FINAL

Environmental Impact Study

20 Cedarow Court, Ottawa, Ontario

Prepared for:

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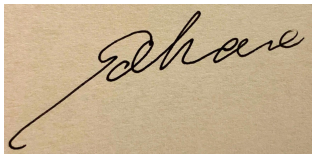

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APPENDICES

1.0 INTRODUCTION

Pinchin Ltd. (Pinchin) was retained by Nautical Lands Group (Client) to complete an Environmental Impact Study (EIS) for the subject property located at 20 Cedarow Court, Ottawa, ON (Site) to support Phase 2 of the Wellings of Stittsville development. The purpose of the EIS is to evaluate the natural heritage features within 120 m of the Site (Study Area) with regard to potential impacts and recommended mitigation measures from the development of the Site. A map of the Site with the surrounding area is shown on Figure 1 in **Appendix A.**

The Site consists of undeveloped land with four different vegetation communities occurring directly on the Site, as shown on Figure 2 in **Appendix A**. The vegetation communities include a mixed meadow, a maple deciduous forest, a sumac shrub thicket and a residential roadway. A fifth vegetation community, a graminoid mineral marsh, occurs north of the site alongside Poole Creek, which is located approximately 25-50 m north of the Site. A detailed review and analysis on the vegetation communities and potential natural features on the Site is provided in Section 5.0 of this report. The Phase 1 of development construction has already occurred on the adjacent property east of the Site, and now the Client proposes to construct Phases 2 of the development, including the construction of a six-story mixed-use residential apartment building with business and retail fronts, underground parking and associated amenities

In order to support the Site Plan Control application, this EIS was requested by the Client as a part of the Site Plan Approval (SPA) requirements for the proposed development. This Scoped EIS as required will be conducted in accordance with the City of Ottawa EIS Guidelines (2010) and the City of Ottawa Official Plan (2003). This Scoped EIS will also be completed in consistency with the provincial and regional policies including the Provincial Policy Statement (2020), Ontario Regulation 153/06 under the Conservation Authorities Act (1990), and Endangered Species Act (2007).

This EIS report was prepared to: identify natural heritage features present on or adjacent to the Site; characterize their ecological functions; evaluate the environmental effects of the development proposal that might reasonably be expected to have an impact on these features; and provide recommendations of mitigation measures to minimize and mitigate the potential direct and indirect impacts.

2.0 NATURAL HERITAGE POLICY CONTEXT

The following provincial, regional and municipal legislation and policies were reviewed prior to an evaluation of the natural heritage features and functions of the Site and adjacent area was undertaken:

- Provincial Policy Statement (2020);
- City of Ottawa Official Plan (2003); and
- Ontario Regulation 153/06 (1990).

The following sections provide a summary of the above legislation and policies applicable to potential development planning of the Study Area.

2.1 Provincial Policy Statement

The Provincial Policy Statement (2020) sets a policy foundation for regulating development and land use. It sets out guidelines for development while protecting resources of interest to the province, public health and safety and the quality of the natural environment. The PPS does support development and improved land use for planning, management and growth, but it does so in ways to enhance communities through efficient land use and environmental management and protection.

2.2 City of Ottawa Official Plan

The Site is designated as a General Urban Area on Schedule B of the Official Plan, as shown in **Appendix B.** This designation permits development of mixed housing, retail, service, entertainment and more. The proposed development is in line with this zoning, as it will provide residential apartments as well as spaces for businesses to sell their goods and services. Poole Creek is adjacent to the Site within the Study Area and is recognized as a part of the Natural Heritage System as seen in Schedules L2 and L3 of the Official Plan. It was determined during the Site visit that the extent of this Natural Heritage System did not extend onto the Site itself. Any new development proposed of lands adjacent to Poole Creek should meet all applicable Conservation Authority regulations (City of Ottawa, 2003).

2.3 Ontario Regulation 153/06

Pursuant to the *Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses*, any development in or on areas defined in the regulation area (e.g., river or stream valleys, hazardous land, wetlands) requires permission from the Mississippi Valley Conservation Authority (MVCA) under the Ontario Regulation 170/06. The Mississippi Valley Conservation Authority may grant permission for development in or on these areas if the control of flooding, erosion, dynamic beaches, pollution or the conservation of land will not be affected by the development. The Regulation also states that all areas within the jurisdiction of the Authority are delineated on a series of maps under the title “Ontario Regulation 97/04: Regulation for Development, Interference with Wetlands and Alterations to Shorelines and Watercourses”, which is discussed in detail in section 2.2 (MVCA, 2019).

3.0 METHODOLOGY OF BIOPHYSICAL INVENTORY

3.1 Background Review and Agency Consultation

A desktop background review of available information sources relating to the Study Area was conducted prior to a site reconnaissance.

Included in the review were natural heritage features present on the Site and in the surrounding area, historical species occurrences available from the Natural Heritage Information Centre (NHIC), existing wildlife data records, Species of Conservation Concern lists and other relevant information. Additionally, information and documents available from the Client including site history and Site plan were also reviewed for this Site. Applicable policies and guidelines including the City of Ottawa Official Plan (City of Ottawa, 2003). This document references the MNRF Natural Heritage Reference Manual (Ministry of Natural Resources, 2010) and the Provincial Policy Statement 2020 (Ministry of Housing and Municipal Affairs, 2020) which were reviewed for this report. This EIS report has been updated to reflect the review comments received from both the City of Ottawa and MVCA.

Natural heritage resources with the potential to be present on the Study Area were identified through the following information sources:

- An assessment of habitat through aerial photographs and online mapping:
  - Land Information Ontario (MNRF 2019a); and
  - Google Earth.
- A review of historical occurrence records for Species of Conservation Concern within or adjacent to the Study Area:
  - Natural Heritage Information Centre (MNRF 2019b) 1 Km grid 18VR2714;
  - Atlas of the Breeding Birds of Ontario (BSC 2019) 1 Km grid 18VR21;
  - Atlas of the Mammals of Ontario (Dobbyn 1994) 100 Km grid, zone VF18;
  - Ontario Reptile and Amphibian Atlas (ON 2019) 1Km grid 18VR21;
  - Ontario Butterfly Atlas (TEA 2019) 1Km grid 18VR21;
  - DFO Aquatic Species at Risk Map (GOC, 2019);
  - Ontario Regulation 230/08 Species at Risk in Ontario List (COSSARO 2019a); and
  - Provincial and federal assessments, recovery strategies, and management plans.

3.2 Field Assessment

Pinchin conducted field surveys to characterize the natural heritage features present on the Site and in the surrounding landscape. A summary of methodologies for the field work component completed by Pinchin is provided below for reference.

3.2.1 Vegetation Assessment

Vegetation communities within the Study Area were assessed and described using the provincial Ecological Land Classification system. The *Ecological Land Classification for Southern Ontario: First Approximation and its Application* (Lee et al., 1998) was referenced to classify the habitats by ecosite. Ecosites classified within the Study Area were then applied to polygons mapped using aerial imagery.

The vegetation communities were sampled for their structure, species composition and habitat characteristics. This information was supplemented by floristic surveys at the time of visit. Species names generally follow the nomenclature of Flora Ontario (Newmaster and Ragupathy, 2012) and the NHIC.

3.2.2 Areas of Natural and Scientific Interest and Provincially Significant Wetland

Areas of Natural and Scientific Interest (ANSI) are defined as areas of land and water containing natural landscapes or features that have been identified as having life science or earth science values related to protection, scientific study or education. The MNRF categorizes ANSIs as either provincially significant, regionally significant or locally significant based on five criteria: representation, condition, diversity, other ecological considerations and special features. Provincially significant ANSIs represent the “best examples” of their representative features and characteristics in the province as a whole; they have extra protection from the provincial Planning Act and Natural Heritage policies of the Provincial Policy Statement (PPS) compared with the other two categories (MNR, 2010).

Wetlands are defined as lands that are seasonally or permanently covered by shallow water as well as lands where the water table is close to the surface causing the formation of hydric soils and favouring the dominance of hydrophytic or water tolerant plants. Provincially Significant Wetlands (PSW) are wetlands that have been identified by the Ontario Ministry of Natural Resources as crossing a threshold score using the Ontario wetland Evaluation System (OWES) during their identification and evaluation This score takes into account a variety of factors including diversity of landforms, vegetation communities, plant and animal species and habitat as well we ecological functions such as water filtration and erosion control, as well as value for scientific research and public education (MNR, 2010).

3.2.3 Significant Valleylands

The Natural Heritage Reference Manual (OMNR, 2010) provides criteria for the identification and classification of valleylands. Some of these criteria include surface and ground water connections, landform prominence, distinctive geomorphic landforms, degree of naturalness, species and community diversity, unique species and communities, habitat value and linkage functions. Within the City of Ottawa, Significant Valleylands are defined as valleylands with slopes more than 15% and a length of more than 50 m, with water present for some period of the year, excluding man-made features (City of Ottawa, 2003). These Significant Valleylands act as corridors and linkages in the City of Ottawa’s Natural Heritage System, as shown in **Appendix B**.

3.2.4 Species at Risk

The likelihood of occurrence for species at risk was assessed qualitatively based on the ability of the habitat to meet one or more life requisites for each species at risk identified during the desktop assessment. If habitat suitable for species at risk was identified, additional survey effort was applied in that area. If incidental species at risk were observed, they were recorded throughout the field assessment within and adjacent to the Site.

3.2.5 Incidental Wildlife Observations

Wildlife was surveyed as part of general wildlife surveys during the Site visits. These surveys involved general coverage recording all species observations and signs, including tracks / trails, scat, burrows, dens, browse, and vocalizations. The wildlife surveys took place during the coincident surveys for vegetation communities and vascular plants. Significant wildlife habitat was assessed according to the MNRF Natural Heritage Reference Manual and the MNRF Significant Wildlife Habitat Technical Guide (MNRF 2000).

4.0 RESULTS OF INVENTORY AND ANALYSIS

A summer field assessment was conducted by a qualified biologist on August 20th, 2019, starting at 11:30am. The weather during the field assessment was sunny and 28 degrees Celsius. A map of the natural features present on and surrounding the Site is provided on Figure 3 on **Appendix A**. Selected Site photographs as described below are provided for reference in **Appendix C**.

4.1 Landform Features

The Site is bounded by Cedarow Court and residential developments to the west, Hazeldean Road to the south, industrial development to the east and Poole Creek to the north. The area surrounding the site consists of residential developments, businesses and other urban centre uses. The northern most area of the Site near Poole Creek lies within the regulation limit under the Authority of the MVCA. Just north of the property line also lies the floodplain. The Site consists of natural features with only the eastern edge containing development. The Ontario Geological Survey classifies the Site as being of Middle Ordovician origin (limestone, dolostone, shale, arkose and sandstone) (Ontario Geological Survey, 1991) and on swamps and bogs (Chapman and Putnam, 1984). The soils in the Study Area are classified by Agricultura Canada and the Ministry of Agriculture and Food as Mineral soils, of the Gleysolic Order (Soil landscapes of Canada ID 54500631) (OMAF, 1979). Soil samples taken at the time of visit indicated a clay loam soil, with wetland indicators (mottles and gley) being found within the Reed-canary Grass marsh described below. Gley occurs when the oxygen in the soil becomes depleted (due to water saturation) resulting in the iron being reduced taking on a blue-grey colouration.

This reduced iron is also mobile and can re-oxidize, producing reddish, yellow, or orange spotting, which is known as mottling. Both of these features are indicators of wetland presence due to the water table being close to the surface.

4.2 Vegetation Survey

The Study Area consists of five different vegetation communities with four within the Site and one just north of the Site. Ecological Land Classification (ELC) polygons for the Site are shown on Figure 3 in **Appendix A**. A total of 76 vascular plant species were identified on the Site from the vegetation survey. A full vascular plant species inventory as observed on the Site is catalogued in Table 1 in **Appendix D**.

4.2.1 Vegetation Communities

A review of historic aerial photography shows that the Site was cleared for agriculture as recently as 1980 (City of Ottawa, 2019). Since this, these former crop fields have become colonized with common and early successional species. In total, five vegetation communities were identified on and north of the Site, including High Density Residential, Dry Fresh Manitoba Maple Deciduous Forest, Reed-canary Grass Graminoid Mineral Meadow Marsh, Dry Fresh Mixed Meadow, and Sumac Deciduous Shrub Thicket communities. These communities show a range from very early successional (mixed meadow) to later early-successional (deciduous forest) and therefore have high species overlap. Each vegetation community is described in detail below, and a map of their locations is shown on Figure 3 in **Appendix A**.

Dry-Fresh Mixed Meadow (MEMM3): This community begins at the edge of Hazeldean Road to the south of the Site. This community consists of a generally disturbed meadow with species and composition typical of urban areas. The dominant species include Smooth Brome (*Bromus inermis*) and Late Goldenrod (*Solidago altissima*), with secondary species including Common Milkweed (*Asclepias syriaca*), Lesser Burdock (*Arctium minus*) and Wild Parsnip (*Pastinaca sativa*). Wild Parsnip is a tall perennial wildflower from the carrot family (*Apiaceae*) but is an unwanted invasive plant in Ontario. The seeds of Wild Parsnip, containing chemicals called furanocoumarins as deterrence to animals from eating the plant, can cause a burn-like rash on skin if exposed to the sap and then sunlight. Within this community, Wild Parsnip is found in scattered clumps throughout with the highest density being close to Hazeldean Road. Care should be taken in and around these invasive plants. A soil sample taken from this community showed silty clay soils with no mottling of gley present. A second, smaller meadow of the same composition is located within the Manitoba Maple Forest described below as shown on Figure 3.

Sumac Deciduous Shrub Thicket (THDM1-2): This community occurs between Cedarow Court, the above mixed meadow and the Manitoba Maple Forest described below. Similar to the mixed meadow, this community contains common native and invasive species which are well adapted to urban areas.

The dominant species in this community are Staghorn Sumac (*Rhus typhina*) and Common Red Raspberry (*Rubus idaeus*). These shrubs are commonly found throughout southern and eastern Ontario, particularly within open areas due to the lack of shading from taller trees, as are found elsewhere on the Site. Typical understory species include Late Goldenrod and Smooth Brome. Wild Parsnip is also found within this community, with the highest density being found in and around the disturbed area near Cedarow Court. A soil sample taken within this community showed silty clay soils, with no mottling or gley found.

Dry-Fresh Manitoba Maple Deciduous Forest (FODM4-5): This community occurs along the northern edge of the Site and extends off onto the public property. This community is dominated by Manitoba Maple (*Acer negundo*) with White Ash (*Fraxinus americana*), Balsam Poplar (*Populus balsamifera*) and White Elm (*Ulmus Americana*) making up the rest of the canopy. Manitoba Maple is an invasive non-native species which is frequently found within urban areas. This species was not present pre-settlement but is now naturalized throughout eastern Ontario. The subcanopy is dominated by Staghorn Sumac, Manitoba Maple and White Ash. The ground cover layer is dominated by Late Goldenrod and Smooth Brome. There are a number of dead ash trees within this community, and some living trees which are displaying bark sloughing that is an early sign of Emerald Ash Borer infestation. Emerald Ash Borer is an invasive insect, originally from Asia, which was first discovered in Ontario in 2002, and have been a major issue in southern Ontario since their introduction (OFAH, 2012).

Reed-canary Grass Graminoid Mineral Meadow Marsh (MAMM1-3): This community occurs entirely off of the Site within the publicly owned lands. The marsh begins at the base of the bank and stretches across Poole Creek to the bank of the other side. This community is dominated by Reed-canary Grass (*Phalaris arundinacea*), with Spotted Jewelweed (*Impatiens capensis)*, Spotted Joe-pye Weed (*Eutrochium maculatum*), and cattails (*Typha angustifolia* and *Typha X glauca*) forming the secondary species. A soil sample taken from this community showed loam soils with mottling seen at a depth of 20 cm and gley at a depth of 35 cm.

The final community, High Density Residential (**CVR_2**), consists of a roadway being used on the adjacent property as part of the first phase of development.

4.3 Surface Water, Groundwater and Fish Habitat

Results from the background review and field assessment indicate that no watercourses or fish habitat were present on the Site. The nearest watercourse is the Poole Creek located north of the Site approximately 40-50 m away. No Aquatic Species at Risk were identified in the background review for the Site. The floodplain has been identified as being north of the Site; however, a small portion of the Site falls under the regulation limit of the MVCA.

The stretch of Poole Creek within the Reed-canary Grass Graminoid Mineral Meadow Marsh community consists of a free-flowing meandering stream, with a primarily cobblestone substrate and with gravel and sand within the gaps (MVCA, 2009). The thermal regime of this creek is cool/cold water, indicating potential groundwater recharge areas at some sections of the watercourse. There is evidence of beaver activity adjacent to Poole Creek with stumps of felled trees and game trails visible within the grasses. These stones provide essential habitat for benthic species such as caddisflies, mayflies and stoneflies, which were all observed within the stream.

The rocky substrate also provides habitat for fish species with Creek Chub (*Semotilus atromaculatus*) and Bass (*Micropterus sp.*) being observed in the creek during field assessment. Although no record within 1 km of the Site was found on the DFO Aquatic Species at Risk mapping, the City noted that American Eel (*Anguilla rostrata*), *Threatened*, occurs in Poole Creek. At the time of visit, the wet width and bankfull width of the stream were approximately 2.5 m and 3.5 m, respectively. There is also extensive refuse dumping observed within the stream and adjacent riparian areas.

Groundwater was not studied for this report but included in a separate geotechnical investigation for groundwater for foundations of the proposed development. Seasonal variations in the water table should be expected, with higher levels occurring during wet weather conditions in the spring and fall and lower levels occurring during dry weather conditions.

4.4 Area of Natural and Scientific Interest and Provincially Significant Wetland

There are no Areas of Natural and Scientific Interest (ANSI) including life science and earth science ANSIs present on or adjacent to the Site.

Based on the NHIC mapping during desktop review, there are no evaluated wetlands including *Provincially Significant Wetlands* mapped on the Site or within the Study Area (i.e., 120 m from the Site). After completing the field assessment, one wetland community was found in the Study Area, but off of the Site. This wetland lies within the floodplain of Poole Creek just north of the Site boundary. The exact boundaries and significance of the wetland are not known at this time. It is noteworthy that the proposed development footprint is farther south from this wetland area.

4.5 Significant Valleylands

The stream valley of Poole Creek is considered Significant Valleylands due to the steep slopes (>15%) and extended length (>50 m) associated with the valley, the presence of Poole Creek and associated cold water fish habitat, vegetated valley slopes and a distinctive geomorphic landform. MVCA was previously consulted on the top of slope limits prior to the Phase 1 development. The top of stable slope was surveyed within the Study Area with MVCA and is shown within the Site Plan in Figure 4 in **Appendix A**. The limit of the Significant Valley should align with this top of stable slope limit as the top of the Significant Valley.

A minimum 15 m buffer for the top of stable slope is required from the MVCA. This protective buffer is indicated on Figure 4 in **Appendix A.** A minimum of 30 m buffer is required from the boundary of the Urban Natural Features unless it is demonstrated through an EIS that there will be no negative impacts to the feature. These buffers are all contained within the Poole Creek Regulation Limit which will not be encroached upon. This will be addressed further in sections 5.0 and 6.0 below.

4.6 Species at Risk

A total of 16 Species at Risk (SAR) were identified as having potential habitat on the Site as a result of the background review of the NHIC records and other available data sources for the Study Area surrounding the Site. Those species, their listing status, the last observed date, and the sources used to identify their presence in the area surrounding the Site are all summarized in Table 2. Species at Risk Screening in **Appendix E**.

Based on background review and field assessment, the majority of those SAR do not have suitable habitat on the Site. Species that have a potential to occur include Snapping Turtle (*Chelydra serpentina*), Blanding's Turtle (*Emydoidea blandingii*), American Eel, Bobolink (Dolichonyx oryzivorus), Eastern Meadowlark (*Sturnella magna*), Eastern Wood-pewee (*Contopus virens*) and Monarch Butterflies (*Danaus plexippus*). Butternut (*Juglans cinerea*) have been found previously on the Site and within the Study Area; however, no Butternut trees were observed on the Site during the most recent Site visit.

Potential SAR on the Site

Monarch Butterflies (*Special Concern)* can be found wherever milkweed and wildflowers exist and were observed on our Site during field surveys. There are also occasional milkweed and wildflowers present in the mineral meadow on the Site, however it is too small in size to be considered significant wildlife habitat.

Both Snapping Turtles (*Special Concern)* and Blanding's Turtles (*Threatened)* have the potential to utilize the Site as habitat due to the proximity to Poole Creek. It is likely that they could utilize the wetland area to the north of the Site in the Study Area as habitat and potential nesting areas. The wetland is small in size, but it is adjacent to Poole Creek which these reptile species likely utilize as a corridor for movement to other wetlands upstream and/or downstream.

As discussed earlier, American Eel (*Threatened)* has the potential to occur in Poole Creek off the Site within the Study Area. Although no record within 1 km of the Site was found on the DFO Aquatic Species at Risk mapping, this benthic fish SAR may utilize the substrate and bottom section of Poole Creek adjacent to the Site for protection and cover.

Eastern Meadowlark (*Threatened)* and Bobolink (*Threatened)* have the potential to utilize the Dry-Fresh Mixed Meadow on Site as habitat. The meadow is small in size and next to a busy road, so it is not the best quality habitat for these avian species. Given the surrounding urban landscapes, there is a chance these species would utilize this habitat over other areas due to large amount of developed areas. However, the noise pollution from being in a busy urban area could deter the birds from utilizing this space. Eastern Wood-pewee (*Special Concern)* has the potential to utilize the Dry-Fresh Manitoba Maple Deciduous Forest as habitat. This species often utilizes edge habitats of mature deciduous forests. The forest on the Site is small in size but is near a watercourse and provides potential habitat to this avian species.

It is likely that due to the fragmented and urbanized landscape surrounding the Site that this species may choose to utilize this space. However, the noise pollution from being in a busy urban centre could deter the birds from utilizing this space.

None of the above Species at Risk or Species of Conservation Concern were observed on the Site or within the Study Area during the field surveys.

Previously Confirmed SAR on/adjacent to the Site

Butternuts, *Endangered*, are most often found on moist, well-drained soils and along streams. There were Butternut trees identified by the previous Arborist assessment conducted for both Phase 1 and 2 development areas. A permit to harm or remove those trees and their habitats has already been obtained by the Client from the province. The original Butternut inventory and transplanting plan was detailed in the Butternut transplanting plan (DALA, 2011), while the Butternut compensation planting and maintenance agreement was formed with the City of Ottawa (CMHC, 2011). Based on the Tree Conservation Report (TCR) for the Phase 2 development area and confirmation with the City planning staff for the Tree Conservation Report, there were no Butternut trees identified within the Site boundaries in the Phase 2 development area (Golder, 2020; WSP 2023). Additionally, a butternut search, dated on January 14, 2022, concluded that no new seedlings or saplings were observed on the Site; therefore, no requirements for notification or permitting under the ESA 2007 are required with the proposed Phase 2 development (Golder, 2022).

4.7 Incidental Wildlife Observations

Due to the anthropogenic influences experienced on the Site and surrounding areas there were limited number of wildlife observed during the field survey. The following wildlife species were observed on the Site and in the Study Area: Creek Chub (*Semotillus atromaculatus,* S5), White Tailed Deer (*Odocoileus virginianus,* S5), Banded Hairstreak (*Satyrium calanus,* S4), Yellow Garden Orbweaver (*Argiope aurantia,* S5), American Beaver (*Castor canadensis,* S5), Eastern Cottontail (*Sylvilagus floridanus,* S5) and Brown-headed Cowbird (*Molothrus ater,* S4B). All of these species are well adapted to urban environments, and none of these species are endangered, threatened or special concern in protection status.

4.8 Natural Heritage System and Ecological Connectivity

The Site is bounded by an under-construction residential apartment building to the east, an industrial/commercial development to the west, Poole Creek to the north, and Hazeldean Road to the south. The Site is in an area zoned as urban, with much of the surrounding landscape consisting of housing developments and businesses. The watercourse to the north of the Site within the Study Area flows through the urban area with a riparian zone established throughout its reach. Currently, there is a significant riparian zone separating our Site from the watercourse.

Due to the Site being surrounded by urban development, the watercourse north of the Site acts as a corridor for wildlife movement and dispersal. Poole Creek is well connected within the landscape and provides safe passage for species that need to avoid busy urban centres. Although the surrounding areas are mostly urban and residential, Poole Creek eventually leads to less disturbed and green spaces which these species can utilize.

The natural features on the Site do not appear to have a great amount of ecological value as a public area. The watercourse in the Study Area and its riparian zone should be maintained with an appropriate buffer to allow for wildlife to traverse freely as a movement corridor. The proposed development should be set back from these valuable features to maintain their ecological integrity. Efforts at ecological restoration including invasive species removal, planting of native species, and removal of dumping refuse could elevate the ecological value of the disturbed area.

5.0 PROPOSED DEVELOPMENT

Currently, the Client has completed Phase 1 of the construction to the east of the Site, creating a residential apartment complex. Phase 2 is proposed for the Site, consisting of a six-story mixed-use residential apartment building with business and retail fronts, underground parking and associated amenities. A Site Plan for the proposed development is included in **Appendix F** in this report. The proposed building development will not encroach on the Poole Creek Regulation Limit on the northwestern boundary of the Site after design adjustments discussed with the City staff. The only aspect of the development that will cross the regulation limit is a connection line from an existing storm manhole to a storm sewer. Impacts from the connection line are expected to be minimal and will be offset through a Restoration Planting Plan. As a result of the proposed construction of these structures and associated activities, direct and indirect impacts have been identified and assessed in detail below.

5.1 Impact Assessment (Direct and Indirect)

5.1.1 Direct Impacts

The proposed development will be entirely contained within the existing footprint of the Site. From an ecological perspective, the potential direct impacts from site construction on the natural features (e.g., thicket, meadow and forest) as a result of the proposed residential development on the Site include:

- The removal of trees and vegetation on the Site;
- Landscaping within the 15 m buffer from the Top of Stable Slope; and
- The displacement of wildlife on the Site.

Three vegetation communities on the Site, including Dry-Fresh Mixed Meadow, Sumac Deciduous Shrub Thicket, and Dry-Fresh Manitoba Maple Deciduous Forest, will be removed to accommodate the proposed development. A Tree Conservation Report Update submitted for the Phase 2 development area documented all trees to be retained or preserved with a minimum DBH of more than 10 cm as required by the City of Ottawa guidelines (WSP, 2023). The wetland to the north of the Site within the Study Area will be protected from the proposed development and associated construction activities. A setback from development from this wetland will be established from the wetland boundary. Poole Creek and the associated Significant Valleylands are adjacent to the Site to the northwest and provide connectivity for wildlife movement within the larger landscape; therefore, this watercourse and valleylands will also need to be adequately protected from construction activities.

Although Poole Creek and the associated Significant Valleylands will not be impacted by the development, landscaping is likely to occur within a portion of the 15 m buffer from the Top of Stable Slope, around the perimeter of the building. Within the 15 m buffer sod will be installed as well as other 6 landscaping trees. Care should be taken during the installation of landscape materials that promote proper infiltration of surface runoff to ensure the installation of landscape materials does not have any negative effects on the valleyland features downslope and foster water infiltration into the surface. The impacts from this landscaping are expected to be temporary and minimal. Additional details on this area can be found within the separate Landscape Plan (Levstek, 2023).

A restoration area has been proposed in order to ecologically offset any impacts from the proposed Phase 2 development. Due to the heavily treed areas in the top of stable slope buffer zone, the restoration planting will focus on this less vegetated area below the top of stable slope limit. The size of the restoration area for planting trees and shrubs is approximately 0.109 hectare. The designated restoration area is shown in Figure 4 **Appendix A** and discussed in Section 6.0 below. Within this restoration area native deciduous and coniferous trees and shrubs will be planted to improve the ecological integrity of the area and promote plant uptake of surface runoff through natural evapotranspiration.

A separate report, titled Geotechnical Investigation: Proposed Mixed-Use Development, prepared by Paterson Group, has shown that there will be no negative impacts to the hazard lands. This determination and mapping can be found in Figure 5 of **Appendix A**.

Existing wildlife that inhabits the Site within the footprint of construction will be displaced as a result of site alteration and construction. As many were observed incidentally on the Site, these wildlife are mostly common suburban species that could migrate to wooded and wetland areas away from the Site to continue their life processes.

5.1.2 Indirect Impacts

The potential indirect impacts to the natural heritage features (i.e., wetland, valleyland and watercourse within the Study Area) include the following:

- Effects on plants and wildlife at the northern portion of the Site and adjacent to the Site by construction noise, dust, and vibration;
- Sedimentation of the wetland, valleyland and creek off the Site by construction activities; and
- Alteration of water quality and flow regime in the adjacent wetland and drainage features.

The impact on the wetland and valleyland communities and their inhabitant plants and wildlife is limited to the species located within or directly adjacent to the Site, as a result of the contained development within the Site. Further, this indirect impact is not significant as construction will take place during the day and the species have adapted to traffic noise as well as human activities in the suburban area. A buffer between the wetland boundary and the proposed development will be established to ensure that the wetland does not incur significant damage. It is possible that invasive species spread may occur in the adjacent communities due to construction occurring close to the 15 m buffer, and landscaping occurring within the 15 m buffer. Sediment and erosion control measures will be installed to help aid in the spread of these species through sediment and water, as well as additional measures to be addressed in a separate construction monitoring and mitigation plan.

During the construction period, wildlife including birds and mammals that occasionally use the wetlands on the Site for foraging and breeding may be disrupted and are likely to abandon the disturbed portions due to indirect impacts of noise and vibration. It is likely that any species impacted will utilize the wildlife corridor that Poole Creek provides to move off of the Site. With the application of protective measures to the surrounding natural areas, the wetland ecosystem will continue to perform their landscape and ecological functions.

Stormwater runoff from site construction and alteration has potential impacts to the adjacent wetland, valleyland and creek by releasing sediment-laden water to these valuable natural features. The Servicing and Stormwater Management Brief completed by Stantec for the Site described water quantity and quality control measures on the Site and water balance pre and post construction. Stormwater runoff from the Site is captured via catchbasins and roof drains and conveyed to a hydrodynamic separator for water quality treatment before entering an underground storage unit for quantity control. The storage unit is restricted by ICDs and a flow control weir at the downstream end while the roof runoff is controlled via roof drains discharging through the internal building plumbing. A StormTech system is proposed to provide subsurface storage in addition to meeting water balance requirements. In case of subsurface storage tank failure, overflows are managed via installed weir wall within STM 101 to address orifice blockage. Each cell of the StormTech unit is interconnected to prevent blockage of a cell from impacting the overall unit, and each cell is open to infiltration to soils below. The site discharge will be conveyed to the previously approved outlet location at the western boundary of the Site which ultimately directs flow into Poole Creek.(Stantec, 2023). On-site water quality control is required to provide 80% TSS removal prior to discharging to Poole Creek. A Stormceptor unit STC300 is proposed upstream of the underground storage unit. To promote ground infiltration of surface flow, low impact development (LID) features will provide infiltration back into the groundwater for this Site. The LID features are designed to be at the back of the proposed 6 storey apartment building (phase 4 of the Phase 2 development) to the west of the Site and will connect to the drainage outlet (Chmiel Architects, 2023 and Stantec, 2023). The KWMSS and Carp River Watershed Study report identify that the Site is located within a low groundwater recharge area. The Watershed Study in particular recommends a minimum of 73 mm per year of infiltration (or 1171 m^3/yr for the 2.29 ha site) for water balance purposes and to support Poole Creek baseflow. As such, it is proposed that runoff from the development be directed to an infiltration BMP composed of clear stone be located directly underneath the proposed StormTech subsurface storage unit to provide baseflow to the creek during the inter-event period. The BMP is to tie in behind the orifice control for the subsurface storage to allow overflow via ICDs within the outlet manhole for larger storm events to be controlled prior to release to the creek. Inverts of the BMP have been set to avoid high groundwater elevations and provide a minimum offset of 1.0 m from anticipated bedrock elevations (Stantec, 2023).

Finally, erosion and sediment controls with Best Management Practices during construction were recommended for the Site. The successful establishment of erosion and sediment control measures may act as a sufficient barrier to protect these adjacent features. A wildlife exclusion fence should also be installed to ensure that turtle species with the potential to be on the Site cannot enter into the construction area (MNRF, 2013; Levstek, 2023). If installed properly, the wildlife exclusion fence will be able to exclude reptiles such as turtles and snakes from entering into the Site during the construction period.

5.2 Residual and Cumulative Effects Assessment

Residual environmental effects are any permanent, non-mitigable change in an identified valued ecosystem component. As residual environmental effects on the natural environment cannot be completely addressed through mitigation, they are likely to persist following project completion. Residual effects may result in cumulative effects through the interaction between residual effects of the project and those associated with other identified project and/or activities. Due to local construction of the material retail units building within the Site surrounded by developed land, the residual effects from the Site construction are projected to be low significance in magnitude, geographic extent, duration and frequency.

With sufficient mitigation measures implemented prior to the construction activities, no cumulative impacts to the natural heritage features are anticipated as a result of the proposed residential construction. Recommendations and mitigation and enhancement measures for the potential direct and indirect impacts are detailed in Section 6.0 below.

6.0 RECOMMENDED MITIGATION AND ENHANCEMENT MEASURES

Based upon the above direct and indirect impact assessment according to the EIS guidelines provided by the City of Ottawa and the MVCA, there are identified direct impacts and minor indirect impacts on the natural environment, including woodland present on the Site and wetland and watercourse within the Study Area. The wetland to the north of the Site is currently unidentified, and therefore have no status. The wetland may form a part of a larger wetland complex along Poole Creek.

The Poole Creek as a cool/cold watercourse has its headwaters in the Upper Poole Creek Wetland Complex and drains north-easterly through the village of Stittsville into the Carp River. According to the City of Ottawa and MVCA's EIS Guidelines, proposed mitigation measures, including recommendations for timing windows or other specifications for implementation, for all potential negative impacts will need to be included in the EIS.

Furthermore, mitigation measures relating to the protection of setbacks and buffers during on-site works (such as fencing) must be implemented prior to the commencement of those works. Therefore, exclusion fencing to the sensitive natural features should be established and protected from the proposed apartment building development.

The proposed development will be set back from the wetland, valleyland and drainage features north of the Site and from the majority of their associated buffers. To elaborate, there is no proposed building encroachment into the Poole Creek Regulation Limit. The only aspect of the development that will cross the regulation limit and Top of Stable Slope is a connection line from an existing storm manhole to a storm sewer. All of the remaining 15 m buffer is respected by and excluded from any proposed works.

This tableland adjacent to the Site leading to the valleylands will be preserved except the encroached pocket since it is recognized as an important transition from the Site to the valleylands and creek. Within the exclusion zone established, no development activities including site grading and construction will take place on or adjacent to the Site. Additional details on the planting of native trees and shrubs on the Site can be found within the Landscape Plan (Levstek Consultant, 2023).

The natural heritage features described above provide a good ecological value for plant, fish and wildlife, protection of the wetland and watercourse from the proposed development is warranted to prevent soil erosion from occurring and sediment-laden water from entering these valuable natural features during site construction. The following recommendations are provided for the protection of the above key features prior to construction or site alteration.

Additionally, restoration and/or enhancement plans must be timely developed and effectively implemented on the Site to ensure that no negative impacts will occur to the woodland post construction.

Tree and vegetation removal:

- The extent of potential tree and vegetation removal within the Site is restricted to the construction footprint as necessary.
- The removal or preservation of trees should follow the Tree Conservation Report for the Phase 2 development area.
- To minimize or avoid impacts to breeding and nesting birds, the removal of tree and vegetation will be outside of the breeding period between April 15 and August 15.
- As Wild Parsnip was confirmed to be present within the mixed meadow (MEMM3) and shrub thicket (THDM1-2) communities. This is a toxic plant that should be handled carefully. The removal of any noxious invasive plants should be conducted by a Professional Landscaper who is familiar with the species and with the procedures of invasive plant control and removal.
- Disturbed areas should be replanted with locally grown native plant species.

Erosion and sediment control and best management measures:

- An Erosion and Sediment Control (ESC) Plan with ecological protection measures as part of the Servicing and SWM Brief has been developed for the construction on the Site. It is recommended that the site alteration and construction against this ESC Plan will be monitored regularly during active construction (i.e., at every major rainfall and/or weekly) by a qualified Environmental Monitor and overseen by a certified Inspector of Sediment and Erosion Control.

- Prior to construction and site alteration, adequate ESC measures including a sediment fencing should be established around the Site upgradient from the natural heritage features until the disturbed area is restored upon construction completion. Sufficient buffers to the adjacent natural features through protection zones will be established.
- Construction equipment will remain within the areas of active construction and will not cross the sediment control measures.
- If required, repair and maintenance of the installed ESC measures are conducted regularly with outcomes monitored by the qualified Environmental Monitor until construction completion.
- Disturbed areas should be stabilized and reseeded immediately post construction to prevent site erosion and/or sedimentation. The ESC measures should be removed at the completion of construction once the Site has stabilized.

Wildlife and Species at Risk encounter protocol:

- If wildlife is encountered during construction, work should cease immediately and allow the animal to naturally move out of the construction zone. If the animal does not leave the area for a prolonged period of time, please consult with a qualified biologist or Environmental Monitor for possible response or mitigation measures.
- If an animal is injured or deceased or if a Species at Risk is found on the Site, the Ministry of Environment, Conservation and Parks will be contacted for guidance and handling.
- Wildlife exclusion fencing or equivalent for turtles should be installed along the property boundary to deter any species from entering the construction area due to the proximity of the Site to Poole Creek and the associated wetland.

Restoration and enhancement measures and monitoring:

- A Restoration Planting Plan for a planting area of approximately 0.109 hectare has been developed for the restoration and enhancement area near the Site within the Study Area, with planting materials and instructions detailed in **Appendix G**. The Restoration Planting Plan details the planting of 25 native deciduous trees, 13 native coniferous trees, and 52 native shrubs as well as the removal of invasive Common Buckthorn *(Rhamnus cathartica)* and Garlic Mustard *(Alliaria petiolate)*, and seeding with a native seed mix within this restoration area. This restoration will take place as restoration and enhancement for the potential negative effects of the minor encroachment from construction and landscaping within the 15 m buffer.

- This Restoration Planting Plan should be read in conjunction with the Landscape Plan for the restoration and enhancement measures of the Site post construction. The Landscape Plan details the planting of an additional 172 deciduous trees, 70 coniferous trees, 1224 shrubs, 564 perennials, and 1093 grasses and sedges throughout the Site (Levstek, 2023). A restoration monitoring is required post restoration to validate the restoration and enhancement measures realized on the Site within one year of construction completion according to the location, species, quantity, specs, etc. for tree and shrub planting outlined in the Restoration Planting Plan.

7.0 CONCLUSION

There are environmental opportunities and constraints identified on the Site as outlined in this EIS report. The assessed impacts, including direct and indirect impacts, can be avoided or mitigated through effective stormwater and environmental management measures. With the implementation of the environmental plans sought out in this EIS and the Restoration Planting Plan and Landscape Plan post construction on the Site, the proposed development would preserve the ecological functions of the adjacent natural features and enhance natural landscape on the Site through the installation of planned restoration and enhancement measures on the Site post construction.

With the above recommendations taken into account and diligently implemented on the Site, no additional adverse negative impacts to the ecological integrity of the Site and the Study Area will result from the proposed residential development.

8.0 CLOSURE

The enclosed Environmental Impact Study report has been prepared to assess the natural heritage features including the terrestrial and aquatic conditions on the Site and within the Study Area. The information contained herein as a result of the EIS regarding the proposed residential development is provided to the Client for the Application of a Site Plan Approval.

In the event that clarifications or further information is required by the Client and approval agencies, please do not hesitate to contact the primary Pinchin contact indicated in the contact page of this document.

9.0 REFERENCES

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10.0 LIMITATIONS

This EIS report work was performed subject to the Terms and Limitations presented or referenced in the proposal for this project. Information provided by Pinchin is intended for the Client to obtain a Site Plan Approval. Pinchin will not provide results or information to any third party unless disclosure by Pinchin is required by law. Any use by a third party of reports or documents authored by Pinchin or any reliance by a third party on or decisions made by a third party based on the findings described in said documents, is the sole responsibility of such third parties. Pinchin accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted. No other warranties are implied or expressed.

247248 UPDATED FINAL Environmental Impact Study 20 Cedarow Court Ottawa ON June 29 2023.docx

APPENDIX A
SITE FIGURES

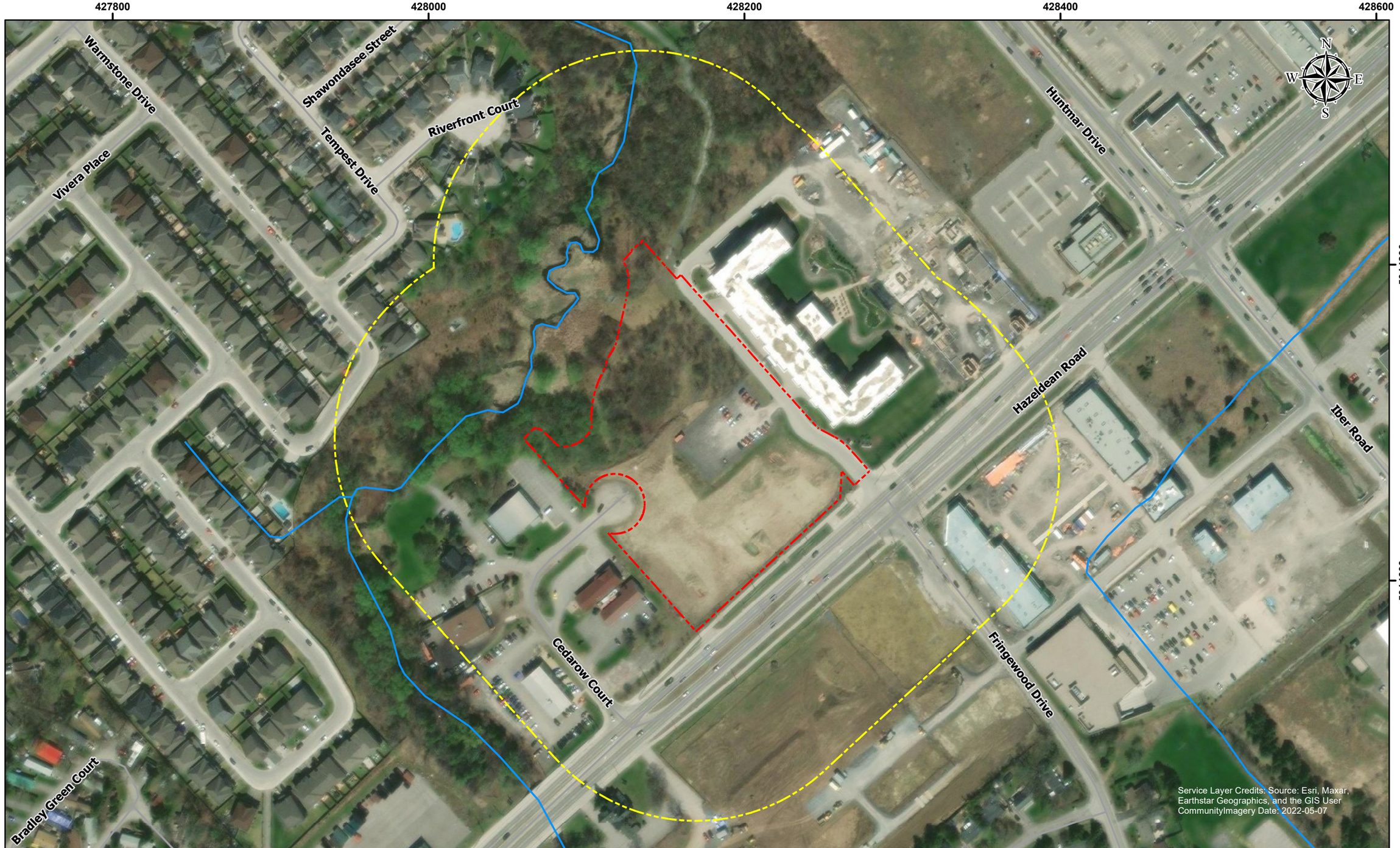
426000 427000 428000 429000 430000

5016000 5015000 5014000

SITE

Kanata KEY MAP Stittsville

PINCHIN	**PROJECT NAME:** 20 CEDAROW COURT, STITTSVILLE ENVIRONMENTAL STUDY **CLIENT NAME:** NAUTICAL LANDS GROUP **PROJECT LOCATION:** 20 CEDAROW COURT, STITTSVILLE, ONTARIO **FIGURE NAME:** SITE LOCATION	**PROJECT NO.** 247248 **DATE:** MARCH 2023 **SCALE:** 1:12,000 **FIGURE NO.** 1	**LEGEND** Subject Property Service Layer Credits: © OpenStreetMap (and) contributors, CC-BY-SA Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster	0 120 240 480 Metres Coordinate System: WGS 1984 UTM Zone 18N Projection: Transverse Mercator Datum: WGS 1984



PINCHIN

PROJECT NAME:	20 CEDAROW COURT, STITTSVILLE ENVIRONMENTAL STUDY
CLIENT NAME:	NAUTICAL LANDS GROUP
PROJECT LOCATION:	20 CEDAROW COURT, STITTSVILLE, ONTARIO
FIGURE NAME:	STUDY AREA
PROJECT NO.	247248
DATE:	MARCH 2023
SCALE:	1:2,300
FIGURE NO.	2

LEGEND

- Approximate Site Boundary
- Study Area
- Watercourse

Ecological Land Classification

- CVR_2 – High Density Residential
- FODM4-5 - Dry – Fresh Manitoba Maple Deciduous Forest
- MAMM1-3 – Reed-canary Grass Graminoid Mineral Meadow Marsh
- MEMM3 – Dry – Fresh Mixed Meadow
- THDM1-2 – Sumac Deciduous Shrub Thicket

0 20 40 80 Metres

Coordinate System: WGS 1984 UTM Zone 18N
Projection: Transverse Mercator
Datum: WGS 1984

427950 428000 428050 428100 428150 428200 428250 428300 428350

5014800 5014750 5014700 5014650 5014600

N W E S

Tempest Drive

MAMM1-3

FODM4-5

MEMM3

CVR_2

Hazeldean Road

MEMM3

Cedarow Court

THDM1-2

Fringewood Drive

Hazeldean Road

Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User CommunityImagery Date: 2017-07-30

PINCHIN

PROJECT NAME: 20 CEDAROW COURT, STITTSVILLE ENVIRONMENTAL STUDY

CLIENT NAME: NAUTICAL LANDS GROUP

PROJECT LOCATION: 20 CEDAROW COURT, STITTSVILLE, ONTARIO

FIGURE NAME: ECOLOGICAL LAND CLASSFICATION

PROJECT NO. 247248

DATE: MARCH 2023

SCALE: 1:1,200

FIGURE NO. 3

LEGEND

Subject Property

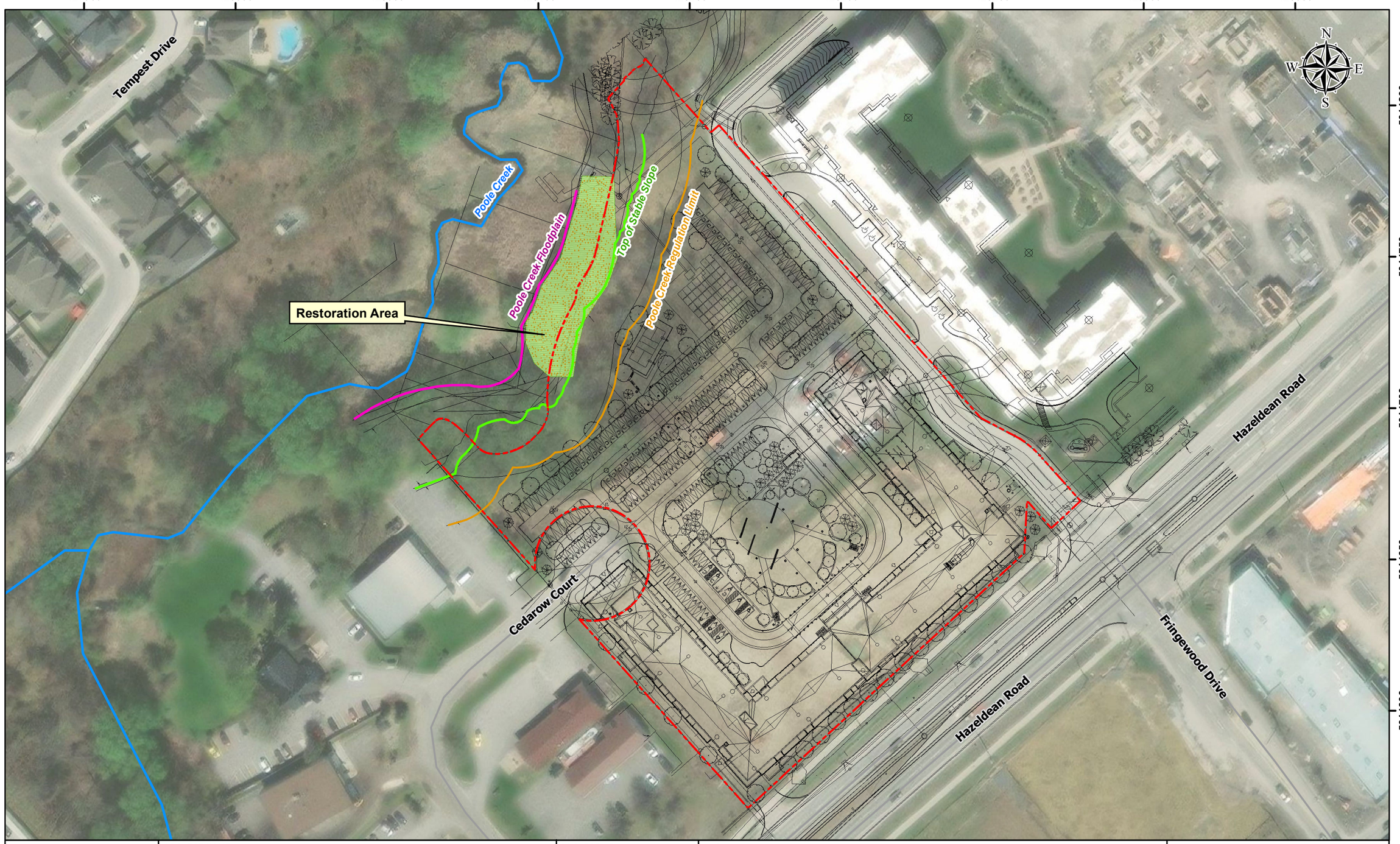
Watercourse

Ecological Land Classification

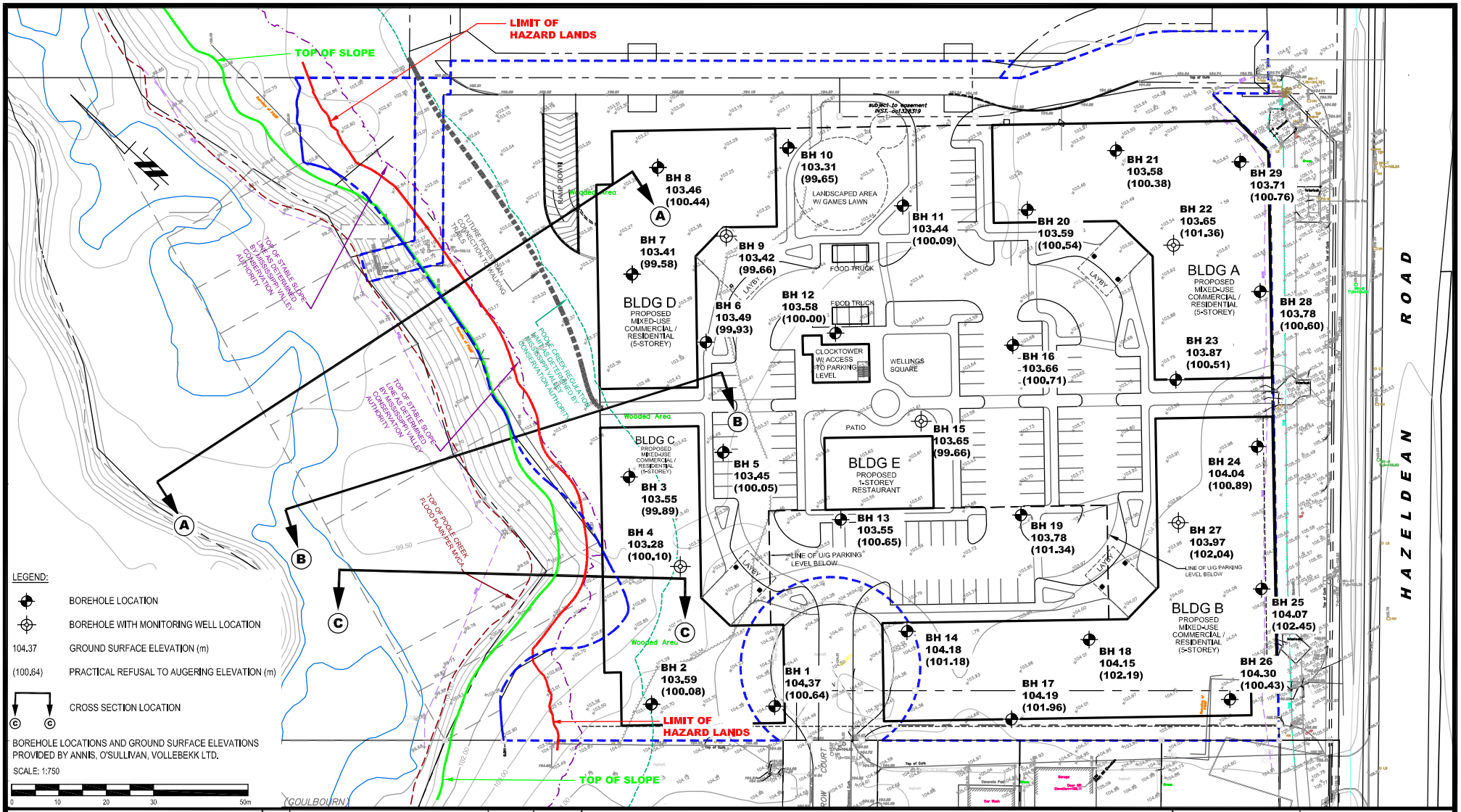
- CVR_2 – High Density Residential
- FODM4-5 - Dry – Fresh Manitoba Maple Deciduous Forest
- MAMM1-3 – Reed-canary Grass Graminoid Mineral Meadow Marsh
- MEMM3 – Dry – Fresh Mixed Meadow
- THDM1-2 – Sumac Deciduous Shrub Thicket

0 10 20 40 Metres

Coordinate System: WGS 1984 UTM Zone 18N
Projection: Transverse Mercator
Datum: WGS 1984



PINCHIN	**PROJECT NAME:** 20 CEDAROW COURT, STITTSVILLE ENVIRONMENTAL IMPACT STUDY **CLIENT NAME:** NAUTICAL LANDS GROUP **PROJECT LOCATION:** 20 CEDAROW COURT, STITTSVILLE, ONTARIO **FIGURE NAME:** SITE PLAN WITH RESTORATION AREA	**PROJECT NO.** 247248 **DATE:** MARCH 2023 **SCALE:** 1:1,200 **FIGURE NO.** 4	**LEGEND** Approximate Site Boundary Watercourse Poole Creek Floodplain Top of Stable Slope Poole Creek Regulation Limit Restoration Area	Note: This map is for planning purposes only. Please refer to original civil drawings for details. Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, and the GIS User CommunityImagery Date: 2022-05-07. Site Plan and constraints provided by Client/chmielarchitects, dwg SP-01, 2023.	0 10 20 40 Metres Coordinate System: WGS 1984 UTM Zone 18N Projection: Transverse Mercator Datum: WGS 1984



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Tel: (613) 226-7381 Fax: (613) 226-6344

NO.	REVISIONS	DATE	INITIAL
1	LIMIT OF HAZARD LANDS REVISED	28/02/2019	FA

NAUTICAL LANDS GROUP

GEOTECHNICAL INVESTIGATION

PROP. MIXED-USE DEVELOPMENT - WELLINGS OF STITTSVILLE PHASE 2 - 20 CEDAROW CT.

OTTAWA, ONTARIO

Title:

TEST HOLE LOCATION PLAN

Scale:	1:750
Drawn by:	MPG
Checked by:	FA
Approved by:	DJG
Date:	01/2019
Report No.:	PG4772-1
Dwg. No.:	PG4772-1
Revision No.:	1

p:\autocad drawings\geotechnical\pg4772\pg4772-1 tht.dwg

APPENDIX B
CITY OF OTTAWA PLANNING MAPS

B

Note:
1) This Schedule forms part of the Official Plan of the City of Ottawa and must be read in conjunction with the text.
2) Boundaries between land use designations are to be interpreted according to Section 5.4.
3) In order to determine permitted land use, reference must also be made to Schedule K, Development Constraints.

Note:
1) La présente Annexe fait partie du Plan officiel de la Ville d'Ottawa et doit être consultée en se reportant au texte même du Plan officiel.
2) Les limites des désignation de sol visées par les politiques doivent êtres interprétées en fonction de la section 5.4 du Plan officiel.
3) Afin de déterminer les activités et les aménagements autorisés, il faut également consulter l'Annexe K , Contraints d'aménagements.

° Subject to Section 3.6.3, policy 14 / Sous réserve de la section 3.6.3 Politique 14

Under Appeal / En appel # 79

See Schedule M / Voir l'annexe M
Ottawa Macdonald-Cartier International Airport Policy Plan
Aéroport International Macdonald-Cartier d'Ottawa Plan Stratégique

Rivière des Outaouais / Ottawa River

Fallowfield

Notre-Dame-des-Champs

Navan

Carlsbad Springs

Manotick

TC

City of Ottawa Official Plan Consolidation and Amendments

Ville d'Ottawa Plan officiel Amendement au plan directeur approuvé

# 1 (09/2003)	# 50 (06/2006)	# 113 (11/2012)	# 172 (07/2016)
# 9 (09/2004)	# 53 (04/2007)	# 123 (07/2013)	# 173 (01/2017)
# 12 (09/2004)	# 54 (06/2007)	# 129 (11/2013)	# 180 (11/2017)
# 14 (09/2004)	# 55 (07/2007)	# 131 (03/2015)	# 184 (04/2017)
# 16 (11/2004)	# 58 (12/2007)	# 132 (03/2015)	# 189 (08/2017)
# 18 (12/2004)	# 64 (07/2008)	# 137 (03/2016)	# 191 (08/2017)
# 26 (06/2005)	# 76	# 139 (10/2014)	# 192 (08/2017)
# 28 (07/2005)	# 77 (06/2009)	# 150 (12/2017)	# 196 (10/2017)
# 29 (06/2005)	# 92 (08/2011)	# 155 (10/2015)	# 201 (03/2018)
# 30 (07/2005)	# 96 (03/2012)	# 158 (10/2015)	# 213 (07/2018)
# 35 (09/2005)	#104 (08/2012)	# 160 (11/2015)	# 214 (08/2018)
# 38 (01/2006)	#110 (11/2012)	# 168 (03/2016)	# 219 (08/2018)
# 44 (06/2006)	#111 (11/2012)	# 171 (07/2016)	# 222 (10/2018)

OMB decision/Décision de la CAMO - N° 952; 2649; 2711; 2783; 3184; 1360; 1679; 1034; PL090678; PI140303; PI141147; PL 141223; PL 160875

Official Plan - Schedule B
Urban Policy Plan

Prepared by: Planning, Infrastructure and Economic Development Department

Plan officiel - Annexe B
Plan des politiques en milieu urbain

Preparé par : Services de la planification, de l'infrastructure et du développement économique

General Urban Area	Zone urbaine générale
Urban Expansion Study Area	Zone d'étude d'expansion urbaine
Central Area	Zone centrale
Town Centre	Centre ville
Traditional Mainstreet	Rue principale traditionnelle
Arterial Mainstreet	Artère principale
Mixed Use Centre	Centre polyvalent
Carp River Restoration Policy Area Overlay	Zone sous-jacente de restauration de la rivière Carp
Developing Community (Expansion Area)	Communauté en développement (zone d'expansion)
Natural Environment Area	Zone écologique naturelle
Agricultural Resource Area	Zone de ressources agricoles
Agricultural Research Area	Zone de recherche agricoles
Macdonald-Cartier International Airport	Aéroport international Macdonald-Cartier
Greenbelt Employment and Institutional Area	Zone d'emploi et d'équipement collectif de la Ceinture de verdure
Urban Employment Area	Zone d'emploi urbaine
Greenbelt Rural	Ceinture de verdure secteur rural
Sand and Gravel Resource Area	Zone de ressources de sable et de gravier
Major Open Space	Grand espace vert
Urban Natural Features	Caractéristiques naturelles zone urbaine
Bedrock Resource Area	Zone de ressources en substrat rocheux
Significant Wetlands	Terres humides d'importance
Central Experimental Farm	Ferme expérimentale centrale
Greenbelt Boundary	Limite de la Ceinture de verdure
Solid Waste Disposal Site	Site d'enfouissement des déchets solides
Lands leased by the Ottawa International Airport Authority	Terrains Loués par l'administration de l'aéroport international d'Ottawa

(10/2018)

Scale / Échelle
2km 2 0 1 2 3 4km

L2

Fallowfield
Greely
Metcalfe
Kenmore
Manotick
Richmond
Marionville
Munster
Ashton
Vernon
Kars
Osgoode
North Gower
Burrit's Rapids
Rivière Rideau River

Ottawa

OFFICIAL PLAN - Schedule L2

NATURAL HERITAGE SYSTEM OVERLAY (SOUTH)

Prepared by: Planning and Growth Management Department, Mapping & Graphics Unit, 2012

PLAN OFFICIEL - Annexe L2

ZONE SOUS-JACENTE DU SYSTÈME DU PATRIMOINE NATUREL (SUD)

Service de l'urbanisme et de la gestion de la croissance, Unité de la cartographie et des graphiques, 2012

0 1,250 2,500 5,000 7,500 10,000 Meters

Official Plan for the City of Ottawa Consolidation and Amendments

Plan officiel de la Ville d'Ottawa Amendement au plan directeur approuvé

 # 162 (01/2016)

or/ ou Identified Natural Heritage System Features Overlay
Zone sous-jacente du Système du patrimoine naturel

NOTE: this Schedule forms part of the Official Plan of the City of Ottawa and must be read in conjunction with the text. It provides a partial map of the City's natural heritage system, including designated significant wetlands, urban natural features and Earth Science ANSIs as well as certain other features believed or proven to meet the definitions established in Section 2.4.2 of the Plan. This schedule does not represent the entire natural heritage system for the City of Ottawa. The policies in Section 2.4.2 will be applied to all features meeting the definitions in Section 2.4.2 regardless of whether or not they are included on this schedule. Detailed on-site analysis and interpretation is required to confirm and delineate individual features and the City will update this schedule by Official Plan Amendment as more detailed information becomes available.

AVIS : cette annexe fait partie intégrante du Plan officiel de la Ville d'Ottawa et doit être lue en même temps que le texte. Elle présente une carte partielle du Système du patrimoine naturel d'Ottawa, comprenant des zones désignées terres humides d'importance et caractéristiques urbaines naturelles et éléments topographique de la ZINS , ainsi que d'autres caractéristiques dont on estime ou possède la preuve qu'elles correspondent aux définitions établies dans la section 2.4.2 du Plan officiel. Cette annexe ne présente pas le Système du patrimoine de la Ville d'Ottawa au complet. Les politiques énoncées à la section 2.4.2 s'appliqueront à toutes les caractéristiques correspondant aux définitions à la section 2.4.2, qu'elles fassent ou non partie de cette annexe. La détermination des différentes caractéristiques suppose une analyse sur place ainsi qu'une interprétation détaillées, et la Ville mettra cette annexe à jour, par voie de modification du Plan officiel lorsque des renseignements plus précis seront disponibles.

The following features are designated on other schedules in this Plan, and are shown on this schedule for information purposes only.

- Floodplain / Plaine inondable (See Schedule K / voir Annexe K)
- Village / Village (See Schedule A / voir Annexe A)
- Greenbelt / Ceinture de verdure (See Schedule B / voir Annexe B)
- Urban Boundary / Limite de la zone urbaine (See Schedule A / voir Annexe A)

APPENDIX C
SELECTED SITE PHOTOGRAPHS

SELECTED SITE PHOTOGRAPHS

(all photos were taken during Site surveys on August 20th, 2019)

Photo 1 – Deciduous thicket from Cedarow Court, with Phase 1 development visible in background.

Photo 2 – Mixed meadow at the southern end of the Site

Photo 3 – Reed-canary Grass marsh to the north of the Site

Photo 4 – Mixed meadow with deciduous forest in the background

Photo 5 – View of the Site from Hazeldean Road.

Photo 6 – View of Poole Creek to the north of the Site, with the Reed-Canary Grass marsh on both riparian areas.

APPENDIX D
VASCULAR PLANT LIST

Table 1: Vascular Plant Species

Scientific Name	Common Name	S-Rank	CC	CW
Acer freemanii	Freeman's Maple	SNA	6	-5
Acer negundo	Manitoba Maple	S5	0	0
Acer tartaricum ssp. Ginnala	Amur Maple	SNA		5
Alliaria petiolata	Garlic Mustard	SNA		0
Ambrosia artemisiifolia	Common Ragweed	S5	0	3
Arctium minus	Common Burdock	SNA		3
Artemisia vulgaris	Common Wormwood	SNA		5
Asclepias incarnata	Swamp Milkweed	S5	6	-5
Asclepias syriaca	Common Milkweed	S5	0	5
Bidens cernuus	Nodding Beggarticks	S5	2	-5
Bidens frondosa	Devil's Beggarticks	S5	3	-3
Bromus inermis	Smooth Brome	SNA		5
Butomus umbellatus	Flowering-rush	SNA		-5
Cichorium intybus	Chicory	SNA		5
Cirsium arvense	Canada Thistle	SNA		3
Cirsium vulgare	Bull Thistle	SNA		3
Cornus racemosa	Gray Dogwood	S5	2	0
Daucus carota	Queen Anne's Lace	SNA		5
Dryopteris carthusiana	Spinulose Wood Fern	S5	5	-3
Echinocystis lobata	Wild Mock-cucumber	S5	3	-3
Elymus repens	Creeping Wildrye	SNA		3
Equisetum arvense	Field Horsetail	S5	0	0
Erigeron annuus	Annual Fleabane	S5	0	3
Erigeron philadelphicus	Philadelphia Fleabane	S5	1	-3
Eutrochium maculatum	Spotted Joe Pye Weed	S5	3	-5
Frangula alnus	Glossy Buckthorn	SNA		0
Fraxinus americana	White Ash	S4	4	3
Glyceria striata	Fowl Mannagrass	S5	3	-5
Impatiens capensis	Spotted Jewelweed	S5	4	-3
Inula helenium	Elecampane	SNA		3
Leucanthemum vulgare	Oxeye Daisy	SNA		5
Linaria vulgaris	Butter-and-eggs	SNA		5
Lonicera tatarica	Tartarian Honeysuckle	SNA		0
Lotus corniculatus	Garden Bird's-foot Trefoil	SNA		3
Lycopus uniflorus	Northern Water-horehound	S5	5	-5
Lythrum salicaria	Purple Loosestrife	SNA		-5
Medicago lupulina	Black Medic	SNA		3
Melilotus albus	White Sweet-clover	SNA		3
Mentha canadensis	Canada Mint	S5	3	-3
Oxalis stricta	Upright Yellow Wood-sorrel	S5?	0	3
Panicum capillare	Common Panicgrass	S5	0	0
Parthenocissus quinquefolia	Virginia creeper	S4?	6	3
Pastinaca sativa	Wild Parsnip	SNA		5
Persicaria maculosa	Spotted Lady's-thumb	SNA		-3
Phalaris arundinacea	Reed Canary Grass	S5	0	-3

Phleum pratense	Common Timothy	SNA		3
Phragmites australis	Common Reed	S4	0	-3
Plantago major	Common Plantain	SNA		3
Poa palustris	Fowl Bluegrass	S5	5	-3
Populus deltoides	Eastern Cottonwood	S5	4	0
Potamogeton crispus	Curly-leaved Pondweed	SNA		-5
Rhamnus cathartica	Common Buckthorn	SNA		0
Rhus typhina	Staghorn Sumac	S5	1	3
Robinia pseudoacacia	Black Locust	SNA		3
Rubus allegheniensis	Allegheny Blackberry	S5	2	3
Rubus idaeus	Common Red Raspberry	S5	2	3
Rumex crispus	Curly Dock	SNA		0
Sagittaria latifolia	Broad-leaved Arrowhead	S5	4	-5
Salix discolor	Pussy Willow	S5	3	-3
Salix euxina	Crack Willow	SNA		0
Schoenoplectus tabernaemontani	Soft-stemmed Bulrush	S5	5	-5
Silene vulgaris	Bladder Campion	SNA		5
Solanum dulcamara	Bittersweet Nightshade	SNA		0
Solidago altissima	Tall Goldenrod	S5	1	3
Solidago rugosa	Rough-stemmed Goldenrod	S5	4	0
Stachys palustris	Marsh Hedge-nettle	SNA		-5
Taraxacum officinale	Common Dandelion	SNA		3
Trifolium pratense	Red Clover	SNA		3
Trifolium repens	White Clover	SNA		3
Tussilago farfara	Colt's-foot	SNA		3
Typha angustifolia	Narrow-leaved Cattail	SNA		-5
Typha X glauca	(Typha angustifolia X Typha latifolia)	SNA		-5
Ulmus americana	American Elm	S5	3	-3
Urtica dioica	Stinging Nettle	S5	2	0
Vicia cracca	Tufted Vetch	SNA		5
Vitis riparia	Riverbank Grape	S5	0	0

APPENDIX E
SPECIES AT RISK SCREENING TABLE

Table 2. Species at Risk Screening for the Study Area

Type	Common Name	Scientific Name	Srank	SARO Status	COSEWIC Status	Last Obs Date	Background Information Source					Notes on Preferred Habitat [1]	Confirmed observation on Site	Suitable Habitat on Site
							NHIC Grid 18VR2714	Atlas of Ontario Mammals (Dobbyn 1994)	Atlas of the Breeding Bird of Ontario (Cadman 2009)	Ontario Reptile and Amphibian Atlas (ON 2018)	Ontario Butterfly Atlas (Macnaight on 2018)			
REPTILE	Snapping Turtle	*Chelydra serpentina*	S3	SC	SC	2018	◆			◆		Prefer shallow, slow-mmovnig waters with abundant vegetation, but can also live in deeper water habitats. During the nesting season June-July, they can be gound on gravelly or sandy areas on land.	No	Yes, the Reed-canary Grass mineral meadow and the Mixed Meadow both provide potential nesting habitat for the species. Due to the proximity to the stream in the Study Area, this species could occur on the Site.
	Blandings Turtle	*Emydoidea blandingii*	S3	THR	THR	2019				◆		Can be found in shallow water in large wetlands and shallow lakes with abundant water vegetation. During nesting season they can be found utilizing sandy and gravelly areas.	No	Yes, the Reed-canary Grass mineral meadow and the Mixed Meadow both provide potential nesting habitat for the species. Due to the proximity to the stream in the Study Area, this species could occur on the Site.
BIRD	Bank Swallow	*Riparia riparia*	S4B	THR	THR	2004			◆			Nest in burrows in natural nd human-made settings where there are vertical faces in silt and sand deposits. Many nests are on river banks, but can be found in sand and gravel pits.	No	No, there were no banks on the Site that were suitable for this species.
	Bobolink	*Dolichonyx oryzivorus*	S4B	THR	THR	2004			◆			Can be found in tallgrass prairie, open meadows, hayfields, and dense grasses. They build their nests on the ground amongst the dense vegetation .	No	Yes, this species could utilize the Fresh Mixed Meadow on the Site has habitat.
	Eastern Meadowlark	*Sturnella magna*	S4B	THR	THR	2004			◆			Breed primarily in moderately tall grasslands such as pastures, hayfields and weedy borders of croplands, roadsides and other open areas.	No	Yes, this species could utilize the Fresh Mixed Meadow on the Site has habitat.
	Barn Swallow	*Hirundo rustica*	S4B	THR	THR	2003			◆			Nest along human-made structures such as open barns, under bridges and in culverts. Attracted to open structures to build their nests, including ledges. They prefer rough-cut wood structures as the mud nests adheres better.	No	No, there were no structures on the Site that this species could utilize as habitat.

Type	Common Name	Scientific Name	Srank	SARO Status	COSEWIC Status	Last Obs Date	Background Information Source					Notes on Preferred Habitat [1]	Confirmed observation on Site	Suitable Habitat on Site
							NHIC Grid 18VR2714	Atlas of Ontario Mammals (Dobbyn 1994)	Atlas of the Breeding Bird of Ontario (Cadman 2009)	Ontario Reptile and Amphibian Atlas (ON 2018)	Ontario Butterfly Atlas (Macnaight on 2018)			
BIRD	Eastern Wood-Pewee	*Contopus virens*	S4B	SC	SC	2005			◆			Live in the mid-canopy layer of forest clearings and edges of deciduous and mixed forests. It is most abundandtly found in intermediate-age mature forest stands with little understory vegetation.	No	Yes, this species could utilize the Dry Fresh Manitoba Maple Deciduous Forest that is on the Site.
	Evening Grosbeak	*Coccothraustes vespertinus*	S4B	SC	SC	2005			◆			Generally found in open, mature mixed-wood forests dominated by ir species, White Spruce of Trembling Aspen. Is dependant on the Spruc Budworm and seed crops from boreal species.	No	No, the forest on the Site does not provide suitable habitat for this species preferences.
	Wood Thrush	*Hylocichla mustelina*	S4B	SC	THR	2004			◆			Lives in mature deciduous and mixed forests, seeking moist stands of trees with well-developed undergrowth and tall trees for perching. They prefer large forests, but will also use smaller stands of trees, building their nests in saplings, trees or shrubs, usually of Sugar Maple or American Beech.	No	No, the forest on Site is not mature enough and does not provide suitable habitat for this species preferences.
MAMMAL	Little Brown Bat	*Myotis lucifuga*	S4	END	END	-		◆				Roost in trees and buildings such as attics, abandoned builings and barns. Generally found in coniferous or deciduous forests along edge habitat, foraging in clearings near sources of water.	No	No, this species does not have suitable habitat on the Site.
	Eastern Small-footed Myotis	*Myotis leibii*	S2S3	END	END	-						Roost in a variety of habitats, including in or under rocks, in rock outcrops, in buildings, under bridges, or in caves, mines or hollow trees	No	No, this species does not have suitable habitat on the Site.
	Northern Myotis	*Myptis septentrionalis*	S3	END	END	-						Roost under loose bark and in cavities of trees. Hibernate from October/November to March/April most often in caves or abandoned mines	No	No, this species does not have suitable habitat on the Site.

Type	Common Name	Scientific Name	Srank	SARO Status	COSEWIC Status	Last Obs Date	Background Information Source					Notes on Preferred Habitat [1]	Confirmed observation on Site	Suitable Habitat on Site
							NHIC Grid 18VR2714	Atlas of Ontario Mammals (Dobbyn 1994)	Atlas of the Breeding Bird of Ontario (Cadman 2009)	Ontario Reptile and Amphibian Atlas (ON 2018)	Ontario Butterfly Atlas (Macnaight on 2018)			
MAMMAL	Tri-coloured Bat	*Pipistrellus subflavus*	S3	END	END	-		◆				Forms day roosts and maternity colonies in older forests but can also be found in barns or other structures. Forage over water along streams in the forest. Overwinter in caves from October-April.	No	No, this species does not have suitable habitat on the Site.
INSECT	Monarch	*Danaus plexippus*	S4B	SC	SC	2018					◆	Caterpillars feed on milkweed plants and are confined to meadows and open areas where milkweed grows. Adults forage on a variety of wildflowers and milkweed.	No	Yes, there is milkweed and wildflowers growing on the Site that this species could utilize as habitat.
FISH	American Eel	*Anguilla rostrata*	S1?	END	THR	-						Broad diversity of habitats and can live in both fresh and salt water.	No	No, there is no habitat on the Site. There is habitat within the greater Study Area.
PLANT	Butternut	*Juglans cinerea*	S2?	END	END	-						Grows alone or in small groups in deciduous forests. Prefers moist, well-drained soil and is often found along streams	Yes	Yes. Individuals were found. Further information can be found in Appendix B

SARO	Species at Risk Ontario (O. Reg. 230/08)
COSEWIC	Committee on the Status of Endangered Wildlife in Canada

Definitions

Endangered (END)	Species facing imminent extirpation or extinction
Threatened (THR)	Species likely to become endangered if nothing is done to reverse the factors leading to their extirpation or extinction
Special Concern (SC)	Species that may become threatened or endangered because of a combination of biolodical characteristics and identified threats
Extirpated (EXR)	Species which no longer exist in the wild in Ontario, but exist elsewhere in the world
DD	Data defficient

NHIC Srank (Subnational) Legend

S1	Critically imperiled, at very high risk of extirpation.
S2	Imperiled, at high risk of extirpation.
S3	Vulnerable, at moderate risk of extirpation.
S4	Apparently secure, at fairly low risk of extirpation.
S5	Secure, at low or no risk of extirpation.
B	Conservation status refers to breeding population.
N	Conservation status refers to non-breeding population.

References

1 Ministry of Natural Resources (MNR). 2000. Significant Wildlife Habitat Technical Guide. Peterborough: Queen's Printer for Ontario.

2 Government of Canada. 2018. Species at Risk Act: COSEWIC Assessments and Status Reports. Accessed February 2019. https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/cosewic-assessments-status-reports.html.

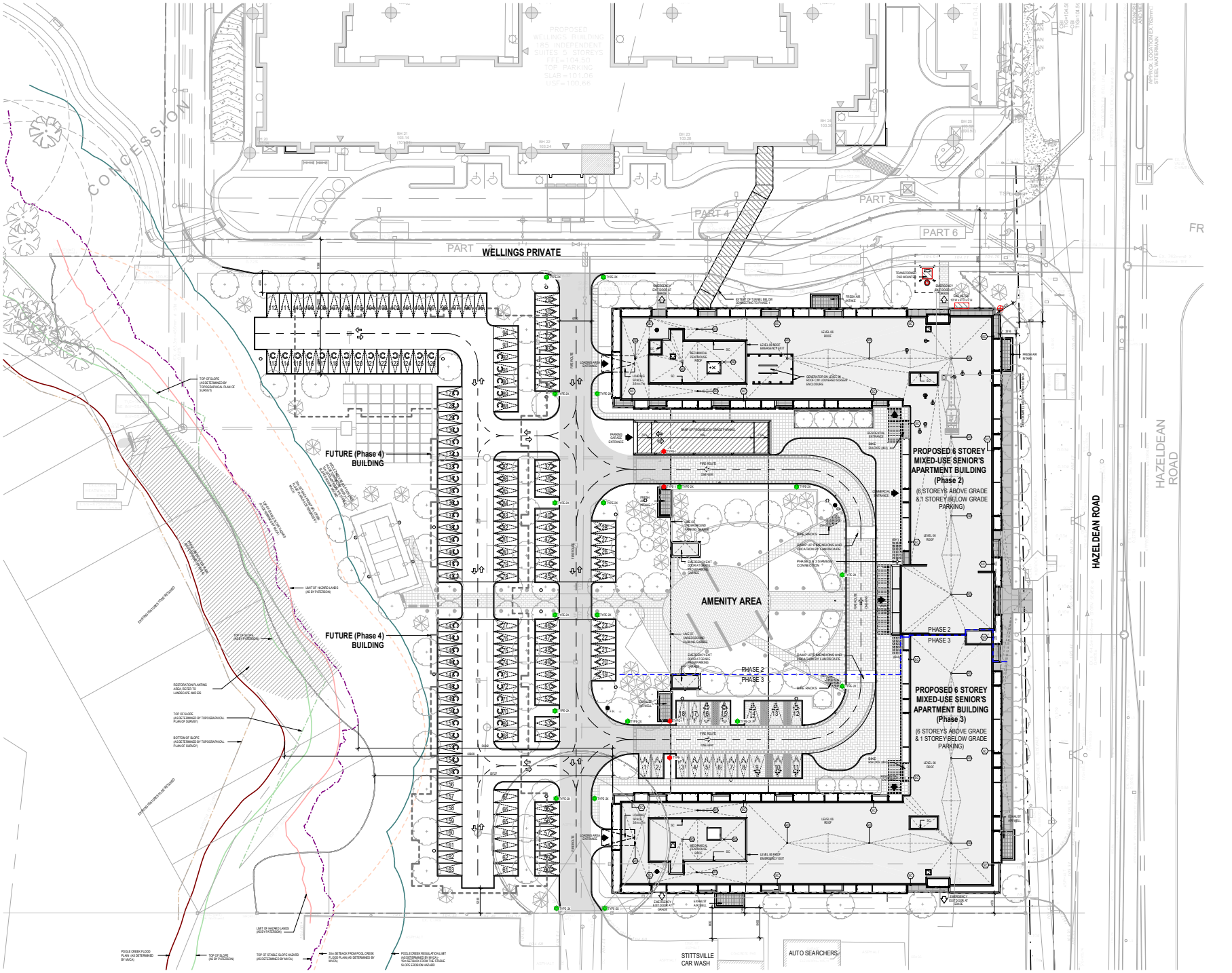
3 Government of Canada. 2011. Species at Risk Public Registry: A to Z Species Index. Ottawa: Government of Canada. Accessed February 2019. http://sararegistry.gc.ca/sar/index/default_e.cfm.

4 Ministry of the Environment, Conservation and Parks. 2018. Species at Risk in Ontario. Accessed February 2019. https://www.ontario.ca/page/species-risk-ontario#section-3.

5 Butterflies of Ontario. 2019. Red-disked Alpine. Accessed February 2019. http://www.ontariobutterflies.ca/families/nymphalidae/red-disked-alpine.

6 Butterflies and Moths of North America. 2018. Red-disked Alpine. Accessed February 2019. https://www.butterfliesandmoths.org/sighting_details/1053970.

APPENDIX F
PROPOSED SITE PLAN



1 SITE PLAN
SP-01 SCALE 1 : 250

RELEASE / REVISION RECORD

No.	Description	Date
1	Issued for Coordination	21-02-19
2	Issued for Coordination	21-03-05
3	Issued for DPA Coordination	21-07-26
4	Issued for DPA Coordination	21-08-06
5	Issued for Coordination	21-11-09
6	Issued for Coordination	21-12-03
7	Issued for Building Permit	21-12-20
8	Issued for Consultant Coordination	22-06-17
9	Issued for Consultant Coordination	22-09-27
10	Issued for Consultant Coordination	22-10-25
11	Issued for Internal Review	22-06-12
12	Issued for MMLS Tender	22-06-19
13	Issued for Zoning Coordination	22-06-30
14	Issued for Excavation Permit	22-11-09
15	Issued for Resubmission to Building Permit	22-12-22

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WELLINGS OF STITTSVILLE
PHASE 2 & 3

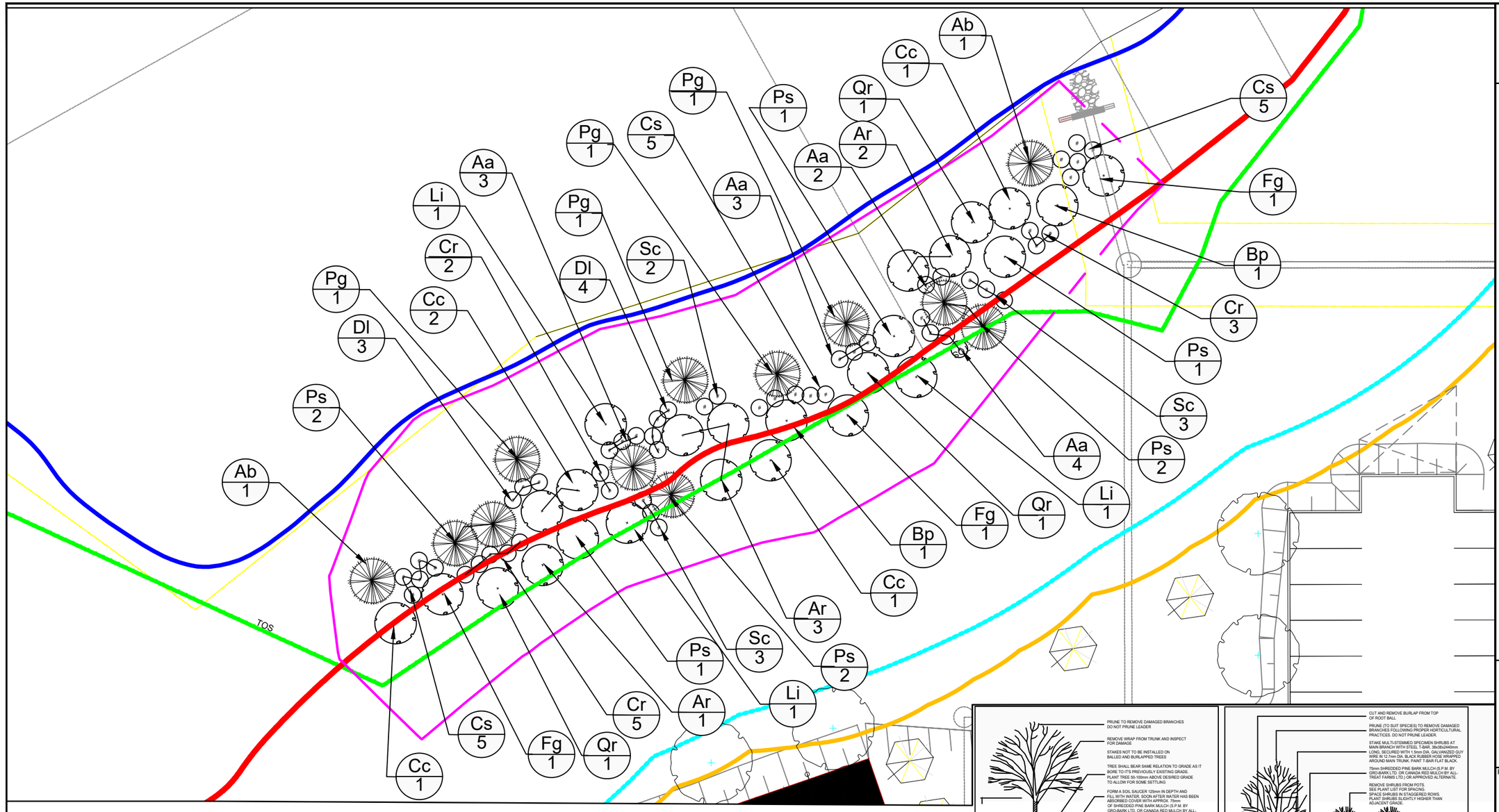
20 CEDARVIEW COURT, STITTSVILLE, ON

PROJECT NO.	DRAWN
19-1764	EC
SCALE	CHECKED
1 : 250	RC

DRAWING TITLE
SITE PLAN

DRAWING NO.
SP-01

APPENDIX G
RESTORATION PLANTING PLAN



LEGEND

- PLANTING PLAN AREA
- PROPOSED DECIDUOUS TREE PLANTING
- PROPOSED CONIFEROUS TREE PLANTING
- PROPOSED SHRUB PLANTING
- SITE BOUNDARY
- POOLE CREEK FLOODPLAIN
- TOP OF STABLE SLOPE
- POOLE CREEK REGULATION LIMIT
- 30m SETBACK TO POOLE CREEK REGULATION LIMIT

LEGEND IS COLOUR DEPENDENT. NON-COLOUR COPIES MAY ALTER INTERPRETATION.

Restoration Planting List

Common Name	Scientific Name	Planting Area	Form	Symbol	Quantity	Specs	Comments
American Beech	*Fagus grandifolia*	●	Tree	Fg	3	40mm WB	
Balsam Fir	*Abies balsamea*	●	Tree	Ab	2	40mm WB	
White Birch	*Betula papyrifera*	●	Tree	Bp	2	40mm WB	Betula alleghaniensis for substitute if necessary
Bitternut Hickory	*Carya cordiformis*	●	Tree	Cc	5	40mm WB	
Black Cherry	*Prunus serotina*	●	Tree	Ps	3	40mm WB	
Red Maple	*Acer rubrum*	●	Tree	Ar	7	40mm WB	Acer saccharum for substitue if necessary
Red Oak	*Quercus rubra*	●	Tree	Qr	3	40mm WB	Quercus macrocarpa for substitue if necessary
Tamarack	*Larix laricina*	●	Tree	Ll	3	40mm WB	
White Pine	*Pinus strobus*	●	Tree	Ps	6	150cm WB	
White Spruce	*Picea glauca*	●	Tree	Pg	4	150cm WB	
Red-osier Dogwood	*Cornus sericea*	●	Shrub	Cs	15	60cm 3gal	
Gray Dogwood	*Cornus racemosa*	●	Shrub	Cr	10	60cm 3gal	Cornus sericea for substitue if necessary
Black Elderberry	*Sambucus canadensis*	●	Shrub	Sc	8	60cm 3gal	Sambucus pubens for substitue if necessary
Bush-honeysuckle	*Diervilla lonicera*	●	Shrub	Dl	7	60cm 3gal	
Service Berry	*Amelanchier arborea*	●	Shrub	Aa	12	60cm 3gal	

Restoration Planting Notes

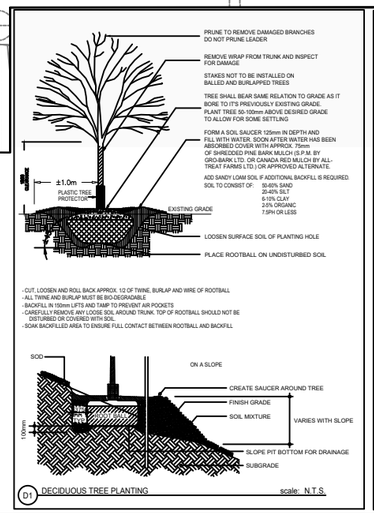
1. The restoration planting is to be carried out at 20 Cedarow Court post construction in appropriate season (i.e. Fall 2021 or spring 2022) in the planting area.

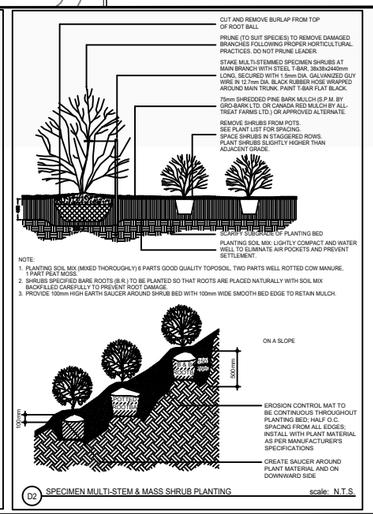
2. Planting Area: all planting beds is to be treated to a minimum depth of 0.6 m of topsoil for the shrub planting areas, and 1 m of topsoil for any tree planting areas. Shrubs are to be planted at 1-2 m on centre and trees 3 m on centre.

3. Invasive plants such as European Buckthorn or Garlic Mustard are to be manually removed prior to the prepration of planting beds.

4. All plant species are to be planted within the appropriate planting area based on the planting list for better survival and suitability.

5. The planting is to be inspected by an Environmental Monitor during and post planting to confirm the correct planting location, species and numbers. Regular maintenance and monitoring of the planting area should be conducted to ensure the long term survivalship of plants and recommend any re-planting or re-seeding within the designated area.





PINCHIN

PROJECT NAME:
RESTORATION PLANTING PLAN

CLIENT NAME:
NAUTICAL LANDS GROUP

PROJECT LOCATION:
20 CEDAROW COURT, STITTSVILLE, ONTARIO

FIGURE NAME:
RESTORATION PLANTING PLAN

PROJECT NUMBER:	SCALE:
247248.001	AS SHOWN
DRAWN BY:	REVIEWED BY:
KP	RY
DATE:	FIGURE NUMBER:
JUNE 2023	1