

**Response to Letter from Trumpeter Swan Restoration Group (received by email Aug 12, 2013)**

Comment from TSRG	Project Team Response
<p>As several different scenarios for timing of construction have been put forth, please clarify when you expect construction to begin and end.</p>	<p>Construction timing will be confirmed during detailed design through ongoing discussions with key stakeholders including the Trumpeter Swan Restoration Group (TSRG), LPMA and permitting agencies. As noted in the report there are a number of things that will influence construction timing including the boating season, fish spawning timing windows and the Trumpeter Swans wintering season. It is the desire of LPMA and the City to work with key stakeholders to try to find a manageable time for construction.</p>
<p>Please explain to us why you think “staging” will protect the swans.</p>	<p>The staging of construction may be one way to avoid construction related disruption during key time periods. As noted above, it is the desire of LPMA and the City to work with key stakeholders to try to find a manageable time for construction.</p>
<p>On Page 33 the report suggest impacts of construction “would be mitigated by delivering the majority of construction materials using a self-unloader (barge) to the breakwater site.” Please provide the evidence on which you have based this assessment.</p>	<p>As noted in the ESR, the bulk of the stone required for the breakwater core would be transported by a self unloading ship. The ship would travel to the site, remaining on the outside of the future breakwater, and would unload the stone into the water. Depending on the size of the ships used, this could require approximately 6 loads. Unloading of each ship can be completed in less than a day and if necessary could be completed during the boating season with minimal impact on the marina operation although noise and possible dust impacts would occur. Reshaping of each load into the core would be done with equipment based on the breakwater or a small barge operating adjacent to the breakwater. This approach reduced the truck and boat traffic associated with the transport of the core material.</p> <p>Trucks are required to bring the armour stone and rip rap for the sides and for the cap of the breakwater. As noted in the ESR, we anticipate approximately 300 truckloads of material that would need to be transported by barge from the pier to the breakwater for placement. This activity is anticipated to take approximately 3 to 4 months to complete. It will have a greater potential to impact marina operation.</p> <p>We understand that construction noise and activity has the potential to disturb swans, other wildlife, boaters and others who use the area. As noted, it is the desire of LPMA and the City to minimize construction disruption and to work with key stakeholders to try to find a manageable time for construction.</p>

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<p>On Page 51 of the report, it says: “The breakwater construction would be well removed from shore and will only occur during the day when the swans are typically in shallower water which will help to minimize construction disturbance.” Please provide the evidence that this will “minimize disturbance”.</p>	<p>This statement is not intended to suggest that there will be no disruption, just that distance will help to minimize the extent of disruption that occurs.</p>
<p>How will it be decided if unwashed or pre-washed material is to be used? Is there a difference in cost? If so, was the estimated cost of construction based on unwashed or prewashed material?</p>	<p>During detailed design consideration will be given to the difference in cost and availability of washed and unwashed stone.</p>
<p>Has the effect of sedimentation on the aquatic life in the Bay been studied and if aquatic life is affected, what impact would that have on Trumpeter Swans and other waterfowl that overwinter in LaSalle Park and depend on water plants as a food source?</p>	<p>The construction of the breakwater will not add sediment to the area. There is some potential to disturb existing sediments however any disturbance during placement of material would be short lived and confined to the near bottom layer. This is documented in the ESR.</p> <p>As noted in section 3.2.2 of the ESR, sediment transport in the area where the proposed breakwater is located is very low and based on the information in past sediment studies in the area it is not anticipated that the proposed breakwater will result in sedimentation issues.</p>
<p>Please explain what a silt curtain is, how it would be deployed, what it is made of and what the possibilities are that Trumpeter Swans or other wildlife could get caught in it.</p>	<p>A silt curtain is essentially a filter that would be installed in the water column to prevent the movement of mobilized sediment during construction. A silt curtain is a filter fabric attached to a floating system. The floating system is anchored with cables to the bottom, usually to concrete blocks. The floats extend only 10 to 20 cm above water. The filter fabric normally, but not always, extends to the bottom of the lake. It may need to surround the area where the stone is dumped. It is a temporary installation. It is commonly used and it is unlikely that wildlife would get caught in the silt curtain.</p>

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<p>The current preferred alternative does not provide a radius of a minimum of 100m for take-offs and landings. A radius of 100m is required.</p>	<p>Based on the information we have reviewed it is clear that there is a need for a minimum of 100 metres for take-off and landing.</p> <ul style="list-style-type: none"> <li>• Boreal songbird initiative web site – “at least 100 meters (328 feet) of unobstructed runway for takeoff” <a href="http://www.borealbirds.org/birdguide/bd0413_species.shtml">http://www.borealbirds.org/birdguide/bd0413_species.shtml</a></li> <li>• Wyoming Game and Fish department report - “An adult Trumpeter requires approximately 110 feet (34 m) without a head wind to take off and gain six feet elevation” <a href="http://www.swansociety.org/docs/Swan%20Habitat%20Construction%20and%20Management%20Prescriptions-WGFD%20Nov2004.pdf">http://www.swansociety.org/docs/Swan%20Habitat%20Construction%20and%20Management%20Prescriptions-WGFD%20Nov2004.pdf</a></li> <li>• Travsky and Beauvais, 2004 – “open flight lanes of at least 100 m are needed for takeoff and landing”</li> </ul> <p>In August 2012 we also exchanged emails with Kyna who we understood is part of the TSRG confirming the need for a least a 100 m of space for takeoff and landing. To date we have found limited reference to the need for a 100 metre radius. Please provide any additional information if available.</p>
<p>Have you studied the impacts of the concentrated fecal matter from wintering waterfowl on plant and algae growth and the waterfowl and if so, could you provide us with any expert advice you’ve received? If you have not studied these impacts, could you please seek expert advice on them and share the results?</p>	<p>Wind and wave patterns were studied through this project. The proposed breakwater will be open at both ends allowing for water circulation. The low crested section of the proposed breakwater will also assist in water circulation.</p> <p>There has been no site-specific study to date related to the impact associated with the fecal matter of wintering birds on water quality. The construction of a fixed breakwater is not expected to change the concentration of wintering waterfowl that currently utilize LaSalle Park. Therefore, it is not expected that there will be a change in fecal matter from these species pre- and post-construction.</p>
<p>Please provide the evidence for “somewhat better water quality”. Have you considered the nutrient load deposited by swans, geese and other waterfowl that will now be trapped by “impeded water flow”? What impact will this have on plant and algae growth?</p>	<p>It is anticipated that the breakwater will help to isolate the water in this area from nutrient and silt sources that have the potential to affect the larger harbour. It is possible that the sheltering nature of the breakwater may change the diversity of aquatic plants, however, as indicated in the ESR, it should be noted that over more than 30 years of operation, LPMA has never reported conditions of nuisance vegetation communities and we do not anticipate the need for their removal. Should this be required, a plan will be developed to address this.</p>

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<p>What impact might the cutting of vegetation have on the harbour's service as fish and bird habitat?</p>	<p>Most of the marina is located in deep water and it is not anticipated that there would be a need to remove vegetation for marina operations. It is noted that LPMA has never had to remove plant growth in the time it has been operating.</p>
<p>Have you done any modeling to indicate what impact the permanent wave break may have on length of time the harbour may freeze over and if so could you please share it?</p>	<p>Wind and wave modeling has been completed and is included in the ESR. There has been no modeling completed related to ice formation.</p>
<p>Please describe how mechanical breaking of the ice would occur and with what equipment. What is the expected impact of this activity with its accompanying noise and movement expected to have on the swans? What would the cost of this equipment be? Who would pay for it?</p> <p>How many aerators would be needed to keep the water between the marina and shore open? What would their cost be? How much backup equipment would you need in case of equipment failure? Who would be responsible for keeping the ice open — the marina? The City? What impact would their placement have on the ecology of the harbour? How much habitat would they displace?</p>	<p>The type of system needed to manage ice and its design will be determined during detailed design. LPMA and the City will be happy to provide the options that are available to the TSRG at that time. As noted in the ESR, LPMA would be responsible for maintenance of the breakwater and all associated equipment which would include any system for ice management.</p>
<p>Please provide examples of where bubbling systems have been employed and their effectiveness and reliability. Please provide a business case that includes the costs of installation and ongoing maintenance.</p>	<p>The need for deicing/bubbling system will be completed during detailed design process. An example of a commercially available system can be viewed at <a href="http://acadianpond.ca/deicing-systems-canada.html">http://acadianpond.ca/deicing-systems-canada.html</a></p>
<p>The report says: "LPMA would be responsible for the capital and maintenance costs of the bubbling system, if installed." Please provide us with the financial statements to show that LPMA has the wherewithal to do so.</p>	<p>LMPA has had a long standing agreement with the City of Burlington for the operation of the marina and provides its audited financial statements to the City as required by that agreement. There has never been an operational subsidy of the marina.</p>

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<p>The report says “LPMA will observe ice formation in the area over the winter up until the time of construction to better understand current conditions.”</p> <p>This is not acceptable to us. This requires a proper scientific, independent study and evaluation by qualified individuals with modeling done to forecast freeze conditions over a multi-year timeframe.</p>	<p>Ongoing observation of the ice in the area will provide data to assist in developing operational parameters for a bubbling system. The formation of ice over a multi-year period cannot be predicted.</p>
<p>The EA does not evaluate what impact reduced wave action might have on accumulation of waterfowl fecal matter near shore and its impact on water conditions and plant growth. Please undertake this evaluation.</p>	<p>There has been no specific study to date related to reduced wave action and concentrations of waterfowl fecal matter. However it is noted that the wintering birds (which represent the greatest concentration) are located at the LaSalle Park during the period of time where there is no plant or algae growth.</p>
<p>There can be no encroachment of docks into the Area of the harbour currently utilized by the swans. Accurate research about the space requirements for over-wintering Trumpeter Swans needs to be undertaken and reported back to us and other concerned agencies.</p>	<p>At a meeting with Bev and Ray Kingdon on October 29<sup>th</sup>, 2012 it was suggested that a 20 ft. by 20 ft. area was a reasonable amount of space per swan. As noted in the ESR, based on the location of the facilities and an assumption of about 200 swans there is approximately 115 m<sup>2</sup> of space per swan. This equates to an area 10 m by 11 m or 32 ft. by 36 ft. We note that this space at shallow depths (i.e. between the shore and the 1 m contour line). There is significantly more space if the area beyond the 1 metre contour line is considered. We recognize that the swans share the space with others but based on the information available we feel that this approximation indicates that there is sufficient space. No other agencies have expressed concern regarding space availability for swans.</p>
<p>Given that the RAP gives priority to restoring fish and wildlife habitat please explain why destroying aquatic habitat and negatively impacting Trumpeter Swans is deemed acceptable?</p>	<p>Section 6.2 of the ESR identifies how this project addresses the RAP fish and wildlife goals as well as the MNR Fisheries Management Plan goals.</p>
<p>Aside from cormorants, what are considered “undesirable species”? Please define “environmental controls”.</p>	<p>Undesirable species that occur within Hamilton Harbour generally include cormorants, as stated in the report. Environmental controls that may be used to dissuade habitation of the breakwater would be done in consultation with waterfowl biologists from Environment Canada and may include keeping the crest of the breakwater free of vegetation and encouraging the colonization of desired species.</p>
<p>If gulls become a problem on the break wall or harbour area, how will they be dealt with?</p>	<p>Gulls are often a concern on all waterfronts. One of the target species for nesting habitat on the crest of the breakwater includes Herring Gulls. Environment Canada waterfowl biologists will be engaged during detailed design to effectively attract desired species and dissuade colonization of undesirable species.</p>

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<p>“During the operational phase, it is expected that the community will enjoy improved aesthetics as the docks may no longer be stored on the pier, and could remain in place during the winter.”</p> <p>Please provide us with the evidence for this assertion.</p>	<p>This statement is based on comment received at the PIC as well as an indication from LPMA and the City that there would be more opportunity for the community to use and value the pier in the winter if it was not used for dock storage.</p>
<p>The ESR Report goes on to say: “The breakwater itself will change the visual landscape.”</p> <p>Why do you assume this change will be welcome?</p>	<p>It is a factual statement that the proposed breakwater will change the visual landscape. A fixed breakwater is preferred for the criterion “Potential operational impact on park users and/or neighbourhood” which considers the benefits to the community associated with improved visual aesthetic and ability to use the pier as well as the visual impact of the breakwater itself.</p>
<p>What impact will the building of a permanent wave break and docks have on the people who are not boaters, not only during the construction period but afterward?</p>	<p>During construction there is potential for those who visit the waterfront to experience nuisance impacts such as dust and noise. This construction related impacts are temporary in nature. It is agreed that the proposed breakwater will change the view for those visiting the pier and shoreline.</p>
<p>Will the public pier continue to be used for boat storage over the winter? With an increased number of slips being proposed for the marina, will there be an increase of boats being stored on the pier? If so, how much public space is this expected to take up?</p>	<p>There are no plans to increase winter storage. Currently approximately 80 boats are stored by the Burlington Bay Sailing Club. The remaining boats are and will continue to be stored elsewhere. No additional public space will be used for boat storage.</p>
<p>Please clarify what is the current boating season and what is expected to be an extended boating season.</p>	<p>For the purpose of modeling wind and waves a typical boating season (May 15 to September 30) and an extended boating season (May 1 to October 15) were used. The LaSalle Park Marina is typically open from mid-April to mid to end of October. The opening and closing dates of the marina are dictated by the Joint Venture Agreement between LPMA and the City of Burlington and the City’s lease with the Hamilton Port Authority.</p>
<p>Will the marina welcome PWC? As well there was discussion of allowing storage of PWC and kayaks. Is this still being considered, where would this take place and how much public space would be forfeited?</p>	<p>No public space will be used for storage. If storage is offered it will be inside the marina. As noted this is fully an off-shore project.</p> <p>We note that PWC using the LaSalle Park Marina are required to follow LPMAs protocols. These include things like no discharging of oil, no pollution, no harassment of wildlife. Those violating LPMA protocols are asked to leave the marina. There are no regulations for PWC that launch from the public ramp.</p>

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<p>If another 121 slips are added, what is the expected input of pollution expected to have on the ecology of the Harbour at LaSalle Park?</p>	<p>As noted in the ESR, the LaSalle Park Marina has won 5 Anchor Awards and a Built Environmental award for accessibility. The Marina is proud of its environmental protection achievements and is committed to continuing to promote environmental stewardship to its members. It is noted that all boats have contained sewage and waste water systems and owners have signed permits requiring them to follow LPMA protocols for noise, fuel waste etc. No fuel is sold, or will be sold at the Marina.</p>
<p>Is the marina planning to expand to 320 permanent and 20 floating boat slips or not?</p>	<p>LPMA is interested in adding additional slips at the marina and through Vision 2012, have put forward a rationale for 320 permanent slips and 20 transient slips.</p>
<p>Will docks remain in place over the winter or not? And if they do not, will some continue to be stored on the pier and if so, how many?</p>	<p>The section of the ESR you have quoted refers to Alternative 2 (a floating wave break). With the fixed wave break LPMA intends to keep the docks in the water in the winter.</p>
<p>Please explain in plain language what this statement from Page 12 of the EA means: "It is noted that while LPMA is interested in adding additional slips to expand the existing marina, other related changes are limited to a reconfiguration of the existing parking facilities."</p>	<p>This statement is intended to clarify that LPMA proposes to add additional slips but no other facility expansions (e.g. club house) are anticipated. This is entirely an off-shore project.</p>
<p>If permanent docks are installed, how will they be installed and how much harbour habitat will be destroyed by their installation?</p>	<p>The walkways will be anchored with relatively small footprints on the bottom. The finger docks are entirely floating. No significant impact on habitat is anticipated.</p>
<p>Will any boats/watercraft remain in the water at the marina over the winter? If not, what is the date when all boats will be removed from the marina?</p>	<p>No boats/watercraft will remain in the water over the winter. Typically LPMA removes boats from the Marina in mid-October and no later than November 1<sup>st</sup>. This represents the current timing for boat removal and will continue with the proposed breakwater. The opening and closing dates of the marina are dictated by the Joint Venture Agreement between LPMA and the City of Burlington and the City's lease with the Hamilton Port Authority.</p>

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<p>Why was the Trumpeter Swan Restoration Group never included in the Agency Consultation meetings for Vision 2012 or in Wave Break Stakeholder meetings?</p> <p>Will the TSRG be considered a “Key Stakeholder” and included in consultations if this project moves forward into the “detailed design phase”?</p> <p>We are deeply disappointed that the TSRG did not hear back from either the City or the consultants after they brought their concerns about the project to their attention.</p>	<p>The Agency consultation group consisted of government and related agencies only. The TSRG is considered a key stakeholder in this project and as such the project team met with Bev Kingdon on three occasions during this project. We believe that through this ongoing dialogue we have responded to the concerns raised by the TSRG.</p> <p>LPMA and the City are committed to continuing to work with the TSRG during detailed design. As noted on the LaSalle Park Marina Facebook page, LPMA is looking forward to working with the TSRG to achieve a win-win situation for all.</p>
<p>Releasing the ESR over the summer seems timed to limit opportunity for community consultation rather than facilitate it.</p>	<p>The City recognized that the summer could be a challenging time for people due to vacation schedules and as such extended the review period from the required 30 day public review period to a 45 day public review period.</p>
<p>Since this marina expansion project is being sold as an opportunity to improve fish habitat, why are you not including the cost of “aquatic habitat features”? If the costs of aquatic habitat features are not included, they will not be built.</p>	<p>Starting with Vision 2012, LPMA has always emphasized that habitat enhancement element of this project. LPMA and the City are committed to building fish habitat as part of the proposed breakwater. The extent of habitat features and associated cost will be confirmed through the detailed design and permitting process with applicable agencies.</p>
<p>Please confirm that the actual cost of building the breakwater is a minimum of \$9.2 million if it is built to include fish habitat.</p>	<p>Based on the estimation of length (approximately 400 m) and cost of the aquatic shelf (approximately \$3000/m) provided in the ESR, the inclusion of a fish habitat shelf along the full length of the breakwater would be approximately \$9.2 M. During detailed design, though discussions with agencies and key stakeholders the extent of habitat shelf will be confirmed and more accurate costing provided.</p>



Comment from TSRG	Project Team Response
<p>Please clarify whether the City of Burlington will be contributing funds for this project.</p>	<p>LPMA has developed a business case for the proposed breakwater and the addition of slips at the Marina. The business case clearly shows that no City ratepayer money will go into capital or operating requirements.</p> <p>LPMA is committed to a biodiverse safe harbour project. They are a not for profit volunteer organization that offers a lower cost service making recreational boating affordable to average Canadians. Boating is by no means the purview of the wealthy nor should it be. This proposed project works towards a true win for the community, wildlife and boating community.</p> <p>It is noted that projects such as these are often built with federal/provincial funding support. Pickering harbour and Trenton harbour are two recent examples.</p> <p>The City of Burlington does not have any funding budgeted for the design and construction of this project.</p>