass land restoration

Infrastructure Providers
Walking path and cycling route development along the main touristic route

Cultural Institutions
Highlight the heritage by management of the plants

SECTION

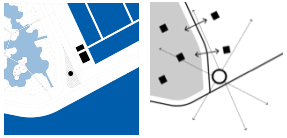
Current



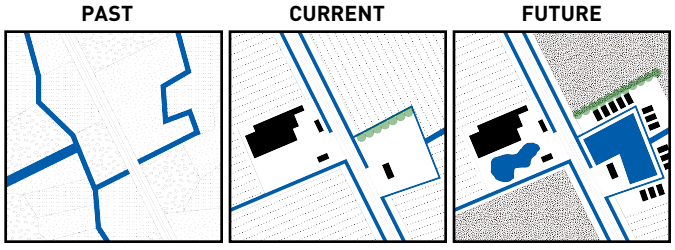
Possible Future

Pollard trees *Linden Tree* *Fruit Tree*

PROPOSED : The high tree along the street will highlight the church. The different program will be added along the street to involve more people and increase their awareness to protect the ecosystem.



Test Site 4 : Current



L01 Highlight Heritage

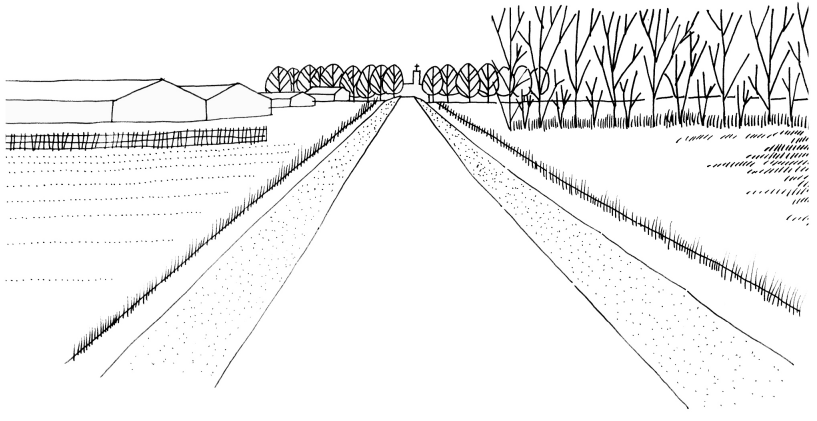
L03 Protect local Species and wildlife

L04 Reinforce cultural identity of water

L05 Slow Mobility

L07 New Access

L08 Eco-educational program



CURRENT : The losing ecosystem in the polder area is mainly caused by farming. In order to meet demand for the growing human population, current agricultural practices need to maximize the use of available land, which results in increased mechanization.

Test Site 4 : Proposed

POTENTIAL ACTOR

Municipal South Holland
Deepen ditches to lower water level and to increase water storage

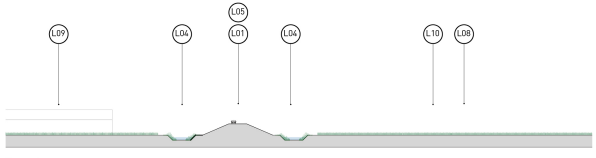
Sharing Platforms
Multi-service bus route / Car and bike Sharing System

NGO
Development of eco-educational program

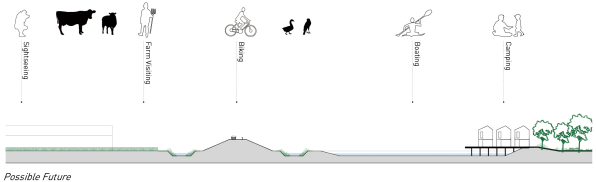
Farmer
Urban landholders create biodiversity farms friendly to wildlife

Real estate company
Development of new house

SECTION

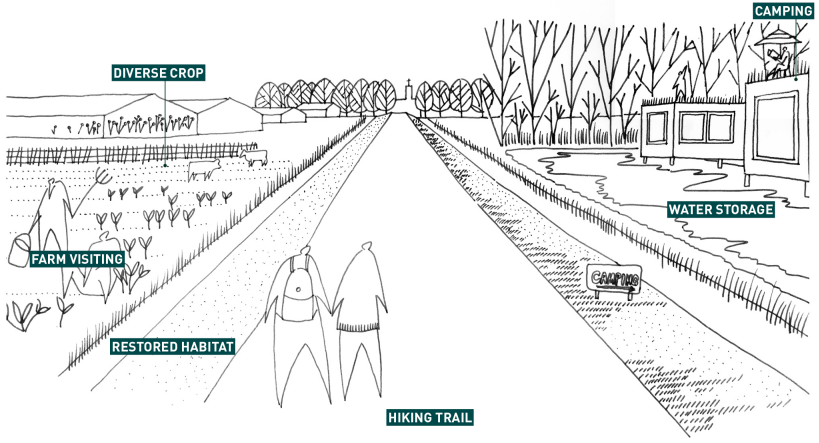


Current

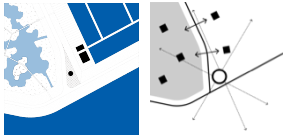


Possible Future

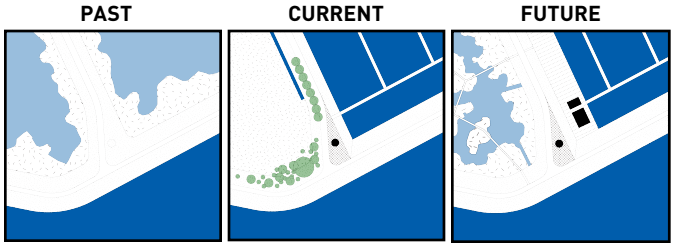
Sheep *Cow* *Salix Alba* *Potato* *Tulip* *Butomus umbellatus*



PROPOSED : The different kinds of agricultural are proposed to be planted in the area in the different time of the year based on the soil and water condition. On that way, the water quality and biodiversity will be improved.



Test Site 5 : Current



L01 Highlight Heritage

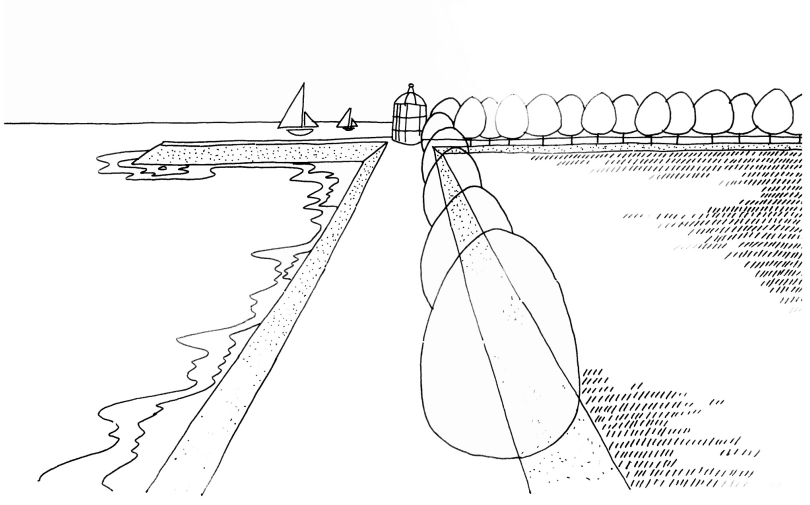
L03 Protect local Species and wildlife

L04 Reinforce cultural identity of water

L05 Slow Mobility

L07 New Access

L08 Eco-educational program



CURRENT : The image of water and light tower is the important cultural identity of the area and needed to be strenthened.

Test Site 5 : Proposed

POTENTIAL ACTOR

Municipal South Holland
Deepen ditches to lower water level and to increase water storage

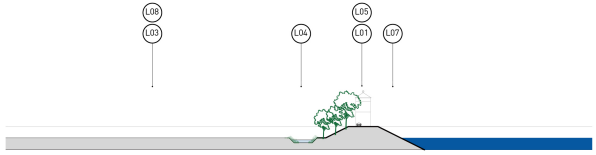
Sharing Platforms
Multi-service bus route / Car and bike Sharing System

NGO
Development of eco-educational program

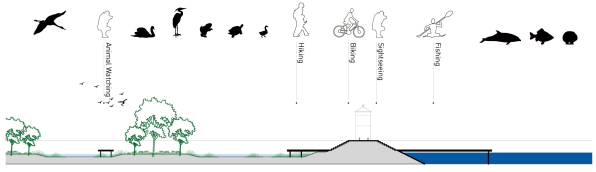
Farmer
Urban landholders create biodiversity farms friendly to wildlife

Landscape Authority
Forest and local grass land restoration

SECTION

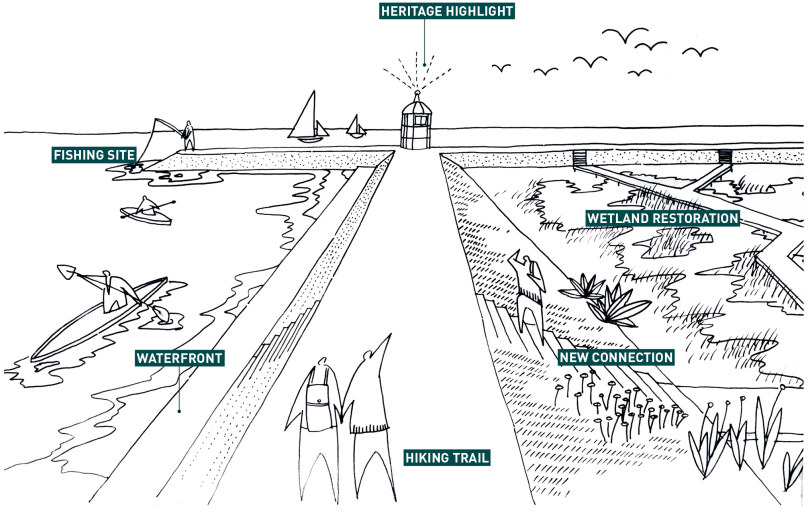


Current

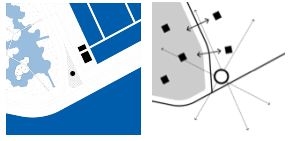


Possible Future

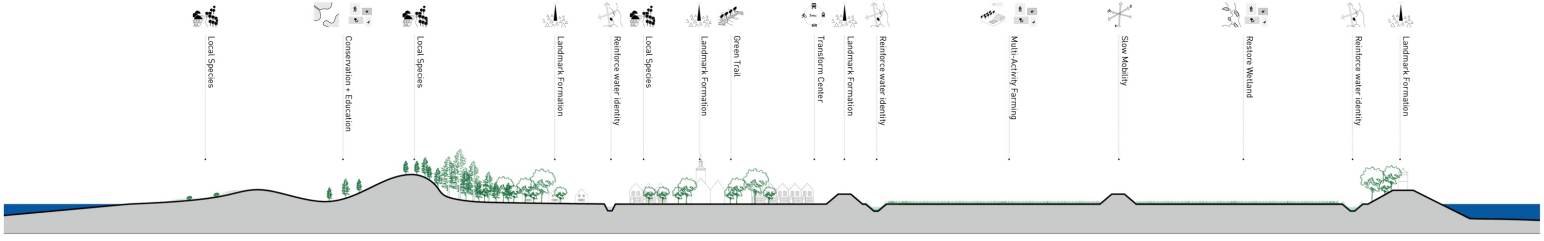
Algivorous fish *Bivalves* *Polygonum hydropiper* *Acorus calamus* *Ficinia nodosa*



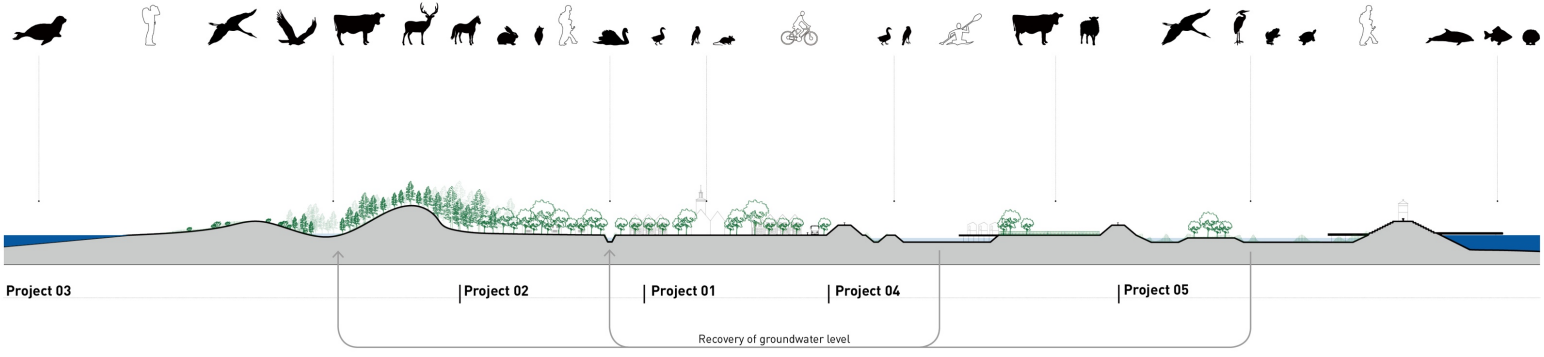
PROPOSED : The recovered wetland and the removal of trees along the street increase the accisibility of the water and light tower.



Current
Proposed intervention based on Local design principle



Possible Future
Ecological impact through intervention



Local Design Principle & Spatial Model

Local Design Principle 1 : The historical structure and the historical element should be highlighted and developed as the landmark. For example, the parish church should be highlighted by increasing the continuous of the ring structure and street space.

Local Design Principle 2 : The development of new facilities or new house should follow the guidelines of the essential features of the existing historical elements including, limited volume, appearance, local materials.

Local Design Principle 3 : The local species can be made use of to increase the local identity of the different site and improve the ecological quality of the site.

Local Design Principle 4 : The water body like creek, ditch and lake, as a kind of cultural identity for the delta region should be reinforced and developed further to improve the ecological quality. For instance, make use of the ditch to develop wetland.

Local Design Principle 5 : The main touristic route is designed to encourage the use of slow mobility including bike, bus and walking.

Local Design Principle 6 : Motor vehicle is not allowed inside the conservation area in order to preserve the territory.

Local Design Principle 7 : The accessibility of the cultural landscape and historical element should be improved. For instance, the bridge or pathway can be developed to increase the accessibility of the lake.

Local Design Principle 8 : The eco-educational program is designed based on the ecological context of the site and it should provide opportunity for people to experience the diversity of nature and increase the awareness of people to preserve the ecosystem.

Local Design Principle 9 : The local community can be involved in the development of the new facility as part of the new body of programmer.

Local Design Principle 10 : The local economy should be enhanced by integrating the new program with the existing local businesses present in the town.

Local Design Principle 11 : New constructions are firstly placed along the urban-nature gradients lines. The urban-nature gradients lines are identified as the transformation area between cultural landscape and the old village which designed to reinforce the cultural identity of the village.

Local Design Principle 12 : New construction should be innovative in order to limit their ecological and visual impact on the territory.

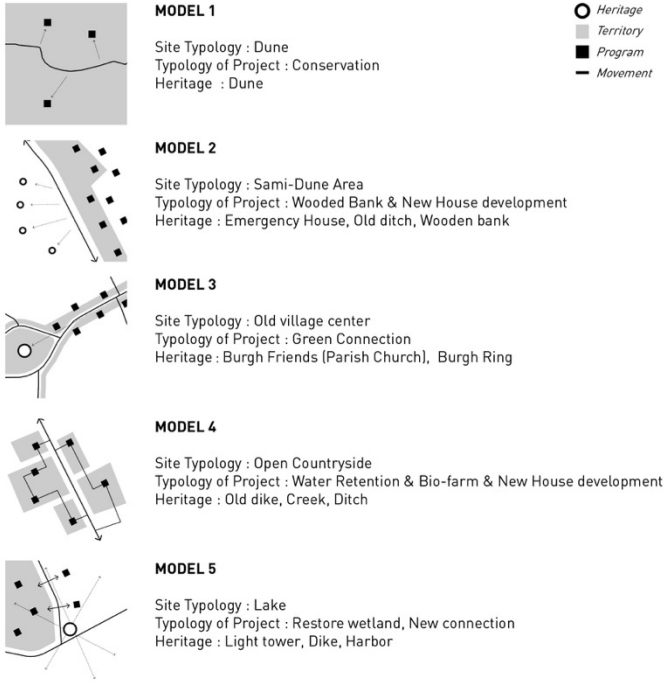


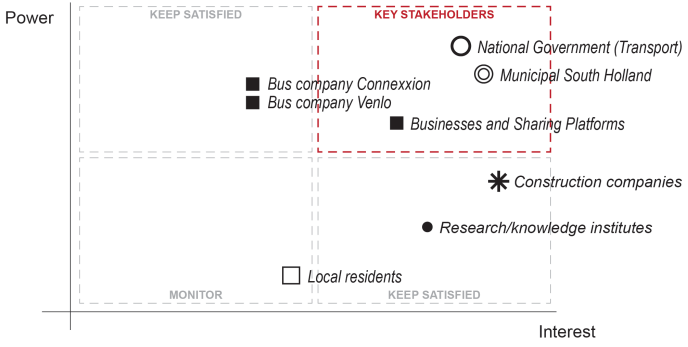
Image 9.8 : The spatial transforamtion involved in Ecotourism (Made by Author)

5. Implementation

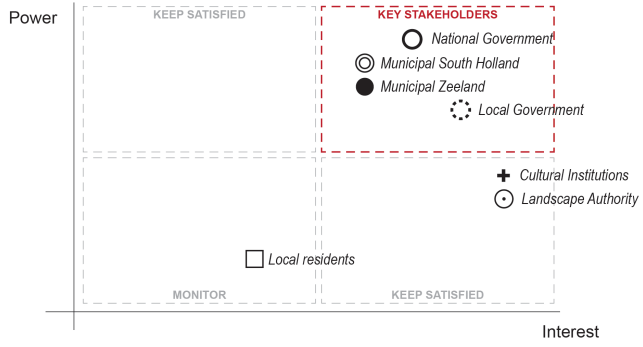
5.1 Actor
5.2 Time line
5.3 Phasing transformation
5.4 Evaluation

Actor Analysis

MOBILITY // SHIFT TO SLOW TRANSPORT

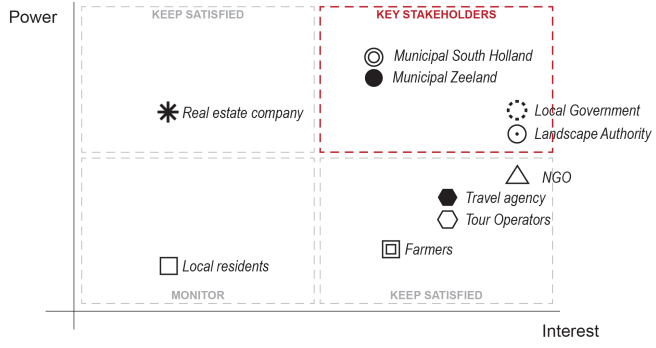


HERITAGE // CONSERVE AND HIGHLIGHT HERITAGE

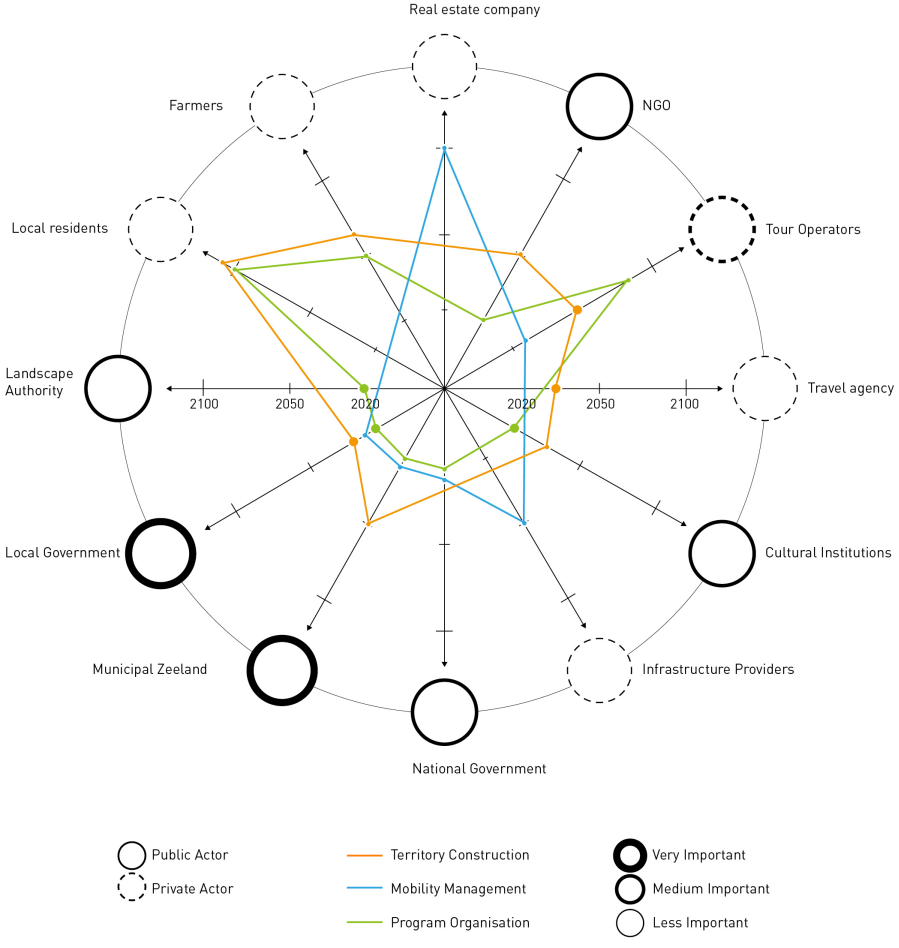


TERRITORY // IMPLEMENTING GREEN INFRASTRUCTURE

PROGRAM // IMPROVE AWARENESS AND ECONOMICAL INCOME



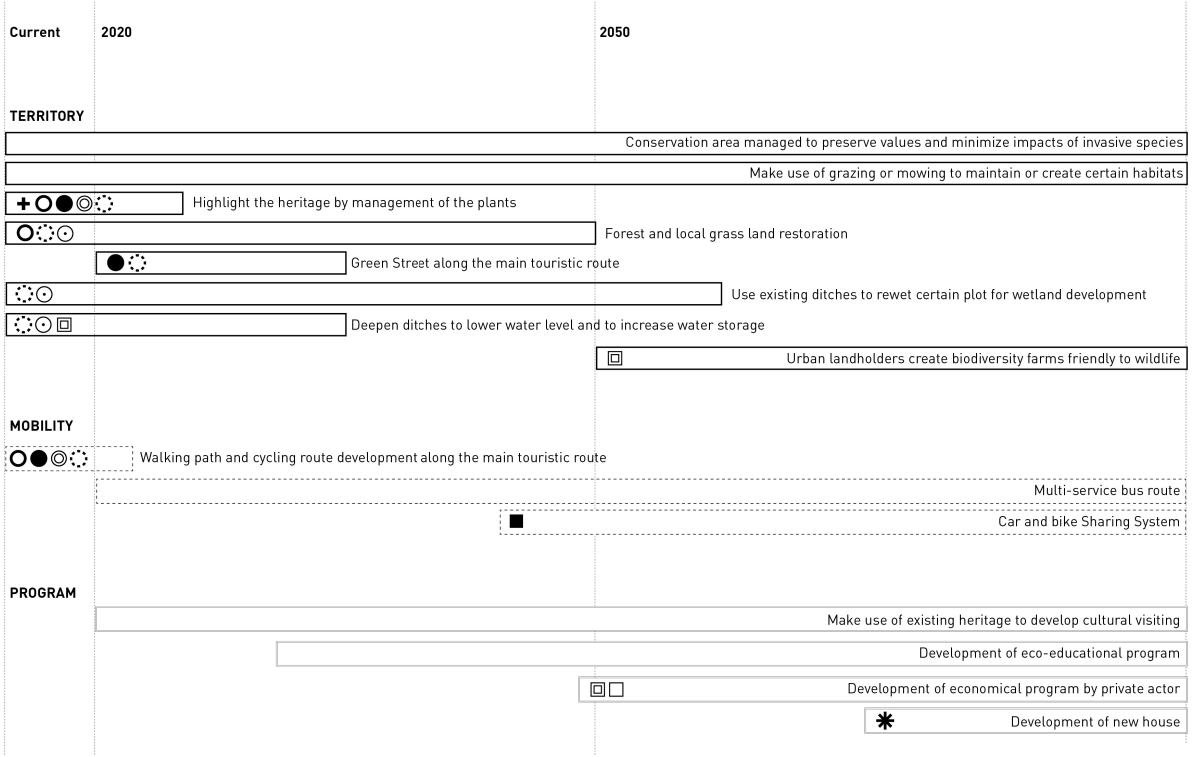
Actor Analysis



Timeline for implication

Timeline for implementation

The timeline shows the implication of the different actions involved in each project and the stakeholders which is possible to take responsible of it. Based on the time line, we can see the structure plan is started by municipal government and local government for the most fundamental task. They will take responsible to prepare the backbone of ecotourism.



Phasing the transformation : 2020

Phase 1 : 2020

In the first phase, I will make use of this existing cultural and ecological resources to develop Ecotourism Network. Zone planning will be formulated to help preserve values and minimize impacts of invasive species. And the existing cultural and natural resource will be reactivated as the hotspots by adding more program and increasing the accessibility of them.

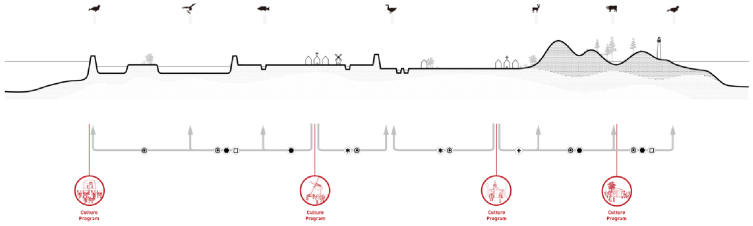
ACTION

- Highlight the heritage by management of the plants
- Conservation area managed to preserve values and minimize impacts of invasive species.
- Make use of grazing or mowing to maintain or create certain habitats.
- Forest and local grass land restoration
- Make use of existing heritage to develop cultural visiting
- Walking path and cycling route development along the main touristic route

STAKEHOLDER

- National Government
- Municipal Zeeland
- Municipal South Holland
- Local Government
- Landscape Authority
- Cultural Institutions

PROPOSED SECTION



Phasing the transformation : 2050

Phase 2 : 2050

In the second phase, the main objective is to restore the natural gradient in the region. As the ecosystem and biodiversity improved, the network can support the development of various eco-educational program. Different actions will take place in different place. Based on the form or new gradients that I create, the new program will also be proposed there.

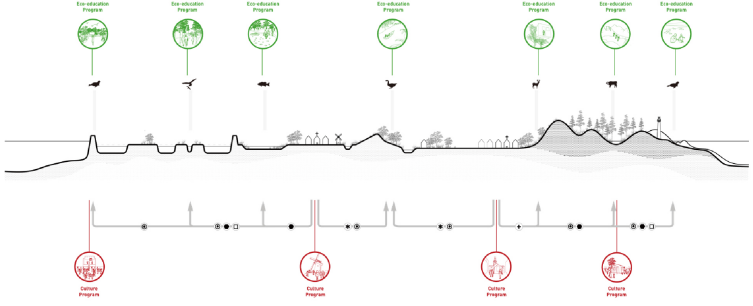
ACTION

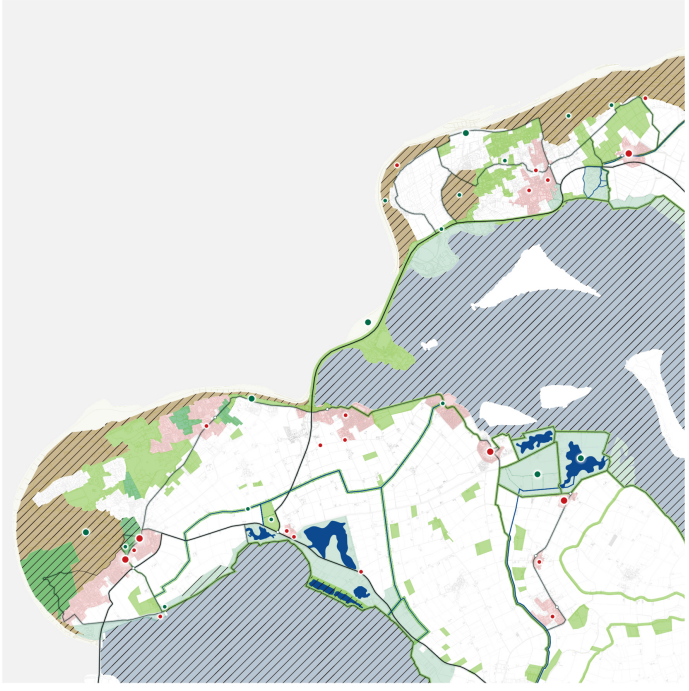
- Green Street along the main touristic route
- Use existing ditches to rewet certain plot for wetland development.
- Deepen ditches to lower water level and to increase water storage.
- Forest and local grass land restoration
- Development of eco-educational program
- Multi-service bus route / Car and bike Sharing System

STAKEHOLDER

- Farmers
- Infrastructure Providers
- Tour Operators
- Travel agency
- NGO

PROPOSED SECTION





Phasing the transformation : 2100

Phase 3 : 2100

In the third phase, due to the development of eco-educational program, eco-tourism growth will take place without putting too much burden on the ecosystem. The development of ecotourism and economy form a virtuous circle. As the spatial quality improved, ecotourism will also provide chance for new urbanisation.

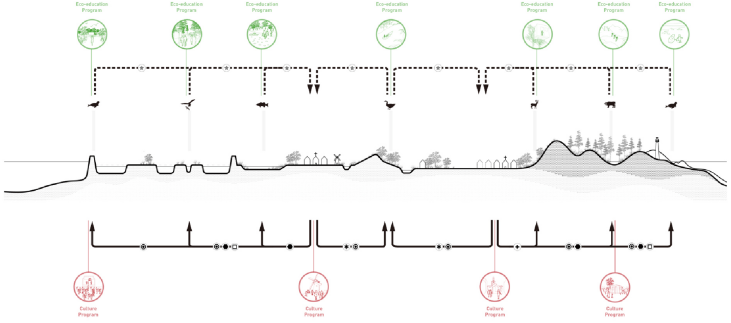
ACTION

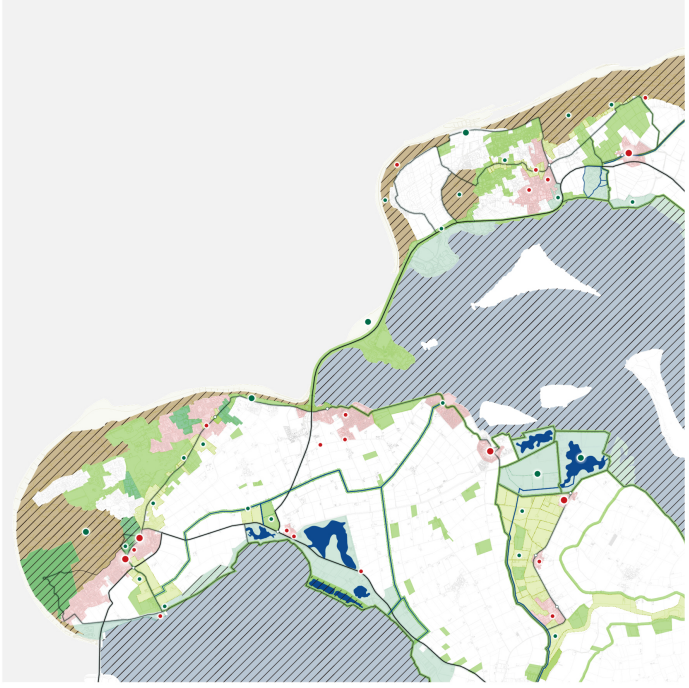
- Urban landholders create biodiversity farms friendly to wildlife.
- Development of new house
- Development of economical program by private actor

STAKEHOLDER

☐ **Local residents** ✳ **Real estate company**

PROPOSED SECTION



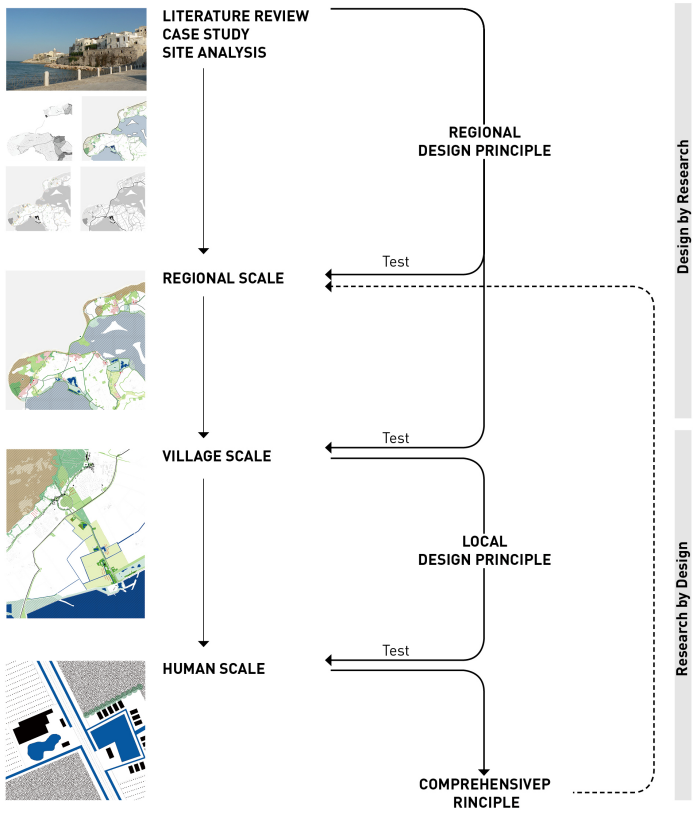


6. Reflection

Reflection : Research and Design

In the first part, I use the design by research method. Based on the literature review and case study, the spatial framework of ecotourism and the general principle (Respect biography and re-establish gradients)is concluded. Based on the site analysis, I implement them in the regional structure plan in Brouwersdam.

In the second part, I zoom into the village scale to further explore the visualization of the structure plan. By using the research by design process, the local design principles are explored further in 5 human scale design. The way how we organize ecotourism in these 5 cases are also concluded. Having the condition of them, they can be reflect back to the regional scale and help to achieve the goal of this graduation project.



Reflection : Ecotourism Framework

- What theory could be introduced to help the analysis or design process of ecotourism?
Two main theories, that is landscape biography, landscape gradients.

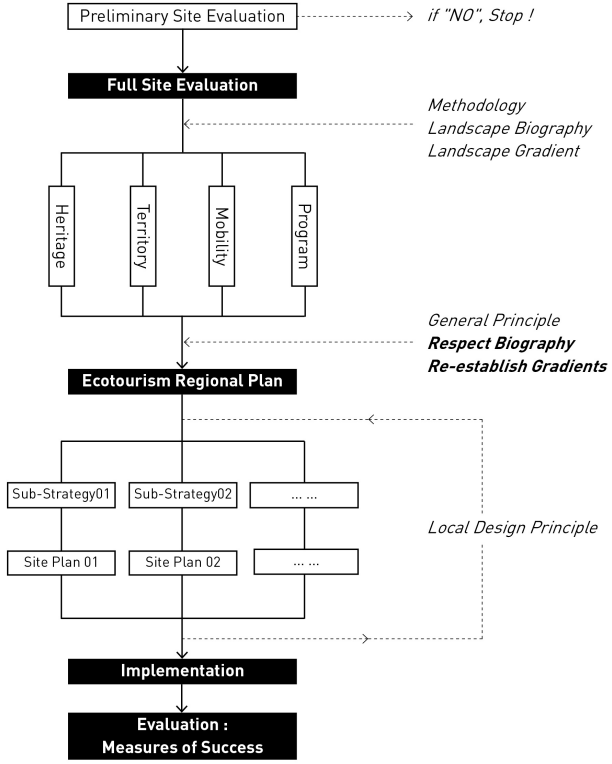
- What design principle could be introduced to create conditions for the development of ecotourism?
Design principles that can be applied in general and could be only applied under local context were generated.

- How can the existing landscape, community and infrastructure be transferred to the spatial element for the regional planning of ecotourism?
The structure plan demonstrates the essential operations to transform the territory, and the main function of a certain area with certain element typology.

- What spatial intervention can we design in the local scale to achieve the design objective?
Based on the local design principle, the spatial intervention in the human scale will be elaborated on 5 cases.

- How to design a corridor and generate a well synthesized spatial development framework for the region? What action, phase, actors shall we study to achieve it?
The different action and actor involved in the development of the ecotourism network will be elaborated.

A Framework of the Ecotourism Planning Process



Reflection : Model for Ecotourism

Finally, following these principle, different location is chosen to show the implication of them. Each site shows a certain way to organize the landscape and heritage under a certain kind of current heritage condition and ecosystem condition. Having these condition, they can be promoted in the other similar area.

Of course, they could have many other forms and variations according to the urban context, and therefore to be localized and contextualized. But the general method to develop these language that making use of new natural gradients to link the cultural identity and providing opportunity for new program can be the same.

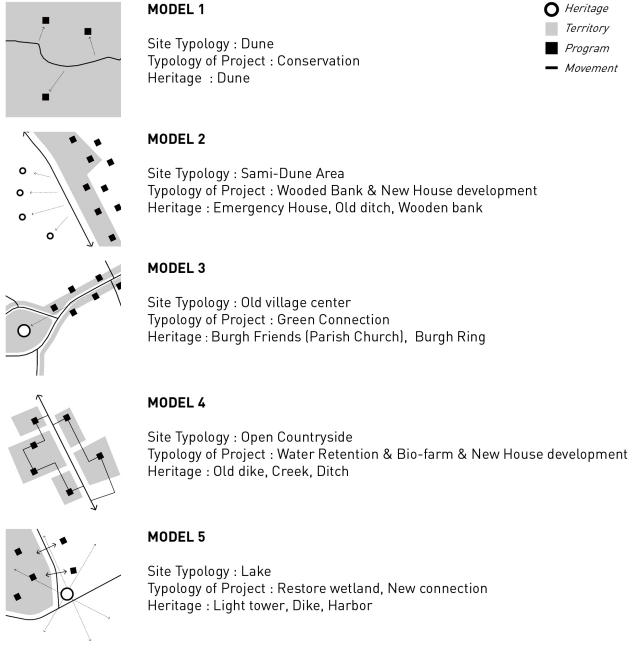
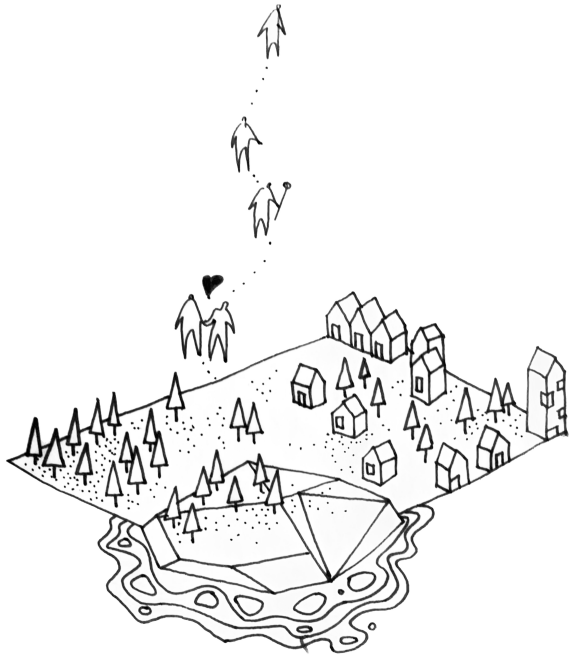


Image 9.8 : The spatial transforamtion involved in Ecotourism (Made by Author)

Question !



ECOTOURISM