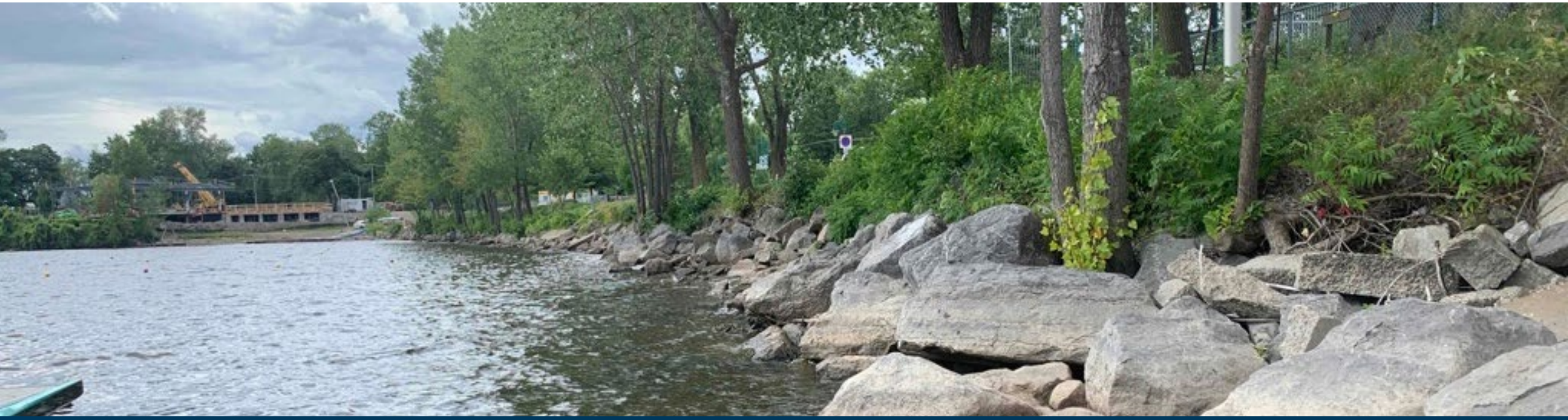
ENVIRONMENTAL IMPACT ASSESSMENT

PUBLIC SHORELINE STABILIZATION PROGRAM IN POINTE-CLAIRE



INFORMATION AND CONSULTATION SESSION

Stantec

Pointe Claire

AGENDA

1. PROJECT PRESENTATION
2. STABILIZATION CONCEPTS
3. ANTICIPATED IMPACTS AND MITIGATION MEASURES
4. NEXT STEPS
5. DISCUSSION

1. PROJECT PRESENTATION

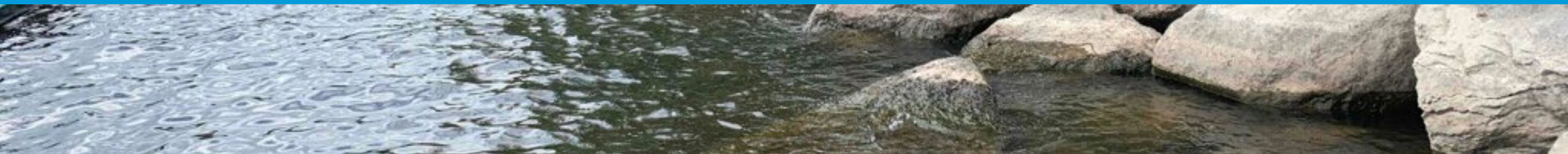
PROJECT JUSTIFICATION

Problem:

Erosion and degradation of Lake Saint-Louis shorelines due to wave and ice action, wave action from boats or the wind, as well as variations in water levels.

Actions must therefore be taken to:

- Prevent the deterioration of urban infrastructure (Lakeshore Road)
- Ensure safe access to shorelines
- Protect aquatic environment from erosion
- Restore the natural character of the city's public shoreline
- Increase biodiversity and ecological value of riparian environments

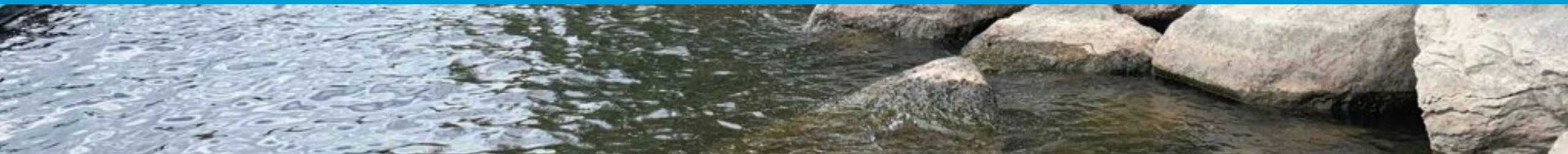


PROJECT JUSTIFICATION

Proposed solutions: Carry out shoreline stabilization work on properties belonging to the City of Pointe-Claire over 2,965 meters of shoreline, divided into segments or subsegments.

The work will be carried out in stages, according to priorities, and will be spread over approximately 10 years.

Shoreline stabilization projects of more than 500 m or 5000 m2 in lakes and watercourses are subject to the environmental impact assessment and review procedure under the *Environmental Quality Act*.



Composante du projet
- Zone d'étude (1,87 km²)
- Limite municipale

Priorité d'intervention
- Court terme
- Moyen terme
- Long terme

Milieu hydrique
- Plan d'eau
- Limite du littoral
- Rive (10 m)

Utilisation du sol
- Parc et espace vert

Archéologie
- Site patrimonial

Project component
- Study area (1.87 km²)
- Municipal boundary

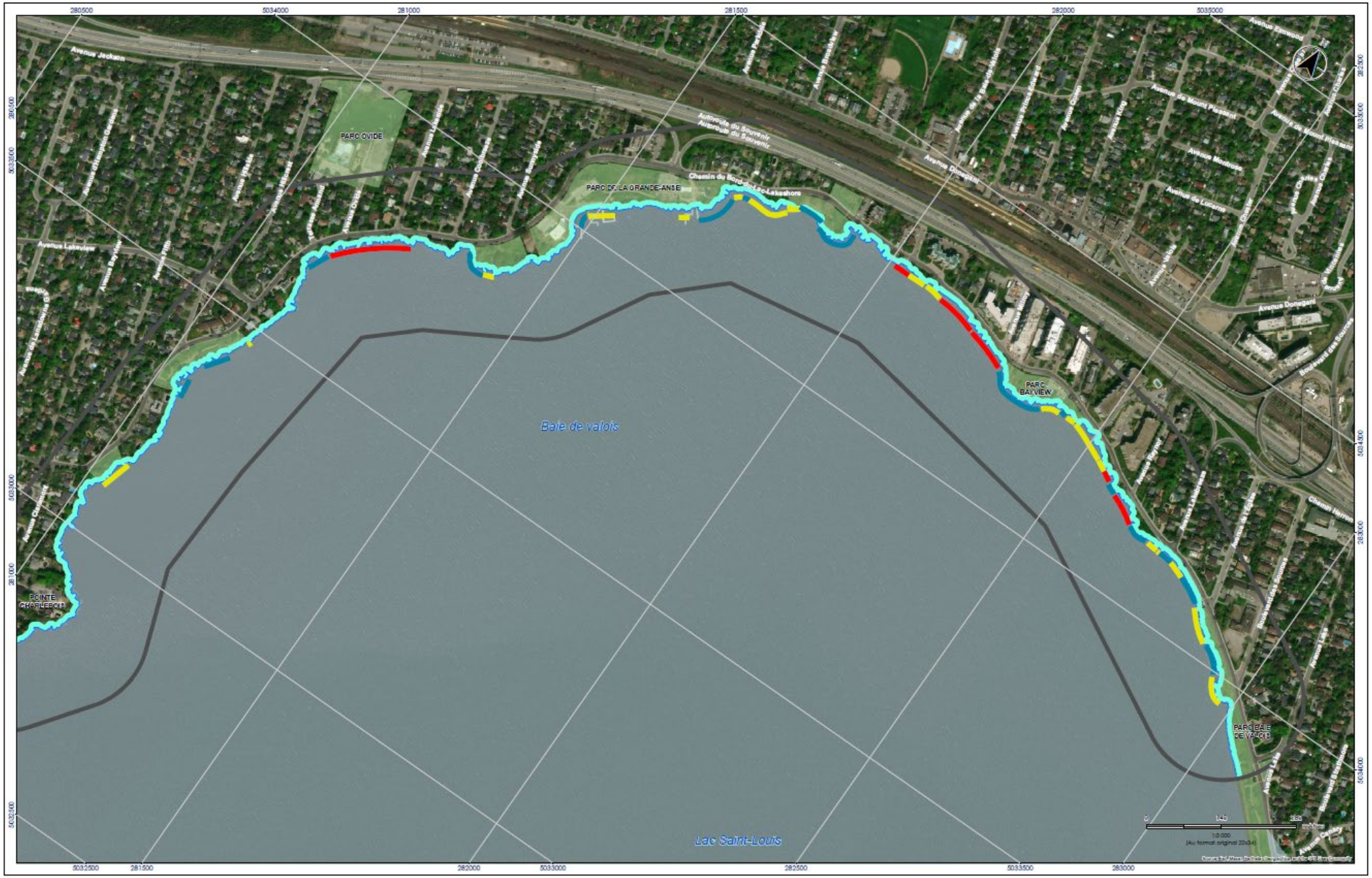
Priority of intervention
- Short term
- Medium term
- Long term

Hydrology
- Water body
- Litoral limit
- Shoreline (10 m)

Land use
- Park and green space

Archaeology
- Heritage site

Pointe Claire



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STUDIES COMPLETED

Monitoring of the shoreline conditions conducted by the City since 2008

- 2017: environmental impact assessment (Stantec) so that the City could proceed with the stabilization of portions of Lake Saint-Louis shoreline on municipal lands
- 2018: hydraulic study - geomorphological and hydrodynamic conditions
- 2020-2021: monitoring of the shoreline conditions and preparation of cross-section (concept) for stabilization works (Terraformex and Axio)
- 2024-2025: Preparation of the environmental impact assessment (Stantec)

DESCRIPTION OF THE RECEIVING ENVIRONMENT

- Potential presence of contaminated soils and sediments (under study)
- Presence of protected species: fragrant sumac (shrub) - vulnerable, brownsnake – threatened
- Waterfowl concentration area in the lake
- No aquatic grass beds at the work sites
- Fish habitat:
  - Some sections with good quality for rearing
- Presence of a heritage site, two archaeological sites, and sectors with potential for the presence of archaeological resources

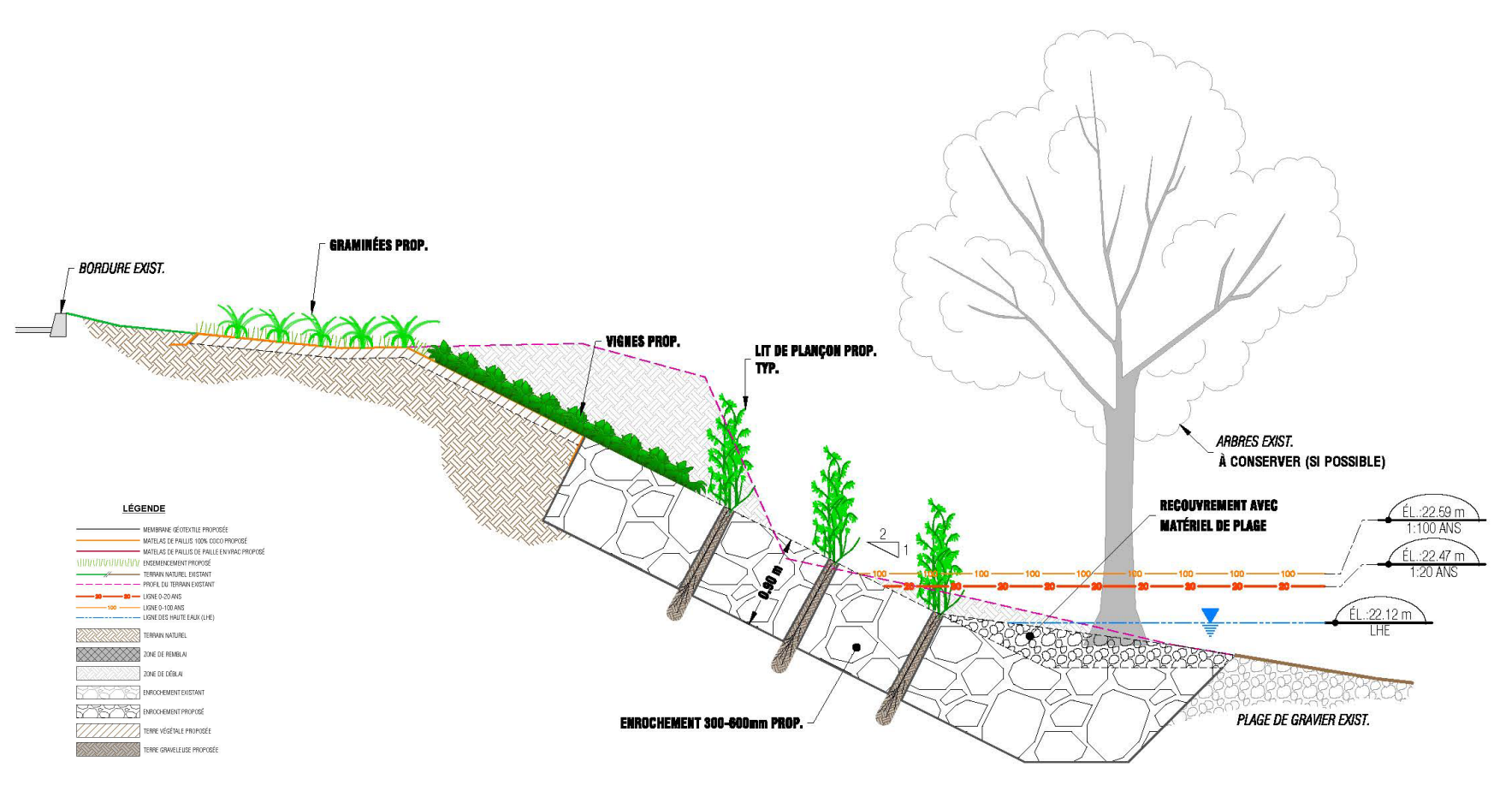
2. STABILIZATION CONCEPTS

PROPOSED STABILIZATION CONCEPTS

Solution Type	Erosion Drivers and Dynamics	Landscaping Components
Type A: **Vegetated riprap**	Erosion notches on the surface of the slope caused by waves and currents, moderate to steep slope, restricted space for vegetation stabilization	• Reprofiling of the shore to soften the slope • Planting of live stem cuttings, vines and grasses • Installation of a stabilized riprap (300-600 mm) • Bed reconstitution with riprap key
Type B: **Revegetation of the shoreline**	Low erosion with the presence of existing vegetation and the need for natural reinforcement	• Conservation of existing vines and grasses • Planting native trees and shrubs to strengthen the shoreline • Preservation of the existing riprap at the bottom of the embankments
Type C: **Removal or replacement of existing walls**	Deterioration of an existing wall with the need for natural stabilization to prevent erosion	• Replacement or repair of the wall with vegetated riprap • Reprofiling of the slope to ensure stability • Planting suitable vegetation at the top and bottom of embankments
Type D: **Repair or reinforcement of existing structures**	Damaged existing structures requiring repair or reinforcement to prevent erosion	• Addition of riprap with key to reinforce the base • Crack repair and structural stabilization • Maintaining vegetation around the structure to reduce erosive impact

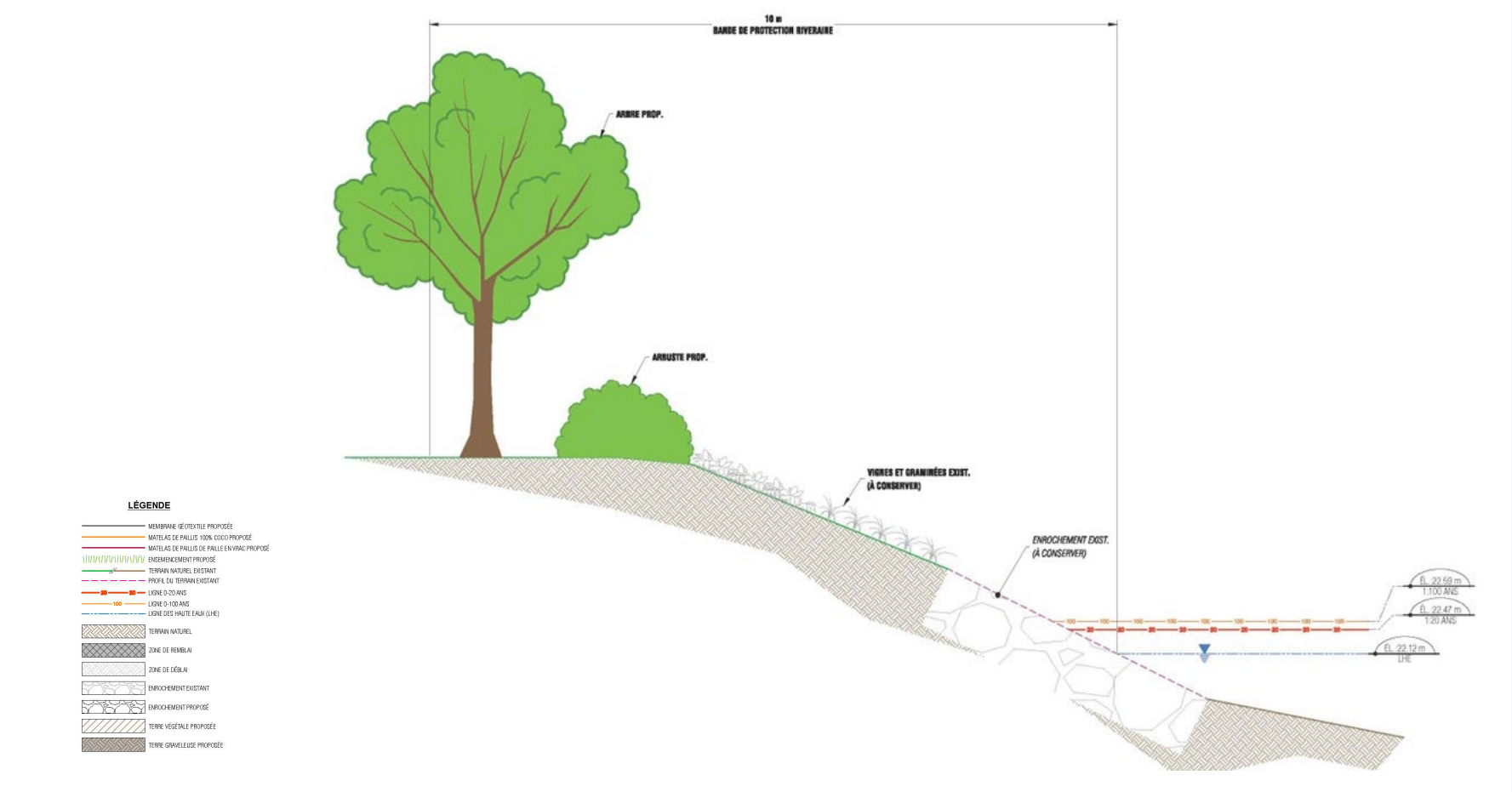
A VEGETATED RIPRAP

- Slope reprofiling
- Riprap
- Use of plants (live stem cuttings, vines, grasses)
- Bed reconstruction (key)



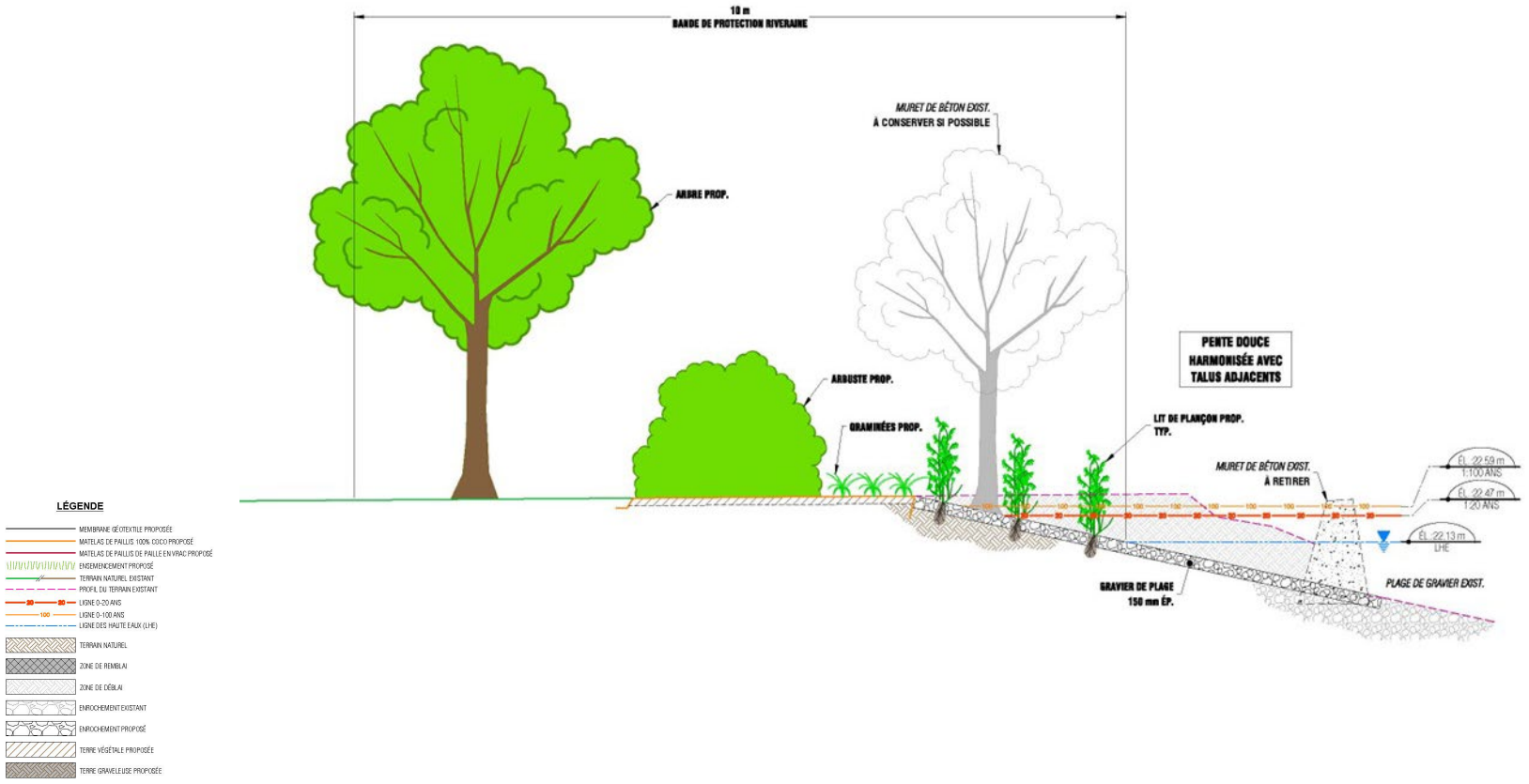
B REVEGETATION OF THE SHORELINE

- Planting of trees, shrubs, grasses and perennials with conservation of existing trees



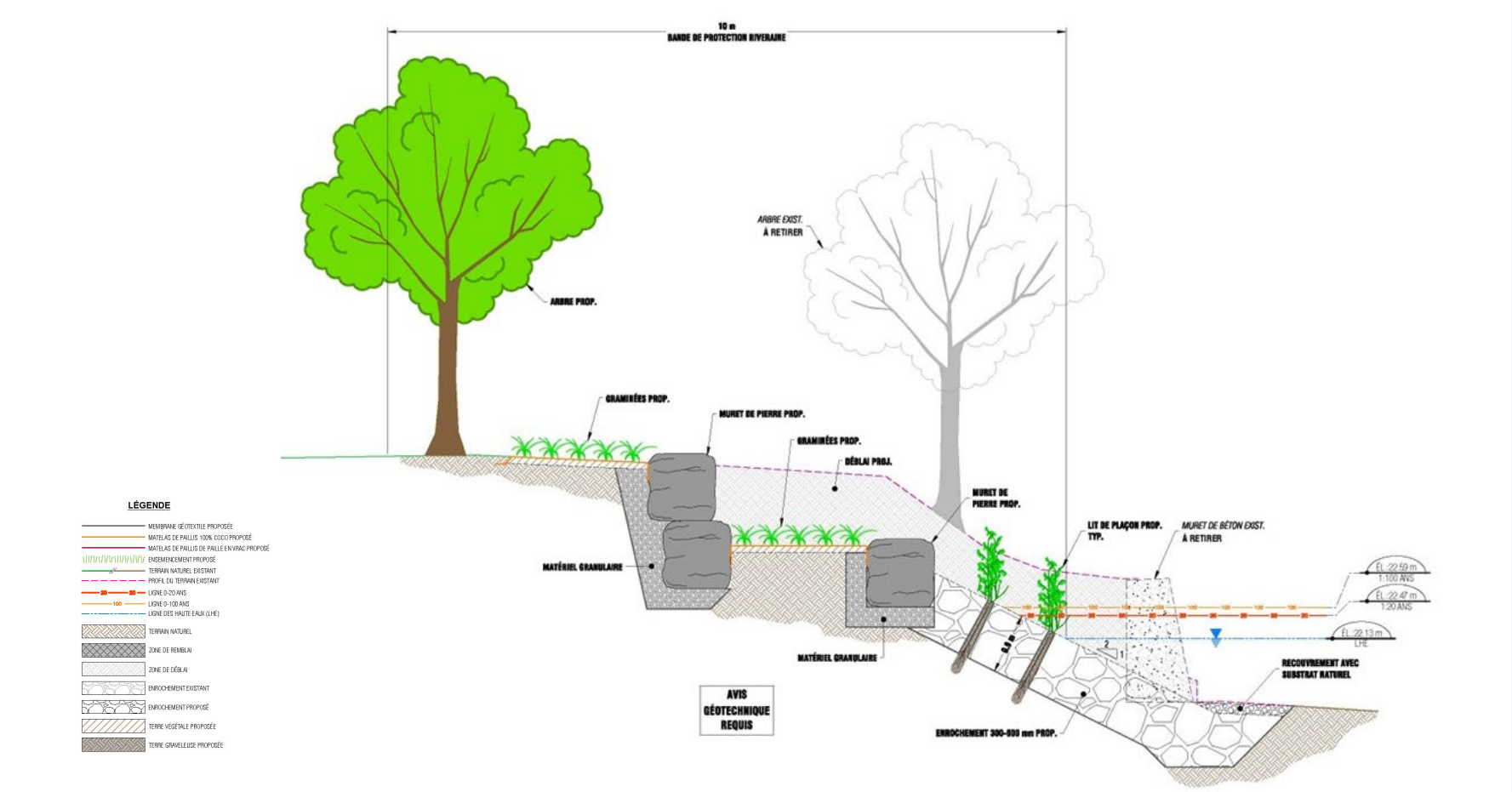
C REMOVAL OR REPLACEMENT OF EXISTING WALLS

- Replacement of a low wall with vegetated riprap



C REMOVAL OR REPLACEMENT OF EXISTING WALLS

- Replacement of a low wall and vegetation



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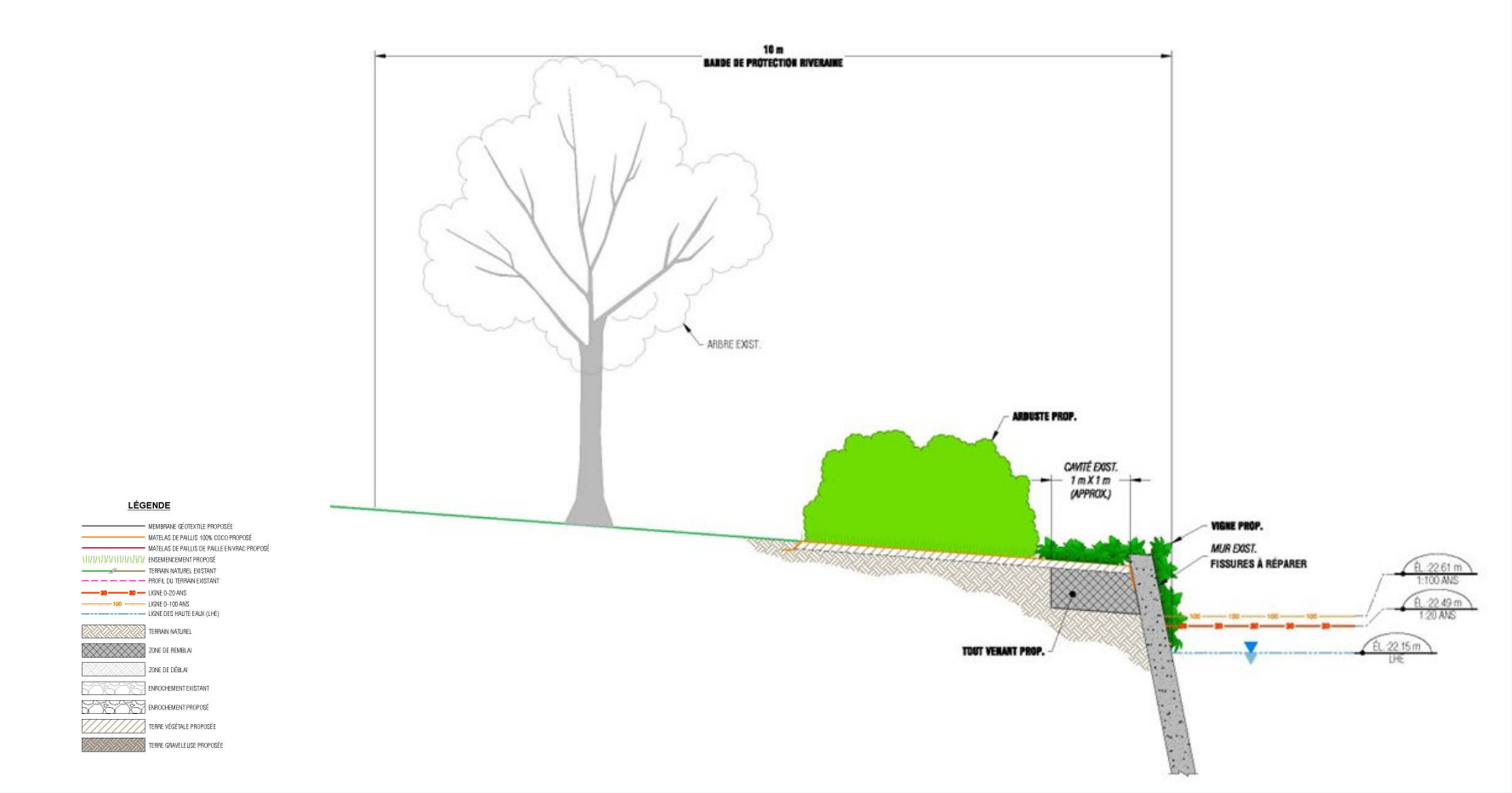
REPAIR OR REINFORCEMENT OF EXISTING STRUCTURES



3. ANTICIPATED IMPACTS AND MITIGATION MEASURES

ISSUES IDENTIFIED

1. Preservation of the Lake Saint-Louis and Valois Bay **physical environment conditions**
2. Preservation of the **quality and diversity** of the Lake Saint-Louis and Valois Bay **habitats**
3. Preservation of the Lake Saint-Louis and Valois Bay **residents and users' quality of life**
4. Preservation of the **built and archaeological heritage**

Issue 1

Preservation of the Lake Saint-Louis and Valois Bay physical environment conditions

- Soil and sediment quality: risks of cross-contamination, soil contamination in the event of an accidental spill
- Water and floodplain: temporary and permanent encroachment, water contamination in the event of an accidental spill

Mitigation measures

- Characterize soils and sediments and manage them according to the MELCCFP requirements
- Adapt work methods to minimize sediment suspension
- Restore and revegetate areas with exposed soils as soon as possible
- Spill prevention measures

Issue 2

Preservation of the quality and diversity of the Lake Saint-Louis and Valois Bay habitats

- Fish habitat: temporary and permanent encroachment, input of suspended solids
- Birds: temporary and permanent encroachment in a waterfowl gathering area
- Brownsnake: disturbance and mortality risks
- Fragrant sumac: loss of a vulnerable species

Mitigation measures

- Carry out work in the water outside the sensitive period for fish
- Compensation measures for losses of aquatic environment (fish and birds)
- Install a temporary snake exclusion fence and relocate snakes
- Protective measures for fragrant sumac

Issue 3

Preservation of the Lake Saint-Louis and Valois Bay residents and users' quality of life

- Landscape: landscape modification (revegetation of the banks)
- Well-being: noise generation during construction
- Recreational activities and uses parks not accessible during the work
- Infrastructure: traffic hindrance during work near Lakeshore Road

Mitigation measures

- Sequencing of the works and coordination with other works planned in the same sector
- Whenever possible, carry out the work between 7 a.m. and 6 p.m
- Inform citizens of the sequence of work
- Adequate signage to inform and guide users and cyclists in the vicinity of the worksite

Issue 4

Preservation of archaeological and heritage resources

- Ground excavation could uncover or disturb archaeological sites

Mitigation measures

- Conduct archaeological monitoring during excavation work

4. NEXT STEPS

NEXT STEPS

1. Finalization of the impact assessment
2. BAPE Information Session
3. Obtaining the ministerial decree
4. Detailed design of the stabilization works in stages
5. Authorization and permit applications by stage
6. Completion of the work in stages

DISCUSSION

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