

Environmental Component	Mitigation Measures	Completed (X)
Adjacent water and fish/fish habitat including aquatic SAR and SAR habitat	No work should be undertaken below the water line.	
	A Sediment and Erosion Control Plan must be developed and implemented.	
	Erosion control structures (silt fences/curtains, sediment traps and or check dams) are to be used, as appropriate, to prevent erosion and release of sediments and/or sediment laden water during the project activities. These structures are to be installed prior to the commencement of project activities, and are left in place until vegetation is re-established.	
	Polyethylene sheeting is to be used, as appropriate, to prevent surface water contamination during Type 1 Lead abatement activities.	
	Selection of a non-toxic, environmentally friendly paint removal product, if available, for lead abatement activities.	
	Ensure loading/unloading of machinery/equipment/materials does not impact the banks and cause erosion into the water.	
	Designated travel routes must be established and maintained for machinery and transportation of materials, preferably along existing pathways.	
	Work must be scheduled to avoid periods of heavy precipitation, when possible, to avoid paint removal product runoff during lead abatement, and to avoid sediment erosion during debris and soil removal.	
	All paint debris and contaminated soils must be disposed of in a provincially approved manner so as to mitigate potential effects generated by leachate entering the adjacent waters.	
	If any construction debris/material (e.g., plastic, food scraps, etc.) enter the aquatic environments they must be removed immediately and disposed in a provincially approved manner.	
	Implement a Spill Prevention and Spill Response Plan for the project activities. Ensure that appropriate inspection personnel and certified inspection personnel are employed through all stages of the project life cycle.	
	Machinery must be checked for leakage of lubricants or fuel and must be in good working order. Refueling must be done at least 30 m from any water body and on an impermeable surface. Basic petroleum spill clean-up equipment must be on-site. All spills or leaks must be promptly contained, cleaned up and reported to the 24-hour environmental emergencies reporting system (1-800-565-1633). Ensure that machinery arrives on site in a clean condition and is maintained free of fluid leaks, invasive species and noxious weeds.	
Terrestrial SAR Habitat	Woodland Caribou have been known to utilize Michipicoten Island. If a caribou is encountered, work must stop, the immediate area shall be avoided and Environment Canada/ the MNRF consulted as to how to proceed. Project activities that produce significant noise should be avoided, if possible, during woodland caribou sensitive periods including reproduction and rearing, winter aggregation and foraging and when	

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	seasonal dispersal is occurring. Timing windows will be applied if the Site is in close proximity to any of the following: <ul style="list-style-type: none"> Nursery Areas (May 1 to July 14 very low tolerance, July 15 to September 15 low tolerance) Winter Use Areas (December 1 to March 31) Travel Corridors (April and/or November) 	
	Proponents, contractors and workers must be advised of the potential presence of SAR, and be familiar with the SAR species during the undertaking.	
	SAR sweeps should be conducted prior to work commencing each day by a qualified individual. If a SAR is encountered, work must stop, the immediate area shall be avoided, and an experienced Biologist must be consulted and/or contact Environment Canada to discuss the way forward.	
	Equipment will be confined to disturbed and regularly travelled portions (trails) of the Site to the extent practical to minimize impacts to habitat and disturbance to migratory birds.	
	If/where debris removal from debris piles will include tree removal, or where tree removal may otherwise occur and have the potential to impact bat maternal roost colonies, surveys for bat maternity snags according to OMNRF guidelines (2011) should be undertaken by a qualified biologist. If no suitable maternal snags are identified, work may proceed. If suitable maternal snags are identified, these should be retained and debris removal in their vicinity should be done by hand where practical	
Migratory bird/bird habitat	No migratory birds, nests or eggs can be disturbed or destroyed per the Migratory Birds Convention Act of (MBCA, 1994). If project activities are unavoidable during the core migratory bird breeding season of April 14 th to August 28 th , nesting sweeps should be conducted by a qualified avian biologist if/where vegetation or tree clearing is required.	
	Low impact machinery or low impact removal procedures must be used as part of debris removal phase of construction.	
	Equipment will be confined to disturbed and regularly travelled portions (trails) of the Site to the extent practical to minimize impacts to potential bird habitat and disturbance to migratory birds.	
	Temporary structures, if applicable, are to be erected within the previously disturbed boundaries of the site.	
	Proponents and contractors must complete a nesting sweep prior to commencing work. If one or more nests containing eggs or chicks of migratory birds are spotted or discovered prior to the work, work must stop, the immediate area shall be avoided, and an experienced Avian Biologist must be consulted for the way forward. The Avian Biologist must develop a species-appropriate buffer zone to work and provide further information on noise levels which may not be exceeded within an appropriate distance to the nest taking into account the species of bird and the area surrounding the nest. Scope and identify the buffer zone in such a way as it is visible with the use of a fence or colored tape so that the construction crew and the construction supervisor at the site can see it and respect this buffer zone. If one or more nests containing eggs or chicks of migratory birds are spotted or discovered during the work, stop any disruptive activity in the nesting area until the establishment of a buffer zone by an experienced Avian Biologist. This is based on a range of appropriate	

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	protection to the species and circumstances and must be maintained until the chicks have naturally left the areas near the nest or that the work is completed. If a buffer zone cannot be established, identify the species of breeding birds and contact Environment Canada to discuss the way forward.	
	Proponents and Contractors must ensure that food scraps and garbage are not left at the project site.	
	If work is planned during timeframes when SAR birds may be present, follow up species-specific SAR surveys may be required.	
	The Contractor must prevent hydrocarbon product releases in and around the project area.	
	A temporary waste storage area will be designed that meets the requirements of the <i>Environmental Protection Act</i> . The area will be maintained to prevent leaks, spills or damage/deterioration to waste containers, has adequate containment, is secure, is protected from weather and is not located in an area within 30 m of a watercourse and has no direct drainage leading to a watercourse.	
	A high-density polyethylene (HDPE) liner is required to be placed at any temporary storage site prior to placement of debris and/or contaminated soil.	
	Temporary drainage and pumping are to be used, as appropriate, to keep excavations and site free from water.	
	Machinery must be checked for leakage of lubricants or fuel and must be in good working order. Refueling must be done at least 30 m from any water body and on an impermeable surface. Basic petroleum spill clean-up equipment must be on-site. All spills or leaks must be promptly contained, cleaned up and reported to the 24-hour environmental emergencies reporting system (1-800-565-1633).	
Groundwater	A high-density polyethylene (HDPE) liner is required to be placed at any temporary storage site prior to placement of debris and/or contaminated soil.	
	Temporary drainage and pumping are to be used, as appropriate, to keep excavations and site free from water.	
	Measures for managing water flowing onto the Site, as well as water being pumped/diverted from the Site are to be used, such that sediment is filtered out prior to the water entering a waterbody. For example, pumping/diversion of water to a vegetated area, construction of a settling basin or other filtration system.	
	Machinery must be checked for leakage of lubricants or fuel and must be in good working order. Refueling must be done at least 30 m from any water body and on an impermeable surface. Basic petroleum spill clean-up equipment must be on-site. All spills or leaks must be promptly contained, cleaned up and reported to the 24-hour environmental emergencies reporting system (1-800-565-1633).	
Terrestrial Wildlife, Habitat and Plant Species	Equipment will be confined to access roads and project areas to minimize impacts to potential wildlife and plant habitat. Routes onto and off the island and around the work area are to be pre-selected and maintained throughout the work program.	
	When possible, work will be completed during the daylight. If lights are required in the evening, they will be installed to illuminate the work area only to minimize impacts to nighttime activities of wildlife.	
	Proponents and Contractors must ensure that food scraps and garbage are not left at the project site.	

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	Disturbances to all wildlife in and near the project area must be minimized. Wildlife sweeps should be conducted each day by a qualified individual prior to work commencing.	
	The Contractor and workers must be familiar with proper protocols for protecting wildlife during construction.	
	The Contractor and workers must be familiar with the arctic-alpine plant species known to be present on the Slate Islands	
Air Emissions	The Contractor must prevent hydrocarbon product releases in and around the project area.	
	A site-specific air pollutant environmental management plan that identifies the objectives to be achieved (e.g. visual inspection, neighbor complaints, quantified maximum concentrations around the site), the methods to be applied, the people responsible for managing and implementing the plan, and the records to be maintained in order to demonstrate adoption of best management practices (and compliance with regulatory requirements) should be developed and implemented. The document <i>Best Practices for the Reduction of Air Emissions from Construction and During Demolition Activities</i> (prepared for Environment and Climate Change Canada by Cheminfo Services, 2005), should be consulted in the development of the plan.	
	Ensure proper scheduling for delivery of backfill materials to minimize storage time on Site and reduce potential for fugitive dust emissions.	
	Misting of disturbed or travelled areas should be undertaken, as well as installing localized wind fencing/barriers particularly during dry, dusty conditions to avoid generating airborne or surface dust and particulates.	
	Machinery and equipment must be maintained in good condition, must be equipped with emission controls as applicable, and operate within regulatory requirements, including meeting local authority's emission requirements.	
	Operators must comply with operating specifications for equipment and machinery.	
	Vehicles and/or equipment should not be left idling when not in use.	
	Exterior scaffolding, when required, will be fitted with a dust screen/netting in order to prevent the migration of dust.	
	Minimize traffic on exposed soils and stabilize high traffic areas with clean gravel surface layer or other suitable cover material. Equipment will be confined to disturbed and regularly travelled portions (trails) of the Site to the extent possible.	
	Power tools utilized for the removal of lead-containing coatings will be fitted with an effective dust collection system equipped with a HEPA filter.	
Soil Quality	If applicable, contaminated soil that is in excess must be stored on Site for the shortest time possible, covered, and be disposed of at an approved facility.	
	Refueling must be done at least 30 m from any water body and on an impermeable surface. Existing ground surface will be protected by the placement of tarps to prevent contamination.	

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	Work must be scheduled to avoid periods of heavy precipitation. Erosion control structures (temporary matting, geotextile filter fabric) are to be used, as appropriate, to prevent erosion and release of sediments and/or sediment laden water during the construction phase. These structures are to be left in place until vegetation is re-established and/or all exposed soils are stabilized.	
	Machinery must be checked for leakage of lubricants or fuel and must be in good working order. Refueling must be done at least 30 m from any water body and on an impermeable surface. Basic petroleum spill clean-up equipment must be on-site. All spills or leaks must be promptly contained, cleaned up and reported to the 24-hour environmental emergencies reporting system (1-800-565-1633).	
	All hazardous materials and/or waste materials being removed or that is generated must be disposed of in a legal manner according to Regulations (i.e. Reg. 347- General - Waste Management, as amended)	
Human Health	Appropriate personal protective equipment (PPE) must be used during all project activities.	
	All hazardous materials must be labelled in accordance with WHMIS requirements and transported in accordance with provincial and federal regulations regarding the transportation of dangerous goods including: <ul style="list-style-type: none"> Federal Transportation of Dangerous Goods Act, 1992 Environmental Protection Act, 1990 - Regulation 347- General – Waste Management 	
	Ensure employees are trained on the identification and handling of designated substances. Undertake work on designated substances containing material and other hazardous materials and chemicals according to the Designated Substance and Hazardous Material Survey information and recommendations or the provincial and federal legislation.	
	In general, the Occupational Health and Safety Act, R.S.O. 1990, c. O.1 (OHSA) should be followed, including: <ul style="list-style-type: none"> Ontario Regulation 213/91, Construction Projects, and R.R.O. 1990, Ontario Regulation 490/09 “Designated Substances”. 	
	Assess to the site will be limited to construction personnel.	
	Work site will be maintained in a clean and orderly manner free of garbage and litter.	
	A temporary waste storage area will be designed that meets the requirements of the <i>Environmental Protection Act</i> . The area will be maintained to prevent leaks, spills or damage/deterioration to waste containers, has adequate containment, is secure, is protected from weather and is not located in an area within 30 m of a watercourse and has no direct drainage leading to a watercourse.	
	Power tools utilized for the removal of loose or rough lead-containing coatings will be fitted with an effective dust collection system equipped with HEPA filters.	
	Exterior scaffolding, when required, will be fitted with a dust screen/netting in order to prevent the migration of dust.	
Physical and Cultural Heritage	The lighthouse tower is a designated Classified Federal Heritage Building (Parks Canada, 2017) based on its design and the relatively unchanged and remote nature of the site. Abatement activities at the light tower will	

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	follow the <i>Standards and Guidelines for the Conservation of Historic Places in Canada</i> . The abatement activities will not impact the design and integrity of the lighthouse tower.	
	All character-defining elements of the lighthouse tower will remain intact. Elements of the structure will not be replaced, removed or substantially altered.	
	Following paint abatement activities, the lighthouse structure will be repainted in the same colour style to match preexisting conditions.	