



## Ashbridges Bay Treatment Plant Landform Project

**Date:** March 19, 2019  
**To:** Infrastructure and Environment Committee  
**From:** General Manager, Toronto Water  
**Wards:** Ward 14, Ward 19

### SUMMARY

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The purpose of this report is to report back to Council on the detailed design, construction plan, and costs associated with building the Ashbridges Bay Treatment Plant ("ABTP") Landform (the "Landform" or "Landform Project") and to obtain Council approval to enter into one or more agreements with the Toronto and Region Conservation Authority ("TRCA") for the permitting, construction, and property transfers associated with construction of the Project.

The Landform Project is intended to provide erosion and sediment control in Ashbridges Bay and new ABTP property for the construction of a future combined sewer overflow ("CSO") High Rate Treatment ("HRT") Facility. Commencing in 2019, an estimated five to six year phased construction approach is required to construct the Landform. The estimated project cost for construction of the Ashbridges Bay Treatment Plant Landform Project is \$96.0 million net of all applicable taxes (\$97.7 million net of HST recoveries).

### RECOMMENDATIONS

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The General Manager, Toronto Water, recommends that:

1. City Council authorize the General Manager, Toronto Water to proceed with the construction of the Ashbridges Bay Treatment Plant Landform in accordance with the detailed design completed by the Toronto and Region Conservation Authority in 2018.
2. City Council authorize the General Manager, Toronto Water, to negotiate, enter into and execute one or more agreements as may be necessary to give effect to Recommendation 1, with the Toronto and Region Conservation Authority for the construction of the Landform on an actual direct construction cost recovery basis plus a reasonable administrative fee not to exceed five percent of the project cost, satisfactory to the General Manager, Toronto Water, and on such terms and conditions as are acceptable to the General Manager, Toronto Water, and in a form satisfactory to the City Solicitor.

3. City Council authorize the City's Chief Financial Officer and Treasurer, in consultation with the City Solicitor and the General Manager, Toronto Water, to issue on behalf of the City and to sign all documentation related thereto, security in a form acceptable to the Fisheries and Oceans Canada (DFO) including a Letter of Credit if so required, in the amount required by DFO to cover the Aquatic Habitat Compensation Work up to a maximum of \$3,000,000, on such terms and conditions as are satisfactory to them, as may be necessary to obtain the permit approvals required by the Fisheries and Oceans Canada for the Landform Project.

4. City Council authorize the City to receive the conveyance of a portion of the water lot owned by Toronto and Region Conservation Authority upon which the Landform is to be built, subject to the reservation of an easement in favour of the Toronto and Region Conservation Authority in, under, over or through those portions of the Landform necessary for access to and maintenance of those erosion control structures retained by Toronto and Region Conservation Authority, on such terms and conditions as are acceptable to the Director of Real Estate Services in consultation with the General Manager, Toronto Water, and in a form satisfactory to the City Solicitor.

5. City Council authorize the City to transfer an easement to Toronto and Region Conservation Authority in, under, over, or through City owned lands in vicinity of Ashbridges Bay Treatment Plant only if, upon completion of the Landform, the General Manager, Toronto Water, determines it necessary to facilitate access to the erosion control structures that will be retained by Toronto and Region Conservation Authority, provided said easement shall be on such terms and conditions as are acceptable to the Director of Real Estate Services in consultation with the General Manager, Toronto Water, and in a form satisfactory to the City Solicitor.

6. City Council determine, in accordance with Chapter 213 of the City of Toronto Municipal Code, that the requirements to give notice to the public of the proposed disposition and to obtain an appraisal of the fair market value do not apply to any City transfer of an easement to the Toronto and Region Conservation Authority granted in accordance with Recommendation 5 above.

7. City Council authorize the City to negotiate and enter into any agreements, amendments, consents or permissions required by Toronto Port Authority (c.o.b. Ports Toronto) as the owner of the lands upon which Ashbridges Bay Treatment Plant is located and upon which a small portion of the Landform will be built, on such terms and conditions as are acceptable to the Director of Real Estate Services in consultation with the General Manager of Toronto Water and in a form satisfactory to the City Solicitor.

## **FINANCIAL IMPACT**

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The estimated project cost for construction of the Ashbridges Bay Treatment Plant Landform Project is \$96.0 million net of all applicable taxes (\$97.7 million net of HST recoveries). Funding is available in Toronto Water's 2019 Ten Year Capital Budget (2019 – 2029).

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial impact information.

## **DECISION HISTORY**

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At its meeting on June 10, 2014, City Council authorized the finalization of the Environmental Study (EA) Report and authorized Toronto Water to undertake the detailed design of the Ashbridges Bay Treatment Plant Landform Project as a joint initiative to be led by the TRCA. City Council also authorized Toronto Water to negotiate, enter into, and execute any required agreements, including an agreement with the TRCA, related to the detailed design of the Landform.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2014.PW31.15>

At its meeting on April 10 and 11, 2012, City Council adopted recommendations contained in the "Waterfront Landforms Study" Report from the General Manager, Toronto Water. Recommendations included entering into a joint initiative with TRCA to develop the Ashbridges Bay Treatment Plant Landform on the water lot south of the Plant in order to provide for the construction of a combined sewer overflow high-rate treatment facility, and sediment control measures/shoreline protection to benefit fish habitat, marine navigation and recreational boating in the area.

City Council directed the General Manager, Toronto Water, to report to the Public Works and Infrastructure Committee upon completion of the Environmental Assessment Study, prior to filing a formal public Notice of Completion for the EA study.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2012.PW13.2>

At its meeting of September 21, 2011, City Council adopted the recommendations contained in the "Wet Weather Flow Master Plan and Basement Flooding Protection Program Update Report" (August 12, 2011) from the General Manager Toronto Water which included the finalization of the Class EA Environmental Study Report for the Don River and Central Waterfront Project. A key component of the Project would be a new wet weather flow facility that will provide high-rate treatment of combined sewer overflows from the Don River and Central Waterfront, and will be located on future lakefill in the water lot south of the Ashbridges Bay Treatment Plant.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2011.PW7.6>

## **ISSUE BACKGROUND**

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The 1994 Toronto and Region Remedial Action Plan ("RAP") identified a series of measures needed to restore the health of Toronto's waters and habitats, and to delist the City of Toronto's waterfront as an Area of Concern. The most recent Toronto and Region Remedial Action Plan report: [Within Reach: 2015 Toronto and Region Remedial Action Plan Progress Report](#), highlights the positive strides that have been made towards delisting City of Toronto's waterfront as an area of concern. The most significant project needed to address water quality issues in the Don River and the Inner Harbour is now being initiated - the Don River and Central Waterfront (DR&CW)

Project, of which the Landform Project is an integral component, as it provides space for the Combined Sewer Overflow (CSO) treatment component of the DR&CW.

In 2003, Toronto City Council approved the City-wide Wet Weather Flow Master Plan ("WWFMP") to reduce the impacts of polluted stormwater runoff and combined sewer overflow (containing a mixture of untreated sewage and stormwater) discharges to Toronto's waterways and waterfront, and to address the 1994 RAP objectives. The 25-year Plan identified a series of projects for implementation, with the ultimate goal of improving water quality and ecosystem health in the City's waterfront; and thereby advancing the delisting of Toronto's waterfront as an Area of Concern in the Great Lakes Basin.

Since 2003, Class EA studies have been completed to support projects recommended in the WWFMP. These include the DR&CW EA (completed in 2012), and the Coatsworth Cut CSO and Stormwater Outfalls Control EA (completed in 2008).

### **Don River & Central Waterfront Project**

The DR&CW Project involves construction of a large diameter tunnel and storage system intended to intercept, store and redirect some 50 CSO outlets discharging to the Don River, Taylor Massey Creek and the Inner Harbour. These flows are to be redirected to the ABTP for treatment at a dedicated treatment facility to be constructed on the current water lot immediately south of the Ashbridges Bay Treatment Plant (ABTP) property. Construction of the first phase of the DR&CW project commenced in 2018. The dedicated treatment facility is referred to as the High Rate Treatment ("HRT") Facility.

The HRT Facility was recommended by the Wet Weather Flow Master Plan as the preferred method of treating CSO's prior to discharge into Lake Ontario. It will be a stand-alone treatment facility designed specifically for CSO flows captured and conveyed through the tunnel system, separate from the wastewater flows received and treated at the ABTP. It will be constructed on the south side of the ABTP property as the flows from the Don and Central Waterfront tunnel system will arrive at the Integrated Pumping Station that will be constructed on the north side of the ABTP.

While the lakefill area required to support the construction of the HRT Facility was identified in the aforementioned completed Class EA studies, an additional EA study was required to identify and integrate solutions from other planning initiatives in the ABTP area including an Erosion and Sediment Control Project, led by TRCA, with the purpose of reducing sedimentation and dredging requirements and ensuring safe navigation for recreational boating through Coatsworth Cut.

In 2012, City Council authorized the additional integrative EA study, "Waterfront Landforms Study" Report, as a joint initiative between the City and TRCA. The Ashbridges Bay Erosion and Sediment Control Class EA study was subsequently initiated in May 2013 and completed in December 2014. The EA is available at the following web site: <http://www.trca.on.ca/dotAsset/198680.pdf>

The preferred alternative consisted of erosion and sediment control structures to be integrated with the lakefill area required for the City's future HRT Facility. The preferred alternative was selected based on input from a Steering Committee consisting of staff from TRCA, Toronto Water, Parks, Forestry and Recreation, Waterfront Secretariat, and Waterfront Toronto. Extensive consultation during the Class EA study included meetings with a Community Liaison Committee, two Public Information Centres, and individual meetings with review agencies and stakeholder groups including local boating clubs.

The identified benefits of the preferred alternative were identified as follows:

- Potential positive impact on water quality in the recreational boating areas around Ashbridges Bay;
- Integration of existing and planned City of Toronto infrastructure, including the future HRT Facility;
- Provide for ongoing safe navigation through Coatsworth Cut without the requirement for ongoing annual dredging;
- Provide for future public access along the shoreline for part of the Landform; and,
- Require minimal annual maintenance.

## **COMMENTS**

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### **OVERVIEW OF WORK COMPLETED TO DATE**

#### **Report Back on Detailed Design**

The ABTP Landform Project detailed design was completed by TRCA in 2018. The detailed design follows the concept design provided in the 2014 Ashbridges Bay Erosion and Sediment Control Project EA. Additionally, during detailed design, two main enhancements to the 2014 EA concept design were identified: a configuration adjustment to ensure protection of the existing ABTP outfall, and aquatic habitat compensation mandated by the DFO.

The final design of the ABTP Landform Project (Figure 1) consists of three distinct sections:

- a land base that includes shoreline erosion control structures;
- a large breakwater, known as the central breakwater, constructed from the west of Coatsworth Cut; and,
- a smaller breakwater, known as the east breakwater, constructed from the southernmost headland of Ashbridges Bay Park.

The total area of the Landform Project, including the breakwaters, is approximately 27 ha of new land (lakefill) as depicted in Figure 1.

Figure 1: ABTP Landform Project Site Plan



The Landform Project will provide:

- a land base for the City of Toronto's High Rate Treatment Plant as identified in the Coatsworth Cut and Don River & Central Waterfront EAs;
- erosion control and long term shoreline protection for City of Toronto facilities;
- diversion of sediment from the navigation channel at Coatsworth Cut, eliminating the need to dredge the channel for several decades;
- public access along portions of the waterfront; and,
- enhancement of fish habitat along the shoreline and newly created embayments.

The Landform will include 16.4 ha of usable land surface and 5.6 ha of erosion control structures. The linear length of original shoreline, to be occupied by the Landform, is approximately 1,800 m long.

The erosion control structures surrounding the Landform include a headland-beach system and a revetment (retaining walls). The revetment, connecting the shore at the eastern portion of the Landform to the eastern portion of the headland-beach system, will be constructed using varying types of protection including rip rap (foundation for the breakwater) and armour stone. The shoreline between the five armour stone headlands will be built by placing cobble over the land base core stone.

The sediment diversion portion of the Landform Project will consist of two breakwaters with a footprint of 5 ha, constructed of rip rap placed overtop core stone and protected by armour stone. The breakwaters will be constructed with one on each side of Coatsworth Cut. The central breakwater will originate from the existing land base on the east side of the ABTP property and will be approximately 710 m long. The east breakwater will originate from the southernmost headland of Ashbridges Bay Park and

will be approximately 100 m long. The size of the area enclosed by the central and east breakwaters will be approximately 140,000 square metres and the opening of that area will be approximately 120 m wide.

## PROJECT COSTS

The estimated cost of the Landform Project is approximately \$96.0 million net of all applicable taxes (\$97.7 million net of HST recoveries). The estimated cost is broken down as per Table 1 below.

Table 1: ABTP Landform Project Cost Estimate

<b>Component</b>	<b>Estimated Cost* (millions \$)</b>
Planning, Permits and Approvals	\$0.25 M
Aquatic Habitat Compensation Work	\$3.0 M**
Issuance of Letter of Credit (10 years)	\$0.47 M**
Lake Based Construction Subcontracts	\$30.9 M
Construction	\$38.3 M
Post Construction Management and Monitoring	\$0.86 M
Property Acquisition Expenses, Inflation, Insurance, Bonding, TRCA Administrative Recovery, Contingency	\$22.2 M
<b>Estimated Total Cost</b>	<b>\$96.0 M</b>

\*Cost is net of all applicable taxes

\*\*Current estimate. This value will be determined when DFO negotiations and requirements are finalized.

Table 1 reflects the estimated full costs that have been identified based on the best available estimates and assumes no off-sets such as recoveries, however, these costs are market driven and may change due to the availability of construction materials, the demand for lake fill materials, and the construction timing of the project. The estimated cost has increased since the Ashbridges Bay Erosion and Sediment Control EA estimate in 2014. Increased costs are attributed to:

- Permitting processes have changed significantly since the 2014 EA budget estimate. There were extensive consultations with permitting authorities during detailed design, and the permitting estimate was adjusted accordingly and includes a 10-year onsite monitoring program mandated by the DFO.
- No lake based work was considered in the EA budget estimate. The approach assumed, at the time, was to create a temporary bridge from the Landform and use this to construct the central breakwater. With the change in the design to protect the existing ABTP outfall, this bridge is no longer possible and construction by barge is required. Barge construction is also required for the new submerged shoals required for habitat compensation, mandated by the DFO.
- The original estimate assumed free core material. To accommodate the DFOs in lake construction windows, the 2018 estimate assumes that all core material is purchased at a cost of \$23.5M. This estimate takes into account the unit cost of core material that has increased and that the quantity required has more than doubled

with the final design; the central breakwater is longer and deeper, the south shoreline of the Landform is deeper, and there are new headlands and shoals for aquatic habitat compensation.

- Inflation, bonding, and TRCA administrative recoveries were not included in the EA budget estimate.

## **LANDFORM PROJECT CONSTRUCTION SEQUENCING PLAN**

Given the scope of the Landform Project, an estimated five to six-year phased approach is required to construct the works commencing in 2019. The phases are as follows and depicted in Figure 2:

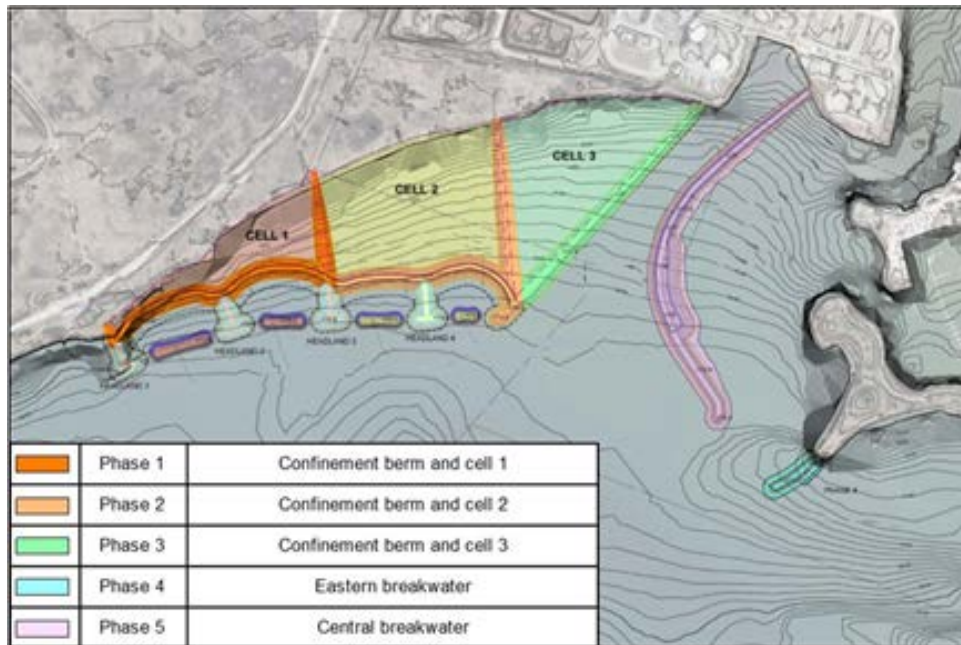
- Phase 1 – Construction of the Cell 1 confinement berm, filling of Cell 1, and construction of the headland-beach system and submerged shoals associated with Cell 1
- Phase 2 – Construction of the Cell 2 confinement berm, filling of Cell 2, and construction of the headland-beach system and submerged shoals associated with Cell 2
- Phase 3 – Construction of the Cell 3 confinement berm (revetment) and filling of Cell 3
- Phase 4 – Construction of the east breakwater
- Phase 5 – Construction of the central breakwater

TRCA is experienced with lake filling projects and has previously undertaken similar projects including the ongoing Region of Peel Lakeview Landform Project. Lessons learned from these projects have been incorporated in the construction approach, including:

- Availability of rubble can impact the schedule. Measures to mitigate schedule impacts may include coordination with other City projects that involve demolition and therefore the generation of rubble, e.g., pending Gardiner Project(s).
- Cell construction staging needs to account for the fishery construction window, which is annually from July 1 to March 31 of the subsequent year. This involves constructing smaller cells in order to close off the cell wall during the in-lake construction window, and then filling the cell at a later time outside the window.
- Significant time is needed to secure permitting and approvals from regulators, especially the DFO. The TRCA has stressed the importance of starting this process early.
- Ticketing system needs to be developed for the receipt of fill material from both internal (i.e. Toronto Water) and external projects. In addition, tipping fees for third party suppliers of fill material will need to be developed.



Figure 2: ABTP Landform Project Construction Sequencing Plan



### Construction of the Landform Project (Phases 1, 2 and 3)

Cell construction of the Landform involves: the construction of a confinement berm to isolate the fill from the lake, the filling of the cell, the construction of the headland-beach system, and construction of the submerged shoals. The construction of all in-water works have been scheduled to correspond with accepted construction window standards identified by the DFO.

Construction of the confinement berms are scheduled to commence on July 1st of each year, with Phase 1 beginning in 2019, Phase 2 in 2020 and Phase 3 in 2021. Completing the confinement berm within the fisheries timing window is of utmost importance. To reduce the risk of delays to the project, the rubble material required for construction may need to be procured to reduce the impact on other City projects as noted below.

### Aquatic Habitat Improvements

Once the fill area is isolated from the lake, aquatic habitat improvements will be undertaken and clean material will be accepted to fill the cell. Once a cell is completely filled the headlands and cobble beaches will be constructed using the filled cell as access. Headlands will be constructed of various sizes of rip rap and armour stone. Cobble beach construction will include the placement of woody debris as habitat. (Please see "Aquatic Habitat Compensation on page 11 for more details.)

### Breakwater/Underwater Shoal Construction (Phases 4 and 5)

Construction of the breakwaters and underwater shoals (Phases 4 and 5) will be contracted out by TRCA and the supply and placement of the required rip rap and armour stone will be by barge. As the east breakwater provides requisite protection to

the central breakwater and the eastern portion of the Landform, it will be constructed first. Construction of the east breakwater is anticipated to take one construction season and is scheduled to run from July 1st, 2019 to December 31st, 2019. Because of its length, and difficulty in winter barge construction, the central breakwater has been divided into three construction seasons. Construction will be undertaken between July 1st and December 31st of 2020, 2021 and 2022.

The construction of the underwater shoals will be implemented following the completion of the headlands, but prior to the cobble beaches of Landform construction Phase 1 and Phase 2. Shoal 1 and 2 are scheduled from July 1st, 2021 to March 31st, 2022 and Shoal 3 and 4 are scheduled from July 1st, 2023 to March 31st, 2024.

Once each containment cell has been infilled to above high lake level elevation, sediment and erosion control plans will be implemented during the terrestrial grading activities to prevent sediment from eroding into the lake. Sub-surface fill materials above lake level will be compacted during construction activities to reduce settlement of the Landform and each containment cell will be infilled to a rough grade before a final top dressing of material is applied.

### **Fill Material for Cells – Construction Project Coordination**

The timing and need for fill material to construct the Landform overlaps with the generation of surplus fill materials from three other projects at the ABTP site: the DR&CW (Phase 1) Tunnel, the ABTP Outfall Tunnel, and the ABTP Integrated Pumping Station. Transfer of fill material generated by these projects to the Landform will offset costs otherwise incurred to dispose of the excess material off-site. In addition, if the Landform Project is able to accept fill material from off-site third party construction projects, then tipping fees would be charged and off-setting revenues could be generated. Priority will be given to Toronto Water generated fill; third party (private) sources would be considered if there are gaps in the availability of Toronto Water sources. All lakefill material must meet quality and structural guidelines established by TRCA.

### **Construction Delay Implications**

Transfer of up to 1.2 million cubic metres of fill material from the three above-noted Toronto Water projects to the Landform Project can generate up to \$21M of savings to those projects - compared to the cost of hauling the fill material to landfill for disposal. The ABTP Landform Construction Sequencing Plan was developed to maximize this opportunity by aligning the construction schedule of the three other projects with the construction schedule of the Landform, and there is little room for schedule slippage. Construction of the Landform must begin in 2019, with the construction of Cell 1 berm and the east breakwater completed by March 31, 2020. Delaying the project will result in the loss of the 2019 in-water construction window; in addition to \$3.3M of lost savings and 171,000 cubic metres of fill material redirected to landfill instead of the Landform.

## AQUATIC HABITAT COMPENSATION

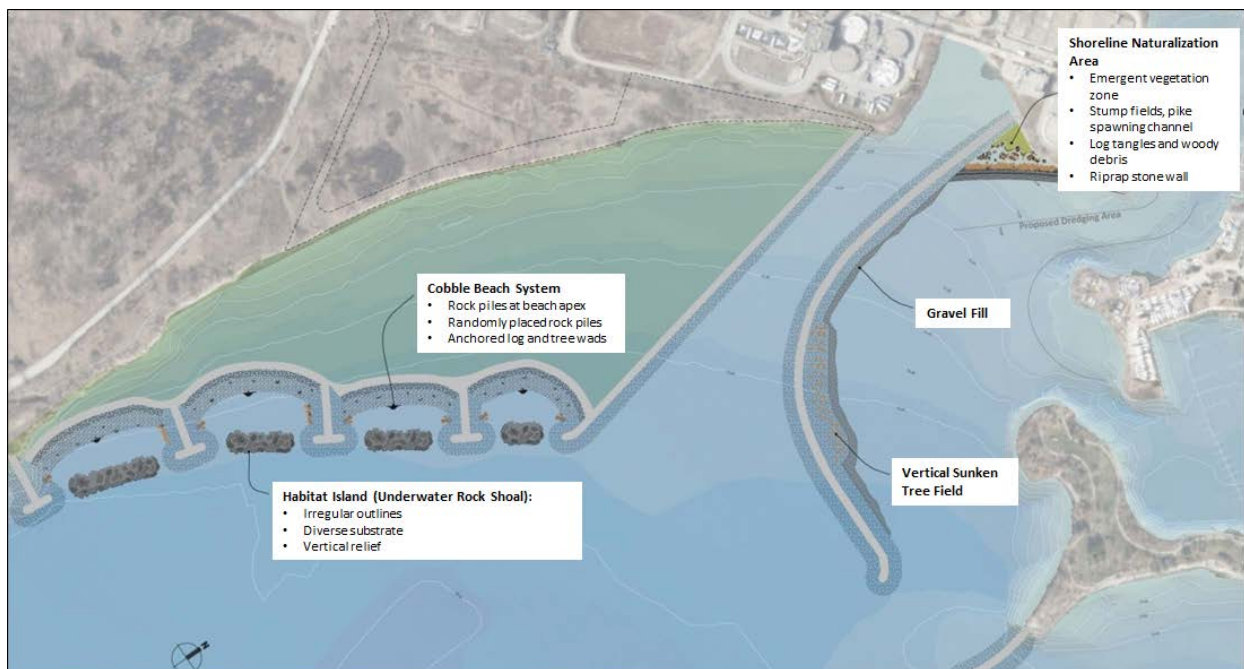
The construction of the Landform results in the loss of approximately 20 ha of open coast aquatic habitat within Lake Ontario, and as such, the DFO requires construction of offsetting habitat as part of the Project together with a Fisheries Act Authorization application under s.35(2)(b) of the Act. Options for offsetting aquatic habitat include:

- Establishing offsite productive aquatic habitat via a Habitat Bank before lake filling or creating a negative impact, or
- Establishing on-site and off-site productive aquatic habitat during or after construction.

The Landform Project will incorporate several measures to improve on-site local fish habitat (see Figure 3) including:

- four submerged rock shoals within the headland-beach system;
- submerged rock piles, anchored log tangles and tree wads in the cobble beaches;
- a shoreline naturalization area near the opening of Coatsworth Cut along the central breakwater;
- gravel fill along the inner bend of the central breakwater;
- a vertical sunken tree field at the inner bend of the central breakwater; and,
- submerged rock berms along the east breakwater.

Figure 3: ABTP Landform Project Aquatic Habitat Improvement



The City and TRCA, working with Aquatic Habitat Toronto ("AHT"), constructed a Habitat Bank compensation project in 2017 to provide the offsite productive aquatic habitat needed to offset the loss of open coast habitat caused by the Landform Project; a Habitat Bank avoids the need for a Letter of Credit associated with offsetting option two above. However, in January 2019, DFO advised that the proposed Habitat Bank

compensation project had not yet biophysically matured sufficiently, to qualify as a habitat bank, and meet the construction timelines of the Landform Project. The DFO advised, however, that this '2017 compensation project' can be used as a location for off-site compensation for offsetting option two above.

The DFO has advised that a Letter of Credit is required to secure funding for the DFO to execute the aquatic habitat restoration work in the event that the Landform Project does not complete the required works. An irrevocable Letter of Credit is required by the DFO with every Fisheries Act Authorization application (i.e. otherwise referred to as a DFO permit) under s.35(2)(b) of the Act, in accordance with SOR/2013-191, to cover the costs of implementing the aquatic habitat restoration work should it not be completed by the proponent as required. The exceptions to this requirement only apply if the applicant is Her Majesty in right of Canada, Her Majesty in right of a province or the government of a territory. The City of Toronto and the Toronto and Region Conservation Authority do not qualify as provincial government organizations. There are no substitutes for a Letter of Credit (e.g. letter of commitment, cash etc.).

Negotiations are on-going with DFO concerning the adequacy of these on-site and off-site measures for offsetting aquatic habitat losses associated with the Landform Project. It is anticipated that these negotiations will be completed within the next few months, the final costs associated with a Letter of Credit established at that time, and a DFO authorization obtained to permit initiation of construction in July 2019.

The estimated cost of this offsetting aquatic habitat compensation work is approximately \$3,000,000. Accordingly, this Staff Report requests that City Council authorize the City's Chief Financial Officer and Treasurer, in consultation with the City Solicitor and the General Manager, Toronto Water, if required, to provide an irrevocable Letter of Credit in the amount necessitated by the DFO permit, on behalf of the City, on such terms and conditions as are satisfactory to them and that may be necessary to obtain the approvals required by the DFO for the Landform. Funds for the Letter of Credit are available in Toronto Water's 2019 Ten Year Capital Budget.

## **CONSTRUCTION AGREEMENT(S) REQUIREMENTS**

This report seeks authority for the City to enter into one or more agreements, as necessary, with the TRCA, as an independent contractor, to construct the Landform based on the detailed design completed by the TRCA in 2018. In view of the TRCA's past involvement with the Landform Project and the TRCA's extensive experience with lake filling projects including the Region of Peel Lakeview Landform Project, it is recommended that the City retain the TRCA as the City's General Contractor for the construction of the Landform. The TRCA will provide all the necessary goods, equipment, labour, services, tools, materials, supplies, machinery, products, work, and services. The TRCA will also be responsible for all work carried out by its subcontractors and sub-consultants.

In general terms, it is expected that the Landform construction will include, among other things, the following, and, as such, that the construction agreement(s) will address:

- construction of the land base (including shoreline erosion control structures) and the two breakwaters;
- tree clearing and site mobilization and preparation for construction, including entry system with entrance controls;
- construction of confinement berms and the filling of confinement cells;
- fill and material supply and management;
- a lake fill quality control program including laboratory analytical requirements;
- the procurement and management of major marine subcontracts;
- topographic and hydrographic surveys;
- erosion control and long-term shoreline protection for various City facilities;
- protection and enhancement of fish habitat along the shoreline and newly created embayment's including on-site and off-site restorations and the Duffins Marsh North Ease Lagoon;
- final grade and site demobilization;
- the development and implementation of various plans to address risk mitigation, environmental mitigation, consultation, and communications strategies;
- the development and implementation of an EA compliance and performance monitoring program;
- quality control and quality assurance services;
- environmental monitoring and protection services including ongoing monitoring to support Aquatic Habitat Compensation mandated by the DFO; and
- erosion and sediment (ESC) planning.

The construction agreement(s) will also address any necessary insurance, performance bond, indemnity and warranty obligations as may be required to mitigate against construction and environmental risks and to protect the City's interests.

In addition to identifying any available source material generated from various City infrastructure projects which may be used in the construction of the Landform, the City will be responsible to pay TRCA for the work properly performed by TRCA in accordance with the construction agreement(s). It is recommended that such payment be on an actual direct construction cost recovery basis plus a reasonable administrative fee not to exceed 5% of the project cost, satisfactory to the General Manager, Toronto Water. Lastly, it is recommended that authority be delegated to the General Manager, Toronto Water, to negotiate, enter into and execute the construction agreement(s) with TRCA on such terms and conditions as are acceptable to the General Manager and in a form satisfactory to the City Solicitor.

## **PERMITTING AND CONSULTATIONS**

During the detailed design, permit applications required for construction were initiated. Table 2 outlines the status of permitting.

Table 2: Status of Required Permits for the ABTP Landform Project

Agency	Permit	Notes
Fisheries and Oceans Canada	Fisheries Act	Letter of Credit is required to secure permit. Permit expected June 2019.
Transport Canada	Navigation Protection Act	Submitted July 25, 2018.
Ports Toronto	Harbour Master's Authorization	Cannot be submitted until Transport Canada permits are secured.
Ministry of Natural Resources and Forestry ("MNRF")	N/A	Courtesy circulation undertaken in 2018; no MNRF regulated lands.
Toronto and Region Conservation Authority (TRCA)	N/A	Courtesy circulation undertaken in 2018; no TRCA regulated lands.

Throughout the Class EA study, extensive consultation took place with the public, local community and interested parties, and other stakeholders, as well as regulatory agencies, and City divisions and agencies. Two Public Information Centers and three Community Liaison Committee meetings were held at key milestones of the study. Indigenous peoples were also engaged through correspondence throughout the Class EA study process. In addition to this a Steering Committee with representation from TRCA, Waterfront Toronto and various City of Toronto departments (Toronto Water, PF&R and Waterfront Secretariat) helped guide the EA process.

Since finalizing the Class EA, consultation activities have included:

- Ongoing presentations and discussions with Aquatic Habitat Toronto (since 2013);
- Individual meetings and briefings with key stakeholders including the local yacht clubs and Tommy Thompson Park User Groups.

During construction, TRCA will take the lead for all communications with Project partners, stakeholders, Indigenous peoples and the broader public. Prior to construction, TRCA will give notice to stakeholders in the Project area. During construction, sections of the waterfront actively under construction will be temporarily restricted for use by the public. This is primarily during construction of Cell 1 (on the north east shoreline of Tommy Thompson Park) and during the construction of the Eastern Breakwater off of Ashbridges Bay Park. The majority of other activities will not have any impacts to land-based public use as they will be occurring off of the ABTP property. The boat clubs in the local area will be notified of work being undertaken and informed of any impacts to navigation that may be experienced within the waters of the Work Area. TRCA, including any sub-contractors, will adhere to all municipal construction by-laws.

## EXISTING AND FUTURE PROPERTY INTERESTS

Figure 4 depicts the current ownership structure of lands affected by the Landform construction. Area as follows:

- Area 1 is property that the City of Toronto owns or has effective control for all purposes related to wastewater infrastructure
- Areas 2 and 3 are part of two water lots, both owned by TRCA

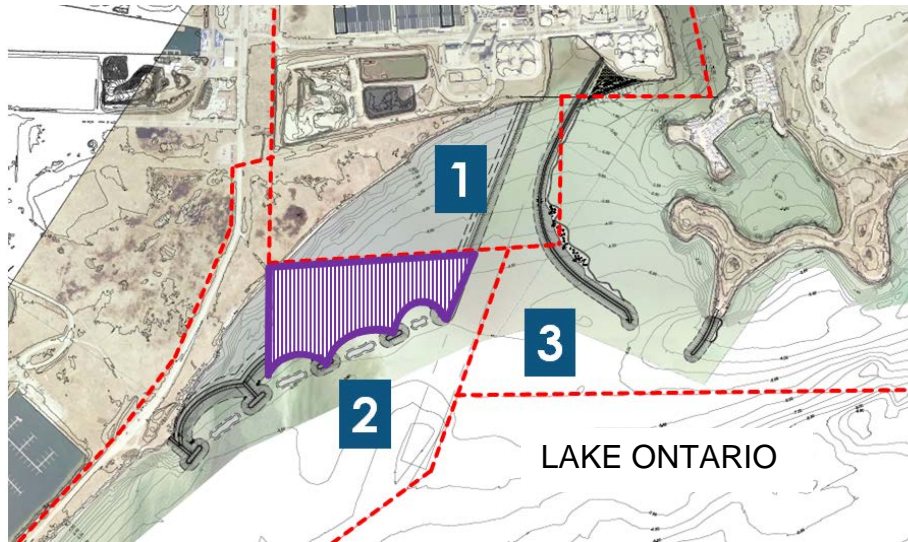
Once the Landform has been built and properly surveyed, ownership of a portion of Area 2 approximately equivalent to the hatched area identified in the figure below, will be transferred to the City, subject to an easement that TRCA will retain over those lands necessary to access and maintain the submerged erosion control structures - which are to remain in TRCA's ownership and control. If the General Manager, Toronto Water, determines it is necessary upon completion of the Landform, the City may also transfer an easement to TRCA over those portions of City-owned land in vicinity of ABTP required for access and maintenance purposes.

The property transfer(s) will occur on a nominal basis and the City shall pay for transaction costs and fees related to the conveyance, including due diligence, surveying fees, the cost of preparing and depositing a reference plan, registration fees but specifically excluding TRCA's legal fees. If the General Manager, Toronto Water, determines that it is necessary, TRCA shall pay for all costs associated with the transfer of easement over City-owned land.

Provisions for public access along the crest of the headland-beach system is to be included. Parks Forestry and Recreation (PF&R) have been consulted, and details of future landscaping and maintenance will be finalized in consultation with TRCA and PF&R during the construction of the Landform.

As the northern most tip of the central breakwater will be built on the main ABTP site, which is owned by Toronto Port Authority (c.o.b. Ports Toronto), the City will liaise with Ports Toronto to determine if any form of agreement, permission, or consent is required to supplement the City's existing property rights on the ABTP site.

Figure 4: ABTP Landform Project Property Interests



## NEXT STEPS

Following City Council approval of this report, Toronto Water will enter into and execute agreement(s) with TRCA for construction of the ABTP Landform. Led by the TRCA, construction staging will then commence according to the Project Construction Sequencing Plan, and will take approximately five to six years to complete.

## CONTACT

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## SIGNATURE

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