Glossary of Terms

Active recreation: Includes higher impact outdoor recreational activities, such as organized sports.

Alongshore transport: The process of sediment being moved along a coastline by nearshore currents.

Alternatives To: Functionally different ways of solving the identified problem or opportunity.

Alternative Methods: Different ways of implementing the preferred Alternative To.

Area of Natural and Scientific Interest (ANSI): Areas of land and/or water that have unique natural features or landscapes, as identified by the Ministry of Natural Resources and Forestry (MNRF).

Archaeology: Includes artifacts, archaeological sites, and marine archaeological sites, as defined under the *Ontario Heritage Act*. The identification and evaluation of such resources are based upon archaeological fieldwork undertaken in accordance with the *Ontario Heritage Act*.

Amourstone: Large irregular hard rock used in hydraulic structures, such as lakeshore defenses and river bank protection.

Baseline conditions: The current or anticipated future conditions of the environment without the proposed project in place. Baseline conditions provide the benchmark from which to assess the effects of the project.

Best management practices (BMPs): Methods or techniques found to be the most effective and practical means in achieving an objective (e.g., preventing or minimizing water pollution, impacts to wildlife, effects of truck traffic, etc.).

Bi-nodal distribution: A condition in which two distinct peaks occur in a directional distribution.

Biodiversity: A term describing the variety of species, both flora and/or fauna, contained within an ecosystem.

Blue Flag Beach: A voluntary eco-label awarded to beaches that meet high environmental and quality standards.

Bluffs: A steep bank, high ridge or cliff located near a river or body of water.

Borehole: A narrow vertical or horizontal hole made in the earth using a drill.

Brownfield site: Vacant or underutilized places where past industrial or commercial activities may have left contamination (chemical pollution) behind, including factories, gas stations or waterfront properties (port lands) formerly used for industrial or commercial activities.

Built heritage: One or more significant buildings, structures, monuments, installations or remains associated with architectural, cultural, social, political, economic or military history and identified as being important to a community. These resources may be identified through designation or heritage conservation easement under the *Ontario Heritage Act*, or listed by local, provincial or federal jurisdictions.

Chart datum: The zero water depth displayed on a nautical chart.

Class Environmental Assessment (Class EA): A type of EA that follows a Ministry of Environment and Climate Change (MOECC) pre-approved self-assessment process. Class EAs are generally used for routine projects that have predictable and manageable effects.

Combined sewer outfalls: A type of sewer that collects surface water run-off and sewage as part of a single system.

Conservation concern: Ecologists assess the quality of each habitat patch through an evaluation of size, shape and matrix influence. These criteria are weighted together to determine an average measure of habitat quality that corresponds to a 'local rank' or L-Rank, ranging from L1 (the highest quality) to L5 (the poorest quality). A classification used by TRCA to assign 'local ranks', or L-ranks, to flora and fauna species, and vegetation communities. L-ranks range from L5 (generally secure) to L1 (of regional concern) to L+ (dominated by non-native species).

Crest migration: The natural process of the slope crest (top of bluffs) receding back as a result of slope failures which occur in naturally oversteepened slopes.

Cultural heritage: Consists of places and items of historical or societal value including archaeological sites and the artifacts recovered from them, built heritage resources, and cultural heritage landscapes.

Cultural heritage landscapes: A defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Aboriginal community. The area may involve features such as structures, spaces, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association. Examples may include, but are not limited to, heritage conservation districts designated under the *Ontario Heritage Act*; villages, parks, gardens, battlefields, mainstreets and neighbourhoods, cemeteries, trailways, viewsheds, natural areas and industrial complexes of heritage significance; and areas recognized by federal or international designation authorities (e.g., a National Historic Site or District designation, or a UNESCO [United Nations Educational, Scientific and Cultural Organization] World Heritage Site).

Detailed Design: Engineering design work that is completed on a more refined scale and typically follows design completed at a higher level (referred to as preliminary design).

"Do Nothing" Alternative: The "Do Nothing" alternative needs to be considered as per the *Environmental Assessment Act (EA Act)* and includes the continuation of the base case or status quo conditions.

Downcutting: Vertical or downward erosion that deepens a channel by removing underlying material.

Ecological Land Classification (ELC) System for Southern Ontario: A standardized framework to describe, inventory and interpret ecosystems in southern Ontario.

Ecosystem: An organic community of plants and animals viewed within its physical environment or habitat (e.g., a freshwater pond, a mixed woodland, or a hedge). An ecosystem can be described as a 'complex of interacting phenomena', within which there are many complicated and often subtle relationships (between climate and vegetation, vegetation and soils, animals and vegetation, and so on).

Ecosystem-based approach: An environmental management approach that recognizes the full array of interactions within an ecosystem, including humans, rather than considering single issues, species, or ecosystem services in isolation.

Effect: A change that a proposed undertaking could potentially have on the environment, either positive or negative, direct or indirect, short or long-term.

Embayment: A shoreline recess that forms a bay.

Environment: As defined in the *EA Act* as:

(a) air, land or water,
(b) plant and animal life, including human life,
(c) the social, economic and cultural conditions that influence the life of humans or a community,
(d) any building, structure, machine or other device or thing made by humans,
(e) any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities, or
(f) any part or combination of the foregoing and the interrelationships between any two or more of them, in or of Ontario.

***Environmental Assessment Act, 1990*:** The *EA Act* (as amended) is a provincial statute that sets out a planning and decision-making process to evaluate the potential environmental effects of a proposed undertaking. Proponents wishing to proceed with an undertaking must document their planning and decision-making process and submit the results from their EA to the Minister of the MOECC for approval.

Environmental Assessment (EA): An EA is a study that assesses the potential environmental effects (positive or negative) of a proposed project. Key components of an EA include consultation; consideration and evaluation of alternatives; and, the management of potential environmental effects. Conducting EAs promotes good environmental planning before decisions are made about proceeding with a proposal.

Environmentally Significant Area (ESA): Land and/or water-based areas that contain sensitive natural features that warrant protection, as identified by the City of Toronto.

Environmental Assessment Report (EA Report): Any report or documentation prepared that describes how the EA was planned to meet the requirements of the *EA Act*.

Erosion control: Preventing erosion caused by water, wind, slope inclination, or some combination thereof, using engineered solutions.

Extreme value analysis: An extreme value analysis is a statistical calculation required to calculate the probability of occurrence of an extreme event from a data set of a shorter duration. In this instance, wave conditions up to a return period of 100 years were calculated from 40 years of hindcast wave data.

Evaluation criteria: A measure established to evaluate the extent to which alternative solutions meet specific objectives and/or to compare against each other for the purpose of selecting a preferred alternative. Evaluation criteria can be qualitative or quantitative in nature.

Factors of Safety: The ratio of available soil strength resisting movement, divided by the gravitational forces tending to cause movement.

Focused approach (or focused EA): A scoped EA process that is permitted by the MOECC if there is a defined planning process that has already occurred, which provides the rationale for the project.

Footprint: The size and shape of the land creation area.

Geotechnical: The study of soil and rock mechanics in the context of subsurface conditions, slope stability and design earthworks.

Glacial outwash: Sediments deposited by glacial meltwater.

Greenspaces: A regional system of natural areas that provides habitat for plants and animal species, and provides opportunities for the enjoyment of nature and outdoor recreation.

Groundwater: Water located below the earth's surface.

Groyne: Structures that sit perpendicular to the shore and retain beach material that is either naturally moving past the site as littoral drift, or is artificially placed.

Habitat: A term used in ecology to describe the specific environment of plants and animals, in which they are able to live, feed, and reproduce.

Habitat/Ecosystem Assessment Tool (HEAT): HEAT is a science-based management tool that seeks to identify whether there is a net benefit or impairment to the existing ecological function of a project area for a suite of fish species. It is the revised version of the Habitat Alteration Assessment Tool (HAAT), which is used by Fisheries and Oceans Canada (DFO) to assess, from the fisheries perspective, the change in habitat amount and function from an existing condition to the proposed modified condition based on the following variables: depth, substrate and aquatic vegetation.

Habitat fragmentation: A situation where patches of habitat are broken into smaller patches by human use (e.g., informal trails) and development (e.g., roads or buildings).

Habitat integrity: The ability of a habitat type to sustain ecological function and support biotic and abiotic features.

Habitat patches: Natural areas that are divided into smaller discrete areas by unnatural features.

Headland: Promontories that extend out into a large body of water and reduce alongshore currents. Headlands can be a variety of shapes (e.g., rounded, T-shaped, L-shaped) depending on their position and the needs of a given project.

Hindcast: A calculation determining probable past conditions, such as wave characteristics at a given place and time.

Hydrogeology: The movement of groundwater in rock and soils.

Hydrology: The study of the distribution and movement of water.

Intake protection zone: The water and surrounding land around a surface water intake pipe.

International Great Lakes Datum, 1985 (IGLD 1985): The current elevation reference system used to define water levels within the Great Lakes-St. Lawrence River system.

International Joint Commission (IJC): The IJC is a bi-national organization established by the governments of Canada and the United States under the Boundary Waters Treaty of 1909. The IJC is responsible for regulating shared water uses, and investigating transboundary issues and recommending solutions.

Invasive species: A species or organism that is considered to be non-native to a particular region, and whose introduction does, or is likely to cause economic environmental harm or harm to human health.

Lakefill: Fill material that is placed in a lake.

Land-water interface: The point where the biotic and abiotic components of a terrestrial and aquatic ecosystem meet and interact.

Lee-side: The side of an object that is sheltered from the wind.

LIDAR: Light Detection and Radiation, or LIDAR, is a remote sensing method that uses light in the form of a pulsed laser to measure ranges (variable distances) to the earth. These light pulses, in combination with other data recorded by the airborne system, generate precise three-dimensional information about the shape of the earth and its surface characteristics.

Lithic scatter: A localized distribution of Indigenous artifacts that consists primarily of lithic (i.e., stone) material. The scatter may include discarded chipped or ground stone tools such as projectile points, scrapers or axes, or it may contain chipping debris from tool-making activities.

Littoral sediments: Natural deposits located in close proximity to a shoreline.

Littoral zone: The portion of the lake which is in closest proximity to the shoreline.

Mitigation measures: Measures which can lessen potential negative environmental effects or enhance positive environmental effects.

Nearshore: A zone of Lake Ontario that is located parallel to the shoreline and is generally less than 15 m deep.

Natural environment: Part of the human environment that contains natural components, such as vegetation, wetlands, fish and fish habitat, etc.

Natural heritage system: Consists of all of the natural cover in a region. It is often called a "system" because of the interactions and dependencies between and among its parts.

Net effects: Negative environmental effects of a project and related activities that are expected to remain after mitigation measures have been applied.

Non-native species: A species or organism that is considered to be exotic to a particular region.

Offshore: Zone of Lake Ontario located outside of the nearshore.

Open water channels: A channel designed for the purposes of water conveyance.

Overland runoff: Water resulting from surface runoff (i.e., stormwater), or water directed directly onto a slope (via downspouts, etc.).

Passive recreation: Includes lower impact outdoor recreational activities, such as swimming, biking and walking.

Pelagic: The open lake without direct contact with the bottom or the nearshore.

Physical environment: Part of the human environment that contains physical components, such as physiography, bedrock, climate, etc.

Preferred Alternative: An alternative that is considered to be preferred when compared to other options based on criteria which may include elements of the natural environment, socio-economic environment, and/or technical aspects (constructability).

Project Objectives: Project Objectives describe what the Project is ultimately trying to achieve if implemented.

Project Vision: The Project Vision is a high-level, guiding purpose of the Project.

Proponent: A person, agency, group or organization who carries out or proposes to carry out an undertaking or is the owner or person having charge, management or control of an undertaking.

Provincially Significant Wetland (PSW): Wetlands that meet the criteria within the Ontario Wetland Evaluation System. This MNRF framework provides a standardized method of assessing wetland functions and societal values, which enables the province to rank wetlands relative to one another.

Ravine: A landform that was formed by running water and is often vegetated and narrow.

Revetment: A reinforced surface using brick, stone or another material, to protect an embankment.

Rip-rap: A layer of rock or other material used for protection against erosion by water.

Sediment: A material that occurs naturally and is broken down by the weathering process and often transported by water, wind or ice.

Sedimentation: The process of deposition of a solid material from a state of suspension or solution in a fluid (usually air or water). Geologically, this typically refers to soil particles being deposited by water bodies. It may also include deposits from glacial ice.

Shoreline: The terms “waterfront” and “shoreline” are used interchangeably in this EA and include both the top and toe of the Bluffs. The term “water’s edge” refers to the area along the toe of the Bluffs only.

Shoreline treatment: Various strategies associated with slowing the natural erosion process along a shoreline or coast.

Socio-economic environment: Part of the human environment that contains socio-economic components, such as land use, population, demographics, economy, etc.

Species at Risk (SAR): Naturally-occurring species in danger of local, provincial or federal extinction, as indicated under federal and/or provincial legislation.

Stonehooking: Mining of aggregate and sheets of bedrock from the lakebed for construction purposes conducted in the nearshore areas of Lake Ontario in the 1800s and early 1900s.

Storm surge: A coastal flood (rising water) typically associated with low pressure weather systems.

Stormwater runoff: Surface water runoff that typically occurs during storm events or other natural processes.

Surficial geology: The study of landforms and the sediment that is located underneath them.

Swale: A depression in a tract of land, often used as a drainage feature to convey and treat stormwater (as opposed to a roadside ditch).

Tablelands: A plateau or other high region sometimes located near a watercourse.

Talus: The soil that erodes off a slope face as a result of natural erosion processes (e.g., landslides) and accumulates at the base of the slope typically as a loose unconsolidated deposit.

Talus catchment area: An area designed to restrict falling talus (soil material) from running out over trails, roads, etc.

Terms of Reference (ToR): A document prepared by the proponent and submitted to the Minister of the MOECC for approval. The ToR establishes the framework for the planning and decision-making process to be followed by the proponent during the preparation of the EA Report. In other words, it is the proponent's work plan for what is going to be studied and includes a consultation plan. If approved, the EA must be prepared according to the ToR.

Thermal refuge: Thermally suitable areas for aquatic organisms given their temperature preferences.

Till: A deposit laid down by a glacier or ice sheet on a land surface. Till is highly variable in character, depending on the precise manner of deposition, but it is generally highly mixed (with particle sizes ranging from clay to boulders) and poorly stratified.

the Project: Refers to the Scarborough Waterfront Project. Also referred to as the "undertaking" for the purposes of the ToR and which is to be determined through the EA process.

Top and toe of the Bluffs: Generally the base of the Bluffs where it meets the beach and the upper edge of the Bluffs where it meets land at a higher elevation.

Topography: The study of the shape of the earth's surface and other surficial features.

Total Phosphorus: The sum of reactive (pure), condensed and organic phosphorus.

Total suspended solids (TSS): TSS are solid materials, including organic and inorganic, that are suspended in the water. These would include silt, plankton and industrial wastes.

Turbidity: Turbidity is the measure of relative clarity of a liquid. It is an optical characteristic of water and is an expression of the amount of light that is scattered by material in the water when a light is shined through the water sample. The higher the intensity of scattered light, the higher the turbidity. Material that causes water to be turbid include clay, silt, finely divided inorganic and organic matter, algae, soluble colored organic compounds, and plankton and other microscopic organisms.

Undertaking: An enterprise, activity or a proposal, plan or program that a proponent initiates or proposes to initiate (i.e., the Project).

Undulating shoreline: A shoreline with a non-linear, wave-like profile.

Waterfront: The terms "waterfront" and "shoreline" are used interchangeably in this EA and include both the top and toe of the Bluffs.

Water lot: Shoreline and submerged land lot.

Water's edge: The term "water's edge" refers to the area along the toe of the Bluffs only.

Watershed: The area of land that catches rain and snow that drains or seeps into a marsh, stream, river, lake or groundwater.

Windshield/walking survey: A survey method where systematic observations are made from a moving vehicle (windshield) and/or on foot (walking).