

Executive Summary

The Town of Oakville retained Baird and Associates and Beacon Environmental Limited (Beacon) to undertake a Municipal Class Environmental Assessment (MCEA) for shoreline protection works at Shorewood Promenade Park in the Town of Oakville. This project was undertaken in accordance with the provincial *Environmental Assessment Act* and MCEA process. Based on the complexity of the project including consideration for the level of community interest, technical requirements, and environmental impacts this study followed the Schedule 'B' MCEA requirements. On this basis, the Town of Oakville has undertaken the first two phases of the MCEA as required for a Schedule 'B' project:

- Phase 1: Define Problem or Opportunity; and
- Phase 2: Identify and Evaluate Alternative Solutions.

This report has been prepared to meet the Project File requirements of the Schedule 'B' process.

Shorewood Promenade Park is an approximately 0.55 hectare (ha) public park located in the Town of Oakville on the shore of Lake Ontario. The park extends inshore approximately 35 metres (m) from the shoreline. The shoreline consists of a 120 m long cohesive bluff, approximately 10 m high, which is unprotected and actively eroding. There is a narrow shingle and cobble beach along the toe of the bluff. There is a stormwater outfall at the west end of the site, protected by a stacked armour stone wall.

Following extreme high-water levels in 2017 and 2019, Shorewood Promenade was flagged by the Town of Oakville as a top ten high priority site for shoreline protection. The bluff at the Shorewood Promenade Park has no current shoreline protection in place and is being undercut and degraded by erosion as a result of the high lake levels and weathering processes. The purpose of this study is to identify a preferred solution for addressing the on-going erosion of the bluff at Shorewood Promenade Park in the Town of Oakville.

Detailed field investigations to document existing natural heritage features and functions were completed in 2020. Studies included an Aquatic Habitat Assessment, Tree Inventory, Ecological Land Classification, Breeding Bird Surveys, and Species at Risk Habitat Screening. The majority of the site consisted of a deciduous woodland, open mineral bluff, and open mineral shoreline. The field investigations revealed that there is an active Bank Swallow colony present on the exposed bluff. Bank Swallows are a protected species under the *Endangered Species Act*, (2007) (ESA).

Geotechnical investigations that were completed by Terraprobe (1995) at the project site and by Landtek (2011) at an adjacent property indicated that the table land and bluff contain a thin layer silt topsoil overlying a native sand layer that extends approximately 7 m below the ground surface. Beneath the sand layer is a layer of clayey silt till (glacial till deposit of the Halton Formation) that is generally found at a depth of 7 m to 9 m from the ground surface and is overlying grey shale bedrock. Shale bedrock can be found at an elevation of 76.3-75.6 m IGLD85.

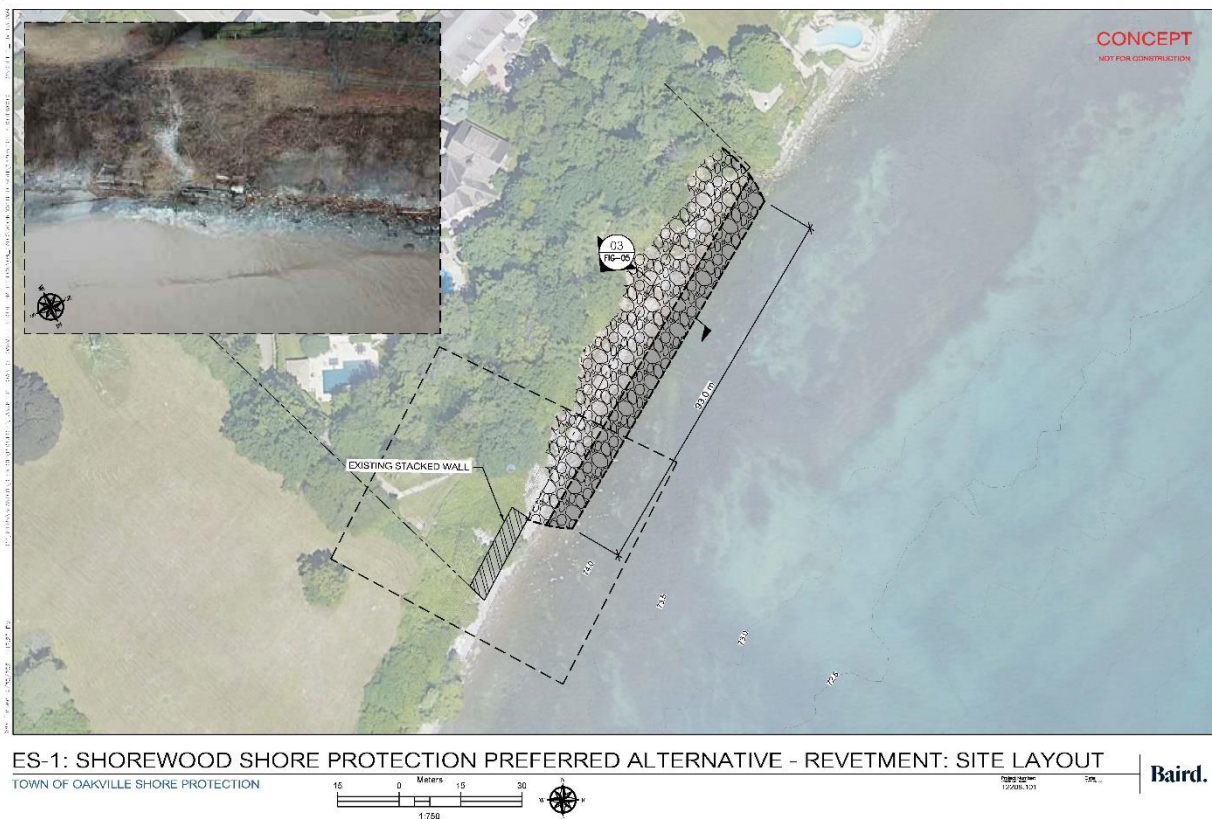
Archeological studies were not required due to the fact that this site is largely disturbed by the existing headwall, outfall and there is erosion works throughout the site. Other factors such as social attributes and climate change have been incorporated into the study.

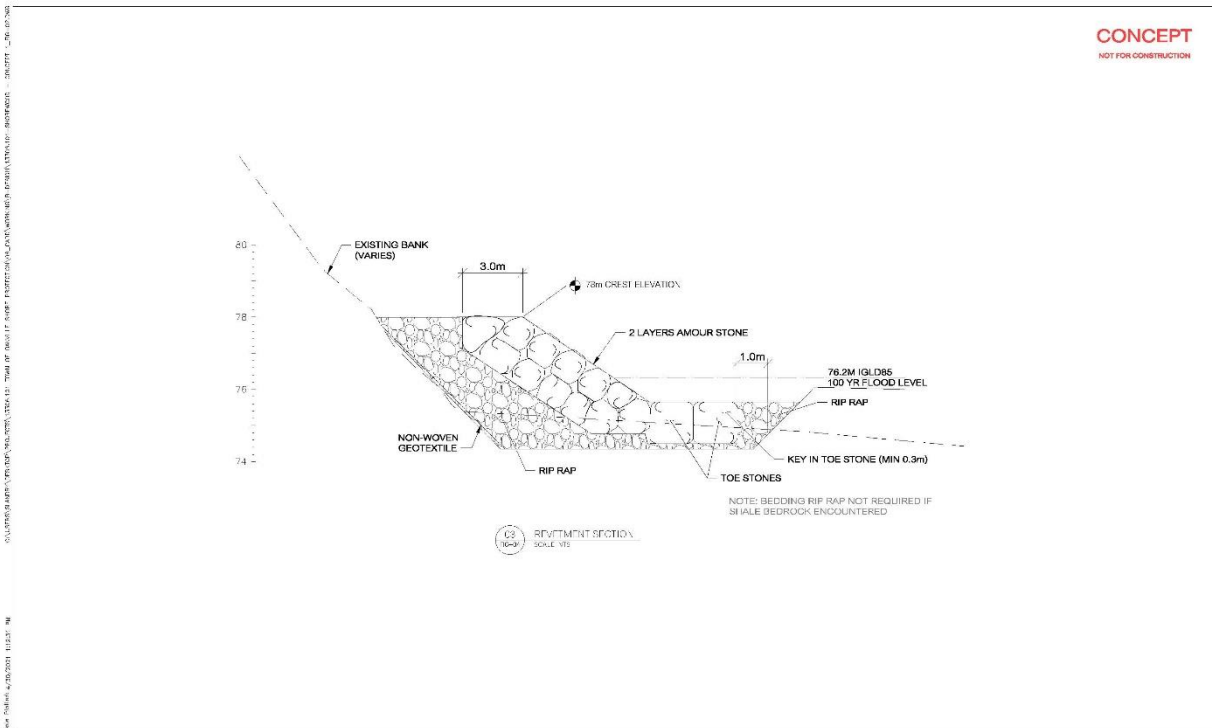
As part of Phase 2 of the MCEA process two shore protection alternative solutions were developed and evaluated. The evaluation process also considered a Do-Nothing option as a third alternative.

- Alternative #1 – Armour Stone Revetment
- Alternative #2 – Cobble Beach and Groynes
- Alternative #3 – Do Nothing

As part of Phase 2 of the MCEA process the alternative solutions were evaluated from the perspective of multiple components including: environmental, physical, and social. The evaluation process for this study reflects these components as well as considers cost and feasibility, which includes both constructability and maintenance requirements. The potential impacts of the alternatives in terms of potential for change from the existing conditions was also factored into the evaluation.

Alternative #1 – Armour Stone Revetment has been selected as the preferred alternative based on providing a high level of shoreline protection, lower cost alternative, smaller footprint on lakebed and does not disrupt alongshore sediment transport. Preliminary design concepts for the preferred alternative are shown on **Figures ES-1 and ES-2**.





ES-2: SHOREWOOD SHORE PROTECTION PREFERRED ALTERNATIVE - REVETMENT SECTION
TOWN OF OAKVILLE SHORE PROTECTION

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Mitigation measures to be implemented during the detailed design phase and during construction were recommended to reduce or eliminate potential impacts to the natural heritage features and social attributes found within the study area. Where required design mitigation will be finalized throughout the detailed design.

Several approvals, authorizations or permits will be necessary to proceed with construction of the preferred alternative including: Ontario Regulation 160/06 Development: Interference with Wetlands and Alteration to Shorelines and Watercourses Permit, ESA Section 17(2)(c) Overall Benefit Permit, Public Lands Act Crown Land Works Permit and a *Fisheries Act* Project Review. All necessary permits and approvals will be obtained prior to the commencement of works.

As per the MCEA process for 'Schedule B' projects consultation with agencies, Indigenous Communities and other key stakeholders was carried out. The Town of Oakville issued notices for review to agencies, residents adjacent to the study area, Indigenous Communities, other key stakeholders, and the public, through a Notice of Study Commencement, Public Information Center (PIC) and Notice of Study Completion. Project information was also made available on the Town of Oakville's website. Comments, concerns, and feedback received throughout the consultation process was considered in the selection of the preferred alternative.

Phase 1 and Phase 2 of the planning and design process were addressed through the study and are documented in this Project File Report. The study provides preliminary design for the preferred alternative which addresses the issue identified in the problem statement by providing shoreline protection from ongoing erosion of the bluff located at Shorewood Promenade Park. Following the 30-day public review period of the Project File Report and so long as a Part II Order under the

Environmental Assessment Act is not requested implementation of the preferred alternative can proceed under Phase 5 of the MCEA process. The next steps involve advancing the preliminary design through to detailed design and construction after obtaining all necessary permits and approvals.