

ANNEX 1: Advice to the Agency

Table 1: Please use the table below to provide advice for the Agency’s consideration in its recommendation to the Minister of Environment and Climate Change and preparation of draft conditions

Questions	Responses/Comments
<ul style="list-style-type: none"> Has the proponent described all project components and activities in sufficient detail to understand all relevant project-environment interactions? If not, identify what additional information is needed. 	No Change from Original December 21, 2020 submission.
<ul style="list-style-type: none"> Were the study areas sufficient to predict potential effects from all relevant project-environment interactions, and to consider the effects within a local and regional context? Is the baseline information sufficient to characterize the existing environment, predict potential effects and obtain monitoring objectives? If not, identify what additional information is needed. 	No Change from Original December 21, 2020 submission.
Alternatives Assessment	
<ul style="list-style-type: none"> Has the proponent adequately described the criteria it used to determine the technically and economically feasible alternative means? Has the proponent listed the potential effects to valued components (VCs) within your mandate that could be affected by the technically and economically feasible alternative means? Has the proponent adequately described why it chose each preferred alternative means? Are there other alternative means that could have been presented? If so, please describe. 	The proponent explored various mitigation measures such as widening the mouth of Boat Harbour and armouring the channel prior to the removal of the dam to determine a potential for the reduction of impacts due to sediment transport to the Marine Environment, once tidal connectivity is restored.
Environmental Effects Assessment	
<ul style="list-style-type: none"> Has the proponent clearly described all relevant pathways of effects to be taken into account under section 5 of CEAA 2012? Has the proponent identified all potential effects to VCs, including species at risk, within your mandate? Were all potential receptors considered? 	No Change from Original December 21, 2020 submission.
<ul style="list-style-type: none"> Were the methodologies used by the proponent appropriate to collect baseline data and predict effects, why or why not? 	No Change from Original December 21, 2020 submission.

Questions	Responses/Comments
<ul style="list-style-type: none"> Has the proponent explicitly addressed the degree of scientific uncertainty related to the data and methods used within the assessment? If there are unaccounted for scientific uncertainties, describe them and indicate the options for increasing certainty in the predictions? 	
<ul style="list-style-type: none"> Are the predicted effects described in objective and reasonable terms (e.g. beneficial or adverse, temporary or permanent, reversible or irreversible)? 	No Change from Original December 21, 2020 submission.
<ul style="list-style-type: none"> Has the proponent adequately assessed the potential cumulative environmental effects, including using appropriate temporal and spatial boundaries , examining physical activities that have been and will be carried out, and proposing mitigation and follow-up program requirements? Provide rationale. 	No Change from Original December 21, 2020 submission.
<ul style="list-style-type: none"> Has the proponent adequately described the potential for environmental effects caused by accidents and malfunctions, including the types of accidents and malfunctions, their likelihood and severity and the associated potential environmental effects? If not, identify what additional information is needed. 	No Change from Original December 21, 2020 submission.
<ul style="list-style-type: none"> Are you satisfied with the proponent’s assessment of effects of the environment on the Project? Has the proponent characterized the likelihood and severity appropriately? Provide rationale. 	No Change from Original December 21, 2020 submission.
<ul style="list-style-type: none"> Has the proponent sufficiently described and characterized the project activities and components as they relate to federal decisions within your mandate? If not, identify what additional information is needed. Are changes to the environment, as they relate to federal decisions within your mandate, sufficiently described? If not, identify what additional information is needed. 	No Change from Original December 21, 2020 submission.
Mitigation	
<ul style="list-style-type: none"> Has the degree of uncertainty regarding the effectiveness of the proposed mitigation measures been described? If not, identify what information is needed. Is it clear how each proposed mitigation measure links to each potential pathway of effect? 	No Comment
<ul style="list-style-type: none"> Would you propose different or additional mitigation measures? If so, provide a description of the mitigation measure(s), with rationale. 	No Change from Original December 21, 2020 submission.

Questions	Responses/Comments
<ul style="list-style-type: none"> Which of the proposed mitigation measures and/or project design elements do you consider to be necessary to reduce the likelihood of significant adverse environmental effects? Provide rationale. 	No Change from Original December 21, 2020 submission.
Residual Adverse Environmental Effects	
<ul style="list-style-type: none"> Are the identification and documentation of residual environmental effects described by the proponent adequate? If not, what are the aspects for which there is uncertainty and, where possible, indicate how these residual effects can be best described. If there is uncertainty, what are the options for increasing certainty? 	No Change from Original December 21, 2020 submission.
<ul style="list-style-type: none"> Did the proponent provide a sufficiently precise, ideally quantitative, description of the residual environmental effects related to your mandate? Identify any areas that are insufficient. 	No Change from Original December 21, 2020 submission.
Determination of Significance	
<ul style="list-style-type: none"> Are the conclusions on significance in the EIS supported by the analysis that is provided? Are the proponent's proposed criteria for assessing significance appropriate? This includes how the criteria were characterized, ranked, and weighted. Provide rationale. Where the proponent has not used one of the Agency's recommended key criteria (magnitude, geographic extent, duration, frequency, reversibility, and social/ecological context), has a rationale been provided? 	No Change from Original December 21, 2020 submission.
<ul style="list-style-type: none"> Were appropriate methodologies used in developing the conclusions on significance? 	No Change from Original December 21, 2020 submission.
<ul style="list-style-type: none"> Do you agree with the proponent's analysis and conclusions on significance? Provide rationale. 	No Change from Original December 21, 2020 submission.
Monitoring and Follow-up	
<ul style="list-style-type: none"> Does the proposed monitoring and follow-up program verify the predictions of the environmental assessment as they relate to section 5? Please explain additional monitoring or follow-up needed to address uncertainty in the effects assessment. 	No Change from Original December 21, 2020 submission.
<ul style="list-style-type: none"> Does the proposed monitoring and follow-up program verify the effectiveness of proposed mitigations as they relate to section 5? Please explain additional monitoring or follow-up needed to address uncertainty in the proposed mitigation. 	No Change from Original December 21, 2020 submission.
<ul style="list-style-type: none"> Is the objective of the follow-up program clear and measurable? Does the follow-up program include sufficient detail, and technical merit, for the Agency to achieve the stated objective through a condition (e.g. sufficient baseline dataset, monitoring plans, acceptable thresholds of change, contingency procedures)? 	No Change from Original December 21, 2020 submission.

Questions	Responses/Comments
<ul style="list-style-type: none"> Are you aware of any federal or provincial authorizations or regulations that will achieve the same follow-up program objective(s)? If so, how do these achieve the objective(s)? 	No Change from Original December 21, 2020 submission.
Additional comments, views, advice	
<ul style="list-style-type: none"> Provide any other comments. 	No Change from Original December 21, 2020 submission.

ANNEX 2: Information requirements directed to the proponent

Table 2: Please use the table below to provide your department’s comments and suggestions for information that should be required from the proponent to ensure the information in the EIS is scientifically and technically accurate and is sufficient to make a determination of significance on environmental effects.

ID	Project Effects Link to CEAA 2012	Reference to EIS guidelines	Reference to EIS	Context and Rationale	Specific Question/ Request for Information
IAAC-06	5(1)(a)(i) Fish and Fish Habitat	Part 2, Section 7.1.6	Section 7.1.6.2, Table 7.1-31	The proponent was asked to describe the methodology used for the fish survey mentioned in Section 7.1.6.1.1. of the EIS. The proponent was also asked to clarify if Striped Bass were caught or observed within the estuary, and reconcile or provide rationale for the discrepancy of fish species in Table 7.1-31 and Section 7.1.6.2 of the EIS.	The proponent’s response is sufficient. It should be noted that the proponent indicated that the salinities found in the estuary were amenable for electrofishing. The mean conductivity measured in the estuary was found to be 3,254 µS/cm. It should be noted that the effective conductivity range for most successful electrofishing sampling occurs from 20 to 2,000 µS/cm. Outside of this range, efficiency becomes limited and it becomes very difficult to achieve the proper voltage, current, and power requirements needed to capture fish efficiently. At high conductivity, the electrical current will travel through the water and around the fish, and not through the fish, as desired. It is highly likely that, even though the proponent caught fish via electrofishing in the estuary, they missed many fish and potentially other species.
IAAC-07	5(1)(a)(i) Fish and Fish Habitat	Part 2, Section 3.2.3	Section 3.1	The proponent was requested to provide the preliminary outline for the reclamation plan to re-establish native riparian vegetation communities.	The proponent’s response is sufficient.
IAAC-08	5(1)(a)(i) Fish and Fish Habitat	Part 2, Section 7.1.7	Section 7.1.6.2	The proponent was requested to provide information on the location of each physical barrier to fish passage, identify the type of barrier, and explain	The proponent’s response is sufficient. The proponent should be advised that multi-season and multi-year site visits are required to determine the presence of a barrier to fish passage due to the large seasonal and yearly fluctuations in flow within the

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				how conclusions were reached regarding the status of fish passage of each barrier.	province of Nova Scotia. The proponent has not carried out surveys to this extent and cannot confidentially conclude the presence of barriers to fish passage for the majority of these watercourses.
IAAC -09	5(1)(a)(i) Fish and Fish Habitat	Part 2 Section 7.1.7	Section 7.1.6.2.1	The proponent was requested to provide a description of primary and secondary productivity, including seasonal variability, for previously dismissed watercourses.	<p>The proponent's response is sufficient.</p> <p>The proponent should be advised that labelling watercourses as having no significant spawning habitat due to the fact that they do not contain typical salmonid spawning habitat is erroneous. Many watercourses throughout the province may not contain what is thought of as "good salmonid rearing habitat", however they are quite productive, providing habitat to both salmonid and non-salmonid species.</p>
IAAC-10	5(1)(a)(i) Fish and Fish Habitat	Part 2 Section 7.3.1	Section 7.3.12	<p>The proponent was requested to provide key timing windows for freshwater and anadromous species found within the Study Area and compare these with the timing of project construction activities.</p> <p>The proponent was also requested to update the</p>	<p>The proponent's response is insufficient.</p> <p>The proponent has listed five species of fish which may be found within the estuary (Striped Bass, Mummichog, Ninespine Stickleback, Tomcod, and White Perch), however the proponent has only described the life history and key timing windows for two of these species (Striped Bass and Mummichog).</p> <p>The proponent is requested to provide key timing windows for the remaining species found within the estuary and compare these with the timing of</p>

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				effects assessment and mitigation measures for fish and fish habitat or provide rationale as to why it was not required.	<p>construction. As applicable, update the effects assessment and mitigation measures for fish and fish habitat or provide the Agency with rationale as to why this is not required.</p> <p>The proponent should also be advised that they will need to submit their fish rescue plan in the application for a <i>Fisheries Act</i> authorization.</p>
IAAC-11	5(1)(a)(i) Fish and Fish Habitat	Part 2 Section 7.1.7	Section 7.1.6.2	The proponent was requested to clarify the definition of “site” as used in Table 7.1-34 and update the effects assessment as applicable.	The proponent’s response is sufficient.
IAAC-12	5(1)(a)(i) Fish and Fish Habitat	Part 2 Section 7.1.7	Section 7.1.6.2	The proponent was requested to provide supplementary information (e.g. peer-reviewed literature) to support the statement that the physical habitat at the BHETF lacks the appropriate features to support adult Brook Trout populations.	<p>The proponent’s response is sufficient.</p> <p>The proponent should be advised that many proponents have attempted to use the descriptions provided in Table 1 to give rationale as to why salmonid species will not inhabit watercourses within Nova Scotia. However, when site visits are conducted, DFO will typically find salmonid species (Brook Trout) and other species, even when a proponent has indicated that the watercourses as being “poor habitat” and unsuitable for spawning.</p>
IAAC-14	5(1)(a)(i) Fish and Fish Habitat	Part 2 Section 7.1.6 and Section 7.2.2	Section 7.3.6, Section 7.1.6.1.1, Section 7.1.6.2, Section 7.3.7.4.3, Section 7.3.7.6, Appendix Z	<p>The proponent was requested to:</p> <p>Provide more detailed information on the baseline conditions in the estuary and the Northumberland Strait shorelines immediately outside of the mouth of Boat Harbour. Use this information and the</p>	<p>The proponent’s response is insufficient.</p> <p>Please refer to Attachment (2)-DFO comments and Request for Information in relation to IR IAAC-14.</p>

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			<p>– Coastal Hydraulic Modelling</p>	<p>results of the WSP 2020 Coastal Hydraulic Modeling Report (Appendix Z) to update the effects assessment of surface water, marine environment, and fish and fish habitat. This should include a discussion of the impacts from both water column increases in TSS and deposition of sediment on:</p> <ul style="list-style-type: none"> • marine water quality; • marine plants, including all benthic and detached algae, marine flowering plants, brown algae, red algae, green algae, and phytoplankton; • marine fauna, including benthic organisms, fish, marine mammals and sea turtles and their associated habitat; • federally and provincially listed marine species at risk; and • fisheries resources, such as aquaculture and seafood facilities. <p>For the WSP 2020 Coastal Hydraulic Modelling Report, the proponent was</p>	

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				<p>requested to expand the model to include nearby marine habitat, provide the revised model results, and update any relevant information such as the effects assessment based on those results.</p> <p>The proponent was also required to provide sediment deposition thickness data for the marine environment in the Pictou Road area, and update any relevant information such as the effects assessment, mitigation measures, and follow-up monitoring.</p>	
IAAC-16	5(1)(a)(i) Fish and Fish Habitat	Part 2 Section 7.1.6	Appendix BB	<p>The proponent was requested to:</p> <p>Describe how the LIDAR data was used to create the sediment and vegetation mapping.</p> <p>Discuss how the uncertainty of ground truthing was factored into the effects assessment for the marine environment and fish and fish habitat VCs.</p>	<p>The proponent's response is sufficient.</p> <p>The proponent should be advised that, while overall the LIDAR work was completed during favourable weather and sea conditions, the LIDAR did not penetrate an area approximately 1 km long, and 400 m at its widest area, located at the mouth of Boat Harbour. The LIDAR also failed to penetrate the estuary and the proponent did not collect baseline benthic habitat data from either of these areas.</p> <p>The proponent's response to IAAC-16 indicates that "Where there was uncertainty with the significance of the potential adverse effects that could result from an interaction between a Project component activity and VC, then a conservative approach was taken, and the activity</p>

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					<p>was also carried forward for further assessment.”</p> <p>In the absence of habitat data within the area located at the mouth of Boat Harbour and the estuary, the proponent should use a conservative approach and assumed that both of these areas contain sensitive benthic habitat such as eelgrass. The effects assessment for fish and fish habitat as well as the marine environment should be updated with this assumption. The proponent should be advised that this missing habitat data will be required for a <i>Fisheries Act</i> Authorization application.</p>
IAAC-17	5(1)(a)(i) Fish and Fish Habitat	Part 2 Section 7.1.6, Section 7.3.3, Section 7.3.4	Section 7.1.6.1, Appendix BB	The proponent was requested to update the effects assessment for the marine environment and fish and fish habitat to include the findings of the 2017 NSCC Topo-bathymetric LIDAR Research Report.	<p>The proponent’s response is insufficient.</p> <p>The proponent did not update the effects assessment for the marine environment and fish and fish habitat VCs to include the benthic habitat findings of the 2017 NSCC Topo-bathymetric LIDAR Research Report.</p> <p>As noted above in the response for IAAC-16, In the absence of habitat data within the area located at the mouth of Boat Harbour and the estuary, the proponent should use a conservative approach and assume that both of these areas contain sensitive benthic habitat such as eelgrass. The effects assessment for fish and fish habitat as well as the marine environment should be updated with this assumption. The proponent should be made aware that this missing habitat data will be required for a <i>Fisheries Act</i> Authorization application.</p> <p>The effects assessment should include, but not be limited to, the impacts of dredging and high TSS loads (both water-column and sediment disposition) on eelgrass within these areas.</p>

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IAAC-24	5(1)(a)(i) Fish and Fish Habitat	Part 2 Section 7.1.6	Section 7.3.6.1.3	<p>The proponent was requested to:</p> <ul style="list-style-type: none"> - Explain what the ratings of potential occurrences of marine species at risk were based on (e.g. number of sightings per day/month/year) - Describe the occupation period of each species at risk, including a temporal period when they could be present within the Study Area and provide references. 	<p>The proponent's response is sufficient. However, the proponent should be advised that their text referring to North Atlantic Right Whales (NARW) is out of date. The NARW is unlikely to be found within the Study Area or in close proximity to the Project Area and as a result, the effects assessment does not need to be updated at this time.</p> <p>New information indicates that a substantial portion of the NARW population now utilizes the southwestern Gulf of St. Lawrence (GSL) for part of the year. The NARW can be found within the GSL from the end of April to mid-January (DFO 2020).</p> <p>DFO. 2020. Updated information on the distribution of North Atlantic Right Whale in Canadian waters. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2020/037.</p>
IAAC-30	5(1)(a)(i) Fish and Fish Habitat	Part 2 Section 7.2.2, Section 7.3.1	Table 7.3-193, Table 7.3-200	<p>The proponent was requested to identify the specific mitigation measures that will be taken to protect the hydrology of wetlands supporting fish and fish habitat and update the effects assessment if required.</p> <p>The proponent was also requested to describe when the reinstatement of the wetland channel between</p>	The proponent's response is sufficient.

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				Wetland 16 and the ASB would occur and how this would mitigate impacts to fish and fish habitat.	
IAAC-31	5(1)(a)(i) Fish and Fish Habitat	Part 2 Section 7.6.2	Section 7.4.2.1.1, Table 7.1-10, Table 7.4-17	<p>The proponent was requested to provide the rationale to design the stormwater pond for a 1:100- year event while the stormwater ditches are only designed for a 1:25-year event or redesign the capacity of the stormwater ditches.</p> <p>The proponent was also requested to update the system design to consider the potential for increasing flood risk due to future climate change.</p>	The proponent's response is sufficient.
IAAC-67	5(1)(a)(i) Fish and Fish Habitat	Part 2 Section 7.1.5, Section 7.2.2	Section 7.1.4.1 (page 7-93), Appendix Z – Boat Harbour Hydrogeology Assessment (AECOM 2016), p. 208	<p>The proponent was requested to provide a detailed description of a conceptual hydro-stratigraphic model for the PLFN groundwater wellfield that uses all available information to:</p> <ul style="list-style-type: none"> - Evaluate the PLFN off-peninsula wellfield source capture zone; 	The proponent's response is sufficient.

ID	Project Effects Link to CEAA 2012	Reference to EIS guidelines	Reference to EIS	Context and Rationale	Specific Question/ Request for Information
			Well Field Evaluation Report (GHD 2018), p. 300 and Vol IV, p. 7-53 and Vol IV, P. 7- 329	<ul style="list-style-type: none"> - Describe model layer infiltration, vertical and horizontal conductivity and flow; - Describe the confining layer for the deeper groundwater zone, if present; - Describe the potential for the Project to lower groundwater levels; and - Update the effects assessment, as required. <p>The proponent was also requested to describe the locations where groundwater interacts with the surface water and any temperature changes in the surface water that may result. The proponent was requested to update the effects assessment for surface and groundwater quality and quantity and fish and fish habitat, if required.</p>	

ANNEX 3: Advice to the proponent

Table 3: Additional advice to the proponent, such as guidance or standard advice related to your departmental mandate

ID	Reference to EIS	Context and Rationale	Advice to the Proponent
No Change from Original December 21, 2020 submission.			