Henvey Inlet Wind LP

Henvey Inlet Wind

Henvey Inlet Wind Energy Centre

Review Period Comments on the Final Draft Environmental Assessment and Appendices

Final

Henvey Inlet Wind LP

Henvey Inlet Wind

Henvey Inlet Wind Energy Centre (HIWEC) - Review Period Comments on the Final Draft Environmental Assessment and Appendices

Prepared by:

AECOM
105 Commerce Valley Drive West, Floor 7 905 886 7022 tel
Markham, ON, Canada L3T 7W3 905 886 9494 fax
www.aecom.com

Project Number:

60341251

Date:

January, 2016

Statement of Qualifications and Limitations

The attached Report (the "Report") has been prepared by AECOM Canada Ltd. ("Consultant") for the benefit of the client ("Client") in accordance with the agreement between Consultant and Client, including the scope of work detailed therein (the "Agreement").

The information, data, recommendations and conclusions contained in the Report (collectively, the "Information"):

- is subject to the scope, schedule, and other constraints and limitations in the Agreement and the qualifications contained in the Report (the "Limitations");
- represents Consultant's professional judgement in light of the Limitations and industry standards for the preparation of similar reports;
- may be based on information provided to Consultant which has not been independently verified;
- has not been updated since the date of issuance of the Report and its accuracy is limited to the time period and circumstances in which it was collected, processed, made or issued;
- must be read as a whole and sections thereof should not be read out of such context;
- was prepared for the specific purposes described in the Report and the Agreement; and
- in the case of subsurface, environmental or geotechnical conditions, may be based on limited testing and on the assumption that such conditions are uniform and not variable either geographically or over time.

Consultant shall be entitled to rely upon the accuracy and completeness of information that was provided to it and has no obligation to update such information. Consultant accepts no responsibility for any events or circumstances that may have occurred since the date on which the Report was prepared and, in the case of subsurface, environmental or geotechnical conditions, is not responsible for any variability in such conditions, geographically or over time.

Consultant agrees that the Report represents its professional judgement as described above and that the Information has been prepared for the specific purpose and use described in the Report and the Agreement, but Consultant makes no other representations, or any guarantees or warranties whatsoever, whether express or implied, with respect to the Report, the Information or any part thereof.

Without in any way limiting the generality of the foregoing, any estimates or opinions regarding probable construction costs or construction schedule provided by Consultant represent Consultant's professional judgement in light of its experience and the knowledge and information available to it at the time of preparation. Since Consultant has no control over market or economic conditions, prices for construction labour, equipment or materials or bidding procedures, Consultant, its directors, officers and employees are not able to, nor do they, make any representations, warranties or guarantees whatsoever, whether express or implied, with respect to such estimates or opinions, or their variance from actual construction costs or schedules, and accept no responsibility for any loss or damage arising therefrom or in any way related thereto. Persons relying on such estimates or opinions do so at their own risk.

Except (1) as agreed to in writing by Consultant and Client; (2) as required by-law; or (3) to the extent used by governmental reviewing agencies for the purpose of obtaining permits or approvals, the Report and the Information may be used and relied upon only by Client.

Consultant accepts no responsibility, and denies any liability whatsoever, to parties other than Client who may obtain access to the Report or the Information for any injury, loss or damage suffered by such parties arising from their use of, reliance upon, or decisions or actions based on the Report or any of the Information ("improper use of the Report"), except to the extent those parties have obtained the prior written consent of Consultant to use and rely upon the Report and the Information. Any injury, loss or damages arising from improper use of the Report shall be borne by the party making such use.

This Statement of Qualifications and Limitations is attached to and forms part of the Report and any use of the Report is subject to the terms hereof.

AECOM: 2012-01-06

The Final Draft **Volume A** which included the Final Draft EA Report and Appendices were made available for review and comment for 30 days from September 30 to October 30, 2015. During this review period, Henvey Inlet First Nation (HIFN), other Aboriginal communities, local municipalities, government agencies, the public, interested groups and the EA Coordinator were given the opportunity to asks questions and provide comments on the Final Draft **Volume A**. This document provides all the comments received on the Final Draft **Volume A** along with HIW responses to these comments. Comments were receive from the EA Coordinator, Environment Canada and two members of the Public.

Table 1 presents comments received from the EA Coordinator on December 9 and 16, 2015 and HIW's responses to these questions and comments.

Table 2 presents comments received from agencies (namely Environment Canada) between September 30 to October 30, 2015 and HIW's responses to these questions and comments.

Table 3 presents comments received from the public between September 30 to October 30, 2015 and HIW's responses to these questions and comments.

Table 1: EA Coordinator Comments and Responses

Date	Agency	Report / Theme	Sections Referenced	Comment #	Questions / Comments	AECOM Response
General Comments on EA Report and Appendices						
December 9, 2015	EA Coordinator	Volume A		1	• HIWEC to provide updated EIS in the Final EA to address important woodlands.	• An EIS for important woodlands has been completed for important woodlands under the NHA - Environmental Impact Study (**Appendix F4** of **Volume A**), which consisted of the same mitigation measures recommended under the Vegetation and Ecological Communities VEC in **Tables 6-4** and **6-5** of the Final EA Report. Since the mitigation measures under the Vegetation and Ecological Communities VEC generally address all vegetation types, no additional or new mitigation measures specific to important woodlands are required in the main body of Volume A. Therefore, there are no changes with respect to mitigation measures specific to important woodlands since they are already covered under the Vegetation and Ecological Communities VEC in the Final EA Report.
		Volume A	Significance	2	• HIWEC to clarify in Volume A how significance was determined.	• Additional text has been added to **Section 3** of the Final EA Report to further describe and clarify how significance was determined.
		Volume A – EA Report	Section 5	3	• HIWEC to provide information in Volume A Section 5 with respect to how decisions are made to remove turbines from the project and, to the extent possible, will document why certain turbines have been removed	• **Section 5.1** of the Final Draft EA Report provided a description of the factors that influenced the decision making process with respect to WTG removal. **Section 5.1** of the Final EA Report has been revised to make the description of the factors that were considered in WTGs removal more prominent within the discussion.
		Volume A – EA Report	Section 5	4	• HIWEC to provide a revised Volume A Section 5 which integrates the alternatives discussion from the SAR report.	• **Section 5.5** and **Table 5-1** have been added to provide a summary of alternatives means for the HIWEC including the reasons for the selection of the preferred HIWEC layout, technology, infrastructure and blasting alternatives.
		Volume A – Appendix M: Noise Impact Assessment		5	• HIWEC to clarify or address issues respecting participating or vacant land receptors on reserve.	• The Project is to be located on a First Nation's reserve, on lands leased from HIFN. DNV GL understands that the MOECC Noise Guidelines for Wind Farms have been incorporated by reference into the HIFN Guidance Instrument and, therefore, are to be followed in this assessment. • DNV GL has been advised by HIFN that certificates of possession under the *Indian Act* or certificates of entitlement under the HIFN Land Code, grant exclusive use and possession of reserve lands to individual band members. As such, receptors identified within 2 km of Project turbines and transformers, on lands leased from HIFN, can only be considered participating receptors (consistent with the MOECC Noise Guidelines for Wind Farms), if they are not located within set lots delineated by certificates of possession or certificates of entitlement. Based on information provided by HIFN to the Project, there are no set lots delineated by certificates of possession or entitlement within 2 km of Project turbines or transformers.
		Volume A – Appendix M: Noise Impact Assessment		6	• HIWEC to provide response and clarification with respect to whether or not any adjustments to noise emission ratings were made.	• Adjustments to the manufacturer's data based on worst case shear are currently required by the MOECC and were performed by DNV GL. The adjusted emission levels for all turbine models are presented in the columns on the right side of Tables **5-1** to **5-4** of the Final Draft NIA Report (**Appendix M** of **Volume A**). The high shear essentially results in adjusting to the highest broadband sound power level for the wind turbines. DNV GL has not only considered the shear, but has adjusted all emission levels to match the worst case octave band spectrum provided by the manufacturer at all applicable integer wind speeds (6 to 10 m/s). DNV GL notes that this is even more conservative than adjusting the sound levels for shear alone.
		Volume A – Appendix M: Noise Impact Assessment		6	• HIWEC to provide response and clarification with respect to the ground factors used in the noise modelling.	• The model was set up in the CadnaA software, which allows for polygons representing waterbodies or other land features to be attributed with a specific ground factor that overrides the global ground factor. In the current model, a global ground factor of 0.8 is applied for the entire site, with the exception of water bodies which were given a ground factor of 0, as described in **Section 6** of the Final Draft NIA Report (**Appendix M** of **Volume A**). It is important to note that nearly all receptor regions are along waterbodies and therefore include the combined effect of both 0.8 and 0 ground factors. The net effect of having GL Garrad Hassan Canada Inc. water modeled at 0 and land modelled at 0.8 near a receptor is deemed comparable to modelling the receptor region uniformly at 0.5. DNV GL believes it used a more realistic and, in most cases, a more conservative approach that better represents the ground coverage of the site than using a uniform receptor ground factor of 0.5, which is meant to be used in the absence of a more detailed ground factor assessment. This has been described in more detail in the updated Final NIA Report (**Appendix M** of **Volume A**). • In terms of the 1,500 m distance, it is very important to make the distinction between 1,500 m from a turbine and 1,500 m from a receptor. DNV GL has modelled and presented results for all receptors located within 1,500 m of a turbine, as required in section 6.4.1 b) of the MOECC guidelines[1]. To address section 6.4.2 of the MOECC guidelines, DNV GL has considered "the impact of the whole Wind Farm" for all modelled receptors by considering all turbines within 5,000 m from a receptor, without being "limited to a 1,500 m radius", subject to section 6.4.9 of the MOECC guidelines.
		Volume A – Appendix M: Noise Impact Assessment		7	• HIWEC to identify the results of the highest sound level predicted at a Participating Receptor for context.	• The sound levels at participating receptors are presented in **Table 7-2** of the NIA Report (**Appendix M** of **Volume A**).

1. *MOECC Noise Guidelines for Wind Farms, Interpretation for Applying NPC Publications, October 2008.*

Table 1: EA Coordinator Comments and Responses

Date	Agency	Report / Theme	Sections Referenced	Comment #	Questions / Comments	AECOM Response
		Volume A – Appendix M: Noise Impact Assessment, Appendix G		8	• HIWEC to provide a detailed calculation in Appendix G of the Noise Impact Assessment as per the MOECC Guideline.	• While it is not explicitly stated what a "detailed calculation" should contain, DNV GL does present a detailed breakdown of octave band sound pressure levels of all noise sources at the two most impacted receptors, which include "the closest wind turbine unit", T28 at 833 m from receptor 1097. This approach has been accepted by the MOECC for several recent reports prepared by DNV GL. If necessary, DNV GL can also provide the values of all attenuations that apply to the T28-R1097 pair, upon request.
		Volume A – Appendix I: Consultation Report	Section 9	9	• HIWEC to work to identify and collaborate with potential partners (universities, colleges, CWS, MNRF, Parks Canada, etc.) to undertake monitoring and research.	• HIW will work with HIFN to identify and collaborate with potential partners including universities, colleges, EC-CWS, MNRF, Parks Canada, etc. to undertake monitoring and research.
		Volume A – Appendix I: Consultation Report		10	• HIWEC will add a section to the end of the consultation summary which identifies on-going consultation and engagement opportunities with HIFN and other stakeholders.	• On-going communication and engagement opportunities with HIFN Band Members, the public, local municipalities, government agencies and other stakeholder / interest groups will be undertaken as deemed necessary by HIW in collaboration with the HIFN Band Council following the submission of the Final EA Report. Future communication and engagement efforts may include (but are not limited to): maintaining the HIW website; meetings with HIFN, the public, local municipalities, government agencies and other stakeholder / interest groups as necessary; and, publishing HIWEC updates and documents as necessary on the HIW website.
		Volume C		11	• HIWEC to provide discussion of the overall effects on the broader ecological system in which the HIFN lands are situated in Volume C. In particular, this discussion will include an analysis of fragmentation effects.	• Section 3.4 has been added in **Volume C** to address this comment regarding the overall effects of the HIWEC on the broader ecological system within which HIFN I.R. #2 is situated.
Comments on Species at Risk						
December 9, 2015	EA Coordinator	Mitigation		1	**Common Nighthawk Whip-poor-will** • Seasonal dusk and dawn turbine operation reductions coincident with Common Nighthawk courting in confirmed breeding areas • Compliance with elimination of "artificial lighting" supported construction" between and including dusk through dawn in confirmed breeding areas	• The following contingency measure during operation for avian SAR was added to **Table 8-1** under **Section 8** of the Final EA Report: "If mortality of Common Nighthawk is recorded during the three (3) years of post-construction mortality monitoring, adaptive management measures will be determined by a qualified avian Biologist and HIW (e.g., potential turbine curtailment at dusk and dawn during the breeding bird season for Common Nighthawk)." • The following mitigation measure during construction for avian SAR was added to **Table 6-4** under **Section 6.3** of the Final EA Report: "Conduct construction and decommissioning activities during daylight hours for increased visibility as well as to avoid light pollution effects during the night, wherever possible. • In emergency circumstances where construction / decommissioning activities must occur at night during the breeding bird season (April 1 to August 31), a lighting scheme will be used to minimize potential risks to bird SAR and will include the following: ▪ Lighting or spotlights will be directed downward, temporary and kept to a minimum." • Original mitigation measures recommended during operation in **Table 6-5** under **Section 6.3** of the Final EA Report for avian SAR already included the utilization of a lighting scheme that will minimize continuous lighting and use of bright lights throughout the HIWEC and therefore no additional mitigation measures pertaining to elimination of "artificial lighting" is required. See original mitigation measure in **Table 6-5** under **Section 6.3** of the Final EA Report for avian SAR with specific reference to bolded mitigation measures as follows: • "Utilize a lighting scheme that will minimize continuous lighting and the use of bright lights through the HIWEC to reduce confusion to bird SAR and minimize attraction to lit structures. Lighting scheme to include the following, where possible, while still fulfilling minimum Transport Canada requirements: ▪ Implement red LED flashing lights on WTG; ▪ Light WTGs and permanent meteorological / communication towers to the minimum federal standards; ▪ Ground-level lights (i.e., buildings, WTG bases, etc.) will be directed downward and shall use motion or heat sensors where practical and allowed by applicable codes and the authority having jurisdiction; ▪ Use of high-intensity lighting or spotlights, if required, will be temporary and will be kept to a minimum; and ▪ Any internal nacelle lighting will only be used when occupied."
		Mitigation		2	**Canada Warbler** • Enhance insect prey populations of this species with ecological restoration favouring concentrations of flowering perennials and the daily control of construction dust in areas of active works and along construction access roads	• The following mitigation measures during construction for avian SAR were added to **Table 6-4** under **Section 6.3** of the Final EA Report: • "Rehabilitation will be initiated within all temporary construction / decommissioning areas as appropriate to the type of habitat that was removed (e.g., replant forested areas using native stock) within one (1) year of the completion of the construction / decommissioning phase. **In order to enhance insect prey populations preferred by bird SAR, specifically Canada Warbler and Olive-sided Flycatcher, planting plans for the rehabilitated areas as part of the Rehabilitation Plan will include flowering herbaceous plants that are known to occur within HIWEC study area.** Although it is not possible to calculate the area of temporary disturbance associated with access roads due to micrositing and site-specific conditions, the temporary disturbance area associated with WTG construction / decommissioning is approximately 17.3 ha." • "Conduct dust suppression (i.e., spraying water on access roads and work areas) during dry conditions to minimize dust generation on vegetation. In the event that dust accumulates on leaves of plants, which may reduce photosynthesis, water will be used to wash dust off of vegetation."

Table 1: EA Coordinator Comments and Responses

Date	Agency	Report / Theme	Sections Referenced	Comment #	Questions / Comments	AECOM Response
		Mitigation		3	**Kirtland's Warbler** • Kirtland's Warbler habitat to be checked (May 1 to July 28) in the vicinity of the 2015 occurrence to confirm species use [using the Kirtland's Warbler Survey Protocol (Environment Canada, 2012)] • 1 turbine (T23), in proximity to Kirtland's Warbler breeding occurrence should be removed • Additional turbines and associated access roads beyond T23 (i.e., T20 – T22, T118) should be considered for placement/removal, subject to the findings of Kirtland's work noted above	• The following monitoring was added for avian SAR to **Table 8-1** under **Section 8** of the Final EA Report: "Surveys to confirm Kirtland's Warbler use of habitat within the greater landscape will be completed between May 7 to July 7 in 2016 by the same team of qualified Avian Biologists that conducted the 2015 breeding bird surveys following the standard methods outlined in the *Search Protocol for Kirtland's Warbler* (Kirtland's Warbler Recover Team, 2012). The following two (2) surveys will be conducted: ▪ A survey will be conducted in the vicinity of the 2015 Kirtland's Warbler observation within the HIWEC study area. ▪ Additional surveys will be conducted in suitable habitats for Kirtland's Warbler where they occur within areas that are publically accessible along the Georgian Bay Shoreline." • The Final EA Report addresses the potential effects on the natural environment based on a layout that consists of 120 WTGs. Given that ultimately 91 WTGs will be built for the HIWEC, final turbine locations will be determined during detailed design and in consultation with EC-CWS through the *SARA* permitting process, which is separate from the EA application. The final determination of turbines for removal will be based on a variety of considerations including SAR concerns, other environmental considerations, constructability, wind resources, etc. • WTG T23 will be dropped from the final HIWEC layout of 91 WTGs that will ultimately be built.
		Mitigation		4	**Olive-sided Flycatcher** • Enhance insect prey population habitat (i.e., Order Hymenoptera, ants, wasps and bees) through ecological restoration favouring concentrations of native flowering plants (pollinator attractants) and provide daily control of construction dust in areas of active works and along construction access roads, to limit the potential effects on plant physiology and reproduction (which could negatively affect Hymenoptera dependent upon plants)	• Please refer to response for Comment 2.
		Mitigation		5	**Blanding's Turtle** **Eastern Musk Turtle** • 7 additional eco-passages are recommended for higher priority SAR species concentrations (location details provided under separate cover) (also benefits snakes, below) • Wildlife fencing should be buried into the ground / soil mounded along bottom edge; sturdy materials should be used to deter wildlife climbing (also benefits snakes, below) • 6 additional turtle nesting mounds should be created • The general posted speed limit should be lowered from 30 km/hr to 20 km/hr and sensitive stretches of access road should be identified where additional signage and a lower posted speed limit of 10 km/hr will be required (e.g., where exclusionary fencing can't be installed) (also benefits snakes, below) • Given the potential distance to an operational turtle trauma centre (Kawartha Turtle Trauma Centre), engage in dialogue with and consider assistance in operationalizing the Georgian Bay Turtle Hospital, ahead of project construction • A more comprehensive security system should be designed and implemented beyond entrance gating, to limit opportunities for the unauthorized use of access roads, a factor that could increase poaching/collection pressures and vehicle/turtle collisions (e.g., including electronic gated access with camera installations designed to avoid detection and/or disconnection; remote camera installations near any known turtle nesting sites and created turtle nesting mounds) (also benefits snakes, below)	• The following mitigation measures during construction for turtle SAR were added to **Table 6-4** under **Section 6.3** of the Final EA Report with specific reference to bolded mitigation measures as follows*:* • "Ecopassages, or designated movement corridors, will be installed in areas of high turtle activity or abundance to limit road mortality, in areas where constructability allows the installation of these structures. **Fourteen (14**) ecopassages will be installed using large corrugated steel or box culverts designs. In addition, two (2) clear-span bridges will also be installed within the HIWEC study area to facilitate turtle movement between habitats without crossing over a road." This has also been included under snake SAR. • "Movement fencing will be installed on either side of the ecopassage, providing site-specific conditions allow installation, to encourage the use of the ecopassage. Chain-link fencing, in combination with geotextile fabric or wire meshing will be used to provide a barrier to juveniles, as this is the most effective type of movement fencing for turtles (McIntosh Perry, 2013). Fencing will be constructed to be 60 cm in height. An overhanging lip of 10-20 cm on the species side should be used to prevent turtles from climbing the fence. Fences should be installed with a turn-around at the ends to assist in redirecting turtles away from any fence openings. Curving the fence inward may help to reduce access to these locations. **Fencing should be buried into the ground / soil mounded along bottom edge, where possible. If not possible, flush to the rock so that individuals can not fit underneath**." This has also been included under snake SAR. • "A minimum of **12** artificial nesting mounds within the HIWEC study area. Artificial nesting mounds will be created strategically throughout the site (without additional disturbance) by using a method developed by Paterson, *et al.* (2013) that combines a mixture of gravel (60%) and sand (40%) into a pile that is approximately 6 m across and 0.5 m high. Nest mounds will be preferentially placed within 100 m of a habitat that contains open aquatic features. Mounds will also be placed in areas where turtle observations have occurred on the same side of the access road as the open aquatic habitat. Specific mound sizes and locations will be developed through a more detailed site-specific evaluation of suitable habitat. Consideration will be given to ensure that nest mounds are not adversely impacting other important habitats. Artificial nest mounds will be created once appropriate equipment is able to reach the selected locations. As such, some road creation will be required prior to the implementation of artificial nest mounds." • "Clearly post speed limit and wildlife crossing signs along access roads (**20 kilometres per hour (km/hr),** install speed bumps and **post speed limits of 10 km/hr within areas of concentrated wildlife activity** and instruct all staff to be vigilant for wildlife while driving on site." This has also been included under snake SAR." • The following mitigation measures during construction for turtle SAR were added to **Table 6-5** under **Section 6.3** of the Final EA Report with specific reference to bolded mitigation measures as follows*:* • *"*Restrict public use of access roads to minimize risk of road mortality and poaching through installation of **electronic** access gate in coordination with operations staff throughout the site. **Security cameras at the entrance and any known turtle nesting sites will also be installed.** It is the intent of HIFN to regulate the use of the HIWEC and HIFN I.R. #2 by members of HIFN and non-members. Gates will be installed at the entrances to the HIWEC and patrolling will be conducted. Currently, the site is monitored by HIFN and the MNRF." This has also been included for snake SAR. • Throughout the permitting process, alternative wildlife trauma centres and/or rehabilitation centres closer to the HIWEC will be examined.

Table 1: EA Coordinator Comments and Responses

Date	Agency	Report / Theme	Sections Referenced	Comment #	Questions / Comments	AECOM Response
		Mitigation		6	**Eastern Foxsnake** **Eastern Hog-nosed Snake** **Massassauga** • Three wind turbines (T16, T17 & T61) and associated access roads should be moved/removed to avoid specialized reptile habitat: ▪ T16 is within 1 km of an Eastern Foxsnake sighting and the subsequent road connecting T16 and T17 will eliminate 6 suitable Eastern Foxsnake hibernacula, and 2 suitable Massassauga hibernacula (the 2 Massassauga hibernacula overlap with the FOSN hibernacula to be removed) ▪ T61 will eliminate 5 suitable Massassauga gestation sites 12 additional (24 total) Massassauga gestation and 10 Massassauga hibernation sites should be created ▪ Supplement hibernacula with brush piles per MNRF SWH MiST (2014)	• The Final EA Report addresses the potential effects on the natural environment based on a layout that consists of 120 WTGs. Given that ultimately 91 WTGs will be built for the HIWEC, final turbine locations will be determined during detailed design and in consultation with EC-CWS through the *SARA* permitting process, which is separate from the EA application. The final determination of turbines for removal will be based on a variety of considerations including SAR concerns, other environmental considerations, constructability, wind resources, etc. • The following mitigation measures during construction for snake SAR were added to **Table 6-4** under **Section 6.3** of the Final EA Report with specific reference to bolded mitigation measures as follows*:* • "A minimum of **24** gestation sites for Massasauga Rattlesnake and ten (10) hibernation sites for Eastern Hog-nosed Snake and Eastern Foxsnake will be established throughout the HIWEC study area. Although preference will be for these habitats to be located away from access roads, consideration will be given to the potential disturbance associated with using machinery to transport the rock. Each location will be placed within 1 km of a habitat suitable for hibernation and gestation sites, and locations will be preferentially chosen to occur in areas where potential hibernation / gestation sites were removed during construction. Where reasonable, created gestation sites will be on the same side of the HIWEC infrastructure as the hibernation habitat to limit the need for the individuals to occur around HIWEC infrastructure. ▪ HIW will utilize blast rocks to create suitable gestation, basking, and retreat sites for Massasauga Rattlesnake; ▪ **Artificial snake hibernacula will be constructed in a south-facing, well-drained area (Long Point Land Trust, n.d.; USFWS, 2006); and** ▪ **Artificial hibernacula will consist of a large hole / pit dug to below the frost line and within approximately 2 m of the water table. The hole will be then filled with layers of rubble (rocks, concrete rubble, timber, bricks) and placed in such a way to create multiple chambers at various depths wherein snakes can hibernate (Long Point Land Trust, n.d.; USFWS, 2006).** ▪ **Brush piles will also be placed around the edge of the created artificial hibernaculas."**
		Mitigation		7	**Little Brown Myotis** **Northern Myotis** **Tri-coloured Bat** • Implement measures provided in Ontario's White-nose Syndrome Response Plan (MNRF, 2015) • Consider increasing the number of artificial roosting structures should the number of roosting trees removed increase during construction	• The following monitoring during operation for bat SAR was added to **Table 8-1** under **Section 8** of the Final EA Report: • "All artificial roosting structures established within the HIWEC study area will be monitored for signs of use at least twice per year for the first three (3) years after installation, with surveys once in each of May and June. ▪ At a minimum, each roost structure will be examined for signs of use. These surveys can occur at any time of day and will utilize flashlights or low-light cameras to look for occupancy. Other signs, such as guano, will also be considered to determine occupancy. If any sign of occupancy is noted, an evening survey* will be completed, combining the use of an ultrasound detector with visual observations to collect information on both abundance and species. ▪ If off-site locations are utilized, other monitoring arrangements may be established; however HIW will offer resources to complete a monitoring program that is at least equivalent to on-site locations. ▪ **Qualified Biologists monitoring artificial roosting structures will take the appropriate precautions (i.e., disinfect all equipment and clothing) before and after each monitoring event to prevent the spread of White-Nose Syndrome as described, and where applicable, in the *Decontamination of Equipment and Clothing to Prevent the Spread of White-Nose Syndrome (the causal fungus: Pseudogymnoascus destructans) in Canada* (CWHC, 2014).** ▪ **Any evidence of White-nose Syndrome detected during these monitoring events will be reported to MNRF in accordance with the *Ontario's White-nose Syndrome Response Plan* (MNRF, 2015c).**" • The following mitigation measures during construction for bat SAR were added to **Table 6-4** under **Section 6.3** of the Final EA Report with specific reference to bolded mitigation measures as follows*:* • "Following the construction phase, erect a minimum of ten (10) artificial roosting structures within the HIWEC study area, which may include bat houses and / or artificial bark. **The number of artificial roosting structures should equal the number of cavity trees removed up to a maximum of 30 structures.** The location of artificial roosting structures will be preferentially chosen for areas away from operational WTGs, but may include locations around the substation, along portions of the access road, or in other areas of the HIWEC study area away from any infrastructure. Specific locations will be determined in consultation with EC. Suitable off-site locations will also be considered, such as other Reserve lands or through collaborations with Ontario Parks or other conservation organizations."
		Construction and Post-Construction Monitoring		8	• An ecologist should assess the SAR areas where construction will occur, each morning and afternoon	• The following monitoring during construction for all SAR was added to **Table 8-1** under **Section 8** of the Final EA Report: • "A qualified Biologist or trained Environmental Monitor will drive along the existing access roads and monitor for SAR each morning and afternoon. Should a SAR be encountered, steps outlined in the Sighting Response Protocol will be followed."

Table 1: EA Coordinator Comments and Responses

Date	Agency	Report / Theme	Sections Referenced	Comment #	Questions / Comments	AECOM Response
		Construction and Post-Construction Monitoring		9	• Monitoring shall ensure compliance with avoidance of light pollution effects from dusk through dawn	• The following monitoring during construction for all SAR in **Table 8-1** under **Section 8** of the Final EA Report addresses this comment: • "The Environmental Monitor will be on-site during construction activities and conduct daily inspections during vegetation removal, dewatering and blasting, and as necessary during other activities to ensure compliance with environmental requirements." The Environmental Monitor will be responsible for ensuring that all of the mitigation measures described in **Tables 6-4** and **6-5** are complied with during construction.
		Construction and Post-Construction Monitoring		10	• Access roads should be actively managed for dust control through the duration of construction	• The following monitoring during construction for all SAR in **Table 8-1** under **Section 8** of the Final EA Report addresses this comment: • "The Environmental Monitor will be on-site during construction activities and conduct daily inspections during vegetation removal, dewatering and blasting, and as necessary during other activities to ensure compliance with environmental requirements." The Environmental Monitor will be responsible for ensuring that all of the mitigation measures described in **Tables 6-4** and **6-5** are complied with during construction. • Refer to responses for Comments 2 for mitigation measures added to **Table 6-4** with respect to dust control.
		Construction and Post-Construction Monitoring		11	• Increased reporting - The 3-year post-construction bird/bat mortality monitoring with annual reports to Environment Canada should be supplemented with interim, informal reporting during the migratory/breeding bird season to be able to more immediately assess/trigger any specific mitigation required to avoid significant effects	• The following monitoring during operation for bird SAR in **Table 8-1** under **Section 8** of the Final EA Report was revised to the following: • "Conduct three (3) years of bird mortality monitoring consistent with *Birds and Bird Habitats: Guidelines for Wind Power Projects* (MNRF, 2011a). ▪ **An end of year report, supplemented by an interim technical memo during the migratory / breeding bird season of each surveyed year,** outlining the methods employed and the results of monitoring will be prepared and submitted to EC-CWS on an annual basis for the three (3) years of bird mortality monitoring to determine if additional monitoring and/or mitigation measures are warranted." This has been revised similarly under bat SAR.
		Construction and Post-Construction Monitoring		12	• Increased reporting - Similarly, a two-year report submission to Environment Canada for turtle mortality and poaching effects should be supplemented with interim, informal reports that can be acted upon with more immediacy, if necessary	• The following monitoring during operation for turtle and snake SAR in **Table 8-1** under **Section 8** of the Final EA Report was revised to the following: • "Road mortality surveys will be conducted twice a week from April 1 to October 31 for a minimum of two (2) years post-construction to monitor turtle mortality rates and the effectiveness of mitigation measures (e.g., ecopassages, speed limits, speed bumps and wildlife crossing signs). This monitoring period encompasses the period when the most vehicle activity will occur on site, albeit still relatively low traffic is expected. ▪ These surveys will consist of a combination of incidental observations while driving along access roads and targeted walking surveys at areas of high turtle activity. ▪ In combination with road mortality surveys, motion-sensor cameras will be installed within each ecopassage in an effort to quantify movement activities and species use of the ecopassages. ▪ Motion-sensor cameras will be checked regularly during the active period for turtles (April 15 to September 30) for the first three (3) years that the HIWEC is operational. ▪ **An end of year report will be provided to EC-CWS, supplemented by an interim technical memo on an annual basis for the two (2) years of post-construction road mortality surveys."** This has been revised similarly under snake SAR.
		Construction and Post-Construction Monitoring		13	• Anti-Poaching - A long-term anti-poaching strategy should be developed and put in place to limit potential effects	• The following mitigation measure during operation for turtle SAR was added to **Table 6-5** under **Section 6.3** of the Final EA Report as follows: • "A long-term anti-poaching strategy, including a communication protocol for detecting and reporting suspected poaching activity within HIWEC, will be developed as part of the SAR Management Plan."
		Construction and Post-Construction Monitoring		14	• Increased Site Personnel Training - Posting of the Species at Risk Fact Sheet should be complemented with comprehensive SAR training for all staff and visitors to the site	• The following mitigation measure during construction and operation for all SAR was revised in **Tables 6-4** and **6-5**, respectively, under **Section 6.3** of the Final EA Report with specific reference to bolded mitigation measures as follows: • "Develop and implement a Sighting Response Protocol, which will include: ▪ **All on-site staff will receive formal training about SAR that may be encountered within the HIWEC, including how to recognize each SAR and the proper procedure to follow if SAR is encountered**; …"

Table 1: EA Coordinator Comments and Responses

Date	Agency	Report / Theme	Sections Referenced	Comment #	Questions / Comments	AECOM Response
		Construction and Post-Construction Monitoring		15	• Increased Monitoring - The 2-year post construction monitoring program should be supplemented with longer term monitoring for the following species/populations, where greater uncertainties exist around general species information and/or effects predictions, i.e.: ▪ Kirtland's Warbler; ▪ Eastern Musk Turtle; ▪ Eastern Foxsnake and Eastern Hog-nosed Snake; and ▪ Little Brown Myotis, Northern Myotis and Tri-coloured Bat	• Longer term monitoring for Kirtland's Warbler, Eastern Musk Turtle, Eastern Foxsnake and Eastern Hog-nosed Snake has been included as part of long-term monitoring and research programs discussed in **Section 8.2** of the Final EA Report. For example: • "Wherever possible, research initiatives for these SAR will be tailored to answering specific research needs as defined in the Recovery Strategies and Government Response Statements that are available for these species and **building on the information collected during the post-construction mortality and disturbance monitoring completed for the HIWEC**." Please also refer to **Table 8-2** for research programs preferred for these species. • Recommended monitoring during operation for bat SAR include the following as per **Table 8-1**: ▪ Three (3) years of post-construction bat mortality surveys in accordance with MNRF's Bat and Bat Habitats for Wind Power Projects (2011); ▪ Under the Operational Mitigation Plan, monitoring of each WTG at a minimum frequency of monthly visits for the first three (3) years that the HIWEC is operational and every five (5) years after that; and ▪ Two (2) years of post-construction bat acoustic monitoring surveys.
		Research		16	• In addition to the three species to be targeted for research, the following species should be added: ▪ Eastern Foxsnake; ▪ Eastern Hog-nosed Snake; and ▪ Kirtland's Warbler. • Specific attention should be paid to Kirtland's warbler, both within and outside of the HIWEC study area. The following should be addressed: ▪ Additional information is required, related to Eco-District 5E-7 (Parry Sound) and potential additional proximate habitats, [i.e., through Breeding bird surveys targeting Kirtland's Warbler in 2016 using the Kirtland's Warbler Survey Protocol (Environment Canada, 2012)]; ▪ A Kirtland's Warbler monitoring and research plan will contribute to an improved understanding of the distribution and habitat use of the Georgian Bay area (i.e., is the HIWEC occurrence the second of only two Canadian breeding occurrences or is it part of a larger eastern Georgian Bay population); and ▪ Depending upon the results of that additional work, some selective opportunities may be identified for habitat enhancements on the HIWEC study area or in other areas of suitable habitat for this species in the broad Georgian Bay landscape.	• A discussion of identified SAR (i.e., Blanding's Turtle, Massasauga Rattlesnake, Eastern Foxsnake, Eastern Musk Turtle, Eastern Hog-nosed Snake; and Kirtland's Warbler) that will benefit from long-term monitoring and research programs has been included in **Section 8** of the Final EA Report. **Table 8-2** has been added in **Section 8** as well, which identifies the research opportunities for each of the identified SAR. For each SAR, the Recovery Strategies, where available for the species, were reviewed to identify data or knowledge gaps that will be the focus of the preferred research programs for each SAR. Specifically for Kirtland's Warbler, the following are the preferred research programs as identified in **Table 8-2:** • "Research program opportunities will be examined with reputable academic institutions, and preference will be given to research programs that are targeting information gaps or potential threats associated with this species, including, but not limited to: ▪ Local population size in Parry Sound District; ▪ Habitat characteristics and use (compared to habitat use in Michigan); ▪ Dispersal Techniques; ▪ Site fidelity; ▪ Cowbird parasitism; ▪ Nesting and fledgling success; ▪ Competing species and predators; and ▪ Possible management or habitat enhancement techniques." • Furthermore, additional surveys will be conducted in 2016 following the *Search Protocol for Kirtland's Warbler* (Kirtland's Warbler Recover Team, 2012) in suitable habitats for Kirtland's Warbler where they occur within areas that are publically accessible along the Georgian Bay Shoreline as identified in **Table 8-1** in **Section 8** of the Final EA Report (refer to response to Comment 3).

Table 2: Agency Comments and Responses

Date	Agency	Report	Sections Referenced	Comment #	Questions / Comments	HIW's Consideration and Response
October 30, 2015	Environment Canada	Final EA Report	• Section 6.2.3.1 – 98	1	EC-1 • Loss/destruction and damage to habitat are also potential effects and should be explicitly stated. • Harm, harass and kill (i.e., mortality risk bullet) are also potential effects. **Advice / Recommendation** • Add these potential effects.	Revisions made to the Final EA Report: • Description of Habitat Change potential effect revised to "Habitat change, including possible damage, destruction and /or fragmentation" in **Section 6.2.3.1**. • Description of Habitat Change potential effect revised to "Habitat change, including possible damage, destruction and /or fragmentation of SAR residences or SAR habitat" in **Section 6.2.7.1**. • Description of Change in Mortality Risk potential effect revised to "Change in mortality risk, including harm, harassment and /or killing" in **Section 6.2.3.1**. • Description of Change in Mortality Risk potential effect revised to "Change in mortality risk, including harm, harassment and /or killing of SAR" **in Section 6.2.7.1**. • These have also been updated in **Tables 6-4** to **6-7** as appropriate in **Sections 6.3.2** and **6.4.2 respectively**.
			• Section 6.2.3.2.1 – 100	2	EC-2 • The Zimmerling reference noted that population-level impacts were unlikely as long as concentrated areas of species at risk (SAR) were avoided. The project area is arguably a concentrated area of SAR, thus population-level effects are possible. • Using the average number of bats in the Ontario Ministry of Natural Resources and Forestry estimates, this project, with its 91 towers has the potential to kill 1,300 bats/year. **Advice / Recommendation** • State that population-level effects are possible due to the concentration of species at risk. • Evaluate the potential effect of the wind turbine generators (WTGs) on local bat populations.	Revisions made to the Final EA Report, **Section 6.2.3.2.1**, first paragraph: Although population level effects is possible related to SAR, based on relative abundance and occurrence data reviewed from various wildlife atlases (Cadman *et al.*, 2007; Ontario Nature, 2015; Dobbyn, 1994), all SAR observed in the HIWEC study area, with the exception of Kirtland's Warbler, are found within the Parry Sound District where populations are not limited to within the HIWEC study area. Further discussion on potential population-level effects on SAR is provided in **Section 6.2.7**. Revisions made to the Final EA Report, **Section 6.2.3.2.1**, third paragraph: The MNRF has estimated that WTGs in Ontario result in the mortality of, on average, 14 bats / WTG / year; however, mortality varies considerably across wind projects (MNRF, 2011b). According to the Wind Energy Bird and Bat Monitoring Database (BSC et al., 2014), the average annual bat mortality estimate is 19.08 bats/WTG/year based on data collected between 2006 and 2012 from 50 wind power projects in Ontario. Considering this data, the operation of WTGs has the potential to increase mortality of bats during operation of the HIWEC. However, the mitigation measures proposed in **Section 6.3** will reduce the effect on bat populations associated with the operation of the HIWEC. Revisions made to the Final EA Report, **Section 6.2.7**: Added discussions of potential population level effects for each SAR. Refer to **Section 6.2.7.2.1** for discussion on bird and bat SAR and **Section 6.2.7.1.2** for discussion on turtle and snake SAR. Revisions made to the Final EA Report, **Section 6.3**, **Table 6-5**: Implement a proactive approach to feathering WTG blades below the manufacturer's recommended cut-in speed. Feathering refers to the act of pitching WTG blades by 90°, parallel to the wind or turning the WTG nacelle so that the blades are facing away from the wind.
			• Section 6.2.3.2.1 – 100	3	EC-3 • EA states that amphibian mortality could be greater during precipitation events. **Advice / Recommendation** • In the mitigation table, add specific mitigation measures that will be implemented to reduce amphibian mortality on warm, humid nights and in migration periods.	Revisions made to the Final EA Report, **Section 6.3**, **Table 6-4** and **6-5** added bullet: • "Avoid driving on access roads in proximity to amphibian breeding habitats at night between April 1 and June 30, and any rainy nights from spring to early autumn, wherever possible," Revisions made to the Natural Heritage Assessment (NHA): Environmental Impact Study (EIS) **Section 6.2.2** , **Table 5-3** added bullet: • "Avoid driving on access roads in proximity to amphibian breeding habitats at night between April 1 and June 30, and any rainy nights from spring to early autumn, wherever possible."
			• Section 6.2.3.2.1 – 101	4	EC-4 • Herptiles are also susceptible to mortality during vegetation clearing **Advice / Recommendation** • Add 'amphibians and reptiles' after birds in second line, second paragraph	Revisions made to the Final EA Report, **Section 6.2.3.1.2**, sentence in first paragraph: Wildlife, particularly turtles and snakes (including Eastern Ribbonsnake, Milksnake, Northern Map Turtle, Five-lined Skink and Snapping Turtle) and amphibians, may also experience an increased mortality risk on access roads during construction and decommissioning, resulting from collisions with vehicles and heavy equipment and vegetation clearing. Revisions made to the Final EA Report, **Section 6.2.3.2.1**, sentence in last paragraph: • Finally, vegetation removal or during routine maintenance of the overhead collector lines or transmission line is also associated with increased mortality risk to wildlife including birds, amphibians and reptiles.

Table 2: Agency Comments and Responses

Date	Agency	Report	Sections Referenced	Comment #	Questions / Comments	HIW's Consideration and Response
			• Section 6.2.4.1.2 – 103	5	EC-5 • Third paragraph only discusses wetlands. **Advice / Recommendation** • Add similar analysis for other wildlife habitats	Other wildlife habitats are assessed in **Section 6.2.3.1.1** Habitat Change in **Section 6.2.3** Wildlife Habitat. Added similar analysis of effects on wildlife habitat to the Final EA Report, **Section 6.2.3.1.1**, third paragraph as per the following: The entire HIWEC study area provides habitat for a variety of different wildlife species, including SAR. Construction within the HIWEC footprint has the potential to kill, harm or harass wildlife that may be using the area as habitat (e.g., for nesting or feeding). Construction within the HIWEC footprint may also damage and destroy portions of wildlife habitat, including residences for SAR. Fragmentation of wildlife habitat is possible due to the construction of access roads, transmission lines, WTGs and laydown areas. The impediments to movement of species (e.g., snakes) resulting from this fragmentation may result in reduced species richness and abundance (Fenech, *et al*. 2000). These potential effects as they relate to SAR habitat change and mortality are addressed under the Species at Risk VEC (**Section 6.2.7**), and therefore are not addressed here.
			• Section 6.2.7.1.1 – 113	6	EC-6 • This section says that suitable habitat for all of the bird species at risk is extensive throughout the HIWEC study area and therefore alternative breeding sites will be available during the construction phase when vegetation will be initially cleared. This implies that SAR birds can simply go elsewhere. However, suitable alternative breeding sites may already be occupied. The section also states that, with respect to Kirtland's Warblers, some localized disturbance associated with vegetation clearing would be considered temporary such that breeding and nest success would not be compromised. EC disagrees that localized disturbance to SAR birds associated with vegetation clearing is temporary as it will be ongoing as vegetation regrows. **Advice / Recommendation** • Propose avoidance and habitat replacement, restoration or compensation for the lost habitat for bird SAR.	For clarification, vegetation removal (and associated noise) is considered to be one time event and therefore disturbance is considered to be temporary. Footprint effects or habitat changes related to the removal of vegetation is discussed in this section (**Section 6.2.7.1.1**). Revisions made to the Final EA Report, **Section 6.2.7.1.1**: An analysis of total suitable habitat loss within the construction footprint based on the 120 WTG and 99 turbine layouts, respectively, were provided for each SAR in hectares. This was then compared to how much suitable habitat for each SAR is available in the HIWEC study area to show habitat availability. Clarification of temporary disturbance is provided in **Section 6.2.7.2.1**. and in **Section 6.2.7.2.2**: Vegetation clearing during construction is a one-time event and therefore SAR birds will not be continuously disturbed by these activities. Maintenance activities (i.e., trimming of vegetation) around access roads, overhead collector lines and transmission lines during operation would occur infrequently (i.e., every two (2) to five (5) years) and would be limited to within the previously cleared construction footprint such that disturbance to SAR birds would also be temporary. Mitigation measures are proposed for vegetation clearing during construction and operation that will avoid or minimize disturbance to SAR birds in **Table 6-5**. Additional mitigation measures for bird SAR were provided in **Tables 6-4** and **6-5**. Habitat replacement, restoration and / or compensation will be provided to EC-CWS under the permitting process for discussion.
			• Section 6.2.7.1.1 – 114	7	EC-7 • This section indicates up to 24.5 ha of wetland will be removed during construction. The significance of this amount of habitat loss to SAR is not described in the EA. • The EA states that, with respect to SAR snakes, "loss of a particular gestation site or hibernation site should not have a detrimental effect on an individual of the species". The number and location of actual/suitable (not just potential) gestation hibernation sites in the project area is unclear, so the statement that such habitat is found throughout the project area appears to be unsupported. Is it being implied that individuals can just go to another, suitable, unoccupied gestation or hibernation site? What if alternatives do not exist? **Advice / Recommendation** • Include more information on avoidance and habitat replacement, restoration or compensation for the lost wetland habitat that supports SAR. • Add discussion (as for Eastern Massasauga) about Eastern Hog-nosed Snake and Eastern Foxsnake. Focus on the sand barren habitat identified in Figure 3.5x when discussing hog-nosed. Clarify the number and location of suitable existing (not just potential) gestation and hibernation sites for SAR snakes. Demonstrate that sufficient similar habitat is available and unoccupied in the project area so that displaced individuals would readily find suitable alternative sites for gestation or hibernation.	Revisions made to the Final EA Report: A discussion of the significance of amount of wetland habitat lost to turtle and snake SAR has been provided in **Sections 6.2.7.1.1**. An additional discussion about availability of alternative suitable habitats outside of the construction footprint was included in Section **6.2.7.1.1**. under Snake SAR. Habitat replacement, restoration and / or compensation will be provided to EC-CWS under the permitting process for discussion.
			• Section 6.2.7.1.2 – 115	8	EC-8 • This section indicates an increase in the mortality risk to SAR birds would result from the construction/decommissioning phase of the project. • This section indicates mortality risk could increase for turtle SAR. **Advice / Recommendation** • With respect to bird SAR, describe potential disturbance of nest sites and demonstrate measures that will be taken to avoid bird mortality. • With respect to turtle SAR, describe potential disturbance of nest sites and demonstrate measures that will be taken to avoid turtle mortality. • Review and edit turtle SAR section in the context of current literature. We recommend you refer to Chris Edge's 2009 MSc thesis as it has much information on Blanding's Turtle hibernation ecology in Ontario.	Reference to mitigation measures in **Table 6-4** and examples included in **Section 6.2.7.1.2** for bird SAR and turtle SAR. Reviewed and edited turtle SAR section using more current literature, including the following scientific articles: Edge, C.B, B.D. Steinberg, R.J. Brooks, and J.D. Litzgus, 2009: Temperature and site selection by Blanding's Turtles (*Emydoidea blandingii*) during hibernation near the species' northern range limit. *Canadian Journal of Zoology*, Volume 87, p. 825-834. Edge, C.B., B.D. Steinberg, R.J. Brooks, and J.D. Litzgus, 2010: Habitat selection by Blanding's turtles (*Emydoidea blandingii*) in a relatively pristine landscape. *Ecoscience*, Volume 17, Issue 1, p. 90-99. Ultsch, G.R. and B.M. Cochran, 1994: Physiology of northern and southern musk turtles (*Sternotherus odoratus*) during simulated hibernation. *Physiological Zoology*, Volume 67, p. 263-281. Ultsch, G.R. 2006: The ecology of overwintering among turtles: where turtles overwinter and its consequences. *Biological Reviews,* Volume 81, Issue 3, p. 339-367. Ultsch, G.R. and S.A. Reese, 2008: Ecology and physiology of overwintering. In Biology of the Snapping Turtle (*Chelydra serpentine*). Edited by A.C. Steyermark, M.S. Finkler, and R.J. Brooks. John Hopkins University Press, Baltimore, MD. Pp. 91-99

Table 2: Agency Comments and Responses

Date	Agency	Report	Sections Referenced	Comment #	Questions / Comments	HIW's Consideration and Response
			• Section 6.2.7.1.2 - 116	9	EC-9 • Literature cited is over 10 years old and does not reflect the most current state of knowledge on Branched Bartonia populations. • With respect to Branched Bartonia, there are at least 10 separate Element Occurrences of this species in Ontario, not 7 confirmed sites, as is stated in the EA Report. Estimates of population sizes are available too. **Advice / Recommendation** • Contact OMNRF for more current data and edit the EA Report. • Determine the potential for increased access by ATV's into Branched Bartonia habitat (e.g. through community consultations regarding potential future use of the area for recreation, hunting). Evaluate the potential impacts assessed and identify associated mitigation, such as ways to prevent ATV use in suitable habitats.	The *COSEWIC assessment and update status report on the Branched Bartonia Bartonia paniculata ssp. paniculata in Canada* (COSEWIC, 2003), is the most recent report that is publically available. Based on the NHIC element occurrences, there are 17 records of Branched Bartonia in Ontario, within the Muskoka and Parry Sound Districts. This has been updated in **Section 4.1.5.1.1.18** of the Final EA Report and in **Appendix F3**. A data request was sent to the MNRF Parry Sound District on November 5, 2015 requesting more information on the population sizes of the 17 identified element occurrences. A response from Jeremy Rouse (MNRF) was received on the same day stating that sensitive information on populations sizes is not relevant to the HIWEC study area (and was therefore not provided) given that this Project is located more than 1 km away and will not be impacting any of the 17 identified element occurrences. Furthermore, according to Jeremy Rouse, Branched Bartonia has never been found north of Parry Sound (pers. comm., November 5, 2015). This confirmation from MNRF in combination with the results of Branched Bartonia surveys completed in 2015, is considered sufficient to confirm the absence of this species from the HIWEC location and therefore no mitigation measures are proposed to be implemented.
			• Section 6.2.7.2.1 – 118	10	EC-10 • This section discusses the percentages of Canada Warblers being impacted by wind projects adding national and provincial context to the problem. However, absolute numbers of birds would also be helpful in assessing impacts. • The conclusion that bird SAR in the HIWEC study area have a relatively low risk of collisions with operating WTGs appears to be unsubstantiated. There could be many reasons why such birds have not been recorded in mortality monitoring programs whereas, in fact, they may have been present elsewhere or at other times in the study area. **Advice / Recommendation** • Add data on absolute numbers (if available) and numbers/percentages of Canada Warblers that could be impacted in the project area. • Elaborate on conclusions. For Kirtland's Warbler, provide analysis on expectations of migration mortality risk due to WTGs and mortality risk to other factors such as operation of maintenance vehicles, collisions with wires, nest parasitism, et al.	Revisions according EC-CWS' recommendations were made to **Section 6.2.7.2.1** to the Final EA Report with respect to Canada Warbler and Kirtland's Warbler. Discussions of additional potential impacts, including operation of maintenance vehicles, collisions with overhead wires and nest parasitism, on bird SAR was also included under the same section. Additional mitigation measures for bird SAR were provided in **Tables 6-4** and **6-5**.
			• Section 6.2.7.2.1 – 119	11	EC-11 • In the first sentence on page 119 it is stated that musk turtles "rarely leave the water". While true, they still need to leave the water to nest, and so we suggest this be indicated in the text. • Road mortality is identified as a key threat for SAR turtles in every Recovery Plan. Given that at least 50 km of new roads are being proposed to be built in a currently roadless area in which SAR turtles are relatively abundant, the second paragraph of the section on turtle SAR appears to underestimate the threat that roads may pose to nesting Blanding's Turtles. • Hatchling Blanding's Turtles may be able to successfully hibernate terrestrially (COSEWIC 2005). As a result, activities planned for October-April may potentially impact individuals of this species or their residences. Mitigation for terrestrially overwintering Blanding's Turtles, potentially impacted by road, WTG or transmission line construction, is not mentioned in the EA. • The second paragraph underestimates the threat that the proposed road network may pose to SAR snakes, especially Eastern Massasauga (as is mentioned on page 121). The latter species is especially susceptible where a road may intersect migration corridors (e.g., between hibernation sites and breeding/feeding areas). **Advice / Recommendation** • Edit first sentence to add the fact that musk turtles leave water to nest on land, and follow this with associated comments on mortality risk. • Edit analysis of road threat, in the context of the extensive existing body of recent scientific literature on the subject (e.g., proceedings from road-mortality workshops at the Toronto Zoo). • Provide avoidance mitigation for terrestrially overwintering Blanding's Turtles. • Further elaborate on potential threats that the proposed road network may pose to SAR snakes and describe measures that will be taken to minimize these threats.	Revisions according EC-CWS' recommendations were made to Section **6.2.7.1.2** to the Final EA Report with respect to Eastern Musk Turtle, Eastern Massasauga and Blanding's Turtle. Mitigation measures for terrestrially overwintering Blanding's Turtles were not provided because overwintering sites for Blanding's Turtle hatchlings are unknown but it is suggested that hatchlings may overwinter on land provided that habitat conditions remain moist enough during hibernation; however, no such instances of hatchlings hibernating terrestrially have been reported and it's not considered to be typical behaviour (COSEWIC, 2005) as described in **Section 6.2.7.1.2** under Turtle SAR.. Additional mitigation measures for turtle and snake SAR were provided in **Tables 6-4** and **6-5**.
			• Table 6-4 – page 142-143 (SAR Birds)	12	EC-12 • Details as to the timing and methodology proposed for removal of vegetation have not been provided. • Details as to what areas will be avoided by construction (e.g., known or potential residences, migration corridors, nest sites, hibernation and gestations sites, feeding areas, etc.) have not been provided. It does not appear that habitat compensation is being proposed to mitigate residual effects. • The full details of a Blasting Plan (e.g., timing windows, BMPs, avoidance of rock) are needed to support the conclusions with respect to residual effects on SAR birds. • Simply postponing construction activity until a bird does not mitigate effects on SAR bird habitat.	Revisions based on EC-CWS' recommendations were made to **Tables 6-4** and **6-5** to the Final EA Report include the following: • Additional Blasting Plan details have been provided in **Table 6-4**. • Additional information regarding vegetation removal including periods of no vegetation removal, areas of avoidances, and buffers from specific observation types. • Vegetation removal will be conducted using a feller buncher where vegetation will be cut close to the root and laid down along the side of the removal area. Trees and shrubs will be de-limbed and, as needed, will be hauled off-site on a skidder.

Table 2: Agency Comments and Responses

Date	Agency	Report	Sections Referenced	Comment #	Questions / Comments	HIW's Consideration and Response
					• The statements in the last column noting that SAR bird habitat will be removed and mortality of avian SAR is possible do not include measures to effectively avoid these risks. Waiting until SAR birds have moved off or have been moved may not be adequate measures. • Rehabilitation of temporary construction area to the type of habitat that was removed may be very difficult in old-growth, late-seral or 'constrained' sites, such as those with thin soils over bedrock. **Advice / Recommendation** • Provide details as to the timing and methods proposed for vegetation removal. • Provide details as to what areas have been avoided by construction planning. Add details regarding compensation. • Provide details of Blasting Plans, including consideration and details of alternative methods (if any) of clearing rock. Use added blasting plan information to support conclusions regarding residual effects. • Provide mitigation that avoids the loss of SAR bird habitat. • Provide mitigation that avoids SAR bird mortality. • Provide details as to how adverse effects on habitat have been eliminated, reduced or controlled and what avoidance measures will be taken. • Provide details regarding that habitat types that will need to be rehabilitated (and area of each) and what will be done to restore/revegetate or avoid late-seral plant communities or those on constrained sites.	• Additional mitigation measures for all SAR, including habitat avoidance and timing windows. • Additional details regarding habitat rehabilitation. With respect to timing restrictions for vegetation removal, this information has been incorporated in **Tables 6-4** and **6-5** for construction / decommissioning and operations, as timing windows for vegetation removal is species dependent and dependent on various life stages of these species. Examples of timing windows restricting vegetation removal include: • SAR Snake nesting habitat (sandy habitats and shorelines) – July 1 to October 15 • SAR Birds in complex habitats – May 1 to July 28 • SAR Bat habitat – April 30 to September 1 unless cleared by a biologist that there are no bat maternity roosts in the trees to be removed Based on the results of the pre-construction surveys conducted by AECOM in the fall of 2015, it has been confirmed that there are no old-growth forests located within the HIWEC construction footprint. Therefore, no potential effects to old-growth forests are anticipated. Details of the methods and results of these pre-construction surveys are provided in **Appendix F3** (NHA: Evaluation of Importance Report) of **Volume A.** **Table 6-4** and **6-5** provides mitigation measures that avoid the loss of SAR bird habitat and SAR bird mortality. Habitat replacement, restoration and / or compensation will be provided to EC-CWS under the permitting process for discussion.
			• Table 6-4 – page 143-144 (SAR turtles)	13	EC-13 • This section indicates turtle nesting areas will be avoided "where possible". It is not clear what is meant by "where possible". • The proposal to potentially remove vegetation in hibernation habitat outside of hibernation periods could affect hibernation sites that are SAR residences. Removing vegetation from them at any time may cause damage or destruction to these residences. • The mitigation for impacts of roads on SAR turtles will be inadequate and/or ineffective, as presented in the EA Report. Regardless of the speed of a vehicle, driving over turtles at any speed would cause significant injury or death to individuals. It is very difficult to detect hatchling turtles on roads, even by drivers that have been instructed to be vigilant and are being vigilant. Additionally, Blanding's Turtles are known to avoid roads, thus potentially limiting their ability to move across the landscape and possibly preventing females from accessing traditional nest sites. • We note that ecopassages will be 'considered'. Ecopassages are one of many means of mitigating impacts to SAR. • The EA Report does not specify whether or not road mortality data would actually be used to inform adaptive management. For example, it does not include consideration of what would happen if fence monitoring revealed that is was not functioning. • Regarding the statement that "...isolated turtle SAR mortality is possible", the loss of a single, mature female Blanding's Turtle, while 'isolated', could have serious effects on local, long-term population levels; the proposed mitigation measures are thought to minimize increased mortality risk, but it would be appropriate to include measures that avoid mortality all together. **Advice / Recommendation** • Elaborate on what "where possible" means, within the context of the prohibitions of SARA. Provide specific mitigation that demonstrates how turtles and their nests are avoided and mitigated (e.g., creation of alternative nesting sites in suitable habitat) prior to construction. • Provide details (e.g., mapping) of known or potential hibernation sites and how such sites will be avoided. Explain how alternative sites (including discussion of feasibility) will be created, prior to any potential destruction or damage. • Provide effective mitigation measures that will better address potential road-kill (e.g., closing roads to vehicle traffic in turtle nesting seasons and reptile migration/nesting periods, alternative means of transportation). • Provide road design alternatives (e.g. routes that avoid wetlands, ecopassages with "funnel-fencing", shoulders that are not suitable for nesting turtles) or plans for constructing alternative nest sites. • Provide details as to the planned locations, numbers and engineering design and other relevant information for all ecopassages proposed. Include timing of construction and what was considered with respect to potential reptile movement corridors. • Provide details as to what adaptive management is being proposed, what would trigger the implementation of adaptive management, etc. • Provide details as to what actions would be taken if fence monitoring revealed that it was not functioning. • Provide more details as to what is being proposed to avoid mortality.	Revisions based on EC-CWS' recommendations were made to **Table 6-4** and **6-5** to the Revisions based on EC-CWS' recommendations have been made to the Final EA Report and **Table 6-4** and **6-5** include the following: • Clarification has been added where the term "where possible" has been used. In the instance the mitigation measure is not possible, appropriate timing windows, clearing restrictions, and buffers apply. • Additional mitigation measures and details to avoid and / or minimize effects to turtle SAR and their nests including timing restrictions, buffers, ecopassages, artificial nest mounds, etc. • Potential hibernation sites are provided in **Section 3.5.1.5** and presented on **Figure 3-5e**. A micro-siting exercise will be conducted prior to vegetation removal to avoid potential hibernation habitat as outlined in **Table 6-4**. Up to 21.4 ha of wetland will be removed. The overall wetland communities will remain intact. Approximately 0.24 ha of this total accounts for complete removal of isolated wetlands. Alternative hibernation sites for turtles are not proposed to be created. • Additional mitigation measures to avoid mortality due to vehicles. • Additional ecopassages and additional information related to ecopassages Details on monitoring, contingency measures and adaptive management provided in **Table 8-1**. • Any documented road mortality of a reptile species will trigger consideration of contingency measures and adaptive management (e.g., access road closure or additional ecopassages, speed bumps, or wildlife crossing signs). The selected approach will be based on the specific circumstances that contributed to the observed impact on the species and will be determined by a qualified Biologist for the purpose of further mitigating potential impacts to the species. • Should installed exclusionary fencing not be excluding turtles from the construction site, a qualified Biologist will provide recommendations for improvement considering the site specific situation (i.e., fence repair, design refinement, location change). Access roads, and other project infrastructure, have been designed away from wetlands and additional micrositing will occur just prior to construction should the boundaries of wetlands have changed.

Table 2: Agency Comments and Responses

Date	Agency	Report	Sections Referenced	Comment #	Questions / Comments	HIW's Consideration and Response
			• Table 6-4 – page 143	14	EC-14 • This section states that SAR turtle residences will be avoided during construction "where possible", but does not elaborate on what is meant by "where possible" or what the extent/scope of impacts would be. • Removing vegetation in SAR turtle hibernation habitat, even outside of hibernation season, will harm the habitat and may harm the species. Regardless of whether turtles are present, hibernation sites are residences that could be damaged by removing vegetation. • Waiting until drawdown is observed may be lethal to individuals and/or damage a residence. The mitigation proposed (i.e., after the fact) may result in non-reversible impacts to individuals, residences and critical habitat. • The details of the zone of influence (ZOI) have not been provided. It is unclear how the conclusions with respect to residual effects were drawn without this information. • Concerns related to drawdowns are similar for dewatering, which may also have negative impacts to SAR. The mitigation as currently proposed may result in non-reversible impacts to individuals, residences and critical habitat. • Regarding the statements in the last column that SAR turtle habitat will be removed and that mortality of avian SAR is possible, it would be appropriate to include measures that avoid SAR turtle mortality and loss of SAR habitat. **Advice / Recommendation** • Provide details on mitigation that avoids SAR turtle residences, bearing in mind the prohibitions of SARA. Explain further what "where possible" means. • Define what is meant by a "safe and suitable location" and what contingencies there are should one not be available. • Provide details on how the removal vegetation from SAR turtle habitat will be avoided. • Provide details of pro-active mitigation (especially avoidance) to avoid damage to SAR individuals, residences and critical habitat. • Provide enough ZOI information to support conclusions regarding residual effects. • Provide a definition of what "possible" means with respect to limiting groundwater cut-offs. Provide mitigation that avoids potential impacts to SAR. • Provide details on avoidance (not just minimization) measures that will be taken	Revisions based on EC-CWS' recommendations have been made to **Table 6-4** to the Final EA Report include, but are not limited to the following: • Clarification has been added where the term "where possible" has been used. In the instance the mitigation measure is not possible, appropriate timing windows, clearing restrictions, and buffers apply • A safe and suitable location refers to suitable habitat for the species, which is located at a safe distance (at least 50 m, but less than 300 m) from activities such that the species has been removed from harm. • Additional mitigation measures and details to avoid / minimize effects to turtles and their habitats have been provided including time restrictions, buffers, ecopassages, artificial nesting mounds, etc. • Further information regarding dewatering, drawdown and zone of influence (ZOI) has been provided. • Access roads, and other project infrastructure, have been designed to avoid wetlands and additional micrositing will occur just prior to construction should the boundaries of wetlands have changed. Details on monitoring, contingency measures and adaptive management provided in **Table 8-1**.
			• Table 6-4 – page 144	15	EC-15 • As previously stated (EC-12), a detailed Blasting Plan (e.g., timing windows, BMPs, avoidance of rock) is needed to support the conclusions with respect to residual effects on SAR birds. • More information regarding the effectiveness of the mitigation proposed (e.g., 'considering' speed bumps) would better support conclusions regarding residual effects. • It is unclear as to how the construction monitors will effectively avoid and minimize impacts on SAR. • It is unclear as to what will happen if an SAR snake is found at a nest or gestation site. • Refer to earlier comments (EC-14) and recommendations regarding drawdown and dewatering. • Regarding the statements in the last column noting that SAR snake habitat will be removed and isolated snake SAR mortality is possible: it would be appropriate to include measures that avoid SAR snake mortality and loss of their habitat. **Advice / Recommendation** • Provide details of Blasting Plans, including consideration and details of alternative methods (if any) of clearing rock. Use added blasting plan information to support conclusions regarding residual effects. • Provide detailed analyses of avoidance options (e.g., not building roads in certain areas or seasonal closures of roads to vehicle traffic during active seasons, especially nesting or migration periods). • Provide details on how many construction monitors will be present and what the scope of simultaneous construction activities will be. • Provide details as to what is being proposed to avoid snake gestation sites and what will happen should an active site be encountered. Define what constitutes a "safe and suitable" location. Explain what mitigation is planned should there not be such a site or one in close proximity. • Provide information regarding drawdown and dewatering, as described in EC-14. • Provide details on avoidance (not just minimization) measures that will be taken.	Revisions made to **Table 6-4** to the Final EA Report include, but are not limited to the following: • Additional Blasting Plan details have been provided in **Table 6-4**. • Additional avoidance mitigation measures including timing restrictions and micrositing. • Additional information on the roles and responsibilities of the environmental monitors and qualified biologists. • A safe and suitable location refers to suitable habitat for the species, which is located at a safe distance (at least 50 m, but less than 300 m) from activities such that the species has been removed from harm. • Further information regarding dewatering, drawdown and zone of influence (ZOI) has been provided. • A micro-siting exercise will be conducted prior to vegetation removal / blasting to avoid potential gestation habitat as outlined in **Table 6-4**. Details on monitoring, contingency measures and adaptive management provided in **Table 8-1**. Access roads, and other project infrastructure, have been designed to avoid wetlands and additional micrositing will occur just prior to construction should the boundaries of wetlands have changed. Details on monitoring, contingency measures and adaptive management provided in **Table 8-1**.

Table 2: Agency Comments and Responses

Date	Agency	Report	Sections Referenced	Comment #	Questions / Comments	HIW's Consideration and Response
			• Table 6-4 – page 145	16	EC-16 • See our previous comment and recommendation related to ecopassages,(EC-13) We note that ecopassages will be "considered". Ecopassages are one of the many means of mitigating impacts to SAR. • Assessment of impacts would be easier if maps showing potential movement corridors between Eastern Massasauga hibernation sites (Figure 3.6q) and potential feeding/mating areas (need to identify and map these as well) and potential gestation sites (Figure 3.6r). Males and non-gravid females use hibernation – feeding/mating area corridors somewhat predictably. • The EA Report does not specify whether or not road mortality data would actually be used to inform adaptive management. For example, it does not include consideration of what would happen if fence monitoring revealed that it was not functioning. • It is unclear what specific mitigation is being proposed for Eastern Foxsnakes, which can easily climb fences. • Regarding the statement that "…isolated snake SAR mortality is possible", the loss of any SAR snake, while "isolated", could have serious effects on local, long-term population levels; the proposed mitigation measures are thought to minimize increased mortality risk, but it would be appropriate to include measures that avoid mortality all together. **Advice / Recommendation** • Provide details as to the planned locations, numbers and engineering design and other relevant information for all proposed ecopassages. Include timing of construction and what was considered with respect to potential reptile movement corridors. • Also provide details on contingencies should monitoring reveal that any ecopassages are not effective or being used. • Map potential movement corridors. Show how planned roads have avoided these potential routes or how they have been identified as high priority areas for ecopassage installation and other road-kill mitigation. • Provide details as to what adaptive management is being proposed, what would trigger the implementation of adaptive management, etc. • Provide specific mitigation and avoidance measures for Eastern Foxsnakes. • Address EC recommendations pertaining to destruction of residences on federal land; definition of construction footprint; blasting plans; mortality and habitat loss of bat SAR. Provide more details as to what is being proposed to avoid mortality of SAR snakes.	Revisions based on EC-CWS' recommendations have been made to **Table 6-4**, and **6-5** to the Final EA Report include, but are not limited to the following: • Additional mitigation measures to avoid snake SAR. • Additional information on ecopassages, including numbers, locations and designs. • Potential movement corridors are not mapped as part of the EA. This will be addressed through the permitting process. Details on monitoring, contingency measures and adaptive management provided in **Table 8-1**. Details on monitoring, contingency measures and adaptive management provided in **Table 8-1**.
			• Table 6-4 – page 146	17	EC-17 • The methodology and final results of the Branched Bartonia surveys are not included. However, the proponent has verbally provided some preliminary results, which indicate that no Branched Bartonia were found. Given the unpredictable emergence of this species, its absence can only be confirmed through future surveys. • Proposed mitigation is likely inappropriate/not technically feasible – for example, this species does not grow in 'topsoil', but rather usually grows in a peat substrate. It is heterotrophic, and may therefore require a healthy population of soil fungi to allow it to uptake nutrients, which would be very difficult to replicate. Competition with invasive buckthorn is also a threat to this species, and needs to be considered when designing appropriate mitigation and monitoring (due to increased potential for invasive species to move in after construction disturbance). **Advice / Recommendation** • Provide methods and results of Branched Bartonia surveys. Include details as to the unpredictability of the emergence of this species and the importance of multi-year surveys. • Provide effective mitigation or evidence that what is proposed is technically feasible and effective. Update rehabilitation based on the understanding that this species does not grow in typical "topsoil" with a readily stripped and stockpiled seedbank that can be preserved and reapplied.	Methods and results of the Branched Bartonia Surveys are provided in the Final NHA: Evaluation of Importance Report (**Appendix F3** of **Volume A**). Please refer to response for Comment EC-9.
			• Table 6-5 – page 152	18	EC-18 • It is unclear as to when vegetation trimming would 'not be possible' outside of bird nesting season. • It is unclear as to what would eventually be done if a nest was found and marked. • It is unclear what "operational mitigation" would be done if post-construction monitoring deemed it necessary. • Regarding the residual environmental effects listed in the last column: it would be appropriate to include measures that avoid these residual effects. **Advice / Recommendation** • Provide details as to when vegetation clearing would not be possible outside of bird nesting season. • Provide details as to what the long term mitigation would be should an SAR bird nest (or evidence of probable or confirmed breeding) be located and identified. Provide specific details for Kirtland's Warbler. • Provide details regarding operational mitigation, including avoidance measures.	Revisions made to **Table 6-5** to the Final EA Report include, but are not limited to the following: • Additional information regarding vegetation removal including periods of no vegetation removal, areas of avoidances, and buffers applied to encountered bird nests. • Included additional avoidance mitigation measures such as feathering WTG blades below the manufacturer's recommended cut-in speed and applying buffers to any active nest or nesting activity.

Table 2: Agency Comments and Responses

Date	Agency	Report	Sections Referenced	Comment #	Questions / Comments	HIW's Consideration and Response
			• Table 6-5 – page 153	19	EC-19 • It is unclear as to what "periodically" means, with respect to ecopassages maintenance. • Grading of access roads may be allowed during turtle nesting season, which could impact turtle nests (i.e. residences). • Details on the location of the nearest turtle trauma centres and their policies have not been provided. • It is unclear how the prosed access gate will prevent unauthorized ATVs and snowmobiles from simply driving around it. It is also unclear as to how much vehicle traffic will be on roads and for what purposes. • It is our understanding that the community will have full authorized access to the road network. • There is potential for residual environmental effects of high concern, e.g., road-kill or poaching of mature female Blanding's and other turtle SAR that are known to wander widely in nesting season. • It would be appropriate to include mitigation to address road avoidance by Blanding's Turtles (see Proulx, Fortin and Blouin-Demers research paper, 2014). Have alternative turtle nest sites been proposed to be constructed? • Cryptic, juvenile snake SAR are susceptible to road-kill despite the speed of vehicles and vigilance of drivers, so avoidance mitigation would be more effective at protecting these individuals. • It is unclear why contingency mitigation strategies will have not been proposed to be developed in advance of "emergency circumstances". • Regarding the identified residual environmental effects of high concern (e.g., road-kill or intentional killing of Eastern Massasaugas, which can use traditional and predictable migration routes): it would be appropriate to include measures that avoid Eastern Massasauga mortality. **Advice / Recommendation** • Provide definition of periodically. • Explain the circumstances in which road grading may be allowed in turtle nesting season and how nests would be avoided should it occur. • Provide more details on turtle trauma centre related procedures and long-term plans for individuals brought there. • Determine how the roads may be used (time of year, frequency, vehicle types, etc.) and the impact of this use not only with respect to road mortality but also to off-road areas that may be accessed where they weren't before. Provide details on how unauthorized access will be prevented, regulated and enforced. Provide details on road usage, including expectations of residents. • Provide specific mitigation that addresses and avoids residual environmental effects of high concern. • Provide mitigation that specifically addresses avoidance of un/travelled roads by Blanding's Turtles. • Provide additional avoidance mitigation (e.g., road closures, etc.). • Provide contingency mitigation strategies well in advance of "emergency circumstances". • Provide specific avoidance mitigation that addresses residual environmental effects of high concern.	Revision made to **Section 6.2.7.2.1** under Turtle SAR in the second paragraph as follows: During operation of the HIWEC, WTGs that operate normally are anticipated to be visited no more than once per month by maintenance staff and twice per week by qualified Biologists during the monitoring and follow-up programs; this is expected to contribute to an average of less than 5 vehicles using access roads per day. Revisions based on EC-CWS' recommendations have been made to **Table 6-5** to the Final EA Report include, but are not limited to the following: • A definition has been provided for "periodically". With respect to ecopassages, inspections will occur once in early spring after snow melt and once in summer / fall to determine if any maintenance or repair is required at all installed ecopassages and repair accordingly to allow for movement corridors in areas where high turtle activity has been identified in order to limit road mortality. • All grading and structural access road maintenance activities will be avoided during the turtle nesting / hatching period (June 1 to September 15; GBBR, n.d.). If there are health and safety concerns or other circumstances where road maintenance may be required during this period, EC-CWS will be consulted prior to the activity taking place. • It is the intent of HIFN to regulate the use of HIFN I.R. #2 by members and non-members. Gates will be installed at the entrance to HIWEC and patrolling will be completed. Currently, the site is monitored by HIFN as well as the MNRF. • Additional mitigation measures to avoid turtle SAR turtle mortality provided. • Additional information on trauma centres. Details on monitoring, contingency measures and adaptive management provided in **Table 8-1**.
			• Table 6-5 – page 154	20	EC-20 • The potential removal of SAR bat roost trees in the non-active season may harm the species. **Advice / Recommendation** • Provide mitigation that details avoidance and compensation measures regarding SAR bat roost trees. EC suggests that OMNRF bat experts be consulted.	Revisions based on EC-CWS' recommendations have been made to **Table 6-4** to the Final EA Report include, but are not limited to the following: • Additional avoidance and compensation measures regarding bat SAR roost trees provided. Details on monitoring, contingency measures and adaptive management provided in **Table 8-1**. Discussions with MNRF with respect to bats have been completed.
			• Table 6-6 – page 163	21	EC-21 • There is insufficient evidence to demonstrate that, after the application of the mitigation measures as currently proposed, there will be no significant residual effects on SAR in the project area. Threatened and endangered SAR in Canada have been listed as such because all previous conservation efforts have failed and losing individuals of any of them is of concern. **Advice / Recommendation** • Review the conclusions and assessments within the context of SARA and national species rankings. Provide a more robust assessment of impacts and fully supported conclusions as to the significance of impacts.	Additional detailed discussion of the evaluation of residual effects on SAR has been prepared and is provided in **Appendix P** of **Volume A**.

Table 2: Agency Comments and Responses

Date	Agency	Report	Sections Referenced	Comment #	Questions / Comments	HIW's Consideration and Response
			• Table 6-7 – page 167	22	EC-22 • There is insufficient evidence to demonstrate that, after the application of the mitigation measures as currently proposed, there will be no significant residual effects on SAR. Many of the SAR species in the project area are not abundant and Eastern Georgian Bay represents one of the last remaining strongholds in Canada for some of the species, which are at immediate risk of becoming endangered in Canada or are at immediate risk of being extirpated from Canada or becoming extinct. Thus, given the ecological context, any increase in risk of the species mortality would be considerable. • SARA permits are only issued as long as all three preconditions are met. **Advice / Recommendation** • Review the conclusions and assessments within the context of SARA and national species rankings. Provide a more robust assessments of impacts (e.g., the threat of nesting Kirtland's Warblers raising Brown-headed Cowbird (i.e., brood parasites) has not been adequately addressed in the EA) and fully supported conclusions as to the significance of impacts.	Additional detailed discussion of the evaluation of residual effects on SAR has been prepared is provided in **Appendix P** of the **Volume A**. Discussion of nest parasitism, on bird SAR, was also included in **Section 6.2.7.2.1** of the Final EA Report.
			• Section 8 – Follow-up and Monitoring	23	EC-23 • This section lacks sufficient detail to support a thorough, meaningful assessment of impacts to migratory birds or SAR. This section is especially lacking information on road mortality monitoring and the details of adaptive management strategies. **Advice / Recommendation** • Provide a comprehensive assessment and more details regarding follow-up and monitoring, especially with respect to road mortality.	Details on monitoring, contingency measures and adaptive management provided in **Table 8-1**.
		Volume A	• Natural Heritage Assessment – Figures 3-6 n, o, q and r	24	EC-24 • Figure 3-6n suggests that a road, WTG or transmission line will be constructed on or very close to virtually every potential Eastern Foxsnake hibernation site identified. The figure suggests over 100 hibernation sites (i.e., SAR residences) would be impacted. • Figure 3-6o suggests that a road or transmission line will be constructed immediately adjacent to all potential Eastern Hog-nosed Snake habitat identified. • Figure 3-6q suggests that a road or WTG will be constructed on or very close to virtually every potential Eastern Massasauga hibernation site identified. The figure suggests over 20 hibernation sites (i.e., SAR residences) would be impacted. • Figure 3-6r suggests that a road or WTG will be constructed on or very close to virtually every potential Eastern Massasauga gestation site identified. Figure suggests over 100 gestation sites (i.e., SAR residences) would be impacted. **Advice / Recommendation** • As commented previously, in the main body of the EA document, provide a robust assessment of how avoidance of all of these SAR residences or habitats will be avoided or their loss compensated.	Additional discussion on potential effects to snake SAR were included in **Section 6.2.7.1.1**. Revisions made to **Table 6-4** and **6-5** to the Final EA Report include, but are not limited to the following: • Additional mitigation measures to avoid snake SAR. • Compensation measures for snake SAR. Details on monitoring, contingency measures and adaptive management provided in **Table 8-1**.
		Volume B – ERR		25	EC-25 • Given that the final transmission line route has not yet been selected or approved but has potential to cross federal land, please note that similar comments would generally apply on other potentially impacted federal lands where SAR occur. **Advice / Recommendation** Provide robust, effective avoidance mitigation and compensatory measures for all SAR species on federal lands.	Advice / recommendation noted.

Table 3: Public Comments and Responses

Date	Comment #	Questions / Comments	HIW's Consideration and Response
October 30, 2015	1	The following represent our comments based on a review of the September 2015, final EA document of the Henvey Inlet Wind Project. The final draft of the EA document is more thorough than the earlier draft report. This final report represents what in our opinion the draft EA should have encompassed.	Comment noted. HIW recognizes that the Interim Draft Environmental Assessment (EA) Report released in June 2015 was not a complete EA. The Interim Draft EA Report was limited to a summary of baseline information about the site to give stakeholders a preliminary understanding of environmental conditions within the study area and an opportunity to provide input on the layout of HIWEC infrastructure. As well, the effects assessment was not complete at that time as fieldwork was ongoing. The Final Draft EA Report, released on September 30, 2015, included the complete effects assessment for public comment.
		At the August 2015 meeting at Key Harbour, Ken Noble mentioned the reduction in the number of windmills to about 91. He also mentioned that those windmills that would be eliminated would be those closest to the Key River. In addition, the new larger windmills would only have the top of the blades visible. We view that comment with skepticism as the existing Met tower at 100 metres in height and approximately 2.25 km southeast of Moustache Bay is clearly visible. The new larger towers at approximately 137 metres in height to the hub will be clearly visible.	One hundred and twenty (120) commercial wind turbines were assessed for the HIWEC with up to 91 turbines ultimately being constructed. The Final Draft EA Report released on September 30, 2015 showed a revised layout for 99 turbines. An additional eight (8) turbines will be removed during the detailed design and construction of the HIWEC, based on constructability, environment, social and financial considerations and public comments. With the uncertainty of which turbines will be removed, we cannot comment on whether or not the turbines will be visible from your location. Once we have determined which remaining eight (8) turbines will be removed, we will be posting this on our website (www.henveyinletwind.com).
		There are many important design and mitigation statements made throughout the text but no information on which government regulatory body will be overseeing this massive industrial scale project to ensure compliance. This comment is made with the understanding of the presence of the First Nations Land Management Act (FNLMA) and with the knowledge that the Species at Risk Act (SARA) paramounts *FNLMA*.	HIW is in the process of reviewing the HIWEC with Environment Canada – Canadian Wildlife Service (EC-CWS) to determine if a Species at Risk (SAR) permit is required for the HIWEC. If it is, then HIW will obtain a SAR permit from EC-CWS and implement the mitigation and compensation measures required under the permit. HIW will also be obtaining permits from several other federal and provincial agencies as outlined on page 3 and 4 of the Final Draft EA Report. These government agencies typically ensure compliance associated with the permits they provide. Additionally, Henvey Inlet First Nation (HIFN) will be issuing an Environmental Permit for the HIWEC and therefore, will have regulatory authority over the HIWEC to ensure compliance.
		Page 17 of the final report indicates that decommissioning of the windmills and the site will be at the discretion of the HIFN. This is not acceptable and should be part of the legal requirements by the HIFN of any approval by Environment Canada. We encourage the reviewers that as a requirement of approval, the HIFN be required to establish a trust fund to deal with decommissioning.	Thank you for this comment, as we realized that the information that we provided should be modified. In the Decommissioning Plan Report (**Appendix D**, of **Volume A**), it states that only certain aspects of the decommissioning of the HIWEC will be at the discretion of HIFN. The removal of the turbines will be completed during the decommissioning of the HIWEC and is not at the discretion of HIFN. The text in the Final EA Report will be revised to reflect this change.
		This document maintains that project will encompass 2.5% of the identified land mass. This is a reduced amount from 5% from the draft EA. The reduction in area was based upon windmills that are being removed. There are a couple of points worth mentioning in relation to the actual impact. First the 2.5% land mass area represents an impact based upon surface area alone but the impact upon biological systems has a multiplier effect that is based upon fracturing of the environment. As a result the exact impact will be much greater. In addition, the project design of roads etc. is in a circular fashion and as such the impact should be based on an area that begins at its centre then proceeds outwards. This would result in an ultimate impact area that is greater than 50% of the land mass. The end result may very well be an area where ecosystems may not support the diverse species that are currently present.	The HIWEC will encompass 1.4 % of the land mass based on a layout for 120 turbines. However, as noted above up to 91 turbines will be constructed so this percentage will be further reduced. A more detailed effects assessment to the biological systems related to fragmentation is included in the Final EA Report and has been further expanded upon to provide additional discussion around this concern. The majority of the HIWEC study area is dominated by a natural mosaic of rock barren, forest and wetland communities that are not large contiguous units but are instead interspersed with each other. The HIWEC has been designed to minimize the amount of forest and wetland communities that will be removed, with the majority of HIWEC infrastructure (e.g., access roads) proposed on rock barrens. Considering the degree of interspersion and the overall availability of rock barren habitat, the addition of gravel roads that will be traveled during construction is not anticipated to have an effect with respect to fragmentation on interior habitat due to the following: • The layout of the proposed access road does not directly bisect large contiguous forest communities; • The application of the proposed access road will consist of crushed rock from the site, which is not a significant change from the overall rock barren landscape; and • The total average width of the access roads will be on average 15 m. The areas designated for vegetation removal for the construction of the access roads were calculated based on the 15 m wide construction footprint of the access roads. Vegetation outside of the 15 m wide construction footprint will not be removed. Disturbance effects on wildlife and SAR have been considered and included in the Final EA Report.
		There are statements made throughout the text that tend to underwhelm the importance of the potential impacts to the landscape and wildlife. The statements deal normally in the assessment section of the text under the titles of mammals, birds, reptiles, and amphibians. We raise this concern because the statements appear to establish the tone for the report including the report's concluding statement on page 190. The statements generally deal with presence of habitat, denning features, movement of animals, and minimum number of animals present within a certain area, etc. As an example from page 43, "A total of 2,106 waterfowl were recorded across all three years; however, no large concentrations (i.e., >100 individuals of waterfowl were recorded within 120 m of the proposed HIWEC location. This type of bird habitat is not present within 120 m of the proposed HIWEC location." Our experiences based on observations on the Key River do not accept these statements. As an example, the Key River maintains a population of about 75-100 Canada geese. We have never observed a concentration of 100 or more Canada geese. In the context of our observations on the Key River, the consultant's report would indicate that no Canada geese habitat exists within the Key River. We would view the reports statements as confusing, misleading or incorrect.	The wording in the Final EA Report describing the data analysis has been revised so as not to be confusing. The term "waterfowl" has been used which includes Canada Geese and Canada Geese were observed during our field investigations. There were no observations of flocks of waterfowl, including Canada Geese, greater than 100 individuals within 120 m of the proposed HIWEC infrastructure. Three (3) years of survey work throughout the site is the basis for this statement. **Appendix F** (HIWEC Natural Heritage Assessment) of **Volume A** provides details on how wildlife habitats were defined and analyzed.
		It is our opinion that the level of mitigation will not be adequate for the animals that will be directly or indirectly killed based upon the enormity of the project. We do not believe that the level of mitigation proposed within the report is possible for this project. The Environment Canada reviewers will need to make a decision whether the project is worth the destruction of the pristine lands and its wildlife inhabitants. We feel that the impacts will be significant.	Experts have done a thorough study of the area as part of the EA planning process to determine the potential effects to SAR, Species of Conservation Concern (SOCC) and other wildlife and, in cases where potential impacts were identified, stringent mitigation measures have been developed for construction and operational activities to avoid or reduce the impact to these species to the extent possible. These mitigation measures are based on extensive experience in wind projects and projects in central / northern Ontario which are known to be effective. In addition, construction and post-construction monitoring will help to ensure that these mitigation measures are successful. These mitigation measures and monitoring plans were developed in consultation with EC-CWS.

Table 3: Public Comments and Responses

Date	Comment #	Questions / Comments	HIW's Consideration and Response
		The lands identified for the HIWEC project have never been cleared or likely disturbed since the melting of glaciers some 10,000 years ago. In the context of the project and reviewers the lands are pristine. Both plants and animals have continued to co-exist to their maximum potential carrying capacity based solely on the quality of the existing habitat. This is the main reason why there are so many species present or identified. The landscape and ecosystems remain undisturbed and functioning near their carrying capacity.	Comment noted.
		The concluding statement in the report, page 190, indicates that "the results of this report have concluded that HIWEC will not have significant adverse effects on any Nishshing Aki, biophysical or socio-economic VEC's provided the mitigation measures identified in Section 6, the EPP (Section 7) and the follow-up and monitoring plans (Section 800 are implemented as appropriate during construction/decommissioning and operations." As mentioned above, we do not feel that based on the enormity of the project that mitigation is possible at a level that will protect the ecosystem and all wildlife from the effects of construction and maintain a vibrant landscape and healthy wildlife populations.	Experts have done a thorough study of the area as part of the EA planning process to determine the potential effects to SAR, SOCC and other wildlife and, in cases where potential impacts were identified, stringent mitigation measures have been developed for construction and operational activities to avoid or reduce the impact to these species to the extent possible. These mitigation measures are based on extensive experience in wind projects and projects in central / northern Ontario which are known to be effective. In addition, construction and post-construction monitoring will help to ensure that these mitigation measures are successful. These mitigation measures and monitoring plans were developed in consultation with EC-CWS.
October 30, 2015	2	I wanted to touch base with you as the deadline for comments on the EA nears. Wow! There is a ton of information in that report. i am still reading! What I wanted to discuss with you were some of the issues we discussed when we met at Peter Foster's this summer. Firstly, it is our understanding that there are 9 or so more turbines that will not be built, the sites of which are still to be determined. I wish to reiterate our fervent hope that tower T77 – the tower closest to Fosters and Camp Henry and ourselves as well as a number of the slightly more distant island cottages – not be built. I believe that by not constructing that particular tower would mean that there would be no turbines within 1 km of any houses anywhere. We think that would be great and would deeply appreciate anything you can do to make this happen. Secondly, I was wondering if you had any updates on the navigation night lighting. Do you think that a radar triggered system will be implemented? I know, after checking the flight app you recommended, that there isn't a lot of air traffic in the area. Having lights that are mostly off has to be better for the bird and bat populations and, of course all boaters and cottagers in the area. Thirdly do you have the artist renderings (elevations) showing the Fosters and our views? We would love to see them. And finally, can you make any further comments on the possibility of our use of roads and parking up the Henvey? You mentioned in the meeting that there was a decent chance of doing this. I appreciate that this is a very busy time and I thank you for your consideration.	With respect to the removal of the remaining eight (8) turbines, we have noted your request to remove T77. We are reviewing requests for removal of specific turbines along with environmental, social, technical, constructability and financial requirements to determine which eight (8) turbines will be removed. We may not know this for several months, but we will keep you informed. With respect to navigation lighting, within the next few months we will be discussing the lighting requirements with Transport Canada and reviewing the radar triggered system. We can provide you with an update once these discussions have taken place. With respect to the rendering, we are in the process of completing this and we will send it to you when it is done. With respect to the use of roads and parking on HIFN I.R. #2, this request has been tabled with HIFN and we will be discussing this request. We will get back to you as soon as we have any information to provide.