



McKINLEY
ENVIRONMENTAL
SOLUTIONS

2750 & 2760 Sheffield Road Development Combined Environmental Impact Statement & Tree Conservation Report



July 2023
Prepared for Richcraft Properties Ltd.

McKINLEY ENVIRONMENTAL SOLUTIONS
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EXECUTIVE SUMMARY

McKinley Environmental Solutions was retained by Richcraft Properties Ltd. to prepare a Combined Environmental Impact Statement and Tree Conservation Report to support the development of a new industrial building on Sheffield Road. The Site includes several connected parcels located at the municipal addresses 2750, 2760, 2713 and 2865 Sheffield Road, Ottawa (Ontario) (Lot 23 and Lot 24, Concession 3, Ottawa River (Gloucester)). The Site is within the urban area of the City of Ottawa and is approximately 8.5 hectares in size. The eastern part of the Site includes four (4) existing industrial buildings with frontage on Sheffield Road. The western part of the Site includes one existing industrial building with frontage on Lancaster Road. Each of the existing industrial buildings is surrounded by paved parking/storage areas and landscaping features. The central part of the Site includes an undeveloped parcel that was historically part of a railway corridor. The former railway corridor is currently vacant and is occupied by regrowth vegetation. The Site is surrounded by existing industrial buildings, paved surfaces, and roads on all sides, with the exception of the adjacent undeveloped portions of the former railway corridor. A Drainage Channel traverses the former railway corridor in an approximately northwest to southeast direction. The Drainage Channel enters the Site at its northwest corner. The Drainage Channel exits the Site at its southeast corner before flowing east towards Sheffield Road. The Drainage Channel is a minor tributary of Ramsay Creek. The ecological characteristics of the Drainage Channel were assessed as part of a concurrently prepared Headwaters Drainage Feature Assessment.

The proposed development will involve the construction of a new industrial building and associated paved parking/storage areas within the former railway corridor. The new industrial building will be divided into four (4) units, each of which will include an office space. The four (4) existing industrial buildings in the eastern part of the Site and the one existing industrial building within the western part of the Site will be retained, however, Existing Building #4 will be reduced in size in order to accommodate the construction of the new industrial building. Sheffield Road will be used for truck and shipping access to the new and existing industrial buildings. Lancaster Road will be used for small vehicle access.

The Site does not include any forest habitat and the majority of the Site lacks mature tree coverage. The tree cover within the developed eastern and western portions of the Site is limited to landscaping features that have been planted adjacent to the existing industrial buildings. The tree cover within the central part of the Site (e.g. within the former railway corridor) predominantly consists of poor quality recent regrowth trees and tree stands. The regrowth vegetation within the former railway corridor is highly fragmented and disturbed, and there are no intact natural vegetation communities. The trees and tree stands that occur within the former railway corridor will be removed in order to accommodate the construction of the proposed development. The removal of the trees and tree

stands from the former railway corridor is not anticipated to be ecologically significant, given that the trees and tree stands are generally of poor quality and that the majority of the trees represent recent regrowth. The landscaping features that are adjacent to the existing industrial buildings are well separated from the tree clearing area, and therefore they are unlikely to be significantly negatively impacted during the proposed development of the Site.

There were no Species at Risk found within the Site during the field surveys. The only designated natural heritage feature that occurs within the vicinity of the Site is the Drainage Channel. There are no wetlands, Significant Woodlots, and/or other designated natural heritage features within the Site and/or immediately adjacent to the Site. The Headwaters Drainage Feature Assessment survey results indicate that the Drainage Channel has very limited hydrological functions and does not contribute significant water and/or nutrients to downstream areas. The riparian corridor surrounding the Drainage Channel is highly degraded. The Drainage Channel can be characterized as a highly degraded and low quality habitat feature that does not provide any significant ecological functions.

The Drainage Channel will be decommissioned in order to accommodate the proposed development. The proposed decommissioning of the Drainage Channel will require approval by the Rideau Valley Conservation Authority under O. Reg. 174/06. The Drainage Channel does not provide any significant amphibian breeding habitat and/or fish habitat functions, and therefore no amphibian breeding habitat and/or fish habitat compensation should be required.

The water that is currently stored and/or conveyed by the Drainage Channel will be captured by the new stormwater management system that will be constructed as part of the proposed development. The new stormwater management system will outlet to the existing stormwater sewers along Lancaster Road and Sheffield Road. The new stormwater management system will include stormwater quantity and quality controls.

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

1.0 INTRODUCTION

1.1 Reading the Integrated Tree Conservation Report (TCR)

This report is presented as a Combined Environmental Impact Statement (EIS) & Tree Conservation Report (TCR). Readers who are principally interested in the TCR may choose to read only those portions of the report where the section headings are marked **(TCR)**. This includes Sections 1.3, 1.4, 1.6, 2.0.1, 3.2, 3.3, and 4.1. Readers who are interested in the EIS should read the entire report, as the information included in the TCR sections is not reiterated.

1.2 Scoping the Environmental Impact Statement

This Combined EIS & TCR was undertaken following the City of Ottawa's *Environmental Impact Statement Guidelines* (City of Ottawa 2015). Following the City of Ottawa (2015) guidelines, the Combined EIS & TCR includes the following:

- Documentation of the existing conditions and the natural heritage features within the Site and around the Site;
- Identification of the potential impacts to the natural heritage features which may result from the proposed development;
- Recommendations to reduce any negative impacts through both avoidance and mitigation measures; and
- Recommendations to enhance the significant natural heritage features and their ecological functions.

This Combined EIS & TCR was prepared with guidance from the *Natural Heritage Reference Manual* (OMNRF 2010). The major objective of the Combined EIS & TCR is to assess whether the proposed development will negatively affect the significant features and functions of the Site, and to ensure that impacts will be minimized through mitigation measures.

It should be noted that the City of Ottawa adopted new *Environmental Impact Study Guidelines* in 2023 (City of Ottawa 2023a). The new City of Ottawa (2023a) *Environmental Impact Study Guidelines* state that ongoing projects that completed a pre-consultation with the City of Ottawa prior to 2023 can be assessed under the old City of Ottawa (2015) *Environmental Impact Statement Guidelines*. As described below in Section 1.5, the pre-consultation meeting for the proposed development occurred on September 21st, 2022. The Combined EIS & TCR was initiated in late 2022. This Combined EIS & TCR has been prepared following the City of Ottawa (2015) *Environmental Impact Statement Guidelines* due to the fact that the pre-consultation occurred prior to 2023 and the project planning and studies were underway prior to 2023.

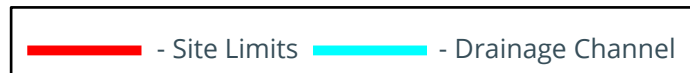
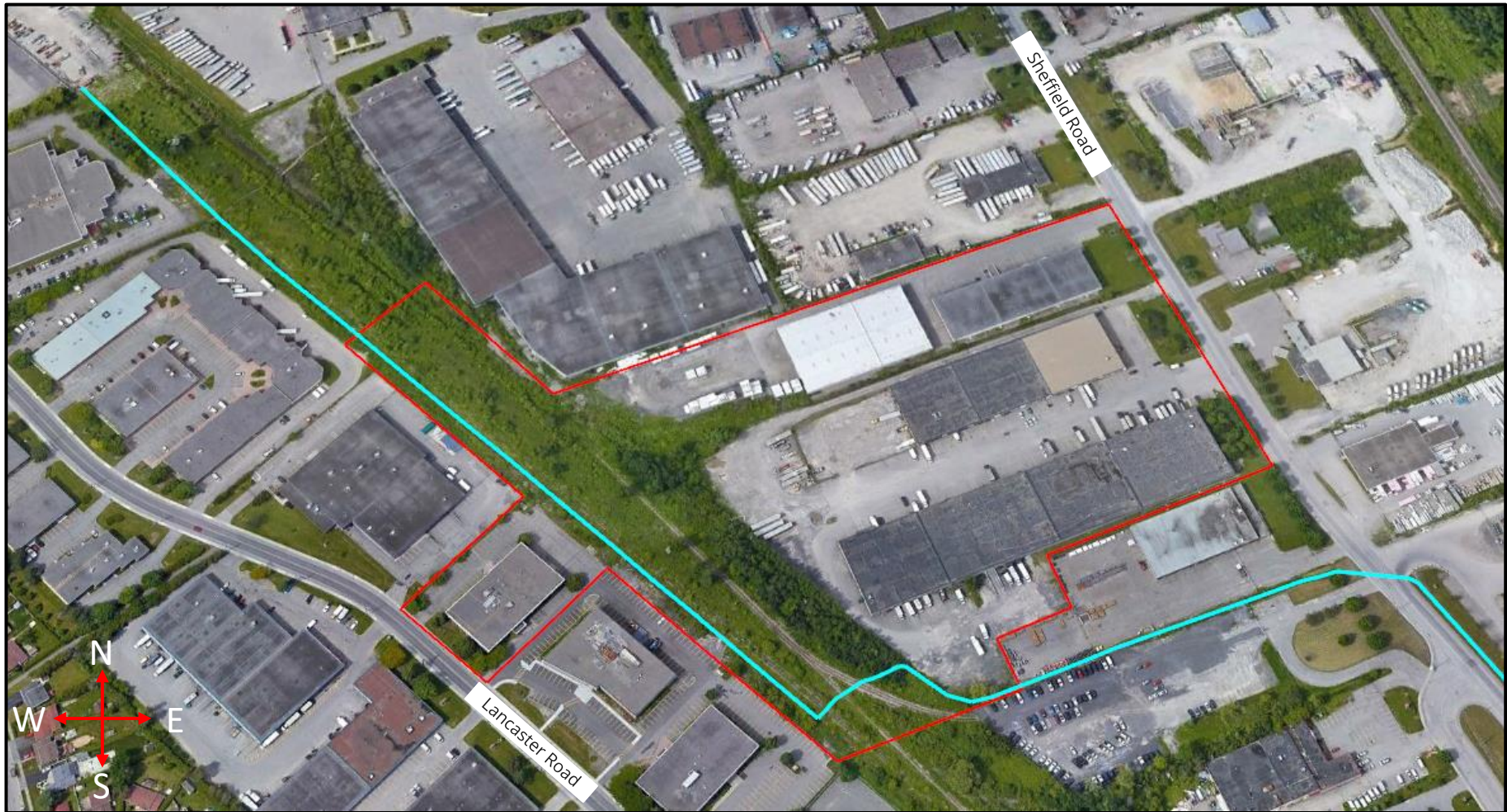
1.3 Site Overview & Background (TCR)

The Site includes several connected parcels located at the municipal addresses 2750, 2760, 2713 and 2865 Sheffield Road, Ottawa (Ontario) (Lot 23 and Lot 24, Concession 3, Ottawa River (Gloucester)) (Refer to Figure 1). The Site is within the urban area of the City of Ottawa and is approximately 8.5 hectares in size. The eastern part of the Site includes four (4) existing industrial buildings with frontage on Sheffield Road. The western part of the Site includes one existing industrial building with frontage on Lancaster Road. Each of the existing industrial buildings is surrounded by paved parking/storage areas and landscaping features. The central part of the Site includes an undeveloped parcel that was historically part of a railway corridor. The former railway corridor is currently vacant and is occupied by regrowth vegetation. The Site is surrounded by existing industrial buildings, paved surfaces, and roads on all sides, with the exception of the adjacent undeveloped portions of the former railway corridor. A Drainage Channel traverses the former railway corridor in an approximately northwest to southeast direction. The Drainage Channel enters the Site at its northwest corner. The Drainage Channel exits the Site at its southeast corner before flowing east towards Sheffield Road. The Drainage Channel is a minor tributary of Ramsay Creek.

FIGURE 1: SITE OVERVIEW

2750 & 2760 Sheffield Road, Ottawa, Ontario

Combined Environmental Impact Statement (EIS) & Tree Conservation Report (TCR)



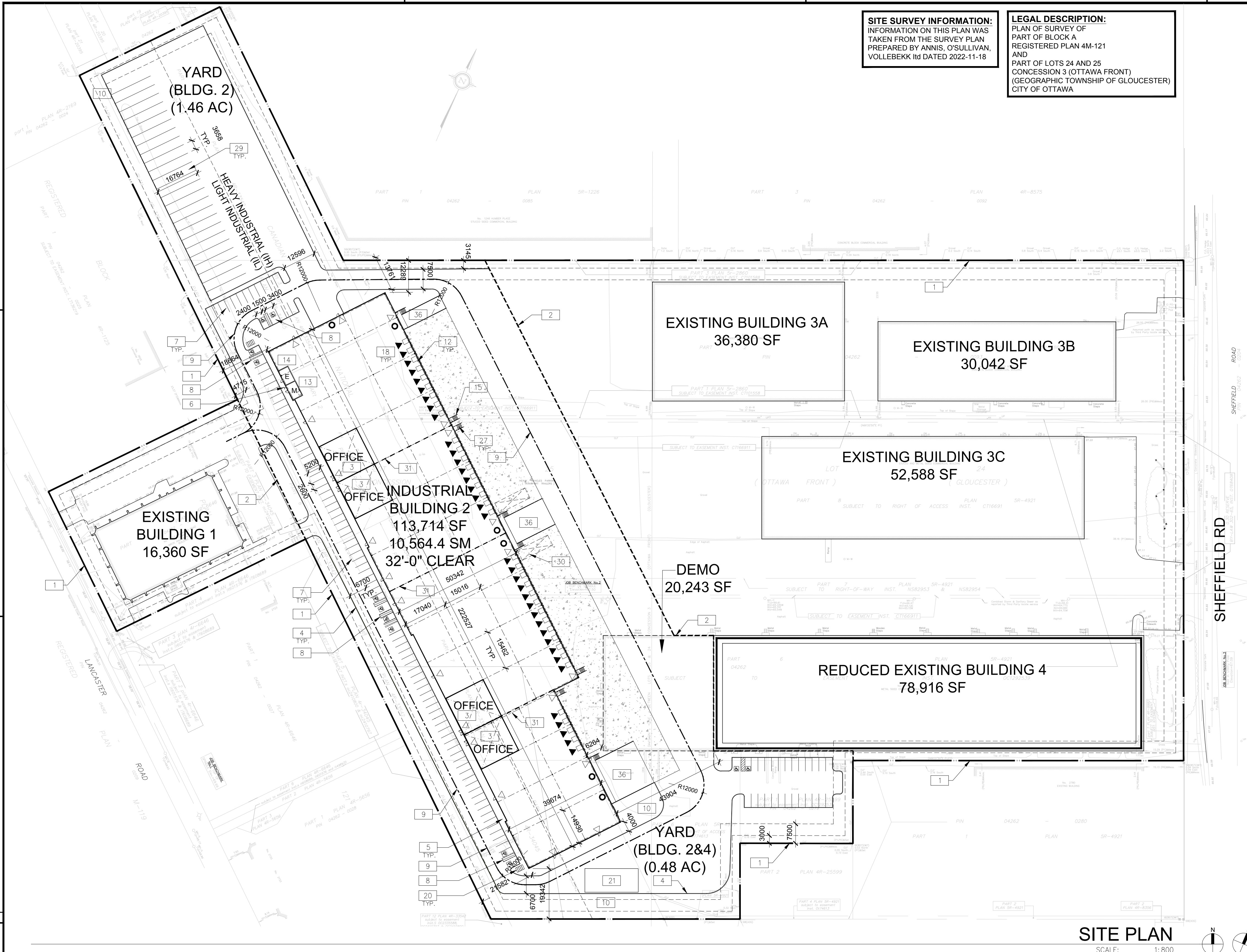
Please Note: This is not a legal land survey. All dimensions and locations are shown as approximate.

1.4 Description of Undertaking (TCR)

The eastern part of the Site includes four (4) existing industrial buildings with frontage on Sheffield Road. The western part of the Site includes one existing industrial building with frontage on Lancaster Road. Each of the existing industrial buildings is surrounded by paved parking/storage areas and landscaping features. As shown below in the Site Plan, the proposed development will involve the construction a new industrial building and associated paved parking/storage areas within the former railway corridor. The new industrial building will be divided into four (4) units, each of which will include an office space. The four (4) existing industrial buildings in the eastern part of the Site and the one existing industrial building within the western part of the Site will be retained, however, Existing Building #4 will be reduced in size in order to accommodate the construction of the new industrial building. Sheffield Road will be used for truck and shipping access to the new and existing industrial buildings. Lancaster Road will be used for small vehicle access.

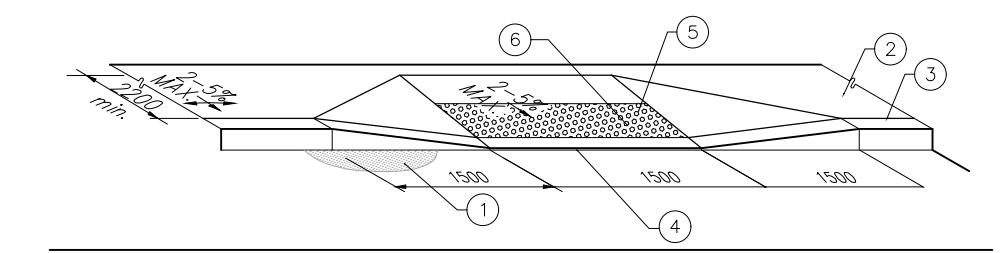
SITE SURVEY INFORMATION:
 INFORMATION ON THIS PLAN WAS
 TAKEN FROM THE SURVEY PLAN
 PREPARED BY ANNIS, O'SULLIVAN,
 VOLLEBEKK Ltd DATED 2022-11-18

LEGAL DESCRIPTION:
 PLAN OF SURVEY OF
 PART OF BLOCK A
 REGISTERED PLAN 4M-121
 AND
 PART OF LOTS 24 AND 25
 CONCESSION 3 (OTTAWA FRONT)
 (GEOGRAPHIC TOWNSHIP OF GLOUCESTER)
 CITY OF OTTAWA



SITE PLAN
 SCALE: 1:800
 CONSTRUCTION NORTH TRUE NORTH

OTW21-0002-00		
SITE STATISTICS		
ZONING	IH/IL	
GROSS SITE AREA	84,452 SM	
PROJECT LIMIT AREA	37,191 SM	
Zone Permitted Use (OTTAWA ZONING BY-LAW NO. 2008-250)		
Proposed Use	Warehouse	
Regulations (Part 11: Industrial Zones)		
	Proposed	Required IH (IL)
Min. Front Yard Building Setback (m)	18.66 m	7.5 m
Min. Interior Side Yard Building Set back (m)	12.29 m	7.5 m
Min.Rear Yard Building Setback (m)	N/A	7.5 m
Min.Landscape Front Yard Setback (m)	4.72 m	3 m
Min.Landscape Side Yard Setback (m)	3.15 m	3 m
Min.Landscape Rear Yard Setback (m)	N/A	3 m
Max. Floor Space Index	0.12	2
Max. Building Height	12 m	22 m (18m)
BUILDING FLOOR AREA		
Building 2	Warehouse Area 9,684.40m ²	
	Office Area 880.00m ²	
	TOTAL BUILDING GFA 10,564.40m²	
PARKING REQUIREMENT		
	PROPOSED	REQUIRED
Warehouse GFA @ 0.8 Spaces per 100m ² , first 5000m ²	126	63
Warehouse GFA @ 0.4 Spaces per 100m ² , above 5000m ²		
Total No. of Parking Spaces	126	63
Barrier Free Parking Spaces	12	5
Parking Stall Dimensions	2.6 m X 5.2 m	
Barrier Free Parking Stall Type A	3.4m X 5.2m	
Barrier Free Parking Stall Type B	2.4m X 5.2m	
Bicycle Parking Space Dimensions	1.8m X 0.6m	
No. Of Bicycle Parking (Warehouse: 1 per 2000m ² , Office 1 per 250m ²)	10	9
Loading Space Dimensions	3.5m X 9.0m	
Oversized Loading Space Dimensions	4.3m X 13.0m	
No. Of Loading Spaces	35	2
No. Of Oversized Loading Spaces	2	2
Trailer Parking	26	N/A
DOCK STATISTICS		
	Proposed	
DOCK-HIGH DOORS	35	
OVER-HEAD DOORS	6	



- 1 PAVEMENT
- 2 ACCESSIBLE ROUTE OF PEDESTRIAN TRAVEL 2200mm MIN. (UNLESS OTHERWISE NOTED ON PLANS)
- 3 TOP FACE OF CURB
- 4 DEPRESSED CURB
- 5 TRUNCATED DOMES WITH A HEIGHT OF 4.5-5.5mm, BASE DIAMETER OF 21-25mm. REGULAR SPACING PATTERN AT 55-50mm ON CENTRE
- 6 A MINIMUM 600mm WIDE SECTION DETECTABLE WARNING SURFACE SHALL BE PROVIDED WHEN FLAT TRAVEL SURFACE ADJACENT TO A VEHICULAR WAY (0mm CURB FACE)

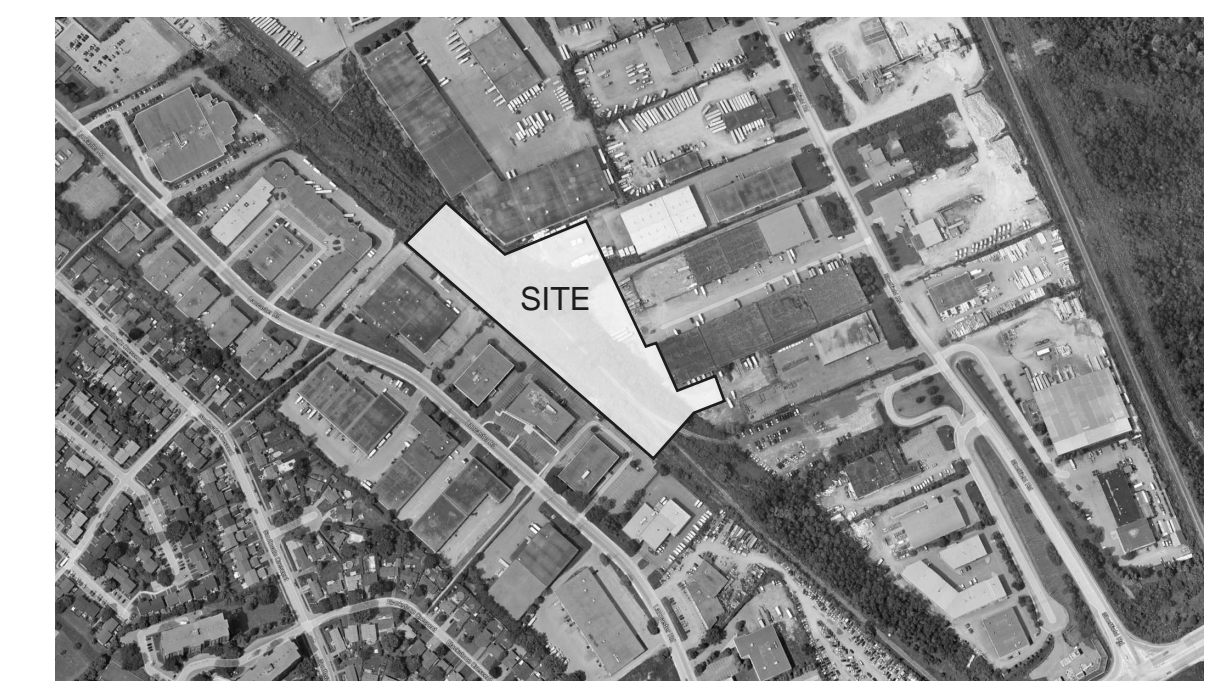
ACCESSIBLE CURB RAMP
 SCALE: N.T.S

SITE PLAN NOTES

- 1 PROPERTY LINE
- 2 PROJECT LIMIT LINE
- 3 PRINCIPLE ENTRY - TENANT FIT-UP SUBJECT TO INTERIOR ALTERATION PERMIT
- 4 150mm WIDE CURB TYPICAL
- 5 SIDEWALK - SEE LANDSCAPE DWGS FOR CONSTRUCTION DETAILS
- 6 FIRE DEPARTMENT/SIAMESE CONNECTION
- 7 2600x5200mm PARKING STALL, PAINTED PARKING STRIPING PER CITY OF OTTAWA ZONING BY-LAW NO. 2008-250
- 8 TYPICAL ACCESSIBLE PARKING STALLS, PAINTED PARKING STRIPING PER BY-LAW OTTAWA ZONING BY-LAW NO. 2008-250. EACH PAIR OF SHARED STALLS TO HAVE TYPE A: 3.4m X 5.2m AND TYPE B: 2.4m X 5.2m WITH 1.5m WIDE PAINTED BARRIER FREE AISLE AND SIGNAGE REFER TO ONTARIO INTEGRATED ACCESSIBILITY STANDARDS.
- 9 FIRE ACCESS ROUTE W/ 12.0M TURNING RADIUS (---)
- 10 LANDSCAPE AREA - SEE LANDSCAPE DRAWINGS
- 11 GUARDRAIL SET INTO RETAINING WALL. REFER TO CIVIL DRAWINGS FOR EXTENT AND DETAILS.
- 12 12.0mX3.5m TRUCK LOADING SPACE (TYP.)
- 13 PROPOSED LOCATION OF MECHANICAL RM
- 14 PROPOSED LOCATION OF ELECTRICAL RM
- 15 GALVANIZED STEEL GUARDRAIL WITH HANDRAIL
- 16 EMPLOYMENT AMENITY SPACE - REFER TO LANDSCAPE DRAWINGS
- 17 SHADED AREA DENOTES HEAVY DUTY ASPHALT. TYPICAL FOR ALL AREAS REQUIRING FIRE OR TRACTOR TRUCK ACCESS.
- 18 TRUCK LOADING DOCK (TYP.)
- 19 STEEL BOLLARD
- 20 GALV. BICYCLE RACKS - SEE LANDSCAPE DRAWINGS
- 21 SNOW STORAGE AREA
- 22 EXISTING FIRE HYDRANT
- 23 PROPOSED LIGHT POLE. REFER TO ELECTRICAL DRAWINGS
- 24 FIRE ROUTE SIGNAGE PER CITY OF OTTAWA STANDARDS. REFER TO FIRE ROUTE BY-LAW NO. 2003-499 FOR SIGN REQUIREMENTS. SIGNS TO BE SPACED NO MORE THAN 25m APART
- 25 TACTILE WALKING SURFACE INDICATOR STRIP
- 26 IN GROUND EARTH-BIN GARBAGE RECEPTACLES WITH VEGETATION SCRE
- 27 EXTERIOR GALV. STEEL STAIRS W/ TUBE STEEL GUARDRAIL, ON CONC. PAD, TYP.
- 28 EV PARKING STALLS (X PROPOSED; X FUTURE)
- 29 TRUCK TRAILER PARKING
- 30 13mX4.3m OVERSIZED TRUCK LOADING SPACE
- 31 FUTURE TENANT DEMISING WALL. SUBJECT TO TENANT FIT UP
- 32 CONCRETE APRON
- 33 PAINTED LINES PEDESTRIAN CROSSING
- 34 PYLON SIGNAGE
- 35 DIMENSION FROM FIRE DEPARTMENT CONNECTION TO HYDRANT.
- 36 DRIVE-IN RAMP BOUNDED BY RETAINING WALLS WITH GUARDRAILS WHERE GRADE CHANGE IS MORE THAN 600mm - REFER TO CIVIL DWGS

SITE LEGEND

- NEW HEAVY DUTY PAVEMENT (HATCHED)
- NEW LANDSCAPED AREA (HATCHED)
- NEW RIVER STONE AREA (HATCHED)
- PAINTED DIAGONAL LINES WHERE INDICATED
- FUTURE EV PARKING STALLS
- PROPERTY LINE
- SITE BOUNDARY LINE
- GAS METER LOCATION.
- FIRE DEPT CONNECTION (VERIFY LOCATION WITH CIVIL DRAWINGS)
- PROPOSED FIRE HYDRANT (VERIFY LOCATION WITH CIVIL DRAWINGS)
- PROPOSED FIRE HYDRANT
- LIGHT POLE
- WALL MOUNTED LIGHT
- MH DENOTES MANHOLE
- PROPOSED CATCHBASIN
- TACTILE INDICATORS AT DEPRESSED CURB
- BICYCLE RACK (1800 x 600 PER BIKE)
- MAN DOOR
- DOCK HIGH TRUCK DOOR
- GRADE LEVEL TRUCK DOOR
- FIRE ROUTE SIGNS
- PYLON SIGNAGE
- CONCRETE SIDEWALK
- ASPHALT PATHWAY
- STONE DUST PATHWAY



KEY PLAN
 SCALE: N.T.S

WARE MALCOMB
 1420 Blair Towers Place, Suite #104
 Gloucester, Ontario, Canada K1J 9L8
 P 343.633.2977

ARCHITECTURE
 PLANNING
 INTERIORS

CIVIL ENGINEERING
 BRANDING
 BUILDING MEASUREMENT

ONTARIO ASSOCIATION
 OF
ARCHITECTS
 JOHN P. HOLLAND
 LICENCE
 8649

RICHCRAFT

SHEFFIELD INDUSTRIAL BUILDING
 2760-2770 SHEFFIELD RD.
 OTTAWA
 ON K1B 3V9, CANADA.

SITE PLAN

DATE	ISSUED FOR SPA	REMARKS
2023-05-17		

PA/PM:	J. HOLLAND
DRAWN BY.:	
JOB NO.:	OTW21-0002-00

SHEET
A100

1.5 Agency Consultation

A pre-consultation meeting was held with the City of Ottawa on September 21st, 2022. The pre-consultation meeting comments were reviewed prior to the preparation of this Combined Environmental Impact Statement (EIS) & Tree Conservation Report (TCR). The Rideau Valley Conservation Authority (RVCA) will be circulated as part of the development application review process. The Ontario Ministry of Natural Resources and Forestry (OMNRF) Kemptville District *Potential Species at Risk List for the Geographic Township of Gloucester* (Appendix C) is referenced below in Section 3.7. No significant Species at Risk (SAR) concerns were identified in relation to the proposed development, and therefore an Ontario Endangered Species Act (ESA) consultation process with the Ministry of Environment, Conservation and Parks (MECP) was not required (Refer to Section 3.7 for additional details).

1.6 Regulatory Requirements (TCR)

As described in greater detail in the following sections, the following natural heritage related approvals are anticipated to be required:

- **Ontario Regulation 174/06:** Ontario Regulation 174/06 regulates activities that will alter shorelines, watercourses, and wetlands. As described in greater detail in Section 3.4.1, a Drainage Channel traverses the former railway corridor in an approximately northwest to southeast direction (Refer to Figure 1). The Drainage Channel enters the Site at its northwest corner. The Drainage Channel exits the Site at its southeast corner before flowing east towards Sheffield Road. As shown in the Site Plan, the proposed development will result in the decommissioning of the portion of the Drainage Channel that occurs within the Site (Refer to Section 4.2.1 for additional details). The proposed decommissioning of the Drainage Channel will require approval by the Rideau Valley Conservation Authority (RVCA) under O. Reg. 174/06. A Headwaters Drainage Feature Assessment (HDFFA) has been prepared to facilitate the RVCA's review of the proposed decommissioning of the Drainage Channel (MES 2023).
- **Fisheries Act:** The Drainage Channel is unlikely to provide any significant fish habitat functions and no fish were found within the Drainage Channel during the HDFFA surveying (Refer to Section 3.4.2 for additional details). As such, a review and/or authorization under the Fisheries Act should not be required to support the proposed decommissioning of the Drainage Channel.
- **Ontario Endangered Species Act (ESA):** No significant Species at Risk (SAR) concerns were identified in relation to the proposed development, and therefore a review and/or authorization under the Ontario Endangered Species Act (ESA) should not be required to support the proposed development.
- **Tree Removal Permit:** A Tree Removal Permit under the City of Ottawa Urban Tree Conservation By-law No. 2020-340 will be required prior to the commencement of tree clearing. The Tree Removal Permit is typically issued following the acceptance of the Tree Conservation Report.

2.0 METHODOLOGY

2.0.1 Vegetation Survey & Tree Inventory Methodology (TCR)

A vegetation survey was undertaken to document the occurrence of plants, to create a Plant List (Appendix A), and to identify and delineate the vegetation communities. Site visits to inventory plants and measure tree sizes were completed by Dr. McKinley on May 15th (Overcast, 13 °C), May 24th (Mostly Sunny, 14 °C), June 11th (Overcast, 24 °C), and July 2nd (Overcast, 24 °C), 2023. As described below in Section 3.3, there is no forest within the Site, and therefore forest sampling plots were not required. Instead, individual mature trees were measured throughout the Site and representative tree size measurements were taken to assess the tree stands. The trees were measured with the use of a D-tape, which is a calibrated diameter at breast height (dbh) tape. The vegetation communities within the Site were classified according to the vegetation community labels described in the Ecological Land Classification (ELC) manual (OMNRF 1998; Lee 2008).

The following terms are used throughout this report:

- Diameter at Breast Height (dbh) means the measurement of the trunk of a tree at a height of 120 cm above grade for trees 15 cm diameter or greater, and at a height of 30 cm above grade for trees less than 15 cm diameter.
- The Critical Root Zone (CRZ) is 10 centimeters from the trunk of a tree for every centimeter of trunk dbh. The CRZ is calculated as $dbh \times 10$ cm.

2.0.2 Environmental Impact Statement Methodology & Species at Risk Surveys

The potential presence of natural heritage features was assessed by completing the following:

- Site surveys to describe the vegetation communities and to inventory the trees (see above);
- Site surveys to assess the potential presence of Species at Risk (SAR) habitat, wetlands, fish habitat, Significant Wildlife Habitat (SWH) features, and other significant habitat features;
- Examination of aerial imagery to evaluate landscape features;
- Natural Heritage Information Center (NHIC) database review (OMNRF 2023);
- Review of the Ontario Ministry of Natural Resources and Forestry (OMNRF) *Potential Species at Risk List for the Geographic Township of Gloucester* (Appendix C); and
- Review of Official Plan designations.

Detailed assessments of the natural heritage features were completed as follows:




- **Vegetation Survey & Tree Inventory:** See description above.
- **Butternut Trees:** The Site was searched for the presence of Butternut Trees (endangered) during the May 15th, 2023 Site visit. No Butternut Trees were found within the Site and/or within the immediately surrounding area. As such, a follow-up Butternut Health Assessment (BHA) was not required.
- **Bat Maternity Roost Assessment:** No caves, bedrock fissures, mining shafts, abandoned buildings, or other features which may function as bat hibernacula habitat were observed within the Site. The OMNRF (2017) guidelines for bat surveying state that deciduous and mixed forest habitats have the potential to provide maternity roosting sites. As described below in Section 3.3, no deciduous or mixed forest habitats were found within the Site. As such, a bat maternity roost assessment was not required.
- **Breeding Bird Surveys:** Breeding Bird Surveys were undertaken following the *Ontario Breeding Bird Atlas – Point Count Surveys Method* (Birds Ontario 2021). The timing and methodology of the surveys followed the requirements outlined in the OMNRF *Survey Methodology under the Endangered Species Act: Dolichonyx oryzivorus (Bobolink)* (OMNRF 2011). The Breeding Bird Survey points are shown below in Figure 2. The Breeding Bird Surveys were completed on May 24th, June 11th, and July 2nd, 2023. The weather conditions during the May 24th Site visit included temperatures of 14 °C and mostly sunny skies. The weather conditions during the June 11th Site visit included temperatures of 24 °C and overcast skies. The weather conditions during the July 2nd Site visit included temperatures of 24 °C and overcast skies.

FIGURE 2: BIRD SURVEY SITES

2750 & 2760 Sheffield Road, Ottawa, Ontario

Combined Environmental Impact Statement (EIS) & Tree Conservation Report (TCR)



 - Site Limits  - Drainage Channel  - Bird Survey Sites

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

2.0.3 Headwaters Drainage Feature Assessment Methodology

A Headwaters Drainage Feature Assessment (HDFA) addressing the Drainage Channel was prepared under separate cover (MES 2023). The HDFA methodology, results, and recommendations have been summarized throughout this Combined Environmental Impact Statement (EIS) & Tree Conservation Report (TCR). The field component of the HDFA was undertaken following the *Evaluation, Classification and Management of Headwater Drainage Features Guideline* (TRCA 2014). The HDFA Survey Sites are shown below in Figure 3. As shown in Figure 3, five (5) HDFA Survey Sites were required. Upstream and downstream drainage feature segments were measured at each of the five (5) HDFA Survey Sites. Each of the HDFA Survey Sites included 40 m upstream and 40 m downstream of each constriction, confluence, and/or each location with divergent ecological conditions. The field surveys included the following:

- **Ontario Stream Assessment Protocol (OSAP) Module S4.M10 – Assessing Headwaters Drainage Features (Stanfield et al. 2013):** OSAP Module S4.M10 includes an assessment of hydrological and physical functions. The parameters measured included the watercourse type, flow regime, wetted width, water depth, hydraulic head, bankfull width, channel depth, substrate, and riparian corridor vegetation. The flow and water measurements were completed on April 12th (spring freshet), May 24th (late spring), and July 2nd, 2023 (mid-summer). The channel measurements were completed during the April 12th, 2023 Site visit.
- **Marsh Monitoring Program – Amphibian Call Count Surveys (Bird Studies Canada 2003):** The potential presence of amphibian breeding habitat was evaluated according to the *Marsh Monitoring Program – Amphibian Call Count Surveys Method* (Bird Studies Canada 2003). This method requires the completion of three (3) night time surveys in April, May, and June, during which the potential presence of amphibian breeding habitat was assessed by listening for frog calls. The surveys were completed on April 21st, May 15th, and June 15th, 2023. The weather conditions on April 21st included overcast skies and temperatures of 13 °C. The weather conditions on May 15th included temperatures of 21 °C and clear skies. The weather conditions on June 15th included partly cloudy skies and temperatures of 21 °C. The amphibian call count surveys were conducted in the upstream and downstream segments of each of the HDFA Survey Sites.
- **Fish Habitat Assessment:** The potential presence of fish habitat was assessed as part of the HDFA. As described below in Section 3.4.1, the Drainage Channel is not directly connected to any upstream or downstream natural watercourses. The Drainage Channel is also a predominantly stagnant feature with limited hydrological functions. These characteristics are such that the Drainage Channel is unlikely to provide any significant fish habitat functions (Refer to Section 3.4.2 for additional details). The Drainage Channel was surveyed for the potential presence of fish through the use of a dip net on July 2nd, 2023. No fish were observed within the Drainage Channel during the HDFA field surveying.

FIGURE 3: HDFA SURVEY SITES

2750 & 2760 Sheffield Road, Ottawa, Ontario

Combined Environmental Impact Statement (EIS) & Tree Conservation Report (TCR)



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

3.0 EXISTING CONDITIONS

3.1 Geological Conditions

As described above in Section 1.3, the western and eastern portions of the Site are previously developed with existing industrial buildings and paved parking/storage areas. The central part of the Site includes an undeveloped parcel that was historically part of a railway corridor. The former railway corridor is currently vacant and is occupied by regrowth vegetation. Topsoil, gravel, and sand fill materials dominate the surface of the Site, including sand and gravel fill that acts as a subbase beneath the paved areas of the Site (WEIS 2020). The native soil deposits beneath the fill primarily consist of silty clay and clay (WEIS 2020). The bedrock beneath the Site consists of Paleozoic shales of the Carlsbad Formation. The depth to bedrock is approximately 9 to 12 meters below the ground surface (WEIS 2020). The Site elevation is approximately 69 m Above Sea Level (ASL) in the central part of the Site, with a gradual slope down to approximately 68 m ASL at Sheffield Road (City of Ottawa 2023b).

3.2 Site History (TCR)

Historic air photos from 1976 and 1991 are included below (Photos from City of Ottawa 2023b). Recent air photos are included in the report figures. As shown below, the eastern part of the Site was developed with three (3) industrial buildings in 1976. The western part of the Site included a vacant parcel in 1976 and the railway corridor included functional railway tracks. By 1991 the overall composition of the Site was similar to current conditions. The eastern part of the Site included four (4) industrial buildings in 1991. The western part of the Site included one industrial building in 1991. The railway corridor in the central part of the Site was inactive by 1991 and regrowth tree stands were present (Photos from City of Ottawa 2023b). The historic air photos suggest that the regrowth tree stands that are present within the central part of the Site are between approximately 30 years and 40 years of age.



Historic Air Photograph 1: Historic Air Photo from 1976 (Site limits shown in red). The eastern part of the Site was developed with three (3) industrial buildings in 1976. The western part of the Site included a vacant parcel in 1976 and the railway corridor included functional railway tracks (Photos from City of Ottawa 2023b).



Historic Air Photograph 2: Historic Air Photo from 1991 (Site limits shown in red). Note that the overall composition of the Site was similar to current conditions in 1991. The eastern part of the Site included four (4) industrial buildings in 1991. The western part of the Site included one industrial building in 1991. The railway corridor in the central part of the Site was inactive by 1991 and regrowth tree stands were present (Photos from City of Ottawa 2023b).

3.3 Trees & Vegetation Communities (TCR)

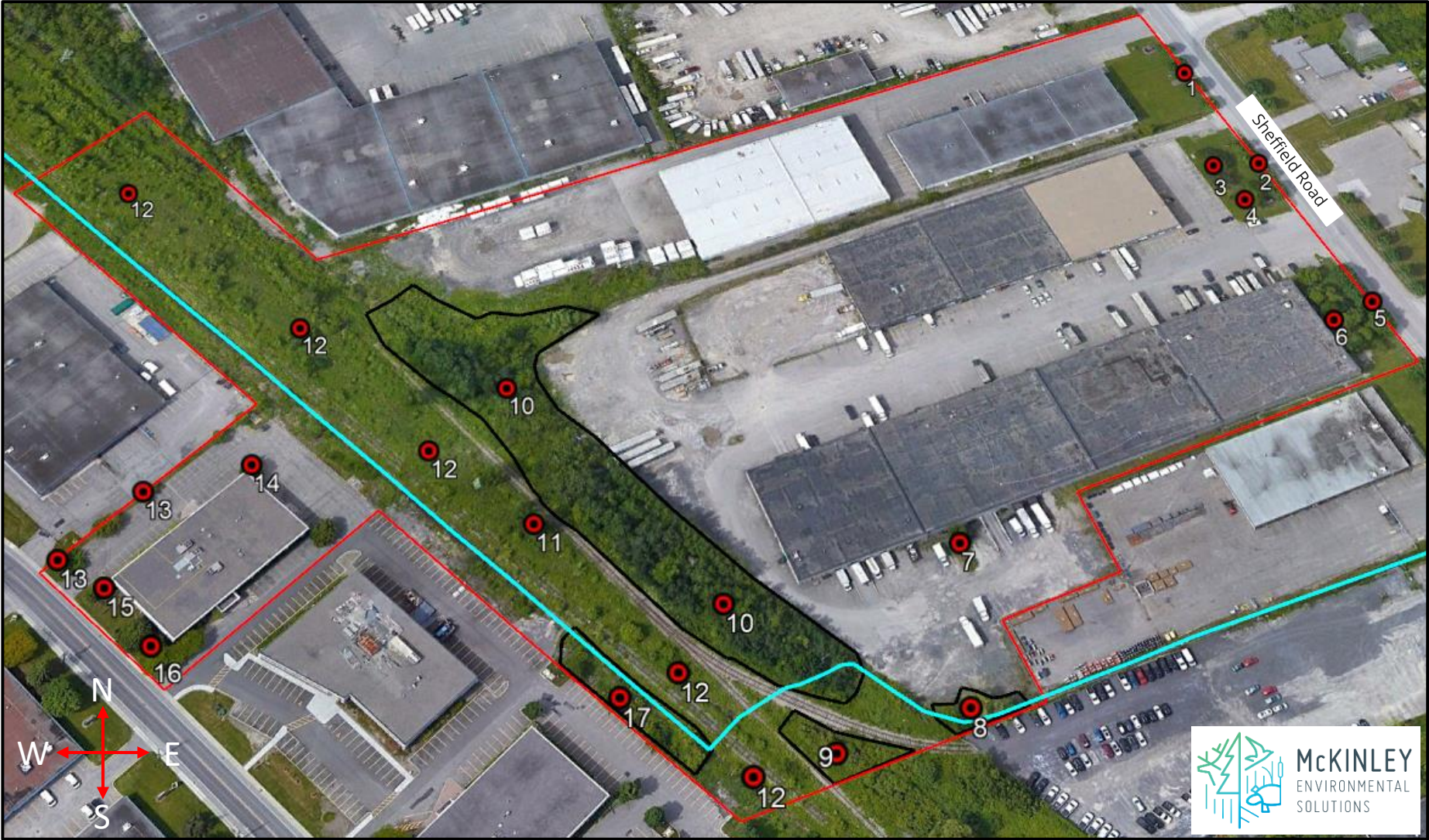
The Site does not include any forest habitat and the majority of the Site lacks mature tree coverage. The tree cover within the developed eastern and western portions of the Site is limited to landscaping features that have been planted adjacent to the existing industrial buildings. The tree cover within the central part of the Site (e.g. within the former railway corridor) predominantly consists of poor quality recent regrowth trees and tree stands. As described above in Section 3.2, the oldest trees within the former railway corridor are approximately 30 years to 40 years of age, however, the vast majority of the stems represent younger recent regrowth. The regrowth vegetation within the former railway corridor is highly fragmented and disturbed, and there are no intact natural vegetation communities.

The trees, tree stands, and regrowth vegetation communities that are found within the Site are shown below in Figure 4. Table A includes a description of each tree, tree stand, and regrowth vegetation community. Photographs of the trees, tree stands, and the regrowth vegetation communities are included below.

FIGURE 4: TREES & VEGETATION COMMUNITIES (EXISTING CONDITIONS)

2750 & 2760 Sheffield Road, Ottawa, Ontario

Combined Environmental Impact Statement (EIS) & Tree Conservation Report (TCR)



— Site Limits — Drainage Channel 12 - Trees/Tree Stands/Vegetation Communities

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

Table A: Trees & Vegetation Communities							
Feature #	Feature Type	Description	Diameter at Breast Height (dbh)	Condition	Location	Ownership	Recommendation
1	Tree Stand (Planted)	4x Sugar Maple (<i>Acer saccharum</i>)	33 cm, 41 cm, 37 cm, 31 cm	Good	Existing Developed Area	Private - On Site	Retain
2	Tree Stand (Planted)	4x Sugar Maple (<i>Acer saccharum</i>)	43 cm, 36 cm, 42 cm, 32 cm	Good	Existing Developed Area	Private - On Site	Retain
3	Tree Stand (Planted)	2x Ornamental Cherry (<i>Prunus</i> sp.) 1x Little Leaf Linden (<i>Tilia cordata</i>) 3x Red Pine (<i>Pinus resinosa</i>)	37 cm, 32 cm 34 cm 29 cm, 29 cm, 36 cm	Good	Existing Developed Area	Private - On Site	Retain
4	Tree & Shrubs (Planted)	1x Honey Locust (<i>Gleditsia triacanthos</i>) Shrubs: Staghorn Sumac (<i>Rhus hirta</i>), Common Buckthorn (<i>Rhamnus cathartica</i>), Tartarian Honeysuckle (<i>Lonicera tatarica</i>)	41 cm	Poor	Existing Developed Area	Private - On Site	Retain
5	Tree Stand (Planted)	4x Sugar Maple (<i>Acer saccharum</i>)	36 cm, 43 cm, 36 cm, 44 cm	Good	Existing Developed Area	Private - On Site	Retain
6	Tree Stand & Shrubs (Planted)	4x Manitoba Maple (<i>Acer negundo</i>) 2x Little Leaf Linden (<i>Tilia cordata</i>) 1x Red Pine (<i>Pinus resinosa</i>) 1x Sugar Maple (<i>Acer saccharum</i>) Shrubs: Staghorn Sumac (<i>Rhus hirta</i>)	36 cm, 17 cm, 18 cm, 45 cm 43 cm, 43 cm 27 cm 20 cm Up to 17 cm	Good	Existing Developed Area	Private - On Site	Retain
7	Tree Stand (Regrowth)	2x Large Tooth Aspen (<i>Populus grandidentata</i>)	25 cm, 47 cm	Good	Tree Clearing Area	Private - On Site	Remove
8	Tree Stand & Shrubs (Degraded Regrowth)	4x Crack Willow (<i>Salix fragilis</i>) 1x Trembling Aspen (<i>Populus tremuloides</i>) 1x White Birch (<i>Betula papyrifera</i>) 1x American Elm (<i>Ulmus americana</i>) Shrubs: Red Osier Dogwood (<i>Cornus sericea</i>), Common Buckthorn (<i>Rhamnus cathartica</i>), Tartarian Honeysuckle (<i>Lonicera tatarica</i>)	Multiple Stems 10 cm to 33 cm 23 cm 11 cm N/A (Dead)	Degraded	Tree Clearing Area	Private - On Site	Remove

Table A: Trees & Vegetation Communities							
Feature #	Feature Type	Description	Diameter at Breast Height (dbh)	Condition	Location	Ownership	Recommendation
9	Thicket (Degraded Regrowth)	Saplings: Manitoba Maple (<i>Acer negundo</i>), Trembling Aspen (<i>Populus tremuloides</i>), White Ash (<i>Fraxinus americana</i>), Green Ash (<i>Fraxinus pennsylvanica</i>) Shrubs: Red Osier Dogwood (<i>Cornus sericea</i>), Common Buckthorn (<i>Rhamnus cathartica</i>), Staghorn Sumac (<i>Rhus hirta</i>), Wild Red Raspberry (<i>Rubus idaeus</i>), Slender Willow (<i>Salix petiolaris</i>)	Saplings <10 cm	Degraded	Tree Clearing Area	Private - On Site	Remove
10	Tree Stand & Shrubs (Degraded Regrowth)	Dominant Trees: Trembling Aspen (<i>Populus tremuloides</i>) Additional Trees: Large Tooth Aspen (<i>Populus grandidentata</i>), White Ash (<i>Fraxinus americana</i>), Manitoba Maple (<i>Acer negundo</i>), Sugar Maple (<i>Acer saccharum</i>), American Elm (<i>Ulmus americana</i>) Shrubs: Red Osier Dogwood (<i>Cornus sericea</i>), Common Buckthorn (<i>Rhamnus cathartica</i>), Riverbank Grape (<i>Vitis riparia</i>), Tartarian Honeysuckle (<i>Lonicera tatarica</i>)	10 cm to 25 cm dbh 10 cm to 25 cm dbh	Degraded	Tree Clearing Area	Private - On Site	Remove
11	Tree	1x American Elm (<i>Ulmus americana</i>)	45 cm	Good	Tree Clearing Area	Private - On Site	Remove

Table A: Trees & Vegetation Communities							
Feature #	Feature Type	Description	Diameter at Breast Height (dbh)	Condition	Location	Ownership	Recommendation
12	Former Railbed (Degraded Regrowth)	<p>The former railbed includes an artificial gravel substrate that is dominated by weedy regrowth.</p> <p>Saplings: Manitoba Maple (<i>Acer negundo</i>), Trembling Aspen (<i>Populus tremuloides</i>), White Ash (<i>Fraxinus americana</i>), Large Tooth Aspen (<i>Populus grandidentata</i>), American Elm (<i>Ulmus americana</i>), Green Ash (<i>Fraxinus pennsylvanica</i>)</p> <p>Shrubs: Red Osier Dogwood (<i>Cornus sericea</i>), Common Buckthorn (<i>Rhamnus cathartica</i>), Staghorn Sumac (<i>Rhus hirta</i>), Wild Red Raspberry (<i>Rubus idaeus</i>), Slender Willow (<i>Salix petiolaris</i>), Riverbank Grape (<i>Vitis riparia</i>), Tartarian Honeysuckle (<i>Lonicera tatarica</i>)</p> <p>Groundcover: Canada Goldenrod (<i>Solidago canadensis</i>), Common Burdock (<i>Arctium minus</i>), Dandelion (<i>Taraxacum officinale</i>), Bull Thistle (<i>Cirsium vulgare</i>), Common Mullein (<i>Verbascum thapsus</i>), Queen Anne's Lace (<i>Daucus carota</i>), Viper's Bugloss (<i>Echium vulgare</i>), Wild Mustard (<i>Sinapis arvensis</i>), Yellow Rocket (<i>Barbarea vulgaris</i>), Common Ragweed (<i>Ambrosia artemisiifolia</i>), Prickly Lettuce (<i>Lactuca scariola</i>), Cleavers (<i>Galium aparine</i>), Lamb's Quarters Pig Weed (<i>Chenopodium album</i>), Virginia Creeper (<i>Parthenocissus vitacea</i>), Dog Strangling Vine (<i>Vincetoxicum rossicum</i>)</p>	Saplings <10 cm	Degraded	Tree Clearing Area	Private - On Site	Remove

Table A: Trees & Vegetation Communities							
Feature #	Feature Type	Description	Diameter at Breast Height (dbh)	Condition	Location	Ownership	Recommendation
13	Tree Stand (Planted)	5x Sugar Maple (<i>Acer saccharum</i>)	22 cm, 28 cm, 22 cm, 21 cm, 42 cm	Good	Existing Developed Area	Private - On Site	Retain
14	Tree (Planted)	1x Sugar Maple (<i>Acer saccharum</i>)	35 cm	Good	Existing Developed Area	Private - On Site	Retain
15	Tree Stand (Planted)	2x White Spruce (<i>Picea glauca</i>)	43 cm, 41 cm	Good	Existing Developed Area	Private - On Site	Retain
16	Tree Stand (Planted)	2x Honey Locust (<i>Gleditsia triacanthos</i>) 1x Little Leaf Linden (<i>Tilia cordata</i>) 3x Red Pine (<i>Pinus resinosa</i>)	33 cm, 25 cm 50 cm 41 cm, 25 cm, 34 cm	Good	Existing Developed Area	Private - On Site	Retain
17	Tree Stand (Degraded Regrowth)	Sparse Regrowth Trees: White Ash (<i>Fraxinus americana</i>), Green Ash (<i>Fraxinus pennsylvanica</i>), Manitoba Maple (<i>Acer negundo</i>), American Elm (<i>Ulmus americana</i>)	10 cm to 20 cm dbh	Degraded	Tree Clearing Area	Private - On Site	Remove



Photograph 1: Feature #1 – Tree Stand (Planted) with four (4) Sugar Maples (May 15th, 2023).



Photograph 2: Feature #2 – Tree Stand (Planted) with four (4) Sugar Maples (May 15th, 2023).



Photograph 3: Feature #3 – Tree Stand (Planted) with two (2) Ornamental Cherries, one (1) Little Leaf Linden, and three (3) Red Pines (May 15th, 2023).



Photograph 4: Feature #4 – Honey Locust (Planted) with shrubs (May 15th, 2023).



Photograph 5: Feature #5 – Tree Stand (Planted) with four (4) Sugar Maples (May 15th, 2023).



Photograph 6: Feature #6 – Tree Stand (Planted) with four (4) Manitoba Maples, two (2) Little Leaf Linden, one (1) Red Pine, one (1) Sugar Maple and shrubs (May 15th, 2023).



Photograph 7: Feature #7 – Tree Stand (Regrowth) with two (2) Large Tooth Aspen (May 15th, 2023).



Photograph 8: Feature #8 – Tree Stand (Degraded Regrowth) with four (4) Crack Willows, one (1) Trembling Aspen, one (1) White Birch, one (1) American Elm (dead) and shrubs (May 15th, 2023).



Photograph 9: Feature #9 – Thicket (Degraded Regrowth) with young deciduous saplings and shrubs (May 15th, 2023).



Photograph 10: Feature #10 – Tree Stand (Degraded Regrowth) dominated by Trembling Aspen with Large Tooth Aspen, White Ash, Manitoba Maple, Sugar Maple, American Elm and shrubs (June 11th, 2023).



Photograph 11: Feature #11 – American Elm (mature tree) (May 15th, 2023).



Photograph 12: Feature #12 – Former Railbed (Degraded Regrowth) dominated by gravel with weedy groundcover, shrubs and deciduous saplings (May 15th, 2023).



Photograph 13: Feature #12 – Former Railbed (Degraded Regrowth) dominated by gravel with weedy groundcover, shrubs and deciduous saplings (June 11th, 2023).



Photograph 14: Feature #13 – Tree Stand (Planted) with five (5) Sugar Maples (May 15th, 2023).



Photograph 15: Feature #14 – Sugar Maple (Planted) (May 15th, 2023).



Photograph 16: Feature #15 – Tree Stand (Planted) with two (2) White Spruce (May 15th, 2023).



Photograph 17: Feature #16 – Tree Stand (Planted) with two (2) Honey Locust, one (1) Little Leaf Linden, and three (3) Red Pines (May 15th, 2023).



Photograph 18: Feature #17 – Tree Stand (Degraded Regrowth) with young White Ash, Green Ash, American Elm and Manitoba Maple (May 15th, 2023).

3.4 Wetlands & Watercourses

As described above in Section 1.3, a Drainage Channel traverses the former railway corridor in an approximately northwest to southeast direction. The Drainage Channel enters the Site at its northwest corner. The Drainage Channel exits the Site at its southeast corner before flowing east towards Sheffield Road. The Drainage Channel is a minor tributary of Ramsay Creek. There are no other wetland and/or watercourse features shown to exist within the Site and/or within 30 m of the Site. There are also no Provincially Significant Wetlands shown to exist within 120 m of the Site (City of Ottawa 2023b; OMNRF 2023). The Drainage Channel is described in greater detail in the following sections.

3.4.1 Drainage Channel

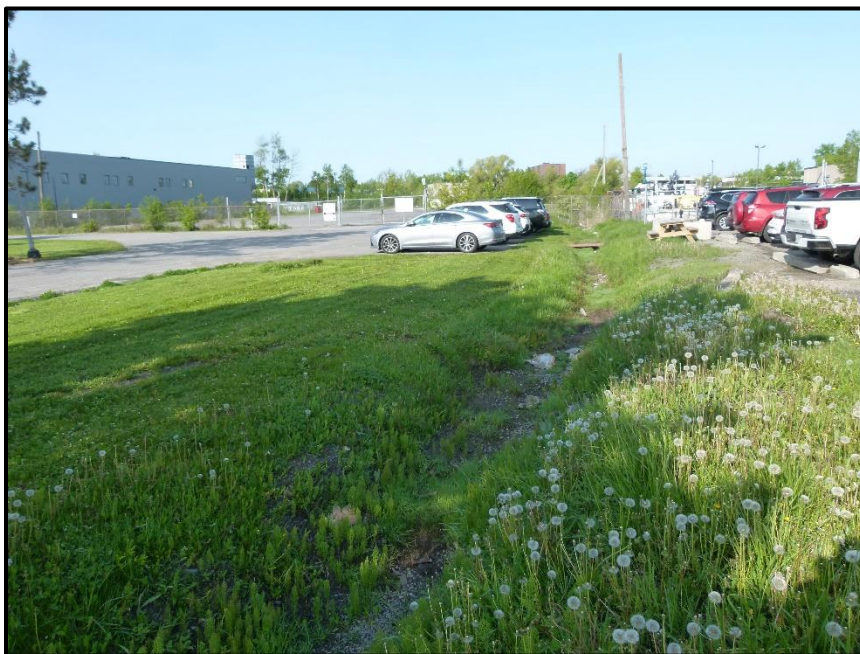
The ecological characteristics of the Drainage Channel were assessed as part of the concurrently prepared Headwaters Drainage Feature Assessment (H DFA) (MES 2023). The H DFA survey results indicate that the Drainage Channel has very limited hydrological functions. The Drainage Channel does not receive water from any upstream watercourses and/or outlets, and it appears to be fed entirely by snowmelt and surface runoff. Even during the spring freshet, there is very little flow from the Drainage Channel to downstream areas, and each segment of the Drainage Channel was either dry or stagnant throughout the late spring and the mid-summer. The Drainage Channel has very limited hydrological functions and does not contribute significant water and/or nutrients to downstream areas.

The riparian corridor surrounding the Drainage Channel is highly degraded. The riparian corridor is dominated by the disturbed ground conditions of the former railway corridor (e.g. rocky former railway beds), paved surfaces, and lawns. There are several areas where trees and/or tree stands surround the Drainage Channel, however, woody vegetation accounts for a comparatively small proportion of the riparian corridor. The Drainage Channel does not provide any significant amphibian breeding habitat and/or fish habitat functions.

The H DFA survey results indicate that the Drainage Channel is a highly degraded and low quality habitat feature that does not provide any significant ecological functions. Refer to MES (2023) for additional details.



Photograph 19: Looking upstream at the downstream segment of HDFA Survey Site #1 (May 24th, 2023).



Photograph 20: Looking upstream at the upstream segment of HDFA Survey Site #1 (May 24th, 2023).



Photograph 21: Looking downstream at the downstream segment of HDFA Survey Site #2 (May 24th, 2023).



Photograph 22: Looking upstream at the upstream segment of HDFA Survey Site #2 (May 24th, 2023).





Photograph 23: Looking upstream at the downstream segment of HDFA Survey Site #3 (May 24th, 2023).



Photograph 24: Looking upstream at the upstream segment of HDFA Survey Site #3 (May 24th, 2023).



Photograph 25: Looking upstream at the downstream segment of HDFA Survey Site #4 (May 24th, 2023).



Photograph 26: Looking upstream at the upstream segment of HDFA Survey Site #4 (May 24th, 2023).





Photograph 27: Looking upstream at the downstream segment of HDFA Survey Site #5 (May 24th, 2023).



Photograph 28: Looking upstream at the upstream segment of HDFA Survey Site #5 (May 24th, 2023).



3.4.2 Fish Habitat

As described in the Headwaters Drainage Feature Assessment (HDFA), the Drainage Channel is not directly connected to any upstream or downstream natural watercourses (MES 2023). The Drainage Channel is also a predominantly stagnant feature with limited hydrological functions. These characteristics are such that the Drainage Channel is unlikely to provide any significant fish habitat functions. The Drainage Channel was surveyed for the potential presence of fish through the use of a dip net on July 2nd, 2023. No fish were captured during the fish survey. No fish were observed within the Drainage Channel during the HDFA field surveying, and therefore the Drainage Channel does not provide any significant fish habitat functions. Refer to MES (2023) for additional details.

3.5 Adjacent Lands & Significant Features

The Site is surrounded by existing industrial buildings, paved surfaces, and roads on all sides, with the exception of the adjacent undeveloped portions of the former railway corridor. The adjacent undeveloped portions of the former railway corridor consist of heavily disturbed areas with recent regrowth vegetation. As described above in Section 3.3 and Section 3.4, several regrowth tree stands, landscaping features, and the Drainage Channel are present within the Site. The Drainage Channel traverses the former railway corridor in an approximately northwest to southeast direction. The Drainage Channel enters the Site at its northwest corner. The Drainage Channel exits the Site at its southeast corner before flowing east towards Sheffield Road. The Drainage Channel is a minor tributary of Ramsay Creek.

The City of Ottawa Natural Heritage System Mapping (Official Plan Schedule C11-C) does not show any significant natural heritage features within the Site and/or immediately adjacent to the Site (City of Ottawa 2022a). There are no wetland features found within the Site. There are also no unevaluated wetlands shown to exist within 30 m of the Site, and no Provincially Significant Wetlands shown to exist within 120 m of the Site (City of Ottawa 2023b; OMNRF 2023). There are no Areas of Natural and Scientific Interest (ANSI) within the Site and/or within 120 m of the Site. As described above, there are no forest habitats within the Site and/or immediately adjacent to the Site, and therefore there are no features present which have the potential to qualify as Significant Woodlots.

3.6 Wildlife & Significant Wildlife Habitat

The birds and other wildlife that were observed within the Site during the field surveys are listed in Appendix B. Twenty (20) bird species were observed within the Site during the field surveys. All of the bird species that were observed within the Site are common species in urban and suburban areas. Other wildlife that were observed within the Site included Eastern Grey Squirrel, Red Squirrel, Eastern Chipmunk and Groundhog. No amphibians or reptiles were observed within the Site.

The potential presence of fish habitat and amphibian breeding habitat within the Drainage Channel was assessed as part of the concurrently prepared Headwaters Drainage Feature Assessment (HDFA) (MES 2023). As described above in Section 3.4.2, the Drainage Channel is unlikely to provide any significant fish habitat functions and no fish were found within the Drainage Channel during the HDFA surveying (MES 2023). No evidence of amphibian breeding activity was documented within the Site during the HDFA surveying (MES 2023).

No stick nests, migratory bird stopover points, amphibian breeding habitat, heron rookeries, caves, bedrock fissures, wetlands, reptile hibernacula, or any other features which may qualify as Significant Wildlife Habitat (SWH) were observed within the Site (OMNRF 2014a). The potential presence of Species at Risk (SAR) habitat is discussed below in Section 3.7.

The City of Ottawa *Bird Safe Design Guidelines* identify that buildings which are located in close proximity to natural areas, parks, forests, and wetlands are likely to pose an increased risk of bird collision (City of Ottawa 2022b). In addition, buildings that are located along known or suspected migration corridors (e.g. rivers, escarpments, and other linear landscape features) also pose an increased risk of bird collision (City of Ottawa 2022b). As described above, the Site is not located in close proximity to any significant natural heritage features and/or any known or suspected migration corridors. The proposed development will therefore pose a comparatively low risk of bird collision. Mitigation measures to address the risk of bird collision are described below in Section 4.4.1.

3.7 Species at Risk

The Natural Heritage Information Center (NHIC) records for the nine (9) grids that include and surround the Site were reviewed. This included an area 3 km x 3 km in size and all published Species at Risk (SAR) records were noted (OMNRF 2023). The Ontario Ministry of Natural Resources and Forestry (OMNRF) *Potential Species at Risk List for the Geographic Township of Gloucester* was also reviewed (Appendix C). The following SAR were identified as potentially occurring within the vicinity of the Site:

- American Eel – Endangered
- Lake Sturgeon – Threatened
- River Redhorse – Special Concern
- Silver Lamprey – Special Concern
- Hickorynut - Endangered
- Channel Darter – Special Concern
- Northern Brook Lamprey – Special Concern
- American Ginseng – Endangered
- Black Ash Trees - Endangered
- Butternut Trees – Endangered
- Gypsy Cuckoo Bumblebee – Endangered
- Monarch Butterfly – Special Concern
- Transverse Lady Beetle – Endangered
- Blanding’s Turtle – Threatened
- Spotted Turtle - Endangered
- Eastern Musk Turtle – Special Concern
- Midland Painted Turtle – Special Concern
- Northern Map Turtle – Special Concern
- Snapping Turtle – Special Concern
- Eastern Ribbonsnake -Special Concern
- Eastern Small Footed Myotis – Endangered
- Little Brown Myotis – Endangered
- Northern Myotis – Endangered
- Tricolored Bat – Endangered
- Bald Eagle – Special Concern
- Bank Swallow – Threatened
- Barn Swallow – Special Concern
- Chimney Swift - Threatened
- Black Tern – Special Concern

- Bobolink – Threatened
- Eastern Meadowlark – Threatened
- Canada Warbler – Special Concern
- Common Nighthawk – Special Concern
- Eastern Whip Poor Will – Threatened
- Eastern Wood Pewee – Special Concern
- Wood Thrush – Special Concern
- Evening Grosbeak – Special Concern
- Henslow's Sparrow - Endangered
- Least Bittern - Threatened
- Loggerhead Shrike – Endangered
- Peregrine Falcon – Special Concern
- Red Headed Woodpecker - Endangered
- Rusty Blackbird – Special Concern
- Short Eared Owl – Threatened

The following is a summary of the potential for these species to occur within the Site:

- **American Eel, Lake Sturgeon, River Redhorse, Silver Lamprey and Hickorynut:** American Eel and Lake Sturgeon are fish species that are found in association with the Ottawa River (SARO 2023). River Redhorse and Silver Lamprey are also fish species which are primarily found in riverine environments and major tributaries (SARO 2023). Hickorynut is a freshwater mussel found in association with the Ottawa River (SARO 2023). The Site does not occur in close proximity to a riverine environment. As described above in Section 3.4.2, the Drainage Channel is unlikely to provide any significant fish habitat functions. As such, American Eel, Lake Sturgeon, River Redhorse, Silver Lamprey and Hickorynut are unlikely to be a significant concern for the proposed development.
- **Channel Darter and Northern Brook Lamprey:** Channel Darters are found living in clean streams and lakes with sandy or gravel bottoms (SARO 2023). Northern Brook Lampreys live in clear streams with cool water (SARO 2023). As described above in Section 3.4.1 and Section 3.4.2, the Drainage Channel is a degraded feature that is unlikely to provide any significant fish habitat functions. As such, Channel Darter and Northern Brook Lamprey are unlikely to be a significant concern for the proposed development.
- **American Ginseng:** American Ginseng is found in association with mature deciduous forests (SARO 2023). As described above in Section 3.3, there are no forest habitats within the Site and/or immediately adjacent to the Site. American Ginseng is therefore unlikely to be a significant concern for the proposed development.

- **Black Ash Trees:** Black Ash Trees are primarily found growing in swamps and wetlands (SARO 2023). As described above, there are no wetland habitats found within the Site and/or immediately adjacent to the Site. No Black Ash Trees were found within the Site during the plant surveys, and therefore Black Ash Trees are unlikely to be a significant concern for the proposed development.
- **Butternut Trees:** Butternut Trees are found in many treed areas throughout the Ottawa region (SARO 2023). The Site was searched for the presence of Butternut Trees during the May 15th, 2023 Site visit. No Butternut Trees were found within the Site and/or immediately adjacent to the Site. As such, Butternut Trees are unlikely to be a significant concern for the proposed development.
- **Gypsy Cuckoo Bumblebee:** Gypsy Cuckoo Bumblebees have been documented in the Ottawa area historically, however, the species has not been observed in the Ottawa area in recent years (SARO 2023). Most recent sightings of the species within Ontario are from the Pinery Provincial Park near Sarnia (SARO 2023). Gypsy Cuckoo Bumblebees are unlikely to occur within the Site, and therefore they are unlikely to be a significant concern for the proposed development.
- **Monarch Butterfly:** Monarch Butterflies are found in meadow and grassland habitats in association with their Milkweed host plants (SARO 2023). As described above in Section 3.3, there are no meadow or grassland habitats within the Site. No Monarch Butterflies were observed within the Site during the Site surveys. As such, Monarch Butterflies are unlikely to be a significant concern for the proposed development.
- **Transverse Lady Beetle:** There have been no records of Transverse Lady Beetle in Ontario since 1990 (SARO 2023). As such, Transverse Lady Beetles are unlikely to be a significant concern for the proposed development.
- **Blanding's Turtle and Spotted Turtle:** Blanding's Turtles are found in shallow wetlands and lakes with abundant wetland vegetation (SARO 2023). Spotted Turtles are found in ponds, marshes, and bogs with unpolluted water and abundant wetland vegetation (SARO 2023). As described above in Section 3.4, there are no wetlands and/or lakes found within the Site and/or immediately adjacent to the Site. The Drainage Channel that occurs within the Site is a degraded and isolated feature that is unlikely to provide any significant aquatic habitat functions (Refer to Section 3.4.1 for additional details). Due to the absence of potentially suitable habitat features, Blanding's Turtles and Spotted Turtles are unlikely to be a significant concern for the proposed development.
- **Eastern Musk Turtle, Midland Painted Turtle, Northern Map Turtle and Snapping Turtle:** Eastern Musk Turtle, Midland Painted Turtle, Northern Map Turtle and Snapping Turtle are Species of Special Concern, and therefore their habitat is not regulated under the Ontario Endangered Species Act (ESA). Eastern Musk Turtle and Northern Map Turtle are primarily riverine species (SARO 2023). There are no riverine habitats located within close proximity to the Site, and therefore Eastern Musk Turtles and Northern Map Turtles are unlikely to be a significant concern for the proposed development. Midland Painted Turtles and Snapping Turtles are generally common in many aquatic habitats throughout the Ottawa area (SARO 2023). No turtles were observed within the Site during the Site surveys. It is unlikely that Midland Painted Turtles and/or

Snapping Turtles occur within the Drainage Channel, due to the fact that the Drainage Channel is highly degraded and is not directly connected to any upstream or downstream natural watercourses (Refer to Section 3.4.1 for additional details). Therefore, Midland Painted Turtles and Snapping Turtles are unlikely to be a significant concern for the proposed development.

- **Eastern Ribbonsnake:** Eastern Ribbonsnakes are found in association with marshes and bogs (SARO 2023). As described above in Section 3.4, there are no wetlands found within the Site and/or immediately adjacent to the Site. As such, Eastern Ribbonsnakes are unlikely to be a significant concern for the proposed development.
- **Eastern Small Footed Myotis, Little Brown Myotis, Northern Myotis and Tricolored Bat:** No caves, bedrock fissures, mining shafts, abandoned buildings, or other features which may function as bat hibernacula habitat were observed within the Site. The OMNRF (2017) guidelines for bat surveying state that deciduous and mixed forest habitats have the potential to provide maternity roosting sites. As described above in Section 3.3, no deciduous or mixed forest habitats occur within the Site. Therefore, the Site is unlikely to be suitable for bat maternity roosting, and the endangered bat species are unlikely to be a significant concern for the proposed development.
- **Bald Eagle:** Bald Eagles are primarily found nesting in large trees and forests adjacent to large lakes and rivers (e.g. the Ottawa River) (SARO 2023). The Site does not occur adjacent to a river or lake, and therefore it is unlikely to provide suitable nesting habitat for Bald Eagles. As such, Bald Eagles are unlikely to be a significant concern for the proposed development.
- **Bank Swallow:** Bank Swallows nest in natural and artificial deposits of sand and silt with vertical faces (SARO 2023). There are no significant areas of exposed sand or silt within the Site and no stockpiles currently exist. As such, Bank Swallows are unlikely to be a significant concern for the proposed development.
- **Barn Swallow and Chimney Swift:** Barn Swallows nest in anthropogenic structures including old barns, sheds, abandoned houses with openings, old silos, large culverts, under bridges, etc. (SARO 2023). Chimney Swifts nest in suitable uncapped chimneys (SARO 2023). The existing industrial buildings that are found within the Site are well maintained modern structures that are currently in use. None of the existing industrial buildings that are found within the Site include chimneys that could be suitable for Chimney Swift nesting. As such, the existing buildings that are found within the Site are unlikely to provide suitable habitat for nesting Barn Swallows and Chimney Swifts. No Barn Swallows and/or Chimney Swifts were observed within the Site during the Breeding Bird Surveys. As such, Barn Swallows and Chimney Swifts are unlikely to be a significant concern for the proposed development.
- **Black Tern:** Black Terns build their nests in shallow marshes (SARO 2023). As described above, there are no marshes within the Site and/or immediately adjacent to the Site. Therefore, Black Terns are unlikely to be a significant concern for the proposed development.
- **Bobolink and Eastern Meadowlark:** Bobolink and Eastern Meadowlark are found nesting in grasslands, old pastures, hayfields, and meadows (SARO 2023). Both species primarily nest in

open habitats dominated by graminoid plants (e.g. grasses). As described above in Section 3.3, the open areas of the Site are highly degraded and they are dominated by weedy regrowth (e.g. forb dominated). The Site does not provide suitable habitat for Bobolink and/or Eastern Meadowlark nesting and no Bobolinks and/or Eastern Meadowlarks were observed within the Site during the Breeding Bird Surveys. As such, Bobolink and Eastern Meadowlark are unlikely to be a significant concern for the proposed development.

- **Canada Warbler:** Canada Warblers breed in deciduous and coniferous forests with dense shrub cover (SARO 2023). As described above in Section 3.3, there are no forest habitats within the Site. As such, Canada Warblers are unlikely to be a significant concern for the proposed development.
- **Common Nighthawk:** Common Nighthawks breed in open areas with very little ground vegetation, including logged areas, recent burns, forest clearings, rock barrens, peat bogs, and lakeshores (SARO 2023). The Site generally does not provide habitat that is suitable for Common Nighthawk nesting. No Common Nighthawks were observed during the night time amphibian call count surveys. As such, Common Nighthawks are unlikely to be a significant concern for the proposed development.
- **Eastern Whip Poor Will:** The *General Habitat Description for the Eastern Whip Poor Will* (OMNRF 2014b) describes Eastern Whip Poor Will breeding habitat as "...open and half treed areas (which) often exhibit a scattered distribution of treed and open space...". Suitable breeding habitats generally consist of a 'mosaic' of open, half treed, and closed canopy conditions (Garlapow 2007). The Site does not include any forest habitat, and therefore it does not provide potentially suitable habitat for Eastern Whip Poor Will. As such, Eastern Whip Poor Wills are unlikely to be a significant concern for the proposed development.
- **Eastern Wood Pewee and Wood Thrush:** Eastern Wood Pewee and Wood Thrush nest within interior forest habitat (SARO 2023). As described above in Section 3.3, there are no forest habitats within the Site. Eastern Wood Pewees and Wood Thrushes are therefore unlikely to be a significant concern for the proposed development.
- **Evening Grosbeak:** Evening Grosbeaks breed in mature mixed forests dominated by Fir trees, White Spruce, and/or Trembling Aspen (SARO 2023). As described above in Section 3.3, there are no forest habitats found within the Site. Evening Grosbeaks are therefore unlikely to be a significant concern for the proposed development.
- **Henslow's Sparrow:** Henslow's Sparrows are found breeding in large grasslands with dense graminoid vegetation (SARO 2023). As described above in Section 3.3, the open areas of the Site are highly degraded and they are dominated by weedy regrowth (e.g. forb dominated). The Site does not provide suitable habitat for Henslow's Sparrow and no Henslow's Sparrows were observed within the Site during the Breeding Bird Surveys. Henslow's Sparrows are therefore unlikely to be a significant concern for the proposed development.
- **Least Bittern:** Least Bitterns breed in open marshes and wetlands (SARO 2023). As described above in Section 3.4, there are no wetlands within the Site and/or immediately adjacent to the

Site. Therefore, Least Bitterns are unlikely to be a significant concern for the proposed development.

- **Loggerhead Shrike:** Loggerhead Shrikes are found nesting in large pastures and grasslands with scattered low trees and thorny shrubs. They also nest and forage in alvars (SARO 2023). As described above in Section 3.3, the open areas of the Site are highly degraded and they are dominated by weedy regrowth (e.g. forb dominated). The Site does not provide suitable habitat for Loggerhead Shrike and no Loggerhead Shrikes were observed within the Site during the Breeding Bird Surveys. Loggerhead Shrikes are therefore unlikely to be a significant concern for the proposed development.
- **Peregrine Falcon:** Peregrine Falcons nest on steep cliff edges and at the top of tall buildings in urban areas (SARO 2023). There are no potentially suitable nest sites for Peregrine Falcons within the Site, and therefore they are unlikely to be a significant concern for the proposed development.
- **Red Headed Woodpecker:** Red Headed Woodpeckers are primarily found in association with open woodlands and woodland edges (SARO 2023). As described above in Section 3.3, there are no woodlands and/or forest habitats found within the Site. Red Headed Woodpeckers are therefore unlikely to be a significant concern for the proposed development.
- **Rusty Blackbird:** Rusty Blackbirds breed in coniferous forest near wetlands (SARO 2023). As described above, there are no forest or wetland habitats found within the Site. Rusty Blackbirds are therefore unlikely to be a significant concern for the proposed development.
- **Short Eared Owl:** Short Eared Owls are found in areas with large tracts of open habitat including grasslands, marshes, and tundra (SARO 2023). The Site does not include large areas of open habitat, and therefore Short Eared Owls are unlikely to be a significant concern for the proposed development.

In summary, no significant Species at Risk (SAR) concerns were identified in relation to the Site and the proposed development.

3.8 Linkages

The Site is surrounded by existing industrial buildings, paved surfaces, and roads on all sides, with the exception of the adjacent undeveloped portions of the former railway corridor. The adjacent undeveloped portions of the former railway corridor consist of heavily disturbed areas with recent regrowth vegetation. The Site does not occur between any two (2) adjacent significant natural heritage features, and therefore the Site is unlikely to provide a significant linkage function.

4.0 DESCRIPTION OF ENVIRONMENTAL IMPACTS & MITIGATION

4.1 Terrestrial Habitat & Tree Retention (TCR)

4.1.1 Tree Retention (TCR)

As described above in Section 3.3, the Site does not include any forest habitat and the majority of the Site lacks mature tree coverage. The tree cover within the developed eastern and western portions of the Site is limited to landscaping features that have been planted adjacent to the existing industrial buildings. The tree cover within the central part of the Site (e.g. within the former railway corridor) predominantly consists of poor quality recent regrowth trees and tree stands. As described above in Section 3.2, the oldest trees within the former railway corridor are approximately 30 years to 40 years of age, however, the vast majority of the stems represent younger recent regrowth. The regrowth vegetation within the former railway corridor is highly fragmented and disturbed, and there are no intact natural vegetation communities.

The trees and tree stands that are proposed to be removed are summarized in Table A (Refer to Section 3.3). The tree retention and tree clearing areas are also shown below in Figure 5. As shown in Figure 5, the landscaping features that have been planted adjacent to the existing industrial buildings will be retained. The landscaping features that are adjacent to the existing industrial buildings are well separated from the tree clearing area, and therefore they are unlikely to be significantly negatively impacted during the proposed development of the Site. The trees and tree stands that occur within the former railway corridor will be removed in order to accommodate the construction of the proposed development. The removal of the trees and tree stands from the former railway corridor is not anticipated to be ecologically significant, given that the trees and tree stands are generally of poor quality and that the majority of the trees represent recent regrowth. As summarized above in Table A, all trees that are proposed to be removed are privately owned and occur within the Site.

FIGURE 5: TREES & VEGETATION COMMUNITIES (POST DEVELOPMENT)

2750 & 2760 Sheffield Road, Ottawa, Ontario

Combined Environmental Impact Statement (EIS) & Tree Conservation Report (TCR)



— Site Limits — Drainage Channel 12 - Trees/Tree Stands/Vegetation Communities

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

4.1.2 Tree Preservation Mitigation Measures (TCR)

The following tree preservation mitigation measures will be implemented to help protect and preserve retained trees:

- Mark the edge of the tree clearing area to ensure only designated trees are removed. Natural areas that are to be retained are to be isolated by sturdy tree protection fencing at least 1 m in height;
- Protect the Critical Root Zone (CRZ) of retained trees, where the CRZ is established as being 10 cm from the trunk of a tree for every centimeter of trunk diameter at breast height (dbh). The CRZ is calculated as $dbh \times 10 \text{ cm}$;
- Attach signs to the tree protection fencing approximately every 10 m. The signs must identify the purpose of the fencing (e.g. to protect retained trees and their CRZ). The signs must also identify that the tree protection fencing is to be maintained throughout the construction phase of the development, and that the fencing is not to be moved and/or removed until construction is complete;
- When trees to be removed overlap with the CRZ of trees to be retained, cut roots at the edge of the CRZ and grind down stumps after tree removal. Do not pull out stumps. Ensure there is not root pulling or disturbance of the ground within the CRZ of retained trees;
- If roots must be cut, roots 20 mm or larger should be cut at right angles with clean, sharp horticultural tools without tearing, crushing, or pulling;
- Do not place any material or equipment within the CRZ of any retained tree;
- Do not attach any signs, notices, or posters to any retained tree;
- Do not damage the root system, trunk, or branches of any retained tree; and
- Ensure that exhaust fumes from all equipment are directed away from any retained tree canopy.

4.1.3 Replanting (TCR)

Landscaping features will be planted adjacent to the new industrial building and its associated paved parking/storage areas. The planting of trees and shrubs will mitigate the loss of woody vegetation from the tree clearing. The planting locations and specific planting requirements will be confirmed by a detailed Landscaping Plan. The Landscaping Plan should emphasize the use of locally appropriate native plant species, which may include the native plant species identified in Appendix A. Non-native species and invasive species should not be utilized in the Landscaping Plan. The planting of Ash trees should be avoided due to the high likelihood that any planted Ash trees will become infested with Emerald Ash Borer. During the development of the Landscaping Plan, the use of features which may reduce the urban heat island effect should be considered (e.g. large canopy trees, green roofs, vegetated walls, etc.).

4.2 Watercourses & Aquatic Habitats

4.2.1 Drainage Channel Decommissioning

As shown above in the Site Plan, the proposed development will result in the decommissioning of the portion of the Drainage Channel that occurs within the Site. The proposed decommissioning of the Drainage Channel will require approval by the Rideau Valley Conservation Authority (RVCA) under O. Reg. 174/06. As described above, the Drainage Channel does not provide any significant amphibian breeding habitat and/or fish habitat functions, and therefore no amphibian breeding habitat and/or fish habitat compensation should be required (MES 2023).

4.2.2 Stormwater Management

The water that is currently stored and/or conveyed by the Drainage Channel will be captured by the new stormwater management system that will be constructed as part of the proposed development. The new stormwater management system will outlet to the existing stormwater sewers along Lancaster Road and Sheffield Road. Stormwater quantity control will be provided by rooftop and underground storage systems, which will control the post development flow rates. Stormwater quality control will be provided by an oil-grit separator system. The proposed stormwater management system and its associated stormwater quantity and quality controls are anticipated to be sufficient to mitigate potential downstream impacts (Ware Malcomb 2023).

4.2.3 Sediment & Erosion Controls

Silt fencing should be installed surrounding the Drainage Channel during the construction phase of the development in order to prevent sediment and erosion from impacting downstream areas. The silt fencing surrounding the Drainage Channel will no longer be required after the Drainage Channel has been decommissioned.

During construction, existing conveyance systems along Sheffield Road, Lancaster Road, and within adjacent developed properties could be exposed to significant sediment loading. Although construction is only a temporary situation, a sediment and erosion control plan will be required to ensure that the existing conveyance systems are not negatively impacted by sediment and erosion. The sediment and erosion control plan will include the following:

- Groundwater in trenches (if present) will be pumped into a filter mechanism, such as a trap made up of geotextile filters and straw, prior to release to the environment;
- Bulkhead barriers will be installed at the nearest downstream manhole in each new sewer which connects to an existing downstream sewer (e.g. existing sewers along Sheffield Road and/or Lancaster Road, if required). The bulkheads will trap any sediment carrying flows, thus preventing any construction-related contamination of existing sewers;
- Seepage barriers will be constructed in any temporary drainage ditches;
- Construction vehicles will leave the Site at designated locations. Exits will consist of a bed of granular material, in order to minimize the tracking of mud off-site;
- Any stockpiled material will be properly managed to prevent those materials from entering the sewer systems; and
- Until landscaped areas are sodded or until streets are asphalted and curbed, all catch basins and manholes will be constructed with a geotextile filter sock located between the structure frame and cover.

4.3 Adjacent Lands & Significant Features

As described above in Section 3.5, there are no significant natural heritage features within the Site and/or immediately adjacent to the Site. Mitigation measures addressing tree clearing and the Drainage Channel are described above in Section 4.1 and Section 4.2 (respectively). No additional mitigation measures are required for the adjacent lands and/or any adjacent significant natural heritage features.

4.4 Wildlife & Species at Risk

4.4.1 Bird Safe Design Guidelines

As described above in Section 3.6, the Site is not located in close proximity to any significant natural heritage features and/or any known or suspected bird migration corridors. The proposed development will therefore pose a comparatively low risk of bird collision (City of Ottawa 2022b). The City of Ottawa *Bird Safe Design Guidelines* identify mitigation measures which can be implemented to reduce the risk of bird collision. Where feasible and compatible with the development requirements, the following guidelines should be considered during the development of the architectural/building designs and the Landscaping Plan (as applicable) (City of Ottawa 2022b). Guidelines which are not relevant to the proposed development (e.g. guidelines that do not apply to a low-rise industrial building) have been omitted from the list below:

- Minimize the transparency and reflectivity of glazing (Refer to Guideline #2). Note that Guideline #2 is considered the highest priority to reduce the risk of bird collision;
 - Avoid monolithic, undistinguished expanses of glazing;
 - Incorporate visual interest or differentiation of material, texture, color, opacity, or other features to fragment reflections; and
 - Where glazing is used, bird-safe glass or glass with integrated protection measures is preferred. Refer to Guideline #2 for treatment directions.
- Avoid or mitigate design traps (Refer to Guideline #3);
 - All glazing that could create a fly-through, mirror maze or black hole effect should be made bird-safe, using bird-safe glass or integrated protection measures as described in Guideline #2;
 - Glass corners should be treated to render them bird-safe for 5 meters in each direction; and
 - Glass railings, parapets, and similar clear barriers should use bird-safe glass as specified in Guideline #2.
- Consider the impact of other structural features (e.g. antennas, wires, poles, etc.) (Refer to Guideline #4);
 - Grates should have a maximum porosity of 20 mm by 20 mm or 40 mm by 10 mm, or should be screened to prevent birds from falling through; and
 - Ensure that vertical pipes, flues and vents are capped or screened to prevent wildlife entry.
- Design bird safe landscaping (Refer to Guideline #5);
 - Design landscape plantings to minimize reflections of trees and shrubs in nearby buildings. In cases where landscape planting near a glazed building façade or other reflective surface is desirable for shading or other purposes, Guideline #2 must be applied to obscure habitat reflections;

- Avoid or minimize the number of linear landscape features leading directly into glass façades or doors. Where such features cannot be avoided, Guideline #2 must be applied;
- Avoid using plant species known to attract birds (e.g. those with abundant fruit or seed crops, or with flowers attractive to hummingbirds) in locations that could result in harmful collisions;
- Minimize the exterior visibility of any indoor vegetation, green walls or water features to reduce their attractiveness to birds; and
- Avoid locating ornamental fountains, ponds, stormwater retention basins, wetlands, swales or related infrastructure near glass façades or windows.
- Design exterior lighting to minimize light trespass at night (Refer to Guideline #6);
 - Avoid up-lighting;
 - Specify Dark Sky compliant, full-cutoff exterior fixtures to reduce light trespass;
 - Use motion detectors and other automatic lighting controls to reduce or extinguish non-essential lighting between 11 pm and 6 am;
 - Use minimum wattage fixtures to achieve appropriate lighting levels (note: minimum required lighting levels are established in the Ontario Building Code);
 - Minimize amount and visual impact of perimeter lighting; and
 - Avoid use of floodlighting.
- Avoid night time light trespass from the building's interior (Refer to Guideline #7);
 - Use window shades or blinds to prevent light trespass from occupied spaces between sunset and sunrise.

The potential application of the guidelines listed above will require consideration by the applicable Qualified Professionals (e.g. Architect, Landscape Architect, etc.) as they develop the architectural/building designs and the Landscaping Plan. Refer to the City of Ottawa *Bird Safe Design Guidelines* for additional details (City of Ottawa 2022b).

It should be noted that the proposed development involves the construction of an industrial building with minimal glazing (e.g. few windows), a comparatively low building height, and limited exterior landscaping. As such, the proposed building design conforms to the key elements of the *Bird Safe Design Guidelines* (described above) (City of Ottawa 2022b).

4.4.2 Species at Risk & Wildlife Construction Stage Mitigation

The mitigation requirements for Species at Risk (SAR) and wildlife during construction are summarized below. These recommendations include provisions from the City of Ottawa (2022c) *Protocol for Wildlife Protection During Construction*:

- **Pre-Stressing:** Prior to vegetation removal, the area will be pre-stressed by traversing the Site with a loud noise such as an excavator horn. This will encourage wildlife to leave the area;
- **Tree Clearing Direction:** Trees will be cleared towards the adjacent undeveloped portions of the former railway corridor, in order to provide an opportunity for wildlife to leave the area;
- **Sweeps:** Prior to vegetation clearing, preconstruction sweeps of vegetated areas will be undertaken to ensure wildlife are not present. A designated staff member will be required to conduct sweeps each morning prior to the commencement of work to ensure that wildlife have not entered the work area;
- **Vehicle Operation:** Vehicles and equipment are to be operated on Construction Travelways (e.g. roads within the Site) at a speed at which drivers are able to stop safely to avoid wildlife;
- **Equipment Washing:** All equipment shall be washed, refueled and serviced to prevent fuel and other deleterious substances from entering the Drainage Channel. All machinery must arrive on Site in a clean condition and shall be maintained free of fluid leaks, invasive species and noxious weeds;
- **Spills:** A spill response plan will be developed. The spill response plan is to be implemented in the event of a sediment release or spill of a deleterious substance. An emergency kit will be kept on Site any time development activities are taking place;
- **Species at Risk (SAR) Encounters:** If a Species at Risk (SAR) is encountered in the work area, construction in the vicinity must be stopped immediately and measures must be taken to ensure the SAR is not harmed. The project biologist and the Ministry of Environment, Conservation and Parks (MECP) must be contacted to discuss how to proceed prior to the recommencement of work;
- **General Provisions:** General provisions for Site management include the following:
 - Do not harm, feed or unnecessarily harass wildlife;
 - Drive slowly and avoid hitting wildlife;
 - Keep the Site tidy and free of garbage and food wastes. Secure all garbage in appropriate sealed containers;
 - Ensure proper Site drainage so that standing water does not accumulate on Site. This will reduce the likelihood that turtles and other wildlife may enter the Site;
 - Any stockpiles should be properly secured with silt fencing to prevent wildlife from accessing areas of loose fill;

- **Timing Windows:**

- The decommissioning of the Drainage Channel should be undertaken outside of the sensitive in-water work timing window, which is from March 15th to June 30th each year; and
- The core migratory bird nesting season is defined as April 15th to August 15th each year. Tree clearing should be undertaken between August 15th and April 15th in order to avoid impacting the nests of migratory birds.

5.0 CUMULATIVE EFFECTS

Cumulative effects were considered in the design of the mitigation measures outlined in Section 4.0. As described above, the development of the Site is not anticipated to contribute significantly to the cumulative loss of forest and/or wetland habitat. The development of the Site will also not contribute significantly to the cumulative loss of Species at Risk (SAR) habitat.

6.0 MONITORING

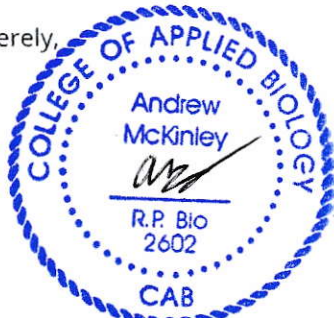
The construction stage monitoring requirements are outlined in Section 4.4.2 (above). Prior to vegetation clearing, preconstruction sweeps of vegetated areas will be undertaken to ensure wildlife are not present. A designated staff member will be required to conduct sweeps each morning prior to the commencement of work to ensure that wildlife have not entered the work area.

7.0 CLOSURE

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

We trust that the above information is sufficient. Please do not hesitate to contact the undersigned if you have any questions or require further information.

Sincerely,



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



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APPENDIX A

Plant List



McKINLEY
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TABLE A: PLANT LIST

Common Name	Scientific Name	Provincial S Rank	Brunton Significance Ranking for the City of Ottawa (Brunton 2005)	Vegetation Type
Common Cattail	<i>Typha latifolia</i>	S5	Common	Aquatic
Garlic Mustard	<i>Alliaria petiolata</i>	SNA	Common	Herbaceous
Common Ragweed	<i>Ambrosia artemisiifolia</i>	S5	Common	Herbaceous
Common Burdock	<i>Arctium minus</i>	SNA	Common	Herbaceous
Yellow Rocket	<i>Barbarea vulgaris</i>	SNA	Common	Herbaceous
Lamb's Quarters Pigweed	<i>Chenopodium album</i>	SNA	Common	Herbaceous
Canada Thistle	<i>Cirsium arvense</i>	S5	Common	Herbaceous
Bull Thistle	<i>Cirsium vulgare</i>	SNA	Common	Herbaceous
Queen Anne's Lace	<i>Daucus carota</i>	SNA	Common	Herbaceous
Viper's Bugloss	<i>Echium vulgare</i>	SNA	Common	Herbaceous
Common Strawberry	<i>Fragaria virginiana</i>	S5	Common	Herbaceous
Cleavers	<i>Galium aparine</i>	S5	Common	Herbaceous
Prickly Lettuce	<i>Lactuca scariola</i>	SNA	Common	Herbaceous
Ox Eye Daisy	<i>Leucanthemum vulgare</i>	SNA	Common	Herbaceous
Common Plantain	<i>Plantago major</i>	S5	Common	Herbaceous
Wild Mustard	<i>Sinapis arvensis</i>	SNA	Common	Herbaceous
Canada Goldenrod	<i>Solidago canadensis</i>	S5	Common	Herbaceous
Dandelion	<i>Taraxacum officinale</i>	SNA	Common	Herbaceous
Common Mullein	<i>Verbascum thapsus</i>	SNA	Common	Herbaceous
Red Osier Dogwood	<i>Cornus sericea</i>	S5	Common	Shrub
Tartarian Honeysuckle	<i>Lonicera tatarica</i>	SNA	Common (aggressive invasive)	Shrub
Common Buckthorn	<i>Rhamnus cathartica</i>	SNA	Common (aggressive invasive)	Shrub
Wild Red Raspberry	<i>Rubus idaeus</i>	S5	Common	Shrub
Slender Willow	<i>Salix petiolaris</i>	S5	Common	Shrub
Manitoba Maple	<i>Acer negundo</i>	S5	Common	Tree
Sugar Maple	<i>Acer saccharum</i>	S5	Common	Tree
White Birch	<i>Betula papyrifera</i>	S5	Common	Tree
White Ash	<i>Fraxinus americana</i>	S5	Common	Tree
Green Ash	<i>Fraxinus pennsylvanica</i>	S5	Common	Tree

Honey Locust	<i>Gleditsia triacanthos</i>	SNA	N/A	Tree
White Spruce	<i>Picea glauca</i>	S5	Common	Tree
Red Pine	<i>Pinus resinosa</i>	S5	Common	Tree
Large Tooth Aspen	<i>Populus grandidentata</i>	S5	Common	Tree
Trembling Aspen	<i>Populus tremuloides</i>	S5	Common	Tree
Ornamental Cherry	<i>Prunus</i> sp.	SNA	N/A	Tree
Staghorn Sumac	<i>Rhus hirta</i>	S5	Common	Tree
Crack Willow	<i>Salix fragilis</i>	SNA	Common (invasive)	Tree
Little Leaf Linden	<i>Tilia cordata</i>	SNA	Common	Tree
American Elm	<i>Ulmus americana</i>	S5	Common	Tree
Virginia Creeper	<i>Parthenocissus vitacea</i>	S5	Common	Vine
Dog Strangling Vine	<i>Vincetoxicum rossicum</i>	SNA	Common (invasive)	Vine
Riverbank Grape	<i>Vitis riparia</i>	S5	Common	Vine

<p>Provincial Ranks (assigned by NHIC)</p> <p>S5 = Very common within the province with > 1000 occurrences, populations or records S4 = Common within the province with 21 - 1000 occurrences, populations or records S3 = Rare within the province with 6 - 20 occurrences, populations or records SNA = Ranking not available SE5 = Very common exotic with > 1000 occurrences, populations or records within the province S? = Unranked, or if followed by a ranking, temporarily assigned (eg. S4?)</p>

APPENDIX B

Bird & Wildlife Lists



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TABLE B: BIRD LIST

Common Name	Scientific Name
Red Winged Blackbird	Agelaius phoeniceus
Ruby Throated Hummingbird	Archilochus colubris
Northern Cardinal	Cardinalis cardinalis
Killdeer	Charadrius vociferus
Rock Dove (Pigeon)	Columba livia
American Crow	Corvus brachyrhynchos
Blue Jay	Cyanocitta cristata
Gray Catbird	Dumetella carolinensis
Common Yellowthroat	Geothlypis trichas
Dark Eyed Junco	Junco hyemalis
Ring Billed Gull	Larus delawarensis
Song Sparrow	Melospiza melodia
House Sparrow	Passer domesticus
Black Capped Chickadee	Poecile atricapilla
Common Grackle	Quiscalus quiscula
American Goldfinch	Spinus tristis
European Starling	Sturnus vulgaris
American Robin	Turdus migratorius
Mourning Dove	Zenaida macroura
White Crowned Sparrow	Zonotrichia leucophrys

TABLE C: WILDLIFE LIST

Common Name	Scientific Name
Groundhog	Marmota monax
Eastern Grey Squirrel	Sciurus carolinensis
Red Squirrel	Sciurus vulgaris
Eastern Chipmunk	Tamias striatus

APPENDIX C

Ontario Ministry of Natural Resources & Forestry (OMNRF) Potential Species at Risk List for the Geographic Township of Gloucester



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FITZROY	GLOUCESTER	GOULBOURN
American Eel	American Eel	Bald Eagle
American Ginseng	American Ginseng	Bank Swallow
Bald Eagle	Bald Eagle	Barn Swallow
Bank Swallow	Bank Swallow	Blanding's Turtle
Barn Swallow	Barn Swallow	Bobolink
Blanding's Turtle	Black Tern	Bogbean Buckmoth
Bobolink	Blanding's Turtle	Butternut
Butternut	Bobolink	Chimney Swift
Canada Warbler	Butternut	Common Nighthawk
Chimney Swift	Canada Warbler	Eastern Meadowlark
Common Nighthawk	Channel Darter	Eastern Prairie Fringed Orchid
Eastern Meadowlark	Chimney Swift	Eastern Small-footed Myotis
Eastern Musk Turtle	Common Nighthawk	Eastern Whip-poor-will
Eastern Ribbonsnake	Eastern Meadowlark	Eastern Wood-pewee
Eastern Silvery Minnow	Eastern Musk Turtle	Gypsy Cuckoo Bumble Bee
Eastern Small-footed Myotis	Eastern Ribbon Snake	Horned Grebe
Eastern Whip-poor-will	Eastern Small-footed Myotis	Least Bittern
Eastern Wood-pewee	Eastern Whip-poor-will	Little Brown Myotis
King Rail	Eastern Wood-pewee	Loggerhead Shrike
Lake Sturgeon	Evening Grosbeak	Monarch
Least Bittern	Gypsy Cuckoo Bumble Bee	Northern Myotis
Little Brown Myotis	Henslow's Sparrow	Red-headed Woodpecker
Loggerhead Shrike	Hickorynut	Snapping Turtle
Monarch	Lake Sturgeon	Tri-colored Bat
Northern Map Turtle	Least Bittern	Wood Thrush
Northern Myotis	Little Brown Myotis	Yellow Rail
Olive-sided Flycatcher	Loggerhead Shrike	
Peregrine Falcon	Monarch	
Red-headed Woodpecker	Northern Brook Lamprey	
River Redhorse	Northern Map Turtle	
Short-eared Owl	Northern Myotis	
Snapping Turtle	Peregrine Falcon	
Transverse Lady Beetle	Red-headed Woodpecker	
Tri-colored Bat	River Redhorse	
Wood Thrush	Rusty Blackbird	
	Short-eared Owl	
	Silver Lamprey	
	Snapping Turtle	
	Spotted Turtle	
	Transverse Lady Beetle	
	Tri-colored Bat	
	Wood Thrush	