Environmental Impact Study (EIS)
7628 Flewellyn Road

Part of Lot 12, Concession 8,

Goulbourn

City of Ottawa

April 11, 2024

Prepared By:

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1.0. Introduction

As requested by Michael Szilagyi of Fotenn an Environmental Impact Study (EIS) was completed to assess the environmental impacts of a proposed Zoning Amendment and Site Plan application for a waste processing/recycling operation at 7628 Flewellyn in Stittsville. The proponent wishes to shift the existing waste processing and recycling operation to the southern portion of the site.

1.1. Site Context

The Subject Lands are located at 7628 Flewellyn Road, Stittsville (Figure 1). The subject lands are approximately 20ha in size and the legal land description is Part of Lot 12, Concession 8, City of Ottawa.

The proposed construction includes two primary buildings: Building G, housing Administration Offices (2-storeys) covering 994.5 m², and a Warehouse spanning 994.5 m², with a combined area of 1,989 m². Additionally, Building H comprises of a Repair/Mechanical Shop with an area of 936.7 m². The proposed total gross floor area (GFA) for these new structures is 3,108 m². Buildings A (Ferrous Metals, 59 m²) and C (Staff Trailers, 112 m²) are slated for demolition, while Buildings B (Weigh Scale Office, 50 m²), D (Wet Drawing Station, 81 m²), and E (ATM, 14 m²) are planned for relocation. See Appendix F for detailed site plan.

The northwest portion of the subject site will remain asphalted for the existing automobile dealership use, with the associated existing Building F located closest to Flewellyn Road to also remain. The salvage yard operation will be located deeper into the subject site, with a minimum setback of 27 to 30 metres from the abutting residential properties along the south side of Flewellyn Road. The relocation of the salvage yard operations will help mitigate possible adverse impacts to nearby residential uses. Drainage ponds along the eastern side of the property will provide stormwater management for the subject site. The east and southern portions of the subject site will remain undeveloped and will re-naturalize as part of the proposed development.

Within the city's Zoning By-law No. 2008-250 the subject lands were designated Rural Countryside Zone (RU). This is in line the official plan designation of General Rural Area and Natural Heritage System Feature. Additionally, the proposed development is located in Ecoregion 6E.

The purpose of this application is to rezone a portion of the subject site from RU – Rural Countryside to RG1 – Rural General Industrial in order to permit the existing salvage yard operation on the subject lands. The Rural Countryside – RU zone is intended to remain in place on the balance of the lands. See Appendix G for area to be rezoned.

Within RU- Rural Countryside the following uses are be permitted:

a) Forestry, conservation and natural resource management activities;
b) Agriculture, agriculture-related and on-farm diversified uses;
c) Residential uses according to the policies of this plan;
d) Animal services boarding, breeding and training and equestrian establishments;
e) Bed and breakfasts;
f) Utility Installations;
g) Cemeteries; and

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h) Sand and gravel pits.

Within RG1– Rural General Industrial the following uses are be permitted:

a) Heavy and light industrial uses, such as value-added processing, fabrication, manufacturing, equipment and supply centres, machine and vehicle sales and servicing, landscape and construction yards, nurseries;
b) Transportation, distribution, warehouse and large-scale storage operations;
c) Uses that are noxious by virtue of their noise, odour, dust or other emissions or that have potential for impact on air quality or surface water or groundwater, **such as salvage or recycling yards**, composting or waste transfer facilities; concrete plants; the treatment of aggregate products; and abattoirs; where they shall not be located adjacent to a highway unless suitable screening and landscaping are provided; and
d) Commercial uses that primarily provide services to employees of the Rural Industrial and Logistics area or the travelling public such as a restaurant, gas station, a retail store up to 300.square metres of gross leasable space or similar uses. A commercial use involving the display and sale of products manufactured or warehoused on the site are permitted provided that the retail floor space does not exceed the greater of 300 square metres or 25 per cent of the gross floor area of the building.

The RU zoning does not permit the proposed development (salvage/recycling yard), therefore the rezoning to RG1 is required. RG1 supports the proposed development (salvage/recycling yard).

Final landscaping will include deciduous and coniferous plantings, along with naturalize/reforestation areas (see Appendix H; Figure 2 and 3).

Through communication with Matthew Hayley (City of Ottawa) and a background review, potential environmental constraints have been identified as Natural Heritage System Feature, Significant Woodland and potential non-evaluated wetlands as well as any watercourses that may be present on the property.

The Provincial Policy Statement (PPS) states that natural heritage systems should be maintained, restored, or improved for the purpose of linkages between natural heritage features and areas. The PPS also states that site development and alteration shall not be permitted in provincially significant woodlands in Ecoregion 6E unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions. Additionally, development and site alteration shall not be permitted in fish habitat except in accordance with provincial and federal requirements.

The facility is proposed to be built within lands south of Flewellyn Road, bordered to the east and south by aggregate extraction operations, and residential buildings to the north. There is a forest and wetland present within the eastern portions of the subject lands (Figure 1).

An unnamed watercourse (maintained) is present within the adjacent lands, east of the subject lands, along with a couple of created side channels which appear to have been created to drain the adjacent lands.

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2.0. Methodology

This report is prepared in accordance with the City of Ottawa Environmental Impact Statement Guidelines (City of Ottawa 2015) with guidance from the Natural Heritage Reference Manual (OMNR, 2010). This EIS includes an assessment of the identified environmental constraints and the potential for Species at Risk.

This EIS will provide the methodology to mitigate, as required, negative impacts on significant features and functions. Potential Species at Risk in the general area were identified from the Ministry of Natural Resources and Forestry databases, the Department of Fisheries and Ocean databases, the Ontario Breeding Bird Atlas, Ontario Reptile and Amphibian Atlas, iNaturalist and the Global Biodiversity Information Facility.

Colour aerial photography was used to assess the natural environment features in the general vicinity of the proposed building.

See Table 1 for a summary of field surveys of the site and adjacent lands. All surveys were completed by the author of this report, Shaun St. Pierre.

TABLE 1: Summary of Field Surveys

DATE	TIME	ACTIVITY	AIR TEMP. (°C)	WIND (Beaufort Scale)	CLOUD COVER	% MOON ILLUM.
May 20, 2021	2000h-2130h	- WPWI Survey	28	Calm	40%	63.1%
May 21, 2021	0815h-1030h	- Breeding Bird Survey - Butternut Survey - Cavity Tree Survey - Community/Watercourse Descriptions	23	Light Air	30%	N/A
May 27, 2021	2230h-2300h	- WPWI Survey	11	Light Air	Clear Skies	99.1%
June 18, 2021	1730h- 2030h	- Community/Watercourse Descriptions	25	Moderate Breeze	Overcast	N/A
June 19, 2021	2115h – 2215h	- WPWI Survey	21	Light Breeze	20%	70.6
July 5, 2021	1100h – 1200h	- Community/Watercourse Descriptions	25	Moderate Breeze	60%	N/A

Nighttime breeding bird surveys followed the MNRF 2014 Survey Protocol for Eastern Whip-poor-will in Ontario. In addition to the nighttime breeding bird survey, a single daytime breeding bird visit was completed to access the potential for bird usage within the subject lands. The daytime survey followed the Ontario Breeding Bird Atlas protocol (OBBA 2001) and included both point counts and incidental observations.

The area was extensively walked and surveyed for significant natural areas, potential species at risk (butternut) and their associated habitat (bat tree cavity, turtle).

Observed plants were recorded for each individual community, the plants utilized in the descriptions are the most abundant specimens observed. A complete observed species list is provided in Appendix B. Plants that could not be identified in the field were collected for a more detailed examination. Nomenclature used in this report follows the Southern Ontario Vascular Plant List (Bradley, 2013) which aligns with the Integrated Taxonomic Information System (ITIS).

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FIGURE 1: SUBJECT LANDS

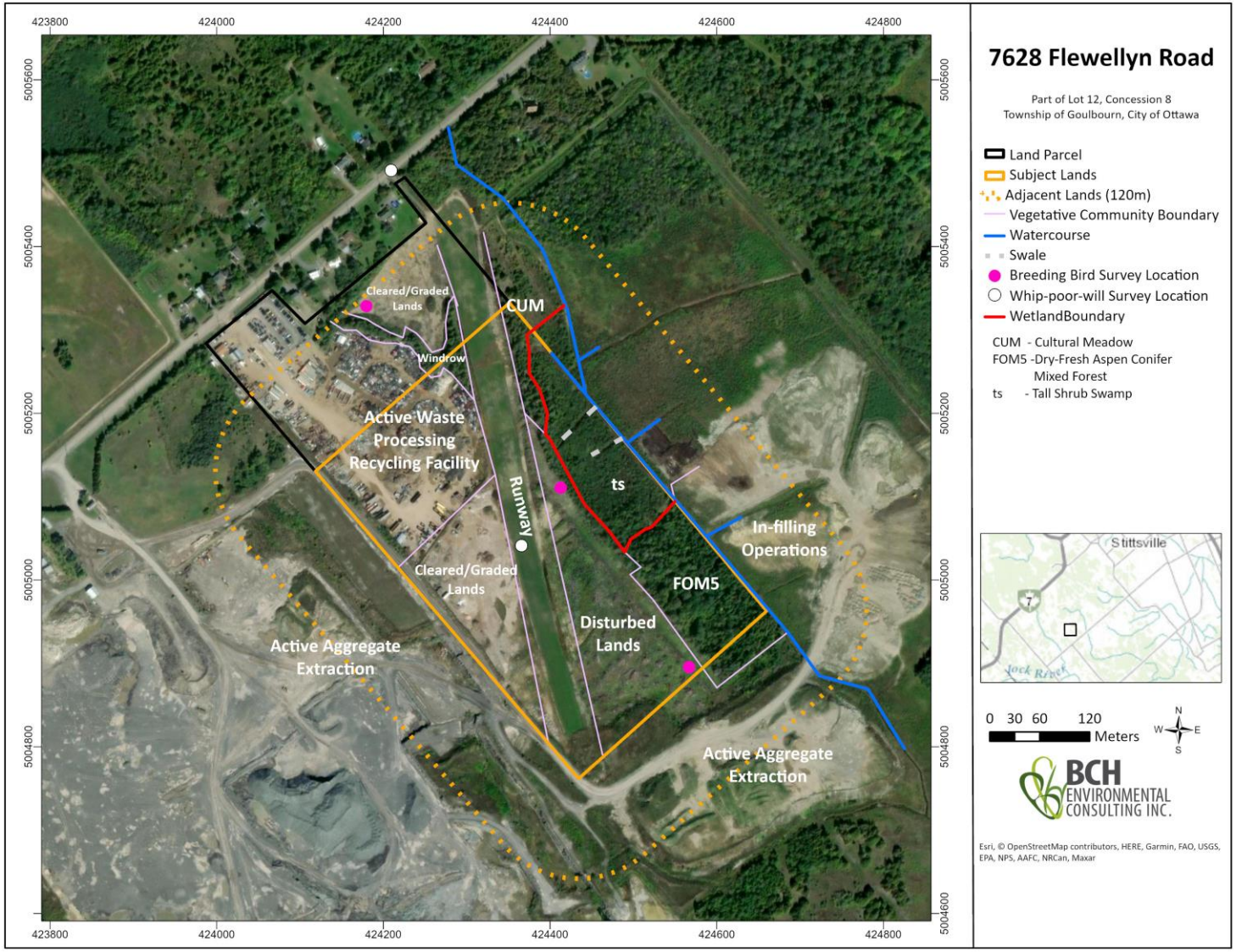

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FIGURE 2: SITE ALTERATIONS OVERLAY

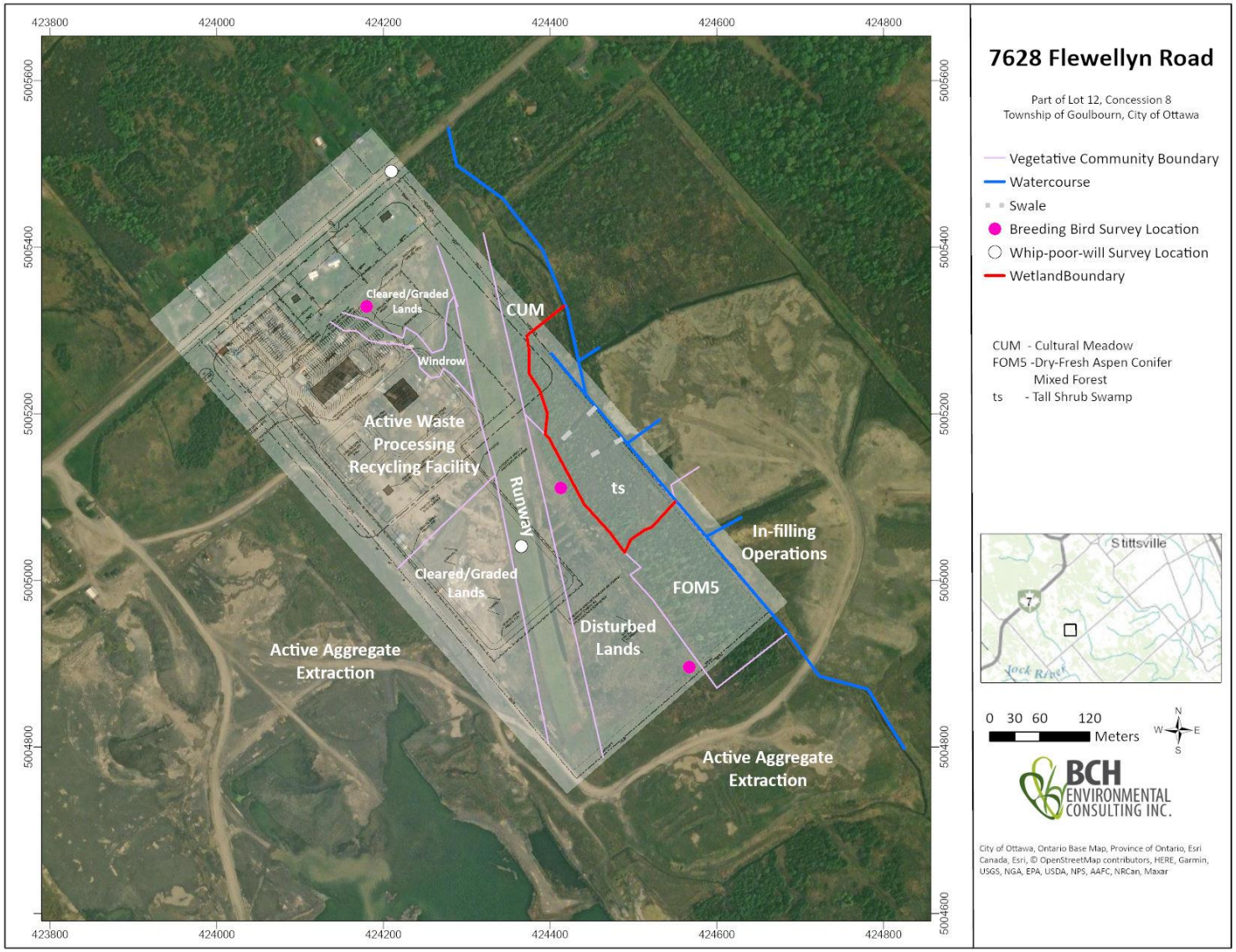

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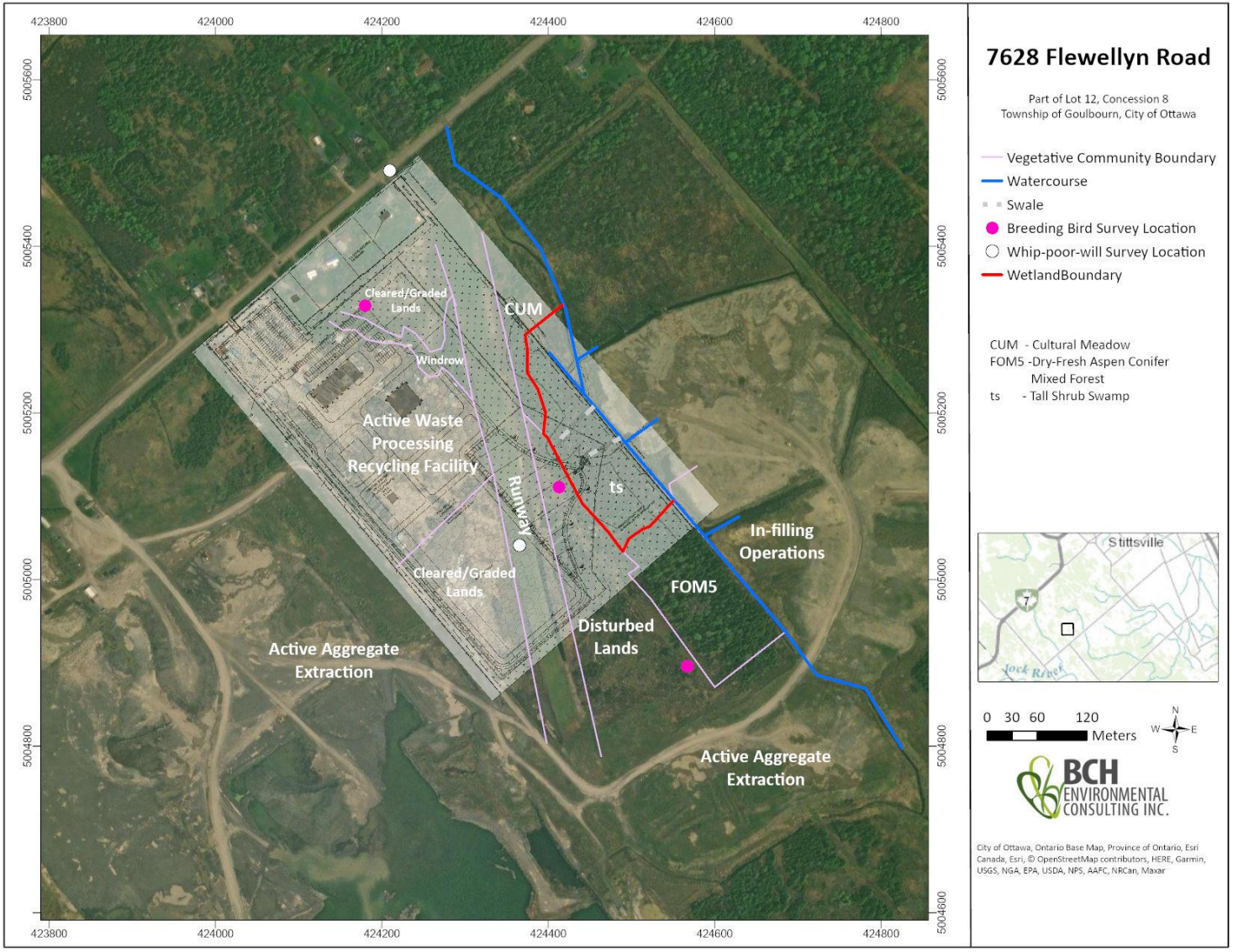
FIGURE 3: SITE ALTERATIONS OVERLAY WITH STORMWATER PLAN



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3.0. Field Surveys

A butternut survey was conducted along with a search for cavity trees by systematically moving through the subject lands (discussed in section 4.3 and 4.4). Vegetation communities along with the watercourse are described in section 3.1. A nighttime breeding bird survey was completed to assess the potential usage of Whip-poor-will (see section 4.2). A single breeding bird survey was completed to assess the potential for species of at risk and species of special concern utilising the subject lands (see section 4.2).

3.1. Existing Conditions

The subject lands consisted of an active waste processing recycling facility, a runway, cleared/leveled lands, a disturbed area, cultural meadow, mixed forest, and swamp. The subject lands drain to the east, towards the watercourse. The subject lands are within the Farmington Soils Series which is described as having varied drainage, and gentle slope of loam and sand undifferentiated drift material overlying bedrock (Shut & Wilson 1987).

3.1.1. Active Waste Processing Recycling Facility

This area is located within the north western portion of the subject lands and adjacent lands, and is currently being used for storage or processing.

3.1.2. Runway

There is an airplane runway crossing the subject lands from the south corner to the north corner and appears to have been constructed sometime after 2018. Vegetation present included grasses, white clover, common mullein, red clover, common plantain, and cow vetch.

Photo 1: Runway (May 21, 2021).

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Photo 2: Runway (July 5, 2021).

3.1.3. Cleared/Leveled Lands

These lands are located within the south western portion of the subject lands and within the northern portion of the adjacent lands. Vegetation was very sparse (approximately 5% of the land cover) and consisted of grasses, field mustard, and common plantain. Spoil piles are present. These areas appear to have been cleared and leveled sometime between 2016 and 2018.

Photo 3: Cleared/Leveled Lands (May 21, 2021).

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Photo 4: Cleared/Leveled Lands (July 5, 2021).

3.1.4. Disturbed Lands

These lands are located within the western portion of the subject lands. Clearing of these lands appear to have started in 2018-2019. What remains are random clumps of woody debris, and soil piles dispersed throughout the area. This has formed an odd mixture of upland plants (dominant) and plants with a higher affinity for moisture. Woody vegetation (1-2m in height) consisted of Manitoba maple, staghorn sumac, black raspberry, balsam poplar, purple flowering raspberry, trembling aspen, and white ash. Ground cover consisted of wild carrot, pigweed, red clover, white clover, wild parsnip, common dandelion, grass-leaved goldenrod, field mustard, European stinging nettle, thistles, common milkweed, riverbank grape, common sow-thistle, and bittersweet nightshade. During the May 21, 2021 site visit, standing water was present between some piles of wood and piles of soil but was completely dry (despite recent rain) by June 18, 2021. Within these areas reed canary grass, narrow-leaved cattail, slender willow, and glossy buckthorn were common.

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Photo 5: Disturbed Lands (May 21, 2021).

Photo 6: Disturbed Lands (July 5, 2021).

3.1.5. Cultural Meadow (CUM)

These lands are located within the northern portion of the adjacent lands. The meadow was dominated equally by grasses and goldenrods. Other vegetation included reed canary grass, wild parsnip, and wild carrot. Along the western edge of this community there is a band of white cedar which before the creation of the runway tied into the Coniferous Windrow (section 3.1.6.), along the other edges young

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white cedar, balsam poplar, Manitoba maple, tartarian honeysuckle, glossy buckthorn and willows were common.

Photo 7: Cultural Meadow (May 21, 2021).

Photo 8: Cultural Meadow (July 5, 2021).

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3.1.6. Coniferous Windrow

The windrow was located within the most northern portion of the subject lands and continues into the adjacent lands. The windrow divided the active work yards from a cleared/leveled area and portions are present on a berm. Woody vegetation consisted of white cedar (DBH 5-10cm; 3-6m tall) with the ground cover consisting of common dandelion, coltsfoot, and field mustard.

Photo 9: Windrow (July 5, 2021).

3.1.7. Dry-Fresh Aspen Conifer Mixed Forest (FOM5)

This is a small forest patch present within the eastern portion of the subject lands and adjacent lands. The tree composition and cover was highly variable with the majority being coniferous (70%) with some deciduous (30%). The overall average DBH was 15-25cm and the sub-canopy was the dominate layer. The canopy (8-10m tall; 50% cover) consisted of largetooth aspen (DBH 20-32cm) which was greater than white spruce (DBH 10-15cm) which was greater than balsam fir (DBH 18-28cm). The sub-canopy (6m tall; 70% cover) was dominated by white spruce, which was more than white cedar, which was more than white ash. The understory (1-2m tall; 10-20% cover) consisted of common buckthorn, balsam fir, beaked hazel, and the occasional glossy buckthorn. The ground layer (80% cover) consisted of grasses, wild sarsaparilla, bracken fern, and large-leaved aster.

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Photo 10: Dry-Fresh Aspen Conifer Mixed Forest (May 21, 2021).

Photo 11: Dry-Fresh Aspen Conifer Mixed Forest (July 5, 2021).

3.1.8. Tall Shrub Swamp (ts)

This tall shrub swamp was situated centrally along the eastern edge of the subject lands. This swamp presented two forms: tall shrub (glossy buckthorn, pussy willow, and slender willow) and narrow-leaved emergent (grasses and sedges). This wetland drains to the east via manmade swales (see description in

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section 3.1.9) into the unnamed watercourse (see watercourse description section 3.1.10). No water was present within this wetland, the swales present also had no water.

Photo 11: Tall Shrub Swamp (May 21, 2021).

Photo 12: Tall Shrub Swamp (July 5, 2021).

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3.1.9. Swale

Two man made swales were present within the tall shrub swamp (Figure 1). These swales appear to be created sometime between 2009 and 2012. They lacked a defined channel and during all site visits they were found to be dry. These swales do not constitute fish habitat but may be contributing.

Photo 13: Swale (May 21, 2021).

Photo 14: Swale (July 5, 2021).

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3.1.10. Unnamed Watercourse

This watercourse is present within the eastern adjacent lands running parallel to the eastern edge of the subject lands. This watercourse drains to the south and has been maintained throughout the years (evidence of dredging). The channel width was 3-4m. During the May visit the average wetted width and depths were 2m and 15-30cm, respectively. During the July visit the average wetted width and depths were 1-2m and 5-10cm, respectively. Additionally, the upstream end in the adjacent lands was dry during the July visit. The channel was well vegetated with reed canary grass, broad-leaved cattail, and marsh horsetail. Fines dominated the exposed substrate with the occasional bedrock present. This tributary may represent fish and turtle habitat.

Multiple side drains have been created between 2009 and 2012 on the eastern side of the watercourse, during all visits these were dry. These drains had defined channels (average width 1-2m), and may represent contributing fish habitat.

Photo 15: Unnamed Watercourse (May 21, 2021).

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Photo 16: Unnamed Watercourse (July 5 2021).

4.0. Potential Species at Risk

The Make a Map: Natural Heritage online database (OMNRF) was reviewed on March 16, 2021. This database provides sightings of provincially tracked species including Threatened and Endangered species covered by the 2008 Endangered Species Act in 1 km squares across most of Ontario. A search conducted on the proposed location (18VR2405 and 18VR2404) revealed the following results:

- Snapping Turtle (Special Concern)
- Bobolink (Threatened)
- Eastern Meadowlark (Threatened)

The Ontario Breeding Bird Atlas provides a searchable database in the form of a 10km square grid. A query revealed the following species at risk and species of special concern were identified within the 10km square that encompasses the site and adjacent lands (18VR20):

- Common Nighthawk (Special Concern)
- Whip-poor-will (Threatened)
- Eastern Wood-Pewee (Special Concern)
- Bank Swallow (Threatened)
- Barn Swallow (Special Concern)
- Wood Thrush (Special Concern)
- Bobolink (Threatened)
- Eastern Meadowlark (Threatened)

Similar to the Ontario Breeding Bird Atlas, the Ontario Reptile and Amphibian Atlas provides a searchable database in the form of a 10km square grid. A query revealed the following species at risk and species of

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concern were identified within the 10km square that encompasses the subject lands and adjacent lands (18VR20):

- Snapping Turtle (Special Concern)
- Blanding's Turtle (Threatened)

iNaturalist and the Global Biodiversity Information Facility provides a searchable database. A query revealed the following species of concern:

- Snapping Turtle (Special Concern)
- Blanding's Turtle (Threatened)

The Department of Fisheries and Oceans provide species at risk sightings via their online map tool. A query found no results in the vicinity of the site.
In addition to the above potential Species at Risk, many other endangered and threatened species may potentially occur in the general area:

- Little Brown Myotis (Endangered)
- Northern Myotis (Endangered)
- Eastern Small-footed Myotis (Endangered)
- Tri-coloured Bat (Endangered)
- Black Ash (Endangered)
- Butternut (Endangered)

4.1. Turtles and Reptiles

Snapping turtles are all designated as special concern under the Ontario Endangered Species Act (ESA). The habitat of species of special concern is not regulated under the Ontario ESA. Blanding's turtles have been designated as threatened and their habitat is provincially regulated.

Blanding's turtles are often observed within clear water eutrophic wetlands and have a strong site fidelity but may use several connected water bodies during the active season. Blanding's turtles were identified as occurring within 2km of the subject lands (Ontario Reptile and Amphibian Atlas, iNaturalist). This EIS will recognize the unnamed watercourse in the vicinity of the subject lands to contain suitable Blanding's Turtle habitat (no study was conducted).

The Ontario Ministry of Natural Resources developed the general habitat description for the Blanding's Turtle (habitat provincially regulated), dividing habitat into three categories:

- **Category 1:** the nest and the area within 30 m or overwintering sites and the area within 30 m. Suitable nesting habitat occurs in sun-exposed areas with low vegetation cover and loose soils. They may overwinter in permanent or temporary waterbodies (young are also know to hibernate terrestrially), with the reported water depth varying from 0 to >100 cm and often show a high site fidelity. No evidence of this habitat was noted and so Category 1 habitat is not considered to be present on or adjacent to the subject lands.
- **Category 2:** the wetland complex that extends up to 2 km from an occurrence, and the area within 30 m around those suitable wetlands or waterbodies. As noted, Blanding's turtle was

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documented within 2 km of the subject lands. For the purpose of this report, portions of unnamed creek will be considered to be Category 2 habitat. All proposed operations will be moved outside of the Category 2 habitat (Figure 4).

- **Category 3:** the area between 30m and 250m around suitable wetlands or waterbodies identified in Category 2, within 2 km of an occurrence. As demonstrated in figure 4, the subject lands are within 250m of the Category 2 habitat, therefore these lands will be considered Category 3 habitat. Category 3 habitat provides essential movement corridors of up to 500m between wetlands, a function which is essential for carrying out life processes associated with the Category 1 and 2 habitats. It should be noted that it is highly unlikely that turtles are utilizing the property as a movement corridor, due to the amount of disturbance, lack of cover (turtle utilizing the land present within the subject lands would be leaving themselves vulnerable to predation), and that the property is surrounded by active aggregate extraction (no wetlands to migrate to). The most likely location for turtles would be the unnamed watercourse. Additionally, the tall shrub swamp is not being considered turtle habitat due to lack of basking sites and an absence of water.

The proposed development occurs within Category 3 Blanding's turtle habitat. As mentioned above, clearing within Category 3 habitat present within the subject lands is not anticipated to affect turtle movements given the amount of disturbance, lack of cover (turtle utilizing the land present within the subject lands would be leaving themselves vulnerable to predation), and that the property is surrounded by active aggregate extraction (no wetlands to migrate to). The most likely location for turtles would be the unnamed watercourse, which is anticipated to be unaffected by the operation. No direct impacts on turtles are anticipated, indirect impacts on these species as a result of the proposed waste processing/recycling operation can be mitigated provided the mitigation measures in this report are implemented.

Under the City of Ottawa's direction if a Blanding Turtle sighting is within 2km of potential development, MECP should be contacted and an IGF form be submitted, there is potential that an authorization/compensation be required by MECP for works to proceed.

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FIGURE 4: BLANDINGS TURTLE HABITAT

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4.2. Birds

Common nighthawk, eastern wood-pewee, wood thrush, and barn swallow are designated special concern under the Ontario Endangered Species Act (ESA). The habitat of species of special concern is not regulated under the Ontario ESA.

Common Nighthawk breeds in a range of open and partially open habitats, including forest openings and post-fire habitats, prairies, bogs, and rocky or sandy natural habitats, as well as disturbed areas. It is also found in settled areas that meet its habitat needs, those with open areas for foraging and bare or short-cropped surfaces for nesting (COSEWIC 2018). This habitat was not present within the proposed development area. The eastern wood-pewee is mostly associated with the mid-canopy layer of forest clearings and edges of deciduous and mixed forests (COSEWIC 2012a). This type of habitat was not present. The wood thrush nests mainly in second-growth and mature deciduous and mixed forests, with saplings and well-developed understory layers (COSEWIC 2012b). This type of habitat was not present. Barn swallow nest sites are commonly found along the interior or exterior of building structures, under bridges and wharves, and in road culverts (Heagy et al. 2014.). No barn swallow or barn swallow nests were observed. No potential nesting structures were present.

Whip-poor-will, bank swallow, bobolink, and eastern meadowlark are designated as threatened under the Ontario Endangered Species Act (ESA).

Eastern whip-poor-will avoids both wide-open spaces and closed canopy forests. Semi-open forests or patchy forests with clearings, such as barrens or forests that are regenerating following major disturbances, are preferred. Areas with little ground cover are also preferred (COSEWIC 2009b). Although the habitat onsite may potentially support whip-poor-will (unlikely), none were heard during the nighttime bird surveys. Bank swallows are generally associated with sand-silt vertical banks (COSWIC 2013a). This habitat was not present. Bobolink and eastern meadowlark are associated with native and non-native larger grassland habitats such as hayfields (COSEWIC 2010, and COSEWIC 2011). No hayfields or other suitable habitat were identified in the area.

A single breeding bird survey was completed to assess the potential for species of at risk and of species concern utilising the subject lands. During the visit, 3 listening stations were established (10 minutes at each station). No species at risk or of concern were heard or observed. Species heard or observed within the subject lands include American Robin, Chipping Sparrow, Song Sparrow, Killdeer, Northern Water Thrush, American Goldfinch, and Brown Thrasher.

Further to this, nesting migratory birds are protected under the Migratory Birds Convention Act (MBCA). No work is permitted that would result in the destruction of active nests (nests with eggs or young birds) or the wounding or killing of bird species protected under the MBCA and/or associated regulations.

4.3. Mammals

Little brown Myotis, northern Myotis, Eastern Small-footed Myotis, and tri-coloured bat are designated endangered under the Ontario Endangered Species Act (ESA). All four bats may forage in open areas on-site and may roost in trees or buildings on or adjacent to the Site. The Atlas of Mammals of Ontario (Dobbyn, 1994) suggests that the tri-colored bat is not present within this part of Ontario however, the NatureServe mapping in the COSSARO (2015) includes all of southeastern Ontario. Based on this

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information, this species is considered to have a very low potential of occurring. To prevent impacts to bats, no clearing of trees greater than 10cm on-site should take place between April 1 and September 30 (inclusive) without a qualified biologist first confirming the absence of bats (i.e., open work timing window from October 1 to March 31). If tree clearing is conducted between October and April, no interactions with bats are anticipated, and therefore, significant negative impacts to SAR bats would be avoided.

Maternity colonies are established by females in the summer, often in buildings, or large-diameter trees with suitable cavities (COSEWIC 2013b). No caves, bedrock fissures, mining shafts, abandoned buildings, or other features which may function as bat hibernacula habitat were noted within the subject lands. No suitable cavity trees that may be used by bats were observed within the subject lands.

4.4. Vegetation

Butternut (designated as endangered by the ESA) tends to reach greatest abundance in rich well-drained mesic loams in floodplains, streambanks, terraces and ravine slopes, but can occur in a wide range of other situations (COSEWIC 2017).

Black ash (designated as endangered by the ESA) occurs most frequently in floodplain forests, basin, seepage and lacustrine swamp forests, shoreline forest margins, and fens (COSEWIC 2017).

No butternut or black ash were found during a detailed surveys.

4.5. Species at Risk Summary

In summary, based on the habitat present within the subject lands, and the field visits, no Species at Risk are anticipated to be present. The most likely Species at Risk would be Blanding's turtle, and butternut (none found). Indirect impacts on these species as a result of the proposed development can be mitigated provided the mitigation measures in this report are properly implemented.

5.0. Natural Heritage System

A Natural Heritage System (NHS) has been identified in accordance with the direction of the Provincial Policy Statement. Its intent is to reinforce the conservation, restoration and enhancement of identified natural heritage features and areas and promote the overall diversity and interconnectivity of natural heritage features and areas.

A refined search identified the following (discussion below): Significant Woodland, Fish Habitat, and Wetland as occurring within the cities identified NHS (City of Ottawa).

5.1. Significant Woodlands

The significance of woodlands has been evaluated using the criteria in the Natural Heritage Reference Manual (OMNR, 2010) by The Ministry of Natural Resources and Forestry (MNRF). This is a small isolated woodland that is present within the south eastern edge of the subject lands and present within the south eastern adjacent lands.

The woodland in question is a total of 2.0ha in size. At this time it is unclear how much of the woodland would be required to be removed, this report will assume that the entirety of the woodland will be

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removed. The significance of this woodland was evaluated using the criteria in the Natural Heritage Reference Manual (OMNR, 2010) and the Significant Woodlands: Guidelines for Identification, Evaluation, and Impact Assessment provided by the city. The PPS does not permit development in significant woodlands south and east of the Canadian Shield unless it has been demonstrated that there will be no negative impacts on the natural features or the ecological functions. Woodlands are significant if they meet the criteria presented in the NHRM: size, ecological function, uncommon characteristics, and economical and social functional values. If the woodland meets any one of these criteria then it could be deemed to be significant. Table 2 demonstrates the factors determining significance pre and post construction as per the NHRM.

Within the portion proposed to be removed there were no seasonal concentration areas of animals, rare vegetative communities, raptor overwintering sites, old growth forest, caves, or suitable tree cavities.

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FIGURE 5: SIGNIFICANT WOODLANDS

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TABLE 2: WOODLAND ANALYSIS

CRITERIA		PRE CONSTRUCTION	POST CONSTRUCTION	DISCUSSION
WOODLAND SIZE		DOES NOT MEET THE CRITERIA		The woodland is located within the Jock River planning area where the percent forest cover is 36.7%. The NHRM stats that where woodlands cover is about 30–60% of the land cover, woodlands 50 ha in size or larger should be considered significant. The woodland size is 2ha therefore does not meet this criteria.
ECOLOGICAL FUNCTION CRITERIA	Woodland Interior	DOES NOT MEET THE CRITERIA		There is no woodland interior
	Proximity to other woodlands or other habitats	DOES NOT MEET THE CRITERIA		The woodland is directly adjacent to the watercourse providing and ecological benefit and does not meet the size threshold (10ha) before and after removal. The stand does appear to be over 60 years old
	Linkages	DOES NOT MEET THE CRITERIA		Woodland is located within a defined natural heritage system but does not meet the size threshold (10ha).
	Water protection	DOES NOT MEET THE CRITERIA		Watercourses are present (outside of the subject lands but within the adjacent lands), but are not located within a sensitive or threatened watershed or a specified distance (e.g., 50 m or

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CRITERIA		PRE CONSTRUCTION	POST CONSTRUCTION	DISCUSSION
				top of valley bank if greater) of a sensitive groundwater discharge, sensitive recharge, sensitive headwater area, sensitive watercourse or sensitive fish habitat. Additionally it does not meet the size threshold (10ha).
	Woodland diversity	DOES NOT MEET THE CRITERIA		Within the subject lands this forest did not contain any declining natural communities or a high variety of native diversity through composition or terrain. Additionally it does not meet the size threshold (10ha).
UNCOMMON CHARACTERISTICS CRITERIA		DOES NOT MEET THE CRITERIA		Within the subject lands there are no uncommon species composition, cover type, age or structure.
ECONOMIC AND SOCIAL FUNCTIONAL VALUES CRITERIA		DOES NOT MEET THE CRITERIA		Within the subject lands the woodlands did not have high economic or social values through particular site characteristics or deliberate management.

As per the criteria set out in the NHRM and the City of Ottawa this woodland should not be considered significant. Regardless of whether it is significant or not, no negative impacts to the natural features or the ecological functions of this woodland are anticipated.

Indirect impacts on this woodland as a result of the proposed development can be mitigated provided the mitigation measures in this report are properly implemented.

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5.2. Watercourse and Unevaluated Wetland

The wetland present is within a transitional phase due to changes within the watercourse (dredging and widening and channeling within the wetland), these changes have effectively drained the wetland with no water present during any of the site visits. Judging by the absence of water within the wetland and the swales, the changes have increased the speed of which the wetland and surrounding lands drain. Substrate was very shallow with bedrock almost at the surface. The entire site appears to drain into the watercourse via the swales present within the wetland. The wetland and swale do not support fish habitat. Through communication with Mathieu Haley (June 22, 2023), it was agreed that this wetland would not meet the criteria necessary to be considered provincially significant, and an official evaluation was deemed unnecessary.

The official plan defined surface water feature as:

"Water-related features on the earth's surface, including headwater drainage features, rivers, stream channels, drains, inland lakes, seepage areas, recharge/discharge areas, springs, wetlands and associated riparian lands that can be defined by their soil moisture, soil type, vegetation or topographic characteristics, including fish habitat".

Although the remnant vegetation present within this area meets the definition of wetland, through the changes in drainage the function is no longer viable and should not be considered a surface water feature. The wetland should not be considered as a constraint to development additionally only approximately 0.1ha of this area will be disturbed.

No headwater study was conducted within the swale identified within the 'wetland' area. Inferring from data collected it is most likely that these features hydrology would be identified as contributing; fish habitat identified as contributing functions; terrestrial habitat identified as limited function; and riparian vegetation identified as important function. The management recommendations for these features would most likely be Conservation. Which can be managed through maintaining the features, to accomplish this a 15m setback from these features is being recommended.

The watercourse present on the edge of the subject lands constituted fish habitat, and through the EIS guidelines a 30m setback is recommended

5.3. Significant Wildlife Habitat

The potential for significant wildlife habitat was assessed using the guidance in OMNR (2010) and MNRF (2015). Potential components which may lead to a designation of significant wildlife habitat include seasonal concentration areas of animals, rare vegetation communities or specialized habitat for wildlife, habitat for species of conservation concern, and animal movement corridors. No rare vegetative communities, raptor overwintering sites, old growth forest, caves were located within the subject or adjacent lands.

There is a potential for Blanding's turtle (along with other turtles) that have been identified as being within 4km of the subject lands to utilize the site as a movement corridor (the subject lands are Category 3 Blanding's habitat). No significant wildlife habitat or species at risk habitat will be negatively impacted, nor will it affect the quality of category 3 Blanding's turtle habitat present.

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There was nothing regarding the characteristic within the subject lands to warrant significance. The majority of the subject lands have been highly disturbed for a couple of years. Prescribed mitigation measures in section 9.0 will limit the potential for indirect impacts.

6.0. Tree Conservation

Under the Tree Protection By-law, the following protected trees cannot be injured or removed without a tree permit from the City:

- All City-owned trees throughout the urban and rural area
- All trees 10 cm or more in diameter at breast height on private properties within the urban area that are subject to a Planning Act application for Site Plan, Plan of Subdivision, or Plan of Condominium
- All trees 10 cm or more in diameter at breast height on private properties within the urban area that are over 1 hectare in size
- All distinctive trees on private properties 1 hectare or less in size, where distinctive trees are defined as:
    - Trees measuring 30 cm or more in diameter at breast height within the inner urban area (urban lands inside the Greenbelt)
    - Trees measuring 50 cm or more in diameter at breast height within the suburban area (urban lands outside the Greenbelt)

The subject lands are outside of the Urban and Suburban Areas and this is private property. For a description of the onsite forest see section 3.1.7.

Tree removal will occur as needed within the subject lands. A reasonable effort will be made to retain any trees not slated for removal. Although the trees proposed to be removed consist of a very small woodland, there is still some ecological function provided such as local wildlife habitat and climate, air quality, wildlife, and nature appreciation benefits. Potential impacts during construction and associated removal of trees and other vegetation includes impacts on wildlife, increased erosion and release of sediments and other potential contaminants from truck traffic and construction activity, harm to wildlife remaining in the work area during construction, and impacts associated with an increase in noise, dust and light.

Removal of tree cover within the subject lands is not anticipated to result in significant negative impacts to the environmental features and functions of the general area, nor will it affect the significance of the woodland (section 5.1; not significant). Any tree in the vicinity of works that is not slated for removal will have its critical roots zone protected by temporary fencing (snow fencing) to ensure it is not affected. Area of tree removal is present in Figure 3. The average DBH is 15-25cm, tree protective fencing will be required to be installed at a minimum of 2.5m from the edge of any retained woodland (Figure 4).

Prescribed mitigation measures in section 9.0 will limit the potential for indirect impacts.

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7.0. Wildland Fire Risk Assessment

The wildland fire policy was introduced in the 2014 Provincial Policy Statement to ensure communities consider and plan for avoiding and mitigating losses to their communities due to wildland fire. As outlined in the Provincial Policy Statement, "Development shall generally be directed to areas outside of lands that are unsafe for development due to the presence of hazardous forest types for wildland fire. Development may however be permitted in lands with hazardous forest types for wildland fire where the risk is mitigated in accordance with wildland fire assessment and mitigation standards".

To assist planning city of Ottawa has identified potential hazardous forest types for wildland fire. The subject lands have been identified as being a Low risk for wildland fire.

7.1. Level 1 Site Assessment

Following review of the available information provided by the city the subject lands have been identified has having a low risk of wildland fires. Following the guidelines as outlined in the MNRF Wildland Fire Risk Assessment and Mitigation Guidebook no further mitigation measures are required for the proposed development. Furthermore the woodland in questions is small, isolated and surrounded by wetland, and quarries.

8.0. Development Constraints, Cumulative Impacts and Climate Change

Constraints that have been identified are discussed below (Figure 4):

Fish Habitat: Fish habitat has been taken into consideration the operation will incorporate a 30m water setback.

Swales: A 15m setback is being proposed to conserve the function of these swales.

Blanding's Turtle: Category 2 habitat has been identified along the watercourse leaving the remainder of the subject lands as Category 3 habitat. A 30m buffer from the top of the watercourse has been established as a water setback, this 30m will also serve as protected turtle habitat. Indirect impacts on the turtles as a result of the proposed development can be mitigated provided the mitigation measures in this report are properly implemented. Under the City of Ottawa's direction if a Blanding Turtle sighting is within 2km of potential development, MECP should be contacted and an IGF form be submitted, there is potential that an authorization/compensation be required by MECP for works to proceed.

The Canadian Environmental Assessment Agency (CEAA) defines cumulative effects as…"the effects on the environment caused by an action in combination with other past, present, and future human actions…" They occur when two or more project-related environmental effects, or two or more independent projects, combine to produce an augmented effect. These cumulative effects may be positive or negative.

There are no significant natural heritage features within the subject lands (majority of the site has been cleared). Given that the proposed location is bordered to the south, west and east by aggregate

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extraction operations the cumulative impacts will be the same, a slow chipping away at the natural landscape.

With proper implementation of the mitigation measures described in this report it is anticipated that the construction of the proposed development will not increase the potential for cumulative effects in the general landscape.

As per the EIS guidelines, climate change should be taken into account when developing the property. The main concerns with climate change are the following: extreme heat and drought, changing seasons, rain and flooding and extreme weather events.

The subject lands currently consist of cleared lands with no tree cover. To aid in mitigating the potential for extreme heat and drought were possible native trees should be considered for planting within remnant green spaces after development and where possible retain trees that are present. The shade produced by these trees will aid in mitigating heat being produced by hardened surfaces. To aid in the mitigation of the increased risk of rain and flood, the design of the stormwater infrastructure should accommodate the potential increased flows. Additional measures such as designing building and infrastructure to be resilient in future climate conditions such as extreme weather, greater rainfall and higher temperatures should be considered.

For further information see the City of Ottawa Climate Resiliency webpage (https://ottawa.ca/en/living-ottawa/environment-conservation-and-climate/climate-change-and-energy/climate-resiliency#section-a8783773-3a10-4998-b516-b4d9c5e73cf0)

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FIGURE 6: ENVIRONMENTAL CONSTRAINTS

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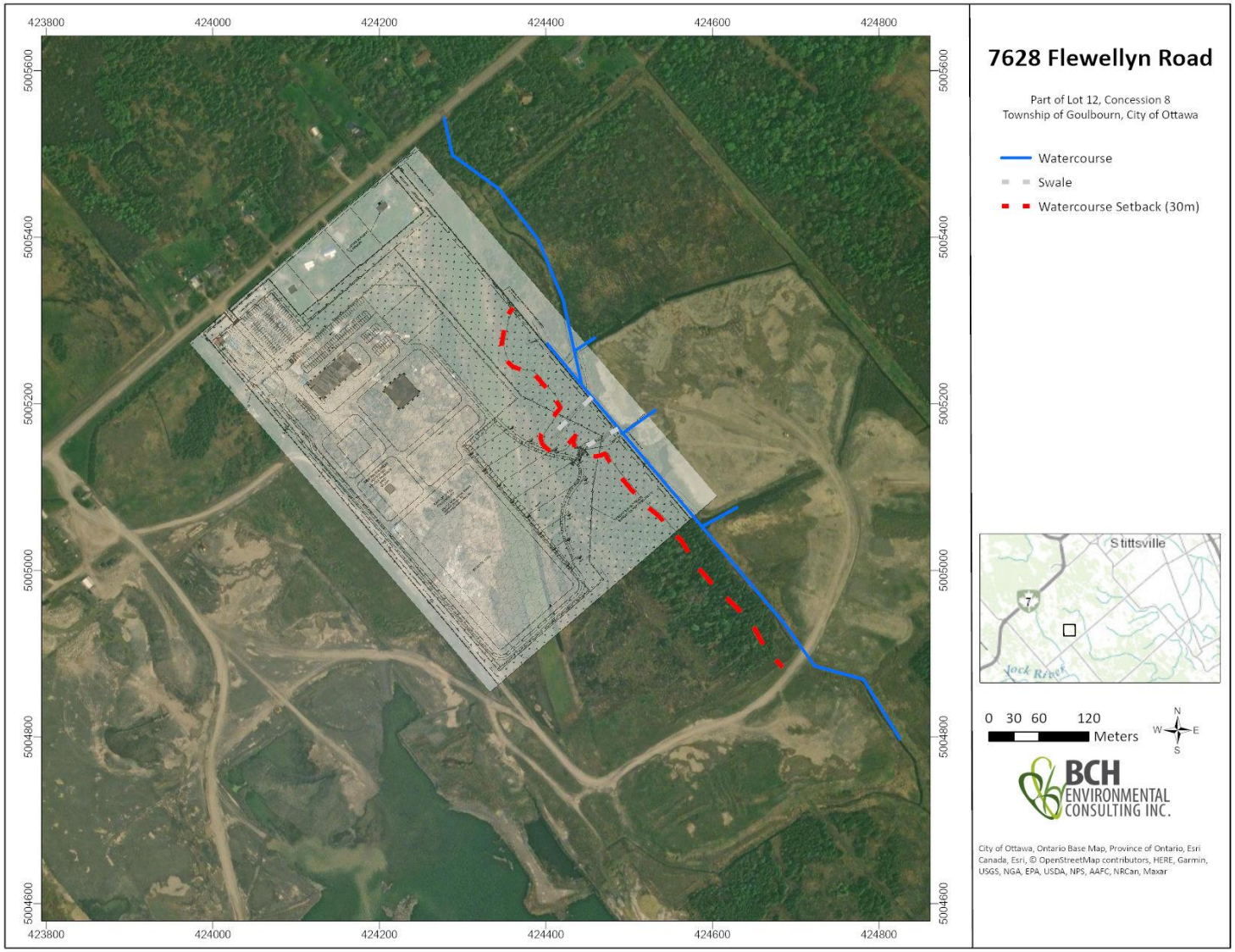
FIGURE 7: ENVIRONMENTAL CONSTRAINTS WITH SITE OVERLAY



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9.0. Discussion, Recommendations and Conclusion

As demonstrated in Figure 1 through 3 the majority of the lands in question are currently in use as an active waste processing and recycling facility. The remaining lands within the development area consisted of cleared/graded areas, a runway, and disturbed lands (see section 3.0 for further description of these lands). A small portion of the tall shrub swamp (0.1ha), will be disturbed and utilised for stormwater management (see section 3.0 and 5.2 for description and discussion regarding this feature). As the current lands are basically being used for the same purpose, and with the exception of the tall shrub swamp, the lands are devoid of natural features and there is very little changes related to the physically of the environment. The most notable would be the proposed stormwater management pond, which will enhance the protection of the watercourse as the site already drains to this location without any management facility. Through mitigation measures present in this report there are no negative impacts to natural heritage features of their function anticipated, any indirect impacts can be mitigated through measures present within this report.

This study's recommendations are intended to mitigate potential negative impacts due to the proposed waste processing/recycling operation and should be implemented through a development agreement between the owners and the municipality in order to control development of the site. Properly implemented controls within this agreement are deemed sufficient to mitigate the potential impacts of the waste processing/recycling operation proposed development on the significant woodland, aquatic habitat, and potential species at risk.

9.1. Mitigation for the Species at Risk and Migratory Birds Convention Act

1- To protect breeding birds, no tree or shrub removal should occur between April 1th and August 30th, unless a breeding bird survey is completed by a qualified biologist within two days of the woody vegetation removal and identifies no nesting activity.
2- With regard to turtles, clearing of vegetation should be undertaken between October 15th and April 15th, which is outside of the more active season for turtles.
3- To prevent impacts to bats, no clearing of trees greater than 10cm on-site should take place between April 1 and September 30 (inclusive) without a qualified biologist first confirming the absence of bats (i.e., open work timing window from October 1 to March 31). If tree clearing is conducted between October and April, no interactions with bats are anticipated, and therefore, significant negative impacts to SAR bats would be avoided.
4- Under the City of Ottawa's direction if a Blanding Turtle sighting is within 2km of potential development, MECP should be contacted and an IGF form be submitted, there is potential that an authorization/compensation be required by MECP for works to proceed.
5- The contractor is to be aware of potential Species at Risk in the vicinity of the site. Appendix 1 of City of Ottawa Protocol for Wildlife Protection during Construction (2022) and Appendix D of this report for descriptions of these species. Any Species at Risk sightings are to be immediately reported to the project biologist and the MECP, and activities modified to avoid the potential for impacts until further direction is received by the Ministry.

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9.2. Fish Habitat, Watercourse and Swale Recommendations and Mitigation Measures

1- A 30m setback from fish habitat is recommended and a 15m setback from the swales is being recommended. All lands within the setbacks are to be maintained in a natural vegetated state.
2- Storm water management facility will be designed in such a way as to not impact the quality of the water contributing to the watercourses.
3- Should dust particles be created during construction they will be suppressed using the appropriate method (i.e. water spraying).
4- Install and maintain the erosion control measures during construction. No work will occur until the appropriate sediment and erosion control measures have been designed and implemented prior to any work. At a minimum these will include:

    a. Provide regular maintenance to the sediment and erosion control measures during construction. Contractor shall be responsible for ensuring that the sediment and erosion control measures are maintained. No turbid water is permitted to leave the work area.
    b. Additional materials (i.e. rip rap, filter cloth and silt fencing) will be readily available in case they are needed promptly for erosion and/or sediment control.
    c. Any stock piles of soil or fill material will be stored as far as possible from the watercourse and wetland and protected by silt fencing.
    d. Sediment fencing will be installed at the edge of the work area, and kept in good working condition. The sediment fencing will not be removed until the area has stabilized.

5- If in-water work is required then DFO standards / codes of practice must be followed where applicable, DFO authorization may be required if the standards / codes of practice cannot be adhered to. In-water work is not to occur between March 15 to June 30.

9.3. Recommendation and Mitigation for Tree Protection

1- Any tree in the vicinity of subject lands but not slated for removal will have its critical roots zone protected by sturdy temporary fencing at least 1.3 metres in height installed from the tree trunk to a distance of ten times the retained tree's diameter where possible (tree protective fencing will be required to be installed at a minimum of 2.5m from the edge of the retained woodland)
2- No grading, heavy machinery traffic, stockpiling of material, machinery maintenance and refueling, or other activities that may cause soil compaction are to occur within three metres of the critical root zone of the trees to be protected.
3- The root system, trunk, and branches of the trees to be protected are to be protected and not damaged. If any roots of trees to be retained are exposed during site alterations, the roots shall be immediately reburied with soil or covered with filter cloth, burlap or woodchips and kept moist until the roots can be buried permanently. A covering of plastic should be used to retain moisture during an extended period when watering may not be possible. Any roots that must be cut are to be cut cleanly to facilitate healing and as far from the tree as possible. Overhanging branches from protected trees that may be damaged during construction are to be pruned by a qualified arborist prior to construction.

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4- Exhaust fumes from all equipment during construction will not be directed towards the canopy of the adjacent protected trees.
5- Any retained woodland should be clearly identified within development plans.

9.4. Climate Change Recommendations

1- To aid in mitigating the potential for extreme heat and drought were possible native trees should be considered for planting within remnant green spaces after development and tree retention were possible should be attempted. The shade produced by these trees will aid in mitigating heat being produced by hardened surfaces.
2- To aid in the mitigation of the increased risk of rain and flood, the design of the stormwater infrastructure should accommodate the potential increased flows.
3- Additional measures such as designing building and infrastructure to be resilient in future climate conditions such as extreme weather, greater rainfall and higher temperatures should be considered.

9.5. Additional Mitigation Measures

1- The extent of any vegetation removal within the development area is to be minimized where possible.
2- All rules governing septic systems and wells must be followed and be kept in good operational order.
3- There will be no use of herbicides in clearing of vegetation.
4- Municipal by-laws and provincial regulations for noise will be followed.
5- Fencing is to be erected to protect wildlife from entering the subject lands.
6- To discourage wildlife from entering the work areas during construction, the site should be kept clear of food wastes and other garbage. Proper drainage should be provided to avoid accumulation of standing water, which could attract amphibians, birds, and other wildlife to the work areas.
7- As recommended in City of Ottawa Protocol for Wildlife Protection during Construction (2022), prior to beginning work each day, wildlife is to be checked for by conducting a thorough visual inspection of the work space and immediate surroundings. See Section 2.0 of City of Ottawa Protocol for Wildlife Protection during Construction (2022) and Appendix C for additional recommendations on construction site management with respect to wildlife. It is the responsibility of the contractor to be familiar with all components of City of Ottawa Protocol for Wildlife Protection during Construction (2022). Any sensitive wildlife in the work area are to be relocated to the East of the subject lands. Animals should be moved only far enough to ensure their immediate safety.

To conclude this EIS, it is the professional opinion of the author that with proper implementation and maintenance of the mitigation measures (see above), the proposed development will not negatively impact the significant woodland, fish habitat, wetland, or any habitat of species at risk. It is important to note that all the subject lands are highly disturbed and have been for a number of years.

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Thank you for the opportunity to work with you. If you have any questions or comments please do not hesitate to contact our office.

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APPENDIX A: OBSERVED SPECIES LIST

COMMON NAME	SCIENTIFIC NAME	SRANK	SARA STATUS	SARO STATUS	BRUNTON 2005
Field Horsetail	*Equisetum arvense*	S5			Common
Water Horsetail	*Equisetum fluviatile*	S5			Common
Bracken Fern	*Pteridium aquilinum*	S5			Common
Sensitive Fern	*Onoclea sensibilis*	S5			Common
Marsh Fern	*Thelypteris palustris*	S5			Common
Balsam Fir	*Abies balsamea*	S5			Common
White Spruce	*Picea glauca*	S5			Common
Eastern White Cedar	*Thuja occidentalis*	S5			Common
Narrowleaf Cattail	*Typha angustifolia*	SNA			Common
Broad-leaved Cattail	*Typha latifolia*	S5			Common
Dark-green Bulrush	*Scirpus atrovirens*	S5			Common
Slender Willow	*Salix petiolaris*	S5			Common
Common Timothy	*Phleum pratense*	SNA			Common
Softstem Bulrush	*Schoenoplectus tabernaemontani*	S5			Common
Path Rush	*Juncus tenuis*	S5			Common
Garden Asparagus	*Asparagus officinalis*	SNA			Common
White Trillium	*Trillium grandiflorum*	S5			Common
Beaked Hazelnut	*Corylus cornuta*	S5			Common
Balsam Poplar	*Populus balsamifera*	S5			Common
Large-toothed Aspen	*Populus grandidentata*	S5			Common
Trembling Aspen	*Populus tremuloides*	S5			Common
Bebb's Willow	*Salix bebbiana*	S5			Common
Pussy Willow	*Salix discolor*	S5			Common
Black Walnut	*Juglans nigra*	S4?			Rare
Speckled Alder	*Alnus incana ssp. rugosa*	S5			Common
White Birch	*Betula papyrifera*	S5			Common
Bur Oak	*Quercus macrocarpa*	S5			Common
American Elm	*Ulmus americana*	S5			Common
European Stinging Nettle	*Urtica dioica*	SNA			Common
Bladder Campion	*Silene vulgaris*	SNA			Common
Virginia Virgin's-bower	*Clematis virginiana*	S5			Common
Garlic Mustard	*Alliaria petiolata*	SNA			Common
Field Mustard	*Brassica rapa*	SNA			Rare
Field Penny-cress	*Thlaspi arvense*	SNA			Common
Wild Black Currant	*Ribes americanum*	S5			Common
Choke Cherry	*Prunus virginiana*	S5			Common

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COMMON NAME	SCIENTIFIC NAME	SRANK	SARA STATUS	SARO STATUS	BRUNTON 2005
Black Raspberry	*Rubus occidentalis*	S5			Uncommon
Purple-flowering Raspberry	*Rubus odoratus*	S5			Common
Bird's-foot Trefoil	*Lotus corniculatus*	SNA			Common
White Sweet Clover	*Melilotus albus*	SNA			Common
Yellow Sweet-clover	*Melilotus officinalis*	SNA			Common
Red Clover	*Trifolium pratense*	SNA			Common
White Clover	*Trifolium repens*	SNA			Common
Cow Vetch	*Vicia cracca*	SNA			Common
Western Poison Ivy	*Toxicodendron radicans var. rydbergii*	S5			Common
Staghorn Sumac	*Rhus hirta*	S5			Common
Manitoba Maple	*Acer negundo*	S5			Common
Common Buckthorn	*Rhamnus cathartica*	SNA			Common
Glossy Buckthorn	*Frangula alnus*	SNA			Common
Riverbank Grape	*Vitis riparia*	S5			Common
Common St. John's-wort	*Hypericum perforatum*	SNA			Common
Purple Loosestrife	*Lythrum salicaria*	SNA			Common
Wild Sarsaparilla	*Aralia nudicaulis*	S5			Common
Wild Carrot	*Daucus carota*	SNA			Common
Wild Parsnip	*Pastinaca sativa*	SNA			Common
Red-osier Dogwood	*Cornus sericea*	S5			Common
White Ash	*Fraxinus americana*	S4			Common
Common Milkweed	*Asclepias syriaca*	S5			Common
Common Viper's Bugloss	*Echium vulgare*	SNA			Common
Catnip	*Nepeta cataria*	SNA			Common
Bittersweet Nightshade	*Solanum dulcamara*	SNA			Common
Butter-and-eggs	*Linaria vulgaris*	SNA			Common
Common Mullein	*Verbascum thapsus*	SNA			Common
Common Plantain	*Plantago major*	SNA			Common
Tatarian Honeysuckle	*Lonicera tatarica*	SNA			Common
Wild Mock-cucumber	*Echinocystis lobata*	S5			Common
Common Ragweed	*Ambrosia artemisiifolia*	S5			Common
Burdock sp.	*Articum sp.*				
Large-leaved Aster	*Eurybia macrophylla*	S5			Common
Chicory	*Cichorium intybus*	SNA			Common
Canada Thistle	*Cirsium arvense*	SNA			Common
Bull Thistle	*Cirsium vulgare*	SNA			Common
Daisy Fleabane	*Erigeron annuus*	S5			Common

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COMMON NAME	SCIENTIFIC NAME	SRANK	SARA STATUS	SARO STATUS	BRUNTON 2005
Common Boneset	*Eupatorium perfoliatum*	S5			Common
Grass-leaved Goldenrod	*Euthamia graminifolia*	S5			Common
Oxeye Daisy	*Leucanthemum vulgare*	SNA			Common
Black-eyed Susan	*Rudbeckia hirta*	S5			Common
Early Goldenrod	*Solidago juncea*	S5			Common
Common Sow-thistle	*Sonchus oleraceus*	SNA			Uncommon
Common Dandelion	*Taraxacum officinale*	SNA			Common
Colts Foot	*Tussilago farfara*	SNA			Uncommon
Tall Goldenrod	*Solidago altissima spp. Altissima*	S5			Common
Canada Goldenrod	*Solidago canadensis var. canadensis*	S5			Common
Sedges					
Reed Canary Grass	*Phalaris arundinacea var. arundinacea*	S5			Common
White Meadowsweet	*Spiraea alba var. alba*	S5			Common
Grasses					
American Toad	*Bufo americanus*	S5			
Tetraploid Gray Treefrog	*Hyla versicolor*	S5			
Spring Peeper	*Pseudacris crucifer*	S5			
Green Frog	*Rana clamitans*	S5			
Northern Leopard Frog	*Rana pipiens*	S5			
Killdeer	*Charadrius vociferus*	S5B, S5N			
American Woodcock	*Scolopax minor*	S4B			
Mourning Dove	*Zenaida macroura*	S5			
American Robin	*Turdus migratorius*	S5B			
Brown Thrasher	*Toxostoma rufum*	S4B			
Northern Waterthrush	*Seiurus noveboracensis*	S5B			
Chipping Sparrow	*Spizella passerina*	S5B			
Song Sparrow	*Melospiza melodia*	S5B			
Common Grackle	*Quiscalus quiscula*	S5B			
American Goldfinch	*Carduelis tristis*	S5B			
Red Squirrel	*Tamiasciurus hudsonicus*	S5			
White-tailed Deer	*Odocoileus virginianus*	S5			

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APPENDIX B: QUALIFICATIONS

SHAUN M. ST.PIERRE, B.Sc. Biology

EDUCATION

B.Sc. Biology, Trent University 2007
Fisheries and Wildlife Technology, Frost Campus, Sir Sandford Fleming College, 2005
Fisheries and Wildlife Technician, Frost Campus, Sir Sandford Fleming College, 2004

LANGUAGES

Fluent in French and English

POSITIONS HELD

2018 - :	BCH Environmental Consulting Inc., Biologist / Owner
2006-2017:	Bowfin Environmental Consulting Inc., Biologist / GIS Specialist / Environmental Site Inspector
2005:	St. Lawrence River Institute of Environmental Sciences, Field Research Assistant
2004:	MNR Kawartha Lakes, Field Research Assistant
2003:	DFO- Experimental Lake Area, Field Research Assistant
2001:	Resource Stewardship S, D &G, Stewardship Ranger

CERTIFICATIONS / PROFESSIONAL AFFILIATIONS

MTO/DFO/OMNR Fisheries Protocol, Ecological Land Classification, Certified in Inventory and Identification Methods for Ontario's Reptiles and Amphibians, North American Benthological Society (NABS) Certified Family Level Taxonomist, Ontario Benthos Biomonitoring Network (OBBN), Ontario Stream Assessment Protocol (OSAP), Certified Ontario Wetland Evaluator (OWES), Butternut Health Assessor (BHA), first aid, CPR, Pleasure Craft Operator Card, Marine Radio Operator, WHMIS, WHSA, Hazard Identification, Assessment and Control, All Terrain Vehicle Riders Course (issued by the Manitoba Safety Council), Water Safety Training (Bronze Cross), Possession / Acquisition Firearms Licence, Ontario Hunter Education Course Certificate, Ontario Trapper Education Course Certificate, Wildlife Chemical Immobilization, Vaccination, and Euthanasia- Certificate of Knowledge, South Lancaster Fish and Game Club (SLFGC; president 2012 and 2013; executive member 2014-2018), Ontario class G driver's license, and Snowmobile License.

EXPERIENCE

Experience in environmental impact assessments, environmental monitoring, environmental assessments, terrestrial habitat assessment, species at risk surveys, amphibian surveys, avian surveys, freshwater habitat assessment, collection and identification of plants, collection and identification of aquatic invertebrate, collection and identification of fish, fish salvage, fish behavioral studies, winter bat hibernaculum inventories and fisheries inventories including habitat mapping, electroshocking, FWIN and RIN. Other experience include GIS mapping.

Environmental and Fisheries Inspections

- Provided environmental and fisheries inspections for the construction of the Cataraqui Crossing HWY 401-MTO (Kingston, ON).
- Provided environmental and fisheries inspections for the construction of the Three Nations Bridge including surveys for nesting species at risk (Cornwall, ON).
- Provided environmental and fisheries inspections for construction (Ottawa, ON).
- Conducted nest surveys (Kemptville, ON.; Stittsville, ON.; Cornwall, ON.)
- Conducted environmental inspections for the construction of the Clarkson WWTP outfall, Lake Ontario.
- Conducted environmental inspections for the construction of a new bridge crossing Bearbrook Creek along the 417.

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- Provided environmental and fisheries inspections for the blasting and drilling operation for the Burloak Water Purification Tunnel project (Burlington, ON).
- Provided environmental and fisheries inspections for the construction of the Poole Creek Re-alignment/Huntmar Drive Crossing.

Species at Risk Inventories / Monitoring

- Butternut survey and assessment for proposed developments (Brockville, Carleton Place, Carp, Clarence-Rockland, Cornwall, Munster, Hawkesbury, Kemptville, Ottawa, South Lancaster, Smith Falls, Stittsville, Prospect, Vars, Moose Creek, Prescott, Westminster, Renfrew, Battersea, Jones Falls, and Millbrook).
- American Eel surveys using the boat electrofisher on the Mississippi River (Almonte, ON), South Nation River (Casselman, ON) and Ottawa River (Renfrew, ON; Ottawa, ON: Shawville, QC)
- American Eel collection on the St. Lawrence River for the St. Lawrence River Institute (Cornwall, ON)
- American Ginseng survey for proposed development (Kanata, South Lancaster and Renfrew).
- Whip-poor-will survey for proposed development (Navan, ON; Kemptville, ON; Stittsville, ON; Prescott, ON; Alexandria, ON) and quarries (Avonmore, Moosecreek, Prospect, Stittsville, Kanata, Ottawa)
- Assisted in a Least Bittern survey (Avonmore, ON)
- Conducted turtle surveys: Blanding's turtle, Eastern musk turtle (Carleton Place, ON; Ottawa, ON; Stittsville, ON; Kanata, ON, Prospect, ON)
- Conducted rapid clubtail surveys (Almonte, ON)
- Bat maternal nesting site surveys (Prescott, ON; Battersea, ON; Prescott, ON; Hawkesbury, ON; Russell, ON)

Aquatic Inventories

- Boat electrofishing along the shoreline of the Ottawa River (Chat Falls, ON) along the shoreline of the Cataraqui River (Kingston, ON), downstream of the Carillion Dam (Pointe-Fortune, QC), Lake St. Francis (South Lancaster, ON), South Nation River (Casselman, ON), Raisin River (Lancaster, ON), and the St. Lawrence River (Cornwall, ON)
- Collecting and data entry for benthic macroinvetebrate community surveys on several watercourses within Ontario including: Bonnechere River (Renfrew, ON), Montreal River (Latchford, ON), Jock River (Ottawa, ON), tributaries of the Bonnechere River (Renfrew, ON), tributaries to Feedmill Creek (Ottawa, ON), tributary to Chippewa Creek (North Bay, On) and tributary to the Beaudette River (Alexandria, ON).
- Collecting and data entry for several fish community surveys including: Black Creek (Westminster, ON), Bonnechere River (Renfrew and Douglas, ON), Butler's Creek (Brockville, ON), East Branch of Little Cataraqui Creek (Kingston, ON), Kehoe Ditch (Greely, ON), Lac Opemisca (Ouje-Bougoumou, QC), Marshall Seguin Municipal Drain (Vars, ON), Montreal River (Latchford, ON), tributaries of Lavalle Creek (Carleton Place), tributaries to Feedmill Creek (Ottawa, ON), tributaries to Lafontaine Creek (Clarence-Rockland), tributaries to Shirley's Brook (Kanata, ON), tributaries to the Beaudette River (Alexandria, ON), tributaries to the Bonnechere River (Renfrew, ON), tributaries to the Ottawa River (Carp, ON; Ottawa, ON; Wendover, ON; Clarence-Rockland, ON), tributaries to the South Nation River (Casselman, ON), tributaries to the South Nation River (Jessup Falls, ON), tributary to Hawkesbury Creek (Hawkesbury, ON), Hawkesbury Creek (Hawkesbury , ON), tributary to the St.Lawrence River (Prescott, ON) and tributary to the North Castor River (Greely, ON).
- Mapped fish habitat in many watercourses including: Black Creek (Westminster, ON), Bonnechere River (Renfrew and Douglas, ON), Butler's Creek (Brockville, ON), Kehoe Ditch (Greely, ON), Lac Opemisca/Lac Barlow Bypass channel (Ouje-Bougoumou, QC), Marshall Seguin Municipal Drain (Vars, ON), McKinnons Creek (Navan, ON), Montreal River (Latchford, ON), tributaries of Lavalle Creek (Carleton Place), tributaries of the Bonnechere River (Renfrew, ON), tributaries to Lafontaine Creek (Clarence-Rockland), tributaries to McKinnons Creek (Navan, ON), tributaries to Shirley's Brook (Kanata, ON), tributaries to the North Castor River (Greely, ON), tributaries to the Ottawa River (Ottawa, ON; Wendover, ON), tributaries to the South Nation River (Casselman, ON), tributaries to the South Nation River (Jessup Falls, ON), tributary to the St.Lawrence River (Prescott, ON) and tributary to Hawkesbury Creek (Hawkesbury, ON).
- Assisted in YOY sampling on the Raisin River (Lancaster, ON).
- Conducted riverine index netting on the Bonnechere River (Renfrew, ON).

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- Assisted in gill netting on Bonnechere River (Renfrew, ON), Lac Barlow (Ouje-Bougoumou, QC), Lac Opemisca (Ouje-Bougoumou, QC), Montreal River (Latchford, ON), and Raisin River (Lancaster, ON).
- Assisted in conducting larvae surveys on Bonnechere River, Hoople Creek, Montreal River and Raisin River,
- Collected walleye eggs from the spawning grounds on the Bonnechere River, Montreal River, Raisin River and Hoople Creek.
- Assisted in the monitoring of a new wetland channel created in the Little Cataraqui River.
- Marsh monitoring program breeding amphibian survey at Stittsville, ON; Cornwall, ON; Kanata, ON; Hoople Creek and the Bonnechere River.
- Assisted in conducting fall walleye index netting for the MNR in Kawartha Lakes
- Conducted turtle surveys (Carleton Place, ON; Ottawa, ON)
- Conducted headwater waters assessment (Kanata, ON; Navan, ON, Ottawa, ON)

Terrestrial Inventories

- Multiple Environmental Impact Assessments across Ontario
- Tree Inventory for construction of the light rail (LRT; Ottawa, ON)
- Winter white-tailed deer survey (Edwardsburgh, ON)
- Plant community inventories for proposed developments, quarries, sand pits and road extensions (Brockville, Carleton Place, Carp, Casselman, Elgin, Griffith, Hamilton, Jessup Falls, Navan, Ottawa, Stittsville, Rockland, Simcoe, Cornwall, Kemptville, Hawkesbury, Smith Falls, Wendover, Moosecreek, Westminster, Prescott, Renfrew, Jones Falls, Michipicoten Island and in Ouje-Bougoumou in QC)

Aquatic Habitat Mapping for Municipal, City Roads and Provincial Highways

- Conducted MTO habitat assessments at Galetta Side Road, Torbolton Road, Kinburn Side Road (Ottawa, ON)
- Conducted MTO habitat assessments at Prince of Wales, Fernbank Road, Fallowfield Road, HWY 115, Arbuckle drain, the Carp river, tributaries to the Carp river and tributaries to Mud creek (Ottawa, ON)
- Conducted MTO habitat assessments at Innes Road, Ottawa, ON.
- Conducted MTO habitat assessments at MacLaren Side Road, Ottawa, ON.

Other

- Fish salvage: Mississippi River (Almonte, ON), Monaghan Drain (Ottawa, ON), tributary to the Rideau Canal (Kemptville, ON), and tributary to Feedmill Creek (Ottawa ON), Bonnechere River (Renfrew, ON)
- Assisted in conducting a winter bat hibernaculum inventory (Plantagenet, ON)
- Field research assistant for the Metalicuus study and EDC study (Experimental Lakes Area, ON)
- Captured, pit tagged, telemetry tagged and tracked Northern Pike (Experimental Lakes Area, ON)
- Construction and maintenance of nature trail (the Cornwall Outdoor Recreational Area, ON)
- Conducted frog deformities surveys (Glengarry, ON)
- Organized youth fishing derbies through SLFGC (2011-2013; South Lancaster)
- Organized the St.Francis Walleye Tournament through SLFGC (2012-2013; South Lancaster)

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CODY J.C FONTAINE, Fisheries and Wildlife Technologist

EDUCATION
Fisheries and Wildlife Technology, Frost Campus, Sir Sandford Fleming College, 2012
Fisheries and Wildlife Technician, Frost Campus, Sir Sandford Fleming College, 2011

LANGUAGES
Fluent in English

POSITIONS HELD
2022: BCH Environmental Consulting Inc., Fisheries and Wildlife Technologist
2014: Bowfin Environmental Consulting Inc., Fisheries and Wildlife Technologist
2009: Raisin Region Conservation Authority, Field Research Assistant

CERTIFICATIONS / PROFESSIONAL AFFILIATIONS
MTO/DFO/OMNR Fisheries Protocol, Environmental Monitoring For Construction Projects Practitioner (EMCPP), Ontario Stream Assessment Protocol (OSAP), Class 2 Electroshocking, first aid, CPR, Pleasure Craft Operator Card, WHMIS, WHSA, Hazard Identification, Assessment and Control, Ice Safety Training, Possession / Acquisition Firearms License, Fish Identification Certificate, Radio Telemetry Certificate, Fish Hatchery Operations Certificate, Ontario Hunter Education Course Certificate, Ontario trapper Education Course Certificate, Ontario class G driver's license.

EXPERIENCE
Experience in environmental monitoring, environmental assessments, terrestrial habitat assessment, species at risk surveys, amphibian surveys, freshwater habitat assessment, collection and identification of plants, collection and identification of fish, fish salvage, bat hibernaculum inventories and fisheries inventories including netting and electroshocking. Other experiences include GIS mapping.

Aquatic Inventories
- Assisted with boat electrofishing along the shoreline of the Ottawa River (Chat Falls and Ottawa, ON), Lake St. Francis (South Lancaster, ON), Bonnechere (Renfrew, ON), Raisin River (Lancaster, ON), Buckhorn Lake (Peterborough, ON) and the St. Lawrence River (Cornwall, ON)
- Assisted in collecting and data entry for several fish community surveys including: Bonnechere River (Renfrew, ON), tributaries to Feedmill Creek (Ottawa, ON), tributaries to Shirley's Brook (Kanata, ON), tributaries to the Ottawa River (Ottawa, ON), tributaries to the Rideau River (Manotick, ON), tributaries to the Castor River (Vars, ON), tributaries to the Otonabee River (Lakefield, ON), tributary to the Madawaska River (Arnprior, ON), tributaries to Kemptville Creek (Kemptville, ON), tributary to Blairs Creek (Clarence Creek, ON), tributaries to South Indian Creek River (Russell, ON) tributaries to the South Nation River (Casselman, ON), tributaries to Fraser Clarke Drain (Nepean, ON), tributaries to the Raisin River (Long Sault, ON), Oliver-Magee drain (South Glengarry, ON) and tributary to Hawkesbury Creek (Hawkesbury, ON).
- Assisted in collecting walleye eggs from the spawning grounds on the Raisin River.
- Marsh monitoring program breeding amphibian surveys (Stittsville, Lakefield, Cornwall, Long Sault, South Glengarry, Bourget, Manotick and Kanata, ON).
- Conducted turtle surveys (Carleton Place, Ottawa, Cornwall and Lancaster, ON)
- Conducted Headwater Assessments (Ottawa, Stittsville and Manotick, ON)
- Invasive Species Survey (Ottawa, ON)

Species at Risk Inventories / Monitoring

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- Assisted in butternut surveys, inventories and assessments for proposed developments (Carleton Place, Casselman, Cornwall, South Glengarry, Long Sault, Kemptville, Smiths Falls, Ottawa, Stittsville, Peterborough, Lakefield, Brockville, Alfred, Orleans, Kanata and Prescott, ON).
- American Eel surveys using the boat electrofisher on the Ottawa River (Ottawa, ON)
- American Eel collection on the St. Lawrence River for the St. Lawrence River Institute (Cornwall, ON)
- Conducted tailrace surveys for hydro facilities regarding American eel and lake sturgeon fatalities (Almonte, Renfrew, Ottawa and Fitzroy Harbour, ON)
- Whip-poor-will survey for proposed development (Ottawa, Kemptville, Bourget, Stittsville, Alfred, South Glengarry and Alexandria, ON) and quarries (Ottawa and Cornwall, ON)
- Surveyor for Little Brown bat, Eastern Small Footed Bat and Northern Long Eared Bat surveys at Ernestown Windpark (Ernestown, ON)
- Gray Ratsnake Survey (Smiths Falls and Lakefield, ON)
- Bat Cavity Survey (Lakefield, Smiths Falls, Bourget, Clarence Creek, Casselman, Orleans, Kanata, South Glengarry and Embrun, ON)
- Conducted Least Bittern surveys (Prospect, Alexandria, and Lancaster, ON)
- Conducted Black Tern nest surveys (Alexandria, and Cornwall, ON)
- Conducted turtle surveys: Blanding's turtle, Musk turtle and Northern Map turtle, Painted turtle and Snapping turtle (Carleton Place, Ottawa, Stittsville, Kanata, Rockland, Cornwall, Lakefield, Alfred, Clarence Creek and Lancaster, ON)
- Conducted American Ginseng Survey (Alfred, ON)
- Conducted rapid clubtail surveys (Almonte, ON)
- Conducted Osprey nest surveys (Cornwall, ON)

Terrestrial Inventories

- Assisted plant community inventories for proposed developments (Ottawa, Cornwall and Prescott, ON)
- Assisted in ELC inventories (Ottawa, Lakefield, Alfred, Kanata, Long Sault, South Glengarry and Peterborough ON)
- Nesting Bird Survey (Stittsville and Brockville ON)
- Large Tree Survey (Carp, Kanata and Orleans, ON)
- Deer and Moose Overwintering Survey (Alfred, ON)

Environmental and Fisheries Inspections

- Assisted in providing environmental and fisheries inspections for construction (Ottawa, ON)
- Assisted in turtle salvage during construction at the Cavanagh Snow Dump (Kanata, ON)

Fish Salvage

- Highway 401 Fish Salvage – Brockville, ON and Prescott, ON (Cruikshank, MTO Contract)
- Other fish salvages: Cardinal Creek (Ottawa, ON), Monaghan Drain (Ottawa, ON), tributary to the Rideau Canal (Kemptville, ON), tributary to Feedmill Creek (Ottawa ON), Bonnechere River (Renfrew, ON), Mississippi River (Almonte, ON), Ottawa River (Ottawa, ON), Tributary to Fraser Clarke Drain (Nepean, ON), tributary to St.Lawrence River (Newington, ON), Davidson Pond (Ottawa, ON),. Hazeldean tributary (Ottawa, ON), tributary to Jock River (Richmond, ON), culvert on Thunder Road (Gloucester, ON), culvert on Dunning Road (Cumberland, ON)

Other

- Organized fishing derby through RRCA (2008-2012; Cornwall, ON)
- Conducted environmental education presentations to many school groups (Cornwall, and Lancaster, ON)
- Tree Planting (2008-2012; Cornwall, ON)

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General Provisions:

- Watch out for wildlife while driving, and avoid hitting them, provided that it is safe to do so.
- Ensure sediment and erosion control measures (i.e., silt fencing) and other protective measures are in place prior to beginning work. Inspect them regularly, and particularly after storm events, to ensure their continued effectiveness.
- Prior to beginning work each day, check for wildlife by conducting a thorough visual inspection of the work space and immediate surroundings.
- Restrict all activities, vehicles and materials to the designated work space. Do not disturb areas identified for retention.
- Secure stockpiled materials, vehicles and structures against wildlife entry.
- Litter and other waste materials must be appropriately contained and promptly disposed of.
- Do not feed any wildlife or leave food out where it could attract them.

For health and safety reasons, and for protection of animals, removal and relocation of mammals must only be done by qualified and properly equipped personnel. Call the wildlife service provider [BCH ENVIRONMENTAL CONSULTING INC.] at (613) 571-8883 for assistance.

Scratches and bites from animals, whether domestic or wild, can result in serious infections and/or transmit diseases. Seek medical treatment immediately for any person injured by an animal.

Wildlife Encounters:

- **Do not harm any wildlife.** Many species are protected under provincial and/or federal legislation. Legal protection of egg-laying species applies to their eggs as well. Penalties for contravening these Acts can be severe.
- **Stand back** and allow the animal to leave the site. Wildlife may be encouraged to move away from the work area by shouting, waving of arms, clapping of hands or gentle redirection using a push broom. Contact project biologist / wildlife service provider for assistance if needed (e.g., if young animals are found). Do not unnecessarily harass any wildlife.
- **Turtles** may need to be helped to safety. Our most common species, Painted and Snapping Turtles, are protected under the Fish and Wildlife Conservation Act, 1997. If one of these turtles is found in the work area, it can be gently removed to a safe location nearby. Wear gloves, or use a broom to steer the turtle into a bucket or other container. Handle with care to avoid injury to the turtle or yourself, particularly when dealing with Snapping Turtles, which may bite or scratch. Turtles may also wet themselves when handled.
- Most of Ottawa's **snakes** are protected under the Fish and Wildlife Conservation Act, 1997. None of them are venomous, but bites may cause infections. Some produce a foul-smelling musk when handled, instead of biting. Snakes will usually try to escape or hide when disturbed, and only defend themselves when trapped. If a snake is found in the work area, it should be gently herded out to a safe location.
- **Stop work immediately** if any species protected under the Endangered Species Act, 2007 are seen in or near the work site (see attached sheet for tips on identifying some commonly encountered species). Take a photograph if possible, to confirm the sighting, and contact the project biologist at (613) 571-8883 and the Ministry of Environment, Conservation and Parks at SAROntario@ontario.ca. Additional measures to avoid impacts may be required by the Ministry before work can restart.

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APPENDIX D: Commonly Encountered Species Protected under the Endangered Species Act, 2007

Blanding's Turtle Bright yellow chin and throat. Highly domed, speckled shell up to 28 cm (11 in) in length. Eggs small, oval and white. Usually less than 12 eggs per nest.	  Photo courtesy of R. van de Lande
Bobolink Males black with white back and cream hood during spring and summer breeding season. Females and non-breeding males streaky brown. Nests on the ground in open grasslands and hayfields.	  Photo courtesy of A. MacPherson
Eastern Meadowlark Streaky grayish-brown bird with bright yellow front marked by black "V." Short tail has white edges on each side. Nests on the ground in open grassy areas; often seen perching on fence posts or shrubs.	 Photo courtesy of A. MacPherson
Butternut Each leaf has several pairs of leaflets on either side of the main stalk, and one leaflet at the tip. Leaves and twigs grow in an alternating pattern along the branches. The nuts resemble limes or lemons in shape, and have greenish-yellow fuzzy rinds covering a hard, brown, ridged shell. The closely related Black Walnut. Its leaves are very similar to Butternut's leaves, but the terminal leaflet at the tip of each leaf is often much smaller than the other leaflets, or missing entirely.	   Photo courtesy of A. MacPherson

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APPENDIX E: Agency Contact

Agency	Staff Contact(s)	Telephone	Information/Authority on:
City of Ottawa	Planner	(613) 580-2424	Development application review process
	Environmental Planner	(613) 580-2424	EIS and other municipal environmental policies
	Forester-Planning	(613) 580-2424	Tree Conservation Report and urban tree removal
Conservation Authority – usually only one will be involved in any given application	Mississippi Valley Rideau Valley South Nation	(613) 253-0006 (613) 692-3571 (613) 984-2948	Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation
Fisheries and Oceans Canada	Fish and Fish Habitat Protection Program (Ontario)	1-855-852-8320 FisheriesProtection@dfo-mpo.gc.ca	Fish and fish habitat issues
Ministry of Environment, Conservation and Parks	Management Biologist	SAROntario@ontario.ca	Provincially protected species at risk (occurrence data, habitat information, advice and applications for permits under the *Endangered Species Act, 2007).*
Ministry of Natural Resources and Forestry (Kemptville District office)	Management Biologist	(613) 258-8204 (main office)	Wetlands; Areas of Natural and Scientific Interest; significant wildlife habitat.

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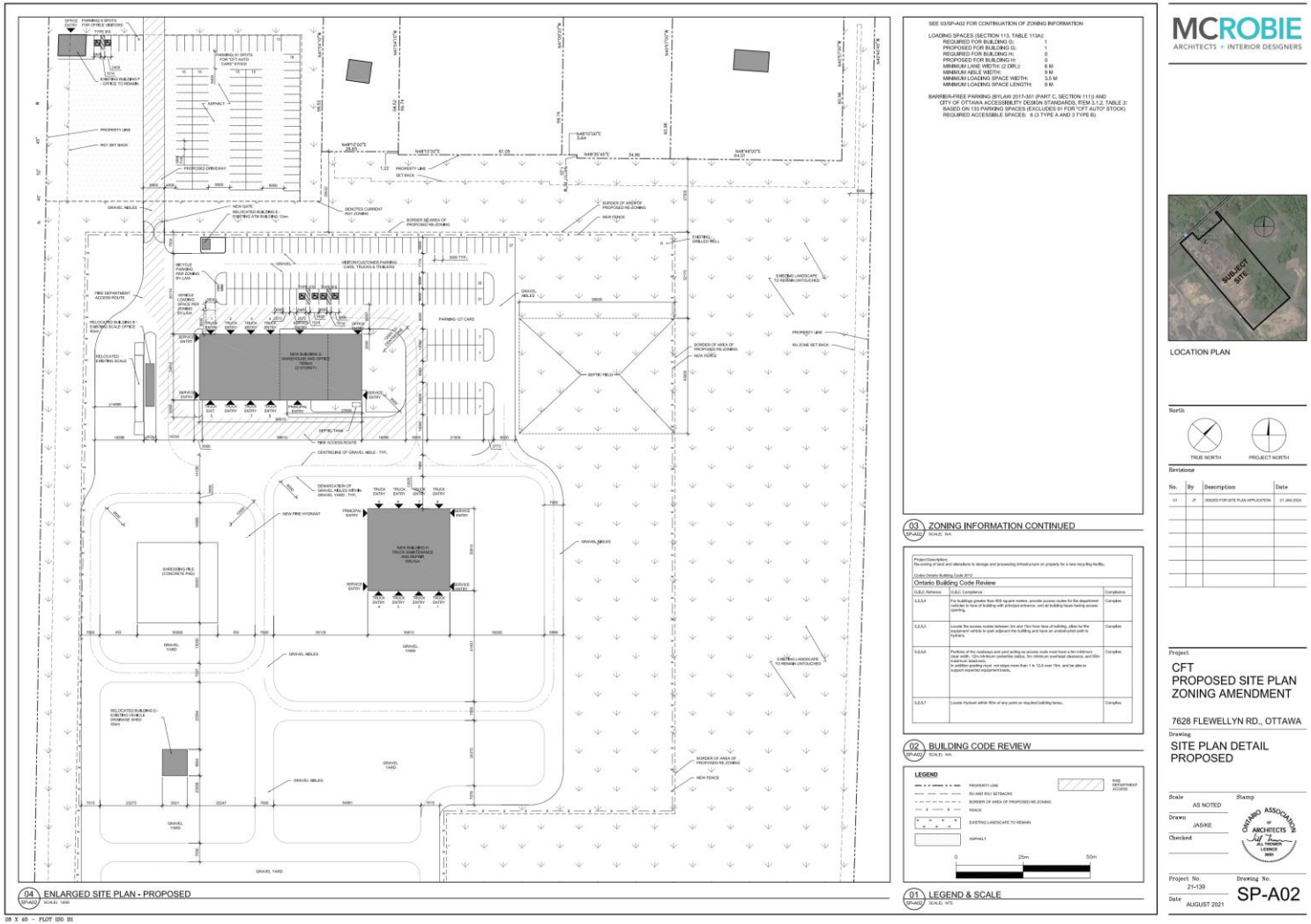
APPENDIX F: SITE PLANS



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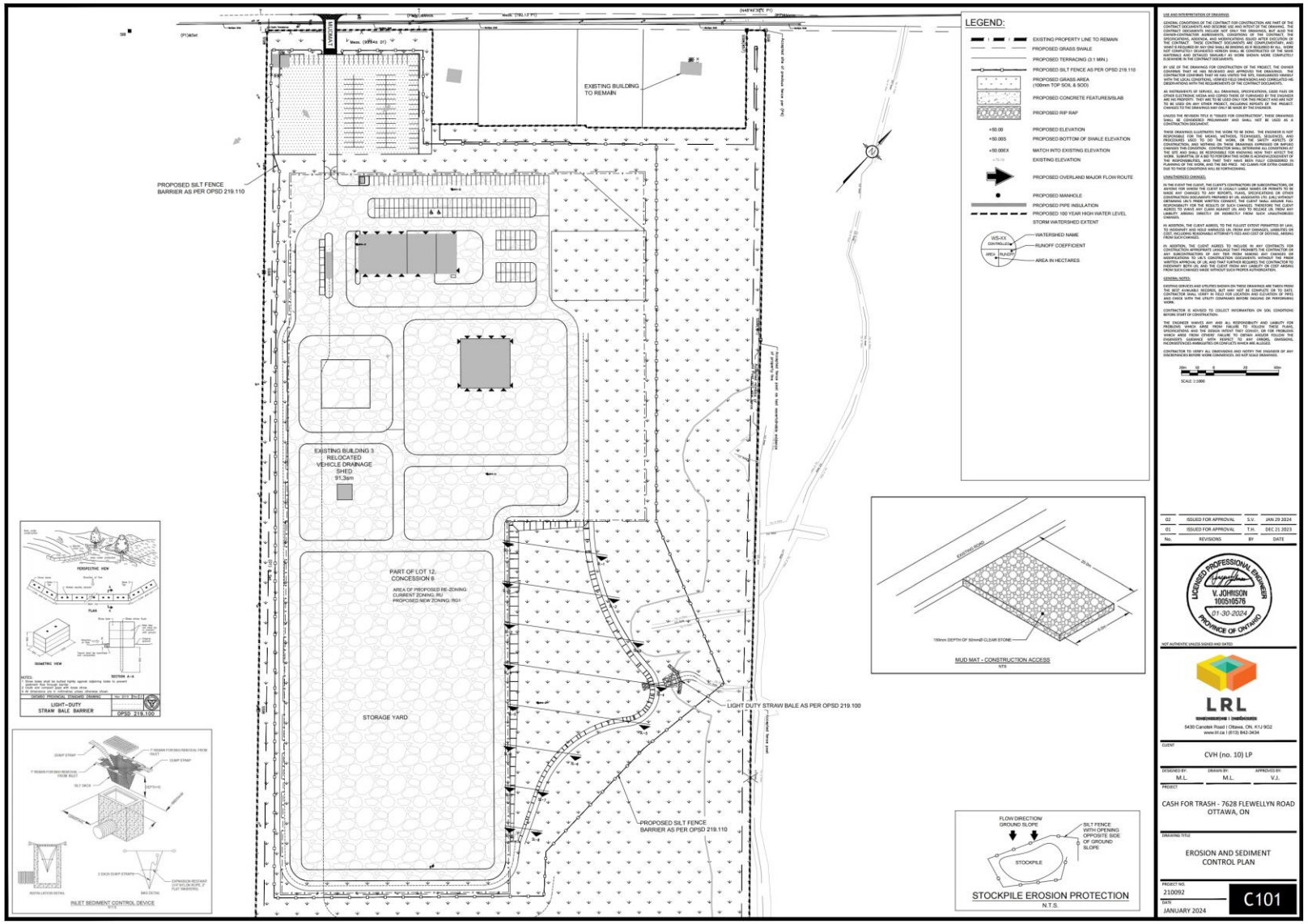

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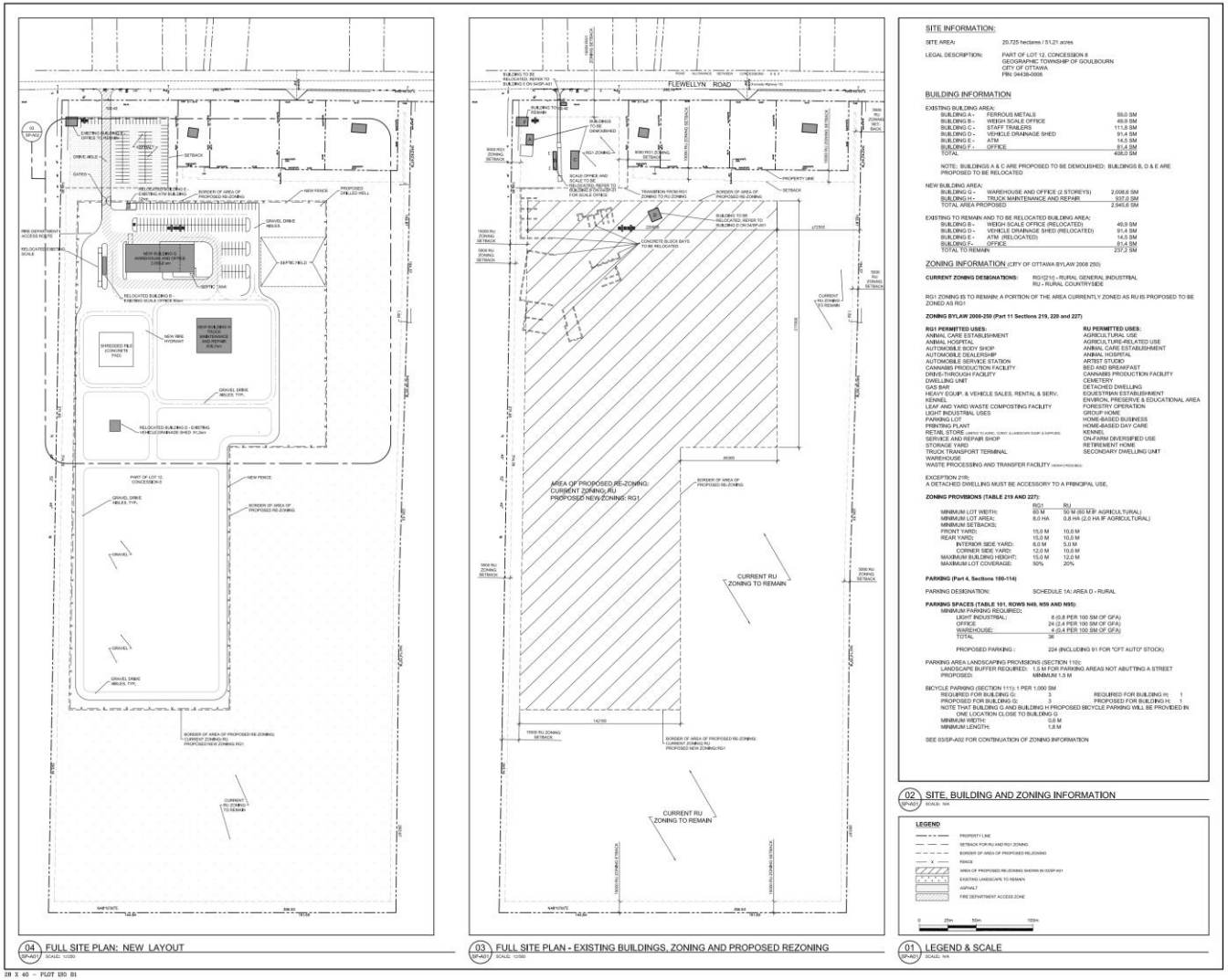
APPENDIX G: ZONING AMENDMENT



LOCATION PLAN

MCROBIE ARCHITECTS + INTERIOR DESIGNERS

North: TRUE NORTH, PROJECT NORTH

Revisions

No.	By	Description	Date
01	JT	ISSUED FOR SITE PLAN APPLICATION	31 JAN 2024

Project
CFT
SITE PLAN
ZONING AMENDMENT
7628 FLEWELLYN RD., OTTAWA

Drawing
ZONING INFORMATION
LOCATION PLAN, EXIST.
AND NEW SITE PLAN

Scale: AS NOTED
Drawn: JA/KE
Checked
Stamp: ONTARIO ASSOCIATION OF ARCHITECTS

Project No. 21-139
Date AUGUST 2021
Drawing No. SP-A01

BCH ENVIRONMENTAL CONSULTING INC.

20373 Bethune Street
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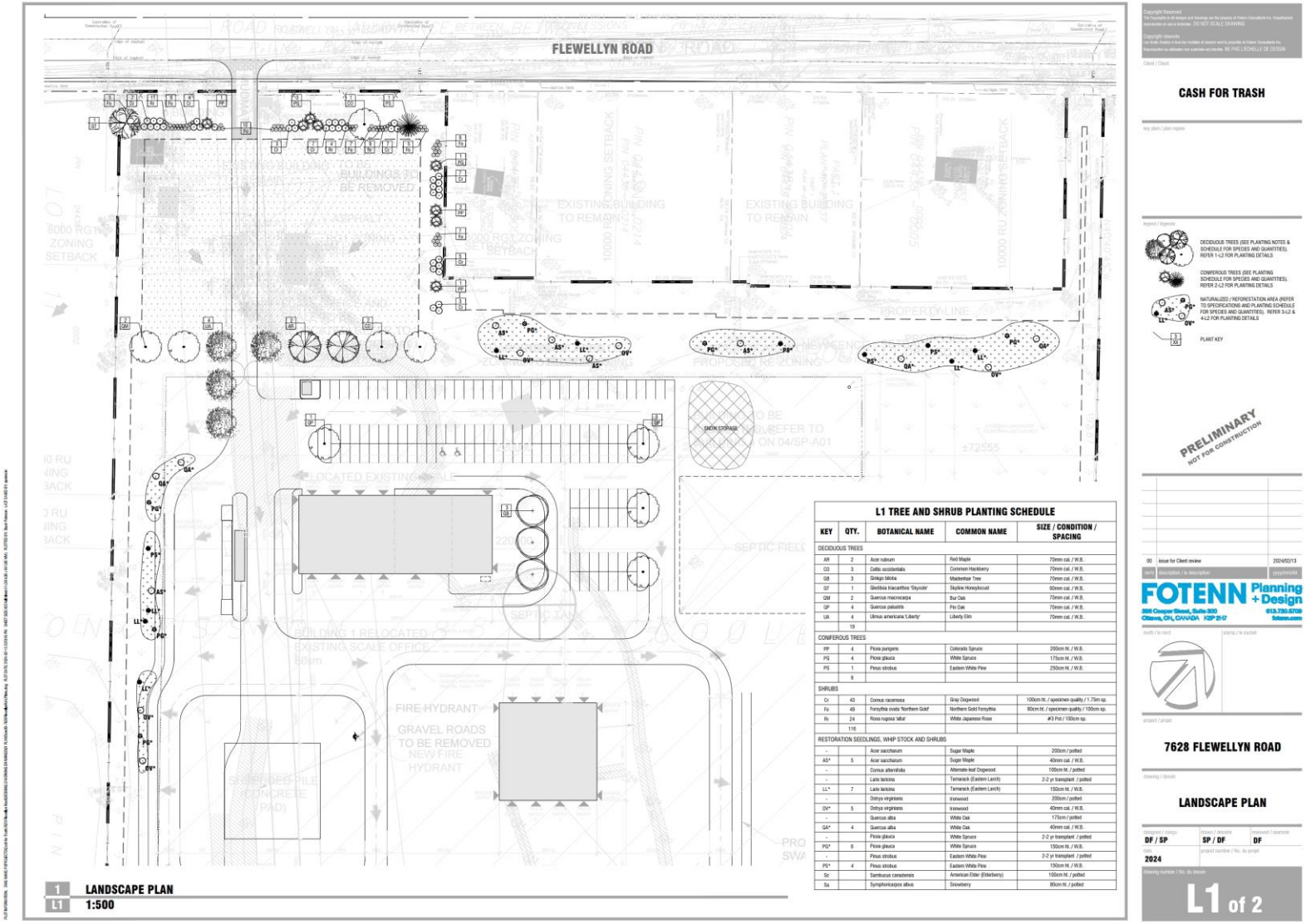
APPENDIX H: FINAL LANDSCAPING PLANS



L1 TREE AND SHRUB PLANTING SCHEDULE

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE / CONDITION / SPACING
DECIDUOUS TREES				
AR	2	Acer rubrum	Red Maple	70mm cal. / W.B.
CO	3	Celtis occidentalis	Common Hackberry	70mm cal. / W.B.
GB	3	Ginkgo biloba	Maidenhair Tree	70mm cal. / W.B.
GT	1	Gleditsia triacanthos 'Skycole'	Skyline Honeylocust	70mm cal. / W.B.
QM	2	Quercus macrocarpa	Bur Oak	70mm cal. / W.B.
QP	4	Quercus palustris	Pin Oak	70mm cal. / W.B.
UA	4	Ulmus americana 'Liberty'	Liberty Elm	70mm cal. / W.B.
	19			
CONIFEROUS TREES				
PP	4	Picea pungens	Colorado Spruce	200cm ht. / W.B.
PG	4	Picea glauca	White Spruce	175cm ht. / W.B.
PS	1	Pinus strobus	Eastern White Pine	250cm ht. / W.B.
	9			
SHRUBS				
Cr	43	Cornus racemosa	Gray Dogwood	100cm ht. / specimen quality / 1.75m sp.
Fo	49	Forsythia ovata 'Northern Gold'	Northern Gold Forsythia	80cm ht. / specimen quality / 100cm sp.
Ru	24	Rosa rugosa 'alba'	White Japanese Rose	#3 Pot / 100cm sp.
	116			
RESTORATION SEEDLINGS, WHIP STOCK AND SHRUBS				
-		Acer saccharum	Sugar Maple	200cm / potted
AS*	5	Acer saccharum	Sugar Maple	40mm cal. / W.B.
-		Cornus alternifolia	Alternate-leaf Dogwood	100cm ht. / potted
-		Larix laricina	Tamarack (Eastern Larch)	2-2 yr transplant / potted
LL*	7	Larix laricina	Tamarack (Eastern Larch)	150cm ht. / W.B.
-		Ostrya virginiana	Ironwood	200cm / potted
OV*	5	Ostrya virginiana	Ironwood	40mm cal. / W.B.
-		Quercus alba	White Oak	175cm / potted
QA*	4	Quercus alba	White Oak	40mm cal. / W.B.
-		Picea glauca	White Spruce	2-2 yr transplant / potted
PG*	6	Picea glauca	White Spruce	150cm ht. / W.B.
-		Pinus strobus	Eastern White Pine	2-2 yr transplant / potted
PS*	4	Pinus strobus	Eastern White Pine	150cm ht. / W.B.
Sc		Sambucus canadensis	American Elder (Elderberry)	100cm ht. / potted
Sa		Symphoricarpos albus	Snowberry	80cm ht. / potted

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DECIDUOUS TREES (SEE PLANTING NOTES & SCHEDULE FOR SPECIES AND QUANTITIES). REFER 1-L2 FOR PLANTING DETAILS

CONIFEROUS TREES (SEE PLANTING SCHEDULE FOR SPECIES AND QUANTITIES). REFER 2-L2 FOR PLANTING DETAILS

NATURALIZED / REFORESTATION AREA (REFER TO SPECIFICATIONS AND PLANTING SCHEDULE FOR SPECIES AND QUANTITIES). REFER 3-L2 & 4-L2 FOR PLANTING DETAILS

PLANT KEY

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no.	description / la description	yyyy/mm/dd
00	Issue for Client review	2024/02/13

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LANDSCAPE PLAN

designed / dessiné	drawn / dessiné	reviewed / examiné
DF / SP	SP / DF	DF
date	project number / No. du projet	
2024		

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L1 of 2

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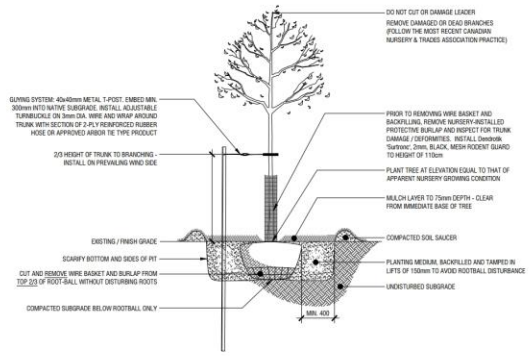
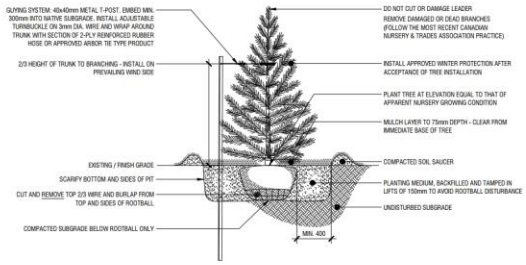
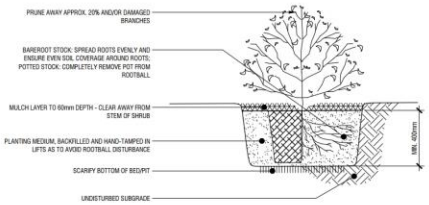


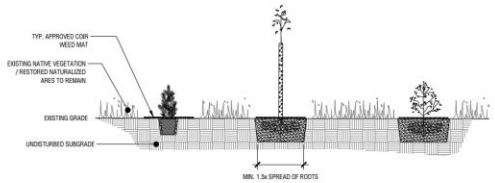
1 L2 DECIDUOUS TREE PLANTING DETAIL
n.t.s.



2 L2 CONIFEROUS TREE PLANTING DETAIL
n.t.s.



3 L2 SHRUB PLANTING DETAIL
n.t.s.



NOTES:

1. LOCATIONS AND SPACING OF PLANTS WILL BE PROVIDED IN THE FIELD BY THE LANDSCAPE ARCHITECT / FORESTER;
2. SCARIFY BOTTOM OF PLANTING PITS;
3. SPREAD ROOTS OF BARE ROOT STOCK EVENLY AND ENSURE FULL SOIL COVERAGE AROUND ROOTS;
4. BACKFILL PLANTING EXCAVATIONS WITH LOOSENED NATIVE SOIL, WHERE FOUND TO UN-SUITABLE, BLEND WITH APPROVED IMPORTED TOPSOIL;
5. REMOVE NATIVE HERBACEOUS GROWTH FROM IMMEDIATE BASE OF PLANT. INSTALL APPROVED BIO-DEGRADABLE COIR MATS (MIN. 600 Ø x 10 THICK) AND FASTEN WITH 3 APPROVED BIO-DEGRADABLE STAKES;
6. INSTALL APPROVED FINE WIRE MESH OR PERFORATED PLASTIC RODENT BARRIER ON WHIP STOCK TREES;
7. REFER TO PLANTING SPECIFICATIONS FOR FURTHER DETAILS

4 L2 REFORESTATION PLANTING DETAIL
n.t.s.

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