Appendix A. Supportive Studies

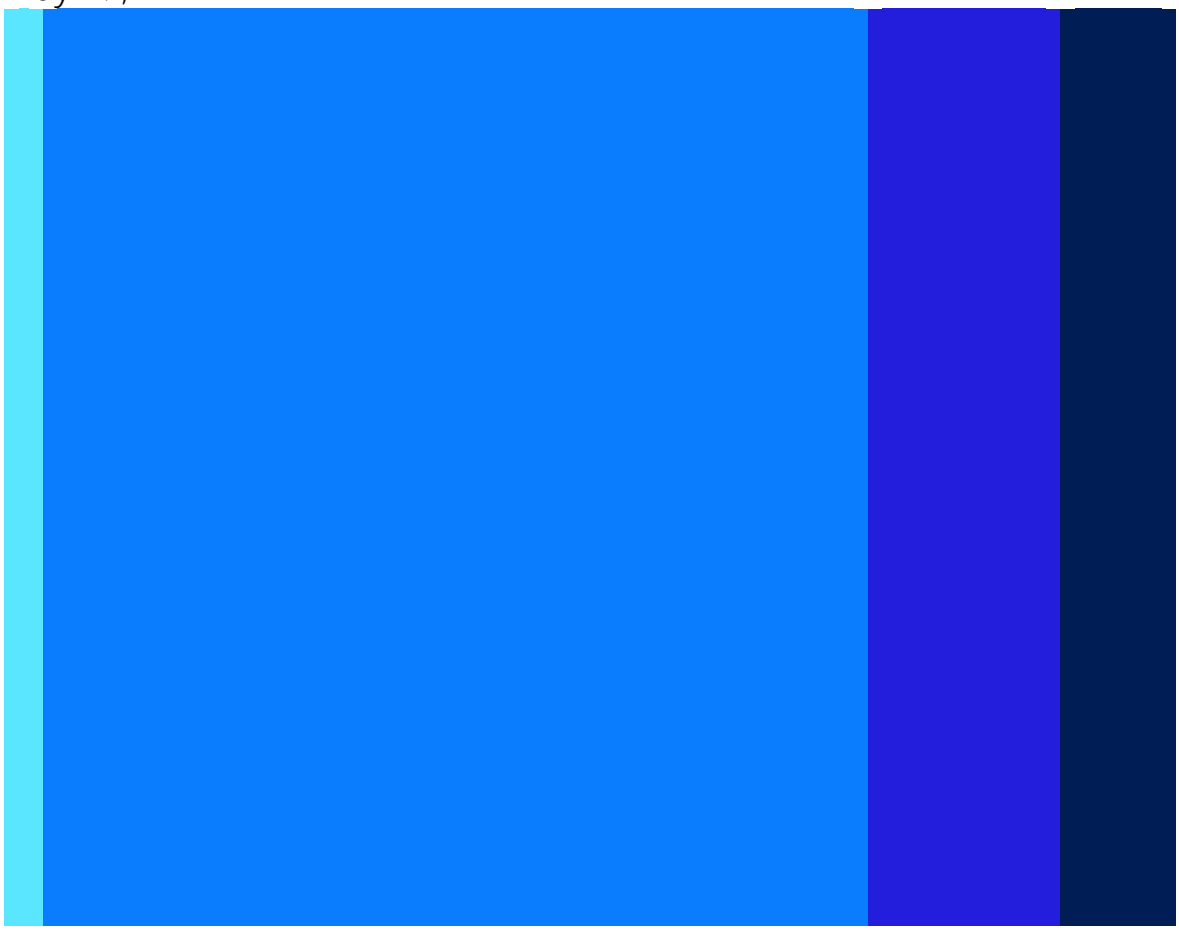
A-1: Natural Heritage Technical Memorandum
A-2: Natural Features and Impact Assessment Report
A-3: Stage 1 Archaeological Assessment Report
A-4: Cultural Heritage Screening Report
A-5: Heritage Impact Assessment Report

City of Clarence-Rockland WTP Expansion and Caron Booster Station Upgrade Natural Heritage Technical Memorandum

Document No: 1
Revision No: Draft

City of Clarence-Rockland

City of Clarence-Rockland WTP Expansion and Caron Booster Station Upgrade
May 29, 2025



City of Clarence-Rockland WTP Expansion and Caron Booster Station Upgrade Natural Heritage Technical Memorandum

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Project Name:	City of Clarence-Rockland WTP Expansion and Caron Booster Station Upgrade		
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Acronyms and Abbreviations

°C	degree(s) Celsius
ANSI	Area of Natural and Scientific Interest
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
COSSARO	Committee on the Status of Species at Risk in Ontario
DFO	Department of Fisheries and Oceans Canada
ECA	Environmental Compliance Approval
ESA	*Endangered Species Act*
ESAs	Environmentally Significant Areas
ha	hectare(s)
km^2	Square Kilometre
LIO	Land Information Ontario
m	metre(s)
MBCA	Migratory Birds Convention Act
MCEA	Municipal Class Environmental Assessment
MECP	Ministry of the Environment, Conservation and Parks
MNR	Ministry of Natural Resources
NHIC	Natural Heritage Information Centre
OBBA	Ontario Breeding Bird Atlas
O. Reg.	Ontario Regulation
PDR	Pre-Design Report
PSW	Provincially Significant Wetland
SAR	Species at Risk
SARA	*Species at Risk Act*
SARO	Species at Risk in Ontario
SCC	Species of Special Concern
SNC	South Nation Conservation
SWH	Significant Wildlife Habitat
TM	Technical Memorandum
WTP	Water Treatment Plant

1 Introduction

The City is looking for professional engineering services for the expansion/upgrade of two (2) facilities a water treatment plant and a water booster station within the City of Clarence-Rockland ("the City"). As part of this scope of work, it was determined that the proposed upgrade at the Water Treatment Plant (WTP) will undergo a Municipal Class Environmental Assessment (MCEA) Schedule C and the Caron Booster Station upgrade would require a Schedule B MCEA. The WTP site is located at 147 Edwards Street, Rockland, Ontario and the Caron Booster Station is located at 1441 Caron Street, Rockland, Ontario.

Jacobs has conducted preliminary background screening to provide information on the existing flora, fauna, and natural heritage features, as well as, applicable fisheries information and protection timing windows for species at risk (SAR) that need to be considered to minimize the impact of proposed construction on the surrounding natural areas.

This Natural Heritage Technical Memorandum (TM) summarizes the findings from the background desktop screening. Natural environment field surveys will be completed and will inform the basis for a Natural Features and Impact Assessment report. Preliminary mitigation and recommendations will also be provided within the Pre-Design Report (PDR) after completion of the field surveys as well as scoring of the alternatives. The Natural Features and Impact Assessment report will then be drafted between the 60% and 90% detailed design stage.

N

0 50 100

Meters

- Aquatic Resource Area Survey Point
- Watercourse

Wetland

- Unevaluated Wetland
- Provincially Significant Wetland (PSW)
- 120 m Adjacent Area Buffer
- 30 m Natural Environment Buffer
- SNCA Reglation Area See Note 4
- Study Area

Notes:
1. Basemaps Source: Maxar
2. Natural Features are from Land Information Ontario.
3. SNCA= South Nation Conservation Authority
4. South Nation Conservation Regulated Area estimated based on their Geoportal.

DRAFT

Figure 1
Natural Heritage Water Treatment Plant
Natural Heritage TM
City of Clarence-Rockland WTP Expansion and Caron Booster Station Upgrade
City of Clarence-Rockland
Clarence-Rockland, Ontario

Jacobs

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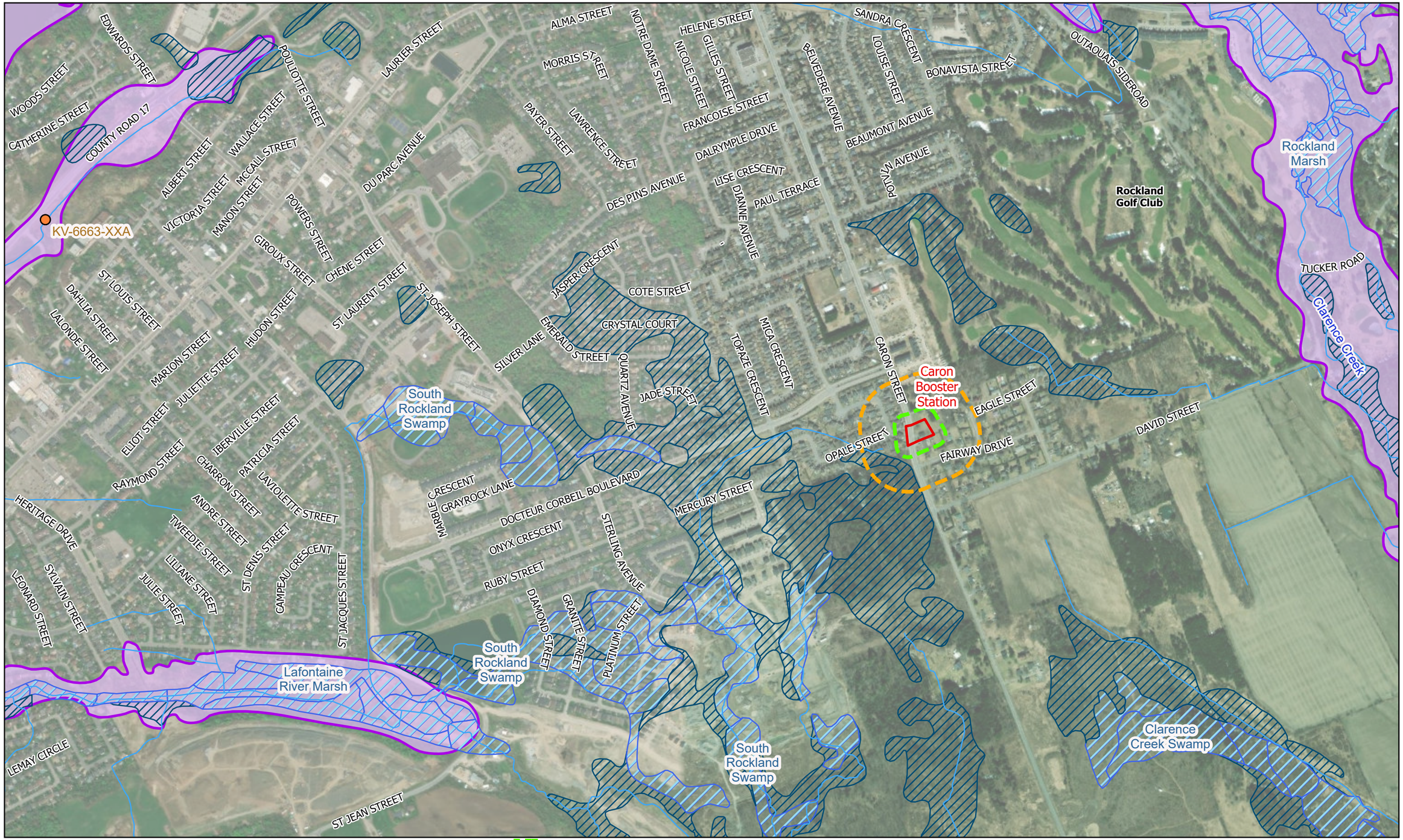

N

0 50 100
Meters

- Aquatic Resource Area Survey Point
- Watercourse

Wetland
- Unevaluated Wetland
- Provincially Significant Wetland (PSW)

- 30 m Natural Environment Buffer
- 120 m Adjacent Area Buffer
- SNCA Reglation Area [See Note 4]
- Study Area

Notes:
1. Basemaps Source: Maxar
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Figure 2
Natural Heritage Caron Booster Station
Natural Heritage TM
City of Clarence-Rockland WTP Expansion and Caron Booster Station Upgrade
City of Clarence-Rockland
Clarence-Rockland, Ontario

Jacobs

2 Desktop Review

A background review of available online natural heritage background data was accessed on May 9, 2025. Agency databases were also reviewed to obtain natural heritage information for the City of Clarence-Rockland WTP Expansion and Caron Booster Station Upgrade, including the120 metre (m) adjacent lands from the Study Area. In accordance with the Natural Heritage Reference Manual (Ontario, 2010), 120 m is a standard distance from natural heritage feature(s) for which an evaluation is required to assess potential negative impacts on said features. The following information sources were reviewed:

- Ministry of Natural Resources (MNR) Lands Information Ontario (LIO) data sets (MNR 2025a) and *Make a Natural Heritage Map* (MNR 2025b)
- Natural Heritage Information Centre (NHIC) data (MNR 2025c; 2025)
- *Ontario Breeding Bird Atlas* (OBBA) data (Bird Studies Canada 2021)
- Department of Fisheries and Oceans Canada (DFO) online aquatic species at risk (SAR) and critical habitat mapping tool (DFO 2023)
- iNaturalist (iNaturalist 2025)
- South Nation Conservation Authority (SNC) mapping tool (SNC, 2020)
- Policies and Guidelines for the Administration of *Ontario Regulation Prohibited Activities, Exemptions and Permits* (O. Reg 41/24) as well as part VI of the *Conservation Authorities Act*

Appendix A provides the results of the NHIC and OBBA queries. Figures 1 and 2 show the Study Areas as well as the natural heritage boundaries from LIO.

2.1 Natural Heritage Features

Natural heritage features within the natural heritage boundaries (shown in Figure 1) were investigated by referencing available mapping from SNC, NHIC, and DFO. Spatial datasets were also downloaded from LIO (MNR, 2025a). Features reviewed included the following:

- Areas of Natural and Scientific Interest (ANSIs)
- Environmentally Significant Areas (ESAs)
- Provincially Significant Wetlands (PSWs)
- Natural Heritage System
- Wetlands
- Woodlands and Valleylands

2.1.1 Area of Natural and Scientific Interest

According to online Make a Natural Heritage Map (MNRF, 2025b), ANSIs do not occur within the Study Areas or 120 m adjacent lands.

2.1.2 Environmentally Significant Areas

According to online Make a Natural Heritage Map (MNR, 2025b), ESAs do not occur within the Study Areas or 120 m adjacent lands.

2.1.3 Provincially Significant Wetlands

No PSWs were identified within the Study Areas based on MNR's LIO datasets (MNR, 2025a), SNC Mapping (SNC, 2020), and online Make a Natural Heritage Map (MNR, 2025b).

2.1.4 Natural Heritage System

The Provincial Policy Statement (PPS, 2020) defines a NHS as:

> *…a system made up of natural heritage features and areas, and the linkages intended to provide connectivity (at the regional or site level) and support natural processes which are necessary to maintain biological and geological diversity, natural functions, viable populations of indigenous species, and ecosystems. These systems can include natural heritage features and areas, federal and provincial park and conservation reserves, other natural heritage features, lands that have been restored or have the potential to be restored to a natural state, areas that support hydrologic functions, and working landscapes that enable ecological functions to continue.*

The NHS includes the following:

- PSWs
- ESAs
- Significant habitat of endangered species
- Urban forests and parks
- Golf Course
- River and valley systems

The NHS mapping for the Study Areas and 120 m adjacent lands were reviewed as part of the background query. Figures 1 and 2 shows the extent of the Natural Heritage Area surrounding the WTP and Booster Station.

2.1.5 Wetlands

A review of MNR's LIO datasets (MNR, 2024a), SNC Mapping (SNC, 2020) and online Make a Natural Heritage Map (MNR, 2024b) indicated that one (1) non-evaluated wetland occurs within the City of Clarence-Rockland WTP and the 120 m adjacent lands, and another non-evaluated wetland occurs in the 120 m adjacent lands of the Caron Booster Station. No other wetlands are present in the Study Areas or 120 m adjacent lands.

2.1.6 Woodlands and Valleylands

According to MNR mapping (MNR 2024a and 2024b), woodland areas occur throughout both the City of Clarence-Rockland WTP and Caron Booster Station and 120m adjacent lands, but no valleylands were present.

2.2 Wildlife

Background data obtained for wildlife included a review of the OBBA, which provides information on avifauna occurrences based on a 10 square kilometer (km^2) area. The 2nd atlas of the OBBA, which includes data collected from 2001 to 2005, was accessed on May 9, 2025. The Study Areas and 120 m adjacent lands occur within OBBA Square Summary 18VR74 (Appendix A). iNaturalist online was also accessed.

2.3 Significant Wildlife Habitat

The *Significant Wildlife Habitat Technical Guide* (MNR 2000) was reviewed to determine whether SWH is present within the City of Clarence-Rockland WTP and Caron Booster Station and 120m adjacent lands. According to the Guide, SWH is divided into four main categories:

1) Seasonal Concentration Areas include the following:

At certain times of the year, some species of wildlife are highly concentrated within relatively small areas. In spring and autumn, migratory species of birds and butterflies concentrate in critical stopover areas where they can rest and feed. Other examples of such habitat include winter deer yards, bird breeding colonies, and hibernation sites for bats or snakes (MNR 2000).

2) Rare Vegetation Communities or Specialized Habitat for Wildlife include the following:

   Areas that contain a provincially rare vegetation, community areas that contain a vegetation, community that is rare within the planning area. Specialized habitats include areas that support wildlife species that have highly specific habitat requirements, areas with exceptionally high species diversity, or community diversity areas that provide habitat that greatly enhances a species' survival (MNR 2000).

3) Habitat for Species of Conservation Concern (Does not include rare species that are defined by SAR legislation and global or provincial ranks provided by the NHIC).

4) Animal Movement Corridors include the following:

   Animal movement corridors are elongated, naturally vegetated parts of the landscape used by animals to move from one habitat to another. They exist at different scales and frequently link or border natural areas. Animal movement corridors encompass a wide variety of landscape features including riparian zones and shorelines, wetland buffers, stream and river valleys, woodlands, and anthropogenic features such as hydro and pipeline corridors, abandoned road and rail allowances, and fencerows and windbreaks (MNR 2000).

No SWH were identified using NHIC data (MNR, 2025b).

2.4 Aquatic Habitat and Fisheries

According to LIO mapping, the Ottawa River, which eventually flows in the St. Lawrence River, abuts the north and west sides of the City of Clarence-Rockland WTP Expansion area and the 120 m adjacent lands (Figure 1). Background screening of the DFO database indicates the potential presence for Hickorynut (*Obovaria olivaria*), which is an endangered species of mussel, in the 120 m adjacent lands of the City of Clarence-Rockland WTP Expansion area. Five (5) other SAR species, listed as special concern, River Redhorse (*Moxostoma carinatum*), Northern Brook Lamprey (*Ichthyomyzon fossor*), Channel Darter (*Percina copelandi*), Cutlip Minnow (*Exoglossum maxillingua*), and Silver Lamprey - Great Lakes - Upper St. Lawrence River population (*Ichthyomyzon unicuspis pop. 1*) were also identified by DFO. NHIC background screening also identified the potential presence of American Eel (*Anguilla rostrata*) and Lake Sturgeon - Great Lakes - Upper St. Lawrence River population (*Acipenser fulvescens pop. 3*) in the 120 m adjacent lands of the City of Clarence-Rockland WTP Expansion area. American Eel was also identified as potentially present in the 120 m adjacent lands of the Caron Booster Station by NHIC background screening. Potential SAR present in the Study Areas and 120 m adjacent lands are listen below in Table 1. As background screening of the City of Clarence-Rockland WTP Expansion area indicates that Lake Sturgeon may be present, this restricts the in-water work window to July 1 – March 31 (MNR, 2013).

According to LIO mapping, a tributary to the Ottawa River, is located approximately southwest of the City of Clarence-Rockland WTP Expansion area (Figure 1). LIO's Aquatic Resource Area (ARA) survey point, KV-6663-XXA is located in this tributary (Figure 1). Table 1 includes fish species that were identified at this ARA survey point.

Table 1. Fisheries Data for City of Clarence-Rockland WTP Expansion area and Caron Booster Station

Species	Preferred Habitat[a]	Study Area
American Eel [b,c] (*Anguilla rostrata*)	Near cover over rock, sand and mud bottoms in lakes, ponds, rivers and creeks at depths <15 m; preferred water temperature range 16-19°C. Spawning months are February – March.	Caron Booster Station, WTP Expansion area

Species	Preferred Habitat[a]	Study Area
Banded Killifish[d] (*Fundulus diaphanous*)	Quiet, shallow, margins of lakes, ponds and sluggish streams in areas with sand and gravel substrates and patches of aquatic macrophytes; preferred water temperature 21°C. Spawning months are June to August.	WTP Expansion area
Brook Stickleback[d] (*Culaea inconstans*)	Small, boggy headwater streams, shallow lake margins, ponds, and clear pools and backwaters of creeks and small rivers; usually associated with aquatic vegetation; occasionally brackish water; preferred water temperature 21.3°C. Spawning months are May to July.	WTP Expansion area
Central Mudminnow[d] (*Umbra limi*)	Heavily vegetated ponds, wetlands, bogs or pools of small creeks and quiet, shallow (0.5 m) areas of lakes with mud and organic substrates; preferred water temperature range 19-25°C. Spawning months are April to May.	WTP Expansion area
Channel Darter[b] (*Percina copelandi*)	Pools and margins of riffles of small to medium rivers over sand or gravel substrates, and sand and gravel beaches and bars in lakes; prefers clear water and silt-free substrates; preferred water temperature range ≥ 25°C. Spawning months are June to July.	WTP Expansion area
Creek Chub[d] (*Semotilus atromaculatus*)	Pools of clear creeks and small rivers, over sand, gravel and cobble substrates; rare in lakes and large rivers; preferred water temperature 20.8°C. Spawning months are May to June.	WTP Expansion area
Cutlip Minnow[b] (*Exoglossum maxillingua*)	Pools and runs of warm, clear, gravelly creeks and small to medium rivers; often in quiet water near boulders; preferred water temperature range ≥ 25°C. Spawning months are May to July.	WTP Expansion area
Hickorynut[b,e] (*Obovaria olivaria*)	Large and wide rivers with relatively deep water, greater than 2-3m, with moderate to strong current.	WTP Expansion area
Lake Sturgeon[b] (*Acipenser fulvescens*)	Bottoms of lakes and large rivers, usually 5 to 10 m deep, over clay, mud, sand and gravel; preferred water temperature range 15-17°C. Spawning months are May to June.	WTP Expansion area
Northern Brook Lamprey[b] (*Ichthyomyzon fossor*)	Clean, clear riffles and runs of small rivers with gravel and sand substrates; preferred water temperature range 19 to 25°C. Spawning months are May to June.	WTP Expansion area
River Redhorse[b] (*Moxostoma carinatum*)	Pools and swift runs of medium to large rivers with gravel, cobble, boulder or bedrock substrates; preferred water temperature range 19 to 25°C. Spawning months are May to June.	WTP Expansion area
Silver Lamprey[b] (*Ichthyomyzon unicuspis*)	Large rivers, lakes and impoundments; preferred water temperature range 19 to 25°C. Spawning months are May to June.	WTP Expansion area

[a] Ontario Freshwater Fishes Life History Database (Eakins 2025).

[b] SAR fish/aquatic species as identified by DFO mapping (DFO, 2025).

[c] SAR fish/aquatic species as identified by NHIC mapping (NHIC, 2025).

[d] Fish species as identified in LIO's Aquatic Resource Area Survey Points (MNR, 2025a) proximal to site.

[e] Hickorynut (MECP, 2014)

2.5 Species at Risk Screening

SAR within Ontario are primarily protected under the *Endangered Species Act* (ESA). Species are ranked as follows:

- Endangered – species facing imminent extirpation or extinction.
- Threatened – species likely to become endangered if limiting factors are not reversed.
- Extirpated – species no longer existing in the wild at this location but may occur elsewhere.
- Special Concern – species may become threatened or endangered due to identified threats.

SAR listed under the ESA are under the jurisdiction of the MECP and aquatic SAR (e.g., fish and mussels) are protected federally, as administered by DFO under the *Species at Risk Act* (SARA). Up-to-date SAR lists are provided by the Committee on the Status of Species at Risk in Ontario (COSSARO), (Government of Ontario 2025c), SAR in Ontario (SARO), (Government of Ontario 2025c), and the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), (Government of Canada 2025b). Special Concern species are not protected under these Acts; however, habitat for these species is typically afforded protection under SWH criteria, as discussed in Section 2.1.9.

The NHIC provides current and historical data on SAR and natural features occurrences within Ontario. The data platform provides information within 1 km^2 areas. The *Aquatic Species at Risk Map* (DFO 2025) provides data on occurrences of critical habitat and the distribution of aquatic SAR.

The City of Clarence-Rockland WTP and Caron Booster Station are located approximately 4km away from each other. As such, SAR data for each study area and their 120 m adjacent lands are presented separately in Tables 2 and 3. SAR data is based on the NHIC database (MNR 2025c), OBBA (square 18VR74), DFO SAR Aquatic Mapping (DFO 2025), and iNaturalist (iNaturalist 2025).

Table 2. Potential SAR Within or Proximal to the City of Clarence-Rockland WTP Expansion area

Common Name	Scientific Name	S Rank	SARO	COSEWIC	SARA
Birds					
Bank Swallow	*Riparia riparia*	S4B	THR	THR	THR
Barn Swallow	*Hirundo rustica*	S4B	SC	SC	THR
Black Tern	*Chlidonias niger*	S3B, S4M	SC	-	-
Bobolink	*Dolichonyx oryzivorus*	S4B	THR	SC	THR
Canada Warbler	*Cardellina canadensis*	S5B	SC	SC	THR
Chimney Swift	*Chaetura pelagica*	S3B	THR	THR	THR
Common Nighthawk	*Chordeiles minor*	S4B	SC	SC	SC
Eastern Meadowlark	*Sturnella magna*	S4B, S3N	THR	THR	THR
Eastern Wood-Pewee	*Contopus virens*	S4B	SC	SC	SC
Golden-Winged Warbler	*Vermivora chrysoptera*	S3B	SC	THR	THR
Grasshopper Sparrow	*Ammodramus savannarum*	S4B	SC	SC	-
Least Bittern	*Botaurus exilis*	S4B	THR	THR	THR
Loggerhead Shrike	*Lanius ludovicianus*	S1B	END	END	-
Peregrine Falcon	*Falco peregrinus*	S4	SC	-	-
Red-Headed Woodpecker	*Melanerpes erythrocephalus*	S3	END	END	END
Short-Eared Owl	*Asio flammeus*	S4?B,S2S3N	THR	THR	SC
Reptiles and Amphibians					
Midland Painted Turtle	*Chrysemys picta marginata*	S4	-	SC	SC
Snapping Turtle	*Chelydra serpentina*	S4	SC	SC	SC
Aquatic					
American Eel	*Anguilla rostrata*	S1S2	END	THR	-
Channel Darter	*Percina copelandi*	S3	SC	SC	SC
Cutlip Minow	*Exoglossum maxillingua*	S2	THR	SC	SC

Common Name	Scientific Name	S Rank	SARO	COSEWIC	SARA
Hickorynut	*Obovaria olivaria*	S1?	END	END	END
Lake Sturgeon (Great Lakes - Upper St. Lawrence River population)	*Acipenser fulvescens pop. 3*	S2	END	THR	-
Northern Brook Lamprey	*Ichthyomyzon fossor*	S3	SC	SC	-
River Redhorse	*Moxostoma carinatum*	S2	SC	SC	SC
Silver Lamprey (Great Lakes - Upper St. Lawrence populations)	*Ichthyomyzon unicuspis pop. 1*	S3	SC	SC	SC

[a] NHIC Subnational rank (MNR 2025b)

[b] SARO (Government of Ontario 2025)

[c] (COSEWIC 2025b)

[d] SARA (Government of Canada 2025)

? = more data required

- = not at risk

B = status qualifier; breeding

END = endangered

H = status qualifier; possibly extirpated

M = status qualifier; migrant species

N = status qualifier; nonbreeding

S#S# = range given due to uncertainty

S1 = critically imperilled (often 5 or fewer occurrences)

S2 = imperilled (often 20 or fewer occurrences)

S3 = vulnerable (restricted range with relatively few populations – often 80 or fewer)

S4 = uncommon but not rare; some cause for long-term concern due to declines or other factors

S5 = secure species, common, widespread, and abundant

SC = special concern

THR = threatened

Table 3. Potential Species at Risk Within or Proximal to the Caron Booster Station Upgrade

Common Name	Scientific Name	S Rank	SARO	COSEWIC	SARA
Birds					
Bank Swallow	*Riparia riparia*	S4B	THR	THR	THR
Barn Swallow	*Hirundo rustica*	S4B	SC	SC	THR
Black Tern	*Chlidonias niger*	S3B, S4M	SC	-	-
Bobolink	*Dolichonyx oryzivorus*	S4B	THR	SC	THR
Canada Warbler	*Cardellina canadensis*	S5B	SC	SC	THR
Chimney Swift	*Chaetura pelagica*	S3B	THR	THR	THR
Common Nighthawk	*Chordeiles minor*	S4B	SC	SC	SC
Eastern Meadowlark	*Sturnella magna*	S4B, S3N	THR	THR	THR
Eastern Wood-Pewee	*Contopus virens*	S4B	SC	SC	SC
Golden-Winged Warbler	*Vermivora chrysoptera*	S3B	SC	THR	THR
Grasshopper Sparrow	*Ammodramus savannarum*	S4B	SC	SC	-
Least Bittern	*Botaurus exilis*	S4B	THR	THR	THR
Loggerhead Shrike	*Lanius ludovicianus*	S1B	END	END	-

Common Name	Scientific Name	S Rank	SARO	COSEWIC	SARA
Peregrine Falcon	*Falco peregrinus*	S4	SC	-	-
Red-Headed Woodpecker	*Melanerpes erythrocephalus*	S3	END	END	END
Short-Eared Owl	*Asio flammeus*	S4?B,S2S3N	THR	THR	SC
Reptiles and Amphibians					
Midland Painted Turtle	*Chrysemys picta marginata*	S4	-	SC	SC
Snapping Turtle	*Chelydra serpentina*	S4	SC	SC	SC
Aquatic					
American Eel	*Anguilla rostrata*	S1S2	END	THR	-

[a] NHIC Subnational rank (MNR 2025b)

[b] SARO (Government of Ontario 2025)

[c] (COSEWIC 2025b)

[d] SARA (Government of Canada 2025)

? = more data required

- = not at risk

B = status qualifier; breeding

END = endangered

H = status qualifier; possibly extirpated

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S1 = critically imperilled (often 5 or fewer occurrences)

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S3 = vulnerable (restricted range with relatively few populations – often 80 or fewer)

S4 = uncommon but not rare; some cause for long-term concern due to declines or other factors

S5 = secure species, common, widespread, and abundant

SC = special concern

THR = threatened

2.6 Tree Resources

Any potential tree removals and injuries to facilitate construction must abide by City of Clarence-Rockland's *Tree Cutting By-law 2018-98* (Clarence-Rockland, 2018). Tree inventories are not planned for the EA stage and should commence during the design stages when work areas are confirmed.

2.7 Natural Features and Site Constraints

The Ottawa River runs along the north and west edges of the City of Clarence-Rockland WTP Expansion area and 120 m adjacent lands, while natural areas, including an un-evaluated wetland and wooded area, extend along its southern and eastern edges. The Caron Booster Station is located in a predominantly residential area, however the 120 m adjacent lands overlap with an un-evaluated wetland and wooded areas.

Within 120 m adjacent area of the Study Areas, the following natural features and potential site constraints occur:

- Wooded areas occur along the eastern and southern portion of the City of Clarence-Rockland WTP Expansion area and 120 m adjacent lands. Such areas provide habitat as well as linkages to other natural areas, per the Provincial Policy Statement (2024). Field surveys will assess whether these areas

are part of the contiguous woodlands off-site, or cultural woodlands (i.e. impacted/disturbed from anthropogenic methods).

- The north boundary of the City of Clarence-Rockland WTP Expansion area abuts the Ottawa River, which also runs along the western border of the 120 m adjacent lands. As such, permitting from South Nation Conservation Authority may be required (SNC, 2023)
- An un-evaluated wetland is located within the City of Clarence-Rockland WTP Expansion area and 120 m adjacent lands. As such, permitting from South Nation Conservation Authority may be required (SNC, 2023)
- Natural forested areas by the City of Clarence-Rockland WTP Expansion area and 120 m adjacent lands may provide potential habitat for SAR bats. SAR bats favour multiple large trees near water exhibiting snag features, and in particular maple and oak trees. If these features are confirmed and could be disturbed due to construction, acoustic surveys for exclusion of SAR bats might be required by the MECP.
- An un-evaluated wetland is located within 120 m adjacent lands to the Caron Booster Station. As such, permitting from South Nation Conservation Authority may be required (SNC, 2023)
- Natural forested areas within the 120 m adjacent lands to the Caron Booster Station may provide potential habitat for SAR bats. SAR bats favour multiple large trees near water exhibiting snag features, and in particular maple and oak trees. If these features are confirmed and could be disturbed due to construction, acoustic surveys for exclusion of SAR bats might be required by the MECP.

2.8 Natural Environment Permitting

2.8.1 Federal

2.8.1.1 *Fisheries Act*, 1985

DFO prohibits activities that would result in harm to fish species and their habitat through the *Fisheries Act* and the *Species at Risk Act*. Death of fish and the harmful alteration, destruction, and displacement (HADD) of their habitat is not permitted without regulatory approval.

2.8.1.2 *Species at Risk Act*, 2002

The Species at Risk Act protects wildlife species in Canada and affords protection to species and their habitat that are endangered or threatened.

2.8.1.3 *Migratory Birds Convention Act*, 1994

In accordance with the *Migratory Birds Convention Act* (MBCA), tree removals are prohibited from April 1 to August 31 to avoid impacts to breeding birds or a bird nest sweep could be conducted. However, avoidance of this period is the preferred approach.

2.8.2 Provincial

2.8.2.1 South Nation Conservation

South Nation Conservation Regulated Area applies to the area around the Ottawa River and the 2 un-evaluated wetlands present in the Study Areas and 120 m adjacent lands. A permit under *O. Reg 41/24*

Prohibited Activities, Exemptions and Permits as well as part VI of the *Conservation Authorities Act* will be required if development occurs within 30 m of wetlands and watercourses.

2.8.2.2 Endangered Species Act, 2007

The Ministry of Environment, Conservation, and Parks (MECP) administers the *Endangered Species Act* and should be consulted if SAR are observed during the field studies or if SAR habitat is confirmed.

2.9 Summary and Next Steps

Field surveys will commence during the growing season this year, beginning with breeding bird surveys after May 24, 2025. It is anticipated that 2-3 surveys will be required. The Natural Features and Impact Assessment report will provide an evaluation of impacts the project may have on natural features, whether direct or indirect, and will provide a list of recommendations and mitigation to reduce or avoid impacts to natural features, entirely.

3 Signature

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Appendix A
Ontario Breeding Bird Atlas and Natural Heritage Information Centre Results

NHIC Data for Clarence-Rockland

Clarence-Rockland WTP

OGF ID	Element Type	Common Name	Scientific Name	S Rank	SARO Status	COSEWIC Status	ATLAS NAD83 IDENT
1111130	SPECIES	River Redhorse	*Moxostoma carinatum*	S2	SC	SC	18VR7644
1111130	SPECIES	Midland Painted Turtle	*Chrysemys picta marginata*	S4		SC	18VR7644
1111130	SPECIES	Silver Lamprey (Great Lakes - Upper St. Lawrence populations)	*Ichthyomyzon unicuspis pop. 1*	S3	SC	SC	18VR7644
1111130	SPECIES	American Eel	*Anguilla rostrata*	S1S2	END	THR	18VR7644
1111130	SPECIES	Lake Sturgeon (Great Lakes - Upper St. Lawrence River population)	*Acipenser fulvescens pop. 3*	S2	END	THR	18VR7644
1111130	SPECIES	Black Tern	*Chlidonias niger*	S3B,S4M	SC	NAR	18VR7644
1111130	SPECIES	Snapping Turtle	*Chelydra serpentina*	S4	SC	SC	18VR7644

Caron Booster Station

OGF ID	Element Type	Common Name	Scientific Name	S Rank	SARO Status	COSEWIC Status	ATLAS NAD83 IDENT
1111149	SPECIES	Midland Painted Turtle	*Chrysemys picta marginata*	S4		SC	18VR7843
1111149	SPECIES	American Eel	*Anguilla rostrata*	S1S2	END	THR	18VR7843
1111149	SPECIES	Least Bittern	*Botaurus exilis*	S4B	THR	THR	18VR7843
1111149	SPECIES	Snapping Turtle	*Chelydra serpentina*	S4	SC	SC	18VR7843

Ontario Breeding Bird Atlas

Square Summary (18VR74)

#species (1st atlas)				#species (2nd atlas)				#hours		#pc done	
poss	prob	conf	total	poss	prob	conf	total	1st	2nd	road	offrd
32	21	34	87	33	28	29	90	31	113	25	0

Region summary (#24: Ottawa)

#squares	#sq with data		#species		#pc done	target #pc
	1st	2nd	1st	2nd		
86	85	86	177	184	2503	1075

Target number of point counts in this square: 17 road side, 8 off road (4 in open wetlands, 3 in deciduous forest, 1 in pasture/grassland). Please try to ensure that each off-road station is located such that the entire 100m radius circle is within the prescribed habitat.

SPECIES	Code		%		SPECIES	Code		%		SPECIES	Code		%	
	1st	2nd	1st	2nd		1st	2nd	1st	2nd		1st	2nd	1st	2nd
Canada Goose		H	7	90	Bald Eagle †			1	9	Black/Yell-billed Cuckoo			0	24
Wood Duck	H	T	57	88	Northern Harrier			68	82	Black-billed Cuckoo	S		72	86
Gadwall	P	P	7	9	Sharp-shinned Hawk		H	43	59	Eastern Screech-Owl			28	40
American Wigeon	P		8	11	Cooper's Hawk			22	45	Great Horned Owl	H	FY	77	59
American Black Duck	P	H	61	54	Northern Goshawk			24	29	Barred Owl			35	50
Mallard	FY	P	82	96	Red-should Hawk †			37	41	Long-eared Owl			34	13
Blue-winged Teal	NE		56	47	Broad-winged Hawk			54	61	Short-eared Owl †			5	12
Northern Shoveler	FY		5	10	Red-tailed Hawk	P	H	78	93	North Saw-whet Owl			61	32
Northern Pintail			11	15	American Kestrel	FY	H	85	90	Common Nighthawk			40	25
Green-winged Teal		H	0	25	Merlin			1	51	Whip-poor-will			57	41
Ring-necked Duck			4	8	Peregrine Falcon †			1	2	Chimney Swift			58	32
Lesser Scaup			4	10	Virginia Rail	S	NE	51	60	Ruby-thr Hummingbird	H	H	74	98
Hooded Merganser		H	17	51	Sora	S		32	50	Belted Kingfisher	NY	NB	84	96
Common Merganser			12	29	Common Gallinule	H		27	13	Red-headed Woodpecker †			16	9
Red-breast Merganser ‡			1	0	American Coot			7	12	Yellow-bellied Sapsucker		P	58	97
Ruddy Duck †			1	8	Coot/Moorhen			0	0	Downy Woodpecker	H	CF	88	100
Gray Partridge			34	29	Killdeer	H	NE	89	94	Hairy Woodpecker	H	FY	85	98
Ring-necked Pheasant	NE		10	3	Rock Dove	H	NY	77	94	Black-backed Woodpecker ‡			1	3
Ruffed Grouse	NY	T	80	94	Spotted Sandpiper	A	P	75	83	Northern Flicker	FY	T	88	100
Wild Turkey			1	73	Upland Sandpiper	FY	H	58	58	Pileated Woodpecker	FY	H	65	93
Common Loon			35	44	Common Snipe	D	T	82	93	Olive-sided Flycatcher			30	17
Pied-billed Grebe	S	H	24	47	American Woodcock	H		64	93	Eastern Wood-Pewee	T	T	88	97
American Bittern	S	NY	56	74	Wilson's Phalarope †			5	4	Yellow-bellied Flycatcher			9	6
Least Bittern †			9	10	Ring-billed Gull §			4	6	Alder Flycatcher	S	T	75	95
Great Blue Heron §		H	74	67	Herring Gull ‡§			1	3	Willow Flycatcher	S	S	32	52
Green Heron §	V	T	57	68	Black Tern † §	FY		18	10	Least Flycatcher	S	T	84	95
Black-crown N.-Heron † §			0	2	Common Tern §			5	8	Eastern Phoebe	AE	S	85	100
Turkey Vulture		H	40	86	Mourning Dove	S	FY	82	100	Gr Crested Flycatcher	FY	T	88	100
Osprey	P	FY	27	52	Yellow-billed Cuckoo ‡			7	2	Eastern Kingbird	CF	P	89	98

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Ontario Breeding Bird Atlas - Summary Sheet for Square 18VR74 (page 2 of 3)

SPECIES	Code		%		SPECIES	Code		%		SPECIES	Code		%	
	1st	2nd	1st	2nd		1st	2nd	1st	2nd		1st	2nd	1st	2nd
Loggerhead Shrike †			20	1	Veery	FY	S	85	96	Ovenbird	S	T	84	100
Yellow-throated Vireo			10	9	Swainson's Thrush			12	17	North Waterthrush		S	65	82
Blue-headed Vireo		H	14	44	Hermit Thrush		H	54	83	Mourning Warbler	T		76	77
Warbling Vireo	T	T	89	96	Wood Thrush	FY	T	82	95	Common Yellowthroat	A	A	87	100
Philadelphia Vireo ‡			2	6	American Robin	NY	NE	89	100	Canada Warbler			29	36
Red-eyed Vireo	A	T	88	100	Gray Catbird	CF	NE	87	98	Eastern Towhee			24	19
Gray Jay ‡			1	2	Northern Mockingbird			11	18	Chipping Sparrow	FY	T	89	98
Blue Jay	H	NY	89	100	Brown Thrasher	H	T	88	91	Clay-colored Sparrow			22	26
American Crow	H	H	89	100	European Starling	NY	CF	88	98	Field Sparrow	FY		64	62
Common Raven			28	88	Cedar Waxwing	H	T	88	100	Vesper Sparrow			70	66
Horned Lark			62	58	Golden-winged Warbler			12	9	Savannah Sparrow	CF	FY	87	95
Purple Martin		AE	57	50	Blue/Gold-wing Warbler			0	3	Grasshopper Sparrow			29	23
Tree Swallow	AE	NE	89	98	Tennessee Warbler ‡			1	0	Song Sparrow	CF	CF	89	100
North Rgh-wing Swallow			50	51	Nashville Warbler		S	80	91	Lincoln's Sparrow			3	8
Bank Swallow §			71	60	Northern Parula ‡			3	2	Swamp Sparrow	S	FY	84	94
Cliff Swallow §		S	67	53	Yellow Warbler	T	CF	87	98	White-throat Sparrow	FY	S	88	98
Barn Swallow	AE	NY	89	98	Chestn-sided Warbler	T	H	84	97	Dark-eyed Junco			22	33
Black-capped Chickadee	CF	CF	89	100	Magnolia Warbler			44	79	Scarlet Tanager	P		80	84
Red-breast Nuthatch	S		70	88	Cape May Warbler			0	20	Northern Cardinal		NB	21	79
White-breast Nuthatch	H	P	80	100	Black-thr Blue Warbler			30	54	Rose-breast Grosbeak	FY	H	88	100
Brown Creeper	FY	H	50	65	Yellow-rumped Warbler		S	64	86	Indigo Bunting	A		85	93
House Wren	T	H	75	90	Black-thr Green Warbler		S	38	84	Bobolink	T	D	85	96
Winter Wren			40	69	Blackburnian Warbler			37	46	Red-wing Blackbird	AE	NE	89	100
Sedge Wren			8	20	Pine Warbler	S		38	69	Eastern Meadowlark	T	S	83	96
Marsh Wren	S	T	24	43	Palm Warbler ‡			1	3	Common Grackle	CF	NE	89	98
Golden-crown Kinglet			32	36	Bay-breasted Warbler ‡			1	2	Brown-head Cowbird	FY	P	89	100
Ruby-crown Kinglet			32	13	Cerulean Warbler †			1	0	Baltimore Oriole	AE	CF	89	97
Blue-gr Gnatcatcher ‡			4	2	Black-white Warbler	S	T	80	98	Purple Finch	S	H	81	88
Eastern Bluebird		AE	47	76	American Redstart	FY	S	84	93	House Finch		P	4	69

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Ontario Breeding Bird Atlas - Summary Sheet for Square 18VR74 (page 3 of 3)

SPECIES	Code 1st	Code 2nd	% 1st	% 2nd
Red Crossbill			12	5
White-winged Crossbill			7	17
Pine Siskin		H	32	33
American Goldfinch	H	NY	89	100
Evening Grosbeak			34	61
House Sparrow	H	CF	83	89

This list includes all species found during the Ontario Breeding Bird Atlas (1st atlas: 1981-1985, 2nd atlas: 2001-2005) in the region #24 (Ottawa). Underlined species are those that you should try to add to this square. They have not yet been reported during the 2nd atlas, but were found during the 1st atlas in this square or have been reported in more than 50% of the squares in this region during the 2nd atlas so far. In the species table, "BE 2nd" and "BE 1st" are the codes for the highest breeding evidence for that species in square 18VR74 during the 2nd and 1st atlas respectively. The % columns give the percentage of squares in that region where that species was reported during the 2nd and 1st atlas (this gives an idea of the expected chance of finding that species in region #24). Rare/Colonial Species Report Forms should be completed for species marked: § (Colonial), ‡ (regionally rare), or † (provincially rare). Current as of 9/05/2025. An up-to-date version of this sheet is available from http://www.birdsontario.org/atlas/summaryform.jsp?squareID=18VR74

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Natural Features and Impact Assessment Report (NFIA)

Draft

City of Clarence-Rockland

City of Clarence-Rockland WTP Expansion and Caron Booster Station Upgrade
February 25, 2026

Natural Features and Impact Assessment Report (NFIA)

Client Name:	City of Clarence-Rockland		
Project Name:	City of Clarence-Rockland WTP Expansion and Caron Booster Station Upgrade		
Client Reference:			
Project No.:	CE906100		
Document No.:		**Project Manager:**	Andre Bourque
Revision:	Draft	**Prepared By:**	Maia Mortimer and Paul Finigan
Date:	February 25, 2026	**File Name:**	

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Contents

Appendix

Tables

Figures

Acronyms and Abbreviations

AHA	Aquatic Habitat Assessment
ANSI	Areas of Natural and Scientific Interest
BF	Beaufort Wind Scale
CBS	Caron Booster Station
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
COSSARO	Committee on the Status of Species at Risk in Ontario
DFO	Department of Fisheries and Oceans
ELC	Ecological Land Classification
ESA	*Endangered Species Act*
ESA	Environmentally Significant Areas
km	kilometre(s)
LIO	Land Information Ontario
MCEA	Municipal Class Environmental Assessment
MECP	Ministry of the Environment, Conservation and Parks
MMP	Marsh Monitoring Program
MNR	Ministry of Natural Resources
NFIA	Natura Features and Impact Assessment
NHF	Natural Heritage Features
NHIC	Natural Heritage Information Centre
NHS	Natural Heritage System
OBBA	Ontario Breeding Bird Atlas
OP	Official Plan
PDR	Pre-design Report
PSW	Provincially Significant Wetlands
RFP	Request for Proposals
RFR	Request for Review
SAR	Species at Risk

SARA	*Species at Risk Act*
SARO	Species at Risk in Ontario
SNC	South Nation Conservation Authority
SWH	Significant Wildlife Habitat
WTP	Water Treatment Plant

1. Introduction

The City is looking for professional engineering services for the expansion/upgrade of two (2) facilities a water treatment plant and a water booster station within the City of Clarence-Rockland ("the City"). As part of this scope of work, it was determined that the proposed upgrades at the Water Treatment Plant (WTP) and Caron Booster Station (CBS) will undergo a Schedule C Municipal Class Environmental Assessment (MCEA). The WTP is located at 125 Edwards Street, Rockland, Ontario, and the CBS is located at 1441 Caron Street, Rockland, Ontario.

The land on which the WTP is situated was previously the site of the Edwards mill, which was constructed in 1868 and operated until 1926. Additional historical context can be found in the *Stage 1 Archaeological Assessment: Rockland Water Treatment Plant* (Matrix Heritage Inc., 2026).

The Project Locations and their 30 metre (m) Natural Environment Buffers include the WTP and the CBS industrial sites, as well as the surrounding residential zones, forested areas, cultural meadows, and parklands. The WTP, located just south of the Ottawa River and Du Moulin Park, consists of an industrial zone that is surrounded by forest to the southeast and east, with a residential zone to the southwest. The CBS, located approximately 2.5 kilometres (km) southeast of the WTP, consists of an industrial zone that is surrounded by a residential zone and a cultural meadow. The Project Locations and their 30 m Natural Environment Buffer are shown in Figures 1a-b.

The purpose of this Natural Features and Impact Assessment (NFIA) Report is to provide available natural heritage background data and to update natural environment data based on field inventories within the Project Location (i.e. the area of proposed works) and extending 30 metres within a Natural Environment Buffer (Figure 1a-b), in support of the proposed construction and related works. Desktop background screening was also completed for the area within the 120 m adjacent lands. This NFIA will document existing terrestrial and aquatic resources, Natural Features, and the potential presence of Species at Risk (SAR) within, and directly adjacent to, the Project Locations.

This NFIA report has been drafted based on the 30% CBS and 30% WTP preliminary design stages and the 60% CBS detailed design stage to include natural heritage information at and near the proposed works for planning purposes. The 60% WTP detailed design stage will be submitted in March 2026, however there are no substantial changes to the building footprint between 30% and the 60% design stages. Results from background desktop screening are provided in Appendix A, a full flora and fauna species list in Appendix B and representative site photos in Appendix C. This NFIA report includes a comprehensive impact assessment in addition to recommendations and mitigation measures.

N

0 15 30
Meters

Watercourse

30 m Natural Environment Buffer

120 m Adjacent Lands Buffer

Project Location

Notes:
1. Basemaps Source: Maxar, Microsoft

DRAFT

Figure 1a
Project Location – Water Treatment Plant
Natural Features and Impact Assessment Report
Clarence-Rockland – WTP expansion and Caron Booster Station Upgrade
The City of Clarence-Rockland
Clarence-Rockland, Ontario

Jacobs

\\DC1VS01\GISPROJ\C\CLARENCEROCKLANDCITYOF\CE906100_SCHEDULECCLASSEA_DESIGN_SDCEXPANSION\MAPFILES\NATURALFEATURES_IMPACTASSESSMENTREPORT\PROJECTLOCATION.APRX VM048279 10/13/2025 3:12 AM

Notes:
1. Basemaps Source: Maxar, Microsoft

DRAFT

Figure 1b
Project Location – Caron Booster Station
Natural Features and Impact Assessment Report
Clarence-Rockland – WTP expansion and Caron Booster Station Upgrade
The City of Clarence-Rockland
Clarence-Rockland, Ontario

Jacobs

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2. Background Review

Available online background data were accessed on May 9, 2025. Agency databases were also reviewed to obtain natural heritage information for City of Clarence-Rockland WTP Expansion and CBS Upgrade (Figures 2a-b. Project Locations and Natural Heritage Feature1a-b), including the 120 metre (m) adjacent lands from the Site. In accordance with the Natural Heritage Reference Manual (Ontario, 2010), 120 m is a standard distance from natural heritage feature(s) for which an evaluation is required to assess potential negative impacts on said features.

The following information sources were reviewed:

- Ministry of Natural Resources (MNR) Lands Information Ontario (LIO) data sets (MNR, 2025a) and *Make a Natural Heritage Map* (MNR, 2025b)
- Natural Heritage Information Centre (NHIC) data (MNR 2025c)
- Ontario Breeding Bird Atlas (OBBA) data (Bird Studies Canada, 2021)
- Department of Fisheries and Oceans Canada (DFO) online *Aquatic Species at Risk Map* (DFO, 2025)
- iNaturalist (iNaturalist, 2025)
- South Nation Conservation Authority (SNC) mapping tool (SNC, 2020)
- City of Clarence-Rockland Official Plan (OP) (City of Clarence-Rockland, 2021)
- Policies and Guidelines for the Administration of *Ontario Regulation Prohibited Activities, Exemptions and Permits* (O. Reg 41/24) as well as part VI of the *Conservation Authorities Act*

Appendix A provides the results of the MNR, DFO, NHIC and OBBA. Figure 2a shows the Water Treatment Plant as well as the surrounding natural heritage features while Figure 2b shows the Caron Booster Station and surrounding natural heritage features.

Notes:
1. Basemaps Source: Vantor, Rideau Valley Conservation Authority (RVCA)
2. Natural Features are from Land Information Ontario.

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Figure 2a
Natural Heritage Boundary – Water Treatment Plant
Natural Features and Impact Assessment Report
Clarence-Rockland – WTP expansion and Caron Booster Station Upgrade
The City of Clarence-Rockland
Clarence-Rockland, Ontario

Jacobs

Notes:
1. Basemaps Source: Vantor, Rideau Valley Conservation Authority (RVCA)
2. Natural Features are from Land Information Ontario.

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Figure 2b
Natural Heritage Boundary – Caron Booster Station
Natural Features and Impact Assessment Report
Clarence-Rockland – WTP expansion and Caron Booster Station Upgrade
The City of Clarence-Rockland
Clarence-Rockland, Ontario

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2.1 Natural Heritage Features

Natural Heritage Features (NHFs) within the Project Locations and 120 m adjacent lands (shown in Figures 2a-b. Project Locations and Natural Heritage Feature) were investigated by referencing available mapping from SNC, MNR, and DFO. Spatial datasets were also downloaded from LIO (MNR, 2025a). Features reviewed included the following:

- Areas of Natural and Scientific Interest (ANSIs)
- Environmentally Significant Areas (ESAs)
- Natural Heritage System (NHS)
- Provincially Significant Wetlands (PSWs)
- Water bodies and watercourses
- Wetlands
- Woodlands and Valleylands

2.1.1 Areas of Natural and Scientific Interest (ANSI)

According to the online Make a Natural Heritage Map (MNR, 2025b), ANSIs do not occur within the WTP, CBS or their associated 120 m adjacent lands. However, there are two ANSI which are located within 500 metres of the WTP. The Rockland Precambrian (~250 m southwest) and the Rockland Quarry (~460 m to the southeast). Both are classified as Earth Science ANSI indicating that they contain significant examples of bedrock, fossils, landforms or ongoing geological processes (MNR, 2025b). These ANSIs are shown in Figures 2a.

2.1.2 Provincially Significant Wetlands (PSW)

No PSWs were identified within the occur within the WTP, CBS or their associated 120 m adjacent lands, based on MNR's LIO datasets (MNR, 2025a) and the online Make a Natural Heritage Map (MNR, 2025b). However, the Rockland Marsh is a PSW which is located approximately 220 m east of the WTP. The Rockland Marsh spans approximately 3 kilometres east of the project and is home to a diverse range of fish including several species of SAR fish which will be discussed further in Section 2.2. The Rockland Marsh is shown in Figure 2a.

2.1.3 Wetlands

A review of MNR's LIO datasets (MNR, 2025a) and online Make a Natural Heritage Map (MNR, 2025b) indicated one non-evaluated wetland occurs within the WTP and its associated 120 m adjacent lands while another unevaluated wetland is located within the 120 m adjacent lands of the Caron Booster Station. These wetlands are shown in Figures 2a-b.

2.1.4 Natural Heritage System (NHS)

The Provincial Planning Statement (PPS, 2024) defines an NHS as:

> *"…a system made up of natural heritage features and areas, and linkages intended to provide connectivity (at the regional or site level) and support natural processes which are necessary to maintain biological and geological diversity, natural functions, viable populations of indigenous species, and ecosystems. These systems can include natural heritage features and areas, federal and provincial parks and conservation reserves, other natural heritage features, lands that have*

been restored or have the potential to be restored to a natural state, areas that support hydrologic functions, and working landscapes that enable ecological functions to continue."

An NHS may include the following:

- PSWs
- ESAs
- Significant habitat of endangered species
- Urban forests and parks
- Golf Course
- River and valley systems

The NHS mapping for the Project Locations and 120 m adjacent lands were reviewed as part of the background query. Figures 2a-b show the extent of the NHS around the WTP and CBS including wetlands, wooded areas and nearby watercourses.

2.1.5 Environmentally Significant Areas (ESAs)

A review of the online Make a Natural Heritage Map (MNR, 2025b) and the City of Clarence-Rockland's OP did not identify any ESAs occurring within the Project Locations or their associated 120 m adjacent lands.

2.1.6 Woodlands and Valleylands

According to MNR mapping (MNR, 2025a and 2025b) woodlands occur within both 120 m adjacent lands associated with the WTP and the Caron Booster Station. These woodlands are shown in Figures 2a-b No valleylands were identified within the Project Locations or 120 m adjacent lands.

2.1.7 Wildlife and Wildlife Habitat

Background data obtained for wildlife included a review of the OBBA, which provides information on avifauna occurrences based on a 10 square kilometer (km^2) area. The 2nd atlas of the OBBA was utilized, which includes data collected from 2001 to 2005. The Project Locations and 120 m adjacent lands occur within OBBA Square Summary 18VR74 (Appendix A). iNaturalist online was also accessed.

2.1.8 Significant Wildlife Habitat (SWH)

Significant Wildlife Habitat (SWH) is designated by Criteria outlined within the *Significant Wildlife Habitat Technical Guide* (MNR, 2000) and divides habitat into four main categories:

1. Seasonal Concentration Areas include the following:

   At certain times of the year, some species of wildlife are highly concentrated within relatively small areas. In spring and autumn, migratory species of birds and butterflies concentrate in critical stopover areas where they can rest and feed. Other examples of such habitat include winter deer yards, bird breeding colonies, and hibernation sites for bats or snakes (MNR, 2000).

   The Make a Natural Heritage Map (MNR, 2025b) identified that a Wildlife Concentration Area (i.e., a Mixed Wader Nesting Colony) occurred within a 1-kilometer square at the Study Area. However, this occurrence is likely associated with the Fourteen Mile Creek watercourse and NHS/ESA outside of the Study Area.

2. Rare Vegetation Communities or Specialized Habitat for Wildlife include the following:

Areas that contain a provincially rare vegetation community areas that contain a vegetation community that is rare within the planning area Specialized habitats include: areas that support wildlife species that have highly specific habitat requirements areas with exceptionally high species diversity or community diversity areas that provide habitat that greatly enhances a species' survival (MNR, 2000).

3. Habitat for Species of Conservation Concern (Not including Endangered or Threatened Species)

   Rare species status is defined by SAR legislation and global or provincial ranks was provided by the NHIC.

4. Animal Movement Corridors

   Animal movement corridors are elongated, naturally vegetated parts of the landscape used by animals to move from one habitat to another. They exist at different scales and frequently link or border natural areas. Animal movement corridors encompass a wide variety of landscape features including riparian zones and shorelines, wetland buffers, stream and river valleys, woodlands, and anthropogenic features such as hydro and pipeline corridors, abandoned road and rail allowances, and fencerows and windbreaks (MNR, 2000).

No SWH were identified using NHIC data within the Project Locations or 120 m adjacent lands (MNR, 2025b).

2.2 Aquatic Habitat and Fisheries

According to LIO mapping, the Ottawa River, which eventually flows in the St. Lawrence River, occurs within the northern limits of the 120 m adjacent lands associated with the WTP (Figure 2a). Background screening of the DFO *Aquatic Species at Risk Map* indicated the potential presence for Hickorynut (*Obovaria olivaria*), which is an endangered species of mussel, within the 120 m adjacent lands of WTP. Five (5) other SAR species, listed as special concern, River Redhorse (*Moxostoma carinatum*), Northern Brook Lamprey (*Ichthyomyzon fossor*), Channel Darter (*Percina copelandi*), Cutlip Minnow (*Exoglossum maxillingua*), and Silver Lamprey - Great Lakes - Upper St. Lawrence River population (*Ichthyomyzon unicuspis* pop. 1) were also identified (DFO, 2025). Background screening of NHIC Squares 18VR7644 and 18VR7744 also identified the potential presence of American Eel (*Anguilla rostrata*) and Lake Sturgeon - Great Lakes - Upper St. Lawrence River population (*Acipenser fulvescens* pop. 3) proximal to the WTP. Table 1 list the SAR that could potential occur within the WTP's 120 m adjacent lands. As background screening of the WTP indicates that Lake Sturgeon may be present, this restricts the in-water work window to July 1 – March 31 (MNR, 2013).

According to LIO mapping, a permanent tributary to the Ottawa River, is located approximately 650 m southwest of WTP (Figure 2a). LIO's Aquatic Resource Area (ARA) survey point, KV-6663-XXA is located within this tributary (Figure 2a). Table 1 includes fish species that were identified at this ARA survey point. In addition, iNaturalist was accessed for research grade observations of aquatic species proximal to the WTP. Results are also shown in Table 1. (Longnose Gar and Brook Silverside)

The CBS is located approximately 2.3 km south of the Ottawa River and while no watercourses occur within the CBS or its associated 30 m Natural Environment Buffer, an unnamed watercourse which flows to the South Rockland Swamp originates with its 120 m adjacent lands. No aquatic SAR were identified by DFO, however a review of NHIC square 18VR7843 indicated that American Eel could potential occur proximal to this study area. No ARA Survey points were located proximal to the CBS to the however ARA line segment KV-6666-XXA was located approximately 420 m southwest (Figure 2b). Fisheries data from this line

segment is presented in Table 1. No research grade observations of aquatic species proximal to the CBS were reported in the iNaturalist database.

Table 1. Fisheries Data Proximal to the WTP and Caron Booster Station

Species	Preferred Habitat[1]	Location(s)
American Eel[2,7] (*Anguilla rostrata*)	Near cover over rock, sand and mud bottoms in lakes, ponds, rivers and creeks at depths <15 m; preferred water temperature range 16-19°C. Spawning months are February – March.	Caron Booster Station WTP
Banded Killifish[5] (*Fundulus diaphanous*)	Quiet, shallow, margins of lakes, ponds and sluggish streams in areas with sand and gravel substrates and patches of aquatic macrophytes; preferred water temperature 21°C. Spawning months are June to August.	WTP
Brook Silverside[4] (*Labidesthes sicculus*)	Surface waters (10-12 cm) of lakes and reservoirs, usually in open water, and quiet pools of rivers; preferred water temperature 24.5°C. Spawning months are May to August.	WTP
Brook Stickleback[5,6] (*Culaea inconstans*)	Small, boggy headwater streams, shallow lake margins, ponds, and clear pools and backwaters of creeks and small rivers; usually associated with aquatic vegetation; occasionally brackish water; preferred water temperature 21.3°C. Spawning months are May to July.	Caron Booster Station WTP
Central Mudminnow [5,6] (Umbra limi)	Heavily vegetated ponds, wetlands, bogs or pools of small creeks and quiet, shallow (0.5 m) areas of lakes with mud and organic substrates; preferred water temperature range 19-25°C. Spawning months are April to May.	Caron Booster Station WTP
Channel Darter [3,7] (*Percina copelandi*)	Pools and margins of riffles of small to medium rivers over sand or gravel substrates, and sand and gravel beaches and bars in lakes; prefers clear water and silt-free substrates; preferred water temperature range ≥ 25°C. Spawning months are June to July.	WTP
Creek Chub [5] (*Semotilus atromaculatus*)	Pools of clear creeks and small rivers, over sand, gravel and cobble substrates; rare in lakes and large rivers; preferred water temperature of 20.8°C. Spawning months are May to June.	WTP
Cutlip Minnow [3,7] (*Exoglossum maxillingua*)	Pools and runs of warm, clear, gravelly creeks and small to medium rivers; often in quiet water near boulders; preferred water temperature range ≥ 25°C. Spawning months are May to July.	WTP
Hickorynut [3,7,8] (*Obovaria olivaria*)	Large and wide rivers with relatively deep water, greater than 2-3m, with moderate to strong current.	WTP
Lake Sturgeon [2,7] (*Acipenser fulvescens*)	Bottoms of lakes and large rivers, usually 5 to 10 m deep, over clay, mud, sand and gravel; preferred water temperature range 15-17°C. Spawning months are May to June.	WTP
Longnose Gar [4] (*Lepisosteus osseus*)	Vegetated, sluggish pools, backwaters and oxbows of medium to large rivers and weedy, quiet shallows of warm lakes with silty, sandy substrates; often near logs and brushpiles; preferred water temperature range 25.3-33.1°C. Spawning months are May to June.	WTP

Species	Preferred Habitat[1]	Location(s)
Northern Brook Lamprey [3,7] (*Ichthyomyzon fossor*)	Clean, clear riffles and runs of small rivers with gravel and sand substrates; preferred water temperature range 19 to 25°C. Spawning months are May to June.	WTP
River Redhorse [2,3,7] (*Moxostoma carinatum*)	Pools and swift runs of medium to large rivers with gravel, cobble, boulder or bedrock substrates; preferred water temperature range 19 to 25°C. Spawning months are May to June.	WTP
Silver Lamprey [2,3,7] (*Ichthyomyzon unicuspis*)	Large rivers, lakes and impoundments; preferred water temperature range 19 to 25°C. Spawning months are May to June.	WTP

[1] Habitat information obtained from Mandrak et al. (2022). A Field Guide to Freshwater Fishes of Ontario, Second Edition.
[2] Identified by NHIC Squares 18VR7644,18VR7744 or 18VR7843
[3] Identified by DFO's *Aquatic Species at Risk Map*
[4] Identified by iNaturalist Research Grade Observations
[5] Identified by ARA Survey Point KV-6663-XXA
[6] Identified by ARA Line Segment KV-6666-XXA
[7] SAR species
[8] Habitat information obtained from Hickorynut (MECP, 2014)

2.3 Species at Risk Screening

SAR within Ontario are primarily protected under the *Endangered Species Act* (ESA ,2007). Species can be ranked as follows:

1. Endangered - species facing imminent extirpation or extinction
2. Threatened - species likely to become endangered if limiting factors are not reversed
3. Special Concern - species may become threatened or endangered due to identified threats
4. Extirpated - species no longer existing in the wild at this location but may occur elsewhere

SAR listed under the ESA are under the jurisdiction of the Ministry of the Environment, Conservation and Parks (MECP) and aquatic SAR (e.g., fish and mussels) are protected federally, as administered by DFO under the Species at Risk Act (SARA). Up-to-date SAR lists are provided by the Committee on the Status of Species at Risk in Ontario (COSSARO), (Government of Ontario, 2025c), SAR in Ontario (SARO), (Government of Ontario 2025c), and the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), (Government of Canada, 2025b). Special Concern species are not protected under these Acts; however, habitat for these species is typically afforded protection under SWH criteria.

The NHIC provides current and historical data on SAR and Natural Features occurrences within Ontario. The data platform provides information within 1 km^2 areas. The *Aquatic Species at Risk Map* (DFO, 2025) provides data on occurrences of critical habitat and the distribution of aquatic SAR.

SAR data within the vicinity of the WTP, CBS and their associated 120 m adjacent lands are presented within Table 2 and 3, based on the NHIC squares 18VR7843, 18VR7644 and 18VR7744 (MNR, 2025c), OBBA (square 18VR74, Region #24: Ottawa), the *Aquatic Species at Risk Map* (DFO, 2025), and iNaturalist research grade observations (iNaturalist, 2025).

While SAR bats did not appear in background screening results, they should always be considered when habitat is available. Wooded areas with large trees near water with species such as maple and oak are preferred. Wooded areas with portions of open canopy, sunlight exposure, and multiple trees exhibiting snag features bats can use as roosts such as cavities, exfoliating bark, and cracks, increase the likelihood of SAR bat presence.

Table 2. Potential SAR and Sensitive/Rare Species Within or Proximal to the WTP

Common Name	Scientific Name	S Rank [a]	SARO [b]	COSEWIC [c]	SARA [d]
Birds					
Bank Swallow	*Riparia riparia*	S4B	THR	THR	THR
Barn Swallow	*Hirundo rustica*	S4B	SC	SC	THR
Black Tern	*Chlidonias niger*	S3B, S4M	SC	-	-
Bobolink	*Dolichonyx oryzivorus*	S4B	THR	SC	THR
Canada Warbler	*Cardellina canadensis*	S5B	SC	SC	THR
Chimney Swift	*Chaetura pelagica*	S3B	THR	THR	THR
Common Nighthawk	*Chordeiles minor*	S4B	SC	SC	SC
Eastern Meadowlark	*Sturnella magna*	S4B, S3N	THR	THR	THR
Eastern Wood-Pewee	*Contopus virens*	S4B	SC	SC	SC
Golden-Winged Warbler	*Vermivora chrysoptera*	S3B	SC	THR	THR
Grasshopper Sparrow	*Ammodramus savannarum*	S4B	SC	SC	-
Least Bittern	*Botaurus exilis*	S4B	THR	THR	THR
Loggerhead Shrike	*Lanius ludovicianus*	S1B	END	END	-
Peregrine Falcon	*Falco peregrinus*	S4	SC	-	-
Red-Headed Woodpecker	*Melanerpes erythrocephalus*	S3	END	END	END
Short-Eared Owl	*Asio flammeus*	S4?B,S2S3N	THR	THR	SC
Reptiles and Amphibians					
Midland Painted Turtle	*Chrysemys picta marginata*	S4	-	SC	SC
Snapping Turtle	*Chelydra serpentina*	S4	SC	SC	SC
Aquatics					
American Eel	*Anguilla rostrata*	S1S2	END	THR	-
Channel Darter	*Percina copelandi*	S3	SC	SC	SC
Cutlip Minow	*Exoglossum maxillingua*	S2	THR	SC	SC
Hickorynut	*Obovaria olivaria*	S1?	END	END	END
Lake Sturgeon (Great Lakes - Upper St. Lawrence River population)	*Acipenser fulvescens pop. 3*	S2	END	THR	-
Northern Brook Lamprey	*Ichthyomyzon fossor*	S3	SC	SC	-
River Redhorse	*Moxostoma carinatum*	S2	SC	SC	SC
Silver Lamprey (Great Lakes - Upper St. Lawrence populations)	*Ichthyomyzon unicuspis pop. 1*	S3	SC	SC	SC
Plants					
Black Ash	*Fraxinus nigra*	S4	END	END	
Butternut	*Juglans cinerea*	S2?	END	END	END

Common Name	Scientific Name	S Rank [a]	SARO [b]	COSEWIC [c]	SARA [d]
Mammals					
Eastern Small-footed Myotis	*Myotis leibii*	S2S3	END	-	-
Little Brown Myotis	*Myotis lucifugus*	S3	END	END	END
Tricolored Bat	*Perimyotis subflavus*	S3?	END	END	END
Northern Myotis	*Myotis septentrionalis*	S3	END	END	END
Eastern Red Bat	*Lasiurus borealis*	S3	END	END	-
Northern Hoary Bat	*Lasiurus cinereus*	S3	END	END	-
Silver-haired Bat	*Lasionycteris noctivagans*	S3	END	END	-

[a] NHIC Subnational rank (MNR 2023b)
[b] SARO (Government of Ontario 2023)
[c] (COSEWIC 2023b)
[d] SARA (Government of Canada 2023)
[e] Species delisted from THR to SC, however, ESA website not updated to date.
- = not at risk
? = more data required
B = status qualifier; breeding
END = endangered
M = status qualifier; migrant species
N = status qualifier; nonbreeding
S#S# = range given due to uncertainty
S1 = critically imperilled (often 5 or fewer occurrences)
S2 = imperilled (often 20 or fewer occurrences)
S3 = vulnerable (restricted range with relatively few populations – often 80 or fewer)
S4 = uncommon but not rare; some cause for long-term concern due to declines or other factors
S5 = secure species, common, widespread, and abundant
SC = special concern
THR = threatened

Table 3. Potential SAR and Sensitive/Rare Species Within or Proximal to the Caron Booster Station

Common Name	Scientific Name	S Rank [a]	SARO [b]	COSEWIC [c]	SARA [d]
Birds					
Bank Swallow	*Riparia riparia*	S4B	THR	THR	THR
Barn Swallow	*Hirundo rustica*	S4B	SC	SC	THR
Black Tern	*Chlidonias niger*	S3B, S4M	SC	-	-
Bobolink	*Dolichonyx oryzivorus*	S4B	THR	SC	THR
Canada Warbler	*Cardellina canadensis*	S5B	SC	SC	THR
Chimney Swift	*Chaetura pelagica*	S3B	THR	THR	THR
Common Nighthawk	*Chordeiles minor*	S4B	SC	SC	SC
Eastern Meadowlark	*Sturnella magna*	S4B, S3N	THR	THR	THR
Eastern Wood-Pewee	*Contopus virens*	S4B	SC	SC	SC
Golden-Winged Warbler	*Vermivora chrysoptera*	S3B	SC	THR	THR
Grasshopper Sparrow	*Ammodramus savannarum*	S4B	SC	SC	-
Least Bittern	*Botaurus exilis*	S4B	THR	THR	THR
Loggerhead Shrike	*Lanius ludovicianus*	S1B	END	END	-
Peregrine Falcon	*Falco peregrinus*	S4	SC	-	-
Red-Headed Woodpecker	*Melanerpes erythrocephalus*	S3	END	END	END

Common Name	Scientific Name	S Rank [a]	SARO [b]	COSEWIC [c]	SARA [d]
Short-Eared Owl	*Asio flammeus*	S4?B,S2S3N	THR	THR	SC
Reptiles and Amphibians					
Midland Painted Turtle	*Chrysemys picta marginata*	S4	-	SC	SC
Snapping Turtle	*Chelydra serpentina*	S4	SC	SC	SC
Aquatics					
American Eel	*Anguilla rostrata*	S1S2	END	THR	-
Mammals					
Eastern Small-footed Myotis	*Myotis leibii*	S2S3	END	-	-
Little Brown Myotis	*Myotis lucifugus*	S3	END	END	END
Tricolored Bat	*Perimyotis subflavus*	S3?	END	END	END
Northern Myotis	*Myotis septentrionalis*	S3	END	END	END
Eastern Red Bat	*Lasiurus borealis*	S3	END	END	-
Northern Hoary Bat	*Lasiurus cinereus*	S3	END	END	-
Silver-haired Bat	*Lasionycteris noctivagans*	S3	END	END	-

[a] NHIC Subnational rank (MNR 2023b)
[b] SARO (Government of Ontario 2023)
[c] (COSEWIC 2023b)
[d] SARA (Government of Canada 2023)
[e] Species delisted from THR to SC, however, ESA website not updated to date.
- = not at risk
? = more data required
B = status qualifier; breeding
END = endangered
M = status qualifier; migrant species
N = status qualifier; nonbreeding
S#S# = range given due to uncertainty
S1 = critically imperilled (often 5 or fewer occurrences)
S2 = imperilled (often 20 or fewer occurrences)
S3 = vulnerable (restricted range with relatively few populations – often 80 or fewer)
S4 = uncommon but not rare; some cause for long-term concern due to declines or other factors
S5 = secure species, common, widespread, and abundant
SC = special concern
THR = threatened

3. Field Investigation Methodology

Jacobs staff utilized the results of the Background Review (as described within Section 2), coupled with air photo interpretation, and agency spatial data accessed to scope and plan site specific field surveys during the appropriate season to retrieve information on terrestrial and aquatic resources, potential SAR and Natural Features.

Table 4 provides the dates, weather conditions and type of surveys conducted. A further description of each survey conducted is provided in the following paragraphs.

Table 4. Field Surveys

Survey Date(s) and Time	Weather Conditions	Survey Type(s)	Personnel
May 27, 2025 20:30-21:45	21ºC, BF = 1, sunny	Amphibian/nightjar surveys	Helen Chen, Maia Mortimer
May 28, 2025 07:00 – 09:45	12ºC, BF = 2, sunny	Breeding Bird Surveys (BBS), Ecological Land Classification (ELC), incidental SAR surveys	Helen Chen, Maia Mortimer
July 10, 2025 19:30 - 21:00	24ºC, BF = 2, sunny	Amphibian/nightjar surveys	Chris Flesher
July 11, 2025 11:00 - 11:30	24ºC, BF = 2, sunny	Incidental SAR surveys	Chris Flesher

BF = Beaufort Wind Scale

3.1.1 Vegetation and Vegetative Communities

The vegetative communities within the Project Locations and 120 m adjacent lands were originally assessed utilizing air photo interpretation. Data were assessed to define the extent of ecological boundaries, and the overall ecosystem function, to develop ecological community mapping. The data were also utilized to plan and carry out ELC surveys within the Project Locations and their 30 m Natural Environment Buffers according to the system developed as per the E*cological Land Classification for Southern Ontario* (Lee et al, 1998). NHIC nomenclature was also utilized.

3.1.2 Aquatic Habitat Assessment (AHA)

No watercourses were identified within the Project Locations or their associated 30 m Natural Environment Buffers; however an outfall channel was identified as occurring with the WTP, which is hydrologically connected to the Ottawa River. This outfall channel was investigated during field surveys to determine whether an AHA could be conducted.

3.1.3 Wildlife and Wildlife Habitat

3.1.3.1 Wildlife Surveys

Incidental and targeted wildlife surveys were carried out utilizing protocols adopted from MNR's *1998 Wildlife Monitoring Programs and Inventory Techniques for Ontario* (MNR, 1998) when possible. Wildlife and mammals were identified by direct observations, tracks, scat, or droppings (or a combination thereof).

An assessment of ecological communities against SWH was completed as per the *Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E* (MNR, 2015). SWH is further discussed within Section 4.4.

3.1.3.2 Bird Surveys

Jacobs carried out Breeding Bird Surveys (BBS) on May 28, 2025. Surveys were completed during the breeding season, chorus hours and under calm conditions. Species were documented visually by sight, song, or call, or some combination of these. Surveys were completed by adopting protocols drafted by Bird Studies Canada (Bird Studies Canada, 2019) and the *Marsh Monitoring Program (MMP)* (Bird Studies Canada, 1995). The surveys included point count location surveys and pedestrian transects through the WTP, the CBS and their associated 30 m Natural Environment Buffer, utilizing phishing techniques as required.

A nightjar (*Caprimulgidae sp.*) and targeted surveys for Common Nighthawk (*Chordeiles minor*) and Eastern Whip-Poor-Will (*Antrostomus vociferus*) was conducted on May 27, 2025, with the WTP, CBS and their associated 30 m Natural Environment Buffer, utilizing guidance provided in the *Canadian Nightjar Survey Protocol* (Knight, 2019).

3.1.3.3 Herptiles

Amphibian surveys were conducted on May 27, 2025, and July 10, 2025, adhering to the *MMP* (Bird Studies Canada, 1995) guideline. The survey began at dusk under the appropriate weather conditions, targeting locations within the WTP, CBS and their associated 30 m Natural Environment Buffer which included riparian areas, treed areas, and the unevaluated wetlands. Herptiles surveys were conducted adopting the *Wildlife Monitoring Programs and Inventory Techniques for Ontario* (MNR, 1998). Searches for herptiles were conducted within forested areas.

4. Results of Site Investigations

4.1 Vegetation Communities

Within the WTP and its associated 30 m Natural Environment Buffer, there was one (1) ecological community, as well as a one (1) Industrial zone, one (1) Residential zone and one (1) Parkland zone identified as shown in Figure 3a.

Within the CBS and its associated 30 m Natural Environment Buffer there was one (1) ecological community identified, in addition to one (1) Industrial zone, (1) Parkland zone, and one (1) residential zone, as shown in Figure 3b. Appendix B contains a full floral list while Appendix C provides representative photographs of the individual communities. The following provides a description of each community.

4.1.1 FOD3-1 (Dry - Fresh Poplar Deciduous Forest Type) – WTP

The FOD3-1 (Dry - Fresh Poplar Deciduous Forest Type) community was located along the eastern and southeastern portions of the WTP's 30 m Natural Environment Buffer where it bordered the Industrial zone. There was a trail, which had a no trespassing sign, located off the southern parking lot, and ran east through the FOD3-1 community. There was a small transition zone located near the entrance of this trail, where there were more shrub species, like Staghorn Sumac, and fewer trees in reaching the canopy. The FOD3-1 is part of a larger woodland that runs approximately 170 m east and 530 m southeast, beyond the 30 m Natural Environment Buffer.

Eastern Cottonwood (*Populus deltoides*) followed by Trembling Aspen (*Populus tremuloides*) dominated the canopy and subcanopy, while Canada Goldenrod (*Solidago canadensis*) and Orchard Grass (*Dactylis glomerata*) dominated the groundcover. The following species were identified within the FOD3-1 community:

- **Canopy**
  - Basswood (*Tilia americana*)
  - Eastern Cottonwood (*Populus deltoides*)
  - Large-toothed Aspen (*Populus grandidentata*)
  - Northern Red Oak (*Quercus rubra*)
  - Norway Maple (*Acer platanoides*)
  - Trembling Aspen (*Populus tremuloides*)
- **Subcanopy**
  - Alternate-leaved Dogwood (*Cornus alternifolia*)
  - Basswood
  - Cherry sp. (*Prunus* sp.)
  - Crack Willow (*Salix euxina*)
  - European Buckthorn (*Rhamnus cathartica*)
  - Large-toothed Aspen
  - Manitoba Maple (*Acer negundo*)
  - Norway Maple
  - Staghorn Sumac (*Rhus typhina*)
  - Trembling Aspen
  - White Ash (*Fraxinus americana*)
  - White Elm (*Ulmus americana*)
  - Willow sp. (*Salix* sp.)
- **Groundcover**

- Canada Goldenrod (*Solidago canadensis*)
- Common Burdock (*Arctium minus*)
- Common Dandelion (*Taraxacum officinale*)
- Common Milkweed (*Asclepias syriaca*)
- Common Plantain (*Plantago major*)
- Common Yarrow (*Achillea millefolium*)
- English Plantain (*Plantago lanceolata*)
- Field Horsetail (*Equisetum arvense*)
- Garden Bird's-foot Trefoil (*Lotus corniculatus*)
- Kentucky Bluegrass (*Poa pratensis*)
- Mossy Stonecrop (*Sedum acre*)
- Orchard Grass (*Dactylis glomerata*)
- Oxeye Daisy (*Leucanthemum vulgare*)
- Purple-flowering Raspberry (*Rubus odoratus*)
- Red Clover (*Trifolium pratense*)
- Tufted Vetch (*Vicia cracca*)
- Virginia Creeper (*Parthenocissus quinquefolia*)
- Western Poison Ivy (*Toxicodendron rydbergii*)
- White Clover (*Trifolium repens*)
- Wild Carrot (*Daucus carota*)
- Wild Parsnip (*Pastinaca sativa*)
- Wild Strawberry (*Fragaria virginiana*)

4.1.2 Industrial – WTP

The Industrial zone encompassed the existing WTP building as well as the gravel parking lots located to the north and east. Background screening indicated that there was an unevaluated wetland which overlaps with the southern limits of the parking lot. While the parking lot was dry and did not have any vegetation growing, it is possible that the ground underneath has a high-water table or soil moisture content.

The canopy was dominated by Eastern Cottonwood and Trembling Aspen, likely due to its proximity to the FOD3-1 (Dry - Fresh Poplar Deciduous Forest Type). Staghorn Sumac dominated the subcanopy while Kentucky Bluegrass dominated the groundcover. The following species were identified within this Industrial zone:

- **Canopy**
  - Crack Willow
  - Eastern Cottonwood
  - Manitoba Maple
  - Trembling Aspen
  - White Elm
- **Subcanopy**
  - European Buckthorn
  - Manitoba Maple
  - Norway Maple
  - Red-osier Dogwood (*Cornus sericea*)
  - Staghorn Sumac
  - White Elm
- **Groundcover**
  - Common Dandelion
  - English Plantain
  - Grass-leaved Goldenrod (*Euthamia graminifolia*)
  - Kentucky Bluegrass
  - Manitoba Maple
  - Staghorn Sumac
  - Tufted Vetch
  - Western Poison Ivy
  - White Elm
  - Wild Carrot
  - Wild Parsnip
  - Wild Strawberry

4.1.3 Parkland – WTP

The Parkland zone contained part of Du Moulin Park, located to the northwest of the WTP. The northern and western limits of the park are bordered by the Ottawa River where the banks are lined with boulders. Du Moulin Park contains a playground, picnic tables, wooden docks and a boat launch area into the Ottawa River. It was heavily utilized by members of the public as a spot for fishing, gathering, and other recreational activities.

The park primarily consisted of manicured lawns with some planted trees. No species dominated the canopy or subcanopy, however the groundcover was dominated by Kentucky Bluegrass. The following species were identified within this Parkland zone:

- **Canopy**
  - Basswood
  - Eastern Cottonwood
  - Silver Maple (*Acer saccharinum*)
- **Subcanopy**
  - Basswood
  - Freeman's Maple (*Acer x freemanii*)
  - Northern Red Oak
- **Groundcover**
  - Black Medick (*Medicago lupulina*)
  - Common Dandelion
  - Common Plantain
  - English Plantain
  - Kentucky Bluegrass
  - White Clover
  - White Sweet-clover (*Melilotus albus*)

4.1.4 Residential – WTP

The residential zone was located on the western side of the WTP. It primarily consisted of residential buildings located along Edwards Street, as well as Edwards Street itself. This zone included manicured lawns and gardens, as well as planted trees along the street and on private property.

No particular species dominated the canopy or subcanopy, however, Kentucky Bluegrass dominated the groundcover. The following species were identified within this Residential zone:

- **Canopy**
  - Eastern White Cedar (*Thuja occidentalis*)
  - Freeman's Maple
  - Norway Maple
  - Red Maple (*Acer rubrum*)
- **Subcanopy**
  - Alternate-leaved Dogwood
  - Eastern White Cedar
  - Eastern Red Cedar (*Juniperus virginiana*)
  - Staghorn Sumac
  - White Elm
  - White Spruce (*Picea alba*)
- **Groundcover**
  - Black Medick
  - Canada Goldenrod
  - Canada Thistle (*Cirsium arvense*)
  - Common Dandelion
  - Common Plantain
  - English Plantain
  - *Hosta* sp.
  - *Hydrangea* sp.
  - Kentucky Bluegrass
  - Orange Day-lily (*Hemerocallis fulva*)
  - Orchard Grass
  - *Physocarpus* sp.
  - *Potentilla* sp.
  - *Rosa* sp.
  - White Clover
  - White Sweet-clover
  - Wild Carrot

4.1.5 CUM1: Mineral Cultural Meadow Ecosite – Caron Booster Station

The CUM1 community bordered the north and east boundaries of the Caron Booster Station. It was contained a large, manicured lawn with a few possibly planted trees. No particular species dominated the canopy or subcanopy however Kentucky Bluegrass dominated the groundcover. The following species were identified within the CUM1 community:

- **Canopy**
  - Balsam Fir (*Abies balsamea*)
  - Black Maple (*Acer nigrum*)
  - Eastern White Cedar
  - *Malus* sp.
- **Subcanopy**
  - Manitoba Maple
  - Staghorn Sumac
- **Groundcover**
  - Common Dandelion
  - Common Plantain
  - English Plantain
  - Field Sow-thistle (*Sonchus arvensis*)
  - Ground Ivy (*Glechoma hederacea*)
  - Heart-leaved Aster (*Symphyotrichum cordifolium*)
  - Kentucky Bluegrass
  - White Clover
  - White Sweetclover

4.1.6 Industrial – Caron Booster Station

The Industrial zone was located within the Caron Booster Station. This zone was enclosed by a metal fence and primarily consisted of the building, a short gravel driveway and a manicured lawn.

No tree or shrub species grew within the fenced area, although there was one overhanging tree from an adjacent residential property. Kentucky Bluegrass dominated the groundcover. The following species were identified within this Industrial zone:

- **Groundcover**
  - Common Dandelion
  - Common Plantain
  - English Plantain
  - Field Sow-thistle
  - Ground Ivy
  - Kentucky Bluegrass
  - White Clover
  - White Sweetclover

4.1.7 Parkland – Caron Booster Station

The Parkland zone proximal to the Caron Booster Station, was located across the street from the study area, within the southwestern corner of the 30 m Natural Environment Buffer. It was bordered to the north and east by a residential zone. Within the Parkland, there was a paved pedestrian trial that was lined on both sides with manicured lawns. Further south in the Parkland was a large patch of unmaintained vegetation.

The canopy was dominated by Red Ash (*Fraxinus pennsylvanica*) followed by Manitoba Maple. The subcanopy was dominated by Staghorn Sumac while the groundcover was dominated by Kentucky Bluegrass. The following species were identified within the Parkland zone:

- **Canopy**
  - Manitoba Maple
  - Red Ash
- **Subcanopy**
  - Manitoba Maple
  - Red Ash
  - Staghorn Sumac
- **Groundcover**
  - Canada Goldenrod
  - Chicory (*Cichorium intybus*)
  - Common Dandelion
  - Common Plantain
  - English Plantain
  - Field Horsetail
  - Garlic Mustard (*Alliaria petiolate*)
  - Great Burdock
  - Purple Crownvetch (*Securigera varia*)
  - Virginia Creeper

- Wild Carrot
- Wild Parsnip

4.1.8 Residential – Caron Booster Station

The Residential zone was primarily located to the south and west of the Caron Booster Station, in addition to one small pocked located in the northeast corner of the 30 m Natural Environment Buffer. This zone consisted primarily of residential houses and Caron Street. Vegetation within this zone primarily consisted of manicured lawns with some small gardens and a few planted trees on private property.

While no particular species dominated the canopy or subcanopy, the groundcover was dominated by Kentucky Bluegrass. The following species were identified within this residential zone:

- **Canopy**
  - Eastern White Cedar
  - Manitoba Maple
  - Red Ash
  - White Spruce
- **Subcanopy**
  - Eastern White Cedar
- **Groundcover**
  - Common Dandelion
  - Common Plantain
  - Eastern White Cedar
  - English Plantain
  - Canada Thistle
  - Ground Ivy
  - *Hosta* sp.
  - Kentucky Bluegrass
  - White Clover
  - White Sweetclover

N

0 10 20
Meters

Watercourse

Ecological Land Classification (ELC)

- FOD3-1,Dry - Fresh Poplar Deciduous Forest Type
- Industrial
- Parkland
- Residential

30 m Natural Environment Buffer

Project Location

Notes:
1. Basemaps Source: Maxar, Microsoft

DRAFT

Figure 3a
Ecological Land Classification (ELC) – Water Treatment Plant
Natural Features and Impact Assessment Report
Clarence-Rockland – WTP expansion and Caron Booster Station Upgrade
The City of Clarence-Rockland
Clarence-Rockland, Ontario

Jacobs

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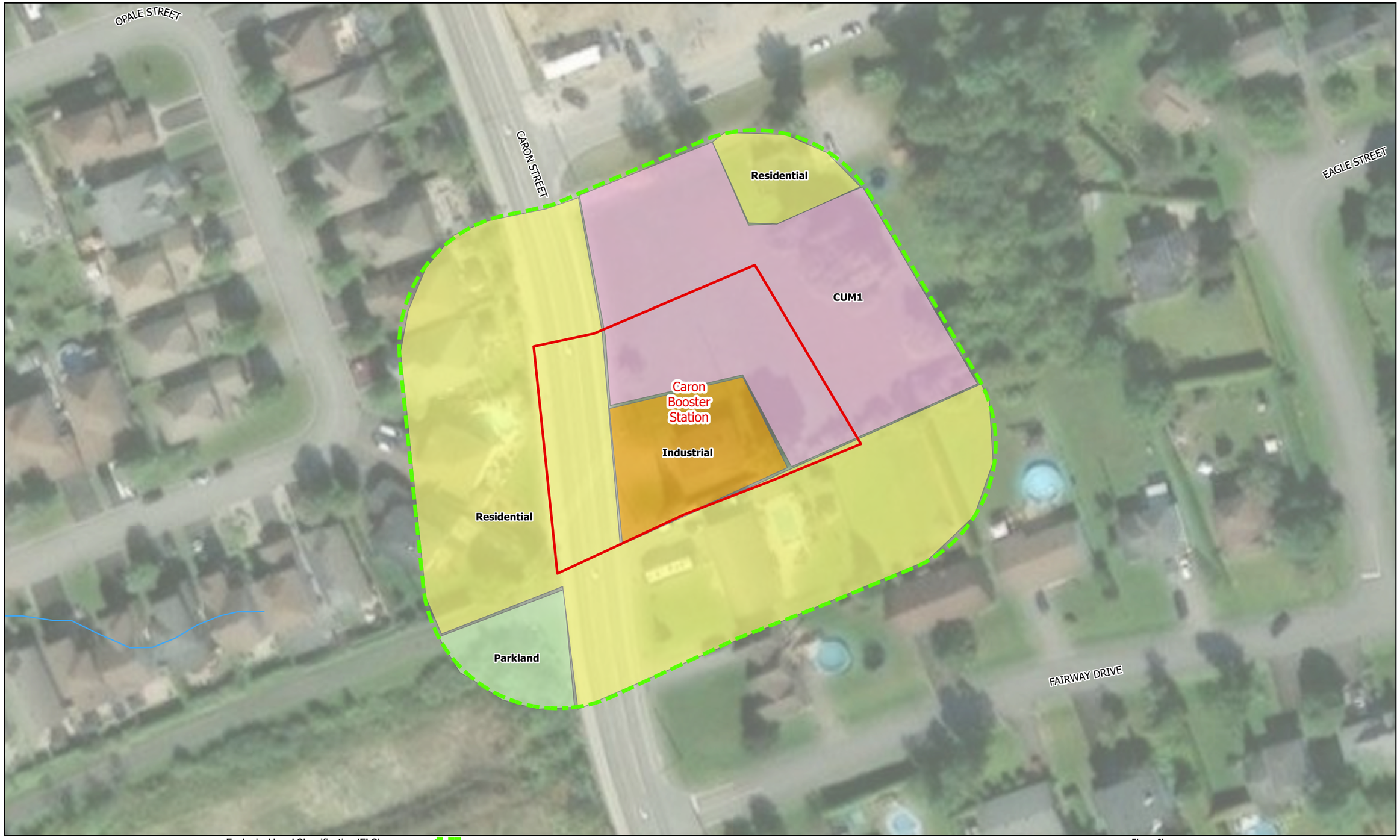

N

0 10 20

Meters

Watercourse

Ecological Land Classification (ELC)

- CUM1,Mineral Cultural Meadow Ecosite
- Industrial
- Parkland
- Residential

30 m Natural Environment Buffer

Project Location

Notes:
1. Basemaps Source: Maxar, Microsoft

DRAFT

Figure 3b
Ecological Land Classification (ELC) – Caron Booster Station
Natural Features and Impact Assessment Report
Clarence-Rockland – WTP expansion and Caron Booster Station Upgrade
The City of Clarence-Rockland
Clarence-Rockland, Ontario

Jacobs

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4.2 Aquatic Habitat Assessment (AHA)

An outfall channel was identified within the WTP which is hydrologically connected to the Ottawa River within the 120 m adjacent lands. The outfall channel ran along the east side of the WTP, through the industrial area, before cutting underneath the entrance to the parking lot towards the FOD3-1, where it then ran north and merged with the Ottawa River. During field surveys, the outfall channel had no flowing water or standing pools present, as such, an aquatic habitat assessment could not be conducted. However, images as well as characteristics of the outfall channel were recorded. The location of the outfall channel is shown in Figure 3a, while representative photos of the outfall channel are provided in Appendix C, and additional photos can be provided upon request.

The upper portion of the outfall channel, which ran alongside the existing WTP building, was shaded by overhanging trees. Although there was no standing or flowing water in this reach, the organic substrate retained moisture. Further downstream, the channel passed through a small culvert beneath a gravel path located at the north end of the WTP building. After the culvert, the channel continued through the Industrial area, where there was no tree cover. Near the outlet, the moist organic substrate supported small patches of Sensitive Ferns. The remaining portion was covered with dry leaf litter, but the substrate beneath remained moist and supported intermittent patches of grass.

Near the border of the Industrial area and FOD3-1, the outfall channel passed through a second small culvert, which ran underneath the entrance to the southern parking lot. Downstream of the outlet, the channel passed through the FOD3-1 until it eventually merged with the Ottawa River. This portion of the outfall channel was lined with cobble and gravel, with some dry leaf litter scattered on top, but also contained some moist, organic substrate underneath. In addition to the leaf litter, there was also manmade litter scattered throughout the outfall channel.

Although no flowing or standing water was observed during field surveys, the presence of moist substrates in parts of the channel indicated intermittent flow. As such, the outfall channel likely contributes water to the Ottawa River during the spring freshet and following rainfall events in the spring, summer, and autumn.

No outfall channels or watercourses are located within the Caron Booster Station or 30 m Natural Environment Buffer.

N

0 10 20
Meters

BBS Point
Amphibian Point
Watercourse
Outfall Channel*
* this outfall channel contained no standing or flowing water at time of survey.
30 m Natural Environment Buffer
Project Location

Notes:
1. Basemaps Source: Microsoft, Vantor

DRAFT

Figure 4a
Aquatic Habitat Assessment (AHA) – Water Treatment Plant
Natural Features and Impact Assessment Report
Clarence-Rockland – WTP expansion and Caron Booster Station Upgrade
The City of Clarence-Rockland
Clarence-Rockland, Ontario

Jacobs

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Notes:
1. Basemaps Source: Microsoft, Vantor

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Figure 4b
Aquatic Habitat Assessment (AHA) – Caron Booster Station
Natural Features and Impact Assessment Report
Clarence-Rockland – WTP expansion and Caron Booster Station Upgrade
The City of Clarence-Rockland
Clarence-Rockland, Ontario

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4.3 Amphibian Survey

An Amphibian Survey was conducted on May 27, 2025, after sunset. Weather conditions were mostly clear with a wind speed of 1 on the Beaufort Wind Scale, and an ambient air temperature of 21°C. There were six (6) amphibian survey stations spread across the Project Locations and their 30 m Natural Environment Buffers (Figures 4a-b). The following observations were made:

WTP:

- Amphib1: No amphibians overheard, background noise from people using Du Moulin Park in addition to boat and car traffic.
- Amphib2: No amphibians overheard, background noise from people using Du Moulin Park in addition to boat and car traffic.
- Amphib3: No amphibians overheard, background noise from people using Du Moulin Park in addition to boat and car traffic

Caron Booster Station:

- Amphib4: No amphibians overheard, some background noise from road traffic.
- Amphib5: No amphibians overheard, however an Eastern Whip-poor-will (*Antrostomus vociferus*).
- Amphib6: Northern Leopard Frog (*Lithobates pipiens*) overheard – call level 3

The Northern Leopard Frog calls overheard were associated with the wetland that occurs within the 120 m adjacent lands to the Caron Booster Station.

4.4 Wildlife and Significant Wildlife Habitat

4.4.1 Wildlife

BBS were conducted during the breeding bird season on May 28, 2025 during chorus hours. Weather conditions were sunny with a wind speed of 2 on the Beaufort Wind Scale and an ambient air temperature was 12°C. BBS were conducted throughout the WTP, Caron Booster Station and their associated 30 m Natural Environment Buffer. Locations of the BBS are shown in Figures 4a-b. The following species were overheard and/or observed:

- American Crow (*Corvus brachyrhynchos*)
- American Goldfinch (*Spinus tristis*)
- American Redstart (*Setophaga ruticilla*)
- American Robin (*Turdus migratorius*)
- Black-and-white warbler (*Mniotilta varia*)
- Black-capped Chickadee (*Poecile atricapillus*)
- Blue Jay (*Cyanocitta cristata*)
- Brown-headed Cowbird (*Molothrus ater*)
- Canada Goose (*Branta canadensis*)
- Chipping Sparrow (*Spizella passerina*)
- Common Grackle (*Quiscalus quiscula*)
- Downy Woodpecker (*Picoides pubescens*)
- Eastern Towhee (*Pipilo erythrophthalmus*)
- European Starling (*Sturnus vulgaris*)
- Great Crested Flycatcher (*Myiarchus crinitus*)
- Grey Catbird (*Dumetella carolinensis*)

- Mourning Dove (*Zenaida macroura*)
- Northern Cardinal (*Cardinalis cardinalis*)
- Northern Flicker (*Colaptes auratus*)
- Northern House Wren (*Troglodytes aedon*)
- Red-eye Vireo (*Vireo olivaceus*)
- Red-wing Blackbird (*Agelaius phoeniceus*)
- Song Sparrow (*Melospiza melodia*)
- Veery (*Catharus fuscescens*)
- Warbling Vireo (*Vireo gilvus*)
- Yellow Warbler (*Setophaga petechia*)

A full species list can be found within Appendix B.

4.4.2 Significant Wildlife Habitat

The immediate study areas primarily contain anthropogenically disturbed areas, such as residential, industrial and parkland zones, as well as cultural meadows, which are dominated by both non-native and successional flora species resulting in generally poor wildlife habitat quality. However, there are ecotones within the 30 m Natural Environment Buffers and 120 m adjacent lands which offer potential suitable wildlife habitat and important ecological functions.

Located within the 30 m Natural Environment Buffer associated with the WTP, the FOD3-1 (Dry - Fresh Poplar Deciduous Forest Type), although primarily dominated by successional Eastern Cottonwood and Trembling Aspen, extended well beyond the 120 m adjacent lands. Due to the size and connection to the surrounding forested areas and wetlands, this forested ecotone could provide suitable wildlife habitat as well as other important functions. In addition, the Ottawa River occurs within the 120 m adjacent lands. The Ottawa River is known to support a diverse range of fish and aquatic species, including several SAR. As such the FOD3-1 and Ottawa River will be brought over to the future NFIA report.

Proximal to the Caron Booster Station is an unevaluated wetland which occurs within and extends beyond the 120 m adjacent lands. This wetland is part of a larger complex of wetlands. As such, it will also be brought over to the future NFIA report

SWH is divided into four main categories as described in subsection 2.1.8. (MNR, 2000), and the following subsections provides comment on whether SWH habitat occurs within the Project Locations and 120 m adjacent lands.

4.4.2.1 Seasonal Concentration Areas

Background screening did not identify any Season Concentration Areas within the WTP, Caron Booster Station or their associated 120 m adjacent lands. At the time of field surveys, Seasonal Concentration Areas such as winter deer yards, bird breeding colonies, or hibernation sites for snakes, within the Project Locations and their associated 30 m Natural Environment Buffers were not identified.

4.4.2.2 Rare Vegetation Communities and Specialized Habitat for Wildlife

Background screening did not identify any Rare Vegetation Communities or Specialized Habitat for Wildlife within the WTP, Caron Booster Station or their 120 m adjacent lands. Fieldwork conducted within the Project Locations and their 30 m Natural Environment Buffers did not identify any Rare Vegetation Communities or Specialized Habitat for Wildlife.

4.4.2.3 Habitat for Species of Conservation Concern

Habitat for Species of Conservation Concern (not including Endangered or Threatened Species) may be present within the study areas and their associated 30 m Environmental Buffer. Chipping Sparrow (S5B, S3N[1]), Eastern Towhee (S4B, S3N), and Grey Catbird (S5B, S3N) are provincially rare (S1-S3) species that were observed during site visits. While no species of Special Concern, as per the *ESA*, were identified during field investigations, as indicated within Table 2, numerous Special Concern avifauna species may occur based on the background investigation. As such, due to their potential to occur within the Project Locations, they will be discussed further within Section 6.

[1]B = status qualifier: breeding; N = status qualifier: nonbreeding

4.4.2.4 Animal Movement Corridors

Although naturalized animal movement corridors may occur within areas of open spaces, such as the trail which runs through FOD3-1 or along the banks of the Ottawa River, as per the SWH Criteria (MNR, 2000) no animal movement corridors were identified through background screening or field investigations within the Project Locations or their associated 30 m Natural Environment Buffers. As such, Animal Movement Corridors will not be carried over to the future EIA report.

5. Evaluation of Existing and Potential Significant Natural Features and SAR

5.1 Species at Risk Screening and Determinations Made

Table 5 provides information on SAR data retrieved from the NHIC, OBBA, MECP and iNaturalist. A discussion of occurrence (based on field surveys or sufficient background data) or likelihood of occurrence (based on site conditions, even if occurrence was not recorded during field surveys) is provided.

Table 5. Evaluation of SAR Data and Likelihood of Occurrence

Species	Determination based on Field Investigations and Background Data [a]	Occurrence within the Project Location	Likelihood of Occurrence
Birds			
Bank Swallow	Vertical faces in silt and sand deposits do not occur within the Project Locations, 30 m Natural Environment Buffers, however the bank of the Ottawa River occurs within the 120 m adjacent lands and may provide suitable nesting habitat.	No	Unlikely within the Project Locations or 30 m Natural Environment Buffers but possible within the 120 m adjacent lands.
Barn Swallow	Buildings and structures that may be suitable for nesting and roosting occur within the Project Locations, 30 m Natural Environment Buffers and 120 m adjacent lands.	No	Possible with the Project Locations, 30 m Natural Environment Buffers and 120 m adjacent lands
Black Tern	No shallow, cattail marshes occur within the Project Locations or their 30 m Natural Environment Buffers but could be possible in the 120 m adjacent lands.	No	Unlikely within the Project Locations or 30 m Natural Environment Buffers but possible within the 120 m adjacent lands.
Bobolink	There are no tallgrass prairies, hayfields or other open meadows large enough to support nesting and foraging that occur within the Project Locations, 30 m Natural Environment Buffers 0r 120 m adjacent lands.	No	Unlikely within the Project Locations, 30 m Natural Environment Buffers or 120 m adjacent lands
Canada Warbler	Deciduous and coniferous forests, with a well-developed, dense shrub layer occur within the WTP and its 30 m Natural Environment Buffer and 120 m adjacent lands.	No	Possible within the WTP and its associated 30 m Natural Environment Buffer and 120 m adjacent lands
Chimney Swift	There are buildings and other man-made structures which could be suitable for nesting and roosting that occur within the Project Locations, 30 m Natural Environment Buffer and 120 m adjacent lands.	No	Marginally possible in the Project Locations, 30 m Natural Environment Buffers, and 120 m adjacent lands but was not observed during targeted nightjar surveys.

Species	Determination based on Field Investigations and Background Data [a]	Occurrence within the Project Location	Likelihood of Occurrence
Common Nighthawk	Open areas occur within the Project Locations, however, they are surrounded by anthropogenic disturbance. There may not be enough area for the Common Nighthawk to find attractive nesting opportunities.	No	Unlikely within the Project Locations, 30 m Natural Environment Buffer and 120 m adjacent lands; and was not observed during targeted nightjar surveys.
Eastern Meadowlark	There are no moderately tall grasslands, such as pastures and hayfields that occur within the Project Locations, 30 m Natural Environment Buffers or 120 m adjacent lands.	No	Unlikely within the Project Location, 30 m Natural Environment Buffer or 120 m adjacent lands.
Eastern Whip-poor-will	There are a mix of open and forested areas which occur within the 30 m Natural Environment Buffers and 120 m adjacent lands associated with each Project Location.	Yes	This species was observed just outside the Caron Booster Station's 30 m Natural Environment Buffer during targeted nightjar surveys. See Figure 5b.
Eastern Wood-pewee	Intermediate-age mature deciduous and mixed forests with little understory vegetation do not occur within the Project Locations or 30 m Natural Environment Buffers but may occur within the 120 m adjacent lands.	No	Unlikely within the Project Locations or 30 m Natural Environment Buffers but possible within the 120 m adjacent lands.
Golden-winged Warbler	Sufficient area with young shrubs surrounded by mature forests do not occur within the Project Locations or 30 m Natural Environment Buffers but may occur within the 120 m adjacent lands.	No	Unlikely within the Project Locations or 30 m Natural Environment Buffers but possible within the 120 m adjacent lands.
Grasshopper Sparrow	Open grassland areas, hayfields and large sparsely vegetated areas do not occur within the Project Locations, 30 m Natural Environment Buffers or 120 m adjacent lands.	No	Unlikely within the Project Locations, 30 m Natural Environment Buffers or 120 m adjacent lands.
Least Bittern	Cattail marshes, and other wetland habitats are not present within the Project Locations, 30 m Natural Environment Buffers but may occur within the 120 m adjacent lands.	No	Unlikely within the Project Locations or 30 m Natural Environment Buffers but possible within the 120 m adjacent lands.
Loggerhead Shrike	Pasture or other grasslands with scattered low trees and shrubs do not occur within the Project Locations, 30 m Natural Environment Buffers or 120 m adjacent lands.	No	Unlikely within the Project Locations, 30 m Natural Environment Buffers or 120 m adjacent lands.

Species	Determination based on Field Investigations and Background Data [a]	Occurrence within the Project Location	Likelihood of Occurrence
Peregrine Falcon	There are no tall, steep cliff ledges or buildings close to large bodies of water that occur within the Project Locations, 30 m Natural Environment Buffers or 120 m adjacent lands.	No	Unlikely within the Project Locations, 30 m Natural Environment Buffers or 120 m adjacent lands.
Red-headed Woodpecker	Open woodland and woodland edges are present within the Project Locations, 30 m Natural Environment Buffers and 120 m adjacent lands.	No	Possible within the Project Locations, 30 m Natural Environment Buffers or 120 m adjacent lands.
Short-eared Owl	No grasslands, marshes or tundra occur within the Project Locations, 30 m Natural Environment Buffers or 120 m adjacent lands.	No	Unlikely within the Project Locations, 30 m Natural Environment Buffers or 120 m adjacent lands.
Mammals			
Eastern small-Footed Myotis (*Myotis leibii*)	Suitable rocks, outcrops, bridges or caves do not occur within the Project Locations, 30 m Natural Environment Buffers or 120 m adjacent lands.	No	Unlikely within the Project Locations, 30 m Natural Environment Buffers or 120 m adjacent lands.
Little Brown Myotis (*Myotis lucifugus*)	No snag trees were identified within the Project Locations, 30 m Natural Environment Buffers or 120 m adjacent lands during leaf-on surveys. However, treed areas occur within the Project Locations, 30 m Natural Environment Buffers and 120 m adjacent lands. In addition, the Ottawa River could provide suitable foraging habitat.	No	Possible within the Project Locations, 30 m Natural Environment Buffers and 120 m adjacent lands.
Tricolored Bat (*Perimyotis subflavus*)	No snag trees were identified within the Project Locations, 30 m Natural Environment Buffers or 120 m adjacent lands during leaf-on surveys. However, treed areas occur within the Project Locations, 30 m Natural Environment Buffers and 120 m adjacent lands. In addition, the Ottawa River could provide suitable foraging habitat.	No	Possible within the Project Locations, 30 m Natural Environment Buffers and 120 m adjacent lands.
Northern Myotis (*Myotis septentrionalis*)	No snag trees were identified within the Project Locations, 30 m Natural Environment Buffers or 120 m adjacent lands during leaf-on surveys. However, treed areas occur within the Project Locations, 30 m Natural Environment Buffers and 120 m adjacent lands. In addition, the Ottawa River could provide suitable foraging habitat.	No	Possible within the Project Locations, 30 m Natural Environment Buffers and 120 m adjacent lands.

Species	Determination based on Field Investigations and Background Data [a]	Occurrence within the Project Location	Likelihood of Occurrence
Eastern Red Bat (*Lasiurus borealis*)	No snag trees were identified within the Project Locations, 30 m Natural Environment Buffers or 120 m adjacent lands during leaf-on surveys. However, treed areas occur within the Project Locations, 30 m Natural Environment Buffers and 120 m adjacent lands. In addition, the Ottawa River could provide suitable foraging habitat.	No	Possible within the Project Locations, 30 m Natural Environment Buffers and 120 m adjacent lands.
Hoary Bat (*Lasiurus cinereus*)	No snag trees were identified within the Project Locations, 30 m Natural Environment Buffers or 120 m adjacent lands during leaf-on surveys. However, treed areas occur within the Project Locations, 30 m Natural Environment Buffers and 120 m adjacent lands. In addition, the Ottawa River could provide suitable foraging habitat.	No	Possible within the Project Locations, 30 m Natural Environment Buffers and 120 m adjacent lands.
Silver-haired Bat (*Lasionycteris noctivagans*)	No snag trees were identified within the Project Locations, 30 m Natural Environment Buffers or 120 m adjacent lands during leaf-on surveys. However, treed areas occur within the Project Locations, 30 m Natural Environment Buffers and 120 m adjacent lands. In addition, the Ottawa River could provide suitable foraging habitat.	No	Possible within the Project Locations, 30 m Natural Environment Buffers and 120 m adjacent lands.
Herptiles			
Snapping Turtle (*Chelydra serpentina*)	There are no shallow waters with organic substrate that are present within the Project Locations or 30 m Natural Environment Buffers but may occur within the Ottawa River which is located within the 120 m adjacent lands of the WTP.	No	Unlikely within the Project Locations or 30 m Natural Environment Buffers but possible within the 120 m adjacent lands.
Midland Painted Turtle[b] (*Chrysemys picta marginata*)	Slow moving, shallow wetlands and water bodies with abundant basking sites and organic substrate do not occur within the Project Location or 30 m Natural Environment Buffer but may occur within the 120 m adjacent lands.	No	Unlikely within the Project Locations or 30 m Natural Environment Buffers but possible within the 120 m adjacent lands.
Aquatics			
Americal Eel	The Project Locations and 30 m Natural Environment Buffers do not provide suitable aquatic habitat, however the Ottawa River, located within the 120 m adjacent lands of the WTP may provide suitable habitat.	No	Unlikely within the Project Locations or 30 m Natural Environment Buffers but possible within the 120 m adjacent lands.

Species	Determination based on Field Investigations and Background Data [a]	Occurrence within the Project Location	Likelihood of Occurrence
Channel Darter	The Project Locations and 30 m Natural Environment Buffers do not provide suitable aquatic habitat, however the Ottawa River, located within the 120 m adjacent lands of the WTP may provide suitable habitat.	No	Unlikely within the Project Locations or 30 m Natural Environment Buffers but possible within the 120 m adjacent lands.
Cutlip Minnow	The Project Locations and 30 m Natural Environment Buffers do not provide suitable aquatic habitat, however the Ottawa River, located within the 120 m adjacent lands of the WTP may provide suitable habitat.	No	Unlikely within the Project Locations or 30 m Natural Environment Buffers but possible within the 120 m adjacent lands.
Hickorynut	The Project Locations and 30 m Natural Environment Buffers do not provide suitable aquatic habitat, however the Ottawa River, located within the 120 m adjacent lands of the WTP may provide suitable habitat.	No	Unlikely within the Project Locations or 30 m Natural Environment Buffers but possible within the 120 m adjacent lands.
Lake Sturgeon (Great Lakes - Upper St. Lawrence River population)	The Project Locations and 30 m Natural Environment Buffers do not provide suitable aquatic habitat, however the Ottawa River, located within the 120 m adjacent lands of the WTP may provide suitable habitat.	No	Unlikely within the Project Locations or 30 m Natural Environment Buffers but possible within the 120 m adjacent lands.
Northern Brook Lamprey	The Project Locations and 30 m Natural Environment Buffers do not provide suitable aquatic habitat, however the Ottawa River, located within the 120 m adjacent lands of the WTP may provide suitable habitat.	No	Unlikely within the Project Locations or 30 m Natural Environment Buffers but possible within the 120 m adjacent lands.
River Redhorse	The Project Locations and 30 m Natural Environment Buffers do not provide suitable aquatic habitat, however the Ottawa River, located within the 120 m adjacent lands of the WTP may provide suitable habitat.	No	Unlikely within the Project Locations or 30 m Natural Environment Buffers but possible within the 120 m adjacent lands.
Silver Lamprey (Great Lakes - Upper St. Lawrence populations)	The Project Locations and 30 m Natural Environment Buffers do not provide suitable aquatic habitat, however the Ottawa River, located within the 120 m adjacent lands of the WTP may provide suitable habitat.	No	Unlikely within the Project Locations or 30 m Natural Environment Buffers but possible within the 120 m adjacent lands.
Vascular Plants			

Species	Determination based on Field Investigations and Background Data [a]	Occurrence within the Project Location	Likelihood of Occurrence
Black Ash	Swamps, floodplains and fens do not occur within the Project Locations or 30 m Natural Environments, but may occur within the 120 m adjacent lands.	No	Unlikely within the Project Locations or 30 m Natural Environment Buffers but possible within the 120 m adjacent lands.

[a] Habitat information obtained from the corresponding Ontario Species at Risk page (https://www.ontario.ca/page/species-risk)

[b] Habitat information obtained from the corresponding COSEWIC Species Assessment (https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry/cosewic-assessments.html)

[c] Bank Swallow observed within 30 m Natural Environment from the Third Line Pump Station. Works are not anticipated at the Third Line Pump Station as such this species will not be carried over to the EIA report.

5.1.1 Natural Features

FOD3-1: Dry-Fresh Poplar Deciduous Forest Type (Figure 5a) occurred slightly within the Project Location, however no SAR were observed within the Project Locations (i.e. area of proposed works). In addition, following Natural Features and SAR were observed within their associated 30 m Natural Environment Buffer and/or 120 m adjacent lands:

- Woodlands: FOD3-1: Dry-Fresh Poplar Deciduous Forest Type (Figure 5a) and woodlands (Figure 5a-b)
- Fish Habitat: Ottawa River (Figure 5a)
- PSWs and wetlands: Rockland Marsh (Figure 5a) and unevaluated wetlands (Figure 5a-b)
- SAR: Eastern Whip-poor-will (shown on Figure 5b as SAR1)

Note: ELC surveys confirmed that the boundaries of the unevaluated wetland shown on the map are outside the project location and its 30 m buffer (Figure 3).

The Natural Features above will be brought over to the future NFIA report as indirect impacts could occur. Based on information from the NHIC and OBBA (Table 2), the Project Locations and 120 m adjacent lands may provide suitable habitat for numerous SAR avifauna (Table 5). The NHIC also suggested that Snapping Turtle and Midland Painted Turtle may occur within the Project Locations and 120 m adjacent lands. These species were not observed during site visits and suitable habitat is not present within the Project Location or 30 m Natural Environment Buffers but may occur within the 120 m adjacent lands. These species will be discussed further in Section 6.

N

0 20 40
Meters

Watercourse
Woodlands

Wetland
Unevaluated Wetland
Evaluated Wetland

FOD3-1,Dry - Fresh Poplar Deciduous Forest Type
30 m Natural Environment Buffer
Project Location

Notes:
1. Basemaps Source: Maxar, Microsoft
2. Natural Features are from Land Information Office.

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Figure 5a
Natural Heritage Features (NHFs) – Water Treatment Plant
Natural Features and Impact Assessment Report
Clarence-Rockland – WTP expansion and Caron Booster Station Upgrade
The City of Clarence-Rockland
Clarence-Rockland, Ontario

Jacobs

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Notes:
1. Basemaps Source: Maxar, Microsoft
2. Natural Features are from Land Information Office.

DRAFT

Figure 5b
Natural Heritage Features (NHFs) – Caron Booster Station
Natural Features and Impact Assessment Report
Clarence-Rockland – WTP expansion and Caron Booster Station Upgrade
The City of Clarence-Rockland
Clarence-Rockland, Ontario

Jacobs

6. Impact Assessment

A comprehensive impact assessment, recommendations and mitigation will be provided after completion of 60% and submitted with the 90% design package once work areas and construction techniques are firmed up through an updated current report. However, a set of preliminary mitigation which will likely be required is provided below:

- Vegetation removal, grading, and heavy equipment use shall only occur within the Project Location where these areas have been previously demarcated and approved to allow construction works. Silt fencing should be erected along the extremities of the disturbance limits.
- Multibarrier ESC measures (i.e.,Filter Socks and heavy-duty silt fencing) should be erected directly adjacent to proposed works which abut natural features i.e. Woodlands (FOD3-1, Figure 5a-b), fish habitat (i.e. Ottawa River if the work is not setback by more than 30 m), PSWs and Rockland Marsh (Figure 5a) and unevulated wetlands (Figure 5a-b) if the proposed works are within 30 m of these features.
- An ESC plan shall be developed (at the 90% stage) by a qualified person and be Site specific. The ESC plan shall be treated as a live document and updated as required.
- Stockpiled material shall be covered to prevent erosion and potential sedimentation from entering Natural Features.
- Staging and access areas should be planned to be located primarily within existing, open, and disturbed areas.
- Access and movement of vehicles and equipment must be controlled to limit the introduction and spread of invasive species. Vehicles and equipment shall be inspected prior to entering and leaving the Project Location to verify the equipment is clean and free of invasive species. Equipment shall be inspected and used only if in good working order. The contractor is to follow and implement the Clean Equipment Protocol for Industry Inspecting and cleaning equipment for the purposes of invasive species prevention (Ontario Invasive Plant Council, 2013). This document should be added to the Projects Contract Specifications.
- If feasible, vegetation removal and grading activities should be scheduled to avoid times of high runoff volumes (spring and fall) to prevent erosion and potential sedimentation.
- The Project Location shall be revegetated with native species as soon as possible following disturbance.
- A designated and lined refuelling area with appropriate spill containment shall be established at a minimum of 30 m from any watercourse/water feature. A spill response team member will be designated as a point of contact in the case of an accident or spill to verify the proper and timely implementation of Site response controls. Contractor shall provide a spill control plan.
- Absorbent materials and equipment required to control and clean up spills of deleterious substances shall be available onsite. Spills and leaks of deleterious substances shall be immediately contained and cleaned up in accordance with regulatory requirements and reported immediately to the Ontario Spills Action Centre (SAC) at 1.800.268.6060.
- Tree and vegetation removals should be avoided from April 15 – August 31, conforming to the Project Location's general nesting period (Zone C3), corresponding to the MBCA (Government of

Canada, 2018). If the mid-April to late August construction timing window cannot be applied for construction, the following should be implemented:

- Have a qualified avifauna biologist sweep areas of proposed construction and flag any nests observed.
- Implement appropriate buffers and timing windows based on type of nests observed per the MBCA.
- Nest sweeps are valid for 1 week from the date of survey
- If in-water works are required, isolated in-water work area should be dewatered (if applicable) and fish to be relocated by qualified aquatic biologists. A License to Collect Fish for Scientific Purposes will have to be retained from MNRF.
- Contractor should set-up a Flood Mitigation Plan
- Submit a Request for Review (RfR) to DFO if applicable.
- An environmental inspector should monitor for sediment plumes. The contractor should be prepared to carry out Turbidity/total suspended solids monitoring if there is a risk that sedimentation from near water works may occur or if plumes are observed.
- Exclusion fencing is recommended to prevent herptiles from entering the Construction Footprint proximal to the Ottawa River/woodlands corridor and wetland habitat (Figure 5) as Snapping Turtle and Midland Painted Turtle was listed in the background review. Hardware cloth, chain link fence (¼" mesh or smaller), concrete, aluminum, vinyl wall, or prefabricated plastic wildlife fence should be utilized (MNRF, 2016). MNRF's Best Management Practices for Mitigating the Effects of Roads on Amphibian and Reptile Species at Risk in Ontario should be followed for installation and methodology for erecting exclusion fencing. Additionally, site personnel should be trained in the identification of SAR herptiles. If these species are identified during or prior to construction, they should be allowed to move from the area freely and all work activities must be halted. If a SAR is identified within the Construction Footprint, the Contract Administrator should contact MECP. SAR herptiles are not to be relocated without direct permission from the MECP.

7. Signature

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Appendix A
Ontario Breeding Bird Atlas and Natural Heritage Information Centre Results

NHIC Data for Clarence-Rockland

Clarence-Rockland WTP

OGF ID	Element Type	Common Name	Scientific Name	S Rank	SARO Status	COSEWIC Status	ATLAS NAD83 IDENT
1111130	SPECIES	River Redhorse	*Moxostoma carinatum*	S2	SC	SC	18VR7644
1111130	SPECIES	Midland Painted Turtle	*Chrysemys picta marginata*	S4		SC	18VR7644
1111130	SPECIES	Silver Lamprey (Great Lakes - Upper St. Lawrence populations)	*Ichthyomyzon unicuspis pop. 1*	S3	SC	SC	18VR7644
1111130	SPECIES	American Eel	*Anguilla rostrata*	S1S2	END	THR	18VR7644
1111130	SPECIES	Lake Sturgeon (Great Lakes - Upper St. Lawrence River population)	*Acipenser fulvescens pop. 3*	S2	END	THR	18VR7644
1111130	SPECIES	Black Tern	*Chlidonias niger*	S3B,S4M	SC	NAR	18VR7644
1111130	SPECIES	Snapping Turtle	*Chelydra serpentina*	S4	SC	SC	18VR7644

Caron Booster Station

OGF ID	Element Type	Common Name	Scientific Name	S Rank	SARO Status	COSEWIC Status	ATLAS NAD83 IDENT
1111149	SPECIES	Midland Painted Turtle	*Chrysemys picta marginata*	S4		SC	18VR7843
1111149	SPECIES	American Eel	*Anguilla rostrata*	S1S2	END	THR	18VR7843
1111149	SPECIES	Least Bittern	*Botaurus exilis*	S4B	THR	THR	18VR7843
1111149	SPECIES	Snapping Turtle	*Chelydra serpentina*	S4	SC	SC	18VR7843

Ontario Breeding Bird Atlas

Square Summary (18VR74)

#species (1st atlas)				#species (2nd atlas)				#hours		#pc done	
poss	prob	conf	total	poss	prob	conf	total	1st	2nd	road	offrd
32	21	34	87	33	28	29	90	31	113	25	0

Region summary (#24: Ottawa)

#squares	#sq with data		#species		#pc done	target #pc
	1st	2nd	1st	2nd		
86	85	86	177	184	2503	1075

Target number of point counts in this square: 17 road side, 8 off road (4 in open wetlands, 3 in deciduous forest, 1 in pasture/grassland). Please try to ensure that each off-road station is located such that the entire 100m radius circle is within the prescribed habitat.

SPECIES	Code		%		SPECIES	Code		%		SPECIES	Code		%	
	1st	2nd	1st	2nd		1st	2nd	1st	2nd		1st	2nd	1st	2nd
Canada Goose		H	7	90	Bald Eagle †			1	9	Black/Yell-billed Cuckoo			0	24
Wood Duck	H	T	57	88	Northern Harrier			68	82	Black-billed Cuckoo	S		72	86
Gadwall	P	P	7	9	Sharp-shinned Hawk		H	43	59	Eastern Screech-Owl			28	40
American Wigeon	P		8	11	Cooper's Hawk			22	45	Great Horned Owl	H	FY	77	59
American Black Duck	P	H	61	54	Northern Goshawk			24	29	Barred Owl			35	50
Mallard	FY	P	82	96	Red-should Hawk †			37	41	Long-eared Owl			34	13
Blue-winged Teal	NE		56	47	Broad-winged Hawk			54	61	Short-eared Owl †			5	12
Northern Shoveler	FY		5	10	Red-tailed Hawk	P	H	78	93	North Saw-whet Owl			61	32
Northern Pintail			11	15	American Kestrel	FY	H	85	90	Common Nighthawk			40	25
Green-winged Teal		H	0	25	Merlin			1	51	Whip-poor-will			57	41
Ring-necked Duck			4	8	Peregrine Falcon †			1	2	Chimney Swift			58	32
Lesser Scaup			4	10	Virginia Rail	S	NE	51	60	Ruby-thr Hummingbird	H	H	74	98
Hooded Merganser		H	17	51	Sora	S		32	50	Belted Kingfisher	NY	NB	84	96
Common Merganser			12	29	Common Gallinule	H		27	13	Red-headed Woodpecker †			16	9
Red-breast Merganser ‡			1	0	American Coot			7	12	Yellow-bellied Sapsucker		P	58	97
Ruddy Duck †			1	8	Coot/Moorhen			0	0	Downy Woodpecker	H	CF	88	100
Gray Partridge			34	29	Killdeer	H	NE	89	94	Hairy Woodpecker	H	FY	85	98
Ring-necked Pheasant	NE		10	3	Rock Dove	H	NY	77	94	Black-backed Woodpecker ‡			1	3
Ruffed Grouse	NY	T	80	94	Spotted Sandpiper	A	P	75	83	Northern Flicker	FY	T	88	100
Wild Turkey			1	73	Upland Sandpiper	FY	H	58	58	Pileated Woodpecker	FY	H	65	93
Common Loon			35	44	Common Snipe	D	T	82	93	Olive-sided Flycatcher			30	17
Pied-billed Grebe	S	H	24	47	American Woodcock	H		64	93	Eastern Wood-Pewee	T	T	88	97
American Bittern	S	NY	56	74	Wilson's Phalarope †			5	4	Yellow-bellied Flycatcher			9	6
Least Bittern †			9	10	Ring-billed Gull §			4	6	Alder Flycatcher	S	T	75	95
Great Blue Heron §		H	74	67	Herring Gull ‡§			1	3	Willow Flycatcher	S	S	32	52
Green Heron §	V	T	57	68	Black Tern † §	FY		18	10	Least Flycatcher	S	T	84	95
Black-crown N.-Heron † §			0	2	Common Tern §			5	8	Eastern Phoebe	AE	S	85	100
Turkey Vulture		H	40	86	Mourning Dove	S	FY	82	100	Gr Crested Flycatcher	FY	T	88	100
Osprey	P	FY	27	52	Yellow-billed Cuckoo ‡			7	2	Eastern Kingbird	CF	P	89	98

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Ontario Breeding Bird Atlas - Summary Sheet for Square 18VR74 (page 2 of 3)

SPECIES	Code		%		SPECIES	Code		%		SPECIES	Code		%	
	1st	2nd	1st	2nd		1st	2nd	1st	2nd		1st	2nd	1st	2nd
Loggerhead Shrike †			20	1	Veery	FY	S	85	96	Ovenbird	S	T	84	100
Yellow-throated Vireo			10	9	Swainson's Thrush			12	17	North Waterthrush		S	65	82
Blue-headed Vireo		H	14	44	Hermit Thrush		H	54	83	Mourning Warbler	T		76	77
Warbling Vireo	T	T	89	96	Wood Thrush	FY	T	82	95	Common Yellowthroat	A	A	87	100
Philadelphia Vireo ‡			2	6	American Robin	NY	NE	89	100	Canada Warbler			29	36
Red-eyed Vireo	A	T	88	100	Gray Catbird	CF	NE	87	98	Eastern Towhee			24	19
Gray Jay ‡			1	2	Northern Mockingbird			11	18	Chipping Sparrow	FY	T	89	98
Blue Jay	H	NY	89	100	Brown Thrasher	H	T	88	91	Clay-colored Sparrow			22	26
American Crow	H	H	89	100	European Starling	NY	CF	88	98	Field Sparrow	FY		64	62
Common Raven			28	88	Cedar Waxwing	H	T	88	100	Vesper Sparrow			70	66
Horned Lark			62	58	Golden-winged Warbler			12	9	Savannah Sparrow	CF	FY	87	95
Purple Martin		AE	57	50	Blue/Gold-wing Warbler			0	3	Grasshopper Sparrow			29	23
Tree Swallow	AE	NE	89	98	Tennessee Warbler ‡			1	0	Song Sparrow	CF	CF	89	100
North Rgh-wing Swallow			50	51	Nashville Warbler		S	80	91	Lincoln's Sparrow			3	8
Bank Swallow §			71	60	Northern Parula ‡			3	2	Swamp Sparrow	S	FY	84	94
Cliff Swallow §		S	67	53	Yellow Warbler	T	CF	87	98	White-throat Sparrow	FY	S	88	98
Barn Swallow	AE	NY	89	98	Chestn-sided Warbler	T	H	84	97	Dark-eyed Junco			22	33
Black-capped Chickadee	CF	CF	89	100	Magnolia Warbler			44	79	Scarlet Tanager	P		80	84
Red-breast Nuthatch	S		70	88	Cape May Warbler			0	20	Northern Cardinal		NB	21	79
White-breast Nuthatch	H	P	80	100	Black-thr Blue Warbler			30	54	Rose-breast Grosbeak	FY	H	88	100
Brown Creeper	FY	H	50	65	Yellow-rumped Warbler		S	64	86	Indigo Bunting	A		85	93
House Wren	T	H	75	90	Black-thr Green Warbler		S	38	84	Bobolink	T	D	85	96
Winter Wren			40	69	Blackburnian Warbler			37	46	Red-wing Blackbird	AE	NE	89	100
Sedge Wren			8	20	Pine Warbler	S		38	69	Eastern Meadowlark	T	S	83	96
Marsh Wren	S	T	24	43	Palm Warbler ‡			1	3	Common Grackle	CF	NE	89	98
Golden-crown Kinglet			32	36	Bay-breasted Warbler ‡			1	2	Brown-head Cowbird	FY	P	89	100
Ruby-crown Kinglet			32	13	Cerulean Warbler †			1	0	Baltimore Oriole	AE	CF	89	97
Blue-gr Gnatcatcher ‡			4	2	Black-white Warbler	S	T	80	98	Purple Finch	S	H	81	88
Eastern Bluebird		AE	47	76	American Redstart	FY	S	84	93	House Finch		P	4	69

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Ontario Breeding Bird Atlas - Summary Sheet for Square 18VR74 (page 3 of 3)

SPECIES	Code 1st	Code 2nd	% 1st	% 2nd
Red Crossbill			12	5
White-winged Crossbill			7	17
Pine Siskin		H	32	33
American Goldfinch	H	NY	89	100
Evening Grosbeak			34	61
House Sparrow	H	CF	83	89

This list includes all species found during the Ontario Breeding Bird Atlas (1st atlas: 1981-1985, 2nd atlas: 2001-2005) in the region #24 (Ottawa). Underlined species are those that you should try to add to this square. They have not yet been reported during the 2nd atlas, but were found during the 1st atlas in this square or have been reported in more than 50% of the squares in this region during the 2nd atlas so far. In the species table, "BE 2nd" and "BE 1st" are the codes for the highest breeding evidence for that species in square 18VR74 during the 2nd and 1st atlas respectively. The % columns give the percentage of squares in that region where that species was reported during the 2nd and 1st atlas (this gives an idea of the expected chance of finding that species in region #24). Rare/Colonial Species Report Forms should be completed for species marked: § (Colonial), ‡ (regionally rare), or † (provincially rare). Current as of 9/05/2025. An up-to-date version of this sheet is available from http://www.birdsontario.org/atlas/summaryform.jsp?squareID=18VR74

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Appendix B
Flora and Fauna List

	Common Name	Scientific Name
Birds	American Crow	*Corvus brachyrhynchos*
	American Goldfinch	*Spinus tristis*
	American Redstart	*Setophaga ruticilla*
	American Robin	*Turdus migratorius*
	Black-and-white Warbler	*Mniotilta varia*
	Black-capped Chickadee	*Poecile atricapillus*
	Blue Jay	*Cyanocitta cristata*
	Brown-headed Cowbird	*Molothrus ater*
	Canada Goose	*Branta canadensis*
	Chipping Sparrow	*Spizella passerina*
	Common Grackle	*Quiscalus quiscula*
	Downy Woodpecker	*Picoides pubescens*
	Eastern Towhee	*Pipilo erythrophthalmus*
	Eastern Whip-poor-will*	*Antrostomus vociferus*
	European Starling	*Sturnus vulgaris*
	Great Crested Flycatcher	*Myiarchus crinitus*
	Grey Catbird	*Dumetella carolinensis*
	Mourning Dove	*Zenaida macroura*
	Northern Cardinal	*Cardinalis cardinalis*
	Northern Flicker	*Colaptes auratus*
	Northern House Wren	*Troglodytes aedon*
	Red-eye Vireo	*Vireo olivaceus*
	Red-winged Blackbird	*Agelaius phoeniceus*
	Song Sparrow	*Melospiza melodia*
	Veery	*Catharus fuscescens*
	Warbling Vireo	*Vireo gilvus*
	Yellow Warbler	*Setophaga petechia*
	Alternate-leaved Dogwood	*Cornus alternifolia*
	Balsam Fir	*Abies balsamea*
	Basswood	*Tilia americana*
	Black Maple	*Acer nigrum*
	Black Medick	*Medicago lupulina*
	Canada Goldenrod	*Solidago canadensis*
	Canada Thistle	*Cirsium arvense*
	Common Burdock	*Arctium minus*
	Common Dandelion	*Taraxacum officinale*
	Common Milkweed	*Asclepias syriaca*
	Common Plantain	*Plantago major*
	Common Yarrow	*Achillea millefolium*
	Crack Willow	*Salix euxina*
	Eastern Cottonwood	*Populus deltoides*
	Eastern Red Cedar	*Juniperus virginiana*
	Eastern White Cedar	*Thuja occidentalis*
	English Plantain	*Plantago lanceolata*
	European Buckthorn	*Rhamnus cathartica*

Vascular Plants	Field Horsetail	*Equisetum arvense*
	Field Sow-thistle	*Sonchus arvensis*
	Freeman's Maple	*Acer x freemanii*
	Garden Bird's-foot Trefoil	*Lotus corniculatus*
	Garlic Mustard	*Alliaria petiolate*
	Grass-leaved Goldenrod	*Euthamia graminifolia*
	Ground Ivy	*Glechoma hederacea*
	Heart-leaved Aster	*Symphyotrichum cordifolium*
	Hosta sp.	
	Hydrangea sp.	
	Kentucky Bluegrass	*Poa pratensis*
	Large-toothed Aspen	*Populus grandidentata*
	Malus sp.	
	Manitoba Maple	*Acer negundo*
	Mossy Stonecrop	*Sedum acre*
	Northern Red Oak	*Quercus rubra*
	Norway Maple	*Acer platanoides*
	Orange Daylily	*Hemerocallis fulva*
	Orchard Grass	*Dactylis glomerata*
	Oxeye Daisy	*Leucanthemum vulgare*
	Physocarpus sp.	
	Potentilla sp.	
	Prunus sp.	
	Purple Crownvetch	*Securigera varia*
	Purple-flowering Raspberry	*Rubus odoratus*
	Red Clover	*Trifolium pratense*
	Red Maple	*Acer rubrum*
	Red-osier Dogwood	*Cornus sericea*
	Rosa sp.	
	Salix sp.	
	Silver Maple	*Acer saccharinum*
	Staghorn Sumac	*Rhus typhina*
	Trembling Aspen	*Populus tremuloides*
	Tufted Vetch	*Vicia cracca*
	Virginia Creeper	*Parthenocissus quinquefolia*
	Western Poison Ivy	*Toxicodendron rydbergii*
	White Ash	*Fraxinus americana*
	White Clover	*Trifolium repens*
	White Elm	*Ulmus americana*
	White Sweet-clover	*Melilotus albus*
	Wild Carrot	*Daucus carota*
	Wild Parsnip	*Pastinaca sativa*
	Wild Strawberry	*Fragaria virginiana*
Herptiles	Northern Leopard Frog	*Lithobates pipiens*

* Species at Risk

Appendix C
Site Photos

Appendix C – Site Photos

Ecological Land Classification (ELC):

WTP:

Photo 1. Photo taken facing east, from Edwards Street, of the existing WTP building, located within the Industrial Zone.

Photo 2. Photo taken from the northeast side of the WTP, facing south of the Industrial zone with the existing WTP building in the background.

Appendix C – Site Photos

Photo 3. Photo taken facing east of FOD3-1 (Dry - Fresh Poplar Deciduous Forest Type), with a restricted access trail running through.

Photo 4. Photo taken facing north of the Parkland, which includes a portion of Du Moulin Park. The Ottawa River can be seen in the background.

Appendix C – Site Photos

Photo 5. Photo taken facing south on Edwards Street of the Residential Zone located on the west side of the WTP.

Caron Booster Station

Photo 6. Photo taken facing east of the Caron Booster Station.

Appendix C – Site Photos

Photo 7. Photo taken facing east, of the CUM1 (Mineral Cultural Meadow Ecosite) located to the north and east of the Caron Booster Station.

Photo 8. Photo taken facing west of the Residential Zone located along Caron Street, across the street from the Caron Booster Station.

Appendix C – Site Photos

Photo 9. Photo taken facing south of the Parkland community located across the street from the Caron Booster Station.

Outfall Channel at the WTP:

Photo 10. Photo taken of the outfall channel before it crosses under a grave side road running along the north side of the WTP building.

Appendix C – Site Photos

Photo 11. Photo taken facing west, showing the outfall channel after it crosses under the gravel side road.

Photo 12. Photo taken facing north, showing the outfall channel after it crosses under the gravel side road.

Appendix C – Site Photos

Photo 13. Photo taken facing west of the outfall channel before it crosses under a second gravel road that provides access to the back of the WTP.

Photo 14. Photo taken facing east of the outfall channel where it crosses under the second gravel road.

Appendix C – Site Photos

Photo 15. Photo taken facing west of the outfall channel after it emerges from under the second gravel road.

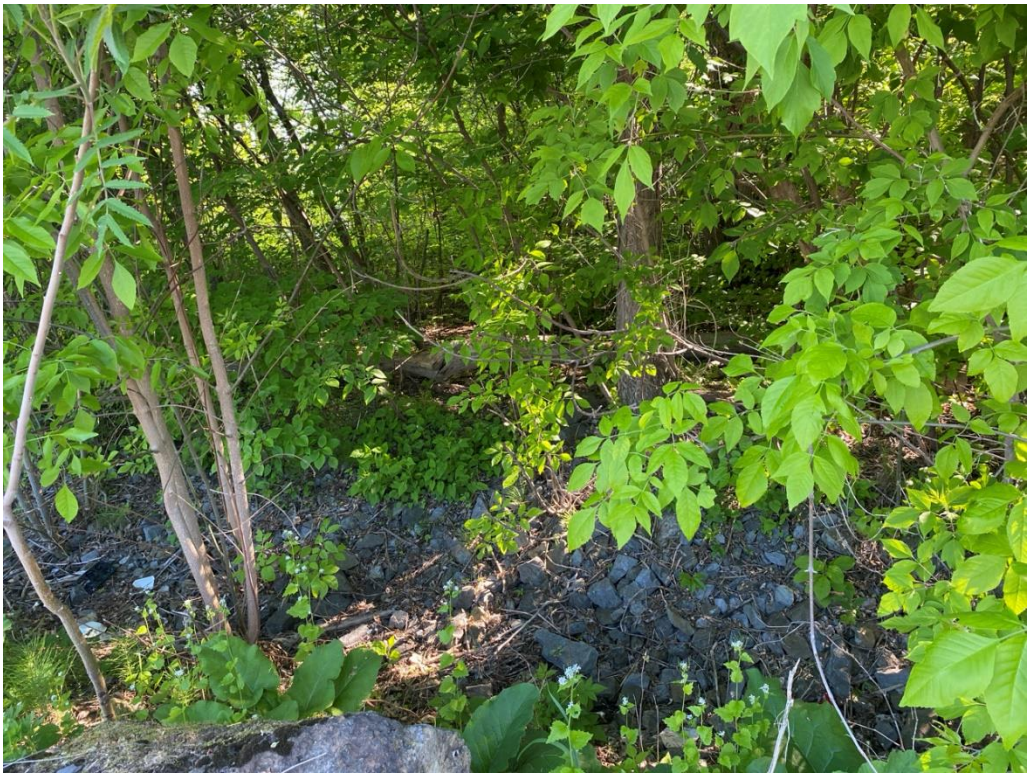

Photo 16. Photo taken facing east of the outfall channel where it runs alongside the Du Moulin parking lot at the 30 m Natural Environment Buffer.

ORIGINAL REPORT

Stage 1 Archaeological Assessment:

Rockland Water Treatment Plant,
147 Edwards Street,
Part Lot 27, Concession 1 Old Survey, and
Caron Booster Pump Station,
1441 Caron Street,
Part Lots 23 and 24, Concession 1 Old Survey,
Geographic Township of Clarence,
City of Clarence-Rockland
United Counties of Prescott-Russell, Ontario

Prepared For

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PIF: P1032-0045-2025 (Rockland Water Treatment Plant)
PIF: P1032-0046-2025 (Caron Booster Pump Station)

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Report: MH1438-REP.01

1.0 Executive Summary

Matrix Heritage, on behalf of Jacobs Consultancy Canada Inc (Jacobs), conducted a Stage 1 Archaeological Assessment of two study areas consisting of the Rockland Water Treatment Plant (WTP) at 147 Edwards Street within Lot 27, Concession 1 Old Survey, and the Caron Booster Pumping Station (BPS) located at 1441 Caron Street, within Lots 23 and 24, Concession 1 Old Survey, both in the Geographic Township of Clarence, now within the City of Clarence-Rockland, United Counties of Prescott Russell, Ontario (Map 1). This Stage 1 assessment is in support of a Schedule C Class EA in advance of the expansion of both the Rockland WTP and the Caron BPS (Map 2). This assessment was completed in accordance with the *Standards and Guidelines for Consultant Archaeologists* (Ministry of Citizenship and Multiculturalism herein MCM 2011).

The Stage 1 assessment included a review of the MCM's archaeological site database, a review of relevant environmental, historical, and archaeological literature, and primary historical research including: land registry records, census records, and historical maps.

This Stage 1 background assessment concludes that, based on criteria outlined in the *Standards and Guidelines for Consultant Archaeologists* (Section 1.3, 2011), the study areas both have pre-contact Indigenous as well as historical Euro-Canadian archaeological potential.

Based on the results of this investigation it is recommended:

1. A Stage 2 archaeological assessment be conducted by a licensed consultant archaeologist using the test pit survey method at 5 m intervals, as per Section 2.1.2 (MCM 2011), in areas with archaeological potential as shown in dark blue on Map 3 and Map 4.

2. No further archaeological study is required for the areas with low to no archaeological potential as delineated in orange on Map 3 and Map 4.

3. The Stage 2 archaeological assessment follow the requirements set out in the 2011 Standards and Guidelines for Consultant Archaeologists (MCM 2011).

2.0 Table of Contents

3.0 Project Personnel

Licensee	Andrea Jackson, MLitt (P1032)
Report Preparation	Andrea Jackson, MLitt (P1032)
Archival Research	Andrea Jackson, MLitt (P1032)
GIS and Mapping	Em Miller (R1409)
Report Review	Nadine Kopp, MA (P378)

4.0 Project Context

4.1 Development Context

Matrix Heritage, on behalf of Jacobs Consultancy Canada Inc (Jacobs), conducted a Stage 1 Archaeological Assessment of two study areas consisting of the Rockland Water Treatment Plant (WTP) at 147 Edwards Street within Lot 27, Concession 1 Old Survey, and the Caron Booster Pumping Station (BPS) located at 141 Caron Street, within Lots 23 and 24, Concession 1 Old Survey, both in the Geographic Township of Clarence, now within the City of Clarence-Rockland, United Counties of Prescott Russell, Ontario (Map 1). This Stage 1 assessment is in support of a Schedule C Class EA in advance of the expansion of both the Rockland WTP and the Caron BPS (Map 2). This assessment was completed in accordance with the *Standards and Guidelines for Consultant Archaeologists* (Ministry of Citizenship and Multiculturalism herein MCM 2011).

4.2 Historical Context

4.2.1 Historic Documentation

Notable histories of the Algonquins include: *Algonquin Traditional Culture* (Whiteduck 1995) and *Executive Summary: Algonquins of Golden Lake Claim* (Holmes and Associates 1993a).

The subject properties are in the former Township of Clarence (now the City of Clarence-Rockland), in the former County of Russell (now the United Counties of Prescott and Russell). There are a limited number of published resources on the history and development of Clarence-Rockland, the township, and the county in general. These include: *La Petite Histoire de Rockland* (Laporte and Beland 1982); *Un peuple autour d'une croix: Centenaire de la paroisse Sainte-Euphemie de Casselman, 1886-1986* (Perrault 1986); *Histoire des Comtes Unis de Prescott et de Russell* (Brault 1965); and *Casselman* (Sylvestre 1984). Another useful resource is the *Prescott and Russell Supplement to the Illustrated Atlas of the Dominion of Canada* (Belden 1881).

4.2.2 Euro-Canadian Colonial History

On January 1, 1800, the townships of Cambridge, Clarence, Gloucester, Osgoode, and Russell were joined to form the County of Russell, which later merged with Prescott County to form Prescott and Russell United Counties.

In the following years, the area expanded modestly, closely tied to the lumber industry and a growing agricultural sector that expanded as the land was cleared. The northern portion of the county, along the Ottawa River, flourished with the development of the L'Orignal-Bytown road in 1840. Most of the early settlers were English, until 1849 when Joseph-Bruno Guigues, the first bishop of the diocese of Bytown, founded the Société de colonisation to encourage Catholic settlement between Ottawa and Montreal. Irish emigrants were directed to the counties of Glengarry and Stormont, while French Canadians were encouraged to settle in Prescott and Russell Counties (Perrault 1986:4). The majority of the French Canadians emigrated from the counties of Vaudreuil, Soulanges, and Deux Montagnes near Montreal as these areas were becoming very populated (Sylvestre 1984:4).
William Cameron Edwards, born in 1844 in Clarence Township, would become an important figure in both the timber industry and in Canadian politics. As a young entrepreneur he built a

sawmill in Rockland in 1868, which contributed significantly to the growth and economic development of the area. This mill was located across from the current Rockland WTP study area, and some remains of the structure are maintained within the Parc Du Moulin. He established the W. C. Edwards & Company which consisted of his large sawmill in Rockland, as well as others in Ottawa and Quebec. Edwards served as a liberal Member of Parliament representing Russell County and later was appointed to the senate.

As the community grew, the first school was opened in 1875. In the nearby cross-roads community of Clarence Creek, a French one-room school (S.S. No. 16) was built in 1881 and was one of the first brick schools in Ontario. The school was demolished in 1962. The railroad extended to the area in 1888, opening the communities to the shipment of wood, hay, merchandise, and materials. The construction of a second railroad in 1908, linking Ottawa and Hawkesbury, had a great impact on the population.

As a result of economic stagnation that prevailed after the First World War, the W. C Edwards sawmill closed its doors in 1926. Following this, a large part of the population left for the province of Quebec to find employment in the Hull and Gatineau sawmills. Economic recovery began after 1939 with the beginning of the Second World War and continued as returning soldiers led to an increase in the population. Home building experienced a boom resulting in the expansion of services like water and electricity and the establishment of a first sewer system in 1964.

4.2.3 Study Area Specific History

The study comprises two areas: the Rockland Water Treatment Plant (WTP), located at 147 Edward Street in the northwestern corner of Lot 27, Concession 1 Old Survey, at the northern end of town near the Ottawa River shoreline; and the Caron Booster Pumping Station (BPS), located at 1441 Caron Street in the southwestern end of the City of Clarence-Rockland, within the southwestern corner of Lot 23 and extending slightly into the southeastern corner of Lot 24, Concession 1 Old Survey (Map 1). Historic mapping from 1863 and 1879 do not show any structures within the current study areas (Map 5).

Caron Booster Pumping Station

Lot 23, Concession 1 Old Survey

The Crown patent for all of Lot 23 was granted to William Claus in 1821 (OLR, (50)). Two decades later, in 1841, Catherine Claus (presumably the widow of William) sold the property to John McDougall (OLR, (50)). Census records from 1861 list John McDougall, aged 63, living with his wife Isabella, and six of their adult children (Statistics Canada 1861). Both John and Isabella, as well as the three eldest children, are all recorded as having been born in Scotland, while the three younger children are listed as having been born in Upper Canada (Ontario) (Statistics Canada 1861). Based on the ages of the children, this shows the family immigrated sometime between 1833 to 1835. The two eldest sons still living at home, John and Peter, are both listed as lumberers. Historic mapping from 1863 lists John McDougall as the owner of the lot with a house depicted in the northern end of the lot, well outside the current study area (Map 5). Following his death in 1882, the will of John McDougall passed the land to his youngest of four sons, Hugh McDougall (OLR, (50)).

A few years prior to his father's passing, Hugh was listed in the 1881 census as 46 years old and living in Clarence Township with his wife Charlotte and three children ages 6 to 15 (Statistics Canada 1881). Only a year after his father's death, Hugh had sold the northern portion of the lot

to Neil McEchern and the southern portion to Samuel Lachance (OLR, (50)). By the time of the 1891 census, Hugh and his family are listed living in what was then called the North West Territories, in the district of Moose Jaw and Regina, where he is recorded as a lumber merchant (Statistics Canada 1891). Hugh McDougall died in Peachland, British Columbia in 1914 at the age of 80 (Ancestry.com 2012). His obituary claimed he went west from the Ottawa area in 1888, established a lumber yard and served as a member of the school board and city council, moved to British Columbia in 1902 where he operated a lumber mill, and died as "one of the most widely known men in the Okanagan Section" (The Ottawa Journal 1914). Following his father's death, Hugh took his lumber and mill experience from his home in Rockland to seek a new adventurous life for his family.

Soon after Samuel Lachance acquired the lot from Hugh McDougall in 1883, he sold the southern portion, where the study area lies, to Moses Lapointe (OLR, (50)). From then the property became increasingly subdivided with small plots sold as the town expanded.

Lot 24, Concession 1 Old Survey

The Crown patent for all of Lot 24 was granted to John McKindlay in 1801 (OLR, (50)). Almost 30 years later, in 1829, McKindlay sold the land to John Gray (OLR, (50)). While it is unclear in the records who the land was passed to through Gray's will in 1833, Thomas B. Anderson sold the property to Alex McDougall in 1859 (OLR, (50)). Alexander McDougall was a son of John McDougall, discussed above, and the 1861 census lists him living next door to his family, aged 32, with his wife Margaret and their four young children aged two to nine (Statistics Canada 1861). Historic mapping from 1863 shows Alex as the owner of the lot with his log house depicted in the northern end of the lot beside his family home and near "McDougall's Wharf" (Map 5).

McDougall sold the northern half of the lot to Charles Henri in 1868, and the southern half of the to Thomas Wilson in 1869 (OLR, (50)). Wilson acquired the northern portion from Henri the previous year placing him as owner of the whole lot. Wilson sold all 200 acres to Charles Surtees in 1876, who in turn subdivided the property between members of his family with the southern quarter of the lot, (where the study area lies), going to Thomas H. Surtees in 1880 (OLR, (50)). Three years later, Thomas sold the southern quarter to Augustus Chance (who the land records claim was also known as Samuel Lachance), who had acquired the southern portion of neighbouring Lot 23 the same year (OLR, (50)). Lachance sold the southern portions of both lots to Moses Lapointe that same year, and as with Lot 23, Lapointe subdivided the land into multiple smaller parcels that were sold off as the town grew.

Charles Surtees was born in 1824 and married Amelia Marston who died in 1850 at the age of only 22 (Ancestry.com 2012). Charles remarried in 1852 to Rosanna Dole (Ancestry.com 2012), and by the time of the 1861 census, Charles, aged 38, was listed living with Rosanna and four young children (Statistics Canada 1861). By the time of the 1871 census the family had grown to include seven children (Statistics Canada 1871), and by 1881 an eighth child was added to the family while the eldest three had married and moved out (Statistics Canada 1881). The 1891 census record shows a significant shift in the family situation. Charles Surtees, aged 67, is listed as a lodger living in Clarence Township with his widowed sister-in-law Maria Dole and her 18-year-old son, while Rosanna Surtees is listed working as a "woman's nurse" and living with her daughter Adelaide and her husband Frederick Watley within the City of Ottawa (Statistics Canada 1891). Charles Surtees died in 1905 at the age of 80 and is buried in Clarence Cemetery with his first wife Amelia (Ancestry.com 2012). His widow Rosanna, is listed in the 1911 census still living with her daughter Adelaide (Statistics Canada 1911), but by the time of the 1921 census Rosanna was 84 years old and listed living at the *Home for Friendless Women* in Ottawa

(Statistics Canada 1921). Established in 1887, the institution officially served as a laundry while functioning as a work house for “unfortunate and destitute women” who had nowhere to go including the poor, the old, the mentally unwell, and former inmates of the local jail (Seccaspina 2017). Rosanna Surtees died within that institution in 1932 at the age of 95 (Ancestry.com 2012).

Rockland Water Treatment Plant

Lot 27, Concession 1 Old Survey

The historic mapping from 1863 shows the owner of Lot 27 as J. McCaul and depicts a schoolhouse on the property in the central portion of the lot, just south of the L’Original-Bytown Road and to the north of the northern extent of the study area (Walling 1862) (Map 5). The land registry records show the original land grantee, Hiram Marston, sold the property to James McCaul soon after his acquisition of the lot in 1840. McCaul, and eventually his wife Ronalda, held the property until the early 1880s (OLR, (50)).

James McCaul was born in Scotland around 1806. The census records from 1861 show James, aged 54, living with his wife Ronalda, aged 31, and four children in a one and a half story stone house. Based on the age difference, it can be assumed that Ronalda was the second wife of James, and the two older children in the house, Alexander aged 18 and Catherine aged 15, were from his first marriage. James is listed as a “lumberer” and the owner of a “squared timber” business (Statistics Canada 1861), presumably he worked with or for the W. C. Edwards Mill. By the time of the 1871 census, the older children had moved out and the household consisted of James, Ronalda, their five children, and Alexander McCaul, aged 62, presumably James’s brother (Statistics Canada 1871).

The W.C. Edwards mill, discussed above, was constructed in 1868 and operated until 1926 (Balado Discovery 2017). Historic mapping shows how quickly the community grew following the establishment of the mill as the 1863 map shows no development in the area, while by the time of the 1879 map, only 16 years later, the town of Rockland is well defined with a road into the community and the sawmill labelled (Map 5). The mill was located across from the current study area, in the northeastern corner of Lot 28. The mill was once the second largest in Canada and at its peak employed up to 2000 workers (Balado Discovery 2017). The “Parc Du Moulin” on McCaul’s Point at the end of Edwards Street was inaugurated in 1967 to commemorate William Edwards, the sawmill, and the prosperity it brought to the community. Some remains of the mill are still visible in the park.

4.3 Archaeological Context

4.3.1 Pre-Contact Period

Archaeological information suggests that ancestral Anishinabe Algonquin people lived in the region for at least 8,000 years before the Europeans arrived in North America. This traditional territory is generally considered to encompass the Ottawa Valley on both sides of the river, in Ontario and Quebec, from the Rideau Lakes to the headwaters of the Ottawa River. The region is dominated by the Canadian Shield which is characterized by low rolling land of Boreal Forest, rock outcrops and muskeg with innumerable lakes, ponds, and rivers. This environment dictated much of the traditional culture and lifestyle of the Anishinabe Algonquin peoples. At the time of European contact, the Anishinabe Algonquin territory was bounded on the east by the Montagnais people, to the west by the Nipissing and Ojibwa, to the north by the Cree, and to the south by the lands of the Iroquois.

Naming

The Anishinabe Algonquin name for themselves is Anishinabeg, which means "human being." The word Algonquin supposedly came from the Malecite word meaning "they are our relatives", which French explorer Samuel de Champlain recorded as “Algoumequin” in 1603. The name stuck and the term “Algonquin” refers to those groups that have their traditional lands around the Ottawa Valley. Some confusion can arise regarding the term “Algonquian” which refers to the broader language family, of which the dialect of the Algonquin is one. The Algonquian linguistic group stretches across a significant part of North America and comprises scores of Nations related by language and customs.

Early Human Occupation

The earliest human occupation of the Americas has been documented to predate 14,000 years ago, however at this time much of eastern Canada was covered by thick and expansive glaciers. The Laurentide Ice Sheet of the Wisconsinian glacier blanketed the Ottawa area until about 11,000 B.P. when then the glacial terminus receded north of the Ottawa Valley, and water from the Atlantic Ocean flooded the region to create the Champlain Sea. This sea encompassed the lowlands of Quebec on the north shore of the Ottawa River and most of Ontario east of Petawawa, including the Ottawa Valley and Rideau Lakes. By 10,000 B.P. the Champlain Sea was receding and within 1,000 years has drained from Eastern Ontario (Watson 1990:9).

The northern regions of eastern Canada were still under sheets of glacial ice as small groups of hunters moved into the southern areas following the receding ice and water. By circa 11,000 B.P., when the Ottawa area was emerging from glaciations and being flooded by the Champlain Sea, northeastern North America was home to what are commonly referred to as the Paleo people. For Ontario the Paleo period is divided into the Early Paleo period (11,000 - 10,400 B.P.) and the Late Paleo period (10,500-9,400 B.P.), based on changes in tool technology (Ellis and Deller 1990). The Paleo people, who had moved into hospitable areas of southwest Ontario, likely consisted of small groups of exogamous hunter-gatherers relying on a variety of plants and animals who ranged over large territories (Jamieson 1999). The few possible Paleo period artifacts found, as surface finds or poorly documented finds, in the broader Eastern Ontario region are from the Rideau Lakes area (Watson 1990) and Thompson's Island near Cornwall (Ritchie 1969:18). In comparison, little evidence exists for Paleo occupations in the immediate Ottawa Valley, as can be expected given the environmental changes the region underwent, and the recent exposure of the area from glaciations and sea. As Watson suggests (Watson 1999:38), it is possible Paleo people followed the changing shoreline of the Champlain Sea, moving into the Ottawa Valley in the late Paleo Period, although archaeological evidence is absent.

Archaic Period

As the climate continued to warm, the glacial ice sheet receded further northwards allowing areas of Eastern Ontario to be travelled and occupied in what is known as the Archaic Period (9,500 – 2,900 B.P.). In the Boreal forests of the Canadian Shield this cultural period is referred to as the “Shield Archaic”. The Archaic period is generally characterized by increasing populations, developments in lithic technology (e.g., ground stone tools), and emerging trade networks.

Archaic populations remained hunter-gatherers with an increasing emphasis on fishing. People began to organise themselves into small family groups operating in a seasonal migration, congregating annually at resource-rich locations for social, religious, political, and economic activities. Sites from this period in the region include Morrison's Island-2 (BkGg-10), Morrison's Island-6 (BkGg-12) and Allumette Island-1 (BkGg-11) near Pembroke, and the Lamoureaux site (BiFs-2) in the floodplain of the South Nation River (Clermont 1999). Often sites from this time are located on islands, waterways, and at narrows on lakes and rives where caribou and deer would cross, suggesting a common widespread use of the birchbark canoe that was so prominent in later history (McMillan 1995). It is suggested that the Algonquin peoples in the Ottawa Valley area developed out of this Shield Archaic culture.

Woodland / Pre-European Contact Period

Generally, the introduction of the use of ceramics marks the transition from the Archaic Period into the Woodland period. Populations continued to participate in extensive trade networks that extended across much of North America. Social structure appears to have become increasingly complex with some status differentiation recognized in burials. Towards the end of this period domesticated plants were gradually introduced to the Ottawa Valley region. This coincided with other changes including the development of semi-permanent villages. The Woodland period is commonly divided into the Early Woodland (1000 – 300 B.C.), Middle Woodland (400 B.C. to A.D. 1000), and the Late Woodland (A.D. 900 – European Contact) periods.

The Early Woodland is typically noted via lithic point styles (i.e., Meadowood bifaces) and pottery types (i.e., Vinette I). Early Woodland sites in the Ottawa Valley region include Deep River (CaGi-1) (Mitchell 1963), Constance Bay I (BiGa-2) (Watson 1972), and Wyght (BfGa-11) (Watson 1980). The Middle Woodland period is identified primarily via changes in pottery style (e.g., the addition of decoration). Some of the best documented Middle Woodland Period sites from the region are from Leamy Lake Park (BiFw-6, BiFw-16) (Laliberté 1999). On the shield and in other non-arable environments, including portions of the Ottawa Valley, there seems to remain a less sedentary lifestyle often associated with the Algonquin groups noted in the region at contact (Wright 2004:1485–1486).

The Woodland Period Algonquin peoples had a social and economic rhythm of life following an annual cyclical pattern of seasonal movements. Subsistence was based on small independent extended family bands operating an annual round of hunting, fishing, and plant collecting. Families returned from their winter hunting camps to rejoin with other groups at major fishing sites for the summer. The movements of the people were connected with the rhythm of the natural world around them allowing for efficient and generally sustainable subsistence (Ardoch Algonquin First Nation 2015). Their annual congregations facilitated essential social, political, and cultural exchange.

The Algonquin peoples established significant trade networks and a dominance of the Ottawa River (in Algonquian the “Kitchissippi”) and its tributaries. The trade networks following the Ottawa River connected the Algonquins to an interior eastern waterway via Lake Timiskaming and the Rivière des Outaouais to the St. Maurice and Saguenay as well as the upper Great Lakes and interior via Lake Nipissing and Georgian Bay. From there their Huron allies would distribute goods to the south and west. The Iroquois and their allies along the St. Lawrence River and the lower Great Lakes dominated the trade routes on those waterways to the south thus leading to a rivalry that would escalate with European influence (Moreau et al. 2016).

European Contact

The addition of European trade goods to artifacts of native manufacture in archaeological material culture assemblages' ushers in a new period of history. Archaeological data shows that European goods penetrated the Canadian Shield as early as 1590 and the trade was well entrenched by 1600 through the trade routes established by the Anishinabe Algonquin peoples along the Ottawa River (Moreau et al. 2016) and their neighbouring allies the Michi Saagiig and the Chippewa nations.

The first recorded meeting between Europeans and Anishinabe Algonquin occurred at the first permanent French settlement on the St. Lawrence at Tadoussac in the summer of 1603. Samuel de Champlain came upon a party of Algonquins, the Kitchissippirini under Chief Tessouat, who were celebrating a recent victory over the Iroquois with their allies the Montagnais and Malecite (Hessel 1993). Champlain made note of the "Algoumequins" and his encounter with them, yet the initial contact between Champlain and the Algonquin people within their own territory in the Ottawa Valley was during his travels of exploration in 1613.

By the time of Champlain's 1613 journey, the Anishinabe Algonquin people along the Ottawa River Valley were important middlemen in the rapidly expanding fur-trade industry. Champlain knew this and wanted to form and strengthen alliances with the Algonquins to further grow the fur-trade, and to secure guidance and protection for future explorations inland and north towards a potential northwest passage. Further, involving the Algonquins deeper in the fur trade promised more furs filling French ships and more Indigenous dependence on European goods. For their part, the French offered the promise of safety and support against the Iroquois to the south.

Early historical accounts note many different Algonquian speaking groups in the region at the time. Of note for the lower Ottawa Valley area were the Kichesipirini (focused around Morrison Island); Matouweskarini (upstream from Ottawa, along the Madawaska River); Weskarini (around the Petite Nation, Lièvre, and Rouge rivers west of Montreal), Kinounchepirini (in the Bonnechere River drainage); and the Onontchataronon, (along the South Nation River) (Holmes and Associates 1993a; Morrison 2005; Pilon 2005). However, little archaeological work has been undertaken regarding Anishinabe Algonquin at the time of contact with Europeans (Pilon 2005).

Fur Trade, Early Contact with the French

Champlain understood that the Anishinabe Algonquin would be vital to his eventual success in making his way inland, exploring, and expanding the fur trade. This was partially due to their language being the key to communication with many other groups, as well as their dominance over trade routes surrounding the Ottawa River and the connection with the Huron in the west.

When the French arrived, there was already a vast trade network in place linking the Huron and the Algonquins, the Michi Saagiig and Chippewa, extending from the Saguenay to Huronia. This route existed at least from the very early beginnings of agricultural societies in Ontario around A.D. 1000 (Moreau et al. 2016). This trade increased rapidly after the arrival of the Europeans with the introduction of European goods and the demand for furs. The Huron held a highly strategic commercial location controlling the trade to the south and the west, and the Algonquin, Michi Saagiig, and Chippewa were their critical connection to goods from the east, including European products.

By the mid-17th century, the demands of the fur trade had caused major impacts to the traditional way of life including a change in tools, weapons, and a shift in diet to more European as hunting

was more for furs and not for food. This dependence on European food, ammunition, and protection tied people to European settlements (McMillan 1995). The summer gathering sites shifted from prominent fishing areas to trading posts. This further spurred social changes in community structure and traditional land distribution and use.

The well-situated Anishinabe Algonquin, particularly the Kitchesipirini who controlled passage around Allumette Island, were originally reluctant to cede any of their dominance in fear of being cut out of their lucrative middleman role in the trade economy. However, an alliance with the French meant protection and assistance against the Iroquois. The French, as well as other Europeans like the Dutch and English, were able to align their own political and economic rivalries with those of the native populations. The competitive greed and obsession with expanding the fur trade entrenched the rivalries that were already in place, and these were intensified by European weapons and economic ambition.

Haudenosaunee (Iroquois) Wars

Little information exists about inter-tribal warfare prior to European contact, however, there was existing animosity between the Haudenosaunee and the Anishinabe Algonquin when Champlain first arrived in the Ottawa Valley. Like his fellow Europeans, Champlain was able to use this existing rivalry to make a case for an alliance, thus gaining crucial access to the established trade networks and economic power of the Anishinabe Algonquin. Prior to European contact, the hostilities had been mainly skirmishes and raids, but everything changed as European reinforcement provided deadlier weapons and higher economic stakes with the introduction of the fur trade.

Along with the French, the Anishinabe Algonquin were allied against the Haudenosaunee with the Huron, Nippissing, Michi Saagiig, and Chippewa. French records suggest that at the end of the sixteenth century the Algonquins were the dominant force and were proud to have weakened and diminished the Iroquois. The first Algonquin campaign the French took part in was a 1609 attack against the Mohawk. The use of firearms in this fight marked the beginning of the escalation of brutality between these old enemies. The Haudenosaunee corn stalk shields could stop arrows but not bullets or French swords (Hessel 1993).

Eventually the tide changed and as the Haudenosaunee exhausted the beaver population in their own territory they became the aggressors, pushing into the lands of the Anishinabe Algonquin, Michi Saagiig, Chippewa, and Huron, with the added strength of Dutch weaponry. Through the 1630s and 40s constant and increased raiding into Anishinabe Algonquin, Michi Saagiig, and Chippewa territory by the Haudenosaunee nations had forced many multi-generational residents to leave their lands in seek protection from their French allies in places like Trois Rivieres and Sillery while others fled to the north. By 1650 Huronia, the home of the long-time allies of the Anishinabe Algonquin and traditional and treaty territory of the Chippewa, had been destroyed by the Haudenosaunee. The Anishinabe Algonquin of the Ottawa Valley had largely been scattered or displaced, reduced through war and disease to small family groups under the protection of the French missions only fifty years after the first Europeans had travelled the Ottawa River (Morrison 2005:26).

There is some evidence that the Anishinabe Algonquin did not completely abandon the Ottawa Valley but withdrew from the Ottawa River to the headwaters of its tributaries and remained in those interior locations until the end of the century. Taking advantage of the Anishinabe Algonquin absence, the Ottawa people, originally from the area of Manitoulin Island, used the river for trade during this time and their name became historically applied to the river.

Aftermath of War

As the Haudenosaunee push continued and the Anishinabe Algonquin sought refuge amongst their French allies, other factors came into play that significantly contributed to their displacement and near destruction. The introduction of European diseases, the devastating influence of alcohol, and the increasing pressure to convert to Christianity massively contributed to the weakening of the Anishinabe Algonquin people and their traditional culture.

The Anishinabe Algonquin thought of themselves as part of the natural world with which they must live in harmony. The traditional stories of Anishinabe Algonquin folklore contained lessons and guides to behaviour. The French missionaries regarded them as “heathens” and dismissed their religion as superstition (Day 2005). The missionaries believed it was their duty to convert these people to Christianity to save them from evil. Anishinabe Algonquin chief Tessouat had seen his Huron neighbours become ill and die after interactions with the European missionaries and had thus originally warned his people about abandoning their old beliefs and the dangers of conversion (Hessel 1993). Eventually the French imposed laws allowing only those converted to Christianity to remain within the missions and under French protection. This created divisions amongst the Anishinabe Algonquin themselves which weakened the social structure as some settled into a new religion and new territory.

Starting in the 1630s and continuing into the 1700s, European disease spread among the Anishinabe Algonquin groups along the Ottawa River, bringing widespread death (Trigger 1986:230). As disease spread through the French mission settlements the priests remained certain that the suffering was punishment for resisting Christianity. An additional threat lurking amongst the French settlements was alcohol which precipitated many issues.

The Long Way Back

After the Haudenosaunee (Iroquois) Wars, the remaining Anishinabe Algonquin people were generally settled around various French trading posts and missions from the north end of the Ottawa Valley to Montreal. A large settlement at Oka was the first mission established on Anishinabe Algonquin lands in 1720. This settlement included people from many groups who had been collected and moved around from various locations. It became a type of base camp; occupied during the summer while the winters were spent at their traditional hunting territories in the upper Ottawa Valley. This arrangement served the French well, since the Anishinabe Algonquin converts at Oka maintained close ties with the northern bands and could call upon the inland warriors to join them in case of war with the British or Iroquois League.

As the British gained control of Canada from the French in 1758-1760 they included in the Articles of Capitulation a guarantee that the Indigenous allies of the French would be maintained in the lands they inhabited. Many of the Anishinabe Algonquin and other native groups that had been living on French mission settlements were shuffled around to new reserves while others began to migrate back to their traditional territories. Those who had remained on the land and continued to be active in the fur trade, now did so with the English through companies in Montreal like the North West Company, and in the north with the Hudson Bay Company.

Some Anishinabe Algonquin people began to return to their traditional territory to join those groups who had remained in the lower Ottawa Valley and continued their traditional lifeway through to the influx of European settlement in the late 1700s and early 1800s. This included bands noted to be living along the Gatineau River and other rivers flowing into the Ottawa. These

traditional bands maintained a seasonal round focused on harvesting activities into the 1800s when development pressures and assimilation policies implemented by the colonial government saw Indigenous lands taken up, albeit under increasing protest and without consideration for Indigenous claims, for settlement and industry. Anishinabe Algonquin lands began to be encroached upon by white settlers involved in the booming lucrative logging industry or having been granted the land as Loyalist soldiers or through other settler groups.

As some Anishinabe Algonquin had been redistributed to lands in Quebec, their traditional territory within the Ottawa Valley was included in multiple land transfer deals, agreements, and sales with the British Crown beginning in the 1780s and continuing till the 1840s. The Anishinabe Algonquin were not included in these transactions and numerous petitions and inquiries on behalf of their interests were often overruled or ignored (Holmes and Associates 1993a; Holmes and Associates 1993b; Sarazin). The Constitution Act of 1791 divided Quebec into the Provinces of Upper and Lower Canada with Ottawa River as the division line, thus the lands claimed by the Algonquins fell under two separate administrations creating more confusion, exclusion, and oversight.

Two “protectorate” communities were eventually established in the nineteenth century for the Anishinabe Algonquin people at Golden Lake in Ontario and River Desert (Maniwaki) in Quebec. One of the last accounts of the Anishinabe Algonquin living traditionally was from 1865. The White Duck family was living just west of Arnprior when they were forced to leave their wigwams as surveyors arrived to tell them the railway was being expanded through their land (Hessel 1993).

Anishinabe Algonquin people continue to live in the wider Ottawa Valley and there are still many speakers of several Algonquian dialects. Outside of the officially recognized bands there are an unspecified number of people of Anishinabe Algonquin decent throughout the Ottawa Valley unaffiliated with any reserve. Today there are ten Anishinabe Algonquin communities that comprise the Algonquins of Ontario: The Algonquins of Pikwàkanagàn First Nation, Antoine, Kijicho Manito Madagouskarini, Bonnechere, Greater Golden Lake, Mattawa/North Bay, Ottawa, Shabot Obaadjiwan, Snimikobi, and Whitney and area.

Struggles to officially secure title to their traditional land and fight for hunting and fishing rights have continued into modern times. The Algonquins of Ontario (AOO) and the Governments of both Canada and Ontario are working together to resolve this land claim through a negotiated settlement. The claim includes an area of 9 million acres of unceded territory within the watersheds of the Ottawa and Mattawa Rivers in Ontario including the city of Ottawa and most of Algonquin Park. The signing of the Agreement-in-Principle in 2016 by the AOO and the provincial and federal governments, signifying a mutual intention for a lasting partnership, was a key step towards a final agreement to clarify the rights and nurture new economic and development opportunities in the area.

4.3.2 Current Conditions

The area of development impact includes two separate study areas (Map 3 and 4). The 2.14 ha Rockland Water Treatment Plant (WTP) study area is on the northern edge of the community along the shore of the Ottawa River, located at 147 Edwards Street within the northwestern corner of Lot 27, Concession 1 Old Survey (Map 3). The Rockland WTP forms part of the City of Clarence-Rockland’s primary water supply and distribution system. Within the study area, to the immediate north of the WTP is a large gravel parking area, serving du Moulin Park to the immediate west, and a municipal boat launch to the north, as well as access to the north and

east sides of the WTP. The Low Lift Pumping Station, which occupies a square brick building, is located beside the western edge of the parking lot, east of the Park. To the east and south, behind the WTP is a forested area, that was formerly part of the Edwards Mill site. To the south of the WTP along the east side of Edwards Street are residential properties dating from circa the 1940s and 1970s.

The 0.2 ha Caron Booster Pumping Station (BPS) study area in on the southeastern side of the town, located at 141 Caron Street, within the southwestern corner of Lot 23 and just within the southeastern corner of Lot 24, Concession 1 Old Survey (Map 4). Within the study area there is a small utility structure with a short driveway, surrounded by lawn. This study area is surrounded mainly by residential properties. Aerial imagery of the area shows that subdivision to the south of the Caron BPS was constructed in 1987 (Map 6).

4.3.3 Physiography

Both study areas are within the Ottawa Valley Clay Plains physiographic region (Map 7). This region is characterized by poorly drained topography of clay plains interrupted by ridges of rock or sand that offer moderately better drainage. This topography was influenced by the post glacial sequence Champlain Sea (*ca*. 10,500 to 8,000 B.C.) that deposited these clay soils and were subsequently covered by sand deposits from the emerging freshwater drainage. Some of these sands were eroded to the underlying clay deposits by later channels of the developing Ottawa River. The sections to the north and south of the Ottawa River are characteristically different. On the Ontario side there is a gradual slope with some steep scarps (Chapman and Putnam 2007:205–208).

Much of the subject properties lie within areas of unmapped urban soils, however the soil type in the immediate vicinity of the Rockport WTP is of the Wendover series, and the soil type within the immediate vicinity of the Caron BPS is of the St. Thomas series (Map 7). Wendover series soils are an imperfectly drained acidic heavy clay. These soils occur adjacent to the Ottawa River and occupy the rolling divides between the eroded banks of stream channels. The topography can be quite variable depending on the frequency of the stream channels. Agriculturally, most of these soils are used as pasture land as there are many drawbacks for growing crops (Wicklund and Richards 1962).

St. Thomas soils are generally a dark brown fine loamy sand on a level to gently sloping or undulating topography. Excessive to well-drained soils occur on the crests and upper slopes of sand ridges and knolls with imperfectly drained soils found in the lower slopes, ridges and depressions of gently undulating topography. In the areas of more level topography the drainage is poor. Due to the coarse nature of the materials these soils are permeable and have low moisture holding capacity. Woodland is the dominant land use for these types of soils and agricultural use is limited to small areas for pasture (Wicklund and Richards 1962).

The surficial geology of the Rockland WTP study area is a stone-poor, carbonate-derived sand and silt textured till on Paleozoic terrain. The surficial geology of the Caron BPS is older alluvial deposits of clay, silt, sand, gravel, and may contain organic remains (Map 7).

The shore of the Ottawa River is less than 100 m from the Rockland WTP study area, and just over 2 km from the Caron BPS study area.

4.3.4 Previous Archaeological Assessments

There has been no known previous assessment of the study areas or within 50 m. A Stage 1 assessment was conducted less than 500 m to the south of the study area along Catherine Street resulting in a recommendation for Stage 2 assessment.

There have been some assessments that have been undertaken within the same lots as the study areas, (these are bolded in Table 1); however, all are located at the opposite ends of the lots and are at least over 1 km away. Table 1 outlines previous archaeological assessments that have been undertaken within the Geographic Township of Clarence.

PIF	Date	Project	Company
P369-0452-2024	**2025**	**Stage 1 Archaeological Assessment: Catherine Street Site Blocks 10 to 13 of Plan 50M-247 on Part Lots 28 and 29, Concession 1, Old Survey, Geographic Township of Clarence, Municipality of Clarence-Rockland United Counties of Prescott-Russell Rockland, Ontario**	**Matrix Heritage**
P369-0125-2021	2024	Stage 1 Archaeological Assessment: Clarence Crossing - Villages 2 to 4 Part Lot 18, 19, 20, 21 and Common Lot Concession 1 Old Survey Geographic Township of Clarence United Counties of Prescott and Russell, Clarence-Rockland, Ontario	Paterson Group
P369-0204-2022, P369-0206-2022, P369-0205-2022, P369-0207-2022, P369-0208-2022, P369-0211-2022, P369-0212-2022, P369-0213-2022	2022	Stage 1-2 Assessment T2GI, Group B 2967 Lough Rd, Lot 8Con 2, Geo Twp Mountain SDG. 5675 CR 14, Lot 12Con 5, Geo Twp East Hawkesbury United Counties of Prescott and Russell (PR). 769 Con Rd 10, Lot 7Con 9, Geo Twp Alfred, PR. Joanisse Rd, Lot 15Con 9, Geo Twp Clarence PR. 1749 Finch-Winchester Rd, Lot 1Con 9, Geo Twp Finch SDG. 1940 Old Military Rd, Lot 26Con 6, Geo Twp Lochiel SDG. 1799 CR 16, Lot 22Con 12, Geo Twp South Plantagenet PR. 141 Marleau Rd, Lot 1Con 1, Geo Twp North Plantagenet PR	Matrix Heritage
P369-0289-2022	**2022**	**Stage 1 and 2 Archaeological Assessment: Poupart / St-Jean Street Part Lots 27, 28, 29, 30, and 31, Concession 1, Old Survey; Part Lot C, Concession 9; Part Lots C and D, Concession 8 Geographic Township of Clarence, Municipality of Clarence-Rockland United Counties of Prescott-Russell Rockland, Ontario**	**Matrix Heritage**
P051-0209-2021	2022	Original Report: Stage 1 – 2 Archaeological Assessment Cobbs Lake Creek Bridge Replacement Part Lot 15, Concessions 2 and 3, Geographic Township of Clarence, City of Clarence-Rockland, United Counties of Prescott and Russell	LHC Heritage Planning & Archaeology
P1107-0040-2021	2021	Stage 1 Archaeological Assessment Cheney-Limoges Water Transmission Main Part of Lots 25 to 30, Concession 1, Cambridge Township, and Part of Lots 20 to 28, Concession 10, and Lot 21 to 28, Concession 11, Clarence Township, Prescott and Russell County; Part of Lots 28, Concession 1 and 2, Cumberland Township, Carleton County	Golder Associates Ltd
P415-0236-2020	**2020**	**Stage 1 Archaeological Assessment: Rockland XHP Reinforcement Pipeline Project Lots 27-31, Concession 1, Old Survey, Lots A-D, Concession 8, Lots A-C, Concession 9, Lot A, Concession 10 and Lot 1 in Concession 8-10, Geographic Township of Clarence, now City of Clarence-Rockland, United Counties of Prescott and Russell, Ontario**	**Stantec Consulting**

PIF	Date	Project	Company
P1077-0052-2019, P1077-0060-2020	2020	Stage 1 and 2 Archaeological Assessment, Residential Land Development Rockland, Part of Lots 28 and 29, Concession 1 and Part of Lot D, Concession 8, Geographic Township of Clarence, City of Clarence-Rockland, County of Russell, Ontario.	Golder Associates Ltd
P415-0167-2018	**2018**	**Stage 1-2 Archaeological Assessment: Rockland Pipeline Project Part of Lots 20 to 21 and 24 to 25, Concession 1 Old Survey, Geographic Township of Clarence, now City of Clarence-Rockland, United Counties of Prescott and Russell, Ontario**	**Stantec Consulting**
P474-0003-2016	2016	Stage 1-2 Archaeological Assessment: St Joseph Street	WSP Canada
P378-0012-2014, P378-0010-2014	2015	Stage 1, 2, & 3 Archaeological Assessment: Pago Point Site BjFt-5, Pago Point Proposed Residential Development, Part Lot 22, Concession 1 Old Survey, Geographic Township of Clarence, United Counties of Prescott and Russell, Clarence-Rockland, Ontario	Paterson Group
P003-331-2012	**2015**	**An Archaeological Assessment (Stage 1) of the proposed Stewart Quarry (Rockland), Part of Lots B & C, Concession 9, Geographic Township of Clarence, City of Clarence/Rockland, United Counties of Prescott-Russell**	**Adams Heritage**

Table 1: Previous archaeological assessments within the Geographic Township of Clarence

4.3.5 Registered Archaeological Sites and Commemorative Plaques

A search of the Ontario Archaeological Sites Database indicated that there were no registered archaeological sites located within 1 km of either study area. However, an expanded search identified one registered archaeological site within 3 km of the study area, with no additional sites identified within 5km. The registered site is the Pago Point Site (BjFt-5), a Late Archaic Indigenous site (Paterson Group 2015).

There is an historic plaque across the street from the Rockland WTP study area in the Parc Du Moulin, commemorating William Cameron Edwards (1844-1921) at the site of the remains of his sawmill complex which are still visible in the park. The text of the plaque reads:

> A leading lumber producer in the Ottawa Valley, Edwards owned many mills in Rockland and Ottawa. As the member of parliament for Russell from 1887 to 1903, he vigorously promoted the interests of lumberers in provincial forestry policies.

4.4 Archaeological Potential

Potential for pre-contact Indigenous sites is based on physiographic variables that include distance from the nearest source of water, the nature of the nearest source/body of water, distinguishing features in the landscape (e. g. ridges, knolls, eskers, wetlands), the types of soils found within the area of assessment and resource availability. The Rockland WTP study area has potential for pre-contact Indigenous archaeological sites as it lies less than 100m south of the Ottawa River and the known site on nearby Pago Point.

Potential for historical Euro-Canadian sites is based on proximity to historical transportation routes, community buildings such as schools, churches, and businesses, and any known archaeological or culturally significant sites. The study area has potential for historical period

Euro-Canadian archaeological sites due to the relatively early patent dates of the properties, the early occupation and ownership of the lots by the McCaul and McDougall families, the association with the W. C. Edwards Mill, and the proximity to historical transportation routes.

5.0 Conclusions and Recommendations

This Stage 1 assessment included a review of the MCM's archaeological sites database, relevant environmental, historical, and archaeological literature, and primary historical research. The assessment concluded that, based on criteria outlined in the *Standards and Guidelines for Consultant Archaeologists* (Section 1.3, 2011), the study areas both have pre-contact Indigenous as well as historical Euro-Canadian archaeological potential.

Based on the results of this investigation it is recommended:

1. A Stage 2 archaeological assessment be conducted by a licensed consultant archaeologist using the test pit survey method at 5 m intervals, as per Section 2.1.2 (MCM 2011), in areas with archaeological potential as shown in dark blue on Map 3 and Map 4.

2. No further archaeological study is required for the areas with low to no archaeological potential as delineated in orange on Map 3 and Map 4.

3. The Stage 2 archaeological assessment follow the requirements set out in the 2011 Standards and Guidelines for Consultant Archaeologists (MCM 2011).

6.0 Advice on Compliance with Legislation

a. This report is submitted to the *Minister of Citizenship and Multiculturalism* as a condition of licencing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Citizenship and Multiculturalism, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

b. It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licenced archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest , and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

c. Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licenced consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.

d. The *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological licence.

7.0 Closure

Matrix Heritage has prepared this report in a manner consistent with the time limits and physical constraints applicable to this report. No other warranty, expressed or implied is made. The sampling strategies incorporated in this study comply with those identified in the Ministry of Citizenship and Multiculturalism's *Standards and Guidelines for Consultant Archaeologists* (2011) however; archaeological assessments may fail to identify all archaeological resources.

The present report applies only to the project described in the document. Use of this report for purposes other than those described herein or by person(s) other than Jacobs Consulting or their agent(s) is not authorized without review by this firm for the applicability of our recommendations to the altered use of the report.

This report is pending Ministry approval.

We trust that this report meets your current needs. If you have any questions or we may be of further assistance, please contact the undersigned.

Matrix Heritage Inc.

Nadine Kopp, M.A., A.P.A.
Senior Archaeologist

Andrea Jackson, MLitt
Staff Archaeologist

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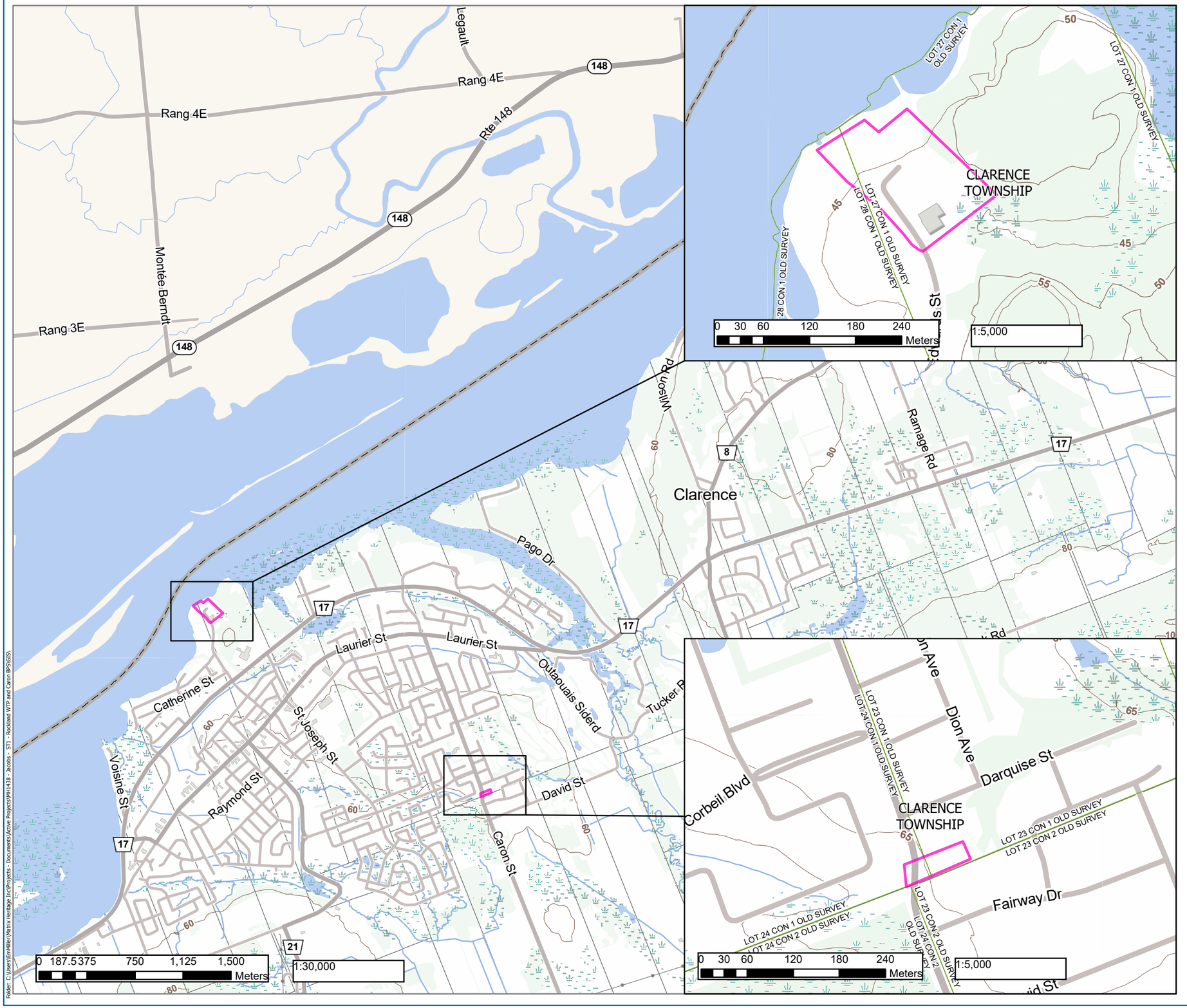
9.0 Maps



LEGEND

STUDY AREA

Matrix

REFERENCES:
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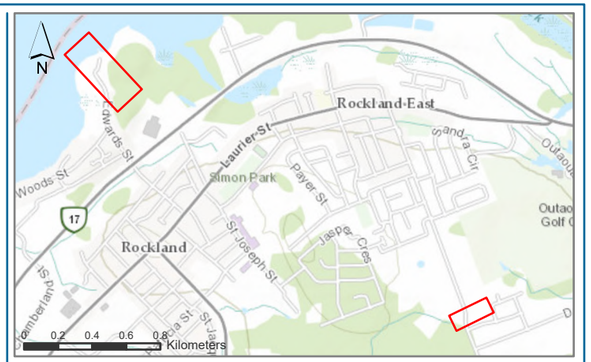
PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT, ROCKLAND WATER TREATMENT PLANT, ROCKLAND, ON

TITLE
LOCATION

MAP
1



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STAGE 1 ARCHAEOLOGICAL ASSESSMENT, ROCKLAND WATER TREATMENT PLANT, ROCKLAND, ON

TITLE
DEVELOPMENT PLAN

MAP 2

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STUDY AREA

RECOMMENDATIONS

ARCHAEOLOGICAL POTENTIAL

SHOVEL TESTED (5M INTERVAL)

LOW TO NO POTENTIAL

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STAGE 1 ARCHAEOLOGICAL ASSESSMENT, ROCKLAND WATER TREATMENT PLANT, ROCKLAND, ON

TITLE
RECOMMENDATIONS - EDWARDS ST

MAP
3

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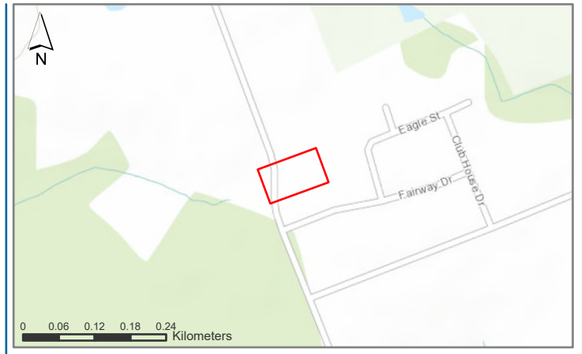

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STUDY AREA

RECOMMENDATIONS

ARCHAEOLOGICAL POTENTIAL

SHOVEL TESTED (5M INTERVAL)

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STAGE 1 ARCHAEOLOGICAL ASSESSMENT, ROCKLAND WATER TREATMENT PLANT, ROCKLAND, ON

TITLE
RECOMMENDATIONS - CARON ST

MAP 4

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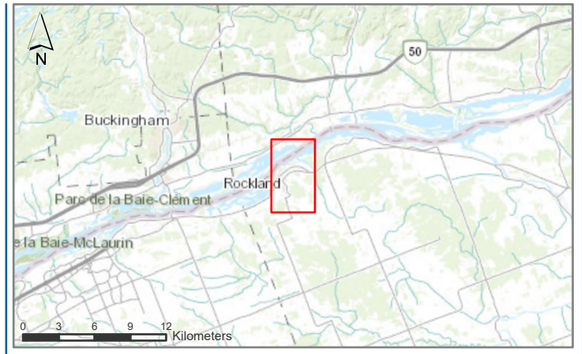
WALLING 1863

BELDEN 1879



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SEGMENT OF WALLING 1863 MAP OF THE COUNTY OF PRESCOTT AND RUSSELL, CANADA WEST : FROM SURVEYS UNDER THE DIRECTION OF H.F. WALLING
SEGMENT OF THE TOWNSHIP OF PLANTAGENET, UBLISHED IN 1879 BY H. BELDEN & CO., TORONTO.

FILE MH1438
DATE 2026-01-13
CREATED BY: EM
PROJECTION: NAD 1983 UTM Zone 18N
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PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT, ROCKLAND WATER TREATMENT PLANT, ROCKLAND, ON

TITLE
HISTORIC

MAP
5

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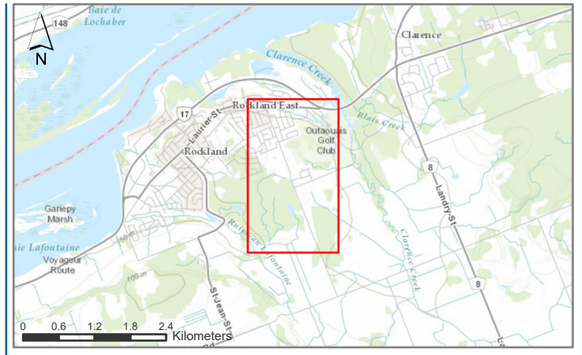
1985

1987



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PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT, ROCKLAND WATER TREATMENT PLANT, ROCKLAND, ON

TITLE
AERIAL IMAGERY

MAP
6

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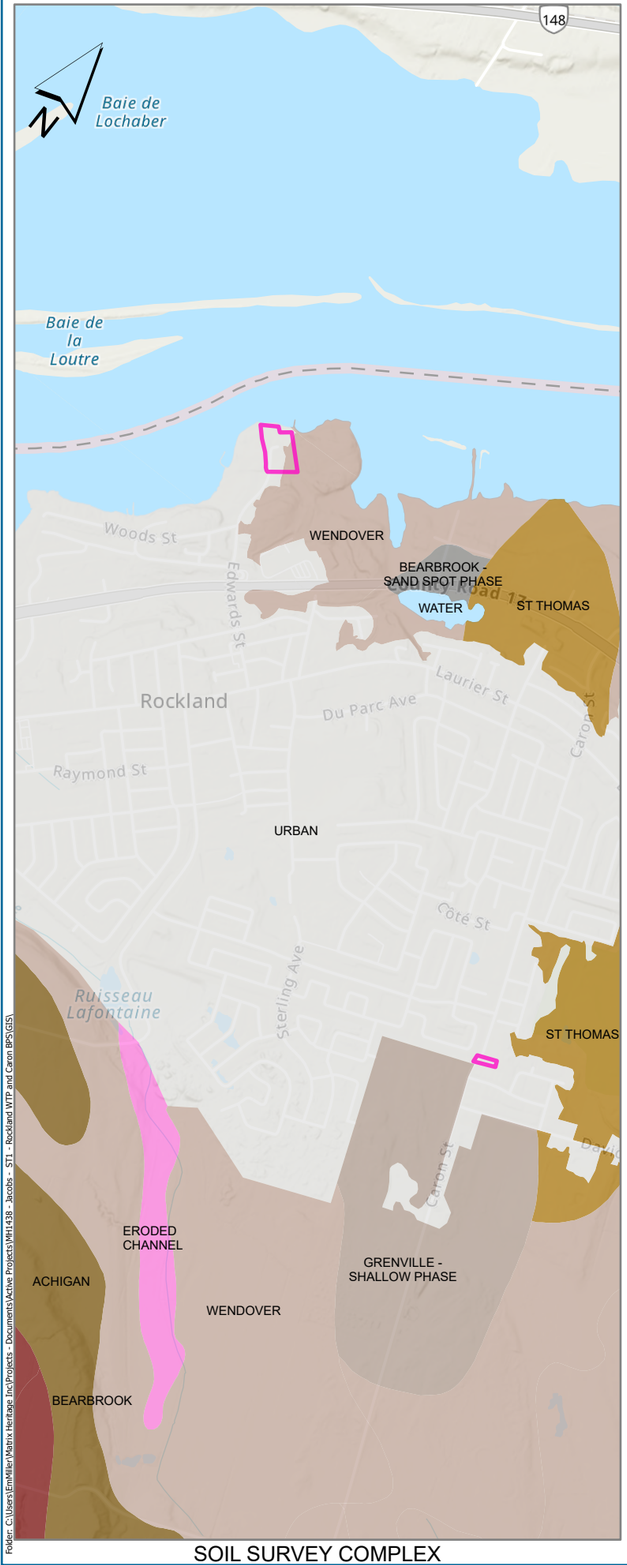

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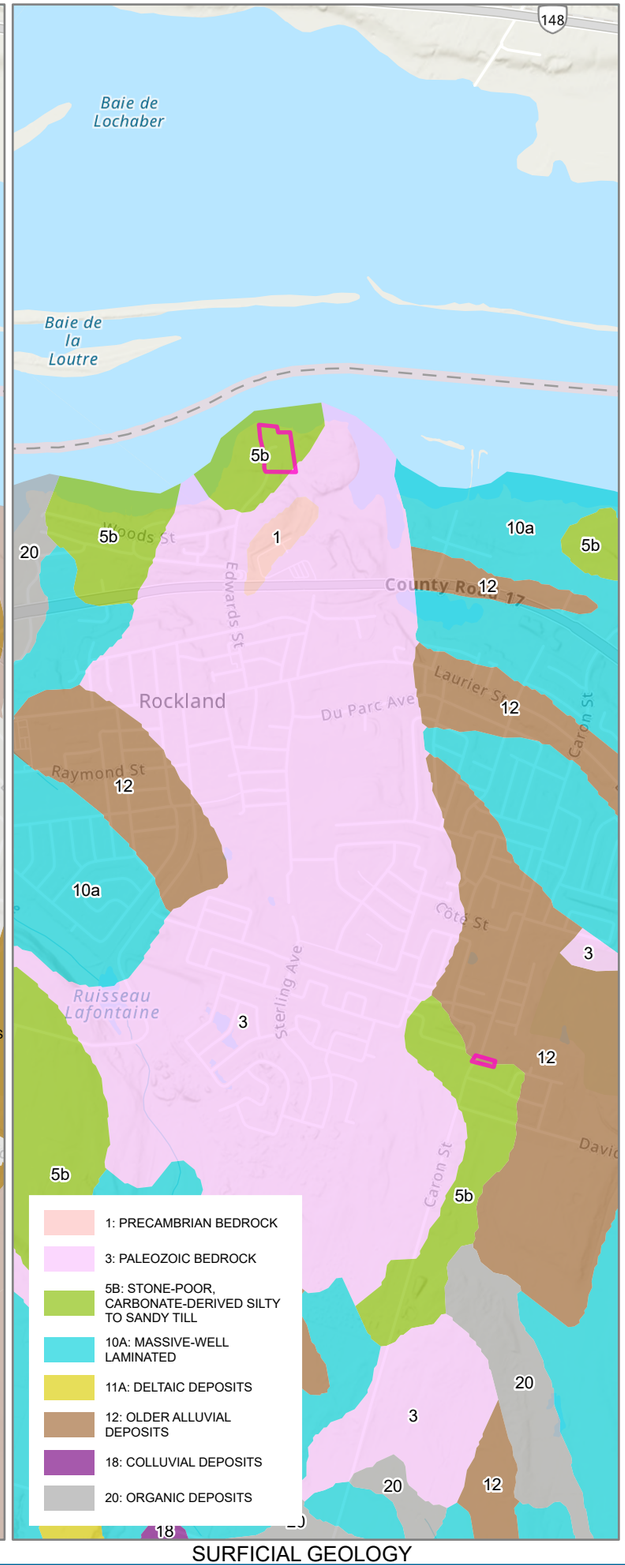

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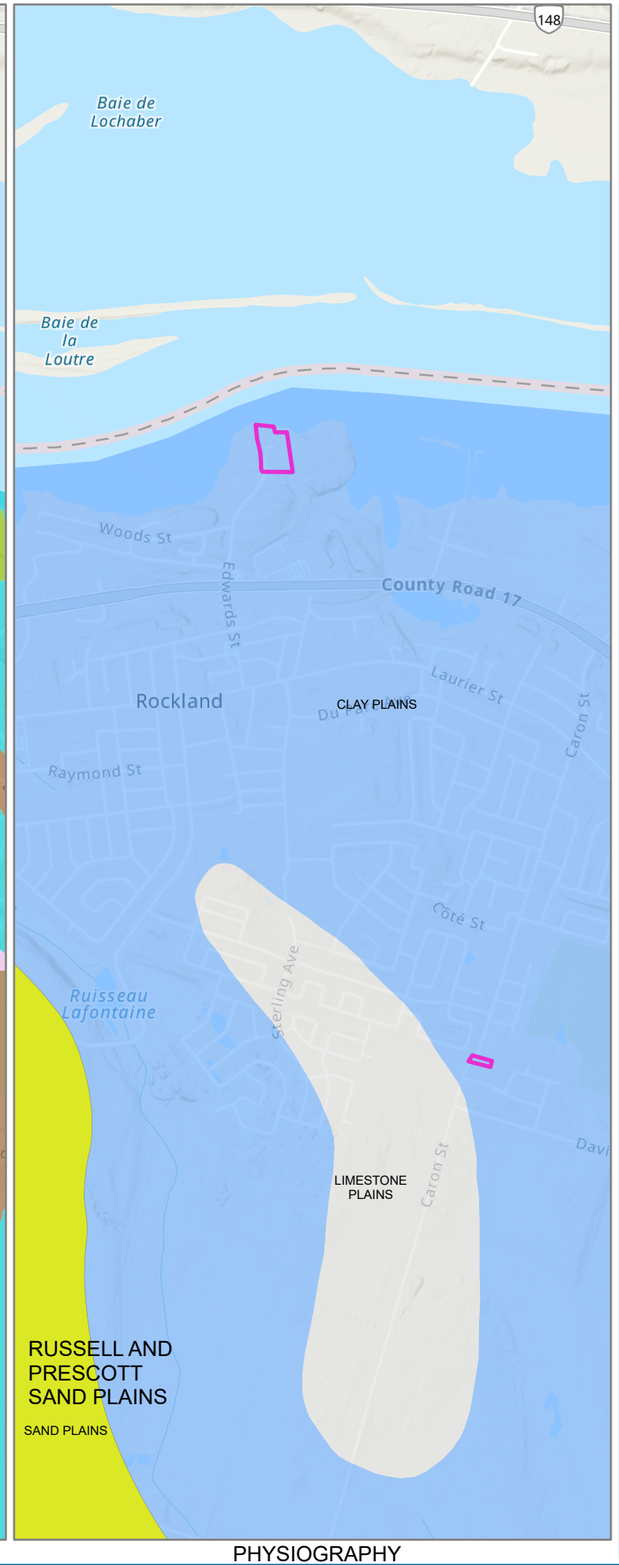

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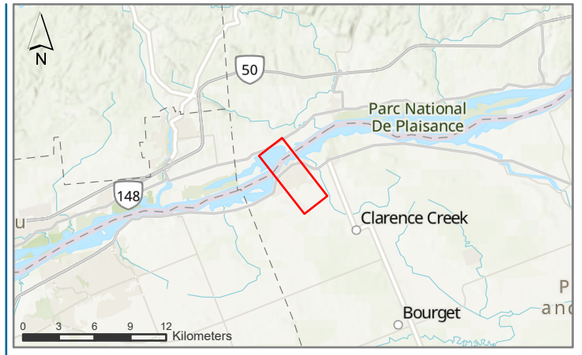

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SURFICIAL GEOLOGY OF SOUTHERN ONTARIO 2003
CHAPMAN AND PUTNAM 2007 PHYSIOGRAPHY OF SOUTHERN ONTARIO

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DATE 2026-01-13

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PROJECTION: NAD 1983 UTM Zone 18N

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PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT, ROCKLAND WATER TREATMENT PLANT, ROCKLAND, ON

TITLE
SOILS AND GEOLOGY

MAP 7

Folder: C:\Users\EmMiles\Matrix Heritage Inc\Projects - Documents\Active Projects\MH1438 - Jacobs - ST1 - Rockland WTP and Caron BPS\GIS\

Appendix A: Map Catalogue

Map Number	Description	Created By
1	Location	E. Miller
2	Development Map	E. Miller
3	Conditions and Recommendations – Edwards St	E. Miller
4	Conditions and Recommendations – Caron St	E. Miller
5	Aerial Images– Caron St	E. Miller
5	Historic	E. Miller
7	Soils and Geology	E. Miller

ORIGINAL REPORT

Cultural Heritage Screening Report

Rockland Water Treatment Plant,
147 Edwards Street,
Part Lot 27, Concession 1 Old Survey, and
Caron Booster Pumping Station,
1441 Caron Street,
Part Lots 23 and 24, Concession 1 Old Survey, Geographic Township of Clarence,
City of Clarence-Rockland
United Counties of Prescott-Russell, Ontario

Prepared For

Andre Bourque
Jacobs Consultancy Canada Inc.
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Ottawa, ON K1Z 8R1
Andre.Bourque@jacobs.com

January 20, 2026
Submitted for Review: December 11, 2025

Submitted By

Natalie Anderson Rathwell, MA, CAHP
Senior Architectural Historian & Heritage Consultant
Matrix Heritage

Matrix Heritage Inc.
6131 Perth Street, Richmond
Ontario K0A 2Z0
Tel: (613) 807-2071
www.MatrixHeritage.ca

Report: MH1442-REP.01.R1

Executive Summary

Matrix Heritage, on behalf of Jacobs Consultancy Canada Inc (Jacobs), conducted a Cultural Heritage Screening of the Rockland Water Treatment Plant (WTP) at 147 Edwards Street within Lot 27, Concession 1 Old Survey, and the Caron Booster Pumping Station (BPS) located at 1441 Caron Street, within Lots 23 and 24, Concession 1 Old Survey, both in Rockland, in the Geographic Township of Clarence, now within the City of Clarence-Rockland, United Counties of Prescott and Russell, Ontario (Map 1, Map 2). This Cultural Heritage Screening is in support of a Schedule C Class EA in advance of the expansion of both the Rockland WTP and the Caron BPS. The objective of the screening is to identify any known or potential cultural heritage resources in the categories of built heritage resources and cultural heritage landscapes within the study area. Archaeological resources are beyond the scope of this screening and are addressed separately in the Stage 1 Archaeological Assessment Report by Matrix Heritage. To ensure an appropriate area was screened that encompasses any potential construction impacts, the study area is the full extent of the properties at 147 Edwards Street and 1441 Caron Steet (project area), as well as the properties immediately adjacent to the proposed work within 250 m.

Identified Known and Potential Cultural Heritage Resources

A portion of the Ottawa River is within the study area. The Ottawa River has been designated a Canadian Heritage River by the Canadian Heritage Rivers System.

There is one (1) property within the Rockland WTP potion of the study area that is fully designated under Part IV of the Ontario Heritage Act. This is du Moulin Park/former Edwards Sawmill at 101 Edwards Street. The property is designated with Clarence-Rockland By-law 2017-45 (see 3.2.2.1).

Du Moulin Park includes three (3) plaques on the History of the Edwards Sawmill.

There are ten (10) residential properties in the study area around the Rockland WTP that appear to be more than 40 years old (Map 3). These properties are:

- 138 Edwards Street, 1960s
- 142 Edwards Street, 1960s
- 145 Edwards Street, 1970s
- 155 Edwards Street, 1970s
- 165 Edwards Street, 1970s
- 191 Edwards Street, c. 1940s
- 203 Edwards Street, c. 1940s
- 211 Edwards Street, c. 1940s
- 223 Edwards Street, c. 1940s
- 233-235 Edwards Street, c. 1940s

The Rockland WTP itself is also over 40 years old, constructed in 1972 and expanded in 1979.

There is one (1) property in the study area around the Caron BPS that is more than 40 years old (Map 4):

- 1433 Caron Street, residential

Conclusions and Recommendations

This report concludes that none of the non-designated properties that appear to be more than 40 years old, including the Rockland WTP, should be reviewed further through individual CHERs or through HIAs because they are of limited or no heritage value in the categories of design, history, and context, the three main categories to be considered in heritage evaluations under Regulation 9/06 of the Ontario Heritage Act. Furthermore, the City of Clarence-Rockland has designated no properties of this type.

An HIA will be required to evaluate potential impacts of the proposed work on du Moulin Park/former Edwards Sawmill. The HIA will also address any potential impacts on the cultural heritage value of the Ottawa River as a Canadian Heritage River.

Project Personnel

Heritage Study Personnel	Lead, Site Visit Natalie Anderson Rathwell, MA, CAHP Senior Architectural Historian and Heritage Consultant Research and Report Assistance Giulia Santocono, MArch Junior Heritage Consultant Mapping & GIS Jeff Dillane, MA, APA Archaeological Operations Manager and GIS Specialist and Em Miller, BA GIS Technician Matrix Heritage Inc. 6131 Perth Street, Richmond Ontario K0A 2Z0 (613) 807-2071 info@matrixheritage.ca
Client Representative	Andre Bourque Jacobs Consultancy Canada Inc. 1565 Carling Avenue, Suite 200 Ottawa, ON K1Z 8R1 Andre.Bourque@jacobs.com
Property Information	**Rockland Water Treatment Plant**, 147 Edwards Street, Part Lot 27, Concession 1 Old Survey, and **Caron Booster Pumping Station**, 1441 Caron Street, Part Lots 23 and 24, Concession 1 Old Survey, Geographic Township of Clarence, City of Clarence-Rockland United Counties of Prescott-Russell, Ontario

Table of Contents

1.0 Introduction

1.1 Purpose of the Report

Matrix Heritage, on behalf of Jacobs Consultancy Canada Inc (Jacobs), conducted a Cultural Heritage Screening of the Rockland Water Treatment Plant (WTP) at 147 Edwards Street within Lot 27, Concession 1 Old Survey, and the Caron Booster Pumping Station (BPS) located at 1441 Caron Street, within Lots 23 and 24, Concession 1 Old Survey, both in Rockland, in the Geographic Township of Clarence, now within the City of Clarence-Rockland, United Counties of Prescott and Russell, Ontario (Map 1, Map 2). This Cultural Heritage Screening is in support of a Schedule C Class EA in advance of the expansion of both the Rockland WTP and the Caron BPS. The objective of the screening is to identify any known or potential cultural heritage resources in the categories of built heritage resources and cultural heritage landscapes within the study area. Archaeological resources are beyond the scope of this screening and are addressed separately in the Stage 1 Archaeological Assessment Report by Matrix Heritage.

1.2 Methodology

For cultural heritage, the first step for the Class Environmental Assessment is to complete a screening checklist evaluating whether there are existing or potential cultural heritage resources in the categories of built heritage resources and cultural heritage landscapes present in the study area. If the screening checklist confirms that potential heritage resources are present, each potential resource would require a full or abridged Cultural Heritage Evaluation Report (CHER) by a qualified heritage specialist to determine whether potential heritage resources are of sufficient cultural heritage value or interest to warrant conservation. Those resources, and any previously identified or designated resources (listed on the heritage register or fully designated), would then be the subject of a Heritage Impact Assessment (HIA) of the proposed undertaking.

The completed screening checklist *Criteria For Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes*[1] is attached here as Appendix A. Information for the checklist was drawn from heritage inventories (the Ontario Heritage Trust, and the Canadian Register of Historic Places), the Official Plan of the Urban Area of Clarence Rockland (2013, consolidated 2024), a desktop survey of the study area's history and heritage, National Air Photo Library mapping, a site visit, and the professional judgement of the senior consultant.

1.2.1 Study Area

The Study Area includes properties within 250 m of the Rockland WTP Project Area at 147 Edwards Street, Rockland, Ontario, and properties within 250 m of the Caron BPS Project Area at 1441 Caron Street, Rockland, Ontario. See Map 1 - Map 4.

[1] Ontario Ministry of Heritage, Sport, Tourism and Culture Industries (now Ministry of Citizenship and Multiculturalism), 2016, *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes, A Checklist for the Non-Specialist.* Online at: https://forms.mgcs.gov.on.ca/dataset/30990b3f-c2f7-451e-90f9-10bef98ea9e2/resource/992f3844-62a5-4091-9e08-ce406dc57850/download/0500e.pdf.

1.2.2 Heritage Personnel

This study was led by Natalie Anderson Rathwell, [2] MA, CAHP, Senior Architectural Historian and Heritage Consultant, Matrix Heritage, who conducted the site visit and is the author of the report. Giulia Santocono, [3] MArch, Junior Heritage Consultant, Matrix Heritage, assisted with research. Jeff Dillane, MA, APA, Archaeological Operations Manager and GIS Specialist completed mapping for the study.

2.0 About the Study Area

- Location plan Rockland WTP: **Map 1**
- Location plan Caron BPS: **Map 2**
- Aerial plan Rockland WTP **Map 3**
- Aerial plan Caron BPS **Map 4**

2.1 Development Context

The study area includes the Rockland WTP located along Edwards Street in Rockland, and the Caron BPS located on Caron Street in Rockland East within the same municipal service network for the City of Clarence-Rockland (Map 1, Map 2).

The Rockland WTP is located at 147 Edwards Street towards the north end of the street, south of the Ottawa River shoreline, forming part of the City of Clarence-Rockland's primary water supply and distribution system. The wider surrounding area comprises a mix of light industrial and municipal utility uses, interspersed with residential neighbourhoods and open green spaces associated with the riverfront corridor. Within the study area (Figure 1-Figure 30), to the immediate north of the WTP is a large gravel parking area, serving du Moulin Park to the immediate west, and a municipal boat launch to the north, as well as access to the north and east sides of the WTP. The Low Lift Pumping Station, which occupies a square brick building, is located beside the western edge of the parking lot, east of the Park. To the east and south, behind the WTP is a forested area, that was formerly part of the Edwards Mill site. To the south of the WTP along the east side of Edwards Street are residential properties dating from circa the 1940s and 1970s. The west side of Edwards Street, within the study area, consists of residential townhouses and 5-storey apartments less than 40 years old, a sewage pumping station, and two raised bungalows immediately opposite the WTP dating to the 1960s. To the north-west of WTP at 101 Edwards Street is du Moulin Park. The Park occupies the north-west corner of the peninsula into the Ottawa River on which the WTP is situated. The location is the former site of

[2] Qualifications of the consultant: Natalie Anderson Rathwell is a Senior Architectural Historian for Matrix Heritage, with six years of experience in cultural heritage reporting, and fifteen years of related experience in the fields of history, art and architectural history. She holds a BA and MA from Carleton University and partially complete doctoral studies (ABD) at York University. She is a professional member of the Canadian Association of Heritage Professionals and a member of the Society for the Study of Architecture in Canada.

[3] Qualifications of the consultant: Giulia Santocono is a Junior Architectural Historian for Matrix Heritage. She holds a BArch and MArch from Toronto Metropolitan University.

the Edwards Sawmill and includes the remains of three stone foundations of the former sawmill, as well as open lawn, and a playground. The Park is designated under Part IV of the Ontario Heritage Act. The Rockland WTP itself is a highly utilitarian building. Its massing consists of a combination of rectangular volumes, between one and two-storeys tall. The exterior includes a one-storey section clad in red brick, with the remainder of the building clad in beige corrugated metal siding, oriented vertically (Figure 1).

The Caron BPS is located at 1441 Caron Street, on a rise of land (study area Figure 31-Figure 45). The BPS is housed in a utilitarian building that blends well into the surrounding neighbourhood with the appearance of a well-constructed suburban garage. The exterior consists of beige brick, in a running bond pattern, with a decorative stretcher course and soldier course at the top of the wall, and a shingled hipped roof. One vent is hidden in a brick chimney structure. A black-brown garage door and man door face the street, and the building is surrounded by a chain-link fence. Caron Street is a busy street, with two lanes for traffic and one for turning. A raised bike path runs along the east side, in front of the BPS, and a sidewalk runs along the other. Surrounding the north and east sides of the Caron BPS is the property at 1433 Caron Street. This consists of a vernacular former farmhouse, dating from approximately the early 20th Century, open lawn, and a few sheds or outbuildings behind the house. The house itself is attractive but simple and unadorned, with modern siding, modern windows, and an enclosed front porch. To the north is a new residential neighbourhood, consisting of row-houses, constructed in the 2020s. To the east and south of the Caron BPS, including along Caron Street, is a residential neighbourhood consisting of single-family homes on relatively large lots. This neighbourhood was constructed in approximately 1988, as evidenced by aerial mapping, and is not quite 40 years old (Figure 46, Figure 47, Figure 48). To the south-west is a large area of land downhill from Caron Street that is currently under development, and to the west and north-west is a residential neighbourhood with large single-family homes on relatively small lots, constructed c. 2005-2010.

2.1.1 Official Plans

2.1.1.1 United Counties of Prescott and Russell Official Plan

From the Prescott-Russell Official Plan (2022), Section 7.7 *Cultural Heritage Policies*:

> 7.7.1 Protecting our Cultural Heritage
>
> It is the policy of Council to recognize and conserve cultural heritage resources, including heritage buildings and structures, Cultural Heritage Landscapes, archaeological resources and other cultural heritage resources, and to promote the maintenance and development of an appropriate setting within, around and adjacent to all such resources.
>
> [Archaeological potential] …
>
> Council and local municipalities shall:
>
> - protect cultural heritage resources within their jurisdiction by using the Ontario Heritage Act for designation or conservation agreements;
> - establish and keep a municipal register; and
> - establish a municipal heritage committee that will advise local council on heritage matters.

Local municipalities shall maintain a cultural heritage resource database and\or heritage management plans for land use planning, resulting in inventories (which has an unofficial status by contributing to the municipal register without taking its place) of significant heritage buildings, heritage districts, cultural heritage landscapes, archaeological sites, and archaeological potential areas located within the Counties. The heritage resources policies of this plan shall apply when:

- conserving heritage buildings, cultural heritage landscapes and archaeological resources that are under municipal ownership and\or stewardship;
- conserving and mitigating impacts to all significant cultural heritage resources when undertaking public works;
- respecting the heritage resources identified, recognized or designated by federal and provincial agencies;
- respecting the heritage designations and other heritage conservation efforts by local municipalities.

Properties may be identified by:

- Designation under Parts IV, V or VI of the Ontario Heritage Act;
- Protection through a heritage conservation easement entered into under Part II or IV of the Ontario Heritage Act;
- Recognition by the local municipal council as having cultural heritage value;
- Recognition by a provincial ministry or prescribed public body as a Provincial Heritage Property under Part III of the Ontario Heritage Act (Standards and Guidelines for Conservation of Provincial Heritage Properties); or,
- Protection under federal legislation or UNESCO World Heritage Sites.

Council shall encourage local Council to:

- Protect cultural heritage resources within their jurisdiction by using the Ontario Heritage Act for designations or conservation agreements;
- Establish and keep a municipal register;
- to include all licensed, private abandoned or legally closed cemeteries in their heritage property register. Local municipalities are encouraged to consider the designation of these cemeteries in order to retain them in their original condition and location; and,
- Establish a municipal heritage committee that will advise local council on heritage matters.

Council shall require that identified heritage resources not yet listed in the municipal heritage register or Heritage Register are evaluated and conserved, as appropriate, through any legislated planning or assessment processes, including the Planning Act, the Environmental Assessment Act, the Ontario Heritage Act and the Cemeteries Act.

Council and local municipalities shall use criteria established by Provincial regulation under the Ontario Heritage Act for determining cultural heritage value

or interest and for identifying and evaluating properties for listing in the Heritage Register and for designation under Part IV of the Ontario Heritage Act.

Council and local municipalities may permit development and site alteration on adjacent lands located to protected heritage property where the proposed development and site alteration has been evaluated and it has been demonstrated that the heritage attributes of the protected heritage property will be conserved. A heritage impact assessment, conducted by a qualified professional, will be required to determine if any adverse impacts will result from a proposed development. Mitigative measures and/or alternative development approaches may be required for the conservation of heritage attributes of a protected heritage property. Council shall ensure that lower tier municipal official plans have policies consistent with the heritage policies developed in this Counties official plan. The Ontario Heritage Act may be utilized to conserve, protect and enhance any significant cultural heritage resources located within the Counties.

Council and local municipalities will conserve and manage its heritage resources and cultural heritage landscapes when undertaking public works, managing public facilities or of heritage interest, or otherwise directly undertaking development or infrastructure projects which may have adverse effects on heritage resources.

Council may look to use Community Improvement Plans and associated financial incentives to assist municipalities in their efforts to preserve and protect cultural heritage.

Council and local municipalities shall ensure that it has accurate and adequate architectural, structural, and economic information to determine the feasibility of rehabilitation and reuse versus demolition when considering demolition applications for designated heritage properties. All cultural heritage resources to be demolished or significantly altered are subject to a Heritage Impact Assessment and documented for archival purposes with a history, photographic record and measured drawings prior demolition or alteration: such documentation shall be the responsibility of the applicant in consultation with relevant heritage committees.

7.7.2 Archeological and Heritage Planning

…

The Counties recognize the importance of cultural heritage resources within the Counties. Therefore, the Counties will encourage the identification, conservation, protection, restoration, maintenance and enhancement of cultural heritage resources. All new development permitted by the policies of this Plan shall have regard for cultural heritage resources and shall, wherever possible, incorporate these resources into any new development plans. In addition, all new development will be planned in a manner which preserves and enhances the context in which cultural heritage resources are situated. Where significant archaeological resources are preserved on site, conservation may be secured

through a heritage easement agreement, designation under the Ontario Heritage Act, zoning provisions and/or other planning or heritage conservation tools.

Cultural heritage resources include, but are not restricted to, significant built heritage, significant cultural heritage landscapes, archaeological sites, cemeteries and burials, buildings and structural remains of historical and architectural value, and human-made rural, village and urban districts or landscapes of historic and scenic interest.

2.1.1.2 Official Plan of the Urban Area of the City of Clarence-Rockland

Section 2.12 of the Official Plan of the Urban Area of the City of Clarence-Rockland (2013, consolidated 2025) pertains to Heritage. From section 2.12:

> The City intends to encourage the preservation and restoration of non-designated existing structures that contribute to the historic character and to designate other properties within the Urban Area for their historical or architectural value or interest.

Under section 4.3 *Cultural Heritage, Significant Built Heritage and Archaeological Resources*:

> The City of Clarence-Rockland recognizes the importance of cultural heritage resources and significant built heritage resources. Therefore, Council will encourage the identification, conservation, protection, restoration, maintenance and enhancement of cultural heritage resources and significant built heritage resources. All new development permitted by the policies of this Plan will have regard for cultural heritage resources and significant built heritage resources and will, wherever possible, incorporate these resources into any new development plans. In addition, all new development will be planned in a manner that preserves and enhances the context in which cultural heritage resources and significant built heritage resources are situated.
>
> Cultural heritage resources include, but are not restricted to, archaeological sites, cemeteries and burial sites, buildings and structural remains of historical and architectural value, and human-made rural, village and urban districts or landscapes of historic and scenic interest.
>
> …
>
> Pursuant to the *Ontario Heritage Act*, the Municipality may, by By-law:
>
> a) designate properties to be of historic or architectural value or interest;
>
> b) define any area or areas within Rockland as an area to be examined for designation as a heritage conservation district; and
>
> c) designate Rockland, or any area or areas within Rockland, as a heritage conservation district.

The City of Clarence-Rockland will lead the community in restoring, rehabilitating, enhancing and maintaining cultural heritage resources owned by the Municipality as examples of the proper stewardship of such resources.

The City of Clarence-Rockland may participate in the development of significant cultural heritage resources through acquisition, assembly, resale, joint ventures or other forms of involvement that will result in the sensitive conservation, restoration or rehabilitation of those resources.

…

The retention, renewal and conservation of commercial built resources of historic or architectural merit will be encouraged if they are affected by an application for development or redevelopment. The impact of such development plans on the character of the surrounding area will also be considered.

The City of Clarence-Rockland may utilize available government or non-government funding assistance programs to assist in the implementation of cultural heritage conservation policies. The City of Clarence-Rockland, where appropriate, will co-operate with other levels of government, as well as private agencies and individuals in the conservation of cultural heritage resources in the Municipality. The City of Clarence-Rockland will co-ordinate its heritage plans and programs with heritage plans and programs of senior levels of government.

Council shall consult with the appropriate government agencies, including the Ministry of Tourism, Culture and Recreation and the Ministry of Government and Consumer Services when an identified human cemetery, marked or unmarked human burial is affected by land use development. The provisions under the *Ontario Heritage Act* and the *Cemeteries Act* shall apply. A Local Architectural Conservation Advisory Committee (LACAC) may be established pursuant to the *Ontario Heritage Act* to advise and assist Council on heritage property designation and heritage conservation planning matters.

Council shall have regard for cultural heritage resources in the undertaking of Municipal public works and related municipal undertakings involving environmental assessments. When necessary, Council will require satisfactory measures to mitigate any negative impacts to significant cultural heritage resources.

…

Council may permit development and site alteration on adjacent lands to protected heritage property where the proposed development and site alteration has been evaluated and it has been demonstrated that the heritage attributes of the protected heritage property will be conserved. Alternative development techniques and/or mitigative measures may be required in order to conserve the heritage attributes of the protected heritage property affected by the adjacent development or site alteration.

2.1.2 Site Visit

A site visit of the Study Area, including the WTP and BPS Study Areas, was conducted by Natalie Anderson Rathwell, MA, CAHP, on November 19, 2025. Photographs of the site visit are included in section 5.0 Figures. The site visit included a visual and photographic surveys of the buildings and landscape within 250 m of the Rockland WTP and Caron BPS.

3.0 Research – Determining Cultural Heritage Resources Present

3.1 Categories of Heritage

Cultural Heritage Resources include Built Heritage Resources, Cultural Heritage Landscapes, and Archaeological Resources. Archaeological Resources are beyond the scope of this Cultural Heritage Screening as archeology is subject to separate requirements.

Using the checklist of the Ontario Ministry of Citizenship and Multiculturalism (former Ministry of Heritage, Sport, Tourism and Culture Industries) *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes* (see Appendix A), the Consultant used online inventories to confirm that there were no CHRs in the relevant categories of:

- Heritage properties designated as a Heritage Conservation District under Part V of the Ontario Heritage Act
- Identified as a Federal Heritage Building by the Federal Heritage Review Office (FHRO)
- A National Historic Site of Canada (or part of)

3.2 Properties with Known or Potential Cultural Heritage Resources

3.2.1 Federal / National, or International Cultural Heritage Resources

The study area surrounding the Rockland WTP includes the **Ottawa River**, which is designated by the Canadian Heritage Rivers System as a **Canadian Heritage River**.[4]

Using the checklist of the MCM *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes*, the Consultant used online sources to confirm that there were no CHRs in the categories of:

- a National Historic Site (or part of),
- designated under the Heritage Railway Stations Protection Act,
- designated under the Heritage Lighthouse Protection Act,
- identified as a Federal Heritage Building by the Federal Heritage Review Office (FHRO), and
- located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site.

[4] Canadian Heritage Rivers System, "Ottawa River." Accessed November 2025. https://chrs.ca/en/rivers/ottawa-river.

3.2.1.1 Ottawa River Canadian Heritage River

The Ottawa River is designated as part of the Canadian Heritage River Systems (CHRS) in recognition of its outstanding cultural and natural heritage and the long-term stewardship committed to its conservation. This national designation identifies the river as a landscape of historical significance, reflecting its role as a major Indigenous travel and trade corridor, and later as the primary route that structured the fur trade, the timber economy, as well as subsequent Euro-Canadian settlement patterns across eastern Ontario and eastern Quebec. The designation affirms the river's ongoing associative value as a cultural corridor that continues to shape regional identity, recreation and community use.

As per their website, the Canadian Heritage Rivers System "is Canada's national program for recognizing, celebrating and conserving the natural, cultural and recreational values of 42 river designations across Canada."[5]

The Ottawa River was designated a Canadian Heritage River in 2016 for its natural, cultural and recreational heritage:[6]

> **Natural Heritage**
>
> Canada's eighth largest river, the Ottawa flows through 1271 kilometres (km) of the Laurentian physiographic region of Canada. The section designated as a Canadian Heritage River spans 590 km and forms a natural border between Ontario and Quebec. The river flows through rural areas and small towns in the Upper and Lower Ottawa Valleys, and passes through the urban setting of Ottawa, Ontario.
>
> Though tamed by multiple hydroelectric dams, the river has many interesting natural features, including underwater caves found at Westmeath. Rare plant species can be found along the riverbed and the diverse environment around the river is home to countless species of fish, birds and mammals.
>
> **Cultural Heritage**
>
> There is archaeological evidence suggesting the existence of a number of Indigenous seasonal campsites dating back more than 6000 years. More permanent Indigenous settlements existed along the riverbank as far back as the 17th century.
>
> Dams and mills have existed along the Ottawa River for centuries. Settlements and communities along the waterway used the river as a vital power source and natural resource, much as communities along the river valley do today. The river was also used as an important transportation and trading hub by the First Nations

[5] Canadian Heritage Rivers System, "About Us." Accessed November 2025. Online at: https://chrs.ca/en/about-chrs

[6] Canadian Heritage Rivers System, "Ottawa River." Accessed November 2025. Online at: https://chrs.ca/en/rivers/ottawa-river

and then by Europeans, and was intrinsic to the development of the nation's early logging industry.

Recreational Heritage

In the 19th century, tourists were able to travel the Ottawa River on steamboats. Today, motor boats, sailboats, canoes and kayaks cruise and explore this lengthy waterway. The Ottawa is also renowned as a whitewater paddling mecca, with multiple companies offering rafting and excursions down the 12 km "Rocher Fendu" section of the river.

Beautiful beaches as well as walking, hiking and biking trails can all be found along the river. In the winter, ice fishing is very popular, and huts dot the river once it freezes over. Snowmobiling, skating, and cross-country skiing are also popular winter pursuits along the river.

3.2.2 Ontario Heritage Trust Register

The study included a search of the online inventory of designated heritage properties maintained by the Ontario Heritage Trust. The following designated heritage property was identified within the study area surrounding the Rockland WTP:

- **du Moulin Park/former Edwards Sawmill**, designated under Part IV of the Ontario Heritage Act, By-law 2017-45 (Map 3, Figure 4 - Figure 18)

Three historic plaques were noted during the site visit. All three are within du Moulin Park and include the following provincial plaque:

- Ontario Heritage Foundation Plaque, to William Cameron Edwards, 1844-1921 (Figure 5, Figure 6).

3.2.2.1 Du Moulin Park/Former Edwards Sawmill

The du Moulin Park, located at 101 Edwards Street, was designated under By-law 2017-45 by the City of Clarence-Rockland on April 12, 2017. The designation recognizes the cultural heritage value and description of heritage attributes of the former Edwards sawmill site as follows:

Statement of Cultural Heritage Value or Interest:

In 1868, William Cameron Edwards built a sawmill at the point McCaul in the Rockland area with two employees. At that time, Rockland had about 350 inhabitants. Mr. Edwards had hired several French Canadians to cut down trees. The men hauled logs up to the river where they floated up to the sawmill. In 1875, a fire destroyed the sawmill and it was reconstructed the year after. Then came the railroad in 1888 to haul wood and merchandise. Wood products were transported to Montreal and then delivered to England. In the 1920's, the mill was sold. In 1926, the sawmill closed their door following the economic stagnation after World War I. Near 1938, the chimney of the mill was demolished and in 1967 the municipal Park, the municipal « du Moulin Park » was inaugurated.

Description of Heritage Attributes:

In the Park, there are still the remains of three old stone foundation of the former sawmill. The three stone foundations are the park's elements to preserve and protect for the future.

3.2.3 City of Clarence-Rockland Heritage Register

Correspondence with the City of Clarence Rockland confirmed that there are no additional cultural heritage resources on the Heritage Register for the City that are additional to the four properties fully designated under Part IV of the Ontario Heritage Act that are included in section 2.12 of the City's Official Plan[7] and on the Ontario Heritage Trust Register.

There are two additional historic plaques within du Moulin Parc. These are:

- City of Clarence-Rockland historic plaque/interpretive panel on du Moulin Park with information provided by the Clarence-Rockland Museum (Figure 7, Figure 8),
- Société Historique Saint-Pascale-Baylon, "A touch of History" plaque, du Moulin Park (Figure 9).

3.2.4 Properties with Potential Built Heritage Resources (Buildings Over 40 Years Old)

The study area includes twelve (12) properties with buildings that may be older than 40 years of age, as listed in Table 1 below. Eleven (11) of these properties are located in the study area surrounding the Rockland WTP (Map 3), and one (1) is located in the study area surrounding the Caron BPS (Map 4).

Table 1. Properties with buildings that may be older than 40 years of age

Property Type	Address	Construction Era	Figures
Utility	Rockland WTP, 147 Edwards Street	1972/79	Figure 1, Figure 2
Residential	138 Edwards Street	1960s	Figure 22
Residential	142 Edwards Street	1960s	
Residential	145 Edwards Street	1970s	Figure 24
Residential	155 Edwards Street	1970s	Figure 24
Residential	165 Edwards Street	1970s	Figure 24
Residential	191 Edwards Street	c. 1940s	Figure 25
Residential	203 Edwards Street	c. 1940s	Figure 25
Residential	211 Edwards Street	c. 1940s	Figure 26
Residential	223 Edwards Street	c. 1940s	Figure 27
Residential	233-235 Edwards Street	c. 1940s	
Residential	1433 Caron Street	Early 1900s	Figure 37

[7] City of Clarence-Rockland, *Official Plan of the Urban Area of the City of Clarence-Rockland*, Office Consolidation to August 2024, **sec. 2.12, "Heritage."**

3.2.5 Applied Knowledge

In addition to other resources consulted, the completion of the checklist was undertaken by applying the knowledge and expertise of the consultant, Natalie Anderson Rathwell, MA, CAHP, an architectural historian and cultural heritage specialist with 15 years of experience in architectural history and 6 years experience in cultural heritage reporting, working on built heritage and cultural heritage landscape matters in Ontario, including work for federal, provincial, municipal and private sector clients.

Based on her experience on research to support designation, the consultant sees no evidence in the history, design or context of the eleven residential properties with buildings over 40 years old to believe that they may be of Cultural Heritage Value or Interest as built heritage resources or components of cultural heritage landscapes. Furthermore, the City of Clarence-Rockland has designated no properties of this type. Similarly, in the case of the Rockland WTP itself, while there are examples of Water Treatment Plants that have been designated for their cultural heritage value, as in the case of City of Ottawa waterworks infrastructure on Lemieux Island and LeBreton Flats, these examples are earlier, and intended as more decorative showpiece buildings, where the Rockland WTP is a highly utilitarian building in unelaborated brick (a limited amount) and corrugated metal. The consultant sees no evidence in the history, design or context of the Rockland WTP to believe that it may be of Cultural Heritage Value or Interest as a built heritage resource or contributing component of a cultural heritage landscape.

3.3 Archaeology

Archaeology is beyond the scope of this Cultural Heritage Screening. Archaeological studies of the area have been completed separately for the project by Matrix Heritage.

3.4 Engagement

The consultant, Natalie Anderson Rathwell, contacted the City of Clarence-Rockland by email on November 12, 2025, to request the City's heritage register. A response was received from Karine McCullock, Deputy Clerk for the City of Clarence-Rockland on November 14, 2025, indicating that the properties within the City of Clarence-Rockland that are designated as heritage under Part IV of the *Ontario Heritage Act*, are listed in the City's Official Plan, under section 2.12. The four (4) designated properties include three (3) institutional properties on Laurier Street, and du Moulin Park.

The consultant contacted the planning department of United Counties of Prescott and Russell by email on November 12, 2025, to inquire if they maintain a heritage register, separate from those of the lower municipalities. A response was received on November 14, 2025, from Louis Prévost, Director of Planning and Forestry confirming that they do not.

3.5 Potential Impacts

The expansion of the Rockland WTP has the potential to impact du Moulin Park/former Edwards Sawmill, a property located at 101 Edwards Street, designated under Part IV of the Ontario Heritage Act with City of Clarence-Rockland By-law 2017-45. A Heritage Impact Assessment is required to evaluate potential impacts of the proposed undertaking.

The HIA will also address any potential impacts on the cultural heritage value of the Ottawa River as a Canadian Heritage River. A full understanding of impacts on the Ottawa River may

require other assessments by professionals in the fields of environmental science which are beyond the scope of the HIA.

4.0 Conclusion

This report has found the following:

A portion of the Ottawa River is within the study area. The Ottawa River has been designated a Canadian Heritage River by the Canadian Heritage Rivers System.

There is one (1) property within the Rockland WTP potion of the study area that is fully designated under Part IV of the Ontario Heritage Act. This is du Moulin Park/former Edwards Sawmill at 101 Edwards Street. The property is designated with Clarence-Rockland By-law 2017-45 (see 3.2.2.1).

There are ten (10) residential properties in the study area around the Rockland WTP that appear to be more than 40 years old (Map 3). These properties are:

- 138 Edwards Street, 1960s
- 142 Edwards Street, 1960s
- 145 Edwards Street, 1970s
- 155 Edwards Street, 1970s
- 165 Edwards Street, 1970s
- 191 Edwards Street, c. 1940s
- 203 Edwards Street, c. 1940s
- 211 Edwards Street, c. 1940s
- 223 Edwards Street, c. 1940s
- 233-235 Edwards Street, c. 1940s

The Rockland WTP itself is over 40 years old, constructed in 1972 and expanded in 1979.

There is one (1) residential property in the study area around the Caron BPS that appears to be more than 40 years old (Map 4). This is:

- 1433 Caron Street, early 1900s

This report concludes that none of the non-designated properties that appear to be more than 40 years old , including the Rockland WTP, should be reviewed further through individual CHERs or through HIAs because they are of limited or no heritage value in the categories of design, history, and context, the three main categories to be considered in heritage evaluations under Regulation 9/06 of the Ontario Heritage Act. Furthermore, the City of Clarence-Rockland has designated no properties of this type.

An HIA will be required to evaluate potential impacts of the proposed work on du Moulin Park/former Edwards Sawmill. The HIA will address any potential impacts on the cultural heritage value of the Ottawa River as a Canadian Heritage River. If a full understanding of impacts on the Ottawa River requires other assessments by professionals in the fields of environmental science, those are beyond the scope of the HIA.

5.0 Figures

5.1 Study Area - Rockland Water Treatment Plant

Figure 1. Rockland Water Treatment Plant located at 147 Edwards St. Matrix Heritage, Nov 19, 2025.

Figure 2. Rockland Water Treatment Plant located at 147 Edwards St. Matrix Heritage, Nov 19, 2025.

Figure 3. Rockland WTP Low Lift Pump Station. Matrix Heritage, Nov 19, 2025.

Figure 4. Du Moulin Park. Matrix Heritage, Nov 19, 2025.

Figure 5. Ontario Heritage Foundation Plaque, to William Cameron Edwards, 1844-1921, in du Moulin Park. Matrix Heritage, Nov 19, 2025.

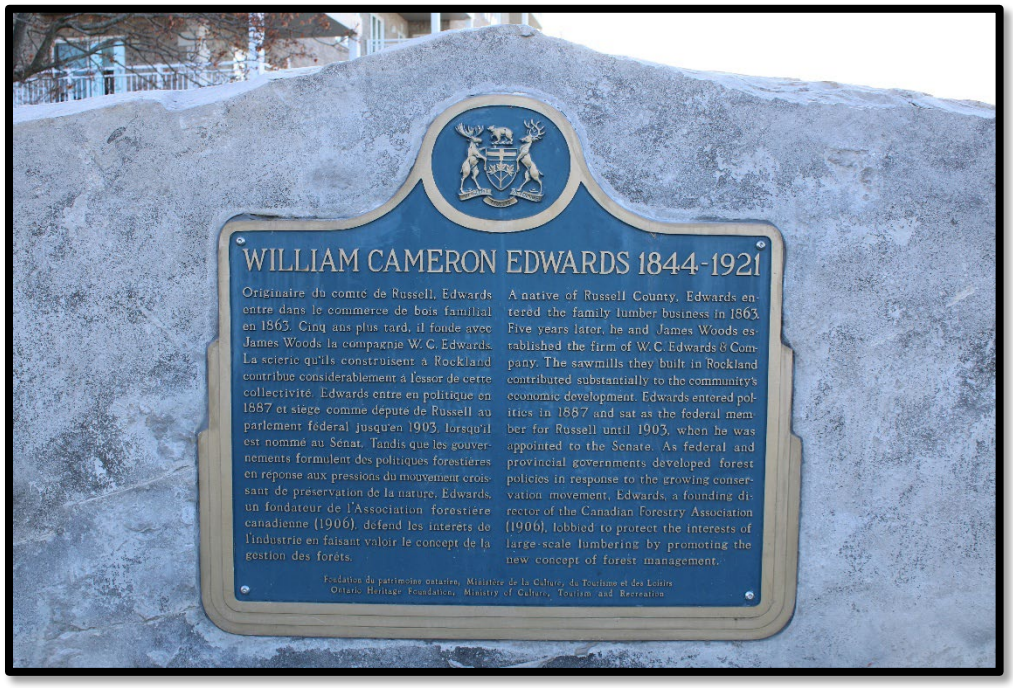


Figure 6. Ontario Heritage Foundation Plaque, to William Cameron Edwards, 1844-1921, in du Moulin Park. Matrix Heritage, Nov 19, 2025.

Figure 7. City of Clarence-Rockland historic plaque/interpretive panel on du Moulin Park with information provided by the Clarence-Rockland Museum. Matrix Heritage, Nov 19, 2025.

Figure 8. Detail, City of Clarence-Rockland historic plaque/interpretive panel on du Moulin Park with information provided by the Clarence-Rockland Museum. Matrix Heritage, Nov 19, 2025.

Figure 9. Société Historique Saint-Pascale-Baylon, "A touch of History" plaque, du Moulin Park. Matrix Heritage, Nov 19, 2025.

Figure 10. Du Moulin Park, looking north across the Ottawa River.

Figure 11. Du Moulin Park, view towards the Rockland WTP. Matrix Heritage, Nov 19, 2025.

Figure 12. Historic foundations (left) and playground (right), du Moulin Park. Matrix Heritage, Nov 19, 2025.

Figure 13. Historic foundations, du Moulin Park. Matrix Heritage, Nov 19, 2025.

Figure 14. Historic foundations, du Moulin Park. Matrix Heritage, Nov 19, 2025.

Figure 15. Historic foundations, du Moulin Park, and modern apartment buildings and townhouses to the south. Matrix Heritage, Nov 19, 2025.

Figure 16. Shoreline of Rockland, looking west from du Moulin Park. Matrix Heritage, Nov 19, 2025.

Figure 17. Ottawa River shoreline, north edge of du Moulin Park, looking east towards boat launch. Matrix Heritage, Nov 19, 2025.

Figure 18. Ottawa River shoreline, north edge of du Moulin Park, looking west, upriver. Matrix Heritage, Nov 19, 2025.

Figure 19. Boat launch, north of Rockland WTP. Matrix Heritage, Nov 19, 2025.

Figure 20. Parking for boat launch and park, looking south towards Rockland WTP. Matrix Heritage, Nov 19, 2025.

Figure 21. View looking south-east on Edwards St, opposite the Rockland WTP. Matrix Heritage, Nov 19, 2025.

Figure 22. Side of 138 Edwards Street, 1960s raised bungalow. Matrix Heritage, Nov 19, 2025.23

Figure 24. 145, 155, and 165 Edwards St, south of Rockland WTP. Matrix Heritage, Nov 19, 2025.

Figure 25. 191-203 Edwards St. Matrix Heritage, Nov 19, 2025.

Figure 26. 211 Edwards St. Matrix Heritage, Nov 19, 2025.

Figure 27. 223 (left) and 233-235 Edwards St (right, house not visible up the hill). Matrix Heritage, Nov 19, 2025.

Figure 28. View looking north along Edwards Street towards the Rockland WTP. Matrix Heritage, Nov 19, 2025.

Figure 29. Sewage Pumping Station, Edwards St. Matrix Heritage, Nov 19, 2025.

Figure 30. Sewage Pumping Station, Edwards St. Matrix Heritage, Nov 19, 2025.

5.2 Study Area – Caron Booster Pumping Station

Figure 31. Caron BPS located at 1441 Caron St. Matrix Heritage, Nov 19, 2025.

Figure 32. Caron BPS located at 1441 Caron St. Matrix Heritage, Nov 19, 2025.

Figure 33. View looking north-east of Caron BPS. Matrix Heritage, Nov 19, 2025.

Figure 34. View looking south on Caron St. Matrix Heritage, Nov 19, 2025.

Figure 35. View looking north on Caron St. Matrix Heritage, Nov 19, 2025.

Figure 36. Property at 1433 Caron St., beside and behind (north and east of) Caron BPS. Matrix Heritage, Nov 19, 2025.

Figure 37. 1433 Caron St, north of the Caron BPS. Matrix Heritage, Nov 19, 2025.

Figure 38. 1433 Caron St. and new Darquise St. subdivision development, north of the Caron BPS. Matrix Heritage, Nov 19, 2025.

Figure 39. View looking south-east towards Caron BPS at intersection of Caron St. and Darquise St., 1433 Caron St. at left. Matrix Heritage, Nov 19, 2025.

Figure 40. View from Darquise St., looking towards a shed at the rear of 1433 Caron St. property (left). Matrix Heritage, Nov 19, 2025.

Figure 41. View looking east toward Dion St. from intersection of Dion St. and Darquise St., north of the Caron BPS. Neighbourhood constructed in 2020s. Matrix Heritage, Nov 19, 2025.

Figure 42. View looking north on Eagle St., east of the Caron BPS. Neighbourhood constructed c. 1988. Matrix Heritage, Nov 19, 2025.

Figure 43. Properties adjacent to the Caron BPS, to the south along Saron St. Constructed c. 1988. Matrix Heritage, Nov 19, 2025.

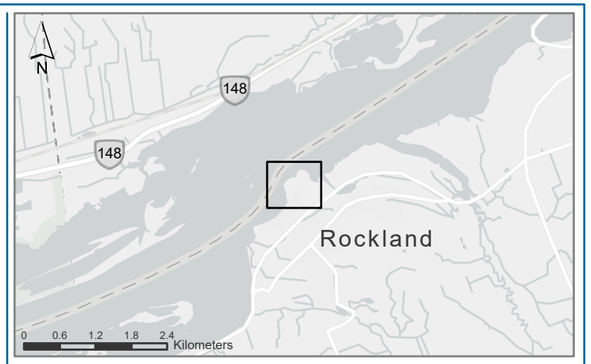
Figure 44. View west to multiuse path south-west of Caron St. BPS. Matrix Heritage, Nov 19, 2025.

Figure 45. View of new development seen along multiuse path. Matrix Heritage, Nov 19, 2025.

Figure 46. 1985 Aerial view of Rockland. National Air Photo Library, Order Key A31398_105, Title photo_19850708_N45532W075279.

Figure 47. 1985 Aerial view of Rockland. Detail, Caron Street at David Street. National Air Photo Library, Order Key A31398_105, Title photo_19850708_N45532W075279.

Figure 48. 1987 Aerial view of Rockland. Detail, showing streets being laid out at the north-east corner of Caron Street and David Street. National Air Photo Library, Order Key A31478_038, Title photo_19870731_N45524W075284.



LEGEND

PROJECT AREA

STUDY AREA

Matrix

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Meters

1:3,000

REFERENCES:
MICROSOFT, VANTOR

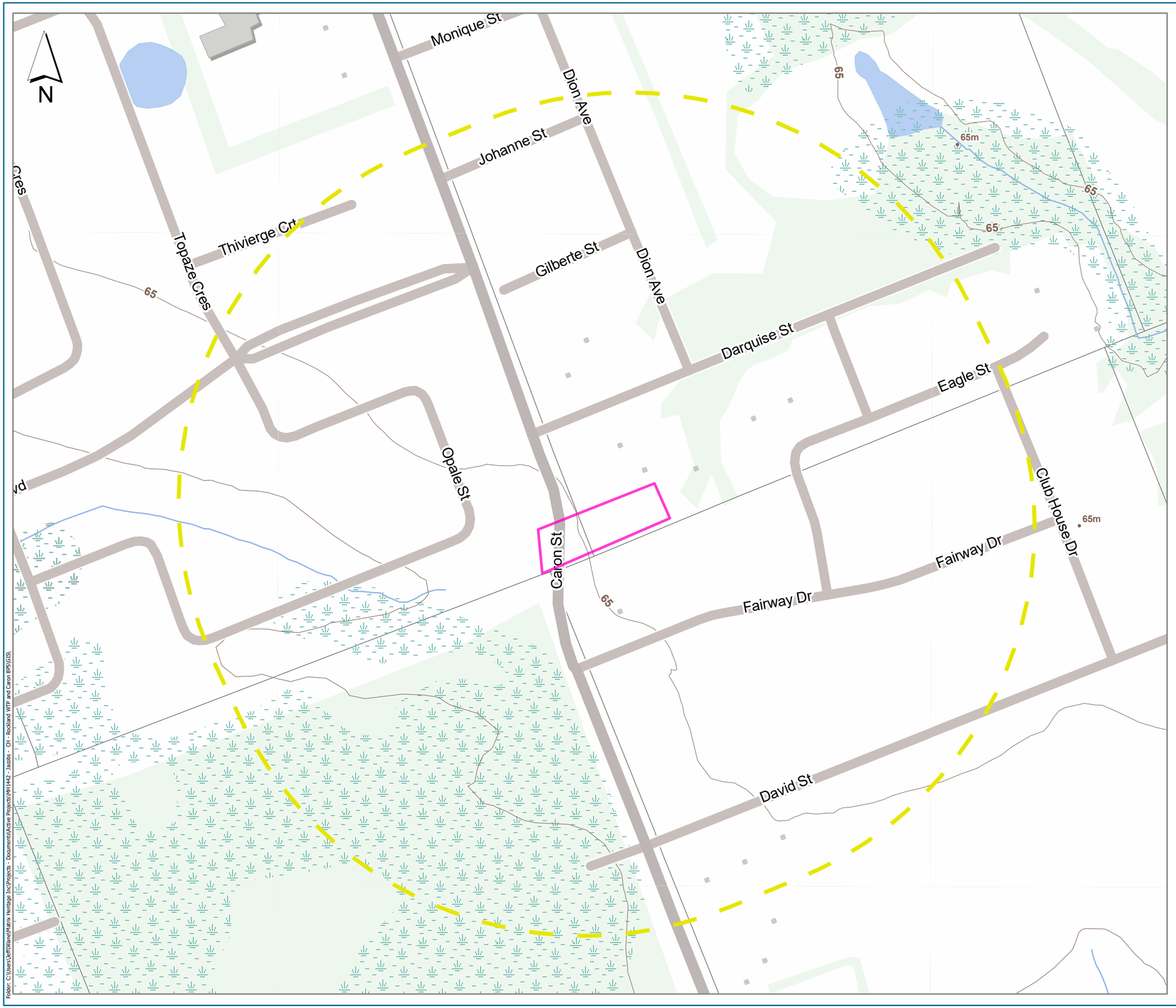
FILE MH1442

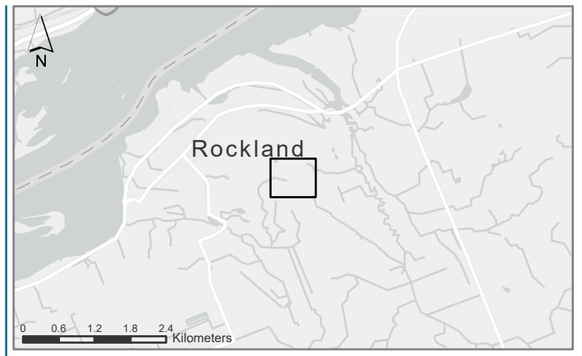
DATE 2026-01-19
CREATED BY: EM
CHECKED BY: NR

PROJECT
CULTURAL HERITAGE EVALUATION, CARON WATER PLANT, 147 EDWARDS ST, ROCKLAND, ON

TITLE
LOCATION - 147 EDWARD STREET

MAP 1





LEGEND

PROJECT AREA

STUDY AREA

Matrix

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Meters
1:2,500

REFERENCES:
MICROSOFT, VANTOR

FILE MH1442

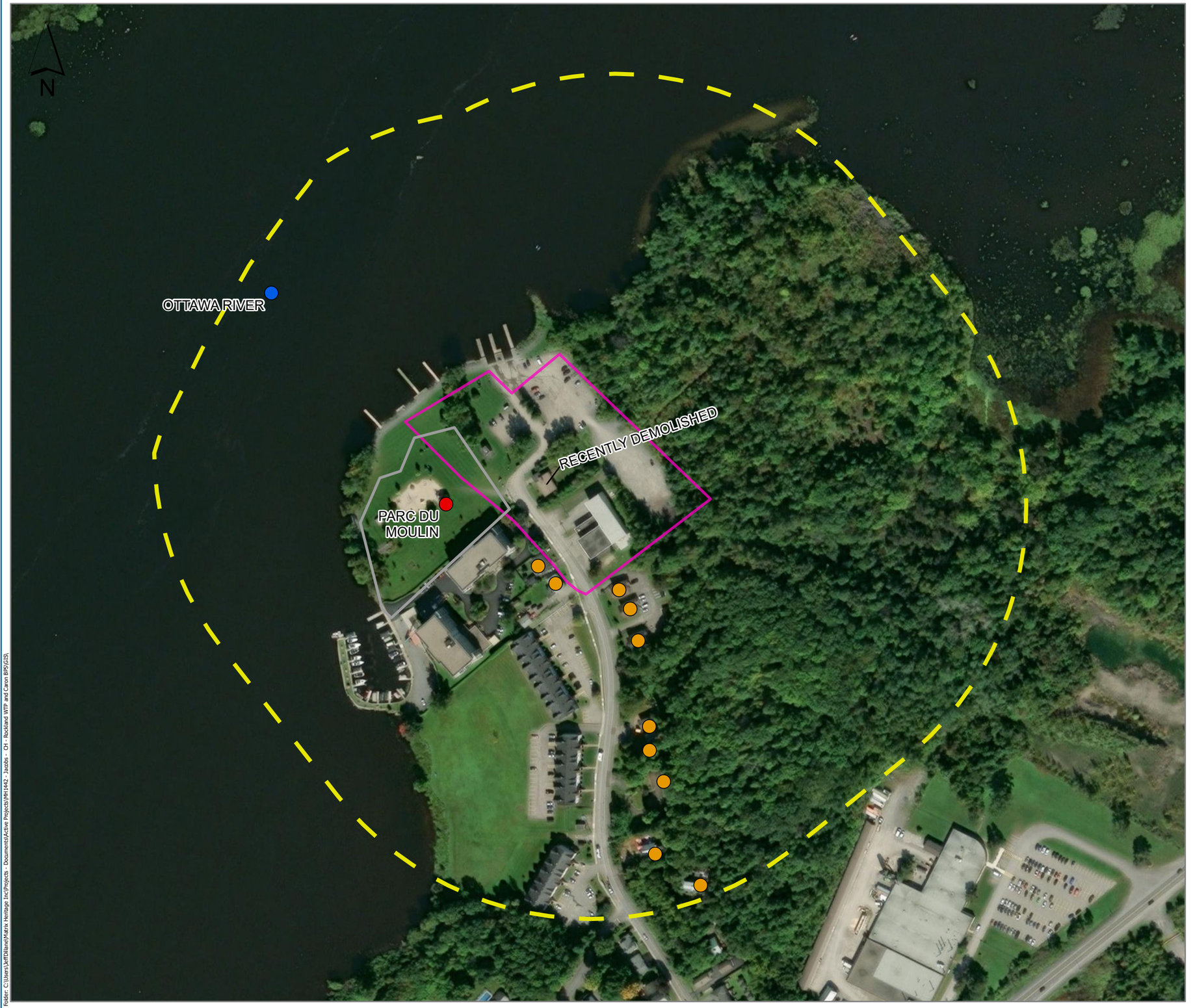
DATE 2025-12-11
CREATED BY: EM
CHECKED BY: NR

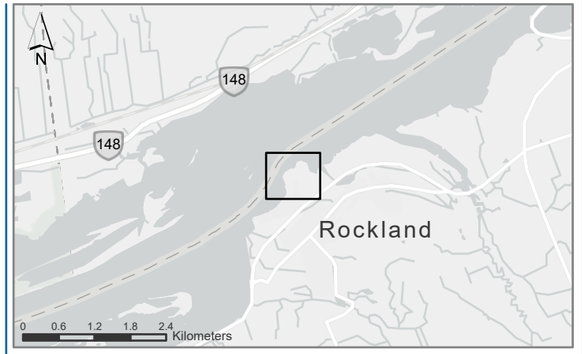
PROJECT
CULTURAL HERITAGE EVALUATION, CARON WATER BOOSTER PUMP, 1441 CARON ST, ROCKLAND, ON

TITLE
LOCATION - 1441 CARON ST

MAP 2

Folder: C:\Users\JeffDblane\Matrix Heritage Inc\Projects - Documents\Active Projects\MH1442 - Jacobs - CH - Rockland WTP and Caron BPS\GIS\





LEGEND

- PROJECT AREA
- STUDY AREA
- PARC DU MOULIN PARCEL BOUNDARY
- PROPERTIES OVER 40 YEARS OLD

HERITAGE FEATURES

- CANADIAN HERITAGE RIVER
- DESIGNATED UNDER PART IV OF THE OHA

Matrix

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Meters

1:3,000

REFERENCES:
MICROSOFT, VANTOR

FILE MH1442

DATE 2026-01-19
CREATED BY: EM
CHECKED BY: NR

PROJECT
CULTURAL HERITAGE EVALUATION, CARON WATER PLANT, 147 EDWARDS ST, ROCKLAND, ON

TITLE
AERIAL - 147 EDWARD STREET

MAP 3

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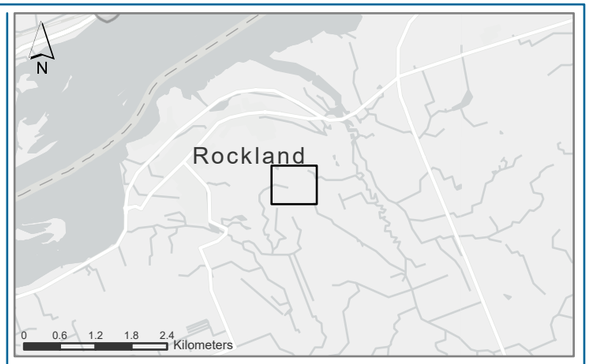

LEGEND

- PROJECT AREA
- STUDY AREA
- PROPERTIES OVER 40 YEARS OLD

Matrix

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Meters

1:2,500

REFERENCES:
MICROSOFT, VANTOR

FILE MH1442

DATE 2026-01-19
CREATED BY: EM
CHECKED BY: NR

PROJECT
CULTURAL HERITAGE EVALUATION, CARON WATER BOOSTER PUMP, 1441 CARON ST, ROCKLAND, ON

TITLE
AERIAL - 1441 CARON ST

MAP 4

Folder: C:\Users\JeffOlivier\Matrix Heritage Inc\Projects - Documents\Active Projects\MH1442 - Jacobs - ON - Rockland WTP and Caron BPS\GIS\

7.0 Sources

7.1 Heritage Process Guidance

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7.2 Research

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National Air Photo Library. *1987 Aerial View of Rockland. Detail, showing streets being laid out at the north-east corner of Caron Street and David Street.* Order Key A31478_038. Title photo_19870731_N45524W075284.

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Clear Form Print Form

Ontario

Ministry of Tourism,
Culture and Sport

Programs & Services Branch
401 Bay Street, Suite 1700
Toronto ON M7A 0A7

Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes

A Checklist for the Non-Specialist

The **purpose of the checklist** is to determine:

- if a property(ies) or project area:
  - is a recognized heritage property
  - may be of cultural heritage value
- it includes all areas that may be impacted by project activities, including – but not limited to:
  - the main project area
  - temporary storage
  - staging and working areas
  - temporary roads and detours

Processes covered under this checklist, such as:

- *Planning Act*
- *Environmental Assessment Act*
- *Aggregates Resources Act*
- *Ontario Heritage Act* – Standards and Guidelines for Conservation of Provincial Heritage Properties

Cultural Heritage Evaluation Report (CHER)

If you are not sure how to answer one or more of the questions on the checklist, you may want to hire a qualified person(s) (see page 5 for definitions) to undertake a cultural heritage evaluation report (CHER).

The CHER will help you:

- identify, evaluate and protect cultural heritage resources on your property or project area
- reduce potential delays and risks to a project

Other checklists

Please use a separate checklist for your project, if:

- you are seeking a Renewable Energy Approval under Ontario Regulation 359/09 – separate checklist
- your Parent Class EA document has an approved screening criteria (as referenced in Question 1)

Please refer to the Instructions pages for more detailed information and when completing this form.

Project or Property Name
Rockland Water Treatment Plant and Caron Booster Pumping Station

Project or Property Location (upper and lower or single tier municipality)
147 Edwards Street and 1442 Caron Street, Clarence-Rockland, ON

Proponent Name
Jacobs Consultancy Canada Inc.

Proponent Contact Information
1565 Carling Avenue, Suite 200

Screening Questions

	Yes	No
1. Is there a pre-approved screening checklist, methodology or process in place?		✓

If Yes, please follow the pre-approved screening checklist, methodology or process.

If No, continue to Question 2.

Part A: Screening for known (or recognized) Cultural Heritage Value

	Yes	No
2. Has the property (or project area) been evaluated before and found **not** to be of cultural heritage value?		✓

If Yes, do **not** complete the rest of the checklist.

The proponent, property owner and/or approval authority will:

- summarize the previous evaluation and
- add this checklist to the project file, with the appropriate documents that demonstrate a cultural heritage evaluation was undertaken

The summary and appropriate documentation may be:

- submitted as part of a report requirement
- maintained by the property owner, proponent or approval authority

If No, continue to Question 3.

	Yes	No
3. Is the property (or project area):		
a. identified, designated or otherwise protected under the *Ontario Heritage Act* as being of cultural heritage value?	✓	
b. a National Historic Site (or part of)?		✓
c. designated under the *Heritage Railway Stations Protection Act*?		✓
d. designated under the *Heritage Lighthouse Protection Act*?		✓
e. identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office (FHBRO)?		✓
f. located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?		✓

If Yes to any of the above questions, you need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report, if a Statement of Cultural Heritage Value has not previously been prepared or the statement needs to be updated

If a Statement of Cultural Heritage Value has been prepared previously and if alterations or development are proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No, continue to Question 4.

Part B: Screening for Potential Cultural Heritage Value	Yes	No
4. Does the property (or project area) contain a parcel of land that:		
a. is the subject of a municipal, provincial or federal commemorative or interpretive plaque?	✓	
b. has or is adjacent to a known burial site and/or cemetery?		✓
c. is in a Canadian Heritage River watershed?	✓	
d. contains buildings or structures that are 40 or more years old?	✓	

Part C: Other Considerations	Yes	No
5. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area):		
a. is considered a landmark in the local community or contains any structures or sites that are important in defining the character of the area?	✓	
b. has a special association with a community, person or historical event?	✓	
c. contains or is part of a cultural heritage landscape?	✓	

If Yes to one or more of the above questions (Part B and C), there is potential for cultural heritage resources on the property or within the project area.

You need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report (CHER)

If the property is determined to be of cultural heritage value and alterations or development is proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No to all of the above questions, there is low potential for built heritage or cultural heritage landscape on the property.

The proponent, property owner and/or approval authority will:

- summarize the conclusion
- add this checklist with the appropriate documentation to the project file

The summary and appropriate documentation may be:

- submitted as part of a report requirement e.g. under the *Environmental Assessment Act*, *Planning Act* processes
- maintained by the property owner, proponent or approval authority

Instructions

Please have the following available, when requesting information related to the screening questions below:

- a clear map showing the location and boundary of the property or project area
  - large scale and small scale showing nearby township names for context purposes
- the municipal addresses of all properties within the project area
- the lot(s), concession(s), and parcel number(s) of all properties within a project area

For more information, see the Ministry of Tourism, Culture and Sport's Ontario Heritage Toolkit or Standards and Guidelines for Conservation of Provincial Heritage Properties.

In this context, the following definitions apply:

- **qualified person(s)** means individuals – professional engineers, architects, archaeologists, etc. – having relevant, recent experience in the conservation of cultural heritage resources.
- **proponent** means a person, agency, group or organization that carries out or proposes to carry out an undertaking or is the owner or person having charge, management or control of an undertaking.

1. Is there a pre-approved screening checklist, methodology or process in place?

An existing checklist, methodology or process may already be in place for identifying potential cultural heritage resources, including:

- one endorsed by a municipality
- an environmental assessment process e.g. screening checklist for municipal bridges
- one that is approved by the Ministry of Tourism, Culture and Sport (MTCS) under the Ontario government's Standards & Guidelines for Conservation of Provincial Heritage Properties [s.B.2.]

Part A: Screening for known (or recognized) Cultural Heritage Value

2. Has the property (or project area) been evaluated before and found not to be of cultural heritage value?

Respond 'yes' to this question, if all of the following are true:

A property can be considered not to be of cultural heritage value if:

- a Cultural Heritage Evaluation Report (CHER) - or equivalent - has been prepared for the property with the advice of a qualified person and it has been determined not to be of cultural heritage value and/or
- the municipal heritage committee has evaluated the property for its cultural heritage value or interest and determined that the property is not of cultural heritage value or interest

A property may need to be re-evaluated, if:

- there is evidence that its heritage attributes may have changed
- new information is available
- the existing Statement of Cultural Heritage Value does not provide the information necessary to manage the property
- the evaluation took place after 2005 and did not use the criteria in Regulations 9/06 and 10/06

Note: Ontario government ministries and public bodies [prescribed under Regulation 157/10] may continue to use their existing evaluation processes, until the evaluation process required under section B.2 of the Standards & Guidelines for Conservation of Provincial Heritage Properties has been developed and approved by MTCS.

To determine if your property or project area has been evaluated, contact:

- the approval authority
- the proponent
- the Ministry of Tourism, Culture and Sport

3a. Is the property (or project area) identified, designated or otherwise protected under the *Ontario Heritage Act* as being of cultural heritage value e.g.:

i. designated under the *Ontario Heritage Act*

- individual designation (Part IV)
- part of a heritage conservation district (Part V)

Individual Designation – Part IV

A property that is designated:

- by a municipal by-law as being of cultural heritage value or interest [s.29 of the *Ontario Heritage Act*]
- by order of the Minister of Tourism, Culture and Sport as being of cultural heritage value or interest of provincial significance [s.34.5]. **Note**: To date, no properties have been designated by the Minister.

Heritage Conservation District – Part V

A property or project area that is located within an area designated by a municipal by-law as a heritage conservation district [s. 41 of the *Ontario Heritage Act*].

For more information on Parts IV and V, contact:

- municipal clerk
- Ontario Heritage Trust
- local land registry office (for a title search)

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ii. subject of an agreement, covenant or easement entered into under Parts II or IV of the *Ontario Heritage Act*

An agreement, covenant or easement is usually between the owner of a property and a conservation body or level of government. It is usually registered on title.

The primary purpose of the agreement is to:

- preserve, conserve, and maintain a cultural heritage resource
- prevent its destruction, demolition or loss

For more information, contact:

- Ontario Heritage Trust - for an agreement, covenant or easement [clause 10 (1) (c) of the *Ontario Heritage Act*]
- municipal clerk – for a property that is the subject of an easement or a covenant [s.37 of the *Ontario Heritage Act*]
- local land registry office (for a title search)

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iii. listed on a register of heritage properties maintained by the municipality

Municipal registers are the official lists - or record - of cultural heritage properties identified as being important to the community.

Registers include:

- all properties that are designated under the *Ontario Heritage Act* (Part IV or V)
- properties that have not been formally designated, but have been identified as having cultural heritage value or interest to the community

For more information, contact:

- municipal clerk
- municipal heritage planning staff
- municipal heritage committee

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iv. subject to a notice of:

- intention to designate (under Part IV of the *Ontario Heritage Act*)
- a Heritage Conservation District study area bylaw (under Part V of the *Ontario Heritage Act*)

A property that is subject to a **notice of intention to designate** as a property of cultural heritage value or interest and the notice is in accordance with:

- section 29 of the *Ontario Heritage Act*
- section 34.6 of the *Ontario Heritage Act*. **Note**: To date, the only applicable property is Meldrum Bay Inn, Manitoulin Island. [s.34.6]

An area designated by a municipal by-law made under section 40.1 of the *Ontario Heritage Act* as a **heritage conservation district study area**.

For more information, contact:

- municipal clerk – for a property that is the subject of notice of intention [s. 29 and s. 40.1]
- Ontario Heritage Trust

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v. included in the Ministry of Tourism, Culture and Sport's list of provincial heritage properties

Provincial heritage properties are properties the Government of Ontario owns or controls that have cultural heritage value or interest.

The Ministry of Tourism, Culture and Sport (MTCS) maintains a list of all provincial heritage properties based on information provided by ministries and prescribed public bodies. As they are identified, MTCS adds properties to the list of provincial heritage properties.

For more information, contact the MTCS Registrar at registrar@ontario.ca.

3b. Is the property (or project area) a National Historic Site (or part of)?

National Historic Sites are properties or districts of national historic significance that are designated by the Federal Minister of the Environment, under the *Canada National Parks Act*, based on the advice of the Historic Sites and Monuments Board of Canada.

For more information, see the National Historic Sites website.

3c. Is the property (or project area) designated under the *Heritage Railway Stations Protection Act*?

The *Heritage Railway Stations Protection Act* protects heritage railway stations that are owned by a railway company under federal jurisdiction. Designated railway stations that pass from federal ownership may continue to have cultural heritage value.

For more information, see the Directory of Designated Heritage Railway Stations.

3d. Is the property (or project area) designated under the *Heritage Lighthouse Protection Act*?

The *Heritage Lighthouse Protection Act* helps preserve historically significant Canadian lighthouses. The Act sets up a public nomination process and includes heritage building conservation standards for lighthouses which are officially designated.

For more information, see the Heritage Lighthouses of Canada website.

3e. Is the property (or project area) identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office?

The role of the Federal Heritage Buildings Review Office (FHBRO) is to help the federal government protect the heritage buildings it owns. The policy applies to all federal government departments that administer real property, but not to federal Crown Corporations.

For more information, contact the Federal Heritage Buildings Review Office.

See a directory of all federal heritage designations.

3f. Is the property (or project area) located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?

A UNESCO World Heritage Site is a place listed by UNESCO as having outstanding universal value to humanity under the Convention Concerning the Protection of the World Cultural and Natural Heritage. In order to retain the status of a World Heritage Site, each site must maintain its character defining features.

Currently, the Rideau Canal is the only World Heritage Site in Ontario.

For more information, see Parks Canada – World Heritage Site website.

Part B: Screening for potential Cultural Heritage Value

4a. Does the property (or project area) contain a parcel of land that has a municipal, provincial or federal commemorative or interpretive plaque?

Heritage resources are often recognized with formal plaques or markers.

Plaques are prepared by:

- municipalities
- provincial ministries or agencies
- federal ministries or agencies
- local non-government or non-profit organizations

For more information, contact:

- municipal heritage committees or local heritage organizations – for information on the location of plaques in their community
- Ontario Historical Society's Heritage directory – for a list of historical societies and heritage organizations
- Ontario Heritage Trust – for a list of plaques commemorating Ontario's history
- Historic Sites and Monuments Board of Canada – for a list of plaques commemorating Canada's history

4b. Does the property (or project area) contain a parcel of land that has or is adjacent to a known burial site and/or cemetery?

For more information on known cemeteries and/or burial sites, see:

- Cemeteries Regulations, Ontario Ministry of Consumer Services – for a database of registered cemeteries
- Ontario Genealogical Society (OGS) – to locate records of Ontario cemeteries, both currently and no longer in existence; cairns, family plots and burial registers
- Canadian County Atlas Digital Project – to locate early cemeteries

In this context, adjacent means contiguous or as otherwise defined in a municipal official plan.

4c. Does the property (or project area) contain a parcel of land that is in a Canadian Heritage River watershed?

The Canadian Heritage River System is a national river conservation program that promotes, protects and enhances the best examples of Canada's river heritage.

Canadian Heritage Rivers must have, and maintain, outstanding natural, cultural and/or recreational values, and a high level of public support.

For more information, contact the Canadian Heritage River System.

If you have questions regarding the boundaries of a watershed, please contact:

- your conservation authority
- municipal staff

4d. Does the property (or project area) contain a parcel of land that contains buildings or structures that are 40 or more years old?

A 40 year 'rule of thumb' is typically used to indicate the potential of a site to be of cultural heritage value. The approximate age of buildings and/or structures may be estimated based on:

- history of the development of the area
- fire insurance maps
- architectural style
- building methods

Property owners may have information on the age of any buildings or structures on their property. The municipality, local land registry office or library may also have background information on the property.

Note: 40+ year old buildings or structure do not necessarily hold cultural heritage value or interest; their age simply indicates a higher potential.

A building or structure can include:

- residential structure
- farm building or outbuilding
- industrial, commercial, or institutional building
- remnant or ruin
- engineering work such as a bridge, canal, dams, etc.

For more information on researching the age of buildings or properties, see the Ontario Heritage Tool Kit Guide Heritage Property Evaluation.

Part C: Other Considerations

5a. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) is considered a landmark in the local community or contains any structures or sites that are important to defining the character of the area?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has potential landmarks or defining structures and sites, for instance:

- buildings or landscape features accessible to the public or readily noticeable and widely known
- complexes of buildings
- monuments
- ruins

5b. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) has a special association with a community, person or historical event?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has a special association with a community, person or event of historic interest, for instance:

- Aboriginal sacred site
- traditional-use area
- battlefield
- birthplace of an individual of importance to the community

5c. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) contains or is part of a cultural heritage landscape?

Landscapes (which may include a combination of archaeological resources, built heritage resources and landscape elements) may be of cultural heritage value or interest to a community.

For example, an Aboriginal trail, historic road or rail corridor may have been established as a key transportation or trade route and may have been important to the early settlement of an area. Parks, designed gardens or unique landforms such as waterfalls, rock faces, caverns, or mounds are areas that may have connections to a particular event, group or belief.

For more information on Questions 5.a., 5.b. and 5.c., contact:

- Elders in Aboriginal Communities or community researchers who may have information on potential cultural heritage resources. Please note that Aboriginal traditional knowledge may be considered sensitive.
- municipal heritage committees or local heritage organizations
- Ontario Historical Society's "Heritage Directory" - for a list of historical societies and heritage organizations in the province

An internet search may find helpful resources, including:

- historical maps
- historical walking tours
- municipal heritage management plans
- cultural heritage landscape studies
- municipal cultural plans

Information specific to trails may be obtained through Ontario Trails.

ORIGINAL REPORT

Heritage Impact Assessment

Rockland Water Treatment Plant,
147 Edwards Street,
Part Lot 27, Concession 1 Old Survey
Geographic Township of Clarence,
City of Clarence-Rockland
United Counties of Prescott-Russell, Ontario

Prepared For

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15 May 2026

Submitted By

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Senior Architectural Historian
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www.MatrixHeritage.ca

Report: MH1442-REP.02

Executive Summary

Matrix Heritage has been retained by Jacobs Consultancy Canada Inc (Jacobs) to prepare a Heritage Impact Assessment (HIA) to evaluate potential impacts of the proposed expansion of the Rockland Water Treatment Plant (WTP) at 147 Edwards Street, Clarence-Rockland. This HIA is in support of a Schedule C Class EA.

A *Cultural Heritage Screening Report* was prepared by Matrix Heritage in January 2026 in advance of this HIA. The screening identified Du Moulin Park/the former Edwards Sawmill, at 101 Edwards Street, a property that is fully designated under Part IV of the Ontario Heritage Act, and the Ottawa River, Canadian Heritage River, as cultural heritage resources (CHRs) of cultural heritage value or interest within the study area. The purpose of the HIA is to consider potential adverse (negative) and positive impacts on CHRs resulting from the project. Archaeological resources are subject to separate requirements and are outside the scope of the HIA. The HIA identifies considered alternatives and proposed mitigation measures.

The Study Area includes the project area of the Rockland WTP at 147 Edwards Street, Du Moulin Park/the former Edwards Sawmill, at 101 Edwards Street, and the shoreline of the Ottawa River adjacent to the impacted property parcels (see 9.0 Maps).

The proposed expansion of the Rockland WTP and Low Lift Pump Station at 147 Edwards Street, Clarence-Rockland is anticipated to have only minor and temporary adverse impacts on the cultural heritage resources of Du Moulin Park/Former Edwards Sawmill, and access to the Ottawa River as a Canadian Heritage River (see section 5.0).

Potential adverse heritage impacts include the following:

- Potential direct adverse impacts in the form of possible accidental damage to the three heritage plaques located towards the north-east corner of Du Moulin Park from construction vehicles.
- The proposed expansion of the Rockland WTP may have a temporary adverse impact on the ability of residents to access the Ottawa River as a place of recreation if the boat launch is inaccessible during construction.
- The proposed expansion of the Rockland WTP may have a temporary adverse impact on the ability of residents to access the Du Moulin Park as a place of recreation if the Park is inaccessible during construction.

No other direct adverse heritage impacts are anticipated for either Du Moulin Park or the Ottawa River.

The following measures are recommended to mitigate the impacts of direct and indirect adverse impacts described in section 5.3 (see section 6.0):

- The proposed expansion of the Rockland WTP and adjacent Low Lift Pump Station currently calls for the use of the same or similar cladding materials. These are generally visually inoffensive, low maintenance and long-lasting, contributing to less waste. The use of either the same cladding materials in the same colours (brick on the Low Lift Pump Station, brick and/or beige metal siding on the Rockland WTP) as proposed, OR the use

on the Rockland WTP of cladding materials in colours that blend into the background of the landscape (such as muted blue siding) is recommended.

- It is recommended that the municipal and provincial plaques in Du Moulin Park along Edwards Steet be marked on plans and avoided.

- It is recommended that steps be taken to ensure safe access to Du Moulin Park by pedestrians for the duration of construction activities if possible.

- It is recommended that public access to the Ottawa River via the boat launch be maintained for as much of the duration of construction activities as can be safely accommodated.

Project Personnel

Heritage Study Personnel

Lead	Natalie Anderson Rathwell, MA, CAHP Senior Architectural Historian and Heritage Consultant
Research & Reporting Assistance	Giulia Santocono, MArch Junior Heritage Consultant
Mapping and GIS	Jeff Dillane, MA, APA Archaeological Operations Manager and GIS Specialist
	Em Miller, BA GIS Technician
	Matrix Heritage Inc. 6131 Perth Street, Richmond Ontario K0A 2Z0 (613) 807-2071 info@matrixheritage.ca

Client Representative

Andre Bourque
Jacobs Consultancy Canada Inc.
1565 Carling Avenue, Suite 200
Ottawa, ON K1Z 8R1
Andre.Bourque@jacobs.com

Property Information

Rockland Water Treatment Plant,
147 Edwards Street,
Part Lot 27, Concession 1 Old Survey, and
Caron Booster Pumping Station,
1441 Caron Street,
Part Lots 23 and 24, Concession 1 Old Survey,
Geographic Township of Clarence,
City of Clarence-Rockland
United Counties of Prescott-Russell, Ontario

Table of Contents

1.0 Introduction

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1.1 Study Area

- Location plan Rockland WTP: **Map 1**
- Aerial plan Rockland WTP: **Map 2**
- Rockland WTP Proposed Footprint: **Map 3**

The Study Area includes the project area of the Rockland WTP at 147 Edwards Street, Du Moulin Park/the former Edwards Sawmill, at 101 Edwards Street, and the shoreline of the Ottawa River adjacent to the impacted property parcels.

1.2 Methodology

This HIA follows guidance provided by the Ministry of Tourism, Cultural and Sport in InfoSheet #5 – Heritage Impact Assessments and Conservation Plans (2006; now the Ministry of Citizenship and Multiculturalism) and Information Bulletin 3 - Heritage Impact Assessments for Provincial Heritage Properties (2017), as well as the Standards and Guidelines for the Conservation of Historic Places in Canada (2010), and makes use of the format provided by the City of Ottawa's Heritage Impact Assessment Terms of Reference. Bulletin 3 is focused on properties owned by the Province of Ontario, but the guidance is relevant for other types of properties.

Research included an overview of the properties' geographic context and history, a visual inspection, including photographic documentation, followed by analysis.

1.2.1 Site Visit

A site visit to the study area was undertaken by Natalie Anderson Rathwell, MA, CAHP, on November 19, 2025 (see Figure 1-Figure 20).

1.2.2 Study Personnel and Professional Qualifications

Natalie Anderson Rathwell, Senior Architectural Historian and Heritage Consultant for Matrix Heritage, led and authored this report. She is a professional member of the Canadian Association of Heritage Professionals (CAHP). She holds a BA and MA in Art History, including studies in architectural history, from Carleton University, and undertook doctoral studies (ABD) in architectural history at York University. Her experience includes seven years in cultural heritage reporting providing Cultural Heritage Screenings, Cultural Heritage Evaluation Reports, Heritage Impact Assessments, Cultural Landscape Studies, histories, and other related research projects for federal, municipal, and private sector clients, and fifteen years of related experience in the fields of history, art and architectural history. In addition to professional membership with CAHP, she is a current member of the board of the Society for the Study of Architecture in Canada.

Giulia Santocono, Junior Heritage Consultant for Matrix Heritage, assisted with research and report preparation. She holds an MArch from Toronto Metropolitan University.

2.0 Current Conditions / Introduction to Development Site

2.1 Development Context

The Rockland WTP is located at 147 Edwards Street towards the north end of the street, south of the Ottawa River shoreline, forming part of the City of Clarence-Rockland's primary water supply and distribution system (Figure 1, Figure 2). The wider surrounding area comprises a mix of light industrial and municipal utility uses, interspersed with residential neighbourhoods and open green spaces associated with the riverfront corridor. Within the study area, to the immediate north of the WTP, is a large gravel parking area serving Du Moulin Park to the immediate west, and a municipal boat launch to the north, as well as access to the north and east sides of the WTP (Figure 17-Figure 20). The Low Lift Pumping Station (Figure 3), which occupies a square brick building, is located beside the western edge of the parking lot, east of the Park. To the east and south, behind the WTP, is a forested area that was formerly part of the Edwards Mill site. To the south of the WTP along the east side of Edwards Street are residential properties dating from circa the 1940s and 1970s. The west side of Edwards Street, within the study area, consists of residential townhouses and 5-storey apartments less than 40 years old, a sewage pumping station, and two raised bungalows immediately opposite the WTP dating to the 1960s.

To the north-west of WTP at 101 Edwards Street is Du Moulin Park. The Park occupies the north-west corner of the peninsula into the Ottawa River on which the WTP is situated. The location is the former site of the Edwards Sawmill and includes the remains of three stone foundations of the former sawmill, as well as open lawn, and a playground. The three stone foundations (Figure 4- Figure 16) are located on the west side of park, towards the shore of the Ottawa River, and the side of the property farthest from the Rockland WTP. The Park is designated under Part IV of the Ontario Heritage Act. The Rockland WTP itself is a highly utilitarian building. Its massing consists of a combination of rectangular volumes, between one and two-storeys tall. The exterior includes a one-storey section clad in red brick, with the remainder of the building clad in beige corrugated metal siding, oriented vertically (Figure 1).

2.2 Historical Context

For a more complete history of the Anishinabe Algonquin and settlement history of the area please see the *Stage 2 Archaeological Assessment, Rockland WTP Site* (Matrix Heritage, 2026).

Archaeological information suggests that ancestral Anishinabe Algonquin people lived in the region for at least 8,000 years before the Europeans arrived in North America. This traditional territory is generally considered to encompass the Ottawa Valley on both sides of the river, in Ontario and Quebec, from the Rideau Lakes to the headwaters of the Ottawa River. By the time of European contact in the early 17th century, the Algonquin were essential middlemen in the fur trade, dominating the trade routes of the "Kitchissipi" (Ottawa River) and its tributaries.

The subject property is located in the former Township of Clarence. On January 1, 1800, the townships of Cambridge, Clarence, Gloucester, Osgoode, and Russell were joined to form the County of Russell, which later merged with Prescott County to form Prescott and Russell United Counties.

In the following years, the area expanded modestly, closely tied to the lumber industry and a growing agricultural sector that expanded as the land was cleared. The northern portion of the county, along the Ottawa River, flourished with the development of the L'Orignal-Bytown road in 1840. Most of the early settlers were English, until 1849 when Joseph-Bruno Guigues, the first bishop of the diocese of Bytown, founded the Société de colonisation to encourage Catholic settlement between Ottawa and Montreal. Irish emigrants were directed to the counties of Glengarry and Stormont, while French Canadians were encouraged to settle in Prescott and Russell Counties.[1] The majority of the French Canadians emigrated from the counties of Vaudreuil, Soulanges, and Deux Montagnes near Montreal as these areas were becoming very populated.[2]

William Cameron Edwards, born in 1844 in Clarence Township, became an important figure in both the timber industry and in Canadian politics. As a young entrepreneur he built a sawmill in Rockland in 1868 on the site of Du Moulin Park, which contributed significantly to the growth and economic development of the area. He established the W. C. Edwards & Company which consisted of his large sawmill in Rockland, as well as others in Ottawa and Quebec. Edwards served as a liberal Member of Parliament representing Russell County and later was appointed to the senate.

As the community grew, the first school was opened in 1875. In the nearby cross-roads community of Clarence Creek, a French one-room school (S.S. No. 16) was built in 1881 and was one of the first brick schools in Ontario. The school was demolished in 1962. The railroad extended to the area in 1888, opening the communities to the shipment of wood, hay, merchandise, and materials. The construction of a second railroad in 1908, linking Ottawa and Hawkesbury, had a great impact on the population.

[1] Jean-Pierre Perrault, Un Peuple Autour d'une Croix: Centenaire de La Paroisse Sainte-Euphémie de Casselman 1886-1986 (Ottawa, ON: Kaice-Tec Reproduction Ltée, 1986), 4.

[2] Paul-François Sylvestre, *Casselman* (Ottawa: Le Centre franco-ontarien de resources pédagogiques, 1984), 4.

As a result of economic stagnation that prevailed after the First World War, the W. C Edwards sawmill closed its doors in 1926. Following this, a large part of the population left for the province of Quebec to find employment in the Hull and Gatineau sawmills. Economic recovery began after 1939 with the beginning of the Second World War and continued as returning soldiers led to an increase in the population. Home building experienced a boom resulting in the expansion of services like water and electricity and the establishment of a first sewer system in 1964.

In 1998 the Township of Clarence and the Town of Rockland merged to form the City of Clarence-Rockland.

2.2.1 Study Area Specific History

The W.C. Edwards mill, discussed above, was constructed in 1868 and operated until 1926 (Figure 21-Figure 25).[3] Historic mapping shows how quickly the community grew following the establishment of the mill. Walling's 1863 map of the county of Prescott and Russell shows no development along the waterfront of Lots 27 and 28 (Figure 26), while by the time of the H. Belden & Co.'s 1879 map, only 16 years later, the town of Rockland is well defined with a road into the community and the sawmill labelled (Figure 27).

The history of Du Moulin Park is provided by a plaque installed by the City of Clarence-Rockland, and the Société Historique Saint-Pascal-Baylon (Figure 9):

> Du Moulin Park was inaugurated in 1967, during the centennial of the Confederation to commemorate the site of the sawmills of the Edwards Family. In 2016, the park was designated a heritage site by the City of Clarence-Rockland as per the Ontario Heritage Act. The foundation of two buildings and the base of one of the big chimneys are the only remnants that remind us of the industrial activity on this site. Since 1967, Du Moulin Park has become a gathering place for the community and the site for many activities. In the Spring of 2017, the Ottawa River's rising waters flooded the Park and many surrounding homes for many weeks.
>
> In 1868, William Cameron Edwards, a young entrepreneur in the Thurso pulp and paper industry built a sawmill at McCaul Point, where the Du Moulin Park (on Edwards Street) is today.
>
> In its first year of operation in 1870, the mill was an incredible success. In order to satisfy the growing demand for wood in Montreal and Europe, the mill, the lumberyard and the shipping docks were expanded in the second year of operations. In 1875, during the fifth year of operations, a fire destroyed the mill. The Edwards Company, which was renowned internationally, was able to secure the required funds to rebuild the mill. This new construction was even more impressive than the first.

[3] Balado Discovery, "Parc Du Moulin," *Balado Discovery*, 2017, https://baladodecouverte.com/circuits/804/poi/9273/parc-du-moulin.

> The very high demand for timber in the early 1900s pushed the Edwards Company to build a second mill at the end of Woods Street, nicknamed the small mill. In the summer of 1924, the small mill was struck by lightning and engulfed in flames. It was never rebuilt since the demand for wood was in decline at the time.
>
> During its existence, the Edwards mill was the second largest in Canada. In prosperous times, up to 2000 employees worked long hours, six days a week for wages varying between 10 and 15 dollars per week, which was considered a good salary at the time.
>
> Because of the wood industry' prosperity, between 1860 and 1880 the Rockland region experienced a very rapid demographic growth. The first houses of the Rockland village were built around the wood mill. Later, families moved into houses built along Laurier Street. Thus, two sections were formed· Rockland-West and Rockland-East. Within a short period, Rockland had its own post office, churches, schools, hotels, etc. All these developments led to a population that surpassed 1,500 residents in Rockland m the 1890s.

As per By-law 2017-45:

> In the 1920's, the mill was sold. In 1926, the sawmill closed their door following the economic stagnation after World War I. Near 1938, the chimney of the mill was demolished and in 1967 the municipal Park, the municipal « Du Moulin Park » was inaugurated.

The Rockland WTP was constructed in 1972 and expanded to its current footprint in 1979.

New mid-rise apartment complexes to the south of the park on the west side of Edwards Street were added to the neighbourhood approximately 20-30 years ago. A midcentury bungalow, formerly immediately adjacent to the north side of the Rockland WTP, was demolished c. 2024.

2.3 Statements of Significance

2.3.1 Du Moulin Park/Former Edwards Sawmill

The Du Moulin Park, located at 101 Edwards Street, was designated under By-law 2017-45 by the City of Clarence-Rockland on April 12, 2017. The designation recognizes the cultural heritage value and description of heritage attributes of the former Edwards sawmill site as follows:

> Statement of Cultural Heritage Value or Interest:
>
> In 1868, William Cameron Edwards built a sawmill at the point McCaul in the Rockland area with two employees. At that time, Rockland had about 350 inhabitants. Mr. Edwards had hired several French Canadians to cut down trees. The men hauled logs up to the river where they floated up to the sawmill. In 1875, a fire destroyed the sawmill and it was reconstructed the year after. Then came the railroad in 1888 to haul wood and merchandise. Wood products were transported to Montreal and then delivered to England. In the 1920's, the mill was

sold. In 1926, the sawmill closed their door following the economic stagnation after World War I. Near 1938, the chimney of the mill was demolished and in 1967 the municipal Park, the municipal « Du Moulin Park » was inaugurated.

Description of Heritage Attributes:

In the Park, there are still the remains of three old stone foundation of the former sawmill. The three stone foundations are the park's elements to preserve and protect for the future.

2.3.1.1 *Plaques in Du Moulin Park*

Three historic plaques were noted during the site visit. All three are within Du Moulin Park. They include:

- Ontario Heritage Foundation Plaque, to William Cameron Edwards, 1844-1921 (Figure 5, Figure 6).

  It includes the following text:

  > William Cameron Edwards 1844-1921
  >
  > A native of Russell County, Edwards entered the family lumber business in 1863. Five years later, her and James Woods established the firm of W.C. Edwards & Company. The sawmills they built in Rockland contributed substantially to the community's economic development. Edwards entered politics in 1887 and sat as the federal member for Russell until 1903, when he was appointed to the senate. As federal and provincial governments developed forest policies in response to the growing conservation movements, Edwards, a founding director of the Canadian Forestry Association (1906), lobbies to protect the interests of large-scale lumbering by promoting the new concept of forest management.
  >
  > Ontario Heritage Foundation, Ministry of Culture, Tourism and Recreation[4]

- City of Clarence-Rockland historic plaque/interpretive panel on Du Moulin Park with information provided by the Clarence-Rockland Museum (Figure 7, Figure 8);
- Société Historique Saint-Pascale-Baylon, "A touch of History" plaque, Du Moulin Park (Figure 9, see text in section 2.2.1).

2.3.2 Ottawa River Canadian Heritage River

The Ottawa River is designated as part of the Canadian Heritage River Systems (CHRS) in recognition of its outstanding cultural and natural heritage and the long-term stewardship committed to its conservation. This national designation identifies the river as a landscape of historical significance, reflecting its role as a major Indigenous travel and trade corridor, and later as the primary route that structured the fur trade, the timber economy, as well as

[4] Note heritage is currently overseen by the Ontario Ministry of Citizenship and Multiculturalism.

subsequent Euro-Canadian settlement patterns across eastern Ontario and eastern Quebec. The designation affirms the river's ongoing associative value as a cultural corridor that continues to shape regional identity, recreation and community use.

As per their website, the Canadian Heritage Rivers System "is Canada's national program for recognizing, celebrating and conserving the natural, cultural and recreational values of 42 river designations across Canada."[5]

The Ottawa River was designated a Canadian Heritage River in 2016 for its natural, cultural and recreational heritage:[6]

> **Natural Heritage**
>
> Canada's eighth largest river, the Ottawa flows through 1271 kilometres (km) of the Laurentian physiographic region of Canada. The section designated as a Canadian Heritage River spans 590 km and forms a natural border between Ontario and Quebec. The river flows through rural areas and small towns in the Upper and Lower Ottawa Valleys, and passes through the urban setting of Ottawa, Ontario.
>
> Though tamed by multiple hydroelectric dams, the river has many interesting natural features, including underwater caves found at Westmeath. Rare plant species can be found along the riverbed and the diverse environment around the river is home to countless species of fish, birds and mammals.
>
> **Cultural Heritage**
>
> There is archaeological evidence suggesting the existence of a number of Indigenous seasonal campsites dating back more than 6000 years. More permanent Indigenous settlements existed along the riverbank as far back as the 17th century.
>
> Dams and mills have existed along the Ottawa River for centuries. Settlements and communities along the waterway used the river as a vital power source and natural resource, much as communities along the river valley do today. The river was also used as an important transportation and trading hub by the First Nations and then by Europeans, and was intrinsic to the development of the nation's early logging industry.
>
> **Recreational Heritage**
>
> In the 19th century, tourists were able to travel the Ottawa River on steamboats. Today, motor boats, sailboats, canoes and kayaks cruise and explore this lengthy waterway. The Ottawa is also renowned as a whitewater paddling mecca, with

[5] Canadian Heritage Rivers System, "About Us." Accessed November 2025. Online at: https://chrs.ca/en/about-chrs

[6] Canadian Heritage Rivers System, "Ottawa River." Accessed November 2025. Online at: https://chrs.ca/en/rivers/ottawa-river

multiple companies offering rafting and excursions down the 12 km “Rocher Fendu” section of the river.

Beautiful beaches as well as walking, hiking and biking trails can all be found along the river. In the winter, ice fishing is very popular, and huts dot the river once it freezes over. Snowmobiling, skating, and cross-country skiing are also popular winter pursuits along the river.

3.0 Description of Proposed Development

As part of Phase 1 of the plans prepared by Jacobs Engineering for the Rockland Water Treatment Plant, the proposed development involves comprehensive upgrades and expansion of the facility and its associated Low Lift Pumping Station. This phase entails significant site alterations, including the removal of existing asphalt, concrete, and gravel surfaces, along with the decommissioning of an abandoned septic tank and the tile field to the east of the WTP. To accommodate the expanded footprint, the project requires targeted clearing and vegetation removal, specifically involving the removal of trees and bushes located immediately adjacent to the northeast corner of the plant.

Site preparation extends to the Du Moulin Park parking lot area, where work includes the removal and subsequent reinstatement of existing concrete bollards and a concrete pad. Broader site preparation will involve clearing, grubbing and stripping within the surrounding work area, including the removal of existing fence sections, to facilitate the construction of an upgraded facility system that features integrated process mechanical systems, a new standby generator set, and an asphalt driveway and pad. Additional site modifications include the relocation of an existing ditch, the reinstatement of a new chain-link fence and gate around the site perimeter, and the establishment of a dedicated contractor laydown area, while the site plan also accounts for a “Future Phase 2” expansion as indicated on the drawing package to ensure long-term utility capacity.

The proposed addition plans to keep with the character of the existing Rockland WTP and Low Lift Pumping Station, in terms of building height and exterior building/cladding finishes.[7]

4.0 Guidance on Assessment of Impacts

To assess the potential impacts of the undertaking, identified BHRs and CHLs are considered against a range of possible negative impacts, based on the *Ontario Heritage Tool Kit Info Sheet #5: Heritage Impact Assessments and Conservation Plans* (Ministry of Tourism and Culture, 2006), and *Standards & Guidelines for Conservation of Provincial Heritage Properties - Information Bulletin 3* (2017). Per the latter, these include but are not limited to:

[7] Meeting between Natalie Anderson Rathwell, Matrix Heritage, and Mitchell Dawley and Jane McDonald, Jacobs, 22 April 2026.

Direct Adverse impacts:

- Removal or demolition of all or part of any *heritage attribute*.
- Removal or demolition of any building or structure on the property whether or not it contributes to the cultural heritage value or interest of the property (i.e. non-contributing buildings).
- Any land disturbance, such as a change in grade and/or drainage patterns that may adversely affect a heritage property, including archaeological resources.
- Alterations to the property in a manner that is not sympathetic, or is incompatible, with cultural heritage value or interest of the property. This may include necessary alterations, such as new systems or materials to address health and safety requirements, energy-saving upgrades, building performance upgrades, security upgrades or servicing needs.
- Alterations for access requirements or limitations to address such factors as accessibility, emergency egress, public access, security.
- Introduction of new elements that diminish the integrity of the property, such as a new building, structure or addition, parking expansion or addition, access or circulation roads, landscape features.
- Changing the character of the property through removal or planting of trees or other natural features, such as a garden, or that may result in the obstruction of significant views or vistas within, from, or of built and natural features.
- Change in use for the property that could result in permanent, irreversible damage or negates the property's cultural heritage value or interest.

Indirect Adverse impacts:

- Shadows that alter the appearance of a heritage attribute or change the visibility of an associated natural feature or plantings, such as a tree row, hedge or garden.
- Isolation of a heritage attribute from its surrounding environment, context or a significant relationship.
- Vibration damage to a structure due to construction or activities on or adjacent to the property.
- Alteration or obstruction of a significant view of or from the property from a key vantage point.

Positive Impacts:

- Changes or alterations that are consistent with accepted conservation principles, such as those articulated in *Eight Guiding Principles in the Conservation of Historic Properties, Heritage Conservation Principles for Land Use Planning* (former Ministry of Tourism, Culture, and Sport, now Ministry of Citizenship and Multiculturalism), and Parks Canada's *Standards and Guidelines for the Conservation of Historic Places in Canada*.
- Adaptive re-use of a property – alteration of a property to fit new uses or circumstances of the of property in a manner that retains its cultural heritage value of interest.

- Public interpretation or commemoration.

The InfoSheet provides direction on mitigation and avoidance, as does Parks Canada's *Standards and Guidelines for the Conservation of Historic Places in Canada* (2010).

5.0 Impact of Proposed Development

5.1 General Impacts

The proposed expansion at the Rockland WTP includes demolition, excavation, trenching, and the construction of new infrastructure upgrades to the existing Water Treatment Plant property. The component located closest to Du Moulin Park is the proposed Low Lift Pump Station, which will contain three new low lift pumps intended to provide a firm pumping capacity of 37 ML/d. While the structure is situated closest to the designated property it is outside of the property parcel designated under Part IV of the Ontario Heritage Act, Du Moulin Park, and is further away than the existing low lift pumping station.

Many of the proposed alterations and construction activities are concentrated on the north-eastern portion of the WTP site, furthest from the designated property and separated by Edwards Street. The proposal does not introduce substantial changes to the building height, massing, or exterior materials that would alter the visual relationship between the WTP and Du Moulin Park. The Rockland WTP is partially screened from the park by the mid-rise building at 134 Edwards Street, and the new Low Lift Pump Station is partially screened from the park by the existing Low Lift Pump Station. As such, the proposal primarily results in localized operational and physical changes to the WTP site, with limited anticipated effects on the adjacent designated property.

5.2 Positive Heritage Impacts

There are no positive heritage impacts anticipated from the proposed expansion of the Rockland WTP for either Du Moulin Park of the Ottawa River as a Canadian Heritage River. The proposal retains Du Moulin Park in its current form and does not require alteration to its identified heritage attributes. The three surviving stone foundations associated with the former Edwards Sawmill will remain protected and publicly accessible. The retention of the park's open setting and continued public access to the designated resource ensures that the cultural heritage value of the site remains legible.

5.3 Adverse Heritage Impacts

Direct Adverse Heritage Impacts

Potential direct adverse heritage impacts include:

- Possible accidental damage to the three heritage plaques located towards the north-east corner of Du Moulin Park from construction vehicles:
    - Ontario Heritage Foundation Plaque, to William Cameron Edwards, 1844-1921 (Figure 5, Figure 6).

- City of Clarence-Rockland historic plaque/interpretive panel on Du Moulin Park with information provided by the Clarence-Rockland Museum (Figure 7, Figure 8),
- Société Historique Saint-Pascale-Baylon, “A touch of History” plaque, Du Moulin Park (Figure 9).

No other direct adverse heritage impacts are anticipated for either Du Moulin Park or the Ottawa River.

No demolition, excavation, trenching, grading, or construction activities are proposed within Du Moulin Park. The designated heritage attributes identified under By-law 2017-45, specifically the three surviving stone foundations of the former Edwards Sawmills, will not be physically altered, removed, or otherwise directly impacted by the proposed works.

Indirect Adverse Heritage Impacts

Potential Indirect Adverse Heritage Impacts include the following:

- The proposed expansion of the Rockland WTP may have a temporary adverse impact on the ability of residents to access the Ottawa River as a place of recreation if the boat launch is inaccessible during construction.
- The proposed expansion of the Rockland WTP may have a temporary adverse impact on the ability of residents to access the Du Moulin Park as a place of recreation if the Park is inaccessible during construction.

6.0 Mitigation Measures

The following measures are recommended to mitigate the impacts of direct and indirect adverse impacts described in section 5.3:

- The proposed expansion of the Rockland WTP and adjacent Low Lift Pump Station currently calls for the use of the same or similar cladding materials. These are generally visually inoffensive, low maintenance and long-lasting, contributing to less waste. The use of either the same cladding materials in the same colours (brick on the Low Lift Pump Station, brick and/or beige metal siding on the Rockland WTP) as proposed, OR the use on the Rockland WTP of cladding materials in colours that blend into the background of the landscape (such as muted blue siding) is recommended.

- It is recommended that the municipal and provincial plaques in Du Moulin Park along Edwards Steet be marked on plans and avoided.

- It is recommended that steps be taken to ensure safe access to Du Moulin Park by pedestrians for the duration of construction activities if possible.

- It is recommended that public access to the Ottawa River via the boat launch be maintained for as much of the duration of construction activities as can be safely accommodated.

7.0 Conclusion

The proposed expansion of the Rockland WTP and Low Lift Pump Station at 147 Edwards Street, Clarence-Rockland is anticipated to have only minor and temporary adverse impacts on the cultural heritage resources of Du Moulin Park/Former Edwards Sawmill, and access to the Ottawa River as a Canadian Heritage River.

The only potential permanent direct adverse heritage impacts include possible accidental damage to the three heritage plaques located towards the north-east corner of Du Moulin Park from construction vehicles.

Temporary loss or reduction of access to Du Moulin Park and the boat launch that offers public access to the Ottawa River are also possible.

Measures included in section 6.0 outline recommendations to mitigate the temporary and potential permanent adverse impacts to Du Moulin Park, and access to the Ottawa River as a Canadian Heritage River and support the current plans for the exteriors of the proposed additions.

8.0 Figures

8.1 Study Area - Rockland Water Treatment Plant

Figure 1. Rockland Water Treatment Plant located at 147 Edwards St. Matrix Heritage, Nov 19, 2025.

Figure 2. Rockland Water Treatment Plant located at 147 Edwards St. Matrix Heritage, Nov 19, 2025.

Figure 3. Rockland WTP Low Lift Pump Station. Matrix Heritage, Nov 19, 2025.

Figure 4. Du Moulin Park. Matrix Heritage, Nov 19, 2025.

Figure 5. Ontario Heritage Foundation Plaque, to William Cameron Edwards, 1844-1921, in Du Moulin Park. Matrix Heritage, Nov 19, 2025.

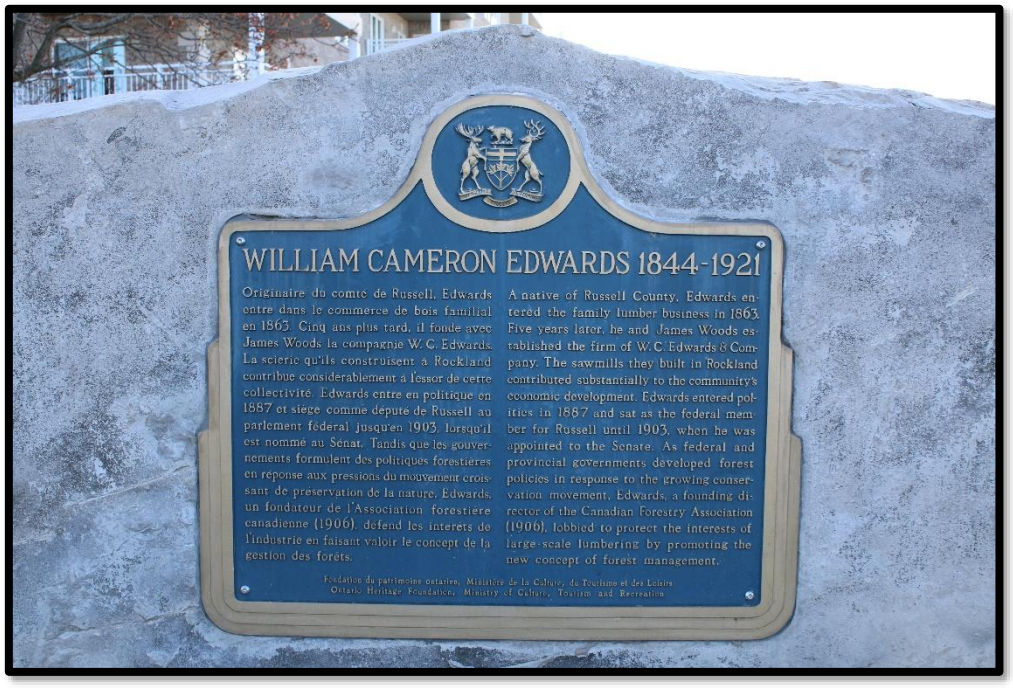


Figure 6. Ontario Heritage Foundation Plaque, to William Cameron Edwards, 1844-1921, in Du Moulin Park. Matrix Heritage, Nov 19, 2025.

Figure 7. City of Clarence-Rockland historic plaque/interpretive panel on Du Moulin Park with information provided by the Clarence-Rockland Museum. Matrix Heritage, Nov 19, 2025.

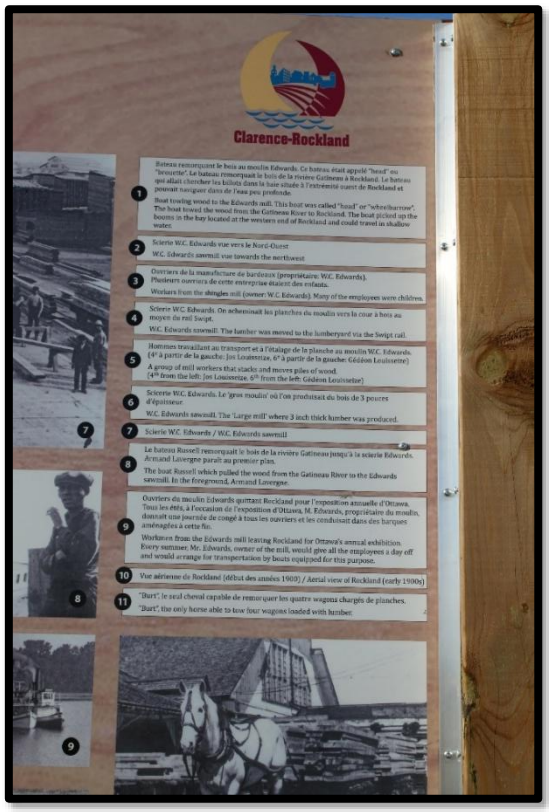


Figure 8. Detail, City of Clarence-Rockland historic plaque/interpretive panel on Du Moulin Park with information provided by the Clarence-Rockland Museum. Matrix Heritage, Nov 19, 2025.

Figure 9. Société Historique Saint-Pascale-Baylon, "A touch of History" plaque, Du Moulin Park. Matrix Heritage, Nov 19, 2025.

Figure 10. Du Moulin Park, looking north across the Ottawa River.

Figure 11. Du Moulin Park, view towards the Rockland WTP. Matrix Heritage, Nov 19, 2025.

Figure 12. Historic foundations (left) and playground (right), Du Moulin Park. Matrix Heritage, Nov 19, 2025.

Figure 13. Historic foundations, Du Moulin Park. Matrix Heritage, Nov 19, 2025.

Figure 14. Historic foundations, Du Moulin Park. Matrix Heritage, Nov 19, 2025.

Figure 15. Historic foundations, Du Moulin Park, and modern apartment buildings and townhouses to the south. Matrix Heritage, Nov 19, 2025.

Figure 16. Shoreline of Rockland, looking west from Du Moulin Park. Matrix Heritage, Nov 19, 2025.

Figure 17. Ottawa River shoreline, north edge of Du Moulin Park, looking east towards boat launch. Matrix Heritage, Nov 19, 2025.

Figure 18. Ottawa River shoreline, north edge of Du Moulin Park, looking west, upriver. Matrix Heritage, Nov 19, 2025.

Figure 19. Boat launch, north of Rockland WTP. Matrix Heritage, Nov 19, 2025.

Figure 20. Parking for boat launch and park, looking south towards Rockland WTP. Matrix Heritage, Nov 19, 2025.

8.2 Historical Images

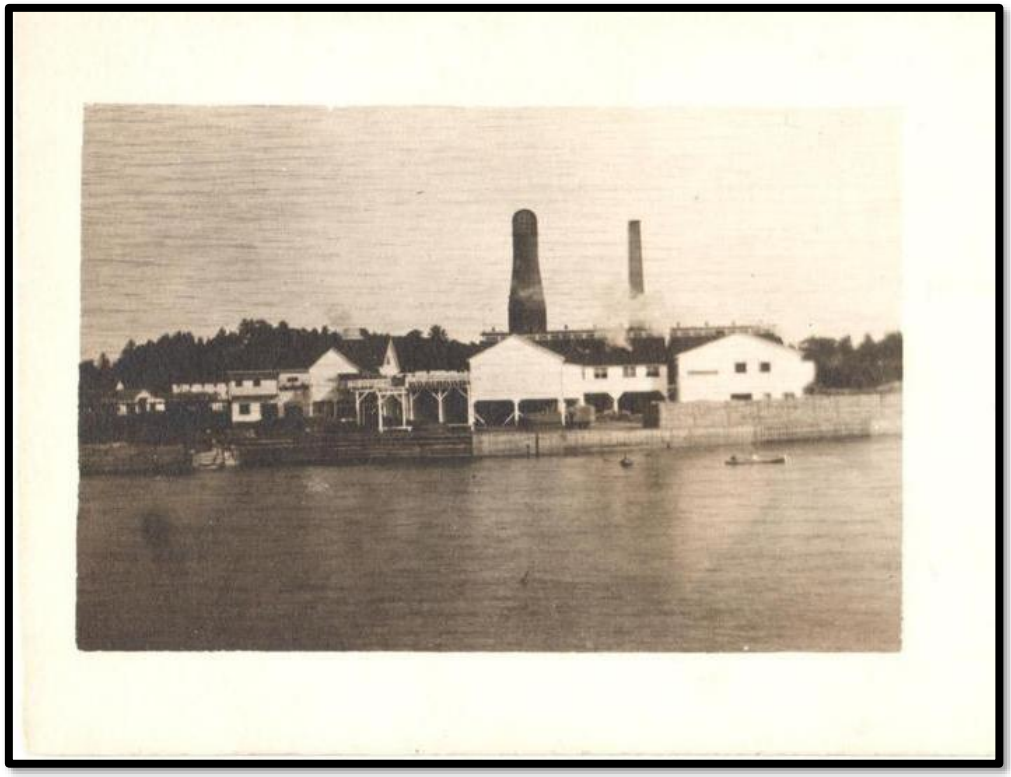


Figure 21. W.C. Edwards mill (1868-1926) at McCaul Point, the location of today's Du Moulin Park. Online at https://baladodecouverte.com/circuits/804/poi/9273/parc-du-moulin

Figure 22. W.C. Edwards mill (1868-1926), the location of today's Du Moulin Park, which includes the foundations of the chimney. Online at https://baladodecouverte.com/circuits/804/poi/9273/parc-du-moulin

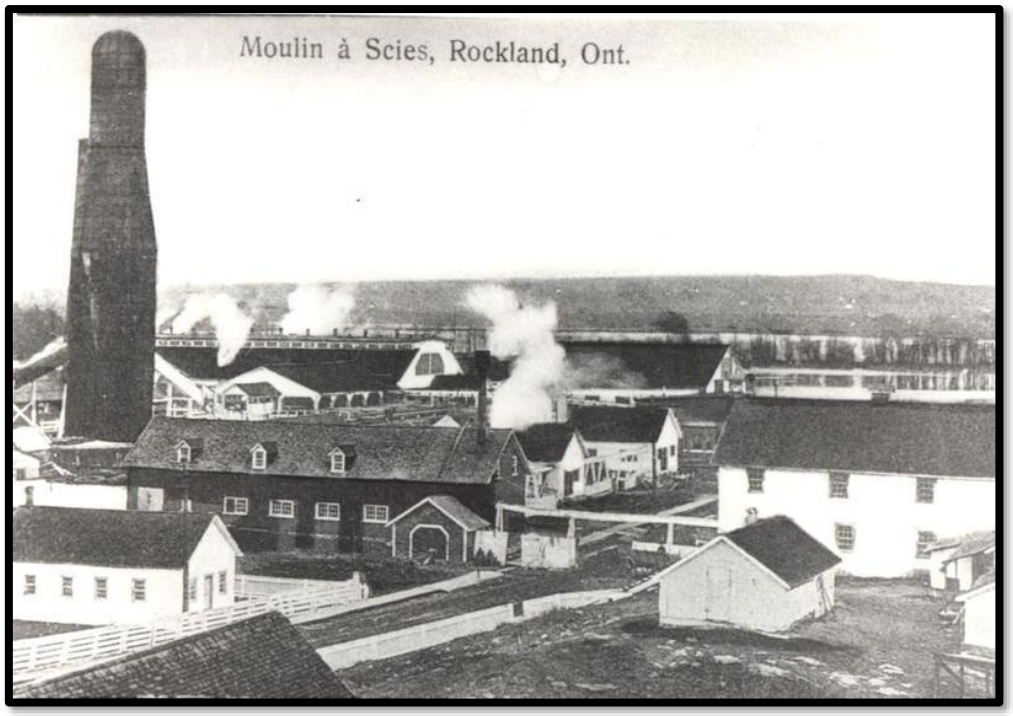


Figure 23. W.C. Edwards mill (1868-1926), the location of today's Du Moulin Park and the Rockland WTP. Online at https://baladodecouverte.com/circuits/804/poi/9273/parc-du-moulin

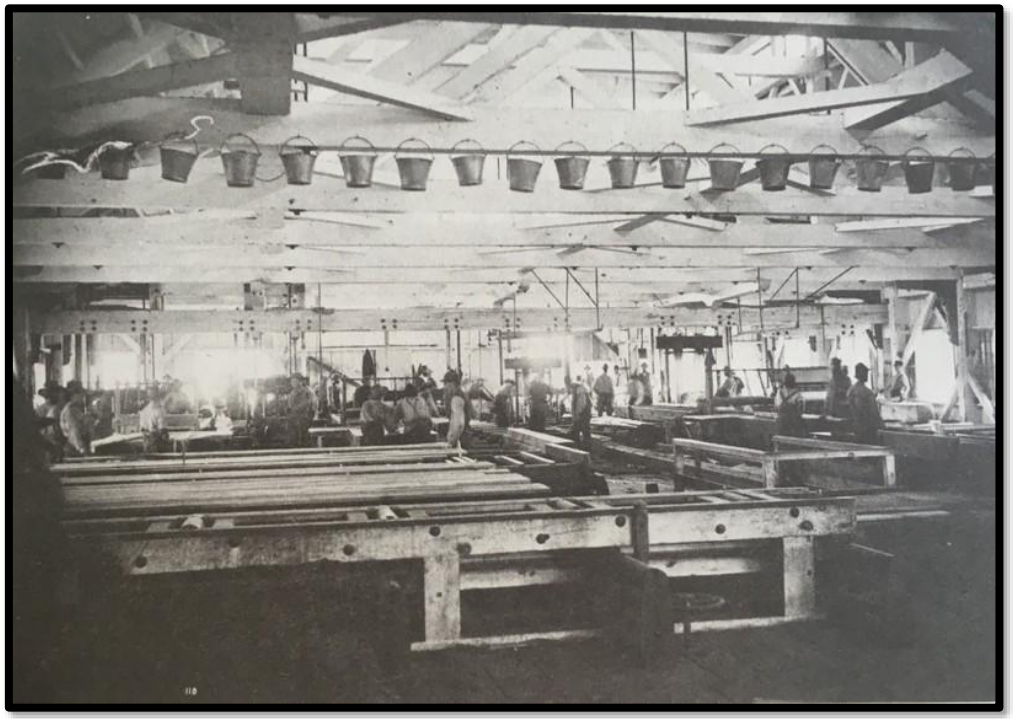


Figure 24. Interior workings of one of the mill buildings, W.C. Edwards mill (1868-1926). Online at https://baladodecouverte.com/circuits/804/poi/9273/parc-du-moulin

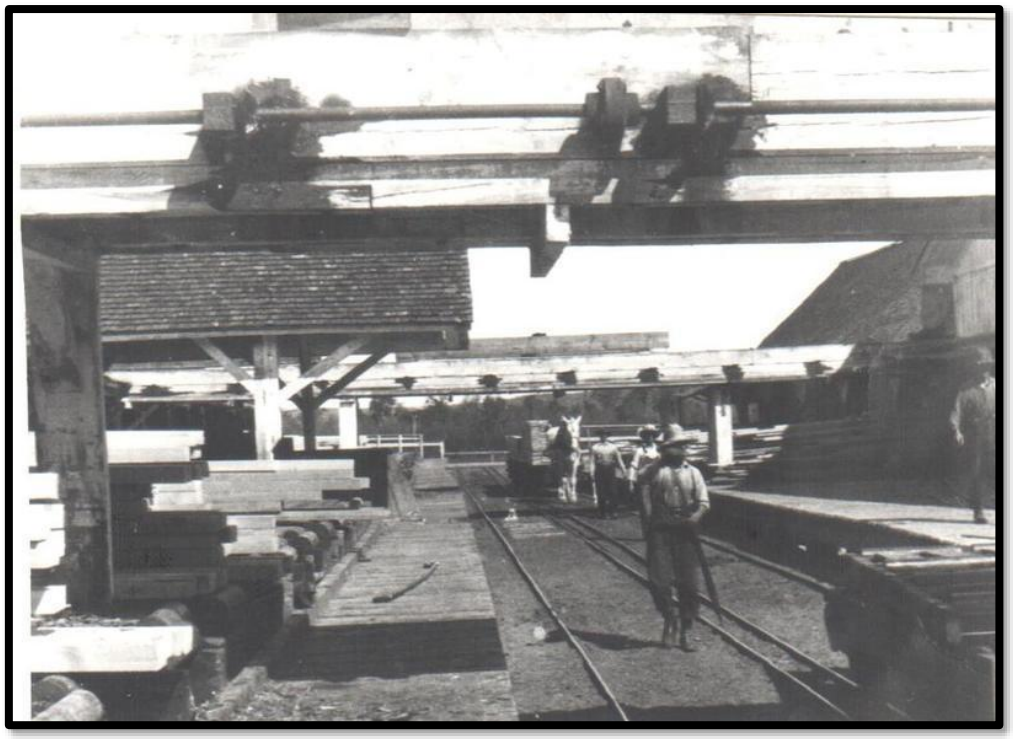


Figure 25. W.C. Edwards mill (1868-1926). Online at https://baladodecouverte.com/circuits/804/poi/9273/parc-du-moulin

Figure 26. 1862. Detail showing no development along the river at lots 27 and 28. Map of the counties of Stormont, Dundas, Glengarry, Prescott & Russell, Canada west / from actual surveys under the direction of H.F. Walling ; published by D.P. Putnam, Prescott, C.W. ; surveyed & drafted by O.W. Gray, assisted by Albert Davis, S.S. Southworth. Online at https://collections.lib.uwm.edu/digital/collection/agdm/id/22929

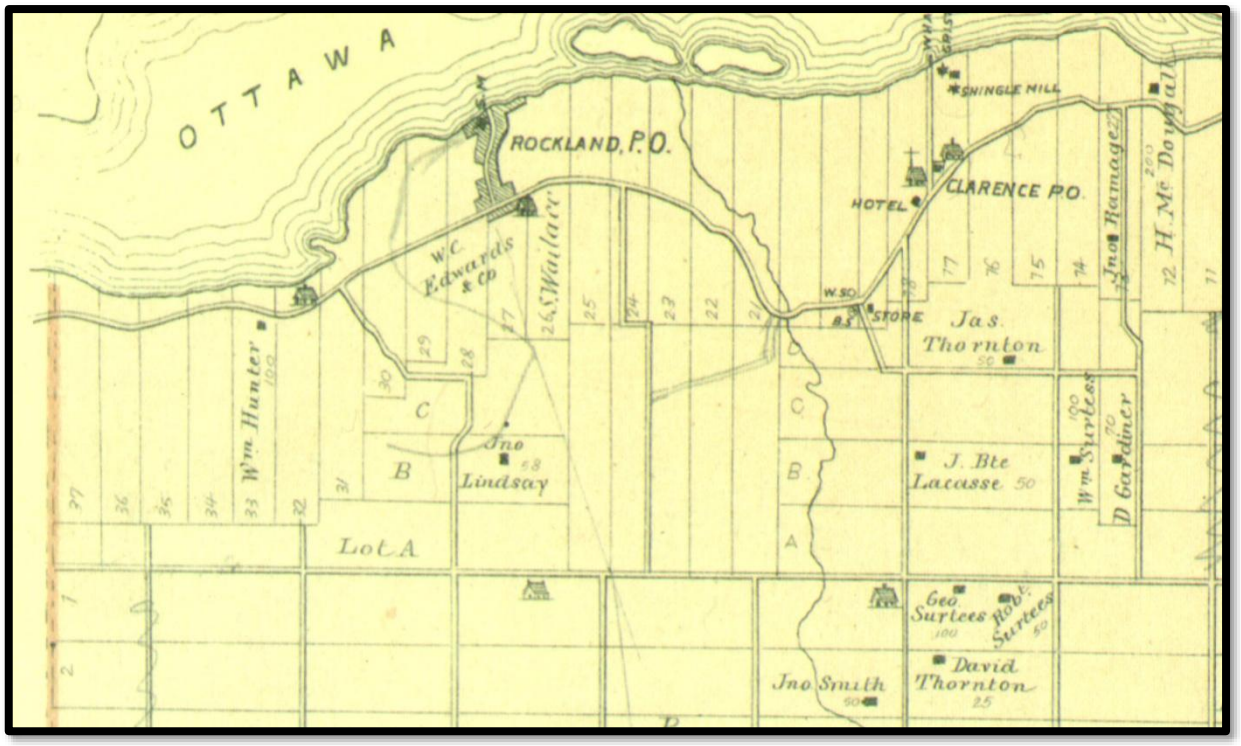
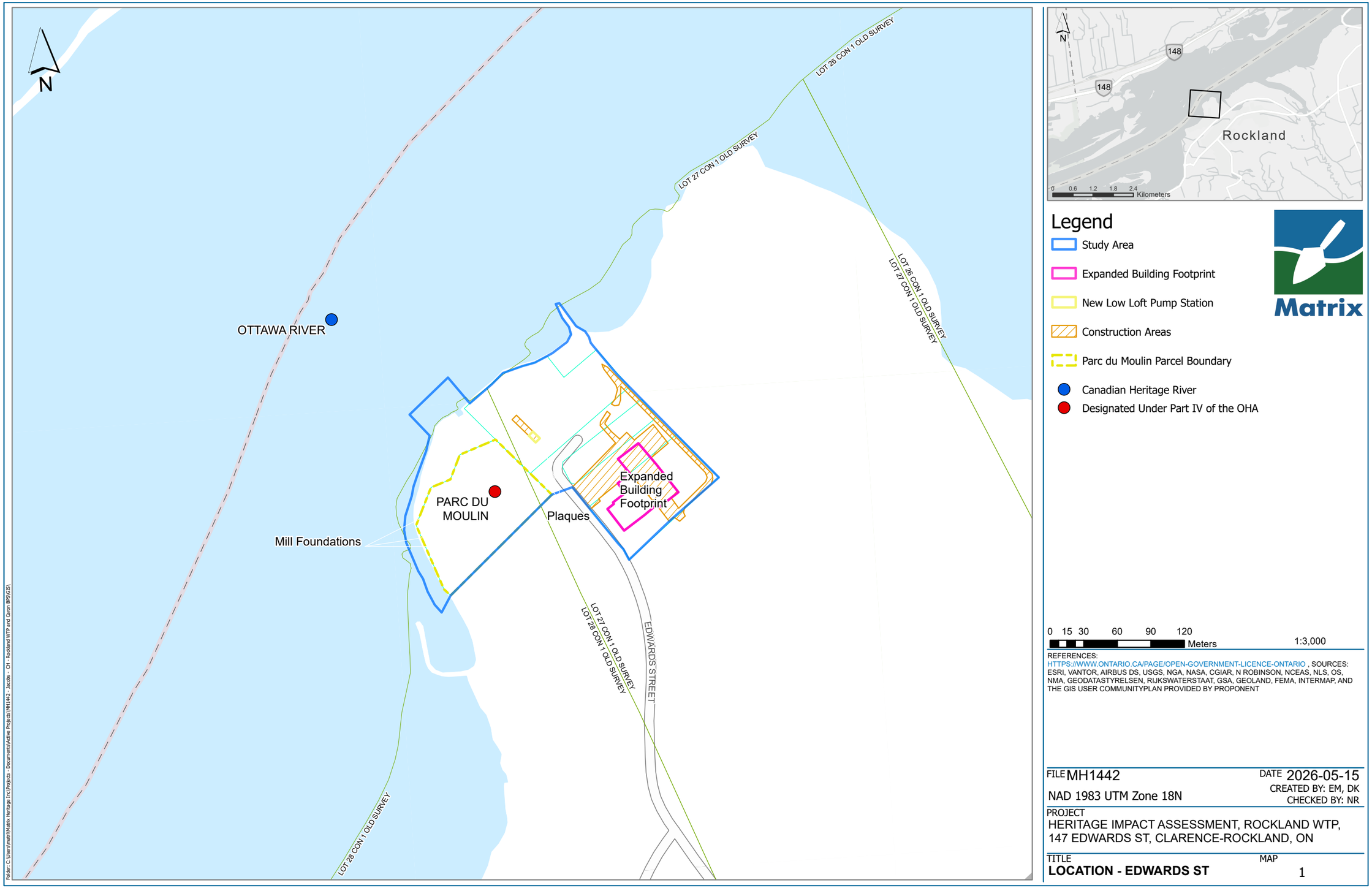


Figure 27. 1879. Detail, Map of The Township Of Plantagenet, H. Belden & Co., Toronto. Online at https://digital.library.mcgill.ca/countyatlas/Images/Maps/TownshipMaps/rus-m-clarence.jpg

Figure 28. 1985 Aerial view of Rockland. National Air Photo Library, Order Key A31398_105, Title photo_19850708_N45532W075279.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Plaques
Expanded Building Footprint
Mill Foundations
LOT 27 CON 1 OLD SURVEY
LOT 28 CON 1 OLD SURVEY
EDWARDS STREET
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Rockland
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Legend
Study Area
Expanded Building Footprint
New Low Loft Pump Station
Construction Areas
Parc du Moulin Parcel Boundary
Canadian Heritage River
Designated Under Part IV of the OHA
Matrix
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REFERENCES:
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FILE MH1442
DATE 2026-05-15
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CHECKED BY: NR
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PROJECT
HERITAGE IMPACT ASSESSMENT, ROCKLAND WTP, 147 EDWARDS ST, CLARENCE-ROCKLAND, ON
TITLE
LOCATION - EDWARDS ST
MAP
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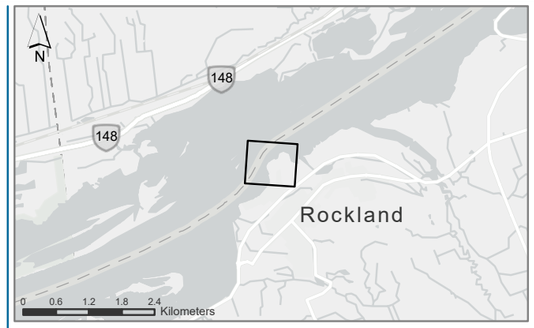

Legend

- Study Area
- Expanded Building Footprint
- New Low Loft Pump Station
- Construction Areas
- Parc du Moulin Parcel Boundary
- Canadian Heritage River
- Designated Under Part IV of the OHA

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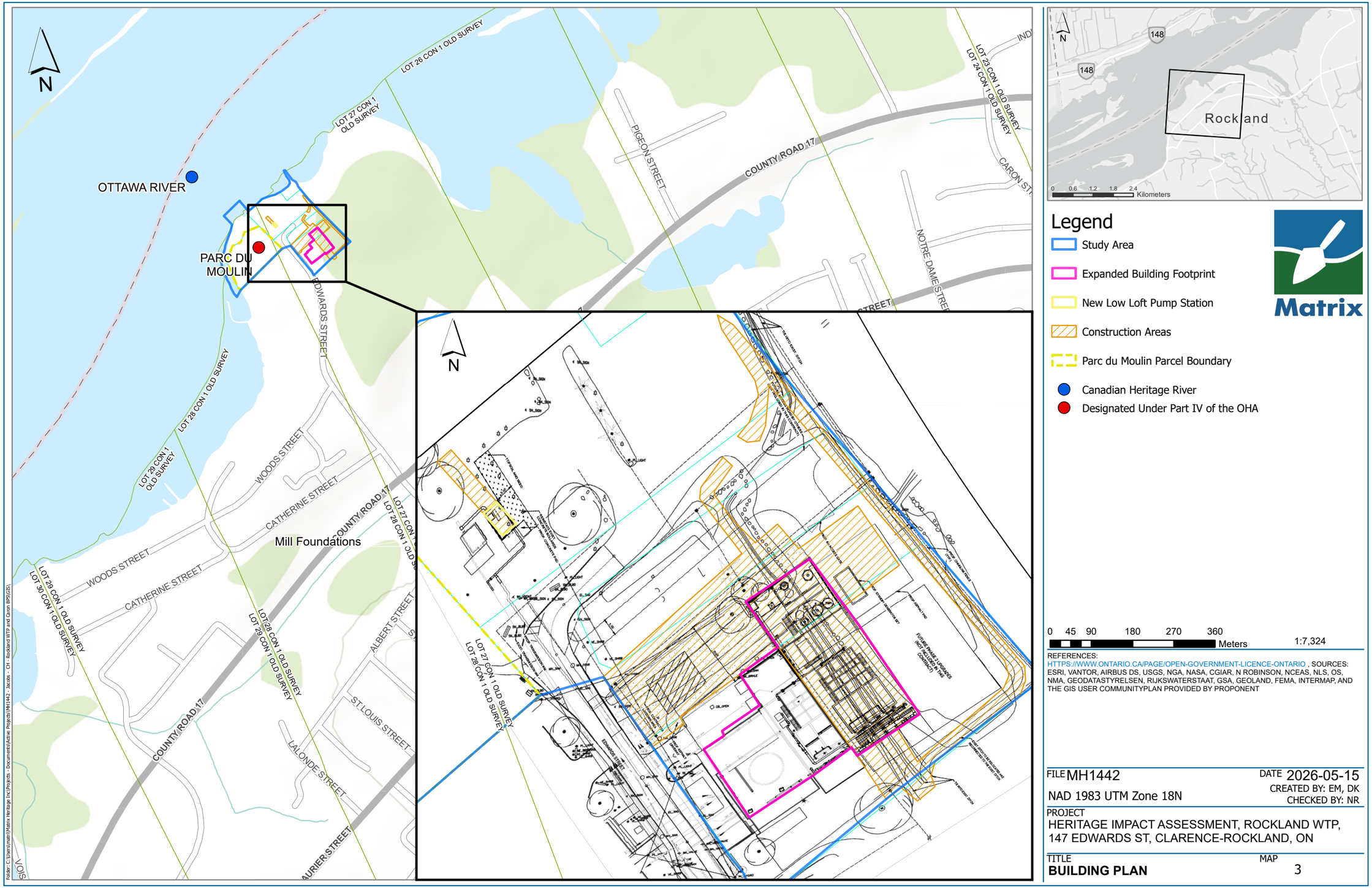
HERITAGE IMPACT ASSESSMENT, ROCKLAND WTP,
147 EDWARDS ST, CLARENCE-ROCKLAND, ON

TITLE
HERITAGE IMPACT ASSESSMENT
MAP 2



Legend

- Study Area
- Expanded Building Footprint
- New Low Loft Pump Station
- Construction Areas
- Parc du Moulin Parcel Boundary
- Canadian Heritage River
- Designated Under Part IV of the OHA

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DATE 2026-05-15
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CHECKED BY: NR

PROJECT
HERITAGE IMPACT ASSESSMENT, ROCKLAND WTP, 147 EDWARDS ST, CLARENCE-ROCKLAND, ON

TITLE
BUILDING PLAN

MAP 3

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EXIST. PROPERTY LINES (TYP.)

GRAVEL PARKING LOT

EXIST. DITCH

EXIST. DITCH

EXIST. ABANDONED SEPTIC TANK AND TILE FIELD

EXIST. WATER TREATMENT PLANT

DU MOULIN PARK PARKING LOT

EXIST. LOW LIFT PUMPING STATION

EXIST. HYDRANT

EXIST. TRANSMISSION PIPE

EXIST. BACKWASH TANK

EDWARDS STREET

EDWARDS STREET

NO.	DATE	REVISION	BY
A	2025-08-19	ISSUED FOR 30% PDR REVIEW	APVD

DSGN | DR: C. LLOYD | CHK | APVD

CORPORATION OF THE CITY OF CLARENCE-ROCKLAND

Water Treatment Plant Upgrades
Clarence-Rockland Water Treatment Plant
City of Clarence-Rockland

Jacobs

CIVIL

EXISTING SITE PLAN LOW LIFT AND WTP

VERIFY SCALE
BAR IS 25MM ON ORIGINAL DRAWING.
0 25MM

DATE
PROJ. CE906100
DWG. C0104002
SHEET OF

FILE NAME: 04-D-4016.dwg

PLOT DATE:

REMOVALS LEGEND:

- CONCRETE REMOVAL
- ASPHALT REMOVAL
- GRAVEL REMOVAL
- FENCE REMOVAL
- REMOVAL
- CLEARING, GRUBBING AND STRIPPING

REMOVE EXIST. TREES AND BUSHES

REMOVE EXIST. GENERATOR AND CONCRETE PAD

EXIST. ABANDONED SEPTIC TANK AND TILE FIELD TO BE REMOVED

REMOVE EXIST. FENCE

EXIST. WATER TREATMENT PLANT

REMOVE EXIST. FENCES AND GATES

SAW CUT EXIST. ASPHALT TO FULL DEPTH

REMOVE AND REINSTATE EXIST. CONCRETE BOLLARDS

DU MOULIN PARK PARKING LOT

EDWARDS STREET

EDWARDS STREET

FILE NAME: 04-D-4016.dwg

PLOT DATE:

NO.	DATE	DSGN
A	2025-08-19	ISSUED FOR 30% PDR REVIEW	DR	C. LLOYD

REVISION | CHK | APVD | BY | APVD

CORPORATION OF THE CITY OF CLARENCE-ROCKLAND

Water Treatment Plant Upgrades
Clarence-Rockland Water Treatment Plant
City of Clarence-Rockland

Jacobs

CIVIL

REMOVALS
LOW LIFT AND WTP

VERIFY SCALE

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DATE	
PROJ.	CE906100
DWG	04-D-4016-0002
SHEET	OF

PROP. CHAINLINK FENCE (TYP.)

TIE INTO EXIST. DITCH

FUTURE ACCESS ROAD BY OTHERS (NOT INCLUDED IN THIS CONTRACT)

PROP. ASPHALT PAD

FUTURE PHASE 2 UPGRADES (NOT INCLUDED IN THIS CONTRACT)

PROP. STANDBY GENERATOR SET

PROP. 6m ACCESS GATE

EXIST. DITCH TO BE RELOCATED AND RECONNECTED TO THE EXIST. DITCH

TIE INTO EXIST. DITCH

20.85

5.00

TOPSOIL AND SEED

REINSTATE EXIST. CONCRETE BOLLARDS

PROP. CONCRETE PAD

5.00

PROP. CONTRACTOR LAYDOWN AREA

PROP. ASPHALT DRIVEWAY

EDWARDS STREET

PROP. TRANSMISSION WM

EXIST. TRANSMISSION WM

NO.	DESCRIPTION	DATE	DR	CHK	APVD	BY
A	ISSUED FOR 30% PDR REVIEW	2025-08-19	C. LLOYD		APVD	APVD

DSGN

CORPORATION
of the Township of
CLARENCE-ROCKLAND

Water Treatment Plant Upgrades
Clarence-Rockland Water Treatment Plant
City of Clarence-Rockland

Jacobs

CIVIL

NEW
CONSTRUCTION
LOW LIFT AND WTP

VERIFY SCALE

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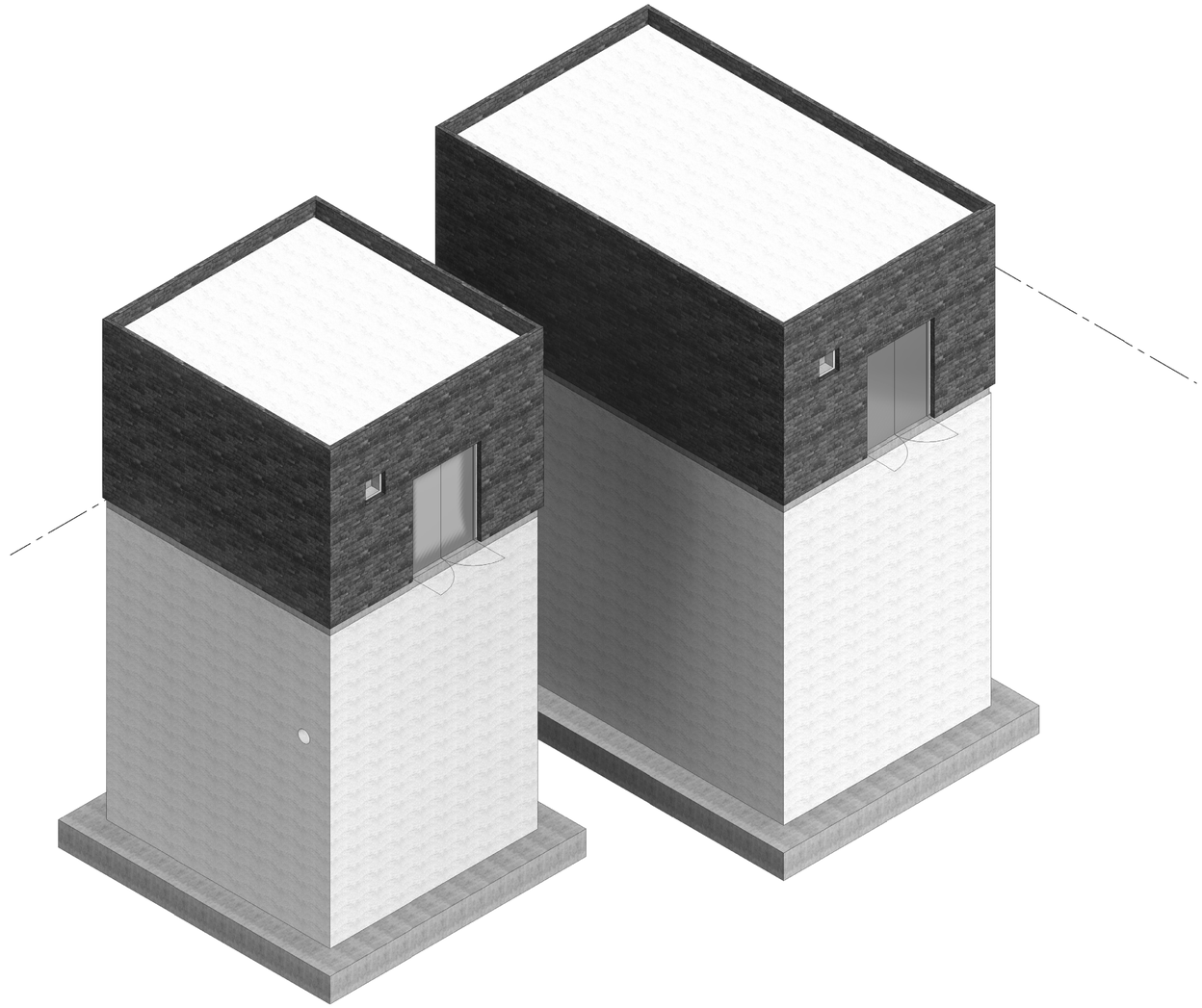
0 25MM

DATE	
PROJ.	CE906100
DWG	04-D-4016
SHEET	OF

FILE NAME: 04-D-4016.dwg

PLOT DATE:



3D PERSPECTIVE

NO.	DATE	REVISION	BY	APVD
DSGN		DR	CHK	APVD
		Designer	Author	Checker

Approver

CORPORATION
de la Cité de / of the City of
CLARENCE-ROCKLAND

Water Treatment Plant Upgrades
Clarence Rockland Water Treatment Plant
City of Clarence Rockland

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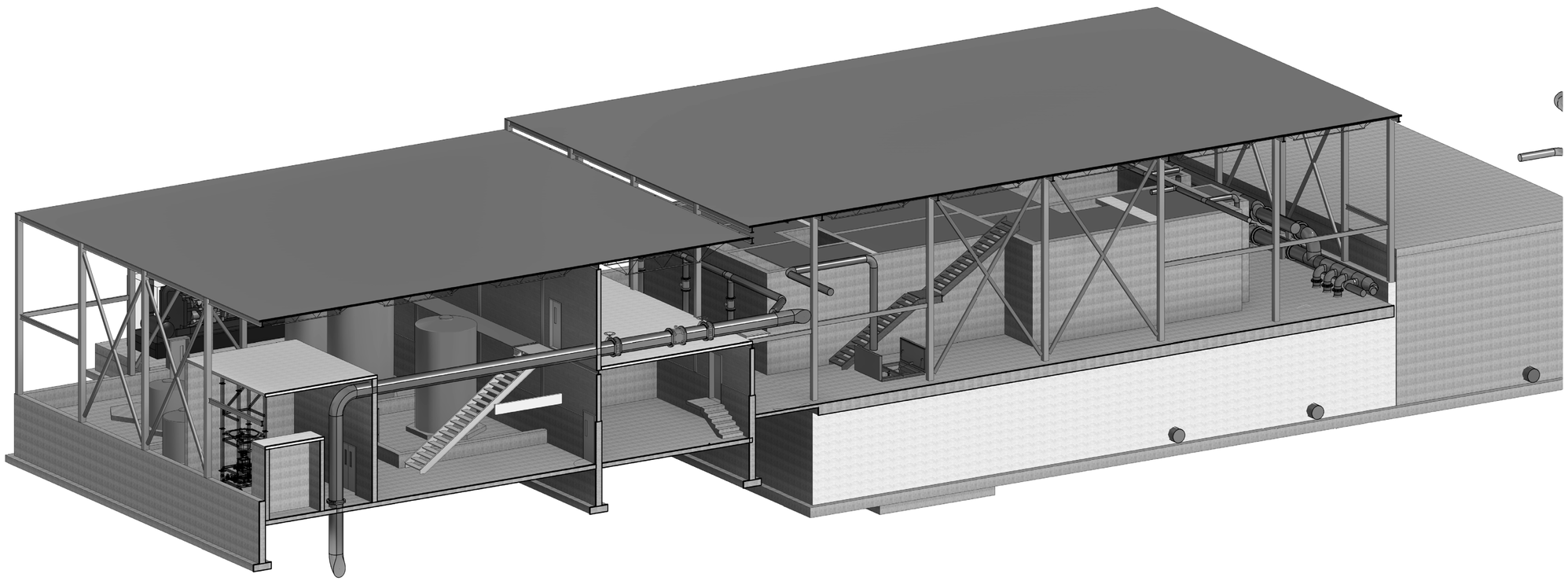
STRUCTURAL

3D PERSPECTIVE

VERIFY SCALE
BAR IS 25MM ON ORIGINAL DRAWING
0 25MM

DATE	
PROJ.	-
DWG	S-901
SHEET	OF



3D PERSPECTIVE
NTS

NO.	DATE	REVISION	BY	APV'D
A.	2025-08-19	ISSUED FOR 30% PDR REVIEW		

DSGN RL | DR CAP | CHK | APV'D | Checker | Approver

CORPORATION de la Cité de / of the City of CLARENCE-ROCKLAND

Water Treatment Plant Upgrades
Clarence Rockland Water Treatment Plant
City of Clarence Rockland

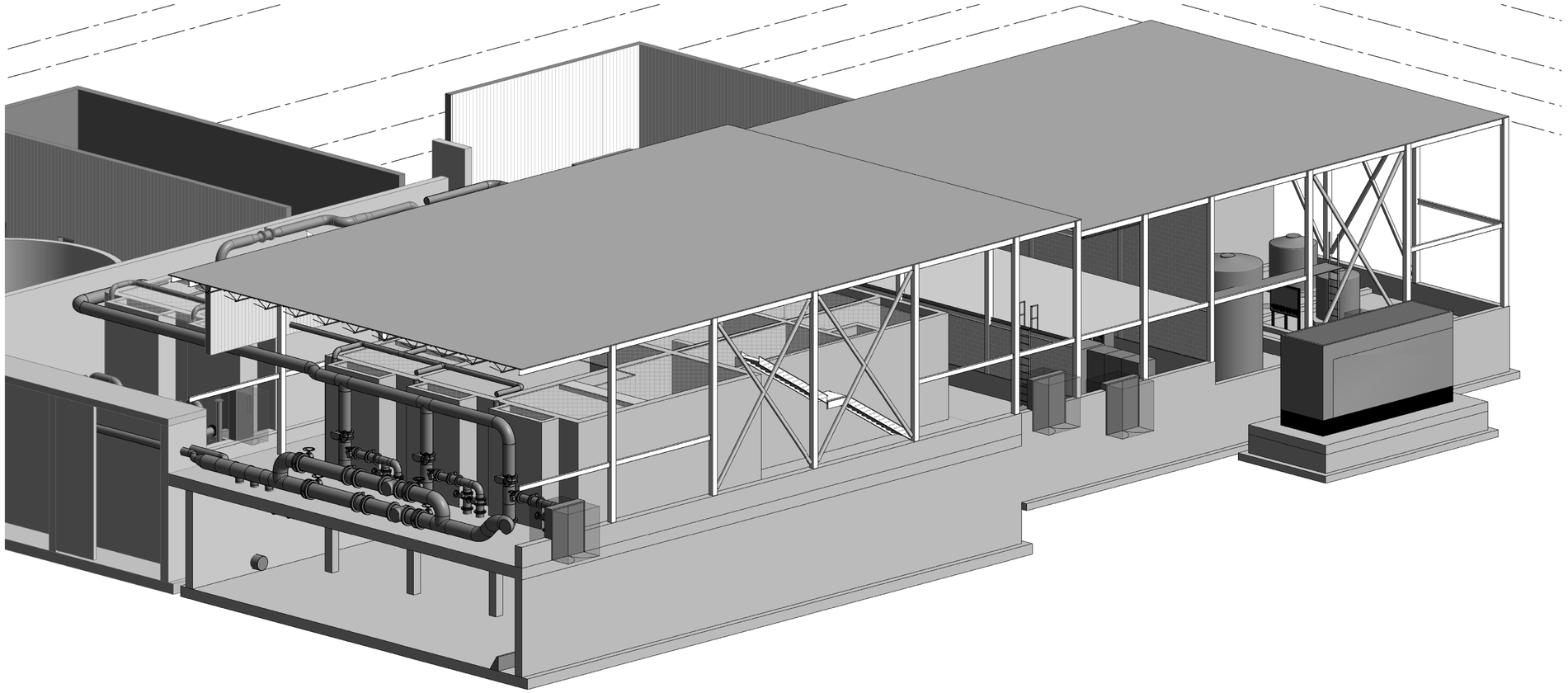
Jacobs

STRUCTURAL

WATER TREATMENT PLANT
3D PERSPECTIVE

VERIFY SCALE
BAR IS 25MM ON ORIGINAL DRAWING.
0 25MM

DATE	
PROJ.	CE788300
DWG	S-901
SHEET	OF



3D PERSPECTIVE

NO.	DATE	REVISION	BY
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DSGN | DR | CHK | APVD
Designer | Author | Checker | Approver

CORPORATION de la Cité de / of the City of CLARENCE-ROCKLAND

Planet Resilient

Water Treatment Plant Upgrades
Clarence Rockland Water Treatment Plant
City of Clarence Rockland

Jacobs

PROCESS MECHANICAL

WATER TREATMENT PLANT
3D PERSPECTIVE

VERIFY SCALE

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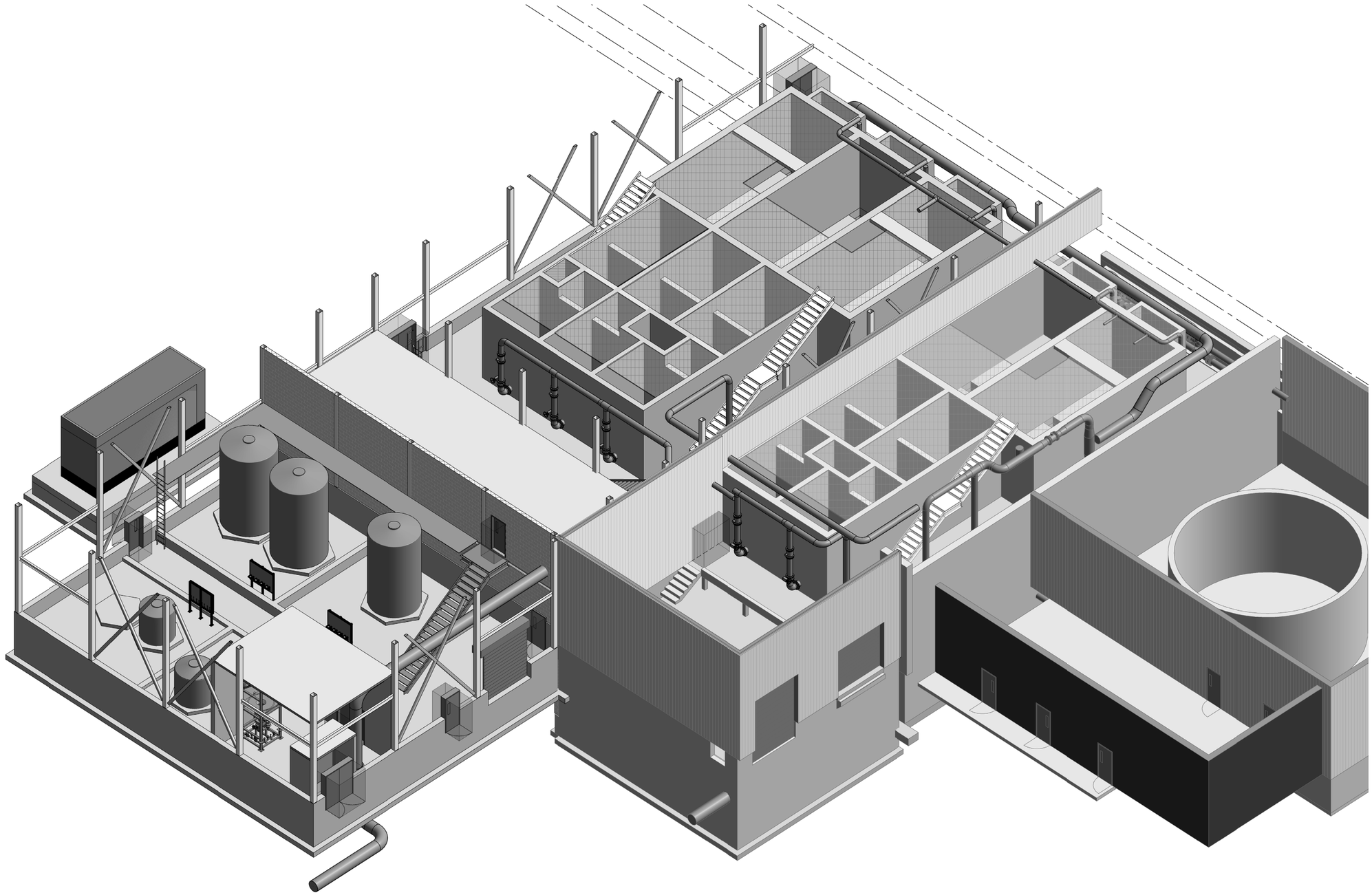
0 25MM

DATE	
PROJ.	CE906100
DWG	D-901
SHEET	OF



3D PERSPECTIVE

NO.	DATE	REVISION	BY	APVD
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DSGN | DR | CHK | APVD
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CORPORATION de la Cité de / of the City of CLARENCE-ROCKLAND

Water Treatment Plant Upgrades
Clarence Rockland Water Treatment Plant
City of Clarence Rockland

Jacobs

PROCESS MECHANICAL

WATER TREATMENT PLANT
3D PERSPECTIVE

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DATE
PROJ. CE906100
DWG D-902
SHEET OF