

**Township of North Dundas Village of Winchester  
Main Street West Sewage Pump Station Upgrades  
Schedule 'B' Class EA Report**

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**Appendix C**

Supporting Studies

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

- if a property(ies) or project area may contain archaeological resources i.e., have archaeological potential
- 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

### Archaeological assessment

If you are not sure how to answer one or more of the questions on the checklist, you may want to hire a licensed consultant archaeologist (see page 4 for definitions) to undertake an archaeological assessment.

The assessment will help you:

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

**Note:** By law, archaeological assessments **must** be done by a licensed consultant archaeologist. Only a licensed archaeologist can assess – or alter – an archaeological site.

### What to do if you:

- **find an archaeological resource**

If you find something you think may be of archaeological value during project work, you must – by law – stop all activities immediately and contact a licensed consultant archaeologist

The archaeologist will carry out the fieldwork in compliance with the *Ontario Heritage Act* [s.48(1)].

- **unearth a burial site**

If you find a burial site containing human remains, you must immediately notify the appropriate authorities (i.e., police, coroner's office, and/or Registrar of Cemeteries) and comply with the *Funeral, Burial and Cremation Services Act*.

### 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 when completing this form.

Project or Property Name  
**Main Street West Sewage Pump Station**

Project or Property Location (upper and lower or single tier municipality)  
**Township of North Dundas, Village of Winchester, 12048 Main Street West**

Proponent Name  
**Khurram Tunio, M.Eng., P.Eng., Director of Public Works, Township of North Dundas**

Proponent Contact Information  
**Email: ktunio@northdundas.com Phone: 613-774-2105 x 292**

### Screening Questions

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

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

**If No**, continue to Question 2.

2. Has an archaeological assessment been prepared for the property (or project area) and been accepted by MTCS? Yes  No

**If Yes**, do **not** complete the rest of the checklist. You are expected to follow the recommendations in the archaeological assessment report(s).

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

- summarize the previous assessment
- add this checklist to the project file, with the appropriate documents that demonstrate an archaeological assessment was undertaken e.g., MTCS letter stating acceptance of archaeological assessment report

The summary and appropriate documentation may be:

- submitted as part of a report requirement e.g., environmental assessment document
- maintained by the property owner, proponent or approval authority

**If No**, continue to Question 3.

3. Are there known archaeological sites on or within 300 metres of the property (or the project area)? Yes  No

4. Is there Aboriginal or local knowledge of archaeological sites on or within 300 metres of the property (or project area)? Yes  No

5. Is there Aboriginal knowledge or historically documented evidence of past Aboriginal use on or within 300 metres of the property (or project area)? Yes  No

6. Is there a known burial site or cemetery on the property or adjacent to the property (or project area)? Yes  No

7. Has the property (or project area) been recognized for its cultural heritage value? Yes  No

**If Yes** to any of the above questions (3 to 7), do **not** complete the checklist. Instead, you need to hire a licensed consultant archaeologist to undertake an archaeological assessment of your property or project area.

**If No**, continue to question 8.

8. Has the entire property (or project area) been subjected to recent, extensive and intensive disturbance? Yes  No

**If Yes** to the preceding question, do **not** complete the checklist. Instead, please keep and maintain a summary of documentation that provides evidence of the recent disturbance.

An archaeological assessment is not required.

**If No**, continue to question 9.

9. Are there present or past water sources within 300 metres of the property (or project area)? Yes  No

**If Yes**, an archaeological assessment is required.

**If No**, continue to question 10.

10. Is there evidence of two or more of the following on the property (or project area)? Yes  No

- elevated topography
- pockets of well-drained sandy soil
- distinctive land formations
- resource extraction areas
- early historic settlement
- early historic transportation routes

**If Yes**, an archaeological assessment is required.

**If No**, there is low potential for archaeological resources at the property (or project area).

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

In this context, the following definitions apply:

- **consultant archaeologist** means, as defined in Ontario regulation as an archaeologist who enters into an agreement with a client to carry out or supervise archaeological fieldwork on behalf of the client, produce reports for or on behalf of the client and provide technical advice to the client. In Ontario, these people also are required to hold a valid professional archaeological licence issued by the Ministry of Tourism, Culture and Sport.
- **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 be already in place for identifying archaeological potential, including:

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

### 2. Has an archaeological assessment been prepared for the property (or project area) and been accepted by MTCS?

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

- an archaeological assessment report has been prepared and is in compliance with MTCS requirements
  - a letter has been sent by MTCS to the licensed archaeologist confirming that MTCS has added the report to the Ontario Public Register of Archaeological Reports (Register)
- the report states that there are no concerns regarding impacts to archaeological sites

Otherwise, if an assessment has been completed and deemed compliant by the MTCS, and the ministry recommends further archaeological assessment work, this work will need to be completed.

For more information about archaeological assessments, contact:

- approval authority
- proponent
- consultant archaeologist
- Ministry of Tourism, Culture and Sport at [archaeology@ontario.ca](mailto:archaeology@ontario.ca)

### 3. Are there known archaeological sites on or within 300 metres of the property (or project area)?

MTCS maintains a database of archaeological sites reported to the ministry.

For more information, contact MTCS Archaeological Data Coordinator at [archaeology@ontario.ca](mailto:archaeology@ontario.ca).

### 4. Is there Aboriginal or local knowledge of archaeological sites on or within 300 metres of the property?

Check with:

- Aboriginal communities in your area
- local municipal staff

They may have information about archaeological sites that are not included in MTCS' database.

Other sources of local knowledge may include:

- property owner
- [local heritage organizations and historical societies](#)
- local museums
- [municipal heritage committee](#)
- published local histories

## 5. Is there Aboriginal knowledge or historically documented evidence of past Aboriginal use on or within 300 metres of the property (or property area)?

Check with:

- Aboriginal communities in your area
- local municipal staff

Other sources of local knowledge may include:

- property owner
- [local heritage organizations and historical societies](#)
- local museums
- [municipal heritage committee](#)
- published local histories

## 6. Is there a known burial site or cemetery on the property or adjacent to the property (or project area)?

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

- Cemeteries Regulation Unit, Ontario Ministry of Consumer Services – for [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.

## 7. Has the property (or project area) been recognized for its cultural heritage value?

There is a strong chance there may be archaeological resources on your property (or immediate area) if it has been listed, designated or otherwise identified as being of cultural heritage value by:

- your municipality
- Ontario government
- Canadian government

This includes a property that is:

- designated under *Ontario Heritage Act* (the OHA ), including:
  - individual designation (Part IV)
  - part of a heritage conservation district (Part V)
  - an archaeological site (Part VI)
- subject to:
  - an agreement, covenant or easement entered into under the OHA (Parts II or IV)
  - a notice of intention to designate (Part IV)
  - a heritage conservation district study area by-law (Part V) of the OHA
- listed on:
  - a municipal register or inventory of heritage properties
  - Ontario government’s list of provincial heritage properties
  - Federal government’s list of federal heritage buildings
- part of a:
  - National Historic Site
  - UNESCO World Heritage Site
- designated under:
  - *Heritage Railway Station Protection Act*
  - *Heritage Lighthouse Protection Act*
- subject of a municipal, provincial or federal commemorative or interpretive plaque.

To determine if your property or project area is covered by any of the above, see:

- Part A of the MTCS Criteria for Evaluating Potential for Built Heritage and Cultural Heritage Landscapes

## Part VI – Archaeological Sites

Includes five sites designated by the Minister under Regulation 875 of the Revised Regulation of Ontario, 1990 (Archaeological Sites) and 3 marine archaeological sites prescribed under Ontario Regulation 11/06.

For more information, check [Regulation 875](#) and [Ontario Regulation 11/06](#).

### 8. Has the entire property (or project area) been subjected to recent extensive and intensive ground disturbance?

Recent: after-1960

Extensive: over all or most of the area

Intensive: thorough or complete disturbance

Examples of ground disturbance include:

- quarrying
- major landscaping – involving grading below topsoil
- building footprints and associated construction area
  - where the building has deep foundations or a basement
- infrastructure development such as:
  - sewer lines
  - gas lines
  - underground hydro lines
  - roads
  - any associated trenches, ditches, interchanges. **Note:** this applies only to the excavated part of the right-of-way; the remainder of the right-of-way or corridor may not have been impacted.

A ground disturbance does **not** include:

- agricultural cultivation
- gardening
- landscaping

#### Site visits

You can typically get this information from a site visit. In that case, please document your visit in the process (e.g., report) with:

- photographs
- maps
- detailed descriptions

If a disturbance isn't clear from a site visit or other research, you need to hire a licensed consultant archaeologist to undertake an archaeological assessment.

### 9. Are there present or past water bodies within 300 metres of the property (or project area)?

Water bodies are associated with past human occupations and use of the land. About 80-90% of archaeological sites are found within 300 metres of water bodies.

#### Present

- Water bodies:
  - primary - lakes, rivers, streams, creeks
  - secondary - springs, marshes, swamps and intermittent streams and creeks
- accessible or inaccessible shoreline, for example:
  - high bluffs
  - swamps
  - marsh fields by the edge of a lake
  - sandbars stretching into marsh

Water bodies not included:

- man-made water bodies, for example:
  - temporary channels for surface drainage
  - rock chutes and spillways
  - temporarily ponded areas that are normally farmed
  - dugout ponds
- artificial bodies of water intended for storage, treatment or recirculation of:
  - runoff from farm animal yards
  - manure storage facilities
  - sites and outdoor confinement areas

## Past

Features indicating past water bodies:

- raised sand or gravel beach ridges – can indicate glacial lake shorelines
- clear dip in the land – can indicate an old river or stream
- shorelines of drained lakes or marshes
- cobble beaches

You can get information about water bodies through:

- a site visit
- aerial photographs
- 1:10,000 scale [Ontario Base Maps](#) - or [equally detailed and scaled maps](#).

## 10. Is there evidence of two or more of the following on the property (or project area)?

- elevated topography
- pockets of well-drained sandy soil
- distinctive land formations
- resource extraction areas
- early historic settlement
- early historic transportation routes

### • **Elevated topography**

Higher ground and elevated positions - surrounded by low or level topography - often indicate past settlement and land use.

Features such as eskers, drumlins, sizeable knolls, plateaus next to lowlands, or other such features are a strong indication of archaeological potential.

Find out if your property or project area has elevated topography, through:

- site inspection
- aerial photographs
- [topographical maps](#)

### • **Pockets of well-drained sandy soil, especially within areas of heavy soil or rocky ground**

Sandy, well-drained soil - in areas characterized by heavy soil or rocky ground - may indicate archaeological potential

Find out if your property or project area has sandy soil through:

- site inspection
- [soil survey reports](#)



- **Distinctive land formations**

Distinctive land formations include – but are not limited to:

- waterfalls
- rock outcrops
- rock faces
- caverns
- mounds, etc.

They were often important to past inhabitants as special or sacred places. The following sites may be present – or close to – these formations:

- burials
- structures
- offerings
- rock paintings or carvings

Find out if your property or project areas has a distinctive land formation through:

- a site visit
- aerial photographs
- 1:10,000 scale [Ontario Base Maps](#) - or [equally detailed and scaled maps](#).

- **Resource extraction areas**

The following resources were collected in these extraction areas:

- food or medicinal plants e.g., migratory routes, spawning areas, prairie
- scarce raw materials e.g., quartz, copper, ochre or outcrops of chert
- resources associated with early historic industry e.g., fur trade, logging, prospecting, mining

Aboriginal communities may hold traditional knowledge about their past use or resources in the area.

- **Early historic settlement**

Early Euro-Canadian settlement include – but are not limited to:

- early military or pioneer settlement e.g., pioneer homesteads, isolated cabins, farmstead complexes
- early wharf or dock complexes
- pioneers churches and early cemeteries

For more information, see below – under the early historic transportation routes.

- **Early historic transportation routes** - such as trails, passes, roads, railways, portage routes, canals.

For more information, see:

- historical maps and/or historical atlases
  - for information on early settlement patterns such as trails (including Aboriginal trails), monuments, structures, fences, mills, historic roads, rail corridors, canals, etc.
  - [Archives of Ontario](#) holds a large collection of historical maps and historical atlases
  - digital versions of historic atlases are available on the [Canadian County Atlas Digital Project](#)
- commemorative markers or plaques such as local, [provincial](#) or [federal](#) agencies
- [municipal heritage committee](#) or other [local heritage organizations](#)
  - for information on early historic settlements or landscape features (e.g., fences, mill races, etc.)
  - for information on commemorative markers or plaques

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  
Main Street West Sewage Pump Station

Project or Property Location (upper and lower or single tier municipality)  
Township of North Dundas, Village of Winchester, 12048 Main Street West

Proponent Name  
Khurram Tunio, M.Eng., P.Eng., Director of Public Works, Township of North Dundas

Proponent Contact Information  
Email: ktunio@northdundas.com Phone: 613-774-2105 x 292

### Screening Questions

	<b>Yes</b>	<b>No</b>
1. Is there a pre-approved screening checklist, methodology or process in place?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

	<b>Yes</b>	<b>No</b>
2. Has the property (or project area) been evaluated before and found <b>not</b> to be of cultural heritage value?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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.

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

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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has or is adjacent to a known burial site and/or cemetery?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. is in a Canadian Heritage River watershed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. contains buildings or structures that are 40 or more years old?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has a special association with a community, person or historical event?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. contains or is part of a cultural heritage landscape?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**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](#)

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](mailto: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.

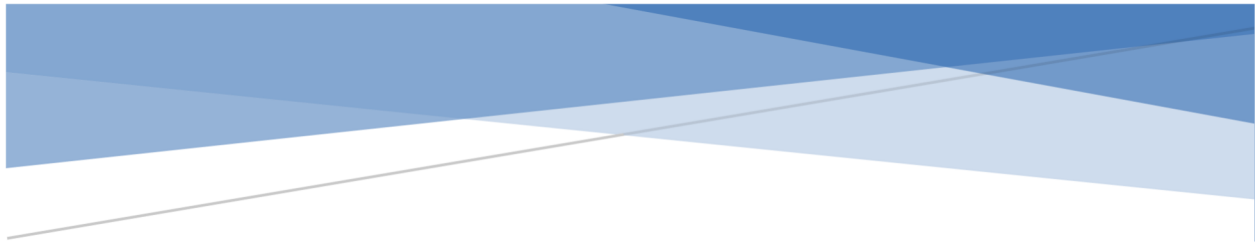
For more information on Questions 5.a., 5.b. and 5.c., contact:

- 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](#).



**FIVE WATERMAIN AND  
WASTEWATER  
INFRASTRUCTURE PROJECTS IN  
WINCHESTER AND  
CHESTERVILLE  
Natural Heritage Features – Desktop Review**

**Prepared For:**

**Prepared By:**  
Bowfin Environmental Consulting  
168 Montreal Road  
Cornwall, Ontario K6H 1B3

**Date:**  
March 2022

### **List of Acronyms and Definitions**

ABBO - Atlas of Breeding Birds of Ontario  
ANSI – Area of Natural and Scientific Interest  
BHA - Butternut Health Assessments/Butternut Health Assessor  
CC - Co-Efficient of Conservation  
COSEWIC - Committee on the Status of Endangered Wildlife in Canada  
DBH - Diameter at breast height  
EIS – Environmental Impact Statement  
ELC - Ecological Land Classification  
ESA - Endangered Species Act (Provincial)  
GPS – Global Positioning System  
NAD 83: North American Datum 1983  
UTM: Universal Transverse Mercator  
LIO - Land Information Ontario  
NHIC – Natural Heritage Information Centre  
MBCA - Migratory Bird Convention Act (Federal)  
MECP - Ministry of Environment, Conservation and Parks  
MNRF - Ministry of Natural Resources and Forestry  
NHIC – Natural Heritage Information Centre  
NHRM - Natural Heritage Reference Manual  
OMNR/MNRF/MNDMNRF - Ontario Ministry of Natural Resources (old name)  
    -Ministry of Natural Resources and Forestry (old name)  
    -Ministry of Northern Development, Mines, Natural Resources and Forestry (new name)  
OP – Official Plan  
PSW - Provincially Significant Wetlands  
SDG – United Counties of Stormont Dundas, and Glengarry  
SNC – South Nation Conservation  
SAR - Species at Risk (in this report they refer to species that are provincially or federally listed as endangered or threatened and receive protection under ESA or SARA)  
SARA - Species at Risk Act (Federal)  
SARO - Species at Risk in Ontario  
SWHCS - Significant Wildlife Habitat Criteria Schedules  
SWHTG - Significant Wildlife Habitat Technical Guide  
SWH - Significant Wildlife Habitat

### **SRANK DEFINITIONS**

S1      Critically Imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially

vulnerable to extirpation from the state/province.

S2 Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.

S3 Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.

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

S5 Secure; Common, widespread, and abundant in the nation or state/province.

? Inexact Numeric Rank—Denotes inexact numeric rank

SNA Not Applicable, A conservation status rank is not applicable because the species is not a suitable target for conservation activities.

S#B Breeding

S#N Non-Breeding

### **SARA STATUS DEFINITIONS**

END Endangered: a wildlife species facing imminent extirpation or extinction.

THR Threatened: a wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.

SC Special Concern, a wildlife species that may become threatened or endangered because of a combination of biological characteristics and identified threats.

### **SARO STATUS DEFINITIONS**

END Endangered: A species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's ESA.

THR Threatened: A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.

SC Special concern: A species with characteristics that make it sensitive to human activities or natural events.

### **Coefficient of Conservatism Ranking Criteria**

0 Obligate to ruderal areas.

1 Occurs more frequently in ruderal areas than natural areas.

2 Facultative to ruderal and natural areas.

3 Occurs less frequent in ruderal areas than natural areas.

4 Occurs much more frequently in natural areas than ruderal areas.

5 Obligate to natural areas (quality of area is low).

6 Weak affinity to high-quality natural areas.

Five Watermain and Wastewater Infrastructure Projects in Winchester and Chesterville – NHA  
Desktop Review

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- 7 Moderate affinity to high-quality natural areas.
- 8 High affinity to high-quality natural areas.
- 9 Very high affinity to high-quality natural areas.
- 10 Obligate to high-quality natural areas.

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## 1.0 INTRODUCTION

Bowfin Environmental Consulting (Bowfin) was retained by, J.L. Richards & Associates Limited to prepare a desktop review of the natural heritage features at five watermain and wastewater infrastructure projects. These sites are distributed between Winchester and Chesterville, in the Township of North Dundas, and the United Counties of Stormont, Dundas and Glengarry (SD&G). They are situated as follows:

### Municipality of Winchester

- Site 1 (part of Lot 1-3, Concession 6)
- Site 2 (part of Lot 1, Concession 6)
- Site 3 (part of Lot 1-2, Concession 6)
- Site 4 (part of Lot 5, Concession 7)

### Municipality of Chesterville

- Site 5 is part of Lot 17, Concession 4

Three of the Sites (1, 2 and 3) are located south of Winchester Main Street, while Site 4 is located South of Highway 3, also in Winchester (Figure 1 and Figure 2). Site 5 is in Chesterville, east of Industrial Drive and north of Brennan Drive.

As per the Official Plan (OP) of the SD&G, if development or site alteration is to occur within 120 m of a Natural Heritage Feature, or 50 m of a significant earth sciences area of natural and scientific interest (ANSI) then an EIS is required to assess the negative impacts on the natural features and the ecological functions of the area in question. The OP follows the guidelines set out in the 2020 Provincial Policy Statement (PPS) in which there are several natural features and areas identified as needing protection. These are described in Table 1. As outlined in the OP, the locations of most known significant features along with other locally significant features (identified as part of the regions' Natural Heritage System) are identified on the Land Use and Constraints Plan Schedules.

**NOTE:** In addition to the references noted in the table below, in SD&G, the local municipality or Conservation Authority may request the assessment of **Unevaluated Wetlands, Coastal Wetlands, and Woodlands**. This request is usually made in the pre-consultation phase.



Table 1: Summary of Natural Heritage Features Protected in SD&G

Natural Heritage Feature	Reference for SD&G (OP January 2021 Consolidation)
Significant habitat of Endangered and Threatened Species (SAR)	Site-specific basis as per province’s guidelines
Significant wetlands	Province’s Mapping (boundary may need to be fine-tuned in field)
Significant coastal wetlands or coastal wetlands	Site-specific basis as per province’s guidelines
Significant valleylands	Land Use Schedules
Significant woodlands	Land Use Schedule B (Constraint Plan); <i>Natural Heritage Reference Manual</i> (OMNR, 2010)
Significant wildlife habitat	Land Use Schedules
Significant Areas of Natural and Scientific Interest	Land Use Schedule B (Constraints Plan)
Fish Habitat	Site Specific Surveys

The following report provides a summary of the findings and an assessment of the functions and values of the natural features on each site based solely from a background review (desktop). The report identifies which features would require additional review, lists potential species at risk (subject to change with time and with a site visit to confirm habitats) and outlines some of the standard avoidance measures for the items identified.

Figure 1: General Location of Site

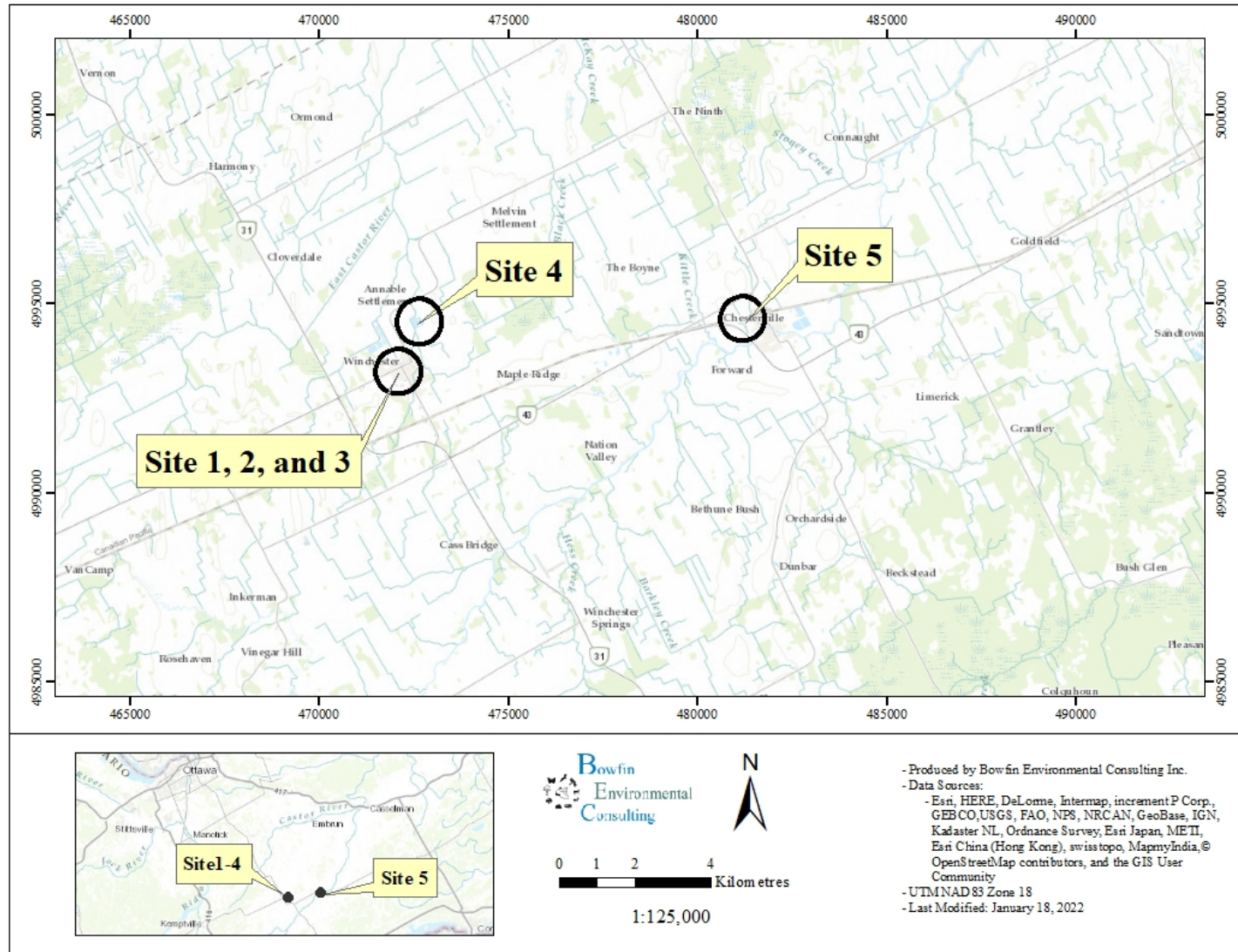


Figure 2: Site and the Adjacent Lands (Winchester)

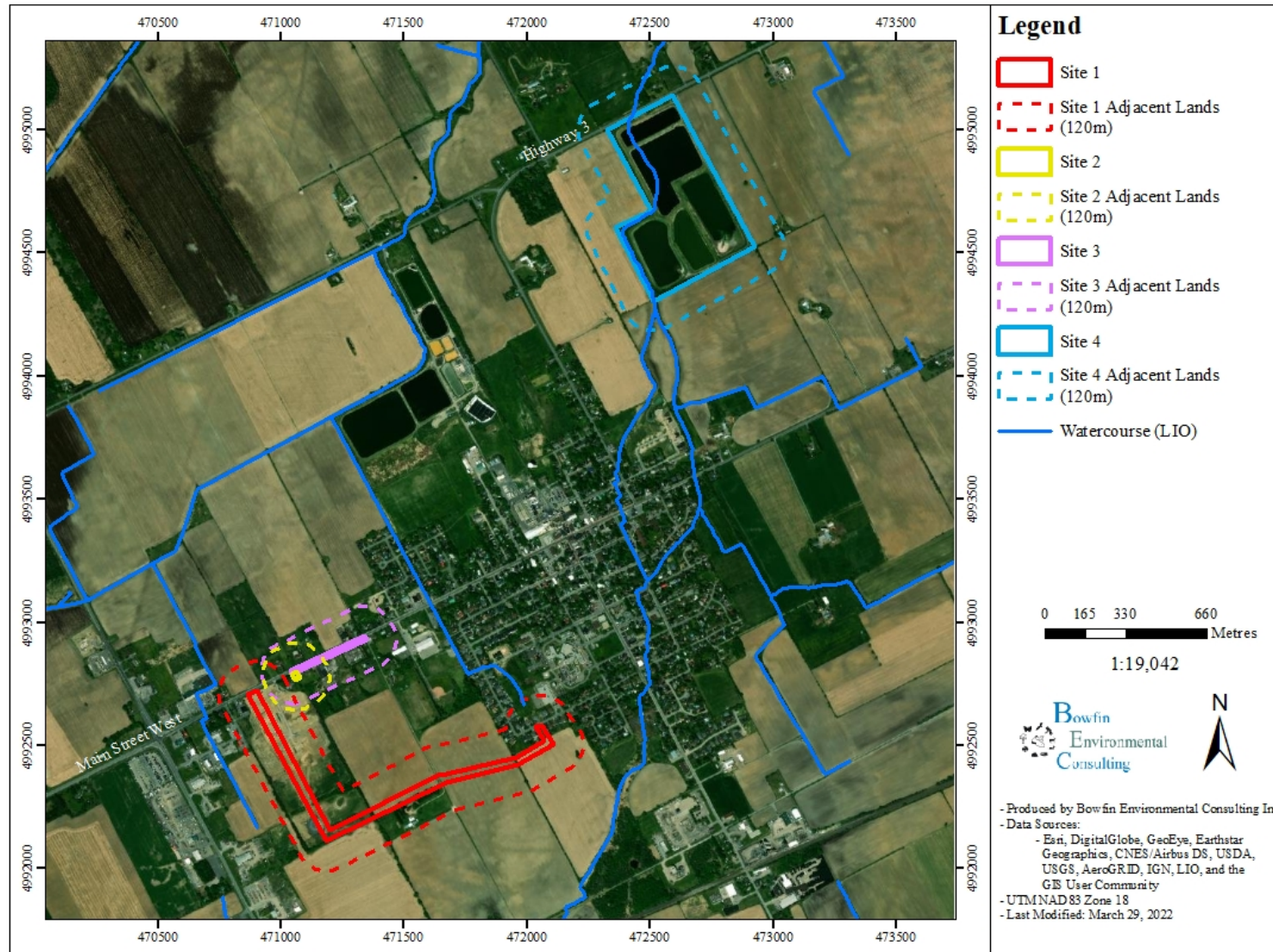
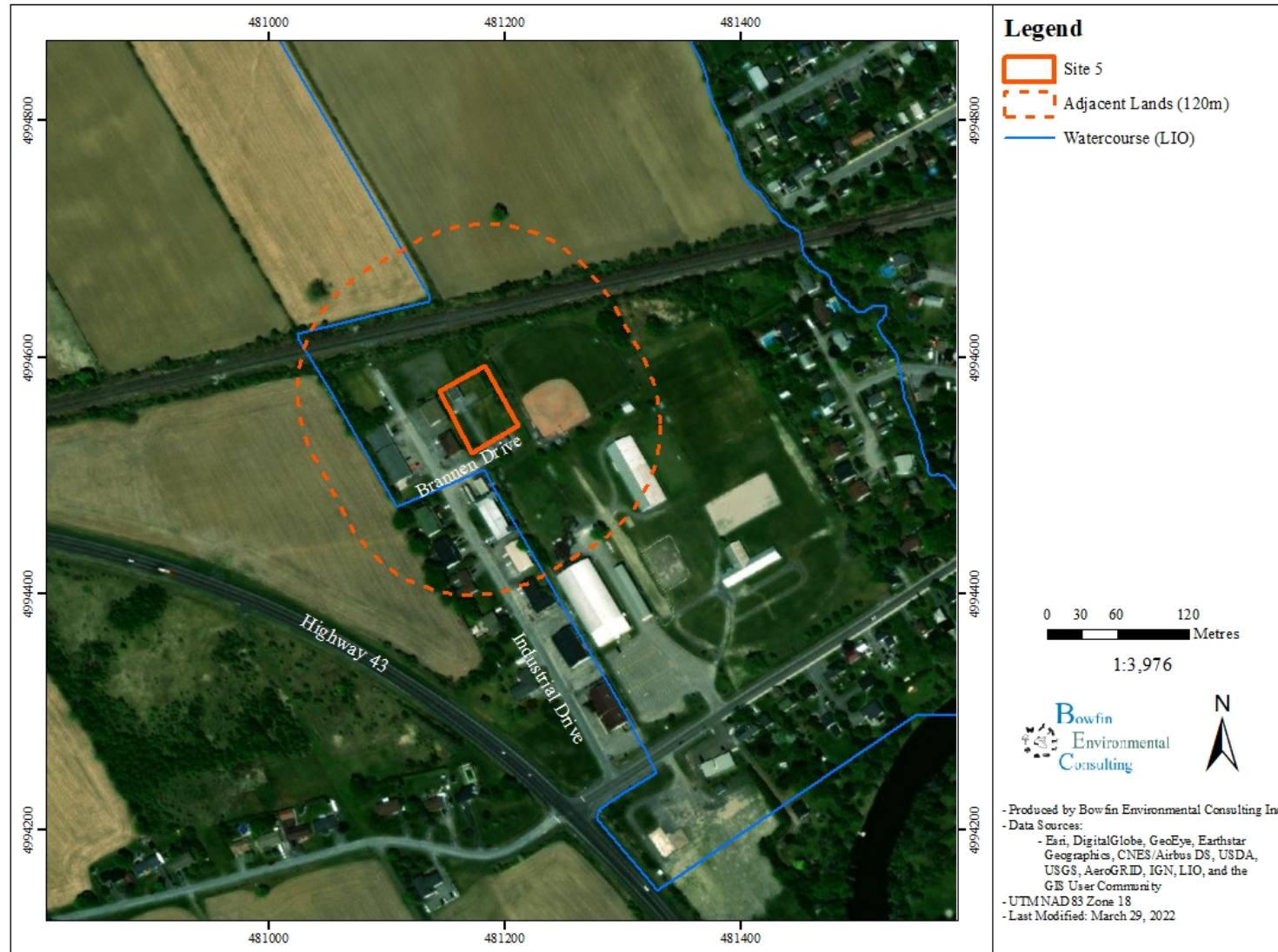


Figure 3: Site and the Adjacent Lands (Chesterville)



## **2.0 METHODOLOGY**

### **2.1 Study Area**

For the most part, the OP calls for an evaluation of the areas to be impacted directly and the adjacent 120 m. This is widened when analyzing the potential for species at risk (SAR) as their protected habitats vary with the species being considered.

### **2.2 Background Review**

Where the OP indicated that the features to be considered were those identified on their schedules, these took precedent. Other information collected from outside sources was used to help inform the functions of these features and to identify those not found on the schedules (i.e., Endangered and Threatened species habitat). Outside sources included: Natural Heritage Information Centre (NHIC) database, iNaturalist, Atlas of Breeding Birds of Ontario (ABBO), DFO Aquatic Species at Risk Map (NASAR), Make-a-Map Land Information Ontario (LIO), and LIO databases. Information from personal knowledge has also been included as appropriate. The desktop review included a larger area (~5 km).

## **3.0 BACKGROUND INFORMATION**

### **3.1 Location**

All Sites are situated in the Township of North Dundas:

Municipality of Winchester

- Site 1 (part of Lot 1-3, Concession 6) (UTM 18T 470893E 4992683N)
- Site 2 (part of Lot 1, Concession 6) (UTM 18T 471060E 4992777N)
- Site 3 (part of Lot 1-2, Concession 6) (UTM 18T 471120E 4992866N)
- Site 4 (part of Lot 5, Concession 7) (UTM 18T 472530E 4994392N)

Municipality of Chesterville

- Site 5 is part of (Lot 17, Concession 4) (UTM 18T 481177E 4994552N).

### **3.2 Natural Heritage Features**

The schedules associated with the SD&G official plan identify few natural heritage features in or near (120 m) of the five sites. The most defined feature is the Henderson Municipal Drain, which is considered fish habitat. This feature travels around the lagoons at Site 4. Additionally, are two watercourses that are depicted on LIO in the adjacent lands of Sites 1 and 5 (110 m north of the eastern end of Site 1 and 5 m south of Site 5). These are potential fish habitat, however a review of the satellite imagery for the area suggests that they have been piped, re-aligned, or

consist of roadside ditches. These may still provide fish habitat and require confirmation from a site visit. No other significant natural features are noted on the schedules, in or within 120 m of the sites. Further afield, Schedule B identifies significant woodland (1.6 km east of Site 4 and 2.3 km west of Site 5), the South Nation River (425 m southeast of Site 5), and Winchester Swamp (4.2 km northwest of Site 1-3).

Table 2: Summary of Available Background Information on the Identified Natural Features (PSW, Woodlands, Valleylands, ANSIs, ESA, SWH, and Fish Habitat)

Natural Heritage Feature	Present within Site	Present within 120 m of Site	Additional Notes
Provincially Significant Wetlands (PSW)		No	None
Areas of Natural and Scientific Interest (ANSIs)		No	Schedule B identifies Winchester Swamp 4.2 km NE of Sites 1-3
Habitats or species designated by ESA (Provincial)	Potential for endangered or threatened species needs to be determined following assessment of the suitable habitats in or near the site. Preliminary review of the satellite images suggests that there is a potential for Chimney Swift, Barn Swallow, Bobolink, Eastern Meadowlark, Bats and Butternut within the adjacent lands of all sites. The agricultural fields can be suitable for grassland bird species, though it is not protected by ESA when under active agriculture use. See section 5 of this report for more information.		None
Significant Woodlands		No	Schedule B shows significant woodland 1.6 km E of Site 4 and 2.3 km W of Site 5.
Significant Valleylands	None identified on OP		None
Significant Wildlife Habitat (SWH)	None identified on Schedules and OP		None
Fish Habitat	Henderson Municipal Drain runs along the western side of Site 4	Two unnamed tributaries have potential to be fish habitat 5 m S of Site 5 and 110 m N of Site 1(their presence needs to be confirmed with site investigations)	South Nation River (425 m to SE of Site 5)

Figure 4: Official Plan Schedule A1a (Site 1-3)

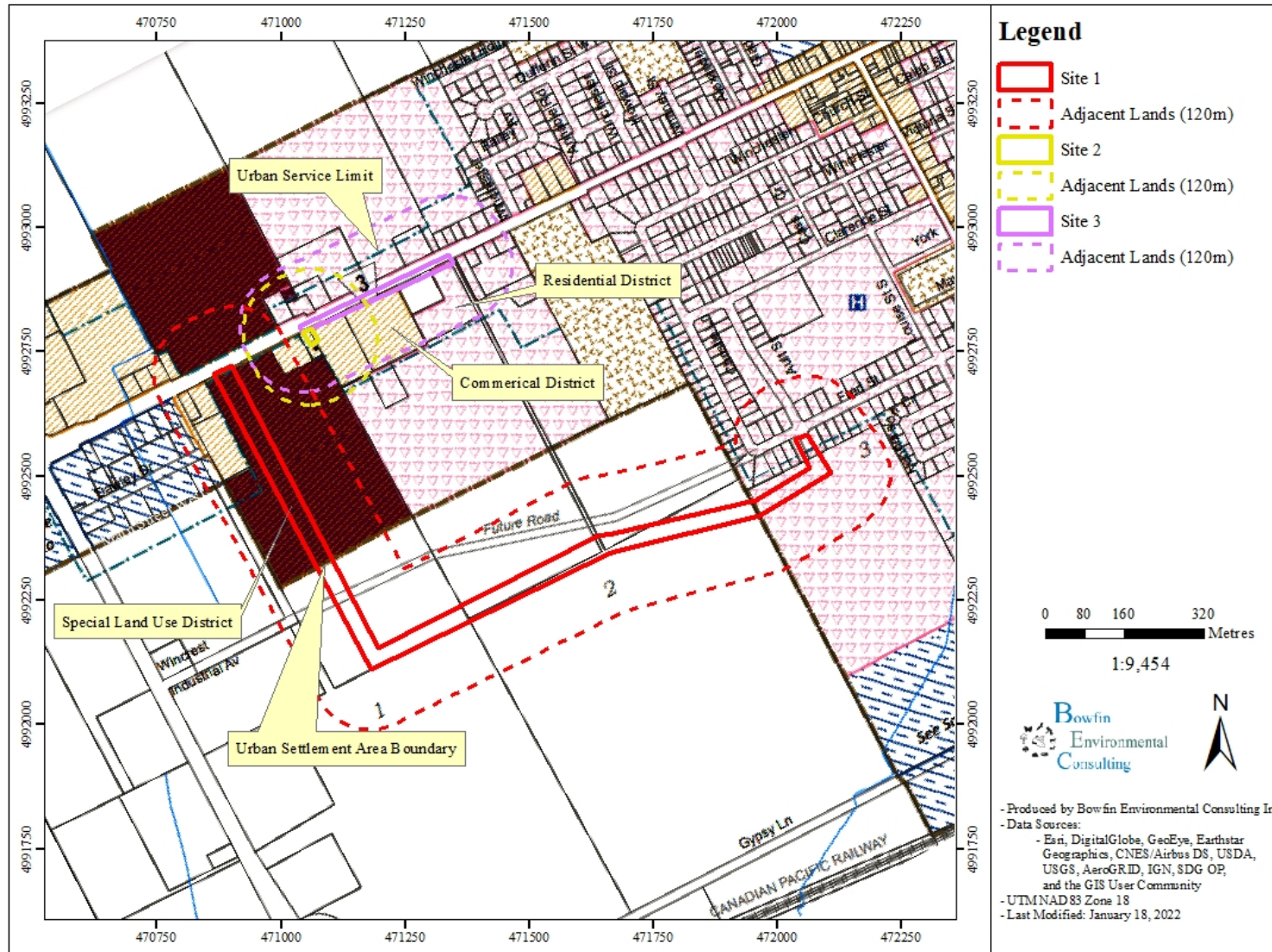




Figure 5: Official Plan Schedule A1 (Site 1-4)

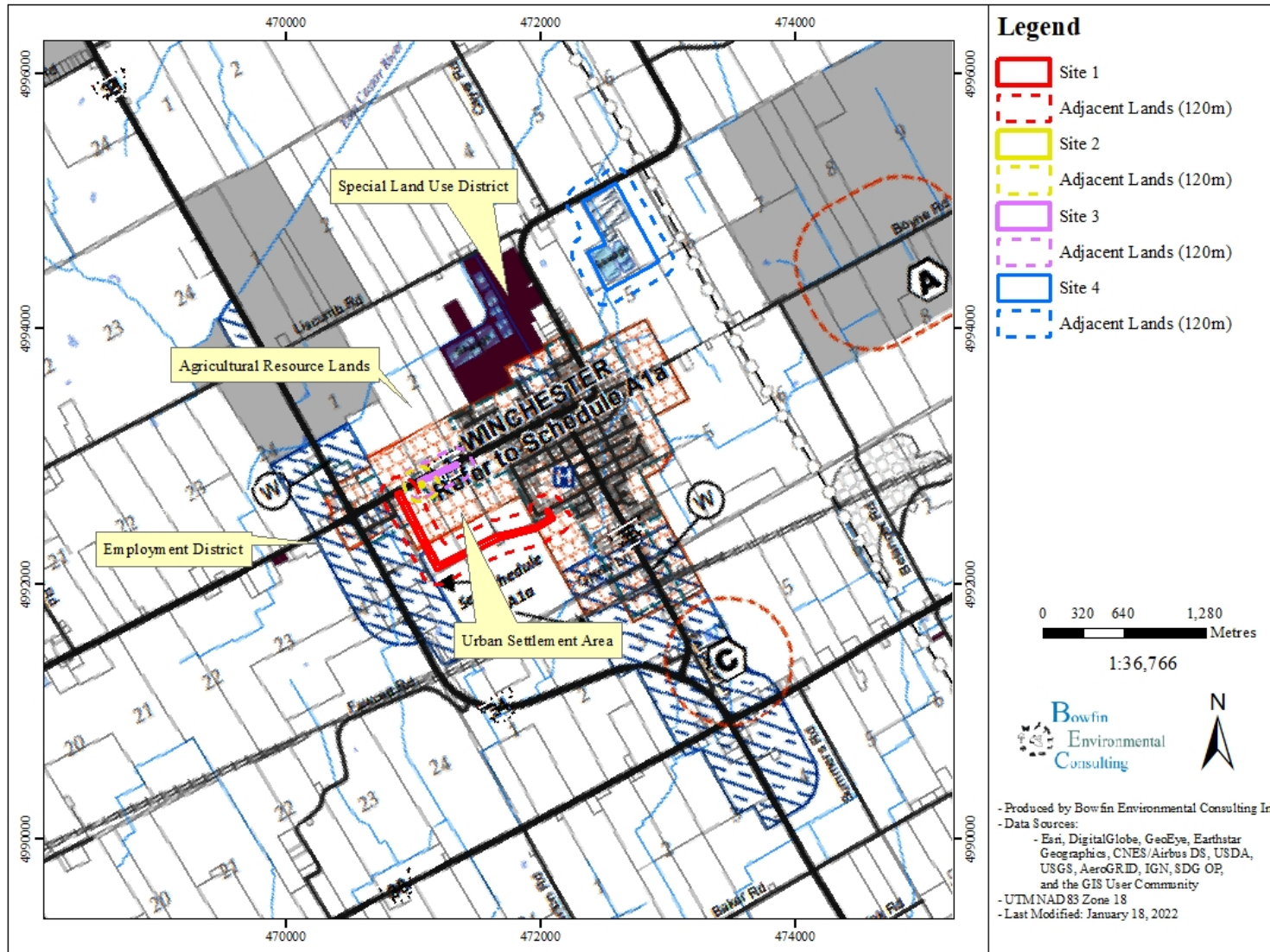


Figure 6: Official Plan Schedule A1b (Site 5)

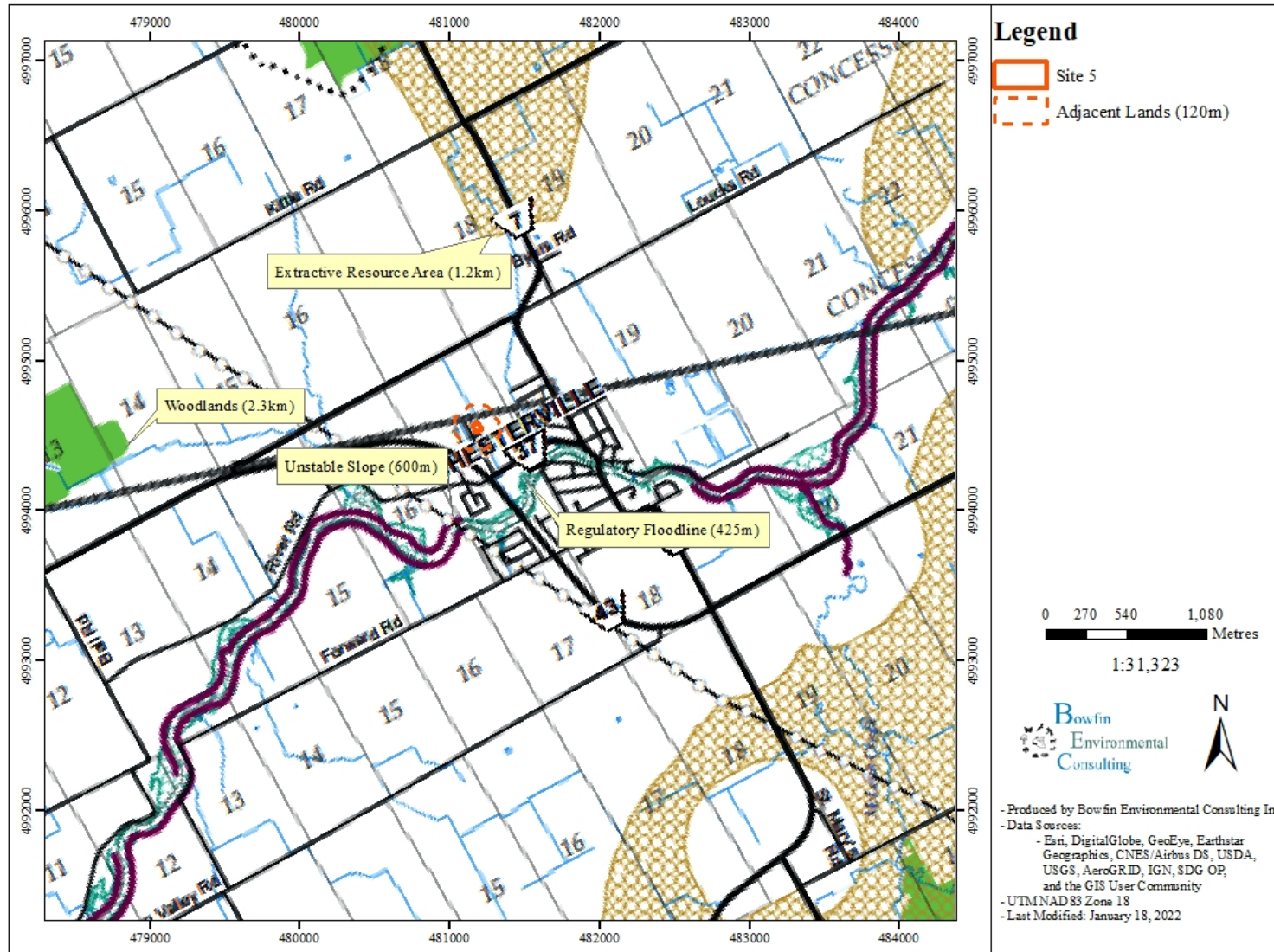


Figure 7: Official Plan Schedule 1B (Site 1-4)

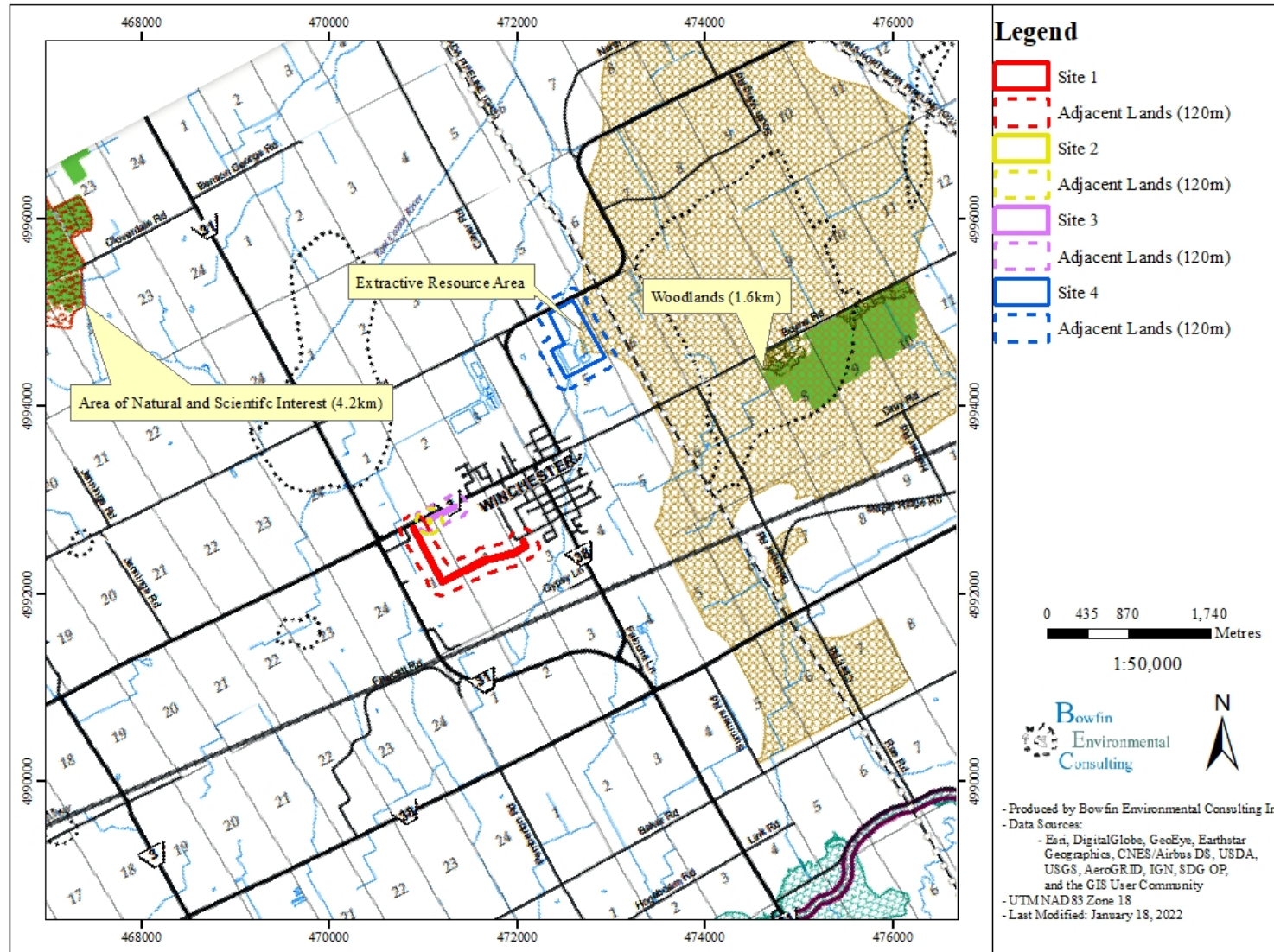


Figure 8: Official Plan Schedule 1B (Site 5)

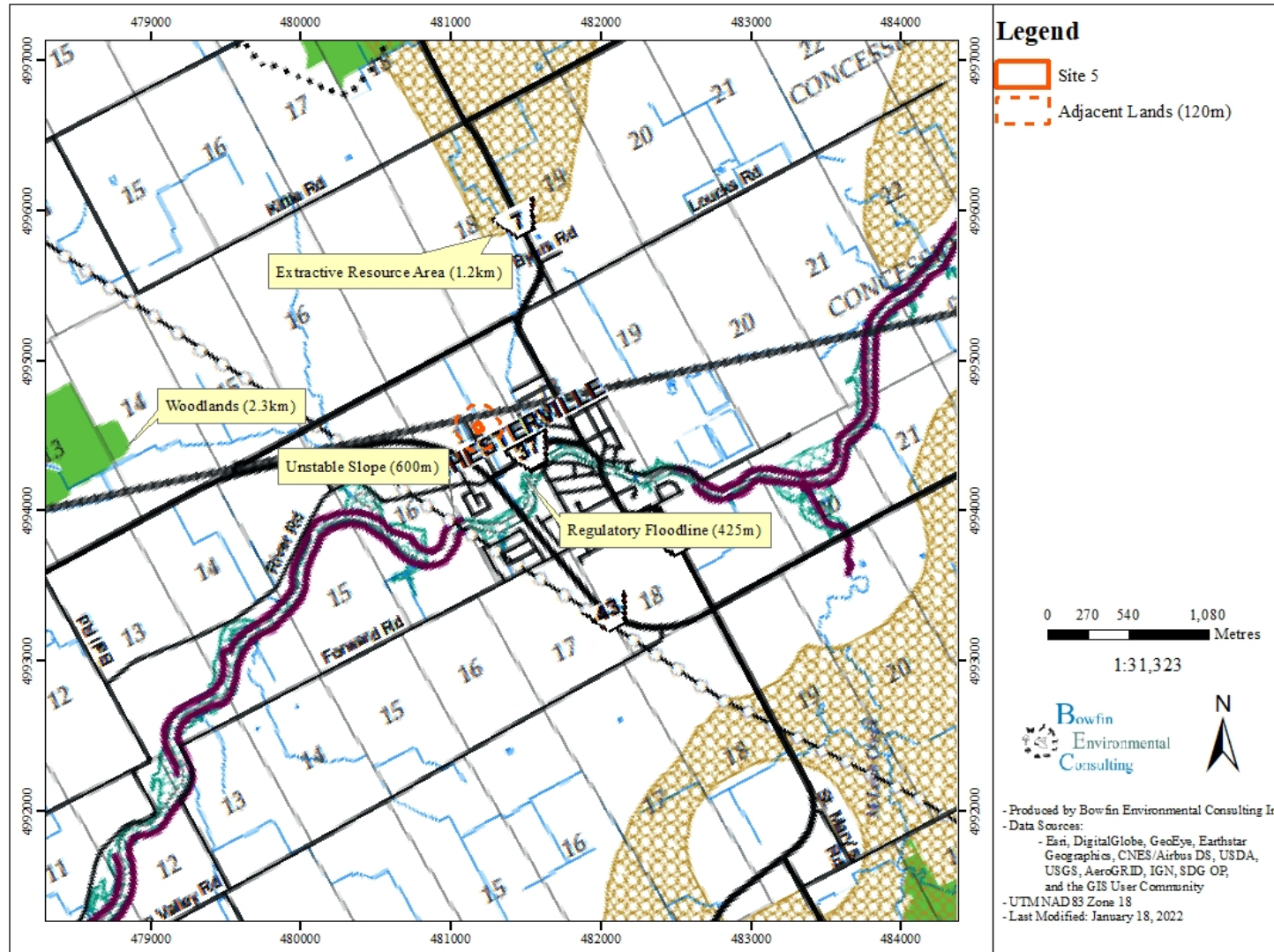


Figure 9: Background Information on Known Natural Heritage Features from LIO (Winchester)

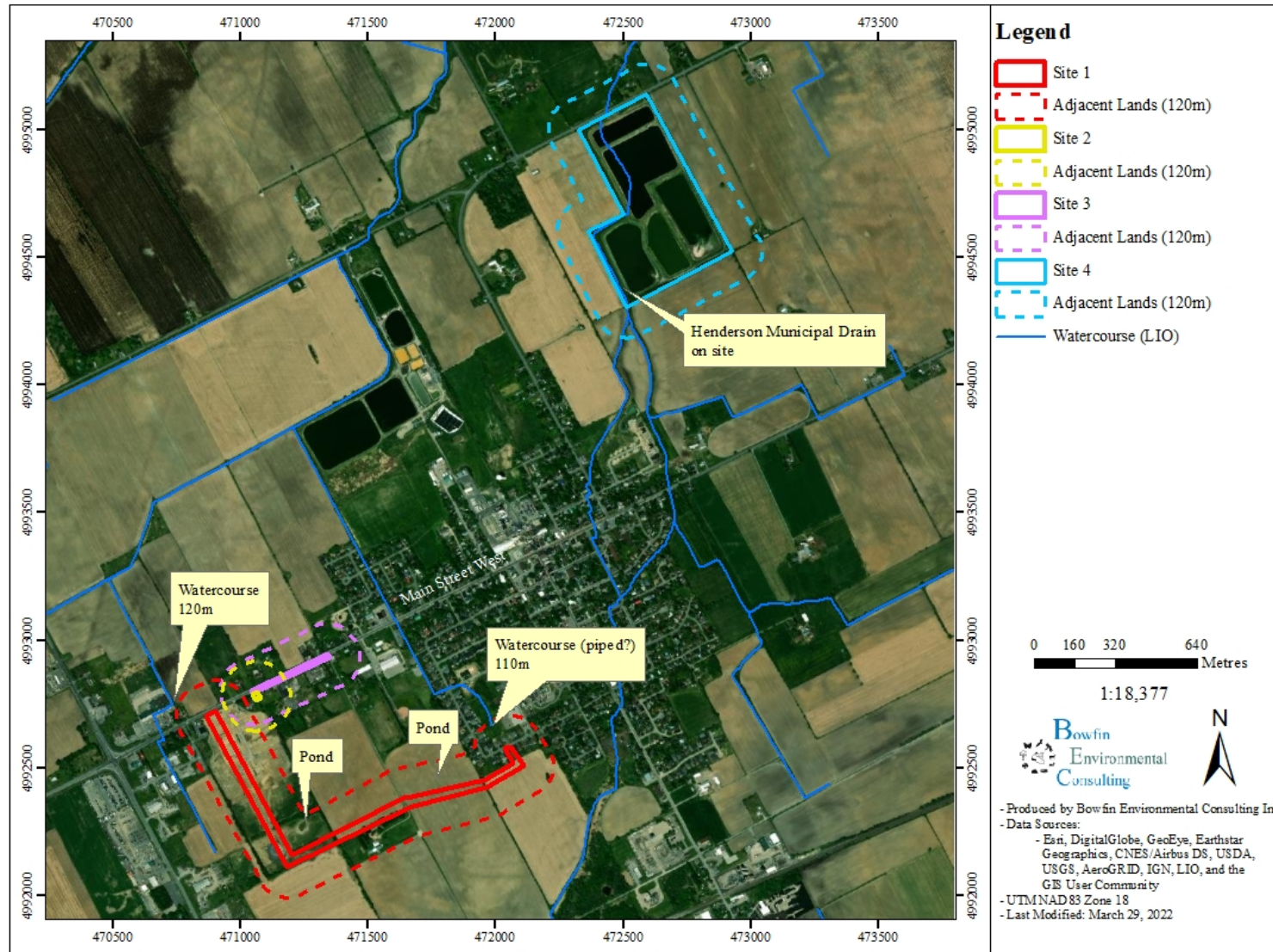


Figure 10: Full LIO Information on 5 km Adjacent Lands (Winchester)

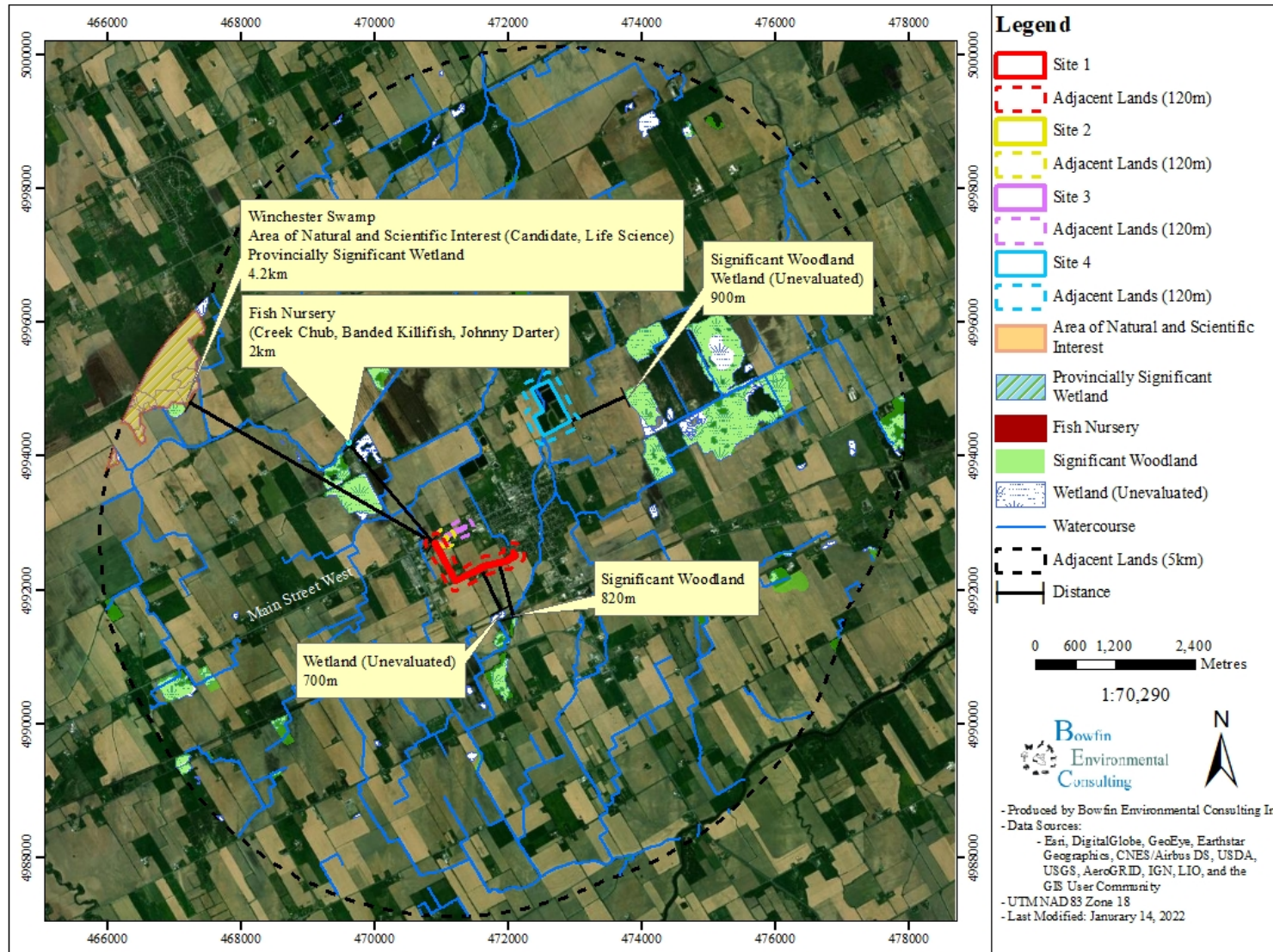


Figure 11: Background Information on Known Natural Heritage Features from LIO (Chesterville)

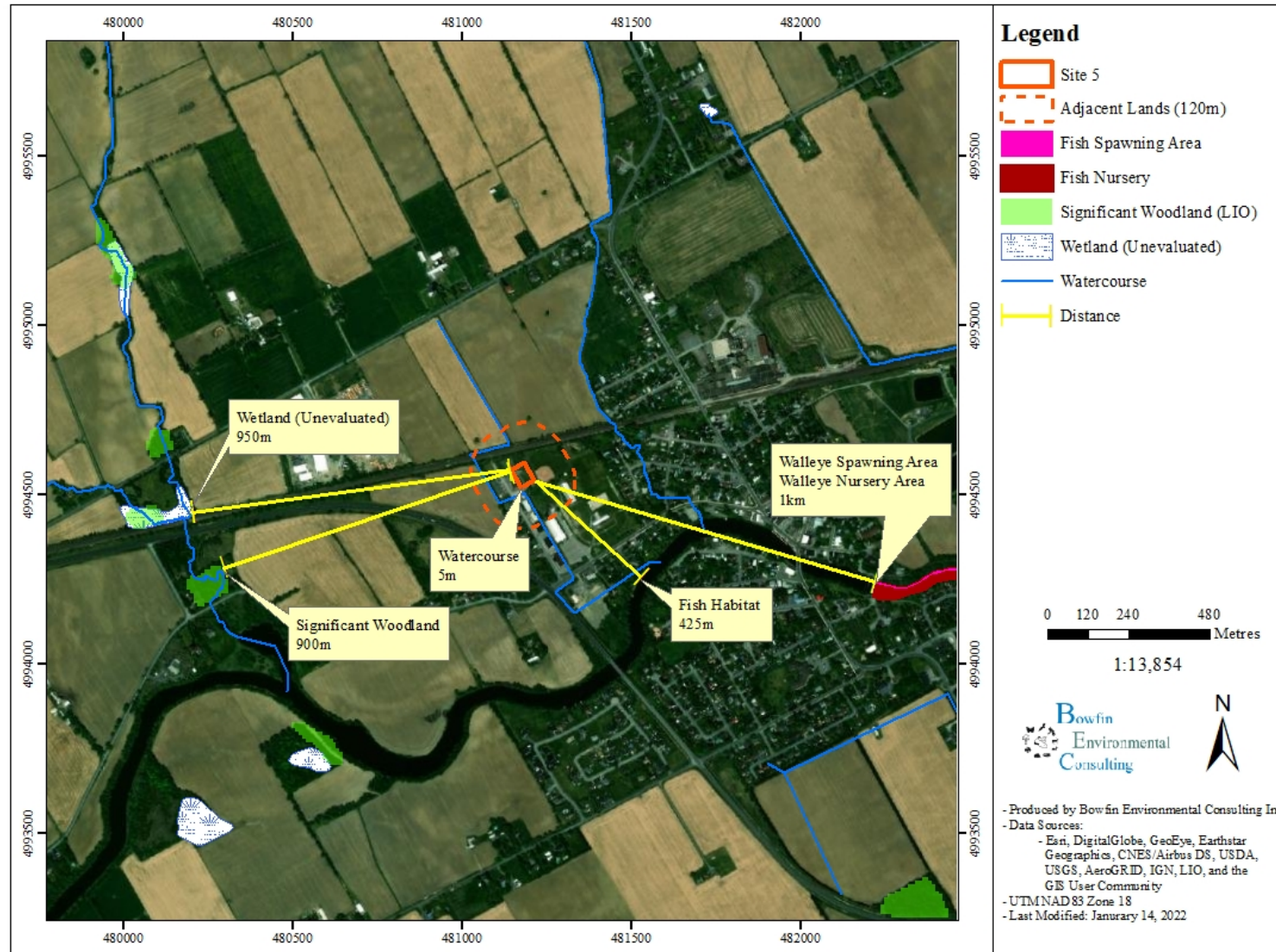
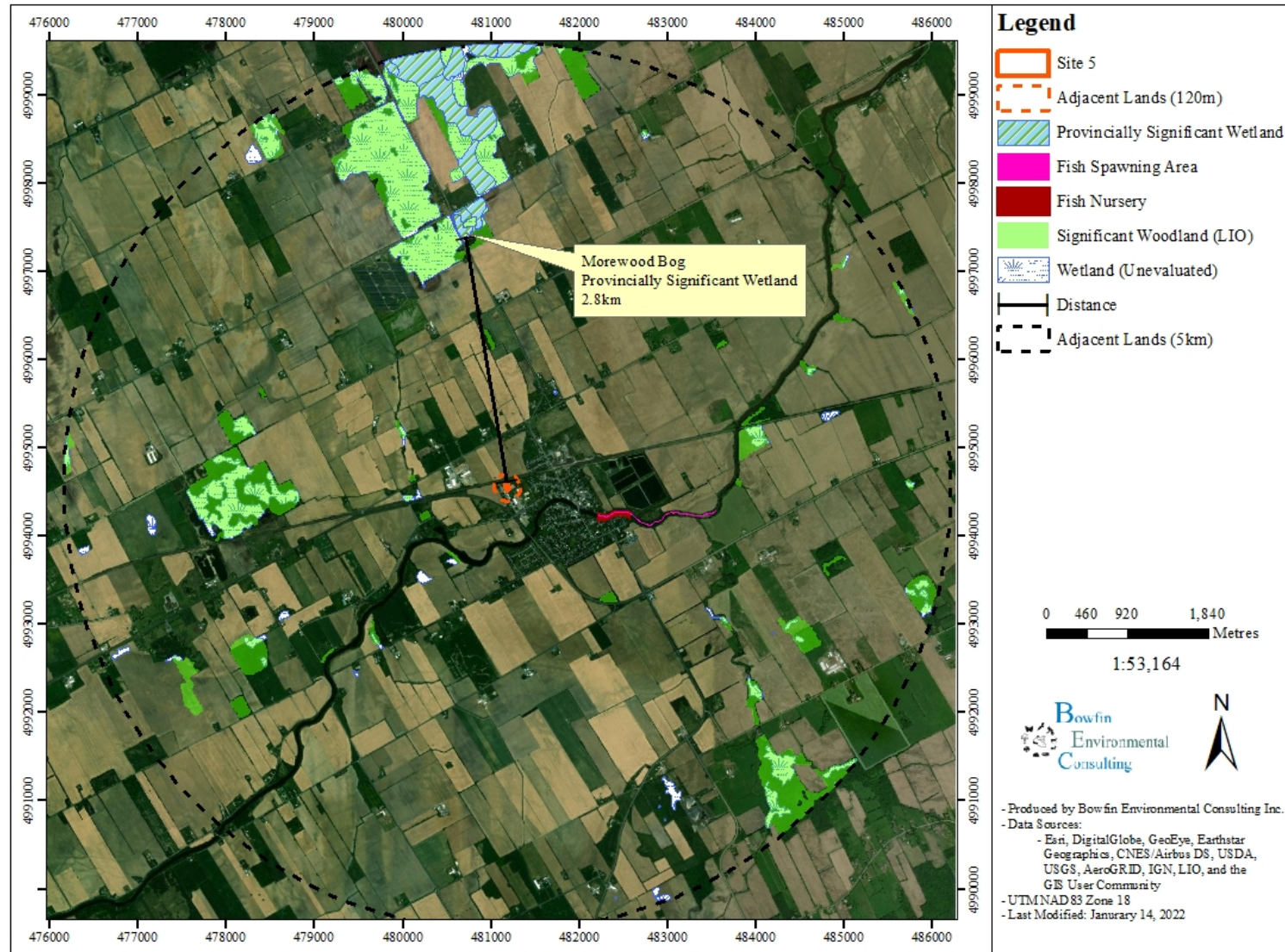


Figure 12: Full LIO Information on 5 km Adjacent Lands (Chesterville)





## 4.0 DESKTOP REVIEW OF HABITATS

### 4.1 Vegetation Communities

The following is a quick summary of the vegetation communities based on a desktop review:

- Site 1 is primarily agricultural land with some hedgerows consisting of tree species.
- Sites 2 and 3 along the Main Street and are primarily manicured lawns with some shrub species around property boundaries. There is an area that is naturalizing (old field and treed areas) within the adjacent lands to the south of Site 2.
- Site 4 consists almost entirely of sewage lagoons with mowed grass in between, there are a few tree and shrub species around the perimeter fence.
- Site 5 is next to the community parks (soccer, baseball fields) and is almost entirely manicured lawn with some scattered tree and shrub species along property edges in the adjacent lands.

There are no wetlands identified in or within 120 m of any of the sites.

### 4.2 Fish Habitat

As noted on the background mapping, the potential for fish habitat was identified for Sites 1, 4 and 5. No watercourses appeared to be within 120 m of Sites 2 or 3.

- Site 1: Two unnamed drains and two ponds (in the agricultural fields) are within the adjacent lands (Figure 9). The ponds appear to be isolated and not connected to other potential fish habitats. Both unnamed drains identified on the LIO database flow north into the East Castor River putting Site 1 near their headwaters. The satellite imagery for the portion of the eastern watercourse near Site 1, does not show a well-defined feature. If present it is anticipated to be a straightened drain and likely ephemeral in nature. The western feature is also poorly defined on the south side of Main Street West and then appears to be piped after it crosses the street. However, the portion of this feature that is just within the 120 m of Site 1 is an open drain and more likely to provide direct fish habitat (Figure 9). There was no background information available for these systems on the LIO databases.
- Site 4: The Henderson Municipal Drain is found running along the side of the existing lagoons. This drained also flows north into the East Castor River. This is a well-defined drain on available imagery. It is anticipated to be a slow-moving well vegetated watercourse that would provide direct fish habitat. While there was no background information available online, Bowfin caught a central mudminnow, for an unrelated

project in 2021, in the Alternate Branch of Henderson Municipal Drain upstream of Site 4.

- Site 5: Background mapping shows an unnamed tributary within its adjacent lands that flows south. The portion of the feature near Site 5 is roughly 425 m upstream from the South Nation River (Figure 11). The channel as it is drawn in LIO does not match well with satellite images for the area. It may no longer be present, may be piped or may be restricted to roadside ditches.

The nearest background fish community data (apart from the sampling by Bowfin for an unrelated project noted above) was for the East Caster River near the Winchester sites and for the South Nation River near Chesterville. LIO provided a list of 12 species for the section of the East Castor River near the confluence with the tributaries from the Winchester sites and 27 common warm to cool water fish species on the South Nation River near the Chesterville site (Table 3). Of these species, five sport fish were identified (northern pike, brown bullhead, smallmouth bass, yellow perch, and walleye). Two pan fish (rock bass and pumpkinseed) were also listed.

The DFO Aquatic Species at Risk on-line mapping did not identify any species at risk in this area (accessed on January 15, 2021). Greater redhorse is noted in the LIO database for the South Nation River, but not on the DFO mapping. This species would not be present in the features identified near the five sites (not a species found in drains).

Figure 13: Summary of Background Fish Community Information (Winchester)

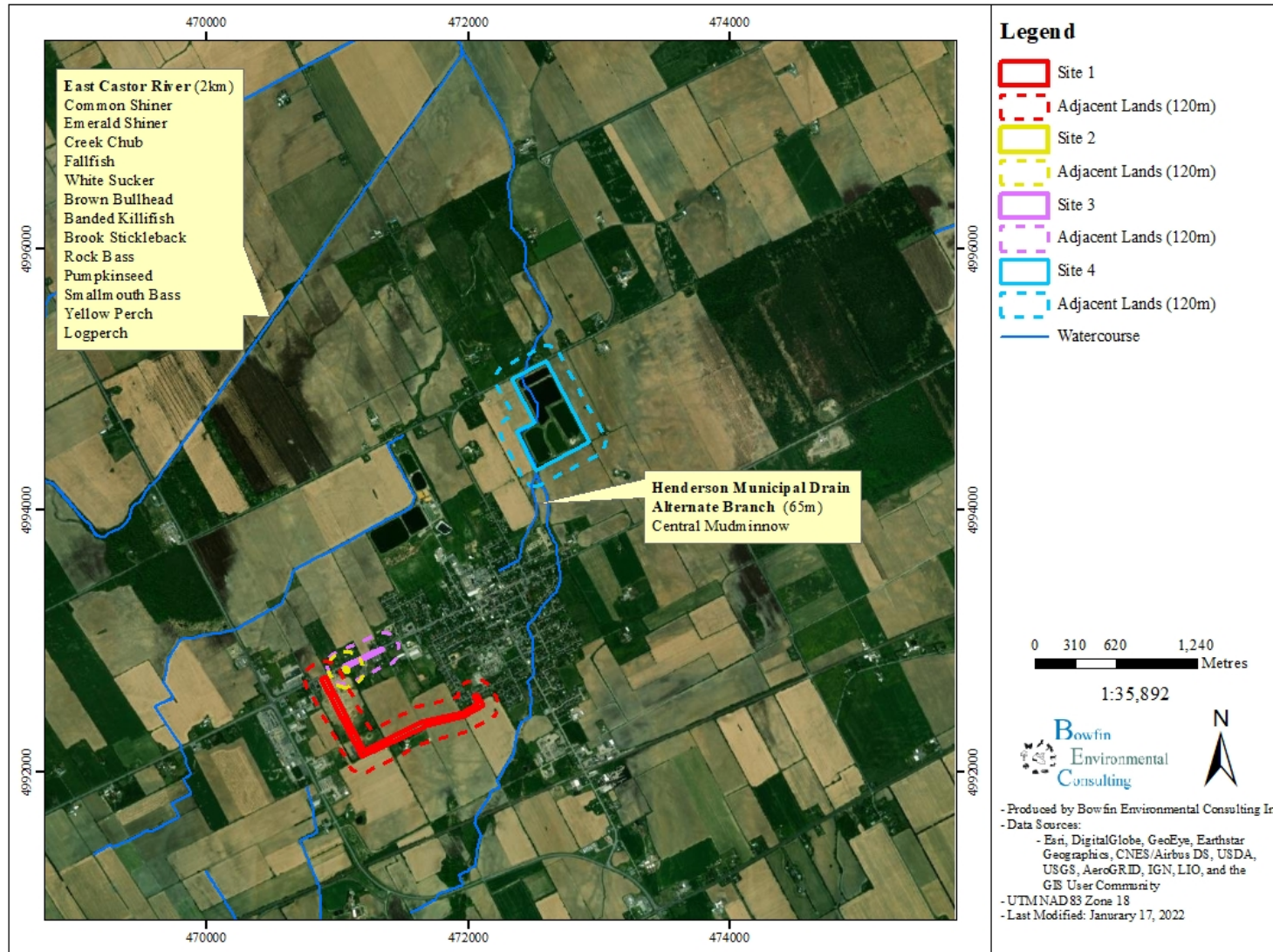


Figure 14: Summary of Background Fish Community Information (Chesterville)

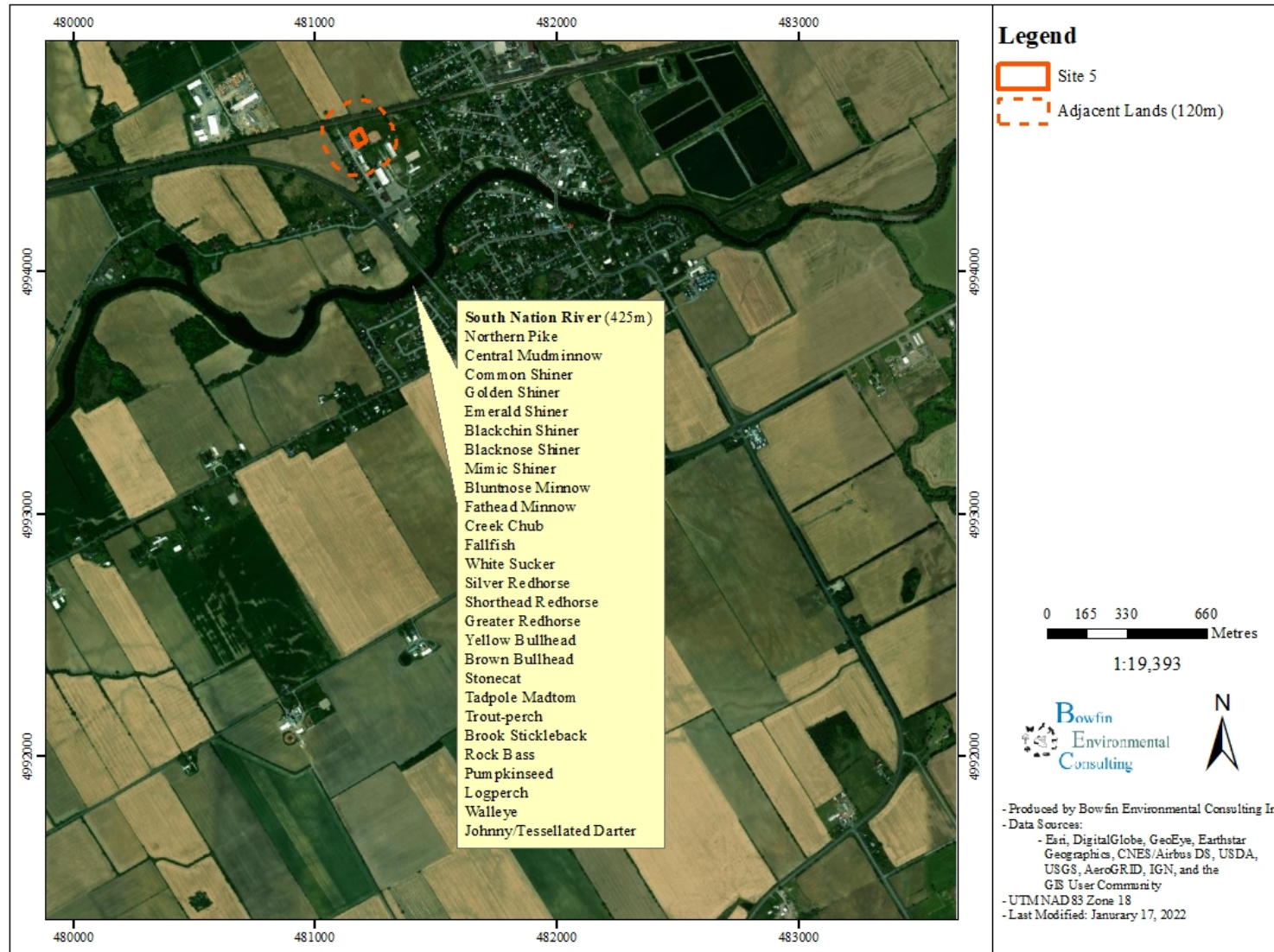


Table 3: Background Fish Community Information for the South Nation River and East Castor River

Common Name	Scientific Name	Trophic Class*	Thermal Regime	SRank	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status	Present in Area Depicted on (Figure 13 and Figure 14)	
							South Nation	East Castor
Northern Pike	<i>Esox lucius</i>	carnivore	cool	S5	No Status	No Status	Y	N
Central Mudminnow	<i>Umbra limi</i>	invertivore	cool	S5	No Status	No Status	Y	N
Common Shiner	<i>Luxilus cornutus</i>	invertivore	cool	S5	No Status	No Status	Y	Y
Golden Shiner	<i>Notemigonus crysoleucas</i>	invertivore/herbivore	cool	S5	No Status	No Status	Y	N
Emerald Shiner	<i>Notropis atherinoides</i>	planktivore	cool	S5	No Status	No Status	Y	Y
Blackchin Shiner	<i>Notropis heterodon</i>	invertivore	cool	S4	No Status	No Status	Y	N
Blacknose Shiner	<i>Notropis heterolepis</i>	invertivore/ herbivore	cool	S5	No Status	No Status	Y	N
Mimic Shiner	<i>Notropis volucellus</i>	invertivore/herbivore	warm	S5	No Status	No Status	Y	N
Bluntnose Minnow	<i>Pimephales notatus</i>	detritivore	warm	S5	No Status	No Status	Y	N
Fathead Minnow	<i>Pimephales promelas</i>	detritivore/ invertivore	warm	S5	No Status	No Status	Y	N
Creek Chub	<i>Semotilus atromaculatus</i>	invertivore/ carnivore	cool	S5	No Status	No Status	Y	Y
Fallfish	<i>Semotilus corporalis</i>	invertivore/ carnivore	cool	S4	No Status	No Status	Y	Y
White Sucker	<i>Catostomus commersonii</i>	invertivore/ detritivore	cool	S5	No Status	No Status	Y	Y

Five Watermain and Wastewater Infrastructure Projects in Winchester and Chesterville – NHA Desktop Review

Common Name	Scientific Name	Trophic Class*	Thermal Regime	SRank	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status	Present in Area Depicted on (Figure 13 and Figure 14)	
							South Nation	East Castor
Silver Redhorse	<i>Moxostoma anisurum</i>	invertivore	cool	S4	No Status	No Status	Y	N
Shorthead Redhorse	<i>Moxostoma macrolepidotum</i>	invertivore	warm	S5	No Status	No Status	Y	N
Greater Redhorse	<i>Moxostoma valenciennesi</i>	invertivore	warm	S3	No Status	No Status	Y	N
Yellow Bullhead	<i>Ameiurus natalis</i>	invertivore/ carnivore	warm	S4	No Status	No Status	Y	N
Brown Bullhead	<i>Ameiurus nebulosus</i>	invertivore/ herbivore/ carnivore	warm	S5	No Status	No Status	Y	Y
Stonecat	<i>Noturus flavus</i>	invertivore/ carnivore	warm	S4	No Status	No Status	Y	N
Tadpole Madtom	<i>Noturus gyrinus</i>	invertivore/ planktivore	warm	S4	No Status	No Status	Y	N
Trout-perch	<i>Percopsis omiscomaycus</i>	invertivore/ carnivore	cold	S5	No Status	No Status	Y	N
Banded Killifish	<i>Fundulus diaphanus</i>	invertivore/planktivore	cool	S5	No Status	No Status	N	Y
Brook Stickleback	<i>Culaea inconstans</i>	planktivore/invertivore	cool	S5	No Status	No Status	Y	Y
Rock Bass	<i>Ambloplites rupestris</i>	invertivore/carnivore	cool	S5	No Status	No Status	Y	Y
Pumpkinseed	<i>Lepomis gibbosus</i>	invertivore/carnivore	warm	S5	No Status	No Status	Y	Y
Smallmouth Bass	<i>Micropterus dolomieu</i>	invertivore/ carnivore	cool	S5	No Status	No Status	N	Y
Logperch	<i>Percina caprodes</i>	invertivore	warm	S5	No Status	No Status	Y	Y

Five Watermain and Wastewater Infrastructure Projects in Winchester and Chesterville – NHA Desktop Review

Common Name	Scientific Name	Trophic Class*	Thermal Regime	SRank	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status	Present in Area Depicted on (Figure 13 and Figure 14)	
							South Nation	East Castor
Walleye	<i>Sander vitreus</i>	invertivore/carnivore	cool	S5	No Status	No Status	Y	N
Johnny/Tessellated Darter	<i>Etheostoma nigrum</i> / <i>Etheostoma olmstedii</i>				No Status	No Status	Y	N
<b>Number of Species</b>							<b>27</b>	<b>12</b>
Indicates presence								

(DFO, 2019; Eakins, 2018; OMNRF, 2014; MNRF, 2017; MTO, 2006)

Status Updated: March 2021

**SRANK DEFINITIONS**

- S3** Vulnerable, Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
- S4** Apparently Secure, Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- S5** Secure, Common, widespread, and abundant in the nation or state/province.

## **5.0 ANALYSIS OF POTENTIAL FOR ENDANGERED OR THREATENED SPECIES**

Terrestrial and wetland Endangered and Threatened Species at Risk, on private land, are protected under provincial *Endangered Species Act*. It is noted that bird species protected under the *Species at Risk Act* (SARA) are protected by the *Migratory Bird Convention Act* (MBCA) on private lands. Within this report, the acronym SAR refers to only Endangered or Threatened species. Special Concern species do not receive protection from ESA or SARA.

A list of potential SAR was compiled using various sources to find occurrences within roughly 5 km of the Site. The resulting list includes 12 potential SAR: 1 fish (American eel), 6 birds (eastern whip-poor-will, chimney swift, bank swallow, barn swallow, bobolink, and eastern meadowlark), 4 mammals (little brown myotis, northern myotis, eastern small-footed myotis, and the tri-colored bat), and 1 plant (butternut) (Table 4). Of these, many were determined not to be present or had no triggers for review based on guidance from the province. Table 4 notes the relevant MECP guidelines and triggers and indicates whether the species is brought forward for discussion in the paragraphs further below.



Table 4: Summary of Potential Endangered and Threatened Species

Common Name	Scientific Name	SRank	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status	Preferred Habitat	Reference	MECP Guidelines/Triggers for Review	Brought Forward (Yes/No)
<b>FISH</b>								
American Eel	<i>Anguilla rostrata</i>	S1?	END	No Status	Near cover over muddy bottoms in lakes, ponds, rivers, and creeks at depths <15 m.	COSEWIC 2012	Recorded in the South Nation River, however there is no suitable habitat within Site 5 or its adjacent lands. It is not listed on the East Caster River.	No
<b>BIRDS</b>								
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	S4B	THR	THR	Rock or sand barrens with scattered trees, savannahs, old burns, or other disturbed sites in a state of early to mid-forest succession, or open conifer plantations.	COSEWIC 2009	No suitable habitat on site or adjacent lands	No
Chimney Swift	<i>Chaetura pelagica</i>	S4B, S4N	THR	THR	Cities, towns, villages, rural, and wooded areas. When selecting trees, they prefer those that are >50 cm in diameter and that are within 1 km of waterbodies	COSEWIC 2007	Buildings and any larger trees, in adjacent lands may provide suitable habitat	Yes
Bank Swallow	<i>Riparia riparia</i>	S4B	THR	THR	This species nests within vertical banks, with a preference for sand-silt substrate. Nesting sites may be near open upland habitats.	COSEWIC 2013	Watercourses on site and in adjacent lands unlikely to provide suitable banks	No
Barn Swallow	<i>Hirundo rustica</i>	S4B	SC	THR	Open or semi-open lands: farms, field, marshes.	Peterson 1980, COSEWIC 2011	Buildings in adjacent lands may provide suitable habitat	Yes
Bobolink	<i>Dolichonyx oryzivorus</i>	S4B	THR	THR	Primarily in forage crops, and grassland habitat.	COSEWIC 2010	Fields in Site 1 and in adjacent lands around all sites are active farmland. They do not provide grassland habitat. Further, active	Yes*

Common Name	Scientific Name	SRank	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status	Preferred Habitat	Reference	MECP Guidelines/Triggers for Review	Brought Forward (Yes/No)
							farmland is exempt from ESA. General mitigation measures have been included to avoid impacts should the land use change.	
Eastern Meadowlark	<i>Sturnella magna</i>	S4B	THR	THR	Fields, meadows, and prairies.	COSEWIC 2011; Peterson 1980	Fields in Site 1 and in adjacent lands around all sites are active farmland. They do not provide grassland habitat. Further, active farmland is exempt from ESA. General mitigation measures have been included to avoid impacts should the land use change.	Yes
<b>MAMMALS</b>								
Little Brown Myotis	<i>Myotis lucifugus</i>	S4	END	END	Buildings, attics, roof crevices and loose bark on trees or under bridges. Always roost near waterbodies.	Eder 2002		
Northern Myotis	<i>Myotis septentrionalis</i>	S3	END	END	Older (late successional or primary forests) with large interior habitat.	COSEWIC, 2013; Menzel et al., 2002; Broders et al., 2006; OMNRF, 2015	MECP recommends the use of avoidance timing window for clearing of trees (>10 cm in diameter) if this can be accomplished then no impacts.	Yes
Eastern Small-footed Myotis	<i>Myotis leibii</i>	S2S3	END		Found within deciduous or coniferous forests in hilly areas.	Eder 2002		
Tri-colored Bat	<i>Perimyotis subflavus</i>	S3?	END	END	Prefers shrub habitat or open woodland near water.	Eder 2002		
<b>VASCULAR PLANTS</b>								
Butternut	<i>Juglans cinerea</i>	S2?	END	END	Variety of sites, grows best on well-drained fertile soils in shallow valleys and on gradual slopes	COSEWIC 2017	Hedgerows on Site 1 and 4 and in the adjacent lands of all sites may provide suitable habitat for this species.	Yes

Status Updated: March 25, 2021

**SRANK DEFINITIONS**

- S1 Critically Imperiled, Critically imperiled in the nation or state/province because of extreme rarity (often 5 or fewer occurrences) or because of some factor(s) such as very steep declines making it especially vulnerable to extirpation from the state/province.
- S2 Imperiled, Imperiled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the nation or state/province.
- S3 Vulnerable, Vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
- S4 Apparently Secure, Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- S#S# Range Rank, A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community. Ranges cannot skip more than one rank (e.g., SU is used rather than S1S4).
- ? Inexact Numeric Rank—Denotes inexact numeric rank
- S#B Breeding

**SARO STATUS DEFINITIONS**

- END Endangered: A species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's ESA.
- THR Threatened: A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.
- SC Special Concern: A species with characteristics that make it sensitive to human activities or natural events.

**SARA STATUS DEFINITIONS**

- END Endangered, a wildlife species facing imminent extirpation or extinction.
- THR Threatened, a wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.

### Chimney Swift

The chimney swift can often be found in developed areas and prefers to utilize structures such as large (>50 cm diameter) trees or man-made structures such as chimneys for its nesting habitat (COSEWIC, 2007). The use of large trees is now considered a rare event and the documented occurrences have all be in trees that were <1 km from a waterbody (large enough to be shown on 1:50,000 topographical maps) (COSEWIC, 2007). There is a potential for this species to utilise the structures in the adjacent lands of all sites.

### Barn Swallow

The barn swallow can often be found nesting on man-made structures. The *General Habitat Description for Barn Swallow* (OMNRF, 2018b) indicates that the protected habitat for this species includes three categories:

- Category 1 nest
- Category 2 the area within 5 m of the nest
- Category 3 the area between 5 m and 200 m of the nest

There is a potential for barn swallows to use the buildings in the adjacent lands of all sites.

### Bobolink

This species is grassland-breeding-bird requiring a minimum of 4 ha of uncut meadow or field (McCracken, 2013). The *Bobolink General Habitat Description* (OMNRF, 2018c) indicates that the protected habitat for this species includes three categories:

- Category 1 known nests and 10 m of the nest
- Category 2 the area between 10 m and 60 m from the nest or the approximate centre of the defended territory
- Category 3 the area of continuous suitable habitat between 60 m and 300 m of the nest or approximate centre of the defended territory

All sites have agricultural fields within their adjacent lands. MECP has advised that for as long as a field is under active agricultural use, there is no protected habitat for this species. This even applies to fields planted in cereal or hay (grasslands). However, should any of the adjacent fields be left fallow, and used for nesting, then it will become protected. That said, the individual birds are protected (under ESA) and their nests (under the Migratory Bird Convention Act (MVCA)). Should the fields be planted in hay or a cereal crop at the time of the work activities, then avoidance measures should be applied to minimize disturbances to this species during their breeding bird period.

### Eastern Meadowlark

Like the bobolink, this species is grassland-breeding-bird requiring a minimum of 4 ha of uncut meadow or field (McCracken, 2013). The *general Habitat Description for the Eastern Meadowlark* (OMNRF, 2018d) indicates that the protected habitat for this species includes three categories:

- Category 1 known nests and 10 m of the nest
- Category 2 the area between 10 m and 100 m from the nest or the approximate centre of the defended territory
- Category 3 the area of continuous suitable habitat between 100 m and 300 m of the nest or approximate centre of the defended territory

All sites have agricultural fields within their adjacent lands. MECP has advised that for as long as a field is under active agricultural use, there is no protected habitat for this species. This even

applies to fields planted in cereal or hay (grasslands). However, should any of the adjacent fields be left fallow, and used for nesting, then it will become protected. That said, the individual birds are protected (under ESA) and their nests (under the Migratory Bird Convention Act (MVCA)). Should the fields be planted in hay or a cereal crop at the time of the work activities, then avoidance measures should be applied to minimize disturbances to this species during their breeding bird period.

### Bats

The potential SAR bats within the general area are little brown myotis, northern myotis, eastern small-footed myotis and tri-colored. There are three types of habitats required by bats: hibernation, maternity sites, and day-roost sites. The latter is not considered critical habitat.

These four bat species prefer to hibernate in caves or mines. They can hibernate in buildings but that is rare for these species (COSEWIC, 2013a). No caves or mines were found in the background search.

The recovery strategy for the eastern small-footed myotis indicates that the preferred maternity habitat of this species consists of open rock habitats and that it rarely uses old buildings as roosting/maternity sites (Humphrey, 2017). There does not appear to be rocky habitat present, however there are buildings within Site 1 and in the adjacent lands of Site 1-5. Based on this information there is a possibility this species maternity habitat is present in the adjacent lands.

The Atlas of Mammals of Ontario (Dobbyn, 1994) suggests that the tri-colored bat is not present within this part of Ontario however, the NatureServe mapping in the COSSARO (2015) includes all southeastern Ontario. Based on this information, this species is considered to have a very low potential of occurring.

The northern myotis tends to prefer larger expanses of older forests (late successional or primary forests) and choose maternity sites in snags that are in the mid-stage of decay. They prefer habitat with intact interior habitat and is shown to be negatively correlated with edge habitat (Menzel et al., 2002; Broders et al., 2006; Yates et al., 2006; OMNRF, 2015a). There was no woodland interior within the study area. As such, the preferred habitat was not present, and this species is considered unlikely to have maternity sites here.

The SWHCS (OMNRF, 2015a) indicates that consideration for maternity sites, for species that utilize cavities, should be made when the vegetation community consists of a mature deciduous or mixed forest with >10/ha of large trees (>25 cm DBH). MRNF guidelines for bat maternity sites require a minimum of >10 snags (with a minimum DBH of 25 cm) / ha. As documented in Section 3.2 above, there were no woodlands within the study areas.

The little brown myotis is one of the few bat species that can use anthropogenic structures as maternity sites. Potential suitable structures can include buildings, bridges, barns, and bat boxes. The little brown myotis can also use tall, large cavity trees that are in the early to mid-stages of decay as maternity roosts, as well as loose/raised tree bark, and/or crevices in cliffs (ECCC, 2018). This bat species occurs in higher densities in mature deciduous and/or mixed forests due to increased opportunities for large snags. However, unlike the northern myotis, the little brown myotis does not exclusively require mature forest stands to find appropriate maternity roosts (COSEWIC, 2013a). There were several buildings within the adjacent lands which have the potential to be used for maternity sites.

There remains potential for bats to use the cavity trees in the adjacent lands of all sites for day-roosting. Day-roosts are not considered critical habitat and impacts to the bats can be minimized by removing the trees outside of the day-use period.

### Butternut

Butternut is listed as an endangered species federally signifying that it is at risk of becoming Extinct or Extirpated in Ontario and in Canada. Butternut is a shade intolerant species that is often found along edge habitats on rich, moist, well-drained loams or well-drained gravels (COESWIC, 2003). The butternut is threatened by a canker for which there is no known control (COESWIC, 2003).

Butternuts are assessed based on the amount of canker (the disease which is killing the species), their size and health, as per the MNRF BHA protocol. This method classes the individual trees as one of three categories:

Category 1 are those that are heavily infected to the point that they are not expected to survive.

Category 2 may have some canker but are still considered healthy.

Category 3 are the same as Category 2, but these are larger individuals situated near heavily cankered trees and province believes that some may be showing immunity to the disease.

There is a potential for butternuts to occur in the hedgerows within the adjacent lands of all sites as well as within Site 1 and 4.

## 6.0 CONCLUSION

The following section summarizes the identified or potential natural features and the results from the desktop review to assess whether any features are present or potentially present, and to provide recommendations on species-specific surveys that should be considered. Note that features may have been missed in the desktop review, site investigations are required to confirm all findings herein.

The following list of natural heritage features were not present in or within 120 m of any site:

- PSWs
- significant valleyland
- Significant Wildlife Habitat
- ANSIs
- Woodlands

Features identified as present or that required further investigations were:

- Endangered and Threatened species/habitats (all sites)
- Fish habitat (Sites 1, 4 and 5)

Table 5: Summary of Available Background Information on the Identified Natural Features (PSW, Woodlands, Valleylands, ANSIs, ESA, SWH, and Fish Habitat)

Natural Heritage Feature	Site 1		Site 2		Site 3		Site 4		Site 5	
	In Site	In Adjacent Lands	In Site	In Adjacent Lands	In Site	In Adjacent Lands	In Site	In Adjacent Lands	In Site	In Adjacent Lands
Provincially Significant Wetlands (PSW)	none									
Areas of Natural and Scientific Interest (ANSIs)	none									
Habitats or species designated by ESA (Provincial)			Chimney Swift Barn Swallow Bobolink Eastern Meadowlark Chimney Swift Bats (day-roosts) Butternuts				Chimney Swift Barn Swallow Bats (day-roosts) Butternuts	Chimney Swift Barn Swallow Bobolink Eastern Meadowlark Chimney Swift Bats (day-roosts) Butternuts		Chimney Swift Barn Swallow Bats (day-roosts) Butternuts
Significant Woodlands	none									
Significant Valleylands	none									
Significant Wildlife Habitat (SWH)	none									
Fish Habitat	none	Needs to be verified with site visit (ponds and potential for drains)			none			Henderson Municipal Drain	none	Needs to be verified with a site visit (potential for drain)

## 7.0 AVOIDANCE AND MITIGATION MEASURES

While the scope of the impacts associated with each project is unknown, the following surveys, general avoidance and mitigation measures are recommended.

NOTE: that an Environmental Impact Study would be required to create an appropriate list of avoidance and mitigation measures. The following are simply some of the general guidelines.

- Confirm presence/absence of direct fish use and if present, type of fish habitat at Sites 1, 4 and 5. Implement appropriate avoidance and mitigation measures. Anticipate in-water constraint period of March 15 to June 30, inclusive (no work that directly or indirectly impacts fish habitat during this period).
- Confirm the habitats and complete appropriate site-specific surveys for Species at Risk. Apply appropriate avoidance and mitigation measures and contact the appropriate agency as needed. Note that the constraints windows vary with species and can change from time to time.
  - With the information reviewed, it is anticipated that Chimney Swifts, Barn Swallows, grassland breeding birds (Bobolink, and Eastern Meadowlark), Bats and Butternuts may need additional considerations or surveys. This list is subject to change.
  - Follow the appropriate windows for avoidance of species at risk bat habitat (Currently no removal of trees with a diameter-at-breast-height of 10 cm or larger between April 1 and September 30, inclusive. This is subject to change).
- Almost all birds in Ontario are protected by either MBCA or FWCA. Assume no clearing of any vegetation between April 5 and August 30, unless the areas are surveyed for nesting birds, and none are found. Timing of the nest clearances must be appropriate for the conditions, obtain guidance during the EIS phase.
- Most reptiles are protected by the FWCA.

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Appendix A: Background Information

**ATLAS OF Breeding Birds in Ontario**

Squares: 18VR60, 18VR70, 18VR80, 18VR90, 18VR68, 18VR78, 18VR88, 18VR98, 18VQ69, 18VQ79, 18VQ89, 18VQ99

Common Name	Scientific Name	ABBO Category	SRANK	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status
Canada Goose	<i>Branta canadensis</i>	Confirmed	S5	no status	no status
Wood Duck	<i>Aix sponsa</i>	Confirmed	S5	no status	no status
Gadwall	<i>Anas strepera</i>	Confirmed	S4	no status	no status
American Wigeon	<i>Anas americana</i>	Probable	S4	no status	no status
American Black Duck	<i>Anas rubripes</i>	Confirmed	S4	no status	no status
Mallard	<i>Anas platyrhynchos</i>	Confirmed	S5	no status	no status
Northern Shoveler	<i>Anas clypeata</i>	Confirmed	S4	no status	no status
Northern Pintail	<i>Anas acuta</i>	Confirmed	S5	no status	no status
Green-winged Teal	<i>Anas crecca</i>	Probable	S4	no status	no status
Blue-winged Teal	<i>Anas discors</i>	Confirmed	S4	no status	no status
Lesser Scaup	<i>Aythya affinis</i>	Probable	S4	no status	no status
Hooded Merganser	<i>Lophodytes cucullatus</i>	Confirmed	S5B,S5N	no status	no status
Common Merganser	<i>Mergus merganser</i>	Possible	S5B,S5N	no status	no status
Ruddy Duck	<i>Oxyura jamaicensis</i>	Probable	S4B,S4N	no status	no status
Gray Partridge	<i>Perdix perdix</i>	Confirmed	SNA	no status	no status
Ring-necked Pheasant	<i>Phasianus colchicus</i>	Possible	SNA	no status	no status
Ruffed Grouse	<i>Bonasa umbellus</i>	Confirmed	S4	no status	no status
Wild Turkey	<i>Meleagris gallopava</i>	Confirmed	S5	no status	no status
Common Loon	<i>Gavia immer</i>	Probable	S5B, S5N	no status	no status
Pied-billed Grebe	<i>Podilymbus podiceps</i>	Confirmed	S4B, S4N	no status	no status
American Bittern	<i>Botaurus lentiginosus</i>	Confirmed	S4B	no status	no status
Great Blue Heron	<i>Ardea herodias</i>	Confirmed	S4	no status	no status
Green Heron	<i>Butorides virescens</i>	Confirmed	S4B	no status	no status
Turkey Vulture	<i>Cathartes aura</i>	Probable	S5B	no status	no status
Osprey	<i>Pandion haliaetus</i>	Confirmed	S5B	no status	no status
Northern Harrier	<i>Circus cyaneus</i>	Confirmed	S4B	no status	no status
Sharp-shinned Hawk	<i>Accipiter striatus</i>	Confirmed	S5	no status	no status
Cooper's Hawk	<i>Accipiter cooperii</i>	Confirmed	S4	no status	no status
Northern Goshawk	<i>Accipiter gentilis</i>	Confirmed	S4	no status	no status
Broad-winged Hawk	<i>Buteo platypterus</i>	Confirmed	S5B	no status	no status
Red-tailed Hawk	<i>Buteo jamaicensis</i>	Confirmed	S5	no status	no status
American Kestrel	<i>Falco sparverius</i>	Confirmed	S4	no status	no status
Merlin	<i>Falco columbarius</i>	Confirmed	S5B	no status	no status
Virginia Rail	<i>Rallus limicola</i>	Probable	S5B	no status	no status
Sora	<i>Porzana carolina</i>	Probable	S4B	no status	no status
Common Gallinule	<i>Gallinula galeata</i>	Confirmed	S4B	no status	no status
American Coot	<i>Fulica americana</i>	Possible	S4B	no status	no status

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Common Name	Scientific Name	ABBO Category	SRANK	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status
moorhen/coot sp.		Possible		no status	no status
Killdeer	<i>Charadrius vociferus</i>	Confirmed	S5B, S5N	no status	no status
Spotted Sandpiper	<i>Actitis macularia</i>	Confirmed	S5	no status	no status
Upland Sandpiper	<i>Bartramia longicauda</i>	Confirmed	S4B	no status	no status
Common Snipe	<i>Gallinago delicata</i>	Probable	S5B	no status	no status
American Woodcock	<i>Scolopax minor</i>	Confirmed	S4B	no status	no status
Wilson's Phalarope	<i>Phalaropus tricolor</i>	Probable	S3B	no status	no status
Black Tern	<i>Chlidonias niger</i>	Probable	S3B	SC	no status
Common Tern	<i>Sterna hirundo</i>	Possible	S4B	no status	no status
Rock Pigeon	<i>Columba livia</i>	Confirmed	SNA	no status	no status
Mourning Dove	<i>Zenaida macroura</i>	Confirmed	S5	no status	no status
Black/Yellow-billed Cuckoo	<i>Coccyzus erythrophthalmus/americanus</i>	Probable	S5B, S4B	no status	no status
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	Probable	S5B	no status	no status
Eastern Screech-Owl	<i>Megascops asio</i>	Confirmed	S4	no status	no status
Great Horned Owl	<i>Bubo virginianus</i>	Confirmed	S4	no status	no status
Barred Owl	<i>Strix varia</i>	Probable	S5	no status	no status
Long-eared Owl	<i>Asio otus</i>	Possible	S4	no status	no status
Short-eared Owl	<i>Asio flammeus</i>	Possible	S2N, S4B	SC	SC
Common Nighthawk	<i>Chordeiles minor</i>	Possible	S4B	SC	THR
Whip-poor-will	<i>Caprimulgus vociferus</i>	Possible	S4B	THR	THR
Chimney Swift	<i>Chaetura pelagica</i>	Confirmed	S4B, S4N	THR	THR
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	Confirmed	S5B	no status	no status
Belted Kingfisher	<i>Ceryle alcyon</i>	Confirmed	S4B	no status	no status
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	Possible	S4	no status	no status
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	Confirmed	S5B	no status	no status
Downy Woodpecker	<i>Picoides pubescens</i>	Confirmed	S5	no status	no status
Hairy Woodpecker	<i>Picoides villosus</i>	Confirmed	S5	no status	no status
Northern Flicker	<i>Colaptes auratus</i>	Confirmed	S4B	no status	no status
Pileated Woodpecker	<i>Dryocopus pileatus</i>	Confirmed	S5	no status	no status
Eastern Wood-Pewee	<i>Contopus virens</i>	Confirmed	S4B	SC	SC
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	Possible	S5B	no status	no status
Alder Flycatcher	<i>Empidonax alnorum</i>	Confirmed	S5B	no status	no status
Willow Flycatcher	<i>Empidonax traillii</i>	Probable	S5B	no status	no status
Least Flycatcher	<i>Empidonax minimus</i>	Probable	S4B	no status	no status
Eastern Phoebe	<i>Sayornis phoebe</i>	Confirmed	S5B	no status	no status
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	Confirmed	S4B	no status	no status
Eastern Kingbird	<i>Tyrannus tyrannus</i>	Confirmed	S4B	no status	no status
Blue-headed Vireo	<i>Vireo solitarius</i>	Probable	S5B	no status	no status
Warbling Vireo	<i>Vireo gilvus</i>	Confirmed	S5B	no status	no status
Red-eyed Vireo	<i>Vireo olivaceus</i>	Confirmed	S5B	no status	no status
Blue Jay	<i>Cyanocitta cristata</i>	Confirmed	S5	no status	no status
American Crow	<i>Corvus brachyrhynchos</i>	Confirmed	S5B	no status	no status

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Common Raven	<i>Corvus corax</i>	Confirmed	S5	no status	no status
Horned Lark	<i>Eremophila alpestris</i>	Confirmed	S5B	no status	no status
Purple Martin	<i>Progne subis</i>	Confirmed	S3S4B	no status	no status
Tree Swallow	<i>Tachycineta bicolor</i>	Confirmed	S4B	no status	no status
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	Confirmed	S4B	no status	no status
Bank Swallow	<i>Riparia riparia</i>	Confirmed	S4B	THR	THR
Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	Confirmed	S4B	no status	no status
Barn Swallow	<i>Hirundo rustica</i>	Confirmed	S4B	THR	THR
Black-capped Chickadee	<i>Poecile atricapilla</i>	Confirmed	S5	no status	no status
Red-breasted Nuthatch	<i>Sitta canadensis</i>	Confirmed	S5	no status	no status
White-breasted Nuthatch	<i>Sitta carolinensis</i>	Confirmed	S5	no status	no status
Brown Creeper	<i>Certhia familiaris</i>	Confirmed	S5B	no status	no status
House Wren	<i>Troglodytes aedon</i>	Confirmed	S5B	no status	no status
Winter Wren	<i>Troglodytes troglodytes</i>	Probable	S5B	no status	no status
Sedge Wren	<i>Cistothorus platensis</i>	Possible	S4B	no status	no status
Marsh Wren	<i>Cistothorus palustris</i>	Probable	S4B	no status	no status
Golden-crowned Kinglet	<i>Regulus satrapa</i>	Confirmed	S5B	no status	no status
Eastern Bluebird	<i>Sialia sialis</i>	Confirmed	S5B	no status	no status
Veery	<i>Catharus fuscescens</i>	Confirmed	S4B	no status	no status
Hermit Thrush	<i>Catharus guttatus</i>	Confirmed	S5B	no status	no status
Wood Thrush	<i>Hylocichla mustelina</i>	Confirmed	S4B	SC	THR
American Robin	<i>Turdus migratorius</i>	Confirmed	S5B	no status	no status
Gray Catbird	<i>Dumetella carolinensis</i>	Confirmed	S4B	no status	no status
Northern Mockingbird	<i>Mimus polyglottos</i>	Probable	S4	no status	no status
Brown Thrasher	<i>Toxostoma rufum</i>	Confirmed	S4B	no status	no status
European Starling	<i>Sturnus vulgaris</i>	Confirmed	SNA	no status	no status
Cedar Waxwing	<i>Bombycilla cedrorum</i>	Confirmed	S5B	no status	no status
Nashville Warbler	<i>Vermivora ruficapilla</i>	Confirmed	S5B	no status	no status
Yellow Warbler	<i>Dendroica petechia</i>	Confirmed	S5B	no status	no status
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	Confirmed	S5B	no status	no status
Magnolia Warbler	<i>Dendroica magnolia</i>	Probable	S5B	no status	no status
Black-throated Blue Warbler	<i>Dendroica caerulescens</i>	Probable	S5B	no status	no status
Yellow-rumped Warbler	<i>Dendroica coronata</i>	Confirmed	S5B	no status	no status
Black-throated Green Warbler	<i>Dendroica virens</i>	Confirmed	S5B	no status	no status
Pine Warbler	<i>Dendroica pinus</i>	Possible	S5B	no status	no status
Black-and-white Warbler	<i>Mniotilta varia</i>	Confirmed	S5B	no status	no status
American Redstart	<i>Setophaga ruticilla</i>	Confirmed	S5B	no status	no status
Ovenbird	<i>Seiurus aurocapillus</i>	Confirmed	S4B	no status	no status
Northern Waterthrush	<i>Seiurus noveboracensis</i>	Confirmed	S5B	no status	no status
Mourning Warbler	<i>Oporornis philadelphia</i>	Confirmed	S4B	no status	no status
Common Yellowthroat	<i>Geothlypis trichas</i>	Confirmed	S5B	no status	no status
Canada Warbler	<i>Wilsonia canadensis</i>	Probable	S4B	SC	THR

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Common Name	Scientific Name	ABBO Category	SRANK	ESA Reg. 230/08 SARO List Status	SARA Schedule 1 List of Wildlife SAR Status
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	Confirmed	S4B	no status	no status
Chipping Sparrow	<i>Spizella passerina</i>	Confirmed	S5B	no status	no status
Clay-colored Sparrow	<i>Spizella pallida</i>	Confirmed	S4B	no status	no status
Field Sparrow	<i>Spizella pusilla</i>	Confirmed	S4B	no status	no status
Vesper Sparrow	<i>Poocetes gramineus</i>	Confirmed	S4B	no status	no status
Savannah Sparrow	<i>Passerculus sandwichensis</i>	Confirmed	S4B	no status	no status
Grasshopper Sparrow	<i>Ammodramus savannarum</i>	Possible	S4B	SC	no status
Song Sparrow	<i>Melospiza melodia</i>	Confirmed	S5B	no status	no status
Swamp Sparrow	<i>Melospiza georgiana</i>	Confirmed	S5B	no status	no status
White-throated Sparrow	<i>Zonotrichia albicollis</i>	Confirmed	S5B	no status	no status
Scarlet Tanager	<i>Piranga olivacea</i>	Confirmed	S4B	no status	no status
Northern Cardinal	<i>Cardinalis cardinalis</i>	Confirmed	S5	no status	no status
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	Confirmed	S4B	no status	no status
Indigo Bunting	<i>Passerina cyanea</i>	Confirmed	S4B	no status	no status
Bobolink	<i>Dolichonyx oryzivorus</i>	Confirmed	S4B	THR	THR
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	Confirmed	S4	no status	no status
Eastern Meadowlark	<i>Sturnella magna</i>	Confirmed	S4B	THR	THR
Common Grackle	<i>Quiscalus quiscula</i>	Confirmed	S5B	no status	no status
Brown-headed Cowbird	<i>Molothrus ater</i>	Confirmed	S4B	no status	no status
Baltimore Oriole	<i>Icterus galbula</i>	Confirmed	S4B	no status	no status
Purple Finch	<i>Carpodacus purpureus</i>	Confirmed	S4B	no status	no status
House Finch	<i>Carpodacus mexicanus</i>	Confirmed	SNA	no status	no status
White-winged Crossbill	<i>Loxia leucoptera</i>	Probable	S5B	no status	no status
Pine Siskin	<i>Carduelis pinus</i>	Probable	S4B	no status	no status
American Goldfinch	<i>Carduelis tristis</i>	Confirmed	S5B	no status	no status
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	Confirmed	S4B	SC	SC
House Sparrow	<i>Passer domesticus</i>	Confirmed	SNA	no status	no status

Status Updated March 25, 2021

**SRANK DEFINITIONS**

S4 Apparently Secure, Uncommon but not rare; some cause for long-term concern due to declines or other factors.

S5 Secure, Common, widespread, and abundant in the nation or state/province.

SNA Not Applicable, A conservation status rank is not applicable because the species is not a suitable target for conservation activities.

S#S# Range Rank, A numeric range rank (e.g., S2S3) is used to indicate any range of uncertainty about the status of the species or community. Ranges cannot skip more than one rank (e.g., SU is used rather than S1S4).

S#B Breeding

S#N Non-Breeding

**SARO STATUS DEFINITIONS**

THR Threatened: A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.

SC Special Concern: A species with characteristics that make it sensitive to human activities or natural events.

**SARA STATUS DEFINITIONS**

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THR Threatened, a wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.

SC Special Concern, a wildlife species that may become threatened or endangered because of a combination of biological characteristics and identified threats.








## Appendix B: SAR Hand-Out


The following table provides photographs and general descriptions of potential species at risk that may occur within the project area and information on what actions to take should any of these species be observed.

Endangered and Threatened species are protected and cannot be harmed, harassed or killed and in some cases their habitats are also protected. These individuals will only be handled by qualified person and only if the individual is in imminent threat of harm. An authorization under the ESA 2007 would be required to handle individuals that are not in imminent threat of harm.

For all Endangered or Threatened species found on-site any activity which may cause harm to the individual will be stopped and the site supervisor will be contact immediately for further instructions.

Photograph	Description	Action to be Taken
 <p><a href="http://birdweb.org/Birdweb">http://birdweb.org/Birdweb</a></p>	<p><b>Barn Swallow</b></p> <ul style="list-style-type: none"> <li>• Swallow with a long tail which is deeply forked in adult males.</li> <li>• An orange front (no white on the forehead)</li> <li>• Narrow pointed wings</li> <li>• Juveniles have a white band across the top of the tail.</li> </ul> <p><b>THREATENED</b></p>	<ul style="list-style-type: none"> <li>• Stop any activity that may cause harm to this specie and contact project Supervisor.</li> <li>• Individuals should only be encouraged to move if it is in immediate harm’s way. These animals can only be handled by a qualified biologist when it is in imminent threat of harm, otherwise an ESA 2007 authorization will be required.</li> </ul>
 <p>Photo: audubon.org</p>	<p><b>Chimney Swift</b></p> <ul style="list-style-type: none"> <li>• Described as a cigar shaped bird with long wings and a short tail.</li> </ul> <p><b>THREATENED</b></p>	<ul style="list-style-type: none"> <li>• Stop any activity that may cause harm to this species and contact project Supervisor.</li> <li>• Individuals should only be encouraged to move if it is in immediate harm’s way. These animals can only be handled by a qualified biologist when it is in imminent threat of harm, otherwise an ESA 2007 authorization will be required.</li> </ul>

 <p>© ROM</p> <p>Photo: Royal Ontario Museum website  <a href="http://www.rom.on.ca/en/ontario/fieldguide">http://www.rom.on.ca/en/ontario/fieldguide</a></p>  <p>Photo: vt.audubon.org</p>	<p><b>Bobolink</b></p> <ul style="list-style-type: none"> <li>• Medium-sized songbird</li> <li>• Female is tan with black stripes and resembles a sparrow.</li> <li>• Male is black with a white patch on the back and yellow patch on the side of his head.</li> </ul> <p><b>THREATENED</b></p>	<ul style="list-style-type: none"> <li>• Stop any activity that may cause harm to this species and contact project Supervisor.</li> <li>• Individuals should only be encouraged to move if it is in immediate harm’s way. These animals can only be handled by a qualified biologist when it is in imminent threat of harm, otherwise an ESA 2007 authorization will be required.</li> </ul>
 <p>© ROM</p> <p>Photo: Royal Ontario Museum website  <a href="http://www.rom.on.ca/en/ontario/fieldguide">http://www.rom.on.ca/en/ontario/fieldguide</a></p>	<p><b>Eastern Meadowlark</b></p> <ul style="list-style-type: none"> <li>• Medium-sized songbird</li> <li>• Bright yellow belly and throat</li> <li>• Black “V” on its breast and white flanks with black streaks</li> <li>• Their backs are mainly brown with black streaks.</li> </ul> <p><b>THREATENED</b></p>	

Photograph	Description	Action to be Taken
 <p data-bbox="205 868 808 896"><a href="http://www.rom.on.ca/ontario/risk.php?doc_type=fact&amp;lang=&amp;id=298">http://www.rom.on.ca/ontario/risk.php?doc_type=fact&amp;lang=&amp;id=298</a></p>	<p data-bbox="856 237 997 272"><b>Butternut</b></p> <ul data-bbox="877 284 1333 487" style="list-style-type: none"> <li>• Medium sized tree with multiple leaflets.</li> <li>• Similar to walnuts, but walnuts usually have a small or missing leaflet at the tip.</li> </ul> <p data-bbox="856 535 1087 571"><b>ENDANGERED</b></p>	<ul data-bbox="1360 237 1848 357" style="list-style-type: none"> <li>• Any Butternut (from seedling to mature tree) needs to be protected (50 m radius) and assessed.</li> </ul>

Appendix C: DFO Aquatic Species at Risk Mapping

