

Wetland

Redistribute, Reuse, Reclaim water



Country / City Portugal, Guimarães

University / School University of Minho, School of Architecture

Academic year 2019/2020 | 4th year

Title of the project Wetland: Redistribute, Reuse, Reclaim water

Authors Bárbara Sofia Carvalho Peixoto, Bruno Miguel Pinto Castro, Filipa da Silva Serino

TECHNICAL DOSSIER

Title of the project	Wetland: Redistribute, Reuse, Reclaim water
Authors	Bárbara Sofia Carvalho Peixoto, Bruno Miguel Pinto Castro, Filipa da Silva Serino
Title of the course	Atelier 2A: Territory
Academic year	2019/2020 4th year
Teaching Staff	Marta Labastida Juan, Marisa Carvalho Fernandes
Department/Section/Program of belonging	Mestrado Integrado Arquitetura. Escola de Arquitetura,
Universidade do Minho (MiArq- EAUM)	
University/School	MiArq- EAUM. University of Minho, School of Architecture



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

The work developed focuses on the area of Esposende and Aguçadoura, in Portugal, based on the characteristics of the territory and the sea. This area is defined by paths and water infrastructures that function as a connection between terrestrial and maritime territory. They are essential in the transport of water and in the support of agricultural practice, representing a fundamental role in the distribution of water and defining the parceling of the territory. These infrastructures prove to be degraded and damaged over the years, resulting in a significant loss of water. Our intervention consists in creating a wetland in the most deteriorated areas, being used for a greater reuse and preservation of water. The water will be redirected to the agricultural fields and greenhouses, thus creating a water cycle. This wetland will allow the establishment of a new ecosystem and creating more biodiversity in this region. The main focus of the intervention is to preserve and reuse these water structures, as well as to implement new methods that will promote agricultural practice, reinforcing the important role that water has in the territory. Taking advantage of degraded greenhouses, the hydroponic system is implemented, which is a method of cultivation through water.

For further information
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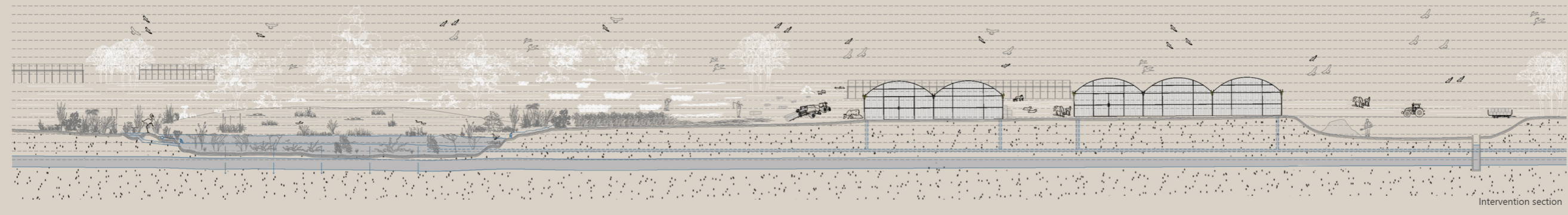
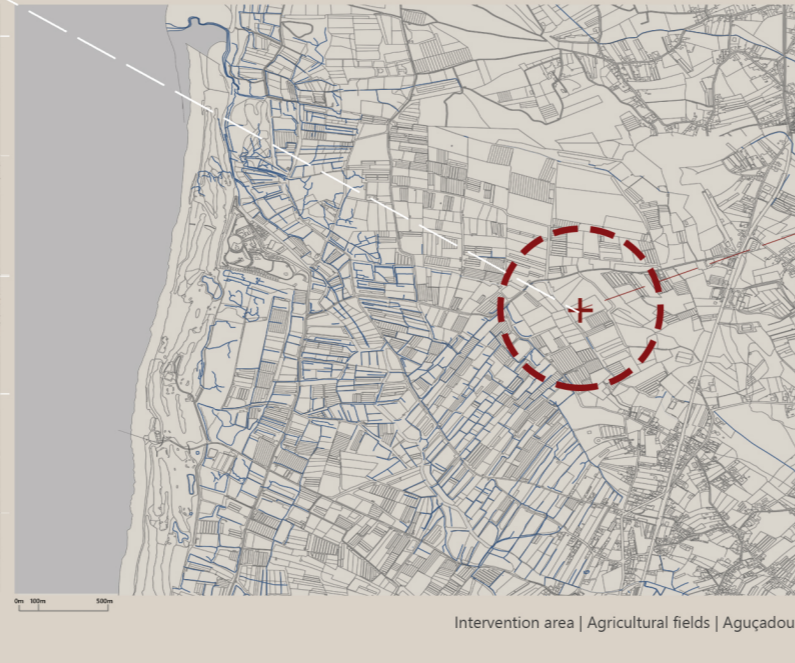
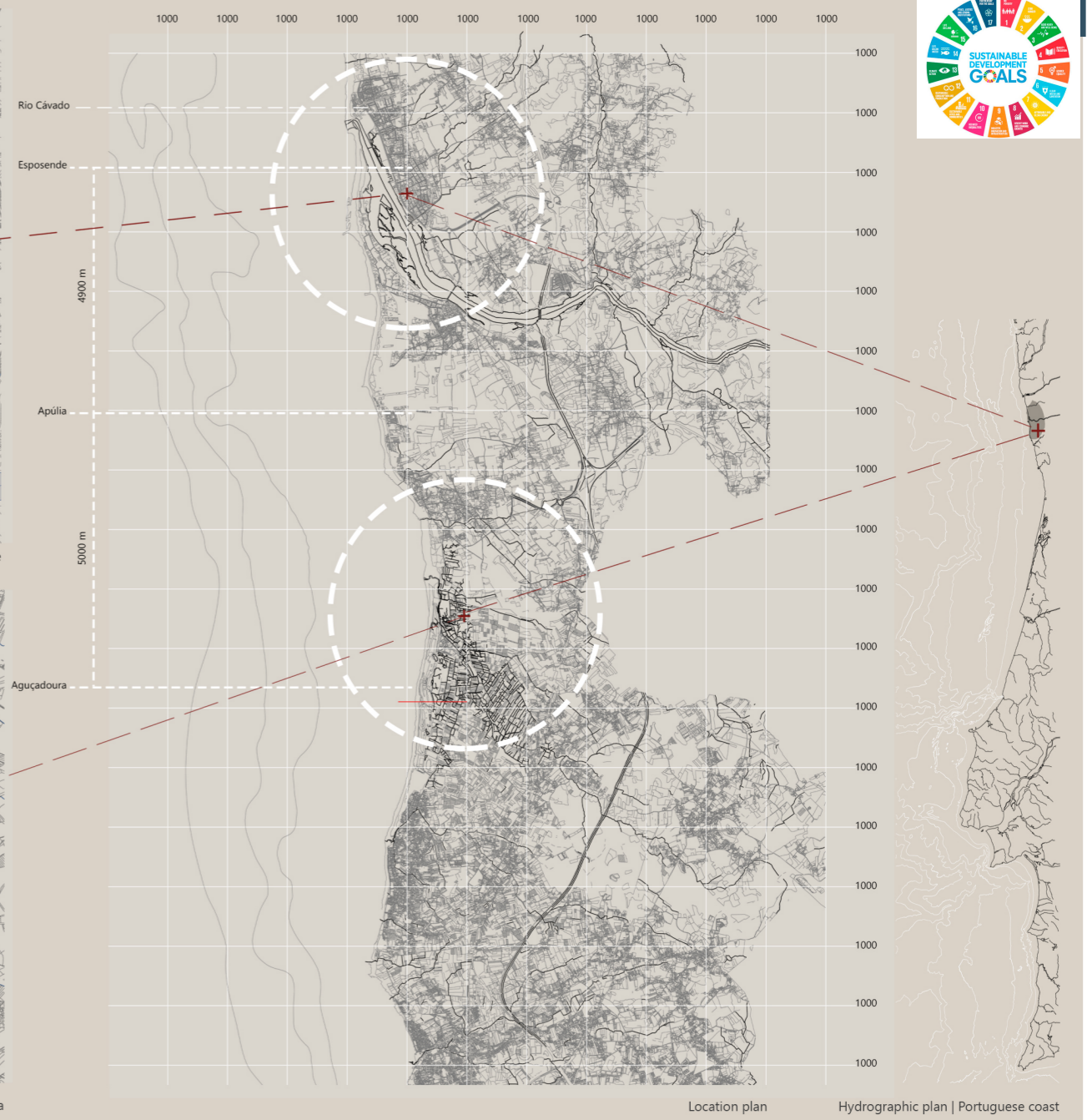
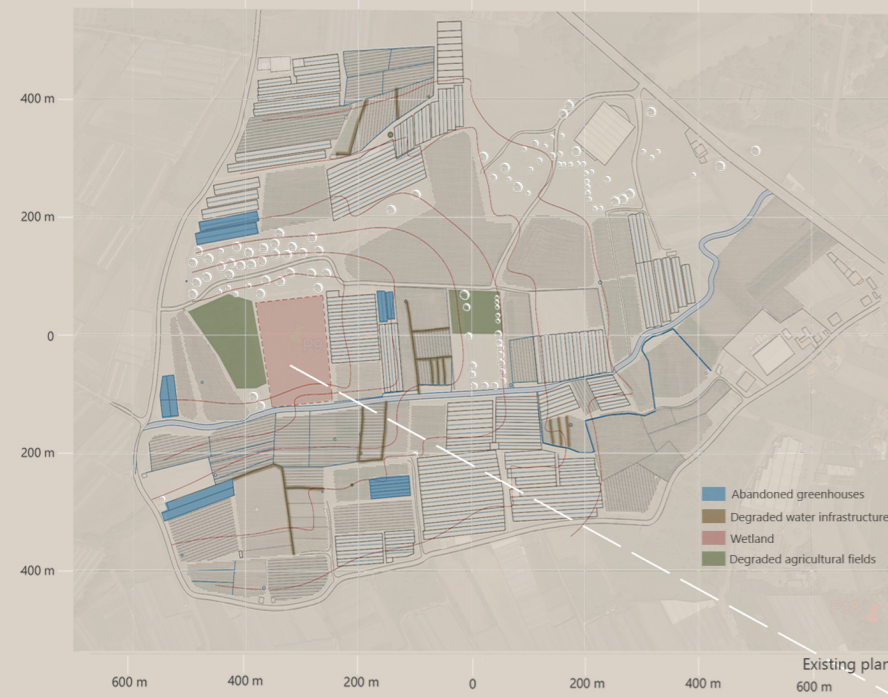
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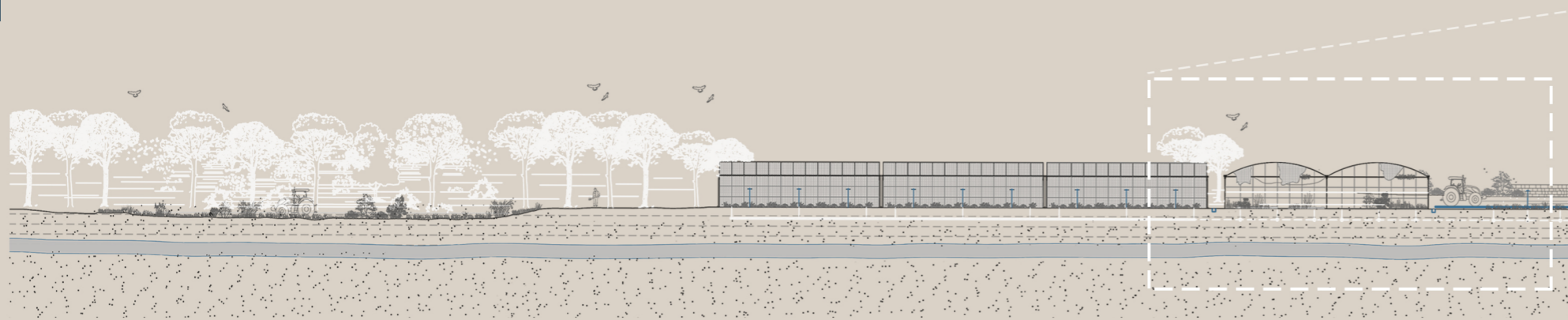


CLIMATE CHANGE AGAIN

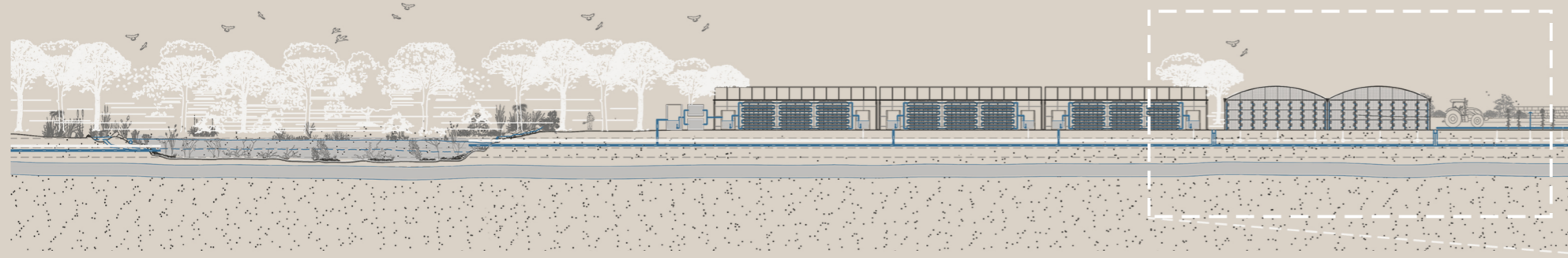
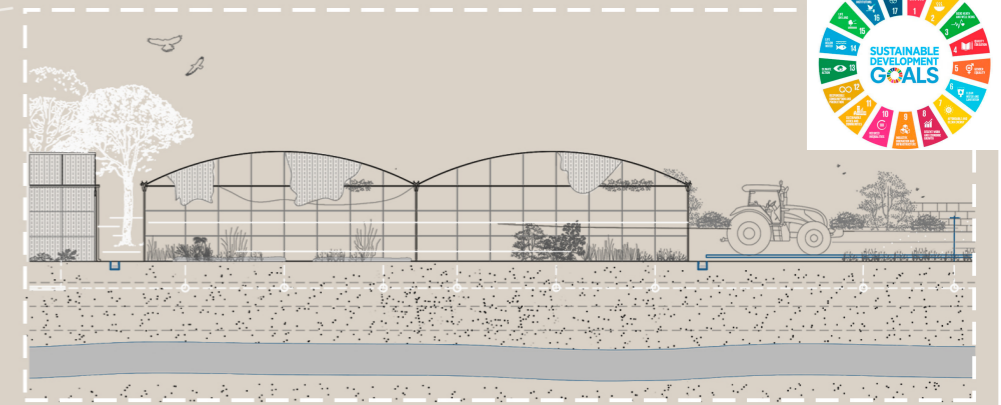
11th International Biennial Landscape Barcelona

Barcelona September 2020
SCHOOL PRIZE

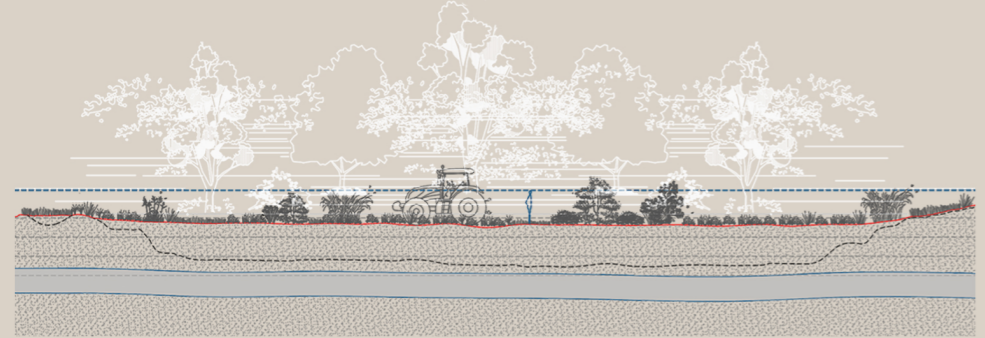
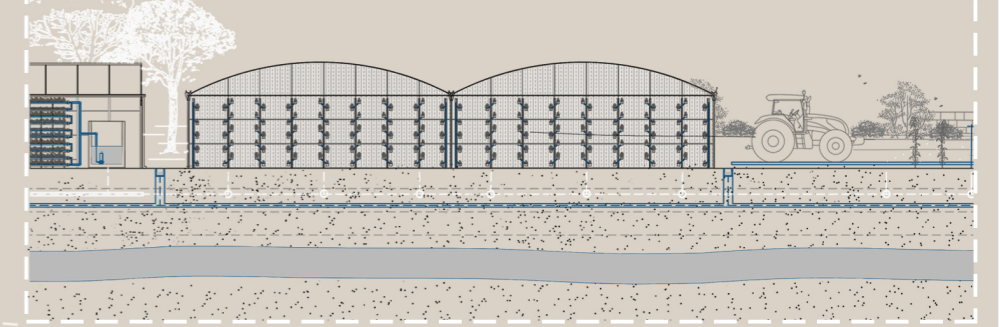




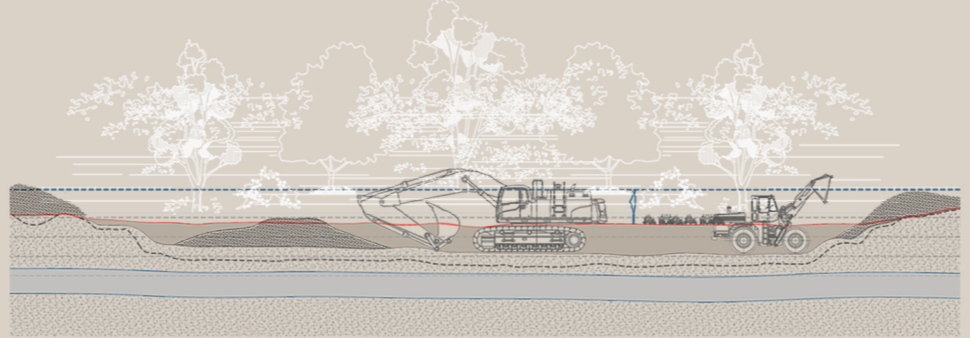
Existing Section | Before



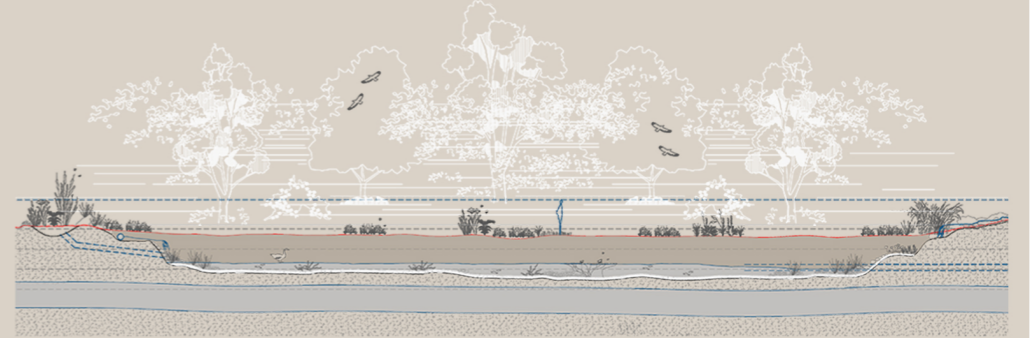
Intervention Section | After



Phase 1

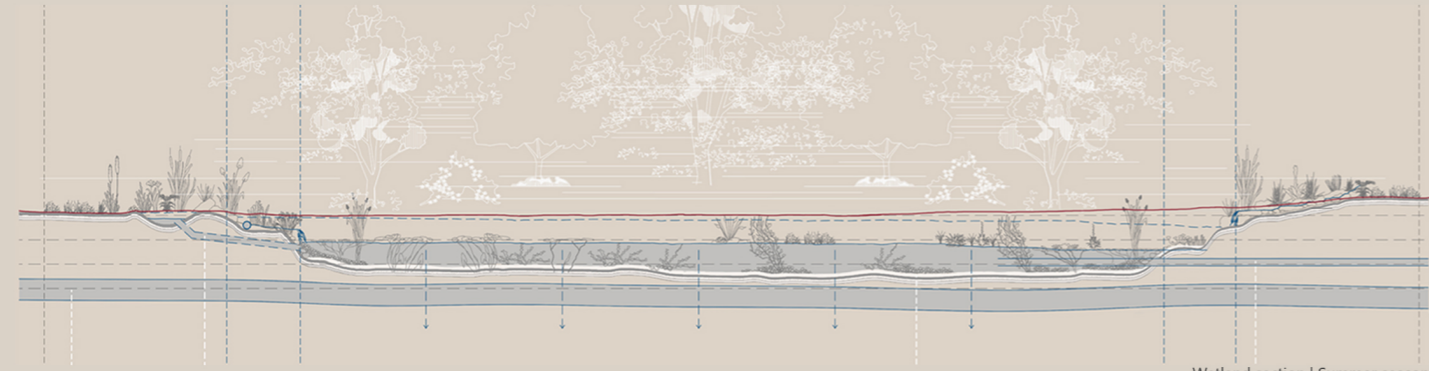


Phase 2

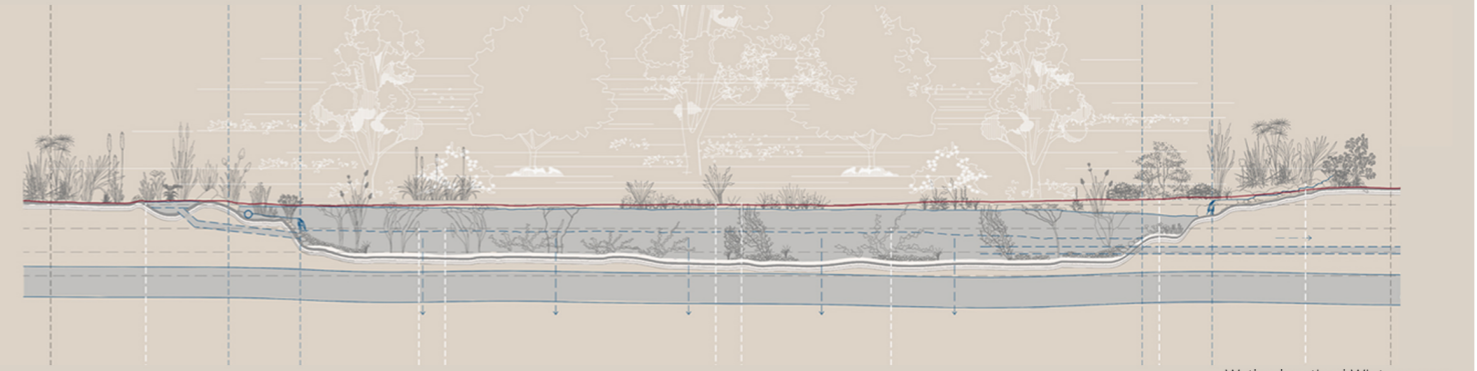


Phase 3

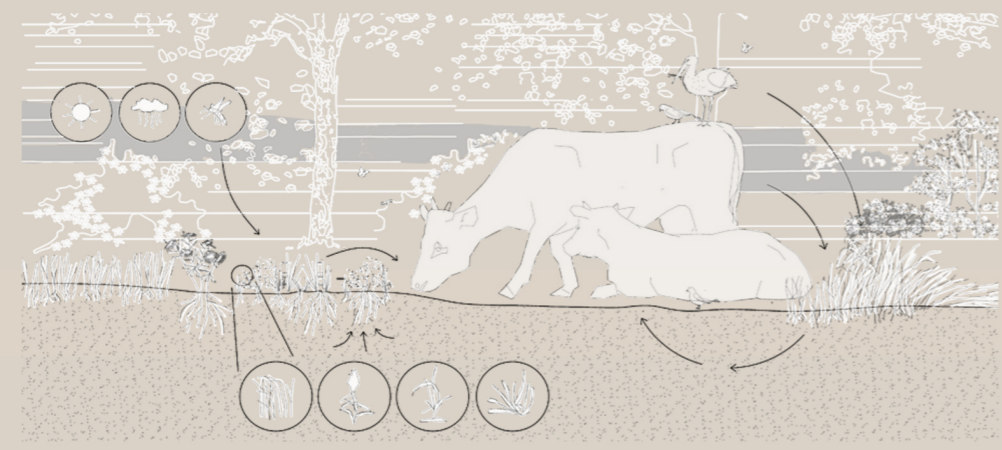
Wetland section | Evolution process



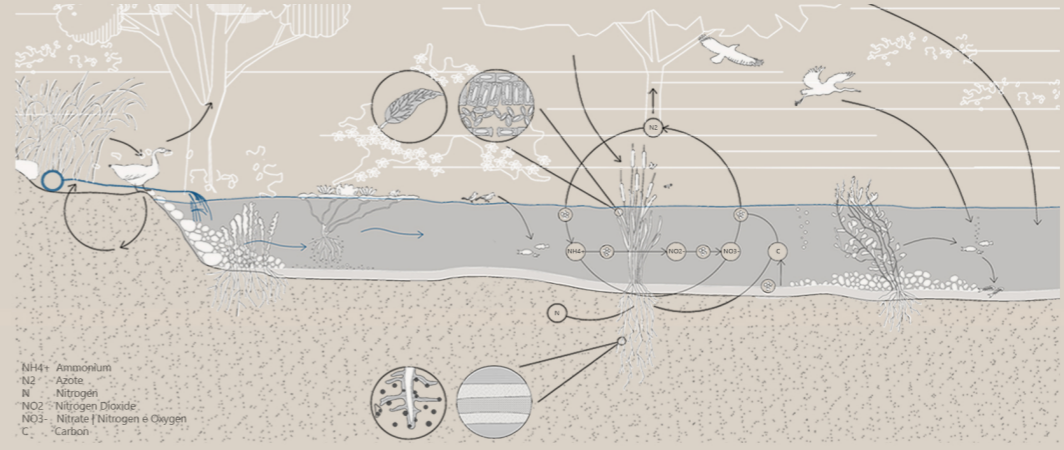
Wetland section | Summer season



Wetland section | Winter season



Wetland | Biodiversity



Wetland | Carbon Cycle

- NH₄⁺ Ammonium
- N₂ Azote
- N Nitrogen
- NO₂ Nitrogen Dioxide
- NO₃ Nitrate / Nitrogen e Oxygen
- C Carbon



