

Combined Environmental Impact Statement, Tree Conservation Report & Wildlife Mitigation and Monitoring Plan Zibi Block 211 Development



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EXECUTIVE SUMMARY

McKinley Environmental Solutions (MES) was retained by Zibi to prepare a Combined Environmental Impact Statement (EIS), Tree Conservation Report (TCR) & Wildlife Mitigation and Monitoring Plan (WMMP) to support the Zibi Block 211 development. The Zibi project is a large scale sustainable community redevelopment of former industrial lands located on Chaudière Island, Albert Island and along the Gatineau waterfront. The project includes lands within both Quebec and Ontario. The Ontario portion of the Zibi project is subject to an existing Master Plan Approval (MPA), which allows the development to occur over multiple phases. The MPA requires an adaptive approach to the evaluation and management of natural heritage features, due to the long term and multi-phase nature of the development. Each individual phase of the project is required to meet several conditions established by the MPA. This report is intended to evaluate and meet the MPA conditions related to the Zibi Block 211 development, including the requirement for an Individual Development Phase EIS and TCR (Condition 25) and the requirement for an updated Wildlife Mitigation and Monitoring Plan (WMMP) (Condition 19).

The Zibi Block 211 development is located on the western portion of Chaudière Island East (east of Booth Street). The Zibi Block 211 development is approximately 0.54 ha in size (the Site). The Site was historically developed as an industrial complex, which was operated as a paper mill until 2007. Until 2018, the Site included Tree Stand A and portions of the Old Board Mill, which was a derelict industrial building. The remainder of the Site consisted of paved areas/compacted gravel. During the winter of 2018 to 2019, Tree Stand A was cleared and the portions of the Old Board Mill that occurred within the Site were demolished. In addition, Tree Stand B was also cleared during the winter of 2018 to 2019, and the adjacent Building 535 was also demolished. Both Tree Stand B and Building 535 were located outside the limits of the Site. A Pre-Demolition Survey and Species at Risk Inspection was completed in September 2018, prior to the winter of 2018 to 2019 tree clearing/demolition. Follow-up site visits were also completed during the winter of 2018 to 2019 to 2019 to monitor the condition of hibernating Big Brown Bats within two (2) tunnels beneath the Old Board Mill. The results of the Pre-Demolition Survey and Species at Risk Inspection, as well as the monitoring of the hibernating Big Brown Bats, are discussed throughout this report.

Currently there are no natural vegetation communities and no trees within the Site. Booth Street forms the western boundary of the Site, beyond which is Chaudière Island West. The portions of Chaudière Island East that are found north, south, and east of the Site are currently occupied by compacted gravel and/or paved. The adjacent areas of Chaudière Island East are also former industrial lands, which will be redeveloped as part of later phases of the Zibi project. Beyond the



adjacent portions of Chaudière Island East are the Buchanan Channel, the Ottawa River, and the future Mòkaham Park (located to the south, north, and east, respectively). The Site does not include any portion of the shorelines of the Buchanan Channel and/or the Ottawa River, as the Site is separated from the watercourses by adjacent areas of Chaudière Island East. The eastern end of Chaudière Island East includes a small tree stand, which has been identified for retention within the future Mòkaham Park. The future Mòkaham Park is located approximately 110 m east of the Site, and therefore is unlikely to be significantly impacted during the development of the Site.

The Site will be developed to accommodate an eight (8) storey office building with retail uses at the ground level. The development will also include the construction of a loop road that will provide two entrances/exits to Booth Street. As noted above, the portions of the Old Board Mill that previously occurred within the Site were demolished in the winter of 2018 to 2019. The Site does not include any portion of the shorelines of the Buchanan Channel and/or the Ottawa River, as the Site is separated from the watercourses by adjacent areas of Chaudière Island East. Therefore, no dewatering and/or fish relocation is anticipated to be required during development of the Site. The Site will receive municipal water and sewer services. Stormwater quality control will be provided by a new end-of-pipe oil and grit separator.

No significant Species at Risk concerns have been identified for the Site. As discussed in greater detail below, no requirements related to In-water Works (MPA Condition 23) and/or Species at Risk (MPA Condition 26) have been identified for the development of the Site. There is no tree clearing required as part of the development of the Site, as all trees that were formerly present within the Site were removed during the winter of 2018 to 2019. This report is intended to satisfy Condition 19, Condition 25 and Condition 28 of the MPA, and approval of this report is anticipated to fulfill all outstanding natural heritage related conditions of the MPA for the development of the Site.

Pending that the regulatory, mitigation, and avoidance measures outlined in this report are implemented appropriately, the development of the Site is not anticipated to have a significant negative effect on the natural features and functions.



1.0 INTRODUCTION

1.1 Reading the Tree Conservation Report (TCR)

This report is presented as a Combined Environmental Impact Statement (EIS), Tree Conservation Report (TCR) and Wildlife Mitigation and Monitoring Plan (WMMP). In order to meet the submission requirements specified by the conditions of the Zibi Master Plan Approval (MPA) (discussed below in Section 1.3), information pertaining to historic tree coverage within the Block 211 development area (the Site) is included in this report. However, it should be noted that all tree removal within the Site was completed during the winter of 2018 to 2019. TCR sections are therefore presented primarily for reference purposes. Readers who are principally interested in the TCR may choose to read only those portions of the report where the section headings are marked **(TCR)**. This includes Sections 1.3, 1.4, 1.5, 2.0.1, 3.2, 3.3.2, and 4.1. Readers who are interested in the EIS and WMMP should read the entire report, as information included in the TCR sections is not reiterated.

1.2 Scoping the Environmental Impact Statement

This Combined EIS, TCR & WMMP was undertaken following the City of Ottawa's Environmental Impact Statement Guidelines. Following the City guidelines, the Environmental Impact Statement includes the following:

- Documentation of existing natural features on and around the Site;
- Identification of potential environmental impacts of the project;
- Recommendations for ways to avoid and reduce any negative impacts; and
- Proposal of ways to enhance natural features and functions.

This Combined EIS, TCR & WMMP was prepared with guidance from the *Natural Heritage Reference Manual* (OMNRF 2010). The major objective of this Combined EIS, TCR & WMMP is to demonstrate that the proposed project will not negatively affect the significant features and functions of the Site, and that impacts will be minimized through mitigation measures.



1.3 Background – Master Plan Conditions (TCR)

The Zibi project is a large scale sustainable community redevelopment of former industrial lands located on Chaudière Island, Albert Island and along the Gatineau waterfront. The project includes lands within both Quebec and Ontario. The Ontario portion of the Zibi project is subject to an existing Master Plan Approval (MPA), which allows the development to occur over multiple phases. The MPA establishes several conditions related to natural heritage features. The following conditions have previously been fulfilled:

- **Condition 22 Construction and Post Construction Environmental Monitoring Plan:** Included as part of the Wildlife Mitigation and Monitoring Plan (NEA 2017a).
- Condition 24 Environmental Impact Statement and Tree Conservation Report Approval: Report submitted by Niblett Environmental Associates in September 2016 (NEA 2016).
- **Condition 27 Integrated Environmental Review Statement:** Report submitted by Niblett Environmental Associates in August 2017 (NEA 2017b).

In addition, the MPA requires an adaptive approach to the evaluation and management of natural heritage features, due to the long term and multi-phase nature of the development. Each individual phase of the project is required to meet several conditions established by the MPA. This report is intended to satisfy the MPA conditions related to the Zibi Block 211 development (the Site). The phased development conditions established by the MPA include the following:

- **Condition 19 Wildlife Mitigation and Monitoring Plan (WMMP):** The WMMP was previously submitted by NEA (2017a). An update to the WMMP is included below in Section 5.0.
- **Condition 23 In-Water Works:** Specific conditions exist for development phases that involve inwater works. As noted below in Section 1.5, no in-water works are proposed during the development of the Site.
- Condition 25 Individual Development Phase Environmental Impact Statement and Tree Conservation Report: This report evaluates the Zibi Block 211 development (the Site).
- **Condition 26 Species at Risk and Endangered Species Act:** The potential presence of Species at Risk (SAR) within the Site is discussed in Section 3.7. As noted in Section 3.7, no SAR concerns have been identified for the Site, and therefore no Endangered Species Act (ESA) regulatory and/or approval requirements have been identified.
- Condition 28 Adaptive Management for Phased Projects: Each individual development phase will require an updated phase specific Environmental Impact Statement (EIS) and Tree Conservation Report (TCR) (Condition 25). The phase specific EIS and TCR will be provided in



future prior to the commencement of development of each individual phase. This will allow adaptive management of the project.

As discussed in greater detail below, no requirements related to In-water Works (Condition 23) and Species at Risk (Condition 26) have been identified for the Site. Conditions 19, 25 and 28 are fulfilled by submission and approval of this report. Therefore, approval of this report is anticipated to fulfill all natural heritage related conditions of the MPA for the Zibi Block 211 development (the Site).





	GENERAL NOTES:
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1.4 Background and Site Overview (TCR)

As noted above, this report is intended to evaluate natural heritage features related to the Zibi Block 211 development area (the Site) (Figure 1). For information related to the remainder of the Zibi development area, refer to NEA (2016). The Site is located on the western portion of Chaudière Island East (east of Booth Street). The Site is approximately 0.54 ha in size (the Site). The Site was historically developed as an industrial complex, which was operated as a paper mill until 2007. Until 2018, the Site included Tree Stand A and portions of the Old Board Mill, which was a derelict industrial building. The remainder of the Site consisted of paved areas/compacted gravel. During the winter of 2018 to 2019, Tree Stand A was cleared and the portions of the Old Board Mill that occurred within the Site were demolished. In addition, Tree Stand B was also cleared during the winter of 2018 to 2019, and the adjacent Building 535 was also demolished. Both Tree Stand B and Building 535 were located outside the limits of the Site. The extent of tree clearing and demolition works completed in the winter of 2018 to 2019 are shown in Figure 2. A Pre-Demolition Survey and Species at Risk Inspection was completed prior to the winter 2018 to 2019 tree clearing/demolition. The results of the Pre-Demolition Survey and Species at Risk Inspection are discussed throughout this report, with additional detail provided in Appendix A.

Currently there are no natural vegetation communities and no trees within the Site. The Site is zoned Mixed Use Downtown Zone (MD5) which permits a mixture of residential and commercial usage. The municipal address for the Site is 3 Booth Street. Booth Street forms the western boundary of the Site, beyond which is Chaudière Island West. The portions of Chaudière Island East that are found north, south, and east of the Site are currently occupied by compacted gravel and/or paved. The adjacent areas of Chaudière Island East are also former industrial lands, which will be redeveloped as part of later phases of the Zibi project. Beyond the adjacent portions of Chaudière Island East are the Buchanan Channel, the Ottawa River, and the future Mòkaham Park (located to the south, north, and east, respectively). The Site does not include any portion of the shorelines of the Buchanan Channel and/or the Ottawa River, as the Site is separated from the watercourses by adjacent areas of Chaudière Island East. The eastern end of Chaudière Island East includes a small tree stand, which has been identified for retention within the future Mòkaham Park. The future Mòkaham Park is located approximately 110 m east of the Site, and therefore is unlikely to be significantly impacted during the development of the Site.



FIGURE 1: SITE OVERVIEW

Zibi Block 211 Development – Combined Environmental Impact Statement, Tree Conservation Report, & Wildlife Mitigation and Monitoring Plan





- Approximate Block 211 Development Limits

Please Note: This is not a legal land survey. All dimensions and locations are shown as approximate.

FIGURE 2: DEMOLITION AND TREE CLEARING LIMITS

Zibi Block 211 Development – Combined Environmental Impact Statement, Tree Conservation Report, & Wildlife Mitigation and Monitoring Plan



Please Note: This is not a legal land survey. All dimensions and locations are shown as approximate.



1.5 Description of Undertaking – Block 211 Development (TCR)

Drawing A-01 shows the Site Plan for the Block 211 development (the Site). The Site will be developed to accommodate an eight (8) storey office building with retail uses at the ground level. The development will also include the construction of a loop road that will provide two entrances/exits to Booth Street. As noted above, the portions of the Old Board Mill that previously occurred within the Site were demolished in the winter of 2018 to 2019. The Site does not include any portion of the shorelines of the Buchanan Channel and/or the Ottawa River, as the Site is separated from the watercourses by adjacent areas of Chaudière Island East. Therefore, no dewatering and/or fish relocation is anticipated to be required during development of the Site.

The Site will receive municipal water and sewer services. DSEL (2019) note that the majority of stormwater runoff from the Site is currently directed to the Ottawa River, with no existing stormwater management quality or quantity control. DSEL (2019) have consulted with the Rideau Valley Conservation Authority (RVCA) and the City of Ottawa, and have determined that stormwater quantity controls are not required. DSEL (2019) note that development of the Site is not anticipated to increase the flood risk and flood levels of the Ottawa River. Stormwater management system will consist of a private storm sewer, outletting to a new outlet at the east edge of Chaudière Island, east of Booth Street. An end of pipe oil/grit separator unit will be included to achieve water quality targets.





1.6 Agency Consultation

The City of Ottawa was contacted by the proponent, and the Rideau Valley Conservation Authority (RVCA) was previously contacted by DSEL (2019) regarding stormwater management requirements. The Ontario Ministry of Natural Resources and Forestry (OMNRF) Kemptville District provided Niblett Environmental Associates (NEA) with an Information and Records Request Response in March 2014 (refer to NEA 2016). The OMNRF response identified the potential Species at Risk (SAR) concerns for the Site. As part of this report, the OMNRF Kemptville District also provided an updated Information and Records Request Response (Appendix B). The OMNRF Kemptville District was also contacted in January 2019 to discuss the presence of hibernating bats in two (2) tunnels below the Old Board Mill (discussed below in Section 3.6).

1.7 Regulatory Requirements

The Site occurs within 30 m of the Ottawa River, and therefore falls within the regulatory area of the RVCA. Although no alteration to the existing shoreline and/or removal of aquatic habitat is proposed as part of the current development, a permit from the RVCA may be required under Ontario Regulation 153/06, due to the fact that work is proposed within 30 m of the water's edge. As noted below, there is no in-water work and no removal of fish habitat proposed as part of the development of the Site. Dewatering and/or fish relocation is not anticipated to be required. Therefore, a review and/or authorization under the Fisheries Act should not be required. As discussed in Section 3.7, there are currently no known Species at Risk (SAR) concerns for the Site. Therefore, no regulatory requirements under the Ontario Endangered Species Act (ESA) have been identified. Lastly, all tree removal within the Site is complete, and therefore a Tree Removal Permit from the City of Ottawa will not be required.



2.0 METHODOLOGY

2.0.1 Tree Inventory Methodology (TCR)

A Pre-Demolition Survey and Species at Risk Inspection was completed on September 18th, 2018, prior to the tree clearing that was undertaken in the winter of 2018 to 2019. Trees that previously occurred within the Site and the adjacent Tree Stand B were documented as part of the Pre-Demolition Survey and Species at Risk Inspection. The presence of trees prior to tree clearing is summarized below in Section 3.3, with additional detail provided in Appendix A.

2.0.2 Environmental Impact Statement Methodology

A Site visit was completed on May 13th, 2019. Conditions during the May 13th site visit included cloudy skies and 10 °C. The Environmental Impact Statement methodology included the following:

- Pre-demolition survey and inspection of the Old Board Mill and Building 535 on September 18th, 2018. The pre-demolition survey was undertaken to verify the presence/absence of Species at Risk including bats (Little Brown Myotis (endangered), Northern Long Eared Bat (endangered), Eastern Small Footed Bat (endangered), and Tricolored Bat (endangered)), Barn Swallows (threatened), and Chimney Swift (threatened). The pre-demolition survey included a visual inspection of all interior and exterior surfaces of the buildings for any signs of bird nesting/bat roosting, such as nests, droppings, dead bats/birds, etc. The majority of the derelict buildings remained well lit, however, a flashlight was used to complete the survey where required. Further detail is provided in Appendix A;
- Inspection of Tree Stand A and B on September 18th, 2018 to verify the presence/absence of Butternut Trees (endangered);
- Follow-up monitoring visits on January 18th, March 1st, and April 16th, 2019 to monitor the condition of hibernating Big Brown Bats within the two (2) tunnels beneath the Old Board Mill (discussed below in Section 3.6);
- Review of changes to the Species at Risk list and records of Species at Risk occurrences in the Ottawa area, to determine if any changes relevant to the project have occurred since completion of the NEA (2016) study;
- Site visit to assess the potential for other natural habitat features to be present in the area, including wetlands, fish habitat, amphibian breeding habitat, Significant Wildlife Habitat features, and other significant habitat features;
- Review of Official Plan designations;
- Natural Heritage Information Center (NHIC) database review (OMNRF 2019);



- Obtainment of an Information and Records Request Response from the Ontario Ministry of Natural Resources and Forestry (OMNRF) (Appendix B);
- Review of the background Geo-technical Report (Paterson Group 2016);
- Review of the Functional Servicing and Stormwater Management Report (DSEL 2019);
- Review of the background Environmental Impact Statement and Tree Conservation Report (NEA 2016), the Wildlife Mitigation and Monitoring Plan (NEA 2017a) and the Integrated Environmental Review Statement (NEA 2017b);
- Updated assessment of the potential environmental impacts related to the development of the Site;
- Updated summary of mitigation and monitoring requirements specific to the Site, including requirements from the City of Ottawa Protocol for Wildlife During Construction (City of Ottawa 2015);
- Update of the Wildlife Mitigation and Monitoring Plan (WMMP) (Section 5.0); and
- Description of requirements related to in-water works (Condition 23) and Species at Risk (Condition 26) specific to the Site.



3.0 EXISTING CONDITIONS

3.1 Geological Conditions

The Site is shown to occur at an elevation of approximately 50 m ASL (at Booth Street). Chaudière Island East slopes gradually to the east, such that the eastern edge of the island occurs at an elevation of approximately 48 m ASL. The shoreline of the Ottawa River includes a steep drop-off along the northern and eastern edges of the island. The Site itself is relatively flat and is well drained, with no areas of surface water accumulation noted. Paterson Group (2016) note that the subsurface profile of the Site consists of either pavement, concrete slab, or gravel fill, overlying varying fill materials, consisting of brown silty sand with crushed stone, wood debris, and/or limestone bedrock. The majority of boreholes encountered a concrete slab poured directly over limestone bedrock (Paterson Group 2016). Groundwater levels were noted to fluctuate in conjunction with the Ottawa River water level, which is controlled by the nearby dam.

3.2 Site History (TCR)

Historic air photos show that the Site has been entirely developed and continuously utilized for industrial purposes as part of the operation of the paper mill complex since at least 1928 (City of Ottawa 2019). The former paper mill closed in 2007.



3.3 Terrestrial Habitats

3.3.1 Existing Buildings and Current Conditions

As noted above, the Site is part of a former paper mill complex, which was closed in 2007. At the time of report preparation (May 2019), there were no longer any buildings present within the Site. Demolition of the Old Board Mill was ongoing at the time of report preparation, and the remaining east and north portions of the Old Board Mill continued to be present adjacent to the Site in May 2019 (beyond the Site). However, the portions of the Old Board Mill which previously overlapped the Site were demolished in the winter of 2018 to 2019. Building 535 was previously located south of the Site, and was also demolished in the winter of 2018 to 2019. Photographs of the previously demolished buildings are included in Appendix A. The following is a summary of the buildings that were previously found within the Site and the adjacent area:

- Old Board Mill: The Old Board Mill included three (3) aboveground levels and a basement level. Many openings existed in the building including holes in the walls and broken windows. The building was constructed primarily from concrete with many metal surfaces and comparatively few wooden surfaces. The building did not include a chimney, and therefore Chimney Swift nesting was not likely to be a concern.
- **Building 535**: Building 535 included an aboveground level and a basement level. The building was well sealed with few significant exterior openings. The building was constructed primarily from concrete with many metal surfaces and comparatively few wooden surfaces. The building did not include a chimney, and therefore Chimney Swift nesting was not likely to be a concern.

Following demolition of the Old Board Mill and Tree Stand A, the Site was left in a pre-development condition. At the time of report preparation, the Site consisted of compacted gravel and stockpiles with little natural vegetation. Photographs of the Site condition in May 2019 are included below.





Photograph 1: Looking northeast across the Site. The remaining portion of the Old Board Mill is visible in the background (outside the Site) (May 13th, 2019).



Photograph 2: Looking south across the Site (May 13th, 2019).



3.3.2 Trees and Vegetation Communities (TCR)

As noted above, Tree Stand A was present within the Site and Tree Stand B was present adjacent to the Site, prior to the commencement of tree clearing in the winter of 2018 to 2019. The tree stands were inspected in September 2018 prior to tree clearing. Photographs of the tree stands are included in Appendix A. The following is a summary of the trees that were previously found within the Site and the adjacent area:

- **Tree Stand A**: Tree Stand A included several mature White Pines that were partially overgrown with Manitoba Maple, Staghorn Sumac and Common Buckthorn. No Butternut Trees were noted. NEA (2016) did not identify Tree Stand A for retention.
- **Tree Stand B**: Tree Stand B included a thicket that was primarily comprised of Common Buckthorn shrubs, young Manitoba Maple, and Staghorn Sumac. Groundcover reflected the disturbed conditions and included Garlic Mustard, Virginia Creeper, and Riverbank Grape. Several large inlet pipes were present within Tree Stand B. The pipes created vertical shafts that could potentially be suitable for bat roosting. However, the pipes were observed to be flooded during the September 2018 site visit, and therefore were unlikely to be used by bats. No Butternut Trees were noted. NEA (2016) did not identify Tree Stand B for retention.



3.4 Wetlands and Watercourses

The Ottawa River is located north of the Site and the Buchanan Channel is located south of the Site. However, the Site does not include any portion of the shorelines of the Buchanan Channel and/or the Ottawa River, as the Site is separated from the watercourses by adjacent areas of Chaudière Island East. Therefore, no dewatering and/or fish relocation is anticipated to be required during development of the Site.



Photograph 3: Looking southeast along the shoreline north of the Site. The remaining portion of the Old Board Mill is visible in the background (beyond the Site) (May 13th, 2019).



3.5 Adjacent Lands and Significant Features

As noted above, Booth Street forms the western boundary of the Site, beyond which is Chaudière Island West. The portions of Chaudière Island East that are found north, south, and east of the Site are currently occupied by compacted gravel and/or paved. The adjacent areas of Chaudière Island East are also former industrial lands, which will be redeveloped as part of later phases of the Zibi project. Beyond the adjacent portions of Chaudière Island East are the Buchanan Channel, the Ottawa River, and the future Mòkaham Park (located to the south, north, and east, respectively). The Site does not include any portion of the shorelines of the Buchanan Channel and/or the Ottawa River, as the Site is separated from the watercourses by adjacent areas of Chaudière Island East. As such, the development of the Site is unlikely to significantly negatively impact the aquatic habitats of the Ottawa River and/or the Buchanan Channel. The eastern end of Chaudière Island East includes a small tree stand, which has been identified for retention within the future Mòkaham Park. The future Mòkaham Park is located approximately 110 m east of the Site, and therefore is unlikely to be significantly impacted during the development of the Site.

NEA (2016) notes that the Victoria Island Area of Natural and Scientific Interest (ANSI) is located southeast of the Zibi Master Plan Agreement (MPA) area. However, NEA (2016) note that the edge of the Victoria Island ANSI is approximately 130 m from the Zibi MPA area (and even further from the Site). Due to the separation distance between the Victoria Island ANSI and the Zibi project, NEA (2016) concluded that no significant negative impacts on the Victoria Island ANSI are likely.

There are no other designated natural heritage features known to occur within the Site or in the immediately surrounding area.



3.6 Wildlife and Significant Wildlife Habitat

A Pre-Demolition Survey and Species at Risk Inspection was completed in September 2018, prior to the winter 2018 to 2019 tree clearing/demolition. The results of the Pre-Demolition Survey and Species at Risk Inspection are documented in Appendix A. In September 2018, extensive construction activity was underway in the vicinity. The noise and disturbance associated with the construction and demolition activity likely helped to dissuade wildlife from utilizing the Site. During the September 2018 inspection, no evidence of wildlife was noted within the Old Board Mill and Building 535. Signs of historic Rock Dove nesting were noted within the buildings, however, no birds were seen. It is likely that Rock Doves nested within the buildings historically, but that they left the area once adjacent construction and demolition activity began.

Notably, no evidence of bats was noted during the September 2018 inspection. Following the September 2018 inspection, hibernating Big Brown Bats were discovered in two (2) tunnels beneath the Old Board Mill. The hibernating bats were discovered the week of January 14th, 2019. The hibernating bats were not previously noted during the September 2018 Pre-Demolition Survey and Species at Risk Inspection, due to the fact that the tunnel entrances were previously blocked by a cinderblock wall, which was not removed until commencement of the demolition project. The existence of the tunnels was not known prior to January 2019. Following their discovery, McKinley Environmental Solutions (MES) inspected the tunnels on January 18th, 2019 and counted seventeen (17) Big Brown Bats, all of which were found to be hibernating. The Big Brown Bats were examined at close range and were positively identified. Photographs of the hibernating bats are included below. Big Brown Bats are not listed as a Species at Risk (SAR) under the Ontario Endangered Species Act (SARO 2019).

The demolition of the Old Board Mill surrounding the tunnel entrances was actively underway in January 2019. MES contacted the Ontario Ministry of Natural Resources and Forestry (OMNRF) Kemptville District on January 18th, 2019 to make them aware of the presence of the bats and to discuss necessary mitigation requirements. The OMNRF Kemptville District (Aaron Foss – Senior Fish and Wildlife Technical Specialist), advised that artificial Big Brown Bat hibernation sites are not protected as Significant Wildlife Habitat, however, the OMNRF advised that measures should be taken to ensure that impacts to the individual bats are avoided during the hibernation season.

MES determined that relocation of the bats prior to the end of the hibernation season was not feasible. It was recommended that the two (2) tunnels that contained the bats should be retained and protected until the end of the hibernation season. In order to avoid disturbing the bats, construction staff were prohibited from entering the tunnels and plywood barriers were installed to



re-seal the tunnel entrances. A gap of approximately 20 cm was left at the top of the plywood barriers, in order to allow airflow into the tunnels and an avenue for the bats to leave the tunnels in the spring. The tunnels were constructed from thick concrete, buried, and were well sealed, and so they were well insulated from noise and disturbance from the surrounding demolition work. During the January 18th, 2019 site visit, no evidence of the bats reacting to the ongoing demolition work was noted. Zibi also installed a heater within the tunnels to ensure that they did not drop below the optimum hibernation temperature (which is approximately -2 °C to +5 °C) (OMNRF 2014). The heater was installed in order to address the concern that the removal of the cinderblock wall may have provided additional airflow into the tunnels, which had the potential to lower the temperature within the tunnels below the optimal hibernation range.

Demolition of the Old Board Mill above the tunnels continued throughout the winter of 2018 to 2019. During the demolition process, the temperature within the tunnels was regularly monitored and maintained between approximately -2 °C to +5 °C. MES completed additional follow-up inspections of the tunnels to monitor the condition of the bats. This included a site visit on March 1st, 2019, during which sixteen (16) of the original seventeen (17) bats were observed. The seventeenth bat may have been present as well, but may have moved to a location that was not readily visible. The bats were observed to have moved following the January 18th, 2019 site visit, which suggested that the bats were alive. Small scale movements during the hibernation period are considered normal (OMNRF 2014). A final inspection of the tunnels was completed on April 16th, 2019, in order to verify whether the bats had survived the winter and successfully dispersed from the hibernation site in the spring. During the April 16th, 2019 site visit, outside temperatures were 10 °C with sunny conditions. During the April 16th site visit, only one (1) Big Brown Bat was found within the tunnels, which suggested that the remaining sixteen (16) bats had already dispersed from the Site. The final Big Brown Bat was expected to leave the Site within a few days of the Site visit, as Big Brown Bats normally disperse from their hibernacula by mid-April (OMNRF 2014). No dead bats were noted within the tunnels, which suggests that the mitigation measures were successful in protecting the hibernating bats, and that the Big Brown Bats successfully dispersed from the Site in the early spring. The tunnels are planned to be decommissioned in the spring of 2019 as part of the ongoing demolition of the Old Board Mill, and therefore hibernating bats within the tunnels will not be a significant concern in the future.

During the May 13th, 2019 site visit, the only wildlife observed in the area included several Canada Goose and European Starling, which were noted along the shoreline of the Ottawa River north of the Site. No Significant Wildlife Habitat (SWH) features are known to occur within the Site or the immediately surrounding area. No wetlands, amphibian breeding habitat, stick nests, migratory bird



stopover points, heron rookeries, reptile hibernacula, caves, bedrock fissures, or any other features which may qualify as SWH were noted within the Site (OMNRF 2014).





Photograph 4: Recently uncovered entrance to the tunnels beneath the Old Board Mill. The tunnel entrance was previously covered with a cinder block wall (January 18th, 2019).



Photograph 5: Interior of the tunnels beneath the Old Board Mill (January 18th, 2019).





Photograph 6: Hibernating Big Brown Bats in the tunnels beneath the Old Board Mill (January 18th, 2019).



Photograph 7: Hibernating Big Brown Bats in the tunnels beneath the Old Board Mill (March 1st, 2019).





Photograph 8: Hibernating Big Brown Bat in the tunnels beneath the Old Board Mill (April 16th, 2019).



3.7 Species at Risk

The Natural History Information Center (NHIC) records for the nine (9) grids that include and surround the Site were reviewed (OMNRF 2019). This included an area 3 km x 3 km in size and all published Species at Risk (SAR) records were noted. The Ontario Ministry of Natural Resources and Forestry (OMNRF) Kemptville District provided Niblett Environmental Associates (NEA) with an Information and Records Request Response in March 2014 (refer to NEA 2016). The 2014 OMNRF response formed the basis of the original Species at Risk (SAR) assessment, completed by NEA in 2016. As part of this report, the OMNRF Kemptville District also provided an updated Information and Records Request Response (Appendix B). The following SAR were identified as potentially occurring within the vicinity:

- Barn Swallow Threatened
- Chimney Swift Threatened
- Little Brown Myotis Endangered
- Northern Long Eared Bat Endangered
- Eastern Small Footed Myotis Endangered
- Tricolored Bat Endangered
- Bank Swallow Threatened
- American Eel Endangered
- Lake Sturgeon Threatened
- Peregrine Falcon Special Concern
- Snapping Turtle Special Concern
- Northern Map Turtle Special Concern
- River Redhorse Special Concern
- Silver Lamprey Special Concern

NEA (2016) completed SAR surveys throughout the Zibi Master Plan Agreement (MPA) area, and no significant SAR concerns were identified. As noted above, McKinley Environmental Solutions (MES) also completed a Pre-Demolition Survey and Species at Risk Inspection in September 2018, and no SAR concerns were noted for the Old Board Mill and Building 535 (Refer to Appendix A).

The following represents a summary of the potential presence of SAR within the Site:

• Barn Swallow and Chimney Swift: Barn Swallows nest in many anthropogenic structures including old barns, abandoned buildings, in culverts, and under bridges (SARO 2019). Chimney Swifts nest in open chimneys with rough interior surfaces made from brick and/or stone (SARO



2019). NEA (2016) observed Barn Swallows flying around the bridges connecting Albert Island to the south in June 2013 and the bridge connecting the Chaudière dam to the north in May and June 2014. However, the location of nesting sites was not confirmed (NEA 2016). During the September 2018 pre-demolition survey, no Barn Swallow nests were noted anywhere within the Old Board Mill and Building 535 (Refer to Appendix A). NEA (2016) also observed Chimney Swifts flying over the channel beside Victoria Island. However, no chimneys that provide potentially suitable nesting habitat for Chimney Swifts were noted within the Zibi MPA area (NEA 2016). The Chimney Swifts that were observed by NEA close to Victoria Island could have been nesting well outside of the Zibi MPA area, as Chimney Swifts are capable of travelling long distances each day during foraging (SARO 2019). During the September 2018 pre-demolition survey, no chimneys that could provide potentially suitable nesting sites for Chimney Swift were noted within the Old Board Mill or Building 535. Therefore, Barn Swallows and Chimney Swift were not anticipated to be a significant concern for the demolition of the Old Board Mill and Building 535. Following the demolition of the Old Board Mill and Building 535, there are no longer any potential Barn Swallows and/or Chimney Swift nesting habitats within the Site. As such, Barn Swallows and Chimney Swifts are not anticipated to be a significant concern for the development of the Site.

- Little Brown Myotis, Northern Long Eared Bat, Tricolored Bat, and Eastern Small Footed Myotis: In some cases, bats may be found roosting or overwintering in abandoned buildings (SARO 2019). NEA (2016) did not note any evidence of bats within the former paper mill complex. During the September 2018 pre-demolition survey, no evidence of bat roosting was noted within the Old Board Mill and Building 535. As described above in Section 3.6, in January 2019 hibernating Big Brown Bats were discovered in two (2) tunnels beneath the Old Board Mill. As discussed above in Section 3.6, the tunnels were inaccessible during the September 2018 pre-demolition survey. Big Brown Bats are not a Species at Risk (SAR), and no evidence of any SAR bats has been noted. Therefore, Little Brown Myotis, Northern Long Eared Bat, Tricolored Bat, and Eastern Small Footed Myotis were not anticipated to be a significant concern for the demolition of the Old Board Mill and Building 535. Following the demolition of the Old Board Mill and Building 535. Following the demolition of the Old Board Mill and Building 535, Northern Long Eared Bat, Tricolored Bat, and Eastern Small Footed Myotis are not anticipated to be a significant concern for the demolition of the Old Board Mill and Building 535, Following the demolition of the Old Board Mill and Building 535. Following the demolition of the Old Board Mill and Building 535, there are no longer any potential bat roosting and/or overwintering habitats within the Site. As such, Little Brown Myotis, Northern Long Eared Bat, Tricolored Bat, and Eastern Small Footed Myotis are not anticipated to be a significant concern for the development of the Site.
- Bank Swallow: Bank Swallows can be found nesting in sand and silt deposits with vertical or nearly vertical surfaces. Natural nesting sites include riverbanks and areas with exposed slopes. Bank Swallows also frequently nest in artificial stockpiles of sand and silt, including in mines, pits, and quarries (SARO 2019). As described above in Section 3.4, the Site does not include any portion of the shorelines of the Buchanan Channel and/or the Ottawa River, as the Site is



separated from the watercourses by adjacent areas of Chaudière Island East. As such, any potential Bank Swallow nesting sites which may exist along the shoreline will not be disturbed during the development of the Site. No exposed silt and/or sand surfaces were noted within the Site, and therefore Bank Swallow are not anticipated to be a significant concern for the development of the Site.

- American Eel and Lake Sturgeon: NEA (2016) note that spawning habitat for Lake Sturgeon was identified approximately 650 m northeast of the Zibi MPA area. However, NEA (2016) did not identify any significant habitat features for American Eel and/or Lake Sturgeon within the Zibi MPA area. As noted above, the Site does not include any of the shoreline of the Ottawa River and/or the Buchanan Channel. Block 211 (the Site) is separated from the adjacent watercourses by the adjacent portions of Chaudière Island East, which are also scheduled for development as part of future phases of Zibi. As such, the development of the Site is not anticipated to significantly negatively impact the adjacent aquatic habitats. Therefore, American Eel and Lake Sturgeon are not anticipated to be a significant concern for the development of the Site.
- **Peregrine Falcon**: Peregrine Falcons naturally nest on cliff edges, but are also found nesting within cities on the roofs of tall buildings (SARO 2019). No evidence of Peregrine Falcon nesting has previously been noted within the Zibi MPA area (refer to Appendix A). There are currently no buildings within the Site, and therefore Peregrine Falcons are not anticipated to be a significant concern for the development of the Site.
- Snapping Turtle, Northern Map Turtle, River Redhorse, Silver Lamprey: Snapping Turtle, Northern Map Turtle, River Redhorse, and Silver Lamprey are all species of special concern that may be found in the Ottawa River. The habitat of species of special concern is not protected under the Ontario Endangered Species Act (ESA). However, measures must be taken to ensure individuals of species of special concern are not impacted by construction activities. As noted above, the Site does not include any of the shoreline of the Ottawa River and/or the Buchanan Channel. Block 211 (the Site) is separated from the adjacent watercourses by the adjacent portions of Chaudière Island East, which are also scheduled for development as part of future phases of Zibi. As such, the development of the Site is not anticipated to significantly negatively impact the adjacent aquatic habitats. Therefore, Snapping Turtle, Northern Map Turtle, River Redhorse, and Silver Lamprey are not anticipated to be a significant concern for the development of the Site.

In summary, no significant SAR concerns have been noted within the Site. Due to the ongoing noise and construction activity within the Site, it is unlikely that any new SAR concerns will be identified within the Site in future. There are currently no regulatory/permit requirements under the Ontario Endangered Species Act (ESA) identified for the development of the Site.



3.8 Linkages

Booth Street forms the western boundary of the Site, beyond which is Chaudière Island West. The portions of Chaudière Island East that are found north, south, and east of the Site are currently occupied by compacted gravel and/or paved. The adjacent areas of Chaudière Island East are also former industrial lands, which will be redeveloped as part of later phases of the Zibi project. Beyond the adjacent portions of Chaudière Island East are the Buchanan Channel, the Ottawa River, and the future Mòkaham Park (located to the south, north, and east, respectively). The Site does not include any portion of the shorelines of the Buchanan Channel and/or the Ottawa River, as the Site is separated from the watercourses by adjacent areas of Chaudière Island East. Due to the fact that the Site does not occur between any two (2) adjacent natural heritage features, the Site is unlikely to provide a wildlife movement corridor or linkage function.



4.0 DESCRIPTION OF ENVIRONMENTAL IMPACTS AND MITIGATION

The mitigation measures outlined below are specific to the Zibi Block 211 development (the Site) and the natural heritage features, vegetation communities, and wildlife concerns that occur within that portion of the Zibi MPA area. Mitigation measures for future phases of the Zibi project should be identified as part of the future phase-specific Combined Environmental Impact Statement and Tree Conservation reports.

4.1 Terrestrial Habitat and Tree Removal (TCR)

As noted above in Section 3.3, Tree Stand A was present within the Site and Tree Stand B was present adjacent to the Site, prior to the commencement of tree clearing in the winter of 2018 to 2019. Following completion of tree clearing in the winter of 2018 to 2019, there are no longer any natural vegetation communities within the Site. Therefore, no additional tree or vegetation removal is required. The eastern end of Chaudière Island East includes a small tree stand, which has been identified for retention within the future Mòkaham Park. The future Mòkaham Park is located approximately 110 m east of the Site, and therefore is unlikely to be significantly impacted during the development of the Site. Due to the absence of trees within the Site and in immediately surrounding areas, there are no mitigation measures required to protect retained trees.

4.1.1 Replanting (TCR)

The Site Plan (A-01) shows conceptual landscaping features that are to be included during the development of the Site. The planting locations and specific planting requirements should be confirmed by a detailed Landscaping Plan. Where feasible, plantings should emphasize the use of native trees and shrubs. Planting of Ash trees should be avoided due to the high likelihood that any planted Ash trees will become infested with Emerald Ash Borer.



4.2 In-Water Work

As described above in Section 3.4, the Site does not include any of the shoreline of the Ottawa River and/or the Buchanan Channel. Block 211 (the Site) is separated from the adjacent watercourses by the adjacent portions of Chaudière Island East, which are also scheduled for development as part of future phases of Zibi. As such, the development of the Site is not anticipated to significantly negatively impact the adjacent aquatic habitats. There are no in-water work requirements for the Zibi Block 211 development (the Site), and therefore fish relocation and dewatering are not anticipated to be required.

However, if plans change and in-water work is ultimately required, additional mitigation measures and/or regulatory requirements may apply. The mitigation and monitoring requirements for in-water work should be re-evaluated by a qualified professional, should any in-water work be required in the future.

4.3 Servicing and Stormwater Management

The Site will receive municipal water and sewer services. DSEL (2019) note that the majority of stormwater runoff from the Site is currently directed to the Ottawa River, with no existing stormwater management quality or quantity control. DSEL (2019) have consulted with the Rideau Valley Conservation Authority (RVCA) and the City of Ottawa, and have determined that stormwater quantity controls are not required. DSEL (2019) note that development of the Site is not anticipated to increase the flood risk and flood levels of the Ottawa River. Stormwater management controls are required to achieve an 'enhanced' level of quality control. The stormwater management system will consist of a private storm sewer, outletting to a new outlet at the east edge of Chaudière Island, east of Booth Street. An end of pipe oil/grit separator unit will be included to achieve water quality targets.

4.4 Sediment and Erosion Controls

Detailed sediment and erosion control requirements have been identified in Section 6.0 of DSEL (2017). Refer to DSEL (2017) for mitigation measures related to sediment and erosion.



4.5 Adjacent Lands and Significant Features

As noted above in Section 3.5, there are no significant natural heritage features found immediately adjacent to the Site. The Site does not include any portion of the shorelines of the Buchanan Channel and/or the Ottawa River, as the Site is separated from the watercourses by adjacent areas of Chaudière Island East. As such, the development of the Site is unlikely to significantly negatively impact the aquatic habitats of the Ottawa River and/or the Buchanan Channel. The eastern end of Chaudière Island East includes a small tree stand, which has been identified for retention within the future Mòkaham Park. The future Mòkaham Park is located approximately 110 m east of the Site, and therefore is unlikely to be significantly impacted during the development of the Site or in the immediately surrounding area.



5.0 WILDLIFE MITIGATION AND MONITORING PLAN (WMMP)

A Wildlife Mitigation and Monitoring Plan (WMMP) was previously prepared as part of the Zibi MPA (NEA 2017a). Updated wildlife mitigation and monitoring requirements are summarized below. It should be noted that the mitigation and monitoring measures presented by NEA (2017a) were intended for the entire Zibi MPA area, whereas those included below are intended to be specific to the Site (Block 211). NEA (2017a) included mitigation and monitoring measures related to vegetation removal and dewatering, however, it is significant to note that development of the Site will not require vegetation removal and/or dewatering. As such, mitigation and monitoring requirements for vegetation removal and dewatering have not been included below. As discussed above, no evidence of Species at Risk (SAR) or other significant wildlife habitat features has been noted within the Site. The mitigation and monitoring requirements for the Site are hence abbreviated compared to those presented in NEA (2017a).

As discussed above, the most significant natural features located in the vicinity of the Site are the Ottawa River and the Buchanan Channel. Although no in-water works are required as part of development of the Site, the Ottawa River and the Buchanan Channel could be impacted by run-off, sedimentation, and/or by deleterious substances. As noted above, mitigation requirements related to sediment and erosion control are specified in Section 6.0 of DSEL (2017). The mitigation and monitoring measures for the Site include provisions from the City of Ottawa (2015) *Protocol for Wildlife Protection During Construction* and the recommendations included in NEA (2017a). Wildlife mitigation and monitoring requirements include the following:

- Wildlife Deterrence: It should be noted that at the time of report preparation, demolition of the Old Board Mill and Building 535 was complete within the Site. However, demolition of the remaining portions of the Old Board Mill, which are present east of the Site, was ongoing at the time of report preparation. Demolition activities generate significant noise and disturbance, which are likely to dissuade most wildlife from entering the work area. As noted above in Section 3.6, no significant wildlife habitat features were noted within the Site during the most recent Site visits. Given that there are no natural vegetated areas within and/or immediately surrounding the Site, and given the high level of ongoing disturbance from demolition activities, it is relatively unlikely that wildlife will be attracted to the Site.
- Sweeps: Construction staff will be required to review the mitigation measures included in this report. A designated staff member will be required to conduct daily sweeps each morning prior to the commencement of work to ensure wildlife have not entered the work area. The risk of birds and urban dwelling mammals (e.g. raccoons, squirrels, skunks, etc.) entering the Site is likely to be greatest during periods when demolition activity has been put on hold (e.g. following



long weekends or statutory holidays). Construction staff should be extra vigilant while conducting sweeps after periods when the Site has been idle.

- Wildlife Encounters: If wildlife are noted within the work area, construction staff must allow the animal to leave the area, prior to the commencement of demolition/construction activities. Where required, construction staff may need to open doors and/or remove other barriers to allow wildlife to leave the area. If the animal will not leave the area on its own, the contractor must contact a qualified professional to complete wildlife relocation. Under no circumstances should a building segment be demolished while wildlife are trapped inside.
- Equipment Maintenance/Refueling: All equipment refueling and maintenance should be undertaken within a designated staging area. All equipment storage, maintenance, refueling, degreasing, and other activities must occur away from the water's edge and in a manner that prevents the release of deleterious substances to the Ottawa River and the Buchanan Channel.
- General Provisions: General provisions for Site management include the following:
 - Do not harm, feed, or unnecessarily harass wildlife;
 - Drive slowly and avoid hitting wildlife;
 - Keep the Site tidy and free of garbage and food wastes. Secure all garbage in appropriate sealed containers;
 - Ensure proper Site drainage so that standing water does not accumulate on Site. This will reduce the likelihood that wildlife may enter the Site; and
 - Any stockpiles should be properly secured with silt fencing to prevent wildlife from accessing areas of loose fill.
- **Species at Risk Encounters:** If Species at Risk (SAR) are encountered in the work area, construction in the vicinity must be stopped immediately and measures must be taken to ensure the SAR is not harmed. The project biologist and the Ministry of Environment, Climate Change, and Parks (MECP) must be contacted to discuss how to proceed prior to recommencement of work.
- **Timing Windows:** No additional vegetation clearing is anticipated to be required as part of the development of the Site. However, should vegetation clearing be required in the future, all tree removal must be undertaken outside of the core migratory bird breeding season of April 15th to August 15th each year in order to avoid impacting the nests of migratory birds.



6.0 CUMULATIVE EFFECTS

Cumulative effects were considered in the design of the mitigation measures outlined in Section 4.0 and 5.0. As noted above, the Site has been entirely developed and utilized for industrial purposes (a paper mill) since at least 1928. The Zibi project is a large scale sustainable community redevelopment of former industrial lands located on Chaudière Island, Albert Island and along the Gatineau waterfront. By redeveloping abandoned industrial lands, the Zibi project will provide new residential, commercial, and retail space without removing any significant areas of natural habitat. Thereby, the project will not contribute to the cumulative loss of wetlands or forest habitat.

7.0 MONITORING

As noted above in Section 5.0, monitoring by construction/demolition staff will continue throughout the development of the Site. The ongoing demolition of the adjacent portions of the Old Board Mill (located east of the Site), and future construction activity within the Site, is likely to dissuade wildlife and Species at Risk (SAR) from colonizing the development area in the future. Due to the ongoing noise and activity, it is unlikely that any new SAR concerns will be identified within the Site in future. Therefore, no additional SAR related monitoring requirements are recommended for the Zibi Block 211 development (the Site). Pre-demolition surveys should be completed for subsequent phases of the Zibi project, prior to the commencement of demolition.



8.0 CLOSURE

Pending that the regulatory, mitigation, and avoidance measures outlined in this report are implemented appropriately, the development of the Site is not anticipated to have a significant negative effect on the natural features and functions.

We trust that the above information is sufficient; should you have any questions or require further information, please do not hesitate to contact the undersigned, at your convenience.



Dr. Andrew McKinley, EP, RP Bio... Senior Biologist, McKinley Environmental Solutions



McKINLEY ENVIRONMENTAL SOLUTIONS

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9.0 REFERENCES

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APPENDIX A

Pre-Demolition Survey and Species at Risk Inspection – Old Board Mill and Building 505





Windmill Development Group 6 Booth Street (Albert Island) Ottawa, Ontario, K1R 6K8 September 19th, 2018

Attn: Taryn Glancy, Brownfields Coordinator

RE: Zibi Development – Pre-Demolition Species at Risk (SAR) Inspection Old Board Mill and Building 535

1.0 INTRODUCTION AND BACKGROUND

McKinley Environmental Solutions (MES) was retained by Windmill Development Group to complete a pre-demolition Species at Risk (SAR) inspection to support the planned demolition of the Old Board Mill and Building 535, both of which are located on Chaudière Island - East. The current undertaking also includes clearing two (2) tree stands that are located adjacent to the demolition work area (Figure 1). Tree clearing, demolition of the Old Board Mill, and demolition of Building 535 will be undertaken to support the Zibi Development project. The Zibi project is a large scale sustainable community redevelopment of former industrial lands located on Chaudière Island, Albert Island and along the Gatineau waterfront. The project includes lands within both Quebec and Ontario.

The Ontario portion of the Zibi project is subject to an existing Master Plan Approval (MPA), which allows the development to occur over multiple phases. The MPA establishes several conditions related to natural heritage features. The following conditions are relevant to this undertaking:

- **Condition 19 Wildlife Mitigation and Monitoring Plan (WMMP):** The WMMP was previously submitted by Niblett Environmental Associates (NEA 2017a).
- **Condition 22 Construction and Post Construction Environmental Monitoring Plan:** Included as part of the Wildlife Mitigation and Monitoring Plan (NEA 2017a).
- Condition 24 Environmental Impact Statement (EIS) and Tree Conservation Report (TCR) Approval: Report submitted by Niblett Environmental Associates in September 2016 (NEA 2016).

- **Condition 26 Species at Risk and Endangered Species Act:** The potential presence of Species at Risk (SAR) was addressed in the Environmental Impact Statement (EIS) and Tree Conservation Report (TCR) (NEA 2016) and no significant concerns were identified.
- **Condition 27 Integrated Environmental Review Statement:** Report submitted by Niblett Environmental Associates in August 2017 (NEA 2017b).

The MPA requires an adaptive approach to the evaluation and management of natural heritage features, due to the long term and multi-phase nature of the development. The Environmental Impact Statement (EIS) and Tree Conservation Report (TCR) (NEA 2016) (Condition 24) and the Wildlife Mitigation and Monitoring Plan (WMMP) (NEA 2017a) (Condition 19) recommended that prior to demolition of existing buildings within each phase of development, an updated pre-demolition inspection for Species at Risk (SAR) should be undertaken. The pre-demolition inspection for SAR is required in order to ensure that demolition will not result in significant impacts to SAR and/or wildlife (as required by Condition 26).

The purpose of this letter report is to document the result of the pre-demolition inspection that was completed in advance of the planned demolition of portions of the Old Board Mill and Building 535. As noted above, the current undertaking also includes clearing two (2) tree stands that are located adjacent to the demolition work area. This letter report is intended to fulfill the pre-demolition adaptive management and monitoring requirements specified by the EIS and TCR (Condition 24), the WMMP (Condition 19) and by Condition 26 (SAR and Endangered Species Act).

In future, development of the portion of the Zibi Development that currently houses the Old Mill Building and Building 535 may require an updated Individual Development Phase Environmental Impact Statement and Tree Conservation Report in order to comply with MPA Condition 25. However, at the current time Windmill Development Group is not seeking approval to develop the lands associated with the Old Mill Building and Building 535, and is instead seeking only to complete demolition activities. Therefore, while a pre-demolition SAR inspection was required, the Individual Development Phase Environmental Impact Statement and Tree Conservation Report is not currently required.



September 2018



FIGURE 1: SITE OVERVIEW

Zibi Development - Pre-Demolition Species at Risk (SAR) Inspection Old Board Mill & Building 535



Please Note: This is not a legal land survey. All dimensions and locations are shown as approximate.

- Approximate Demolition/Tree Clearing Limits (A) - Tree Stand

2.0 POTENTIAL SPECIES AT RISK

The Natural History Information Center (NHIC) records for the nine (9) grids that include and surround the work area were reviewed. This included an area 3 km x 3 km in size and all published Species at Risk (SAR) records were noted. The OMNRF Kemptville District provided NEA with an Information and Records Request Response in March 2014 (refer to NEA 2016). The 2014 OMNRF response formed the basis of the original SAR assessment, completed by NEA in 2016. MES also obtained an updated Information and Records Request Response in 2017 (Appendix A). The following SAR were identified as potentially occurring within the vicinity:

- Butternut Trees Endangered
- Barn Swallow Threatened
- Chimney Swift Threatened
- Little Brown Myotis Endangered
- Northern Long Eared Bat Endangered
- Eastern Small Footed Myotis Endangered
- Tricolored Bat Endangered
- Bank Swallow Threatened
- American Eel Endangered
- Lake Sturgeon Threatened
- Peregrine Falcon Special Concern
- Snapping Turtle Special Concern
- Northern Map Turtle Special Concern
- River Redhorse Special Concern
- Silver Lamprey Special Concern

NEA (2016) completed SAR surveys throughout the Zibi MPA area, and no significant SAR concerns were identified. NEA (2017a) also completed a pre-demolition SAR survey of the Phase 1 & 2 development area in February 2017, and no SAR concerns were noted. MES completed an updated pre-demolition inspection of the Phase 1 & 2 development area on November 3rd, 2017, and again no SAR concerns were noted (MES 2018).

Of the species noted above, only Barn Swallow, Chimney Swift, Little Brown Myotis, Northern Long Eared Bat, Eastern Small Footed Bat, and Tricolored Bat have the potential to be found within derelict buildings that are scheduled for demolition. In addition, Butternut Trees (endangered) have the potential to be found in tree clearing areas. The following is a summary of the potential for these SAR to be found within the work area:



- Barn Swallow and Chimney Swift: Barn Swallows nest in many anthropogenic structures including old barns, abandoned buildings, in culverts, and under bridges (SARO 2018). Chimney Swifts nest in open chimneys with rough interior surfaces made from brick and/or stone (SARO 2018). NEA (2016) observed Barn Swallows flying around the bridges connecting Albert Island to the south in June 2013 and the bridge connecting the Chaudière dam to the north in May and June 2014. However, the location of nesting sites was not confirmed (NEA 2016). NEA (2016) observed Chimney Swifts flying over the channel beside Victoria Island. However, no chimneys that provide potentially suitable nesting habitat for Chimney Swifts were noted within the Zibi MPA area (NEA 2016). The Chimney Swifts that were observed by NEA close to Victoria Island could have been nesting well outside of the Zibi MPA area, as Chimney Swifts are capable of travelling long distances each day during foraging (SARO 2018).
- Little Brown Myotis, Northern Long Eared Bat, Tricolored Bat, and Eastern Small Footed Myotis: In some cases, bats may be found roosting or overwintering in abandoned buildings (SARO 2018). NEA (2016) did not note any evidence of bats within the Zibi MPA area.
- **Butternut Trees**: Butternut Trees can be found in many treed areas throughout the region (SARO 2018). However, NEA (2016) did not note any Butternut Trees within the vicinity of the Zibi MPA area.



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3.0 INSPECTION METHODS

In order to address the potential presence of Barn Swallow, Chimney Swift, and roosting Bats, a predemolition inspection was completed on September 18th, 2018. This included visual inspection of all interior and exterior surfaces of the buildings for any signs of bird nesting/bat roosting, such as nests, droppings, dead bats/birds, etc. A flashlight was used to complete the inspection where required. In order to address the potential presence of Butternut Trees, the tree stands were searched for Butternut Trees on September 18th, 2018. Although late in the growing season, the site visit was completed before trees had lost their leaves.



4.0 RESULTS

The Old Mill Building and Building 535 are located on Chaudière Island – East (east of Booth Street). Both buildings represent portions of the derelict industrial complex, which was historically operated as a paper mill. In addition to the two (2) buildings, two (2) small tree stands are present within the work area, and both tree stands are intended to be cleared. Neither tree stand was identified for retention within the EIS and TCR (NEA 2016). The following is a summary of the characteristics of these features:

- Old Mill Building: The Old Mill Building includes three (3) aboveground levels and a basement level. Many openings exist including holes in the walls and broken windows. The building is constructed primarily from concrete with many metal surfaces and comparatively few wooden surfaces. At the current time, demolition is only planned to remove the southern portion of the building. The interior and exterior of the building was inspected and no evidence of Barn Swallow nests or Bats was noted. The building does not include a chimney, and therefore Chimney Swift nesting is not likely to be a concern. Several roosting pigeons were noted within the Old Mill Building.
- **Building 535**: Building 535 includes an aboveground level and a basement level. The building is well sealed with few significant exterior openings. The building is constructed primarily from concrete with many metal surfaces and comparatively few wooden surfaces. The interior and exterior of the building was inspected and no evidence of Barn Swallow nests or Bats was noted. Exterior overhangs of Building 535 and the adjacent bridge on Booth Street were inspected from within Tree Stand B, and no evidence of Barn Swallow nesting was noted. The building does not include a chimney, and therefore Chimney Swift nesting is not likely to be a concern.
- **Tree Stand A**: Tree Stand A includes several mature White Pines that are partially overgrown with Manitoba Maple, Staghorn Sumac and Common Buckthorn. No Butternut Trees were noted. NEA (2016) did not identify Tree Stand A for retention.
- Tree Stand B: Tree Stand B includes a thicket that is primarily comprised of Common Buckthorn shrubs, young Manitoba Maple, and Staghorn Sumac. Groundcover reflects the disturbed conditions and includes Garlic Mustard, Virginia Creeper, and Riverbank Grape. Several large inlet pipes are present within Tree Stand B. The pipes create vertical shafts that could potentially be suitable for bat roosting. However, the pipes were observed to be flooded during the site visit, and therefore are unlikely to be used by bats. No Butternut Trees were noted. NEA (2016) did not identify Tree Stand B for retention.





Photograph 1: Looking east at the southwest corner of the Old Board Mill. Tree Stand A is visible at the left (September 18th, 2018).



Photograph 2: Looking east at the northwest corner of the Old Board Mill (September 18th, 2018).





Photograph 3: Looking west along the south side of the Old Board Mill (September 18th, 2018).



Photograph 4: Looking west on the roof of the Old Board Mill (September 18th, 2018).





Photograph 5: The interior of the Old Board Mill (second floor) (September 18th, 2018).



Photograph 6: The interior of the Old Board Mill (fourth floor) (September 18th, 2018).





Photograph 7: Looking east from Booth Street at the south side of Building 535 (left) and Tree Stand B (center) (September 18th, 2018).



Photograph 8: Looking west at the overhangs along Booth Street, adjacent to the south side of Building 535 (September 18th, 2018).





Photograph 9: The interior of Building 535 (upper level) (September 18th, 2018).



Photograph 10: Looking north at Tree Stand A. The Old Board Mill is visible at the right (September 18th, 2018).





Photograph 11: Looking west at Tree Stand B. The south side of Building 535 is visible at the right, Booth Street is visible in the background (September 18th, 2018).



Photograph 12: One of several flooded inlet pipes that are present within Tree Stand B (September 18th, 2018).



5.0 MITIGATION

A Wildlife Mitigation and Monitoring Plan (WMMP) was previously prepared as part of the Zibi MPA (NEA 2017a). Updated wildlife mitigation and monitoring requirements that are relevant to the proposed demolition and tree clearing are summarized below. It should be noted that the mitigation and monitoring measures presented by NEA (2017a) were intended for the entire Zibi MPA area, whereas those included below are intended to be specific to the current demolition and tree clearing. The mitigation and monitoring measures outlined below include provisions from the City of Ottawa (2015) *Protocol for Wildlife Protection During Construction* and the recommendations included in NEA (2017a). Wildlife mitigation and monitoring requirements include the following:

- Wildlife Deterrence: Demolition activities generate significant noise and disturbance, which is likely to dissuade most wildlife from entering the work area.
- Sweeps: Construction staff will be required to review the mitigation measures included in this letter report. A designated staff member will be required to conduct daily sweeps each morning prior to commencement of work to ensure wildlife have not entered the work area. The risk of birds and urban dwelling mammals (e.g. raccoons, squirrels, skunks, etc.) entering the work area is likely to be greatest during periods when demolition activity has been put on hold (e.g. following long weekends or statutory holidays). Construction staff should be extra vigilant while conducting sweeps after periods when the work area was idle.
- Wildlife Encounters: If wildlife are noted within the work area, construction staff must allow the animal to leave the area, prior to the commencement of demolition/tree clearing activities. Where required, construction staff may need to open doors, and/or remove other barriers to allow wildlife to leave the area. If the animal will not leave the area on its own, the contractor must contact a qualified professional to complete wildlife relocation. Under no circumstances should a building segment be demolished while wildlife are trapped inside.
- Equipment Maintenance/Refueling: All equipment refueling and maintenance should be undertaken within a designated staging area. All equipment storage, maintenance, refueling, degreasing, and other activities must occur away from the water's edge and in a manner that prevents the release of deleterious substances to the Ottawa River.
- General Provisions: General provisions for management of the work area include the following:
 - o Do not harm, feed, or unnecessarily harass wildlife;
 - Drive slowly and avoid hitting wildlife;
 - Keep the work area tidy and free of garbage and food wastes. Secure all garbage in appropriate sealed containers;
 - Ensure proper drainage so that standing water does not accumulate within the work area.
 This will reduce the likelihood that wildlife may enter the work area; and



- Any stockpiles should be properly secured with silt fencing to prevent wildlife from accessing areas of loose fill.
- SAR Encounters: If SAR are encountered in the work area, demolition/tree clearing activities in the vicinity must be stopped immediately and measures must be taken to ensure the SAR is not harmed. The project biologist and the OMNRF must be contacted to discuss how to proceed prior to recommencement of work.
- **Timing Windows:** All tree and shrub removal must be undertaken outside of the core migratory bird breeding season of April 15th to August 15th each year in order to avoid impacting the nests of migratory birds.



www.mckinleyenvironmental.com

6.0 DETERMINATION AND CLOSURE

In summary, no significant Species at Risk (SAR) or wildlife concerns have been noted for the proposed work area. Demolition of the Old Mill Building, demolition of Building 535, and clearing of the adjacent tree stands is therefore unlikely to result in any significant impact to SAR.

We trust that the above information is sufficient; should you have any questions or require further information, please do not hesitate to contact the undersigned, at your convenience.

Sincerely,

anoteur Mchinley

Dr. Andrew McKinley, EP, RP Bio. Senior Biologist, McKinley Environmental Solutions



www.mckinleyenvironmental.com

7.0 REFERENCES

City of Ottawa (2015) Protocol for Wildlife Protection During Construction.

McKinley Environmental Solutions (MES) (2018) Zibi Development Phase 1 and 2 - Integrated Environmental Impact Statement, Tree Conservation Report & Wildlife Mitigation and Monitoring Plan.

Niblett Environmental Associates (NEA) (2016) Environmental Impact Study and Tree Conservation Report. Windmill Development Group – Domtar Lands – Ottawa, Ontario.

Niblett Environmental Associates (NEA) (2017a) Windmill Development Group – Domtar Lands – Ottawa, Ontario. Wildlife Mitigation and Monitoring Plan.

Niblett Environmental Associates (NEA) (2017b) Windmill Development Group – Domtar Lands – Ottawa, Ontario. Integrated Environmental Review Statement.

Ontario Ministry of Natural Resources and Forestry (OMNRF) (2005) OMNRF Natural Heritage Reference Manual for Natural Heritage Policies of the Provincial Policy Statement, 2005, Second Edition.

Ontario Ministry of Natural Resources and Forestry (OMNRF) (2014) Significant Wildlife Habitat Mitigation Support Tool.

Ontario Ministry of Natural Resources and Forestry (OMNRF) (2018) Natural Heritage Information Center http://nhic.mnr.gov.on.ca/ (Accessed September 1st, 2018).

Species at Risk Ontario (SARO) (2018) Species at Risk Ontario. Retrieved September 1st, 2018 at http://www.ontario.ca/environment-and-energy/species-risk-ontario-list



APPENDIX B

OMNRF Information Request Response



Ministry of Natural Resources and Forestry

Kemptville District

10 Campus Drive Postal Box 2002 Kemptville ON K0G 1J0 Tel.: 613 258-8204 Fax: 613 258-3920 Ministère des Richesses naturelles et des Forêts

District de Kemptville



10, promenade Campus Case postale, 2002 Kemptville ON K0G 1J0 Tél.: 613 258-8204 Téléc.: 613 258-3920

Fri. Nov 17, 2017

Andrew McKinley McKinley Environmental Solutions PO Box 45505, 3151 Strandherd Dr. Ottawa, Ontario K2J 5N1 (613) 620-2255 mckinleyenvironmental@gmail.com

Attention: Andrew McKinley

Subject:Information Request - DevelopmentsProject Name:Zibi Project Phase 1 EISSite Address:4 Booth Street, Ottawa, Ontario, K1R 6K8Our File No.2017_NEP-4297

Natural Heritage Values

The Ministry of Natural Resources and Forestry (MNRF) Kemptville District has carried out a preliminary review of the above mentioned area in order to identify any potential natural resource and natural heritage values.

The following Natural Heritage values were identified for the general subject area:

- ANSI, Earth Science, VICTORIA ISLAND (Provincial)
- Lake, Lac Deschênes (Non-Sensitive)
- River (Non-Sensitive)
- Spawning Area, Walleye Spawning Area (Low)

Municipal Official Plans contain information related to natural heritage features. Please see the local municipal Official Plan for more information, such as specific policies and direction pertaining to activities which may impact natural heritage features. For planning advice or Official Plan interpretation, please contact the local municipality. Many municipalities require environmental impact studies and other supporting studies be carried out as part of the development application process to allow the municipality to make planning decisions which are consistent with the Provincial Policy Statement (PPS, 2014).

The MNRF strongly encourages all proponents to contact partner agencies and appropriate municipalities early on in the planning process. This provides the proponent with early knowledge regarding agency requirements, authorizations and approval timelines; Ministry of the Environment

and Climate Change (MOECC) and the local Conservation Authority may require approvals and permitting where natural values and natural hazards (e.g., floodplains) exist.

As per the Natural Heritage Reference Manual (NHRM, 2010) the MNRF strongly recommends that an ecological site assessment be carried out to determine the presence of natural heritage features and species at risk and their habitat on site. The MNRF can provide survey methodology for particular species at risk and their habitats.

The NHRM also recommends that cumulative effects of development projects on the integrity of natural heritage features and areas be given due consideration. This includes the evaluation of the past, present and possible future impacts of development in the surrounding area that may occur as a result of demand created by the presently proposed project.

In Addition, the following Fish species were identified: alewife, American brook lamprey, American eel, American shad, banded killifish, black bullhead, black crappie, blackchin shiner, blacknose shiner, bluegill, bluntnose minnow, brassy minnow, brook silverside, brook stickleback, brown bullhead, brown trout, burbot, Carps and Minnows, Catostomus sp., central mudminnow, channel catfish, channel darter, cisco, common carp, common shiner, creek chub, cutlip minnow, eastern blacknose dace, eastern silvery minnow, emerald shiner, Etheostoma sp., fallfish, fantail darter, fathead minnow, finescale dace, freshwater drum, golden shiner, greater redhorse, lowa darter, johnny darter, lake sturgeon, largemouth bass, logperch, longear sunfish, longnose dace, longnose gar, longnose sucker, margined madtom, Micropterus sp., mimic shiner, mooneye, mottled sculpin, Moxostoma sp., muskellunge, ninespine stickleback, North American Catfishes, northern brook lamprey, northern pike, northern redbelly dace, pearl dace, pumpkinseed, quillback, rainbow smelt, river redhorse, rock bass, rosyface shiner, sand shiner, sauger, shorthead redhorse, silver lamprey, silver redhorse, slimy sculpin, smallmouth bass, spotfin shiner, spottail shiner, stonecat, tadpole madtom, tessellated darter, trout-perch, walleye, white crappie, white sucker, yellow bullhead, yellow perch.

Significant Wildlife Habitat

Section 2.1.5 d) of the PPS states: Development and site alteration shall not be permitted in significant wildlife habitat unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions. It is the responsibility of the approval authority to identify significant wildlife habitat or require its identification. The MNRF has several guiding documents which may be useful in identification of significant wildlife habitat and characterization of impacts and mitigation options:

- Significant Wildlife Habitat Technical Guide, 2000
- The Natural Heritage Reference Manual, 2010
- Significant Wildlife Habitat Mitigation Support Tool, 2014
- Significant Wildlife Habitat Criteria Schedule for Ecoregion 5E and 6E, 2015

The habitat of special concern species (as identified by the Species at Risk in Ontario list) and Natural Heritage Information Centre tracked species with a conservation status rank of S1, S2 and S3 may be significant wildlife habitat and should be assessed accordingly.

Water

If any in-water works are to occur, there are timing windows for which work in water should not take place (see below). Appropriate measures should be taken to minimize and mitigate impact on water quality and fish habitat, including:

- installation of sediment and erosion control measures;
- avoiding the removal, alteration, or covering of substrates used for fish spawning, feeding, over-wintering or nursery areas; and
- debris control measures to manage falling debris (e.g. spalling).

Timing windows (no in-water works) in MNRF Kemptville District*:

•	· · · · · · · · · · · · · · · · · · ·		
	Warmwater and cool water	→ March 15 – June 30	
	St. Lawrence River & Ottawa River	→ March 15 – July 15	
	Coldwater	→ October 1 – May 31	
	Big Rideau Lake & Charleston Lake	→ October 1 – June 30	
	a nata. Additional timina reatriationa	may apply as they relate	40

* Please note: Additional timing restrictions may apply as they relate to endangered and threatened species for works in both water and wetland areas.

Timing windows when in-water work is restricted – based on species presence:

Spring	
Spring:	

	FISH SPECIES	TIMING WINDOW (No in-water works)
ng:	Walleye	March 15 to May 31
-	Northern Pike	March 15 to May 31
	Lake Sturgeon	May 1 to June 30
	Muskellunge	March 15 to May 31
	Largemouth/Smallmouth Bass	May 1 to July 15
	Rainbow Trout	March 15 to June 15
	Other /Unknown Spring Spawning Species	March 15 to July 15

Fall:

FISH SPECIES	TIMING WINDOW (No in-water works)
Lake Trout	October 1 to May 31
Brook Trout	October 1 to May 31
Pacific Salmon	September 15 to May 31
Lake Whitefish	October 15 to May 31
Lake Herring	October 15 to May 31
Other /Unknown Fall Spawning Species	October 1 to May 31

Additional approvals and permits may be required under the Fisheries Act. Please contact Fisheries and Oceans Canada to determine requirements and next steps. There may also be approvals required by the local Conservation Authority or Transport Canada. As the MNRF is responsible for the management of provincial fish populations, we request ongoing involvement in such discussions in order to ensure population conservation.

Species at Risk

A review of the Natural Heritage Information Centre (NHIC) and internal records indicate that there is a potential for the following threatened (THR) and/or endangered (END) species on the site or in proximity to it:

- American Eel (END)
- Chimney Swift (THR)
- Eastern Small-footed Myotis (END)
- Lake Sturgeon (THR)
- Northern Long-eared Bat (END)
- Tri-Colored Bat (END)
- Little Brown Bat (END)

All endangered and threatened species receive individual protection under section 9 of the ESA and receive general habitat protection under Section 10 of the ESA, 2007. Thus any potential works should consider disturbance to the individuals as well as their habitat (e.g. nesting sites). General habitat protection applies to all threatened and endangered species. Note some species in Kemptville District receive regulated habitat protection. The habitat of these listed species is protected from damage and destruction and certain activities may require authorization(s) under the ESA. For more on how species at risk and their habitat is protected, please see: https://www.ontario.ca/page/how-species-risk-are-protected.

If the proposed activity is known to have an impact on any endangered or threatened species at risk (SAR), or their habitat, an authorization under the ESA may be required. It is recommended that MNRF Kemptville be contacted prior to any activities being carried out to discuss potential survey protocols to follow during the early planning stages of a project, as well as mitigation measures to avoid contravention of the ESA. Where there is potential for species at risk or their habitat on the property, an Information Gathering Form should be submitted to Kemptville MNRF at <u>sar.kemptville@ontario.ca</u>.

The Information Gathering Form may be found here:

http://www.forms.ssb.gov.on.ca/mbs/ssb/forms/ssbforms.nsf/FormDetail?OpenForm&ACT=RDR&T AB=PROFILE&ENV=WWE&NO=018-0180E

For more information on the ESA authorization process, please see: <u>https://www.ontario.ca/page/how-get-endangered-species-act-permit-or-authorization</u>

One or more special concern species has been documented to occur either on the site or nearby. Species listed as special concern are not protected under the ESA, 2007. However, please note that some of these species may be protected under the Fish and Wildlife Conservation Act and/or Migratory Birds Convention Act. Again, the habitat of special concern species may be significant wildlife habitat and should be assessed accordingly. Species of special concern for consideration:

- Peregrine Falcon (SC)
- Snapping Turtle (SC)
- Northern Map Turtle (SC)
- River Redhorse (SC)
- Silver Lamprey (SC)

If any of these or any other species at risk are discovered throughout the course of the work, and/or should any species at risk or their habitat be potentially impacted by on site activities, MNRF should be contacted and operations be modified to avoid any negative impacts to species at risk or their habitat until further direction is provided by MNRF.

Please note that information regarding species at risk is based largely on documented occurrences and does not necessarily include an interpretation of potential habitat within or in proximity to the site in question. Although this data represents the MNRF's best current available information, it is important to note that a lack of information for a site does not mean that additional features and values are not present. It is the responsibility of the proponent to ensure that species at risk are not killed, harmed, or harassed, and that their habitat is not damaged or destroyed through the activities carried out on the site.

The MNRF continues to strongly encourage ecological site assessments to determine the potential for SAR habitat and occurrences. When a SAR or potential habitat for a SAR does occur on a site, it is recommended that the proponent contact the MNRF for technical advice and to discuss what activities can occur without contravention of the Act. For specific questions regarding the Endangered Species Act (2007) or SAR, please contact MNRF Kemptville District at sar.kemptville@ontario.ca.

The approvals processes for a number of activities that have the potential to impact SAR or their habitat have recently changed. For information regarding regulatory exemptions and associated online registration of certain activities, please refer to the following website: https://www.ontario.ca/page/how-get-endangered-species-act-permit-or-authorization.

Please note: The advice in this letter may become invalid if:

- The Committee on the Status of Species at Risk in Ontario (COSSARO) re-assesses the status of the above-named species OR adds a species to the SARO List such that the section 9 and/or 10 protection provisions apply to those species; or
- Additional occurrences of species are discovered on or in proximity to the site.

This letter is valid until: Sat. Nov 17, 2018

The MNRF would like to request that we continue to be circulated on information with regards to this project. If you have any questions or require clarification please do not hesitate to contact me.

Sincerely,

Jane Devlin Management Biologist jane.devlin@ontario.ca

Encl.\ -ESA Infosheet -NHIC/LIO Infosheet