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June 5, 2014

Ms. Agatha Garcia-Wright
Director
Ministry of Environment
Environmental Approvals Access and Service Integration Branch
Ministry of Environment
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

Attention: Ms. Agatha Garcia-Wright, Director, Environmental Approvals Access & Service

Reference: Amherst Island Wind Energy Project (“Project”)
MOE reference # 1271-96VNH3

Dear Ms. Garcia-Wright;

Further to the discussion held with Ms. Sue Edwards with respect to the Amherst Island Wind Energy Project (“Project”), Algonquin Power Co. (on behalf of Windlectric Inc. – a subsidiary of Algonquin Power Co. (“Algonquin”)) below is a list of minor Project layout changes, constituting Administrative and Technical Changes as defined in Chapter 10 of the Renewable Energy Approval (REA) technical guide.

A. Administrative Change – Mapping Updates – Island Underground Cable Vault

- The mainland and island underground cable vaults would be located on private land. These properties abut the North Channel between Amherst Island and the mainland.
- As identified in the REA technical documentation figures/ mapping, the underground cable vaults will be located near the shoreline. The Design and Operations Report describes the location of the cable vaults to be approximately 50 m from the shoreline.
 - As detailed in the REA application technical documentation there would be no negative impacts for the placement of underground the cable vault at these proposed locations.
- The REA Project technical documentation contains figures/ mapping that illustrate that the cable vaults are closer to the shoreline than would be constructed (as described in the Design and Operation Report). The figures/ mapping would be amended to make this administrative change.

B. Technical Change:

Island transmission line pole placement:

- The Project team is constantly reviewing certain design features of the layout in order to assess efficiencies and to further reduce any likelihood of potential environmental impacts.
- The REA application technical documentation mapping illustrates the route of the overhead transmission line from the island substation to the Island underground cable vault.
- In examining the placement for the transmission line poles there is an opportunity to:
 - Reduce the angle at which the overhead transmission line crosses Front Road, and
 - Reduce the number of poles, near the substation, by crossing a knoll, on the private landowner's property, by spanning the transmission line over the hill. No poles would be placed on the hill and no entry of personnel onto the hill would be required to install the line between the poles.
 - Both of these options will still allow the installation of the transmission line poles to remain in the corridor that was originally allocated. This pole placement would not cause any additional environmental impact.

Submarine cable route mapping:

- In designing the submarine cable route a comprehensive mapping exercise was undertaken in order to minimize the distance between the proposed shoreline island landing option and shoreline mainland landing options.
 - Mainland – An important item of interest that needed to be considered for routing the three options is the avoidance of a Crown Land easement (water utility easement). The REA application technical mapping illustrated the “branching” of the submarine cable, toward the mainland, in order to avoid the Crown Lease easement.
- The Project team has been completing further refinement of the submarine cable route, and has recommended the middle submarine cable landing area be routed (east of the west dock option) in order to provide greater assurance of avoiding the Crown Lease easement.
 - The middle submarine cable route is still within the underwater marine archeological survey area that is identified in the REA technical report Underwater Archeological Assessment Report.
 - There would be no impacts to underwater archeological or environmental items of interest.

Island and mainland dock layout minor amendment:

- Through further detailed design of the island and mainland docks, it has been determined that option 2A is the preferred design methodology as it allows for installation with the least interference with the lakebed during construction. The docks will be constructed from the land out and will limit the use of jack-up barges needed for construction. The construction contractor has also determined that the entire length of the docks should be constructed in this way rather than using a jack-up barge at the offshore end. For the island dock the total length of 50m \pm 50% (30m of dock and 20m of jack-up barge) will be maintained with 50m \pm 50% of dock and no jack-up barge. In the case of the mainland dock, the lengths provided in the Dock Size column of Table 3.2 in the Project Description Report will be maintained, and the jack-up barge will simply be excluded.
- The marine safety and logistics component of the project is unique among wind energy projects in Ontario and is expected to extend the construction period compared to other similarly sized wind

projects. Therefore ongoing engineering and planning work for the docks has resulted in analyzing the dock configuration for safety and logistics. One conclusion, recently assessed by the construction engineering team, is the concept of widening the first segments of the docks (from the land side out into the water) from 7m \pm 50% to 10m \pm 50% will provide an optimum solution by allowing significantly faster and safer loading and unloading of the barges which will in turn minimize the time that marine logistics will add to the overall construction schedule.

- In addition, the marine subject matter experts have also recently identified, considering options to improve safety and schedule, a preference to have access for two barges to be docked at the same time. If, for instance a barge is docked and loading/unloading cannot take place due to some mechanical issue with a piece of equipment, the second barge will also be able to dock rather than staying idle within the channel which will reduce the impact to marine traffic. It will also allow for workers to be transported off the island in a similar breakdown situation which could be a safety issue.
- To achieve the two barge docking design, the dock designs would need to be wider near the end, widening from 10m to approximately 15m over the last 10m of dock length.
- This minor design amendment in width will not impact the number of piles needed for the docks or change the footprint of each dock structure with the lakebed.
- The additional area needed for the wider dock designs is entirely within the area that has been assessed in the Underwater Archaeological Assessment and Water Assessment and Water Body Reports. There would be no impacts to underwater archeological or environmental items of interests.

C. Please see Tab #1 for rough conceptual drawings of the proposed amendments.

D. Please see Tab #2 for a matrix listing the proposed change requirements in relation to the impacts to the REA process.

E. Potential Negative Environmental Effects, Mitigation and Monitoring Requirements

The following table confirms in each case there will be no negative environmental effects of the Project changes on environmental components and no new mitigation and/or monitoring measures would be required.

Environmental Component	Potential Negative Environmental Effects	Mitigation Measures	Monitoring Requirements
Natural Environment Components			
Air Quality	No additional negative effect	No additional mitigation required.	No new monitoring required.
Soil Quality	No additional negative effect	No additional mitigation required.	No new monitoring required.
Soil Quantity	No additional negative effect	No additional mitigation required.	No new monitoring required.
Groundwater	No additional negative effect	No additional mitigation required.	No new monitoring required.
Surface Water	No additional negative effect.	No additional	No new monitoring

Environmental Component	Potential Negative Environmental Effects	Mitigation Measures	Monitoring Requirements
Quantity		mitigation required.	required.
Surface Water Quality	No additional negative effect.	No additional mitigation required.	No new monitoring required.
Aquatic Habitat and Biota	No additional negative effect.	No additional mitigation required.	No new monitoring required.
Woodlands	No additional negative effect.	No additional mitigation required.	No new monitoring required.
Wetlands	No additional negative effect.	No additional mitigation required.	No new monitoring required.
Wildlife Habitat	No additional negative effect.	No additional mitigation required.	No new monitoring required.
Wildlife	No additional negative effect.	No additional mitigation required.	No new monitoring required.
Socio-Economic Environmental Components			
Noise	No additional negative effect.	No additional mitigation required.	No new monitoring required.
Public and Facility Safety	Increase in ability to safely transport workers off the island in the case of an emergency.	No additional mitigation required.	No monitoring required.
Change in Visual Landscape	Fewer Poles (benefit)	No additional mitigation required.	No new monitoring required.
Property Values	No additional negative effect.	No additional mitigation required.	No monitoring required.
Availability of Resources	No additional negative effect.	No additional mitigation required.	No monitoring required.
Recreational Land Use	No additional negative effect.	No additional mitigation required.	No monitoring required.
Infrastructure	No additional negative effect.	No additional mitigation required.	No monitoring required.
Traffic	Reduction in potential impacts to marine traffic.	No additional mitigation required.	No monitoring required.
Archaeological and Heritage Resources	No additional negative effect.	No additional mitigation required.	No monitoring required.

- Summary of Revisions to REA Supporting Documents - Maps to be updated:

Report	Figure No.
Construction Plan Report	1, 1.1, 1.2, 2, 2.1, 2.2, 3, 3.1, 3.2, 4, 4.1, 4.2
Underwater Archaeological Report	1
Natural Heritage Assessment Report/ Environmental Impact Study	1A, 1B, 2.0, 2.1, 2.2, 3.0, 3.1, 3.2, 4.0, 4.1, 4.2, 5.0, 5.1, 5.2, 6.0, 6.1, 6.2
Heritage Report	3, 5,6,8,10,12
Project Description Report	1, 1.1, 1.2, 2, 2.1, 2.2, 3, 3.1, 3.2, 4, 4.1, 4.2, , 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
Protected Properties Report	3,5,6,8, 10,11
Stage 1 Archaeological Report	2, 5, 7, 9, 10
Stage 2 Archaeological Report	2, 8
Waterbody Assessment Report	1, 2 (2 and 4 of 4), 3, 4 (1,2,3 and 4 of 4), 5 (2 and 4 of 4)
Design and Operation Report	1, 1.1, 1.2, 2, 2.1, 2.2, 3, 3.1, 3.2, 4, 4.1, 4.2

- Summary of Revisions to REA Supporting Documents –Project Description Report and the Design and Operation Report:

Report	Text
Project Description Report	<p>Section 3.4.6: (a) amend text to remove the use of a jack-up barge and the dock width would be approximately 10m \pm50%, and (b) end of the docks will be designed to allow two barges to dock</p> <p>Section 3.5.7: (a) Table 3.2 – update Dock size to 10m \pm50%, remove reference to jack-up barge, and (b) remove text reference to jack-up barge and dock width is approximately 10m \pm50%.</p>
Design and Operation Report	Section 3.11: (a) amend text to remove the use of a jack-up barge and the dock width would be approximately 10m \pm 50%, and (b) end of the docks will be designed to allow two barges to dock
Construction Plan Report	Section 2: (a) Table 2.1 – update dock type selected and remove reference to jack-up barge


Conclusion

The minor changes to the Project described above do not result in any negative environmental effects not already identified in the application material already filed. In addition, the public notification and consultation would be satisfied by updating the final REA technical documents and posting the updated mapping on the project web site, sometime over the next couple of weeks. It is our understanding that these minor changes will not affect the six month service commitment, which commenced on January 2, 2014.

If you have any questions or require any further information please do not hesitate to the undersigned at 905-465-4518 or Alex Tsopelas at 905-829-6388.

Regards,

Algonquin Power Co.
On behalf of Windlectric Inc.

A handwritten signature in black ink, appearing to be 'S. Fairfield', written over a horizontal line.

Sean Fairfield
Senior Manager – Project Planning

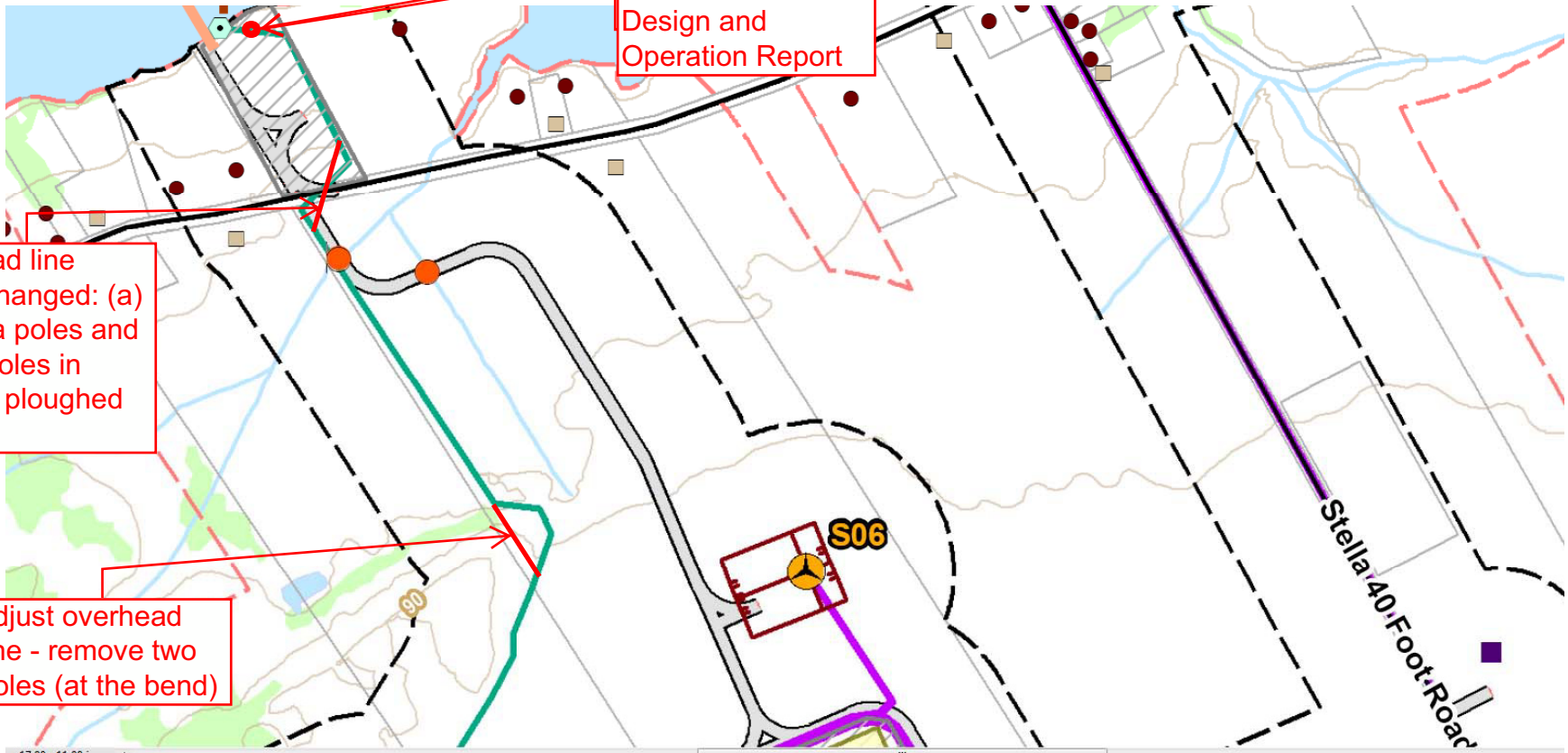
cc: Alex Tsopelas, Algonquin Power Co.
Kerrie Skillen, Stantec Consulting

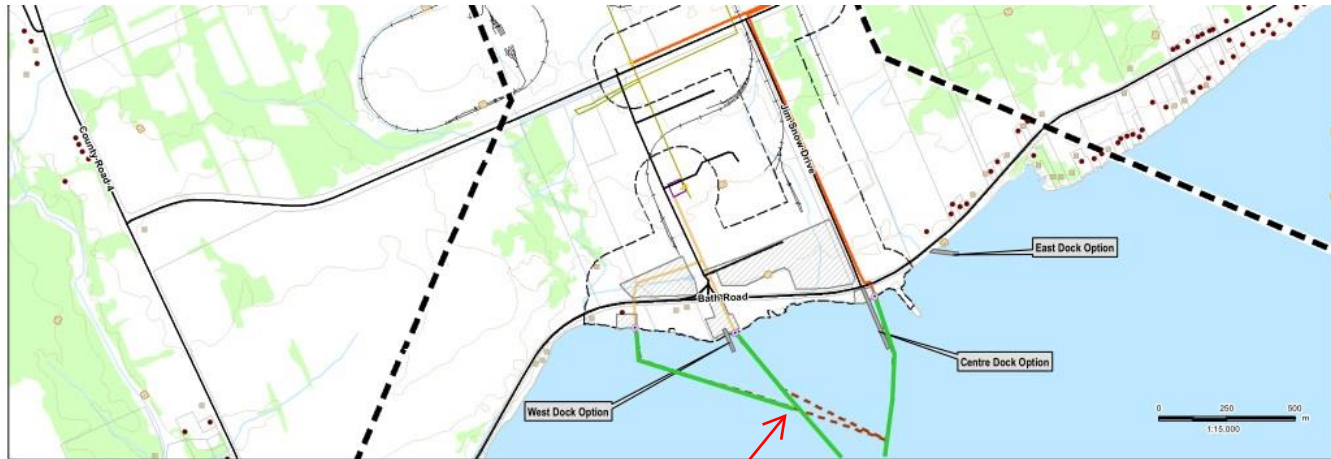
Tab #1

Cable Vault should be illustrated farther onto land as described in Design and Operation Report

overhead line angle changed: (a) no extra poles and (b) all poles in stage 2 ploughed area

adjust overhead line - remove two poles (at the bend)





- Elevation Contour (metres ASL)
- Hydro Line
- Watercourse
- Waterbody
- Wooded Area
- ANSI Boundary
- Property Boundary

Notes
 1. Coordinate System: UTM NAD 83 - Zone 18 (N)
 2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2012.



Stantec
 December 2012
 103465250

Client/Project
 WINDLECTRIC INC.
 AMHERST ISLAND WIND ENERGY PROJECT

Figure No.
1.1 **DRAFT**

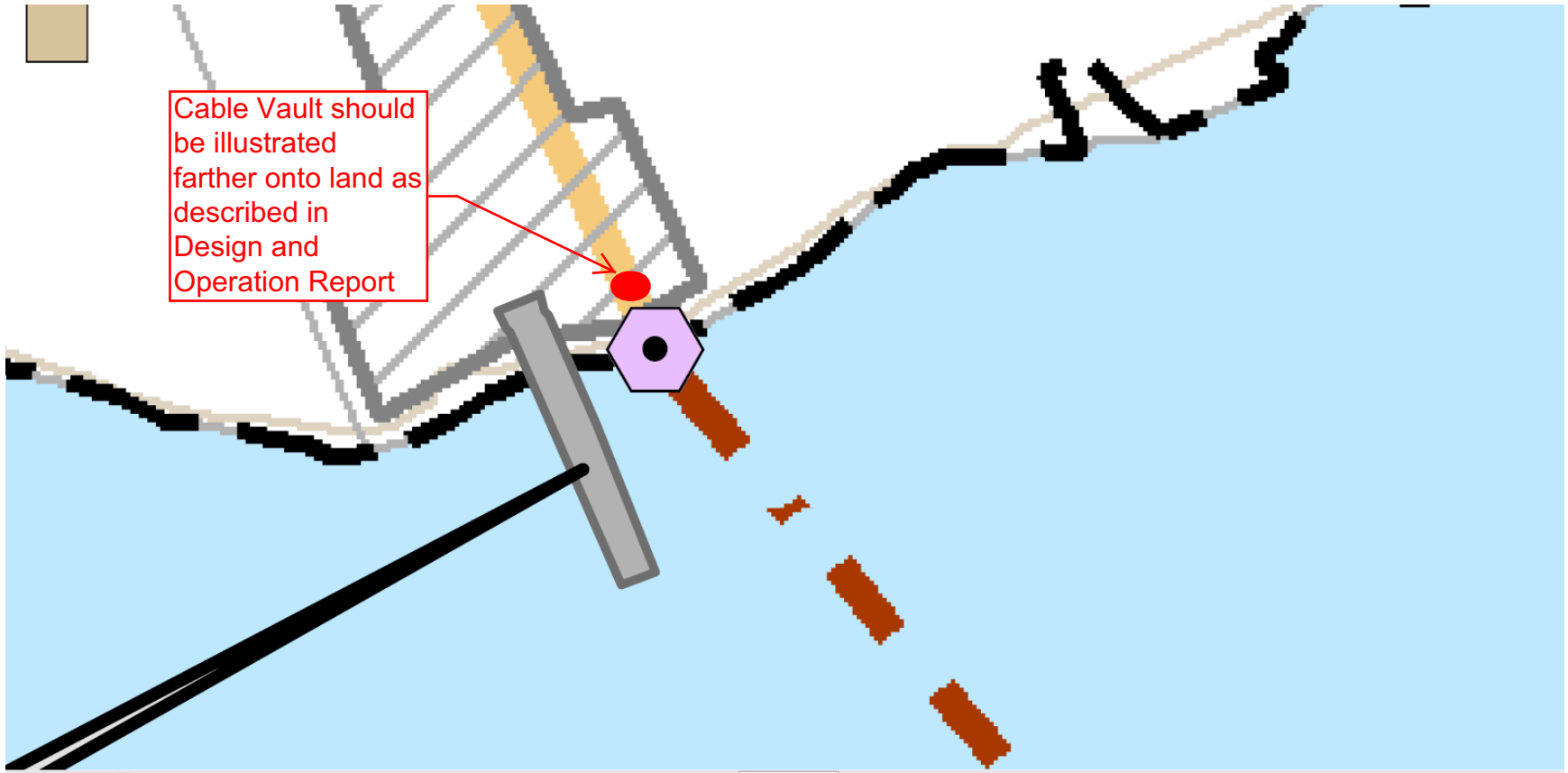
Title
Project Location & Study Area

W:\Users\89880595\Documents\MXD\APC\DWG\14090595_7\01_Propo\locatn_2012\1218.mxd
 Revised: 2012-12-19 By: carlbertson

Proposed change
 to cable route to
 avoid Crown
 Lease easement

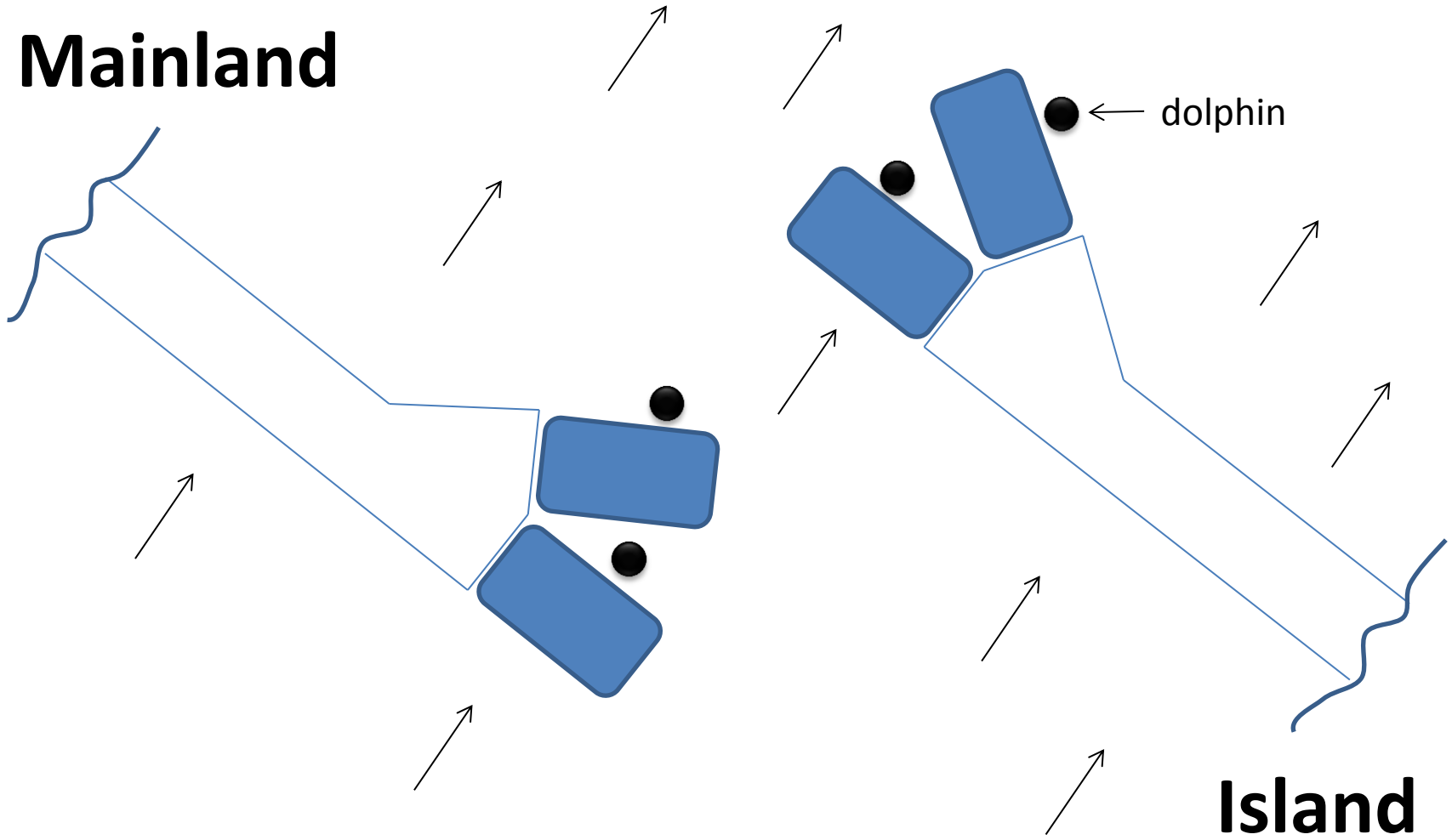


- Legend**
- Project Study Area
 - 300m Zone of Investigation
 - 120m Zone of Investigation
- Project Components**
- Turbine
 - Met Tower (Potential Location)
 - Substation (Potential Location)
 - Access Road



Amherst Island - 2-Barge Dock Concept Sketch

Mainland



dolphin

Island

↑ N

**Prevailing Wind
Direction (from SW)**

Tab #2

Amherst Island wind energy project - Proposed Amendments in Relation to Impacts to the REA Process

	Administrative	Comment
Overall Impact	No bearing on the environmental effects	<p>Underground cable vaults:</p> <ul style="list-style-type: none"> • Design and Operation report describes the location of the vaults to be approximately 50 m from shoreline. The current REA mapping/figures illustrate the vaults to be on the shoreline. The maps need to be slightly adjusted. This is an administrative issue and no overall impact to the Project. • Land has been assessed already from an Natural Heritage Assessment & Cultural Heritage assessment (part of REA application) <p>Docks:</p> <ul style="list-style-type: none"> • Project Description Report describes the use of a jack-up barge for the island dock (this description is in the Design and Operation report for the island dock as well), and the width of the docks of 7 m $\pm 50\%$. The project engineering and planning team has worked with the general contractor to develop a revised dock design which would: (a) remove the use of the jack-up barge concept, widen docks to 10m $\pm 50\%$, and widen the end of the docks to accommodate two barges docking at the same time. This is a minor technical issue and no overall impact to the Project. • The additional area needed for the wider dock designs is entirely within the area that has been assessed in the Underwater Archaeological Assessment and Water Assessment and Water Body Reports. There would be no impacts to underwater archeological or environmental items of interests.
Project Location and Impact on Receptors	Not applicable	<p>Underground cable vault – Design and Operation report describes the location of the vaults to be approximately 50 m from shoreline. The current REA mapping illustrates the vaults to be on the shoreline. The maps need to be slightly adjusted. This is an administrative issue and no overall impact to the Project location or impact to receptors.</p> <p>Docks – see comment above regarding description of amendment. This is a minor technical issue and no overall impact to the Project.</p>
Cultural Heritage – archaeological		Underground cable vaults– no additional lands required. These parcels of land have already been assessed for the REA application, therefore, no changes to previous recommendations.

Amherst Island wind energy project - Proposed Amendments in Relation to Impacts to the REA Process

	Administrative	Comment
		Docks - The additional area needed for the wider dock designs is entirely within the area that has been assessed in the Underwater Archaeological Assessment and Water Assessment and Water Body Reports. There would be no impacts to underwater archeological or environmental items of interests and no changes to previous recommendations.
Cultural Heritage – Heritage		<p>Underground cable vaults - Not require because no additional land is required for either of these vaults. These parcels of land have already been assessed for the REA application, therefore, no changes to previous recommendations.</p> <p>Docks - The additional area needed for the wider dock designs is entirely within the area that has been assessed in the Underwater Archaeological Assessment and Water Assessment and Water Body Reports. There would be no impacts to underwater archeological or environmental items of interests and no changes to previous recommendations.</p>
REA technical documentation modification	Only require mapping to be updated	<p>See cover letter that lists the maps/ figures and text that needs to be amended.</p> <p>Note: the amendment to the dock layout is slight enough to not make a difference on the maps. It is believed this amendment is not necessary.</p>
Proponent notification	Not applicable	The updated figures/ mapping will be posted on the project web site.
Public consultation		<p>Underground cable vault - It is believed no additional public notification is required since there is no additional land is being used for the proposed figure/map amendments and change is administrative.</p> <p>Docks – the widening of the main segments of docks and re-design of the ends the docks is minimal and it is believed no additional public notification is required since the change is minor with no overall impacts to receptors or the environment.</p>