

eco-DESIGN OF THE BASSIN DES CHASSES PUMPING STATION FOR THE OPTIMIZATION OF THE RIVIÈRE NEUVE / PIERRETTES HYDRAULIC SYSTEM - FRANCE

“The Hydraulic Watchtower”

HYDRAULIC INFRASTRUCTURE, HQE® APPROACH: PUMPING STATION, WATER MANAGEMENT AND FLOOD RISK PREVENTION

CLIENT	Intercommunal Institution of the Wateringues
LOCALISATION	Calais (62), France
MISSIONS	Construction of hydraulic structures on the Rivière Neuve / Pierrettes
CONSULTANT	SETEC HYDRATEC / AR ARCHITECTES
PUMPING CAPACITY	6m ³ /s
COST	7 000 000 €
DATE	Detailed Design Phase - 2026



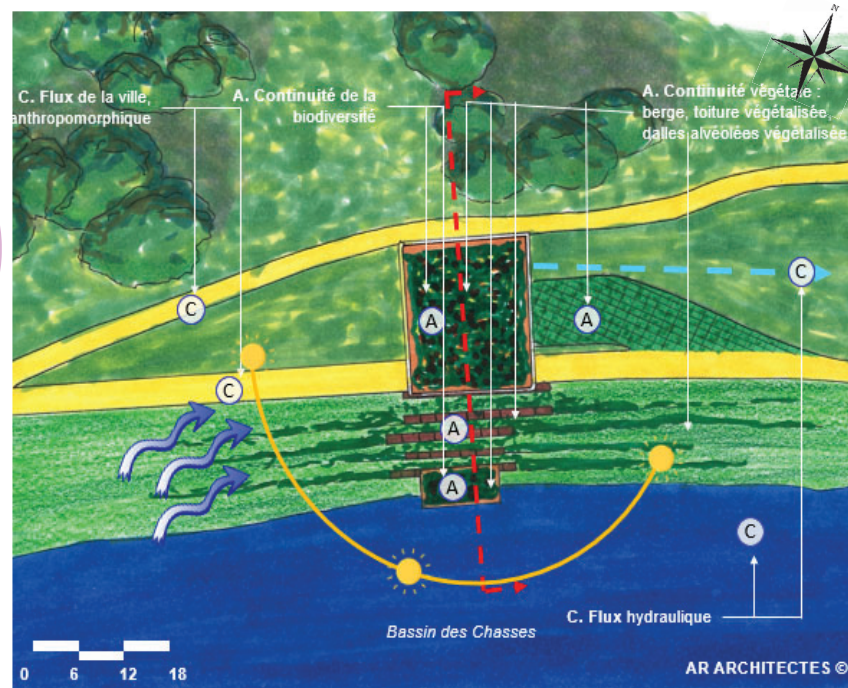
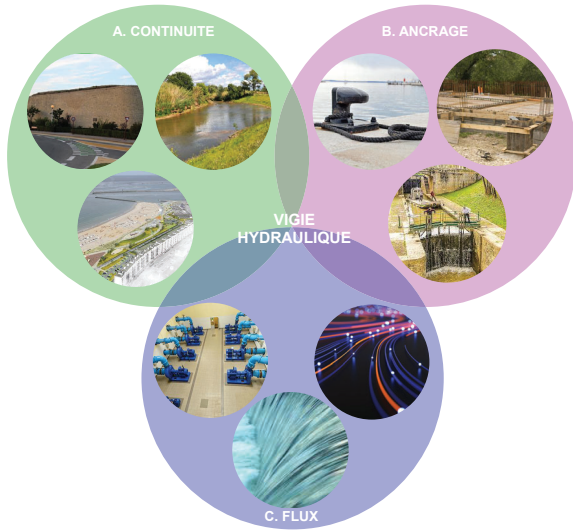
Overview plan of the Bassin des Chasses pumping station



Perspective view of the future Bassin des Chasses pumping station – proposed design - The Hydraulic Watchtower

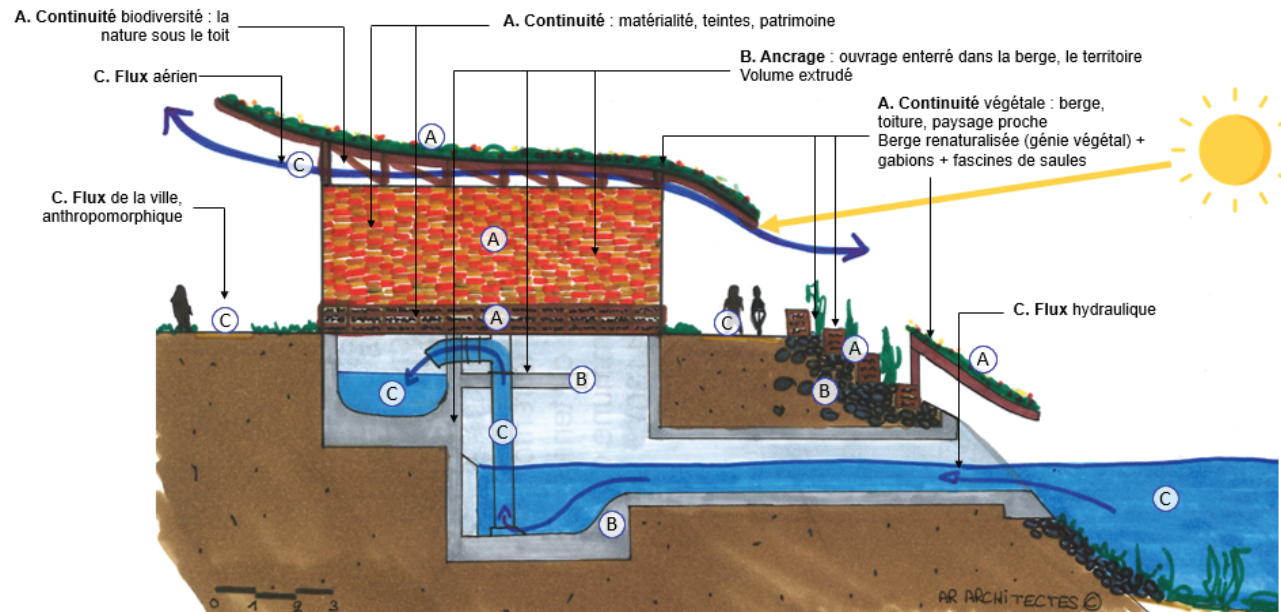
The Bassin des Chasses pumping station project is part of the optimization of the Rivière Neuve / Pierrettes hydraulic system, aiming to improve stormwater management and reduce flood risks. Located within a natural area and in the protected setting of a historic monument (Fort Risban), the project addresses strong landscape and heritage preservation challenges, while ensuring efficient discharge of water towards the maritime environment during intense rainfall events.

The project proposes a setback from the riverbank in order to preserve landscape continuities. The architecture is sober and contemporary, using durable materials in response to the heritage context, with particular attention given to the integration of technical equipment and the ecological and landscape treatment of the surroundings.



Concept - Design approach - Bassin des Chasses site plan - The Hydraulic Watchtower

Concept – The Hydraulic Watchtower



Facade concept – principle section - The Hydraulic Watchtower

HQE® targets

Target 1 – SYNERGY AND COHERENCE WITH THE TERRITORY AND ITS INFRASTRUCTURES

- Integration of the project in response to the existing context
- Continuity with landscape and heritage environments
- Continuity of the riverbank echoed in the curvature of the roof

Target 4 – LANDSCAPE AND HERITAGE

- Use of brick to reflect the surrounding built heritage
- Green roof
- Planting of locally adapted species promoting biodiversity

Target 5 – NATURAL ENVIRONMENTS AND ECOSYSTEMS

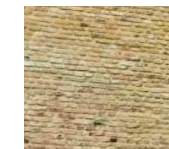
- Riverbank integration with biodiversity restoration measures
- Creation of habitats for local fauna

Target 6 – WATER MANAGEMENT

- Hydraulic structure enabling on-site water management
- Site greening strategy:
 - Green roof
 - Vegetated cellular paving
 - Riverbank renaturalization using willow fascines and helophyte plants
 - Rustic meadow planting

Target 7 – MATERIALS, BY-PRODUCTS AND WASTE MANAGEMENT

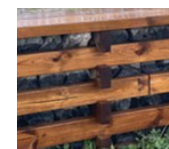
- Bio-based insulation materials
- Riverbank base and stabilization using gabions, pebbles and timber
- Local brick
- Oak timber structure



Yellow brick



External insulation (wood fiber)



Timber gabion



Green roof



Vegetated cellular paving



Willow fascines