REQUEST FOR TENDER
MV 2026-04
Barry's Bay Water Tower Repair

Please submit complete tender using the attached forms, quoting the above tender number and closing date, and forward before 3:00 pm EST Wednesday April 29 2026 to:

The Corporation of the Township of Madawaska Valley
PO Box 1000 85 Bay Street Barry's Bay ON K0J1B0
Attn: Hannah Gutoskie, Manager of Recreation and Community Services

Submissions must be received in accordance with the attached RFT forms, Specifications, Instructions to Vendors, and Standard Terms and Conditions.

Opening of Tenders (open to the public):
Wednesday April 29 2026 @ 3:15 pm

Contact:
Hannah Gutoskie
Manager of Recreation and Community Services
Box 1000 85 Bay St Barry's Bay ON K0J1B0
613-756-2747 ext 220
recreation@madawaskavalley.ca

1. INSTRUCTIONS TO BIDDERS

1.1. GENERAL

The Township of Madawaska Valley, herein known as the Township, is inviting submissions from qualified firms to complete repairs of the Barry's Bay Water Tower.

Key dates:

Release of Request for Tender	Wednesday April 1 2026
Deadline for Inquiries	Wednesday April 15 2026
Request for Tender Closes	Wednesday April 29 2026 @ 3pm
Opening of Tender	Wednesday April 29 2026 @ 3:15pm

1.2. SUBMISSION OF TENDERS

1.2.1. Bidders shall submit the following items duly completed as part of this tender request: Form of Tender (page 11)

1.2.2. Tenders are to be in a sealed envelope clearly marked RFT 2026-04 Barry's Bay Water Tower Repair and addressed to:
Hannah Gutoskie
Township of Madawaska Valley
85 Bay Street, Barry's Bay ON K0J1B0

1.2.3. Tenders shall be received at the above address until 3:00pm local time on Wednesday April 29 2026.

1.2.4. Tenders received at 3:01pm or later will be deemed late and rejected.

1.2.5. The Township is not responsible for any Tenders received after the stated closing time and will not consider any such Tenders.

1.2.6. The Township will not be responsible for any lost Tenders or for those Tenders that are delivered to any location other than the submission address indicated above.

1.2.7. The onus remains solely on the Bidder to instruct couriers/delivery personnel to deliver Tender submissions to the exact location specified. Bidders assume sole responsibility for late deliveries if these instructions are not strictly adhered to.

1.2.8. Faxed or emailed Tenders will not be accepted.

1.3. FORM OF TENDER

1.3.1. All bids must be upon the blank Form of Tender attached hereto and the bidder is required to fill all blanks.

1.3.2. If it becomes necessary to correct an error made on a Form of Tender, such correction must be initialed by the person or persons signing the form.

1.3.3. The Form of Tender shall be signed in ink by a designated signing officer of the bidding firm, with the ability to bind the company.

1.4. TAXES, PERMITS, AND FEES

All prices must be stated in Canadian funds. Prices quoted shall be the net prices inclusive of all associated costs i.e. equipment, material, applicable licenses/permits/plates, including transportation and delivery charges fully prepaid by the Bidder to any specified destination within Township of Madawaska Valley. HST shall be extra to bid prices.

1.5. BID SECURITY

Not required.

1.6. ADDITIONAL ENCLOSURES WITH TENDER

Not required.

1.7. IRREVOCABILITY OF OFFER

The Bidder shall not revoke its offer until after the expiration of sixty (60) calendar days after the opening of the Tender by the Township.

1.8. COMPETITION INTENDED

It is the Township's intent that this request for tenders permit competition. It shall be the Bidder's responsibility to advise the Manager of Recreation and Community Services in writing if any language, requirement, specification, etc. or any combination thereof, inadvertently restricts or limits the requirements stated in this request for tender to a single source.

1.9. INQUIRIES

1.9.1. All inquiries during the tender period shall be in writing only, and directed by email to Hannah Gutoskie, Manager of Recreation and Community Services: recreation@madawaskavalley.ca.
1.9.2. No other staff is to be contacted for clarification of any aspect of this request for tenders.
1.9.3. No verbal instructions or verbal information to Bidders will be binding on the Township.
1.9.4. Bidders are encouraged to submit their questions as soon as possible. The deadline for submitting inquiries is Wednesday April 15 2026 @ 4pm. No questions will be accepted after this date.

1.10. DISCREPANCIES AND OMISSIONS

1.10.1. Any Bidder finding discrepancies or omissions in this document, or in doubt as to its intent, shall at once notify the Manager of Recreation and Community Services. If necessary, a written addendum will be issued.

1.10.2. Misinterpretations of any requirement of the contract documents will not be considered a release of responsibility to complete the work as indicated. If in doubt about intent of documents, contact the Manager of Recreation and Community Services before closing; if necessary, an addendum will be issued to clarify ambiguities.

1.11. CLARIFICATION AND ADDENDA

1.11.1. All clarifications, or other instructions (ie. additions, alterations or deletions to the specifications and other parts of this request for tender) issued by the Manager of Recreation and Community Services during the tender period will be in writing in the form of an Addendum and posted on the Township of Madawaska Valley website.

1.11.2. All such changes shall become part of the tender request and shall be allowed for in arriving at bid pricing.

1.11.3. It is the responsibility of interested bidders to regularly check the Township of Madawaska Valley website for posted queries or addenda.

1.12. WITHDRAWAL OF TENDER

Bidders will be permitted, without prejudice, to withdraw their bid unopened after it has been received by the office of the Manager of Recreation and Community Services, provided such request for withdrawal is received in writing by the Manager of Recreation and Community Services prior to the closing date and time. The withdrawal of a tender does not disqualify a Bidder from submitting another tender prior to the closing.

1.13. TENDER OPENING

Tenders will be opened at 3:15pm EST on Wednesday April 29 at the Township of Madawaska Valley offices, 85 Bay Street, Barry's Bay ON. The opening of tenders is open to the public. Opening of tenders does not signify acceptance of any tender.

1.14. INFORMAL TENDERS

Tenders that are incomplete, illegible, unbalanced, conditional or obscure, or which contain additions not called for, reservations, erasures/overwriting/strikeouts not initialed, alterations or irregularities of any kind, or are not properly signed may be rejected as informal.

1.15. PRICING DISCREPENCIES

Whenever there is a discrepancy between the unit price and the extended price on the bid form, the unit price shall govern, and the total price bid shall be adjusted accordingly.

1.16. REFERENCES

If requested, Bidders shall provide references that are relevant to the current project in scope and value. The Township will review these references and the Bidder's prior performance on other contracts with the Township and consider the same during evaluation of bids. References may be requested during the tender call or post-bid opening.

1.17. AWARD OF CONTRACT

1.17.1. Award of this contract is subject to budget approval.
1.17.2. The Contract is only awarded on acceptance by the appropriate level of governance of the Township based on the Contract value, and following evaluation of the tenders submitted.
1.17.3. The Township reserves the right to request clarification on any bid or to ask Bidders to supply any additional material deemed necessary to assist in the evaluation of the bid.
1.17.4. The Township reserves the right to negotiate price or terms with the lowest compliant Bidder should the bid price be over the budget allotted for the project, or to cancel and recall the bid.
1.17.5. The lowest or any submission will not necessarily be accepted, and the Township reserves the right not to award any contract if it is deemed not to be in its best interest.

1.18. NON-RESIDENT BIDDER

If the Bidder is non-resident in Ontario, the Bidder shall not commence work or order any materials or equipment for the tender until they have furnished a certificate from the Retail Sales Tax Branch showing that they have registered with the Retail Sales Tax Branch. The Bidder shall ensure that all sub-contractors whom they propose to use for carrying out any of the work and who are non-resident in Ontario have registered with and have complied with the requirements of the Retail Sales Tax Branch before they commence any such work.

1.19. RIGHT TO REJECT

The Township reserves the right to reject tenders from any Bidder who in the Township's reasonable opinion are deemed incapable of providing the necessary labor, materials, equipment, financing, and management resources to provide the requirement in a satisfactory manner.

2. TERMS AND CONDITIONS

2.1. GENERAL

The Instructions to Bidders, Terms and Conditions, Specifications, and Form of Tender, form the entire contract between the parties, and no variations thereof irrespective of the wording of the Bidder's acceptance will be effective unless specifically agreed to in writing by Township staff.

2.2. DEFINITION

Where context is required, the word "goods" is to be read as "service".

2.3. TERMS OF PAYMENT

Unless otherwise specified, should the Corporation of the Township of Madawaska Valley enter into a contract relating to the Project, it will make payment of accounts within thirty (30) days of the date on which the invoice is received.

2.4. PAYMENT WITHHELD FOR UNSATISFACTORY PERFORMANCE

The Township shall not pay the final invoice to the successful bidder for the work, services, products, or materials stated in these documents until the Township is fully satisfied that all terms and conditions stated in these documents and all work, service performed, products or materials delivered shall be deemed to have been completed, installed, or delivered to the complete satisfaction of the Township.

2.5. QUALITY

Goods are subject to the Township's inspection and approval at a reasonable time after delivery. If specifications are not met, goods may be returned at seller's expense.

2.6. CODES AND STANDARDS

All work under this contract must be completed in accordance with all appropriate requirements in Federal, Provincial and Municipal laws, statutes, regulations, and bylaws, relevant to this tender request including but not limited to:

- The Construction Lien Act, R.S.O. 1990, c. C.30
- The Occupational Health and Safety Act, R.S.O. 1990, c. 0.1, as amended
- Workplace Safety and Insurance Act, effective January 1, 1998, as amended
- The Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990, c.M.56, as amended
- Technical Standards & Safety Authority

- Accessibility for Ontarians with Disabilities Act (AODA)

2.7. SIGNED BID TO BE CONSIDERED AN OFFER

The submission of a signed tender to the Township shall be deemed to constitute an "Offer" which may be accepted, at the option of the Township by a written acknowledgement of acceptance, and (a) a duly executed contract, and/or (b) the issuance of a "purchase order". Upon such acceptance, the terms, conditions, and specifications herein set forth shall be confirmed and binding upon the Township and the Bidder. Upon acceptance of the tender, both parties hereto agree to do everything necessary to ensure that the terms of this agreement take effect.

2.8. SATISFACTION OF BIDDER

The submission of a signed tender to the Township shall be deemed to constitute an "Offer" which may be accepted, at the option of the Township by a written acknowledgement of acceptance, and (a) a duly executed contract, and/or (b) the issuance of a "purchase order". Upon such acceptance, the terms, conditions, and specifications herein set forth shall be confirmed and binding upon the Township and the Bidder. Upon acceptance of the tender, both parties hereto agree to do everything necessary to ensure that the terms of this agreement take effect.

2.9. RESERVATIONS FOR REJECTION AND AWARD

The Township reserves the right to accept or reject any/or all bids, to waive irregularities and technicalities and to request rebids on the required services. The Township also reserves the right to waive minor variations to specifications.

2.10. BIDDER'S EXPENSE

Bidders are solely responsible for their own expenses in preparing a tender and for subsequent negotiations with the Township, if any. If the Township elects to reject all tenders received, the Township will not be liable to any Bidder for any claims, whether for costs or damages incurred by the Bidder in preparing the tender, loss of anticipated profit in connection with any final Contract, or any other matter whatsoever.

2.11. LITIGATION WITH THE TOWNSHIP

No tender submission will be accepted from any bidder, inclusive of its subcontractors(s), which has a claim or has instituted a legal proceeding or has threatened to claim or institute a legal proceeding against the Township or against whom the Township has a claim or has instituted a legal proceeding with respect to any previous contract, without the approval of Council in its sole and unfettered discretion. This applies whether the legal proceeding is related or unrelated to the subject matter of this tender.

2.12. DEFAULT OF BIDDER

In case of a default of performance of the Project, the Township of Madawaska Valley reserves the right to transfer the Project to another source. All additional expenses arising from such transfer will be charged to the original submitter of a tender or contractor and are due forthwith.

2.13. INDEMNIFICATION

The Bidder agrees to indemnify, defend, and save harmless the Township and all Municipal Officers, employees, volunteers, servants and agents of its Boards and Commissions from and against all losses, costs, damages, expenses, and claims made against the Township, resulting from or arising out of any act or omission or negligence of the Bidder, his employees or agents, during or connected with the performance of the work under the contract.

2.14. WARRANTY

The Bidder warrants that all goods to be supplied are free from defects in material, workmanship, and design, suitable for the purposes intended implied, in compliance with all applicable specifications and free from liens or encumbrance on title. All services are performed in accordance with current, sound and generally accepted industry practices by qualified personnel trained and experienced in the appropriate fields.

2.15. CONFLICT OF INTEREST

All Bidders are required to disclose to the Township any potential Conflict of Interest, may it be pecuniary or otherwise. If a conflict of interest does exist with the potential successful Bidder, the Township may, at its discretion, refrain from awarding the project to the Bidder. The Bidder covenants that it presently has no interests, and it shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of its service hereunder. The Bidder further covenants that in the performance of this contract no person having such known interest shall be employed.

3. BACKGROUND AND OBJECTIVES

3.1. BACKGROUND

The Barry's Bay Canadian National Railway Water Tower, located at 20 Mahon Street in Barry's Bay Ontario, is a structure of significant cultural and heritage value to the community and the province at large. The last standing wooden water tower in Ontario, it requires significant repairs to continue to preserve it for years to come.

The water tank has been decommissioned and emptied, and the tower is being conserved for its heritage value. The Township is interested in repairs that will preserve this heritage asset.

The Township has procured engineered drawings and a Cultural Heritage Assessment of the tower to properly facilitate its repair and ensure it retains its cultural and historical value.

3.2. SCOPE OF SERVICES

The selected firm will be responsible for completing repairs of the Water Tower, following the Water Tower Repair Design (see attachment on Township website). These interventions and replacements should be completed using identical or similar materials.

As this is a designated heritage structure, the selected firm will also be required to follow the below recommendations within the Cultural Heritage Assessment (see page 12):

- Replacement of wooden components with the same type of wood. If a species needs to be changed, it must be approved and documented.
- Maintenance of the chimney, sliding float road, metal spout, and ladder on the Water Tower in their current locations and arrangement.
- Maintenance of the iron hoops and lugs around the tank in their current locations and arrangement.
- Replacement of deteriorated horizontal cladding on the frost box, with removal of decorative trim with "c. 1904" around the door, replacing with plain trim.

A building permit is required for this project, to be applied for by the selected firm with no fees charged. Construction debris may be brought to Bark Lake Waste Site with no tipping fees charged.

If additional repairs/replacement not within the scope of work of this tender are discovered, they will be discussed and negotiated accordingly.

Construction will be overseen by a qualified engineering firm, to be hired by the Township of Madawaska Valley. Site visits will be scheduled at key points in construction, and a final

inspection will take place upon completion of the works, including confirmation the project has been completed in general accordance with the design, specifications, and applicable standards.

3.3. DEADLINES

This project must be completed by October 1 2026. If the Manager of Recreation & Community Services grants the contractor an extension of time, the contractor shall complete the work by the revised deadline.

4. FORM OF TENDER

TOWNSHIP OF MADAWASKA VALLEY
FORM OF TENDER
BARRY'S BAY WATER TOWER REPAIR

CLOSING DATE: Wednesday April 29 2026
CLOSING TIME: 3:00 pm local time

BIDDER INFORMATION

Company	
Contact Name and Position	
Street Address	
Telephone	
Email	
Signature	
Date	

The bidder agrees to supply all services necessary for the completion of the work set forth in the Tender Documents in the sum noted below:

Barry's Bay Water Tower Repair	
HST (13%)	
TOTAL TENDER AMOUNT	

REFERENCES
The following is a list of three project references of a similar scope and budget as the project outlined above.

PROJECT NAME	YEAR COMPLETED	CONTACT NAME AND PHONE/EMAIL

ATTACHMENT 1: CULTURAL HERITAGE ASSESSMENT – see following page.

FINAL REPORT:

Cultural Heritage Assessment Report
CNR Water Tank
Barry's Bay, Township of Madawaska Valley, Renfrew County, ON

26 August 2024

Project # LHC0434

LHC Heritage Planning & Archaeology Inc.

Kingston|Toronto|Ottawa

837 Princess Street, Suite 400
Kingston, ON
K7L 1G8

Phone: 613-507-7817
Toll Free: 1-833-210-7817
E-mail: info@lhcheritage.com
www.lhcheritage.com

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Report prepared for: Township of Madawaska Valley

Report prepared by: Benjamin Holthof, MPI, MMA, CAHP
Diego Maenza, MPl, CAHP-Intern

Graphics prepared by: Jordan Greene, BA

Reviewed by: Christienne Uchiyama, MA, CAHP

RIGHT OF USE

The information, recommendations and opinions expressed in this report are for the sole benefit of the Township of Madawaska Valley (The 'Township'). Any other use of this report by others without permission is prohibited and is without responsibility to LHC. The report, all plans, data, drawings and other documents as well as all electronic media prepared by LHC are considered its professional work product and shall remain the copyright property of LHC, who authorizes only the Township and approved users (including municipal review and approval bodies as well as any appeal bodies) to make copies of the report, but only in such quantities as are reasonably necessary for the use of the report by those parties. Unless otherwise stated, the suggestions, recommendations and opinions given in this report are intended only for the guidance of Owners and approved users.

REPORT LIMITATIONS

The qualifications of the heritage consultants who authored this report are provided in Appendix A.

All comments regarding the condition of the Property are based on a superficial visual inspection and are not a structural engineering assessment unless directly quoted from an engineering report. The findings of this report do not address any structural or physical condition related issues associated the Property or the condition of any heritage attributes.

Concerning historical research, the purpose of this report is to evaluate the cultural heritage value or interest, identify heritage attributes and provide conservation strategy advice for future rehabilitation of the Property. The authors are fully aware that there may be additional historical information that has not been included. Nevertheless, the information collected, reviewed, and analyzed is sufficient to conduct this assessment.

This report reflects the professional opinion of the authors and the requirements of their membership in various professional and licensing bodies.

The review of policy and legislation was limited to that information directly related to cultural heritage management and is not a comprehensive planning review.

Soundscapes, cultural identity, and sense of place analyses were not integrated into this report.

EXECUTIVE SUMMARY

The Executive Summary only provides key points from the report. The reader should examine the complete report including background, results as well as limitations.

LHC Heritage Planning & Archaeology Inc. (**LHC**) was retained by the Township of Madawaska Valley (the Township) to prepare a Cultural Heritage Assessment Report (**CHAR**) for the CNR Water tower (**Water Tower**) on the property (the **Property**). This CHAR is intended to assist in understanding the cultural heritage value or interest and heritage attributes of the Water Tower

The Water Tower is located at 20 Mahon Street, Barry's Bay, ON, in the Township of Madawaska Valley in Renfrew County. It is located in the geographic township of Sherwood on the west side of Mahon Street. It is in Water Tower Park bound by Mahon Street to the north and east, 17 Billings Street to the south, and 29 and 39 Stafford Street to the west.

This CHAR was undertaken following guidance from the *Ontario Heritage Tool Kit* (2006). The process included background research into the site, an on-site assessment, and evaluation of the cultural heritage value of the property based on the criteria of *Ontario Regulation 9/06: Criteria for Determining Cultural Heritage Value or Interest* under the *Ontario Heritage Act* (***O. Reg. 9/06***).

LHC found that this Water Tower is likely the last wood water tank on a wood structure in Ontario. It is rare. It is also representative of a style of railway water tower that was once common with many variations but has increasingly disappeared over time. The Water Tower has significant historical value to the Community and has contextual value for maintaining and supporting the local rail heritage, for historical and visual links to other historic buildings connected to local history and as a landmark. The heritage attributes of the Water Tower are:

- The location of the Water Tower.
- The two-storey form and massing of the wooden tank with shallow, conical roof supported on an open wood frame.
- The wooden tank formed of vertical wood staves and 14 iron hoops and lugs. The hoops close together near the bottom of the tank and gradually spaced further apart as they extend up the tank walls. The lugs arranged in a gentle curve pattern as they wrap around the tank.
- The form and location of the frost box inside the support frame of the tower.
- Horizontal wood siding of the frost box.
- The framework that supports the water tank, comprised of 12 thick timber posts set upon a concrete slab and concrete pier foundation in a cruciform plan, and strengthened with large timber cross-braces bolted to the support timbers.
- Smokestack chimney pipe.
- Sliding float rod extending from the centre of the roof.
- The metal sway pipe spout.
- The ladder from the roof.
- Interior elements including the remnants of the inlet and outlet pipes and valves.

Conservation of the Water Tower should focus on preservation with some rehabilitation and restoration elements. It should be guided by the *Eight Guiding Principles* and *S&Gs*. This CHAR, supplementary photographs taken during the site visit for this CHAR, historic photographs of the Water Tower and previously completed engineering studies should inform conservation planning.

LHC recommends:

- Documentation of the Water Tower should include detailed drawings of its current condition along with measurements of structural members. This may include creation of engineering drawings or a computer model of the Water Tower.
- The wood tank condition should be monitored and stabilized—as required.
- Deteriorated staves, joists and tank floorboards should be replaced in kind as needed.
- The chimney, sliding float rod and ladder should be maintained on the Water Tower.
- The iron hoops and lugs should be maintained in their current arrangement around the tank.
- The frost box should be preserved with limited replacement (as needed) of deteriorated wood cladding.
- The timber structure supporting the Water Tank should be documented in detail and rehabilitated.
- Replace structural timbers and bolts as needed.
- Address the void under the concrete slab and grading around the base of the Water Tower, including around the pier footings.

There is opportunity to restore missing components of the Water Tower. The wood frame and pulley system for the spout could be rebuilt based on photographs. The trim around the frost box door should be restored and the decorative trim with “c. 1904” engraved in it should be removed.

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1.0 INTRODUCTION

1.1 Introduction to the Property and Context

LHC Heritage Planning & Archaeology Inc. (**LHC**) was retained by the Township of Madawaska Valley (the **Township**) to prepare a Cultural Heritage Assessment Report (**CHAR**) for the CNR Water tower (**Water Tower**) on the property (the **Property**). This CHAR is intended to assist in understanding the cultural heritage value or interest and heritage attributes of the Water Tower

The Water Tower is located at 20 Mahon Street, Barry's Bay, ON, in the Township of Madawaska Valley in Renfrew County. It is located in the geographic township of Sherwood on the west side of Mahon Street. It is in Water Tower Park bound by Mahon Street to the north and east, 17 Billings Street to the south, and 29 and 39 Stafford Street to the west (Figure 1 and Figure 2).

This CHAR was undertaken following guidance from the *Ontario Heritage Tool Kit* (2006). The process included background research into the site, an on-site assessment, and evaluation of the cultural heritage value of the property based on the criteria of *Ontario Regulation 9/06: Criteria for Determining Cultural Heritage Value or Interest* under the *Ontario Heritage Act* (***O. Reg. 9/06***).

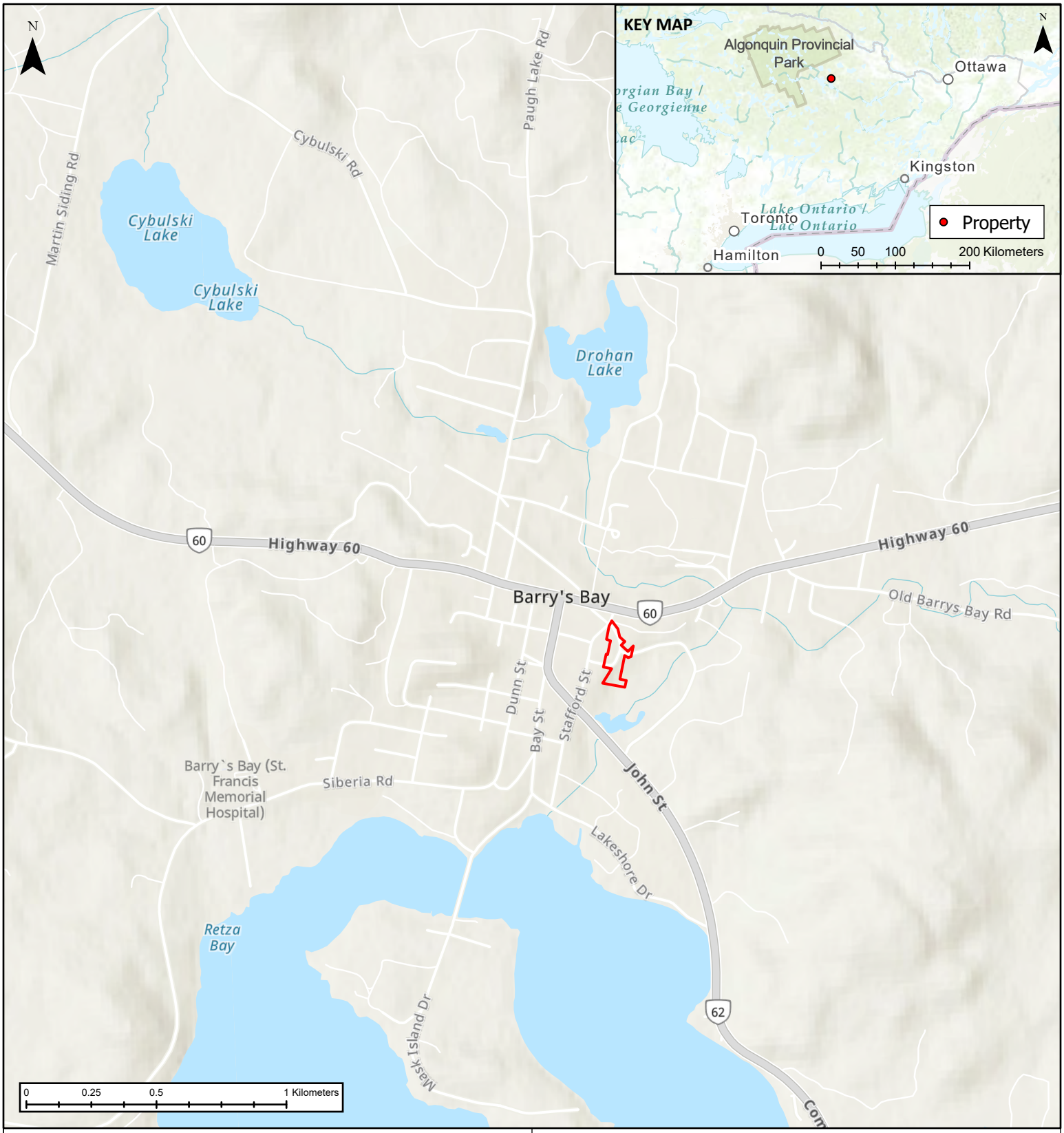
1.2 Heritage Status

The Water Tower is designated under Part IV Section 29 of the *Ontario Heritage Act* (***OHA***) through By-law #347 enacted by the Council of the Village of Barry's Bay on 7 February 1977.[1] Schedule "A" to By-law #347 provides a short Statement of Cultural Heritage Value or Interest (**SCHVI**) which is included *verbatim* below:

> Historical Significance: This tank is a remembrance of the logging days in the early part of the 19th Century when trains passed through Barry's Bay quite frequently.
>
> Architectural Significance: It is one of only two existing wooden water towers of this type in the Province of Ontario.

Since 1977 –when By-Law #347 was written—the *OHA* has been updated with new requirements for heritage designation By-laws. This CHAR includes work to prepare a SCHVI that meets contemporary requirements.

[1] Corporation of the Village of Barry's Bay, *By-law No. 347 A By-law to designate property within the Village of Barry's Bay as being of Historical and Architectural Value to the Heritage of the Village of Barry's Bay*, 7 February 1977, https://www.heritagetrust.on.ca/fr/oha/details/file?id=7664.



Legend

Property

NOTE(S) 1. All locations are approximate.

TITLE
Location of the Water Tower Property

CLIENT
Township of Madawaska Valley

PROJECT
Cultural Heritage Assessment Report
CNR Water Tank Barry's Bay, Township of Madawaska Valley, Renfrew County, ON

PROJECT NO. LHC0434

YYYY-MM-DD 5/14/2024

FIGURE # 1

Legend

- Property
- Water Tower Location

TITLE
Current Conditions of the Water Tower Property

CLIENT
Township of Madawaska Valley

PROJECT
Cultural Heritage Assessment Report
CNR Water Tank Barry's Bay, Township of Madawaska Valley, Renfrew County, ON

PROJECT NO. LHC0434

NOTE(S) 1. All locations are approximate.
REFERENCE(S) 1. Pontiac, Maxar, Microsoft

LHC

YYYY-MM-DD 5/14/2024

FIGURE # 2

2.0 STUDY APPROACH

LHC follows a three-step approach to understanding and planning for cultural heritage resources based on the understanding, planning and intervening guidance from the Canada's Historic Places *Standards and Guidelines for the Conservation of Historic Places in Canada* and the *Ontario Heritage Tool Kit*.[2] Understanding the cultural heritage resource involves:

- Understanding the significance of the cultural heritage resource (known and potential) through research, consultation and evaluation–when necessary.
- Understanding the setting, context and condition of the cultural heritage resource through research, site visit and analysis.
- Understanding the heritage planning regulatory framework around the cultural heritage resource.

This CHAR includes research and evaluation of the Water Tower to understand its cultural heritage value or interest and to identify its heritage attributes. It also includes a conservation strategy to guide the heritage conservation decision making process.

The Water Tower is already a designated heritage property through By-law #347. However, the 1977 By-law pre-dates changes to the *OHA* over time since 2005 that require new heritage designation By-law to include more detailed information. This CHAR includes a SCHVI that meets current requirements. The *OHA* does not require older By-laws to be updated. However, in order to better understand the water tower for rehabilitation this CHAR has included research and analysis of the water tower following current best-practice guidance and has re-evaluated the water tower for cultural heritage value or interest This CHAR is based on the existing by-law, and is augmented by the research and analysis presented in Sections 4.0, 5.0, and 6.0. An updated SCHVI has been prepared including a list of heritage attributes for the CNR Water Tower in Section 6.3 of this CHAR.

A glossary of terms used in this HIA is provided in Appendix B.

2.1 Legislation and Policy Review

This CHAR includes a review of provincial legislation, plans and cultural heritage guidance, and relevant municipal policy and plans for heritage conservation. This review outlines the cultural heritage legislative and policy framework that applies to decision making for the Water Tower (Section 3.0).

2.2 Historical Research

Historical research for this CHA included local history research. LHC consulted primary and secondary research sources including:

[2] Canada's Historic Places, "Standards and Guidelines for the Conservation of Historic Places in Canada", 2010, 3, and Ministry of Heritage, Sport, Tourism and Culture Industries, "Heritage Property Evaluation", Ontario Heritage Tool Kit, 2006, 18.

- Local histories;
- Histories of water towers;
- Historic maps;
- Aerial photographs; and,
- Online sources about local history.

Online sources consulted included (but was not limited to):

- The Archives of Ontario;
- Library and Archives Canada;
- National Air and Photo Library;
- The Ontario Council of University Libraries, Historical Topographic Map Digitization Project;
- The Canadian County Atlas Digital Project;
- CNR Historical Association;
- CPR Historical Association;
- Toronto Railway Historical Association;
- Canadiana;
- Ancestry;
- FamilySearch; and,
- The Internet Archive.

2.3 Enquiries

LHC contacted:

- The Township of Madawaska Valley;
- The Canadian Rail Archives at Exporail; and,
- The Toronto Railway Historical Association.

2.4 Site Visit

A site visit was conducted on 09 April 2024 by Benjamin Holthof, Senior Heritage Planner. Photographs of the Water Tower exterior, Water Tower interior, and the surrounding area were taken. The purpose of this site visit was to document the current conditions of the Water Tower, its structure, and its surrounding context. Unless otherwise attributed all photographs in this CHAR were taken during the site visit. A selection of photographs from the site visit that document the Water Tower are included in Section 5.0.

2.5 Evaluation

This CHAR is guided by the *Ontario Heritage Tool Kit: Heritage Property Evaluation*. To evaluate a property for cultural heritage value or interest (**CHVI**), there are three key steps: Historical Research, Site Analysis, and Evaluation.

As a matter of due diligence, the CNR Water Tower located at 20 Mahon Street was evaluated for cultural heritage value or interest against *Ontario Regulation 9/06* (***O. Reg. 9/06***) under the *OHA* with the goal of identifying heritage attributes (Sections 3.1.1 and 6.1). A SCHVI is created based on evaluation using the *O. Reg. 9/06* criteria. These criteria are used in determining if an individual property or HCD has CHVI. The regulation has nine criteria for evaluation of individual properties and nine criteria for evaluation of properties in HCDs.

2.6 Conservation Strategy

The conservation strategy included in this CHAR is based on the *Standards and Guidelines for the Conservation of Historic Places in Canada* (*S&Gs*) and E*ight Guiding Principles for the Conservation of Built Heritage Properties* (*Eight Guiding Principles*). It describes approaches and guidance to inform decision making for conservation of the Water Tower. The conservation strategy also includes a brief discussion of measures proposed in a brief structural technical memorandum by WSP dated 8 September 2023 and a building condition assessment prepared by Accent Building Services Inc. dated 11 July 2021.

3.0 POLICY AND LEGISLATION CONTEXT

3.1 National Context

3.1.1 Standards and Guidelines for the Conservation of Historic Places in Canada

Canada's Historic Places' S&Gs has been adopted by most federal agencies (including Parks Canada), provinces, heritage agencies (such as the Ontario Heritage Trust), and many municipalities as the guiding document for heritage work. They are considered best practice guidance for heritage conservation in Canada. The Township has not formally adopted the S&G to guide heritage conservation decision making.

The S&G document is a tool to help guide change for cultural heritage resources. It provides an overview to the conservation decision-making process, identifies appropriate conservation treatments, and provides standards and guidelines appropriate for conservation. In the context of the S&G, conservation is understood to embrace several key concepts including preservation, rehabilitation, and restoration. These terms are defined as follows:

- **Conservation:** all actions or processes that are aimed at safeguarding the character-defining elements of an historic place so as to retain its heritage value and extend its physical life. This may involve Preservation, Rehabilitation, Restoration, or a combination of these actions or processes;
    - **Preservation:** the action or process of protecting, maintaining, and/or stabilizing the existing materials, form, and integrity of an historic place, or of an individual component, while protecting its heritage value;
    - **Rehabilitation:** the action or process of making possible a continuing or compatible contemporary use of an historic place, or an individual component, while protecting its heritage value; and,
    - **Restoration:** the action or process of accurately revealing, recovering or representing the state of an historic place, or of an individual component, as it appeared at a particular period in its history, while protecting its heritage value.[3]

The S&Gs outline the conservation decision making process which includes a sequence of actions:

- Understanding the historic place;
- Planning for its conservation; and,
- Intervening.

The conservation strategy in this CHAR is guided by the S&G.

[3] Canada's Historic Places, "Standards and Guidelines for the Conservation of Historic Places in Canada," prepared for Her Majesty the Queen in the Right of Canada, second edition, 2010, 22-23.

3.2 Provincial Context

In Ontario, cultural heritage is considered a matter of provincial interest and cultural heritage resources are managed under Provincial legislation, policy, regulations, and guidelines. Cultural heritage is established as a key provincial interest directly through the provisions of the *Ontario Heritage Act (**OHA**), Planning Act,* the *Provincial Policy Statement* (***PPS***), and the *Environmental Assessment Act.* Other provincial legislation deals with cultural heritage indirectly or in specific cases. These various acts and the policies under these acts indicate broad support for the protection of cultural heritage by the Province.

Definitions under these acts and policy inform our understanding of cultural heritage in Ontario. Definitions relevant to this CHAR are:

> **"heritage attributes"** means, in relation to real property, and to the buildings and structures on the real property, the attributes of the property, buildings and structures that contribute to their cultural heritage value or interest; ("attributs patrimoniaux"), (*OHA* S1)
>
> **Heritage attributes** means the principal features or elements that contribute to a protected heritage property's cultural heritage value or interest, and may include the Property's built or manufactured elements, as well as natural landforms, vegetation, water features, and its visual setting (including significant views or vistas to or from a protected heritage property) (*PPS*).
>
> **Built Heritage Resource** means a building, structure, monument, installation or any manufactured or constructed part or remnant that contributes to a property's cultural heritage value or interest as identified by a community, including an Indigenous community. Built heritage resources are located on property that may be designated under Parts IV or V of the Ontario Heritage Act, or that may be included on local, provincial, federal and/or international registers. (*PPS*)
>
> **Cultural Heritage Landscape** means a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Indigenous community. The area may include features such as buildings, structures, spaces, views, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association. Cultural heritage landscapes may be properties that have been determined to have cultural heritage value or interest under the Ontario Heritage Act, or have been included on federal and/or international registers, and/or protected through official plan, zoning by-law, or other land use planning mechanisms. (*PPS*)
>
> **Protected Heritage Property** means property designated under Parts IV, V or VI of the Ontario Heritage Act; property subject to a heritage conservation

> easement under Parts II or IV of the Ontario Heritage Act; property identified by the Province and prescribed public bodies as provincial heritage property under the Standards and Guidelines for Conservation of Provincial Heritage Properties; property protected under federal legislation, and UNESCO World Heritage Sites. (*PPS*)
>
> **Significant** means in regard to cultural heritage and archaeology, resources that have been determined to have cultural heritage value or interest. Processes and criteria for determining cultural heritage value or interest are established by the Province under the authority of the Ontario Heritage Act. (*PPS*)

The CNR Water Tower was designated as being of historical and architectural value under Part IV Section 29 of the *OHA* in 1977 by municipal Council of the Village of Barry's Bay.

This CHA has been completed and makes recommendations and evaluates the Water Tower based on requirements under the most current version of the *OHA* and its regulations.

Part IV Section 27(1) of the *OHA* requires the clerk of a municipality to keep a register of property in the municipality that is of cultural heritage value or interest—often known as a Municipal Heritage Register (**MHR**). The MHR must include properties designated under Part IV the *OHA*. Section 27(1.1) requires the clerk to make the information on the register accessible on the municipality's website.

Section 27(2) describes the required contents of the MHR. It must include:

a) a legal description of the property;

b) the name and address of the owner; and,

c) a statement explaining the cultural heritage value or interest of the property and a description of the heritage attributes of the property.

3.2.1 Ontario Regulation 9/06

O. Reg. 9/06 identifies the criteria for determining cultural heritage value or interest under Part IV Section 27(3), 29(1)(a) and Part V Section 41(1)(b) of the *OHA*.[4] A SCHVI is created based on evaluation using these criteria. These criteria are used in determining if an individual property or HCD has CHVI. The regulation has nine criteria for evaluation of individual properties and nine criteria for evaluation of properties in HCDs. The two sets of criteria are substantially similar. The criteria for evaluation of individual properties under Part IV of the *OHA* are:

1. The property has design value or physical value because it is a rare, unique, representative or early example of a style, type, expression, material or construction method.

[4] Province of Ontario, "*Ontario Regulation 9/06 Criteria for Determining Cultural Heritage Value or Interest*", last modified 1 January 2023, https://www.ontario.ca/laws/regulation/060009.

2. The property has design value or physical value because it displays a high degree of craftsmanship or artistic merit.
3. The property has design value or physical value because it demonstrates a high degree of technical or scientific achievement.
4. The property has historical value or associative value because it has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community.
5. The property has historical value or associative value because it yields, or has the potential to yield, information that contributes to an understanding of a community or culture.
6. The property has historical value or associative value because it demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.
7. The property has contextual value because it is important in defining, maintaining or supporting the character of an area.
8. The property has contextual value because it is physically, functionally, visually or historically linked to its surroundings.
9. The property has contextual value because it is a landmark.[5]

Properties that meet one of these criteria may be listed on a MHR under Part IV, Section 27 of the *OHA*. Properties that meet at least two of these criteria may be designated under Part IV, Section 29 of the *OHA*.

3.2.2 Ontario Regulation 385/21

O. Reg. 385/21 identifies the requirements of a municipal heritage designation by-law under Part IV Section 29(8) of the *OHA*.[6] The following by-law requirements are prescribed:

1. The by-law must identify the property by,

    i. the municipal address of the property, if it exists,
    ii. the legal description of the property, including the property identifier number that relates to the property, and
    iii. a general description of where the property is located within the municipality, for example, the name of the neighbourhood in which the property is located and the nearest major intersection to the property.

[5] Province of Ontario, "*Ontario Regulation 9/06 Criteria for Determining Cultural Heritage Value or Interest*", last modified 1 January 2023.
[6] Province of Ontario, "*Ontario Regulation 385/21*," last modified 1 January 2023, https://www.ontario.ca/laws/regulation/210385.

2. The by-law must contain one or more of the following that identifies each area of the property that has cultural heritage value or interest:

    i. A site plan.
    ii. A scale drawing.
    iii. A description in writing.

3. The statement explaining the cultural heritage value or interest of the property must identify which of the criteria set out in subsection 1 (2) of Ontario Regulation 9/06 (Criteria for Determining Cultural Heritage Value or Interest) made under the Act are met and must explain how each criterion is met.

4. The description of the heritage attributes of the property must explain how each heritage attribute contributes to the cultural heritage value or interest of the property.[7]

3.2.3 Eight Guiding Principles for the Conservation of Built Heritage Properties

Ontario's Eight Guiding Principles), compiled by the Ministry of Tourism, Culture and Sport (now the MCM[8] are a useful as a tool to help guide change to cultural heritage resources. These principles are intended to provide a basis for decisions concerning "good practice" in heritage conservation:

1) **Respect for documentary evidence**: do not restore based on conjecture. Conservation work should be based on historic documentation such as historic photographs, drawings, or physical evidence.

2) **Respect for the original location**: do not move buildings unless there is no other means to save them. Site is an integral component of a building or structure. Change in site diminishes the cultural heritage value considerably.

3) **Respect for historic materials**: repair/conserve–rather than replace building materials and finishes, except where absolutely necessary. Minimal intervention maintains the heritage content of the built resource.

4) **Respect for original fabric**: repair with like materials. Repair to return the resource to its prior condition, without altering its integrity.

5) **Respect for the building's history**: do not restore to one period at the expense of another period. Do not destroy later additions to a building or structure solely to restore to a single time period.

6) **Reversibility**: alteration should be able to be returned to original conditions. This conserves earlier building design and technique, e.g. When a new door opening is put

[7] Province of Ontario, "*Ontario Regulation 385/21*", last updated 1 January 2023, 3.
[8] The Ontario Heritage Trust (OHT) has *Eight Guiding Principles in the Conservation of Historical Properties*. Despite the slightly different names both the MCM and OHT principles are identical, only the MCM version is referenced in this report.

into a stone wall, the original stones are numbered, removed and stored, allowing for future restoration.

7) **Legibility**: new work should be distinguishable from old. Buildings or structures should be recognized as products of their own time, and new additions should not blur the distinction between old and new.

8) **Maintenance**: with continuous care, future restoration work will not be necessary. With regular upkeep, major conservation projects and their high costs can be avoided.

3.2.4 Provincial Planning Context Summary

This CHAR is being prepared in compliance with Provincial policy and regulations. Cultural heritage resources are considered an essential part of the land use planning process in the Province of Ontario, and their conservation is a central component of many Provincial policies. The *Planning Act* considers cultural heritage to be a Provincial interest and the *PPS* provides high level policies requiring the conservation of cultural heritage resources. The *Ontario Heritage Act* is the primary legislation governing heritage conservation in Ontario. The *Ontario Heritage Act* and associated regulations, including *O. Reg. 9/06*, set minimum standards for the evaluation of heritage resources in the Province and give municipalities power to identify and conserve individual properties, districts, or landscapes of cultural heritage value or interest.

3.3 Local Framework

3.3.1 County of Renfrew Official Plan (2002 Consolidated 2023)

The *County of Renfrew Official Plan* (***CROP***) was adopted by County Council on 27 March 2002, approved by the Ministry of Municipal Affairs and Housing on 16 June 2016, and most recently consolidated on 4 January 2023. The Township of Madawaska Valley uses the *CROP* as their Official Plan (*CROP* Section 1.6).

Section 2.2.6.2 of the *CROP*, entitled 'Built Heritage and Cultural Landscape Resources', contains policies surrounding the management of cultural heritage resources. This section is prefaced with the following:

> Council recognizes the importance of cultural heritage resources within the municipality. Therefore, Council will encourage the identification, conservation, protection, restoration, maintenance and enhancement of cultural heritage resources. All new development permitted by the land use policies and designations of this Plan shall strive to conserve cultural heritage resource and incorporate them into development plans. In addition, all new development will be planned in a manner which preserves and enhances the context in which cultural heritage resources are situated.[9]

[9] County of Renfrew, *County of Renfrew Official Plan*, last consolidated January 4, 2023, https://www.countyofrenfrew.on.ca/en/business-and-development/resources/Documents/OFFICIAL-PLAN-TEXT-Consolidated-Jan-2023.pdf.

Policies relevant to this project include:

Section 2.2.6.2 (c):

> Municipal Register
>
> In accordance with Section 27 of the Ontario Heritage Act, the municipal clerk shall maintain a register of all property designated under Part IV and Part V of the Ontario Heritage Act. This register may also contain properties that have heritage conservation easements placed upon them and properties that are not designated, but which are considered by Council to be of cultural heritage value or interest.

Municipal council should adopt a MHR to comply with this policy.

Section 2.2.6.2 (d): Municipal Initiative

> Council shall conserve cultural heritage resources by:
>
> i. conserving heritage buildings, cultural heritage landscapes and archaeological resources that are under municipal ownership and/or stewardship;
>
> ii. conserving and mitigating impacts to all significant cultural heritage resources when undertaking public works;
>
> iii. respecting the heritage designations and other heritage conservation efforts by area municipalities;

Plans to rehabilitate the Water Tower are consistent with the intent of municipal policy.

4.0 HISTORIC CONTEXT

4.1 Township and Village History

The village of Barry's Bay was named after James Barry, a local hunter who had a campsite.[10] In 1852, the government of Upper Canada authorized the survey of the Opeongo Road from Ottawa towards the interior of the province. It was constructed in 1854, and by 1860 many immigrants began to settle the area. In 1862, A.J. Forrest, Provincial Land Surveyor recommended the creation of a town plot at Barry's Bay.[11] In 1877, the United Townships of Hagarty, Sherwood, and Jones was formed.[12] The 1892 *Union Publishing Co's Farmers' and Business Directory* notes that Barry's Bay had a population of approximately 80 inhabitants. In 1895, Barry's Bay was recommended by County Council as a town site with the first survey, Plan 131, being undertaken by Frank Purvis, Ontario Land Surveyor.[13] In 1910, the United Townships separated into two municipalities, of which Barry's Bay became the centre for the Township of Sherwood, Jones, and Burns.[14]

In 1933, the Village of Barry's Bay was incorporated as a municipality through By-law 1184, with Henry J. Chapeskie serving as the first reeve.[15] In the 1950s, the village experienced growth with the construction of a community hall, theatre, widened roads, apartment housing, and became the hub of the Madawaska Valley.[16] By 1960, the population of Barry's Bay numbered 1,468 inhabitants.[17] On 1 January 2001, the Village of Barry's Bay, the Township of Sherwood Jones & Burns and the Township of Radcliffe was incorporated into the Township of Madawaska Valley.

4.2 Railway History in the Township

The Ottawa, Arnprior and Parry Sound Railroad (**OA&PS**) was conceived and constructed by John Rudolphus Booth. In 1867, he purchased a 250-acre tract of land on the western side of Algonquin Park from the estate of John Egan. In 1894, Booth relocated the divisional point from Barry's Bay to Madawaska.[18] The OA&PS had 14 or 15 stations constructed from a standard

[10] Alan Rayburn, *Geographical Names of Renfrew County*, Ottawa, ON: Geographical Branch, Dept. of Energy, Mines and Resources, 1967, 25.
[11] Village of Barry's Bay, *Village of Barry's Bay 50th Anniversary 1933-1983*, 1983, 6.
[12] Theresa Prince, *The Kovalskie (Kowalski) Family of Barry's Bay*, 2007, 20.
[13] Ontario Land Registry, Renfrew (49), Sherwood, Book 131, 1895, Inst. Plan 131.
[14] Theresa Prince, *The Kovalskie (Kowalski) Family of Barry's Bay*, 2007, 21-22.
[15] Village of Barry's Bay, *Village of Barry's Bay 50th Anniversary 1933-1983*, 1983, 9.
[16] *The Union Publishing Co.'s (of Ingersoll) farmers' and business directory for the counties of Carleton, Lanark, Renfrew & Russell*, Vol. VI, Ingersoll, ON: Union Publishing Co., 1891, 228. https://www.canadiana.ca/view/oocihm.8_00662_5/304
[17] Village of Barry's Bay, *Village of Barry's Bay 50th Anniversary 1933-1983*, 1983, 10.
[18] *Ottawa Journal*, 24 November 1894, Ottawa Railway History Circle.

plan of which only the one in Barry's Bay remains. They were constructed between 1892 and 1896 by George Tomlinson, who was noted as working as a "station builder for the company".[19]

In 1893, the Crown Patent for Lot 182, Range B, being 45 acres was granted to Frank Stafford and Henry George.[20] In 1894, Barry's Bay station was constructed. It was described as a two-storey First Class wood-frame station.[21] On 8 September 1894, the first train, Engine No. 63, arrived at Barry's Bay station. The station master was David Milloy and the passenger agent was C.T. Smith.[22] In December 1894, a land dispute over right-of-way access occurred between the OA&PS and Frank Stafford, a local general store merchant.[23] Until mid-1895, trains were relocated to a siding west of Barry's Bay. In mid-1895, the land was sold from Stafford and George to the OA&PS.[24] In 1896, the divisional point of the OA&PS was relocated from Barry's Bay to Madawaska.[25]

In 1899, the OA&PS was taken over by the Canadian Atlantic Railway (**CAR**), becoming the largest North American railway to be owned by one person. In 1905, the CAR was purchased by the Grand Trunk Railway (**GTR**). In 1923, the GTR was bankrupt and nationalized to become the Canadian National Railways (**CNR**). By the late 1920s, improved roads and the depletion of the lumber industry hastened the decline of railway services. In 1930, the divisional point was relocated from Barry's Bay to Madawaska. In 1943, new facilities were constructed including the engine house, bunkhouse and maintenance shop. In 1962, the roundhouse facility was demolished. In 1963, passenger rail service ceased between Ottawa and Barry's Bay and the railway tracks were removed shortly afterwards.[26] In 1972, the station building and 0.5 acres of land were purchased from the CNR by the Village of Barry's Bay for a sum of $2,500.[27]

4.3 Railway Water Tower History

Many of the first advances in water engineering occurred in England during the Industrial Revolution and were quickly adopted across Europe and North America. The earliest water tower structures date from the 1830s and 1840s. They were constructed out of brick and stone

[19] *Ottawa Journal*, 21 December 1896; David Jeanes, "A note on OA&PS and Canada Atlantic Railway Station Builders", Colin Churcher's Railway Pages, January 2017, accessed 11 April 2024, https://churcher.crcml.org/circle/Central_Depot_stations.htm

[20] Ontario Land Registry, Renfrew (49), Sherwood, Book 131, 1893, Inst. Q142.

[21] G.A. Mitchell, *Grand Trunk Railway System, Bridges and Buildings Middle Division*, 1907, 91, https://bzglfiles.s3.ca-central-1.amazonaws.com/u/131959/435ae931d1aa3e1ef936acac944d9dfb2f43eb1c/original/gtr-ottawa-1907-page-010010.pdf?response-content-type=application%2Fpdf&X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIA2AEJH4L527DJJBYE%2F20240422%2Fca-central-1%2Fs3%2Faws4_request&X-Amz-Date=20240422T175058Z&X-Amz-Expires=604800&X-Amz-SignedHeaders=host&X-Amz-Signature=5b505e335a964598fc99391ce946f58705f20f73a612ede48aed13682104e288

[22] Theresa Prince, *The Kovalskie (Kowalski) Family of Barry's Bay*, 2007, 52.

[23] *Renfrew Mercury*, 1 February 1895.

[24] Ontario Land Registry, Renfrew (49), Sherwood, Book 131, 1893, Inst. Q163.

[25] *Ottawa Journal*, 14 October 1896.

[26] Theresa Prince, *The Kovalskie (Kowalski) Family of Barry's Bay*, 2007, 53.

[27] Bill Collins, "Barrys Bay plans railway museum", *Ottawa Journal*, 23 February 1973, 5.

as narrow standpipe structures with cast-iron tanks on top.[28] Beginning in 1830, elevated cast-iron tanks were used in the United Kingdom, and were often rectangular in shape, formed by cast-iron plates bolted together. The rectangular shape of the tank was the result of a requirement to maximize the footprint of the boiler house building below the tank.

One of the earliest mentions of water towers in Ontario relates to a rectangular 50,000 gallon cast-iron water tank supported on an iron frame above a boiler house in Hamilton, constructed for the Great Western Railway (**GWR**) in 1856.[29]

From the early 1850s onwards, in larger towns and cities, railway companies would directly connect the water towers to municipal water systems. When piped water was unavailable, windmills would be constructed beside or near the water tower.[30] By the late 1860s, Canadian railways including the GWR at Sarnia, Belle River, Newbury, and Port Credit, and the Wellington, Grey, and Bruce Railway at Elora, utilized windmills based on a patented design from American engineer Daniel Halladay of the U.S. Wind Engine and Pump Company. These windmills used gear mechanisms and counterweights to self-regulate the supply of water into tanks.[31] The associated wooden water tower was developed by Halladay's business partner, John Burnham in 1866.[32]

Where erecting a windmill was not feasible, coal-fired engines and pumps were placed either underneath the water tower, in a separate pumphouse or engine house, or within the enclosed water tower itself.[33] By the 1870s, large wooden water towers were universally used across North American railways as cast-iron towers became uncommon (Image 1).[34] The oldest extant example of a wooden water tank on a supporting wooden timber-frame dates to 1875, in Beaumont, Kentucky, United States.[35] In Canada, the oldest extant example of a wooden water tank on a supporting wooden timber-frame dates to 1903.

Because barrel and tank making techniques were fully developed in North America and relatively inexpensive, railway water tanks were remarkably similar with the exception of the delivery system. The most common designs for wooden water tanks featured circular pine, cypress, cedar, or Douglas fir tubs between 16 and 30 feet (4.87 to 9.14 metres (m) in diameter,

[28] Helen Davies, *The Archaeology of Water*, Gloucestershire, UK: The History Press Ltd., 2008, 151.
[29] "Great Western Railway To Iron Founders", *Hamilton Spectator*, 20 March 1856, 2.
[30] U.S. Wind Engine & Pump Co., *Descriptive catalogue of U.S. Wind Engine & Pump Co. Batavia, Illinois : manufacturers of Halladay's standard wind mills, double and single acting pumps, the IXL feed grinders, Halladay's celebrated outlet valves, railroad tanks, drop pipes, goosenecks, hay carriers, horse hay forks, &c.*, Chicago, IL: Culver, Page, Hoyne & Co., 1879, 43-45.
[31] "Canada", *Montreal Star*, 11 December 1869, 1; Hamilton Spectator, 30 May 1870, 1.
[32]
[33] Ron Brown, The train doesn't stop here anymore: an illustrated history of railway stations in Canada, 2014, 21.
[34] Carol Ann Dubie*, The Architecture and Engineering of Elevated Water Storage Structures: 1870-1940*, 1980, 14, http://www.waterworkshistory.us/tech/1980DubieWaterStorage.pdf
[35] National Register of Historic Places, *National Register of Historic Places Nomination Form, Beaumont St. Louis and San Franscisco Railroad Water Tank*, October 1990, https://www.kshs.org/resource/national_register/nominationsNRDB/Butler_BeaumontStLouisAndSanFransicoRailroadWaterTankNR.pdf

holding capacities between 20,000 to 100,000 gallons (75,708 to 378,541 litres (L)) of water.[36] The wooden tub walls were often vertical staves held with iron hoops on the exterior and fastened with iron lugs. The hoops were spaced closer together at the bottom of the tank due to increasing water pressure.

The structural frame was generally constructed out of twelve wooden timber posts on concrete piers in a cruciform plan, braced with wooden struts.[37] In northern areas, frost boxes were constructed enclosing the pipes of the water tank in rooms clad with board-and-batten wood siding. Frost boxes included a stove acting as an inexpensive heating source.[38] In Ontario and Quebec, some early water towers such as those at Perth, Renfrew, and Dalhousie Mills were supported on stone masonry bases. The CPR on the Western Lines sheathed water towers in octagonal wooden board-and-batten outer shells which were not attached to the tubs. Many railway water towers in eastern Canada did not have the outer shell as winter weather was not as severe as in western Canada. These outer shells were not often found on American railways due to warmer climate conditions.[39]

By the 1880s, the use of wood and metal water tanks on combined wooden or metal supports was the preferred alternative to the standpipe or masonry water tank for railways or locations where finances dictated inexpensive and low maintenance structures fashioned from locally available materials.[40]

By the 1910s, the use of wooden water towers diminished and steel water towers became more common.[41] However, the design of the first steel tanks on steel supports followed that of the railway wooden water tank as being flat and supported on a horizontal beam deck.[42] Around this time, CNR had contracts with the Chicago Bridge & Iron Works Company and

[36] Walter Berg, *Buildings and Structures of American Railroads*, New York, NY: John Wiley & Sons, 1893, 117.
[37] Carol Ann Dubie*, The Architecture and Engineering of Elevated Water Storage Structures: 1870-1940*, 1980, 70.
[38] John Wilson Orrock, Railroad Structures and Estimates, New York, NY: John Wiley & Sons, 1909, 174.
[39] "MacGregor Water Tower (1900)", Manitoba Agricultural Museum, accessed 23 April 2024, https://mbagmuseum.ca/artifact/macgregor-water-tower-1900/
[40] Carol Ann Dubie*, The Architecture and Engineering of Elevated Water Storage Structures: 1870-1940*, 1980, 62.
[41] John Wilson Orrock, *Railroad Structures and Estimates*, New York, NY: John Wiley & Sons, 1918, 436; Railway Track and Structures, "What's the Answer?", Vol. 19, Issue 6, June 1923, 247, https://ia804602.us.archive.org/BookReader/BookReaderImages.php?zip=/4/items/sim_railway-track-structures_1923-06_19_6/sim_railway-track-structures_1923-06_19_6_jp2.zip&file=sim_railway-track-structures_1923-06_19_6_jp2/sim_railway-track-structures_1923-06_19_6_0046.jp2&id=sim_railway-track-structures_1923-06_19_6&scale=4&rotate=0
[42] "Development of Steel Tanks", *The Water Tower* l, July 1915, 2.

Horton Steel Works Ltd. of Canada to install steel water tanks across the country.[43] Around 1910, concrete water tanks began to be constructed in the United States.[44]

By the 1940s, steam locomotives were still being constructed in Canada and used to transport freight, passengers, and contribute to the war effort. A 1940 CNR Standard Plan *No. 150-156* illustrates a 60,000 gallon wooden water tower enclosed by a wooden outer shell. It notes a roof structure composed of tongue-and-groove wooden boards and asphalt felt topped by cedar shingles, a galvanized iron trap door cover, a galvanized iron smokestack pipe, and a galvanized iron float rod. It notes a wooden tub composed of wooden staves and tar paper with malleable galvanized iron hoops fastened with iron lugs supported on a cedar beam deck. The sway pipe spout was constructed out of galvanized iron. The front door was composed of wooden tongue-and-groove boards braced with wooden battens in a Z-pattern. The timber frame structure was composed of cedar posts and cedar cross-braces in a cruciform plan on a concrete foundation (Image 3).

In 1949, the last steam locomotive was constructed in Canada. Dieselization accelerated through the 1950s and although there were exceptions due to fuel or locomotive shortages, the generally accepted "last day" of steam power used in revenue service by Canadian railroads was 30 April 1960. This is the day that both CNR and CPR coordinated the retirement of their last operating steam locomotives.[45] Throughout the 1960s and 1970s, many associated station facilities including water towers and coaling towers were demolished.

[43] Railway Track and Structures, "Moving a Steel Tank Two Miles by Railroad", Vol. 18, Issue 9, September 1922, 313, https://ia601000.us.archive.org/BookReader/BookReaderImages.php?zip=/9/items/sim_railway-track-structures_1922-09_18_9/sim_railway-track-structures_1922-09_18_9_jp2.zip&file=sim_railway-track-structures_1922-09_18_9_jp2/sim_railway-track-structures_1922-09_18_9_0036.jp2&id=sim_railway-track-structures_1922-09_18_9&scale=4&rotate=0

[44] C.R. Knowles, "Concrete Water Tanks for Railway Water Service", *Railway Tracks and Structures*, Vol. 19, Issue 11, 1923, https://ia801002.us.archive.org/BookReader/BookReaderImages.php?zip=/23/items/sim_railway-track-structures_1923-11_19_11/sim_railway-track-structures_1923-11_19_11_jp2.zip&file=sim_railway-track-structures_1923-11_19_11_jp2/sim_railway-track-structures_1923-11_19_11_0031.jp2&id=sim_railway-track-structures_1923-11_19_11&scale=2&rotate=0

[45] Toronto Railway Historical Association, "Canadian National Railway", n.d, accessed 26 April 2024, https://www.trha.ca/trha/history/railways/canadian-national-railway/

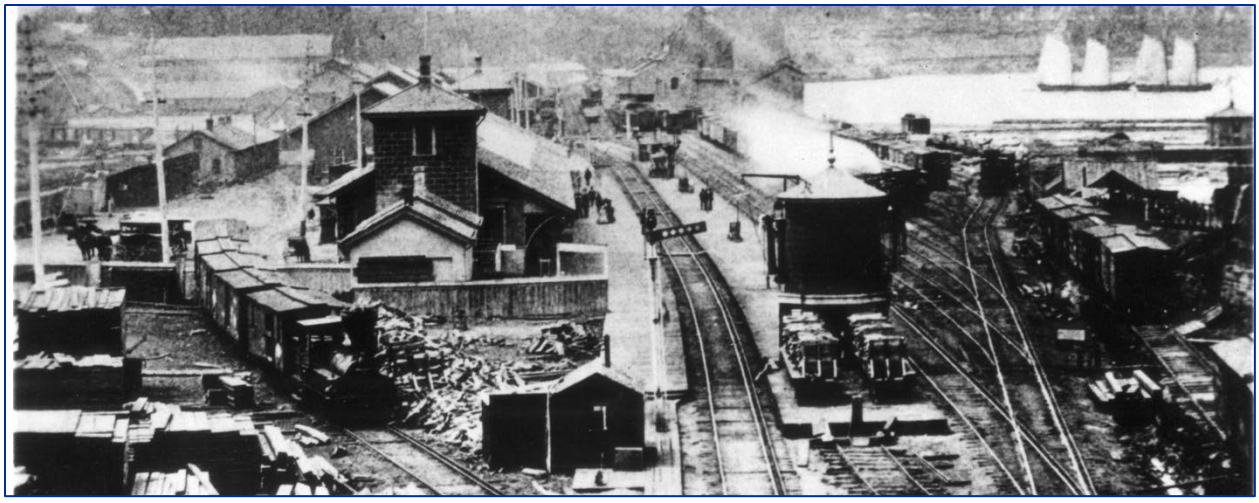


Image 1: View of the GWR Hamilton Station yard with the water tank at centre, 1870.[46]

[46] "Great Western Railway Yards (1870)", Hamilton Public Library, Local History and Archives, 1870, https://www.communitystories.ca/v2/nine-hour-league_a-ligue-des-neuf-heures/gallery/great-western-railway-yards-1870/

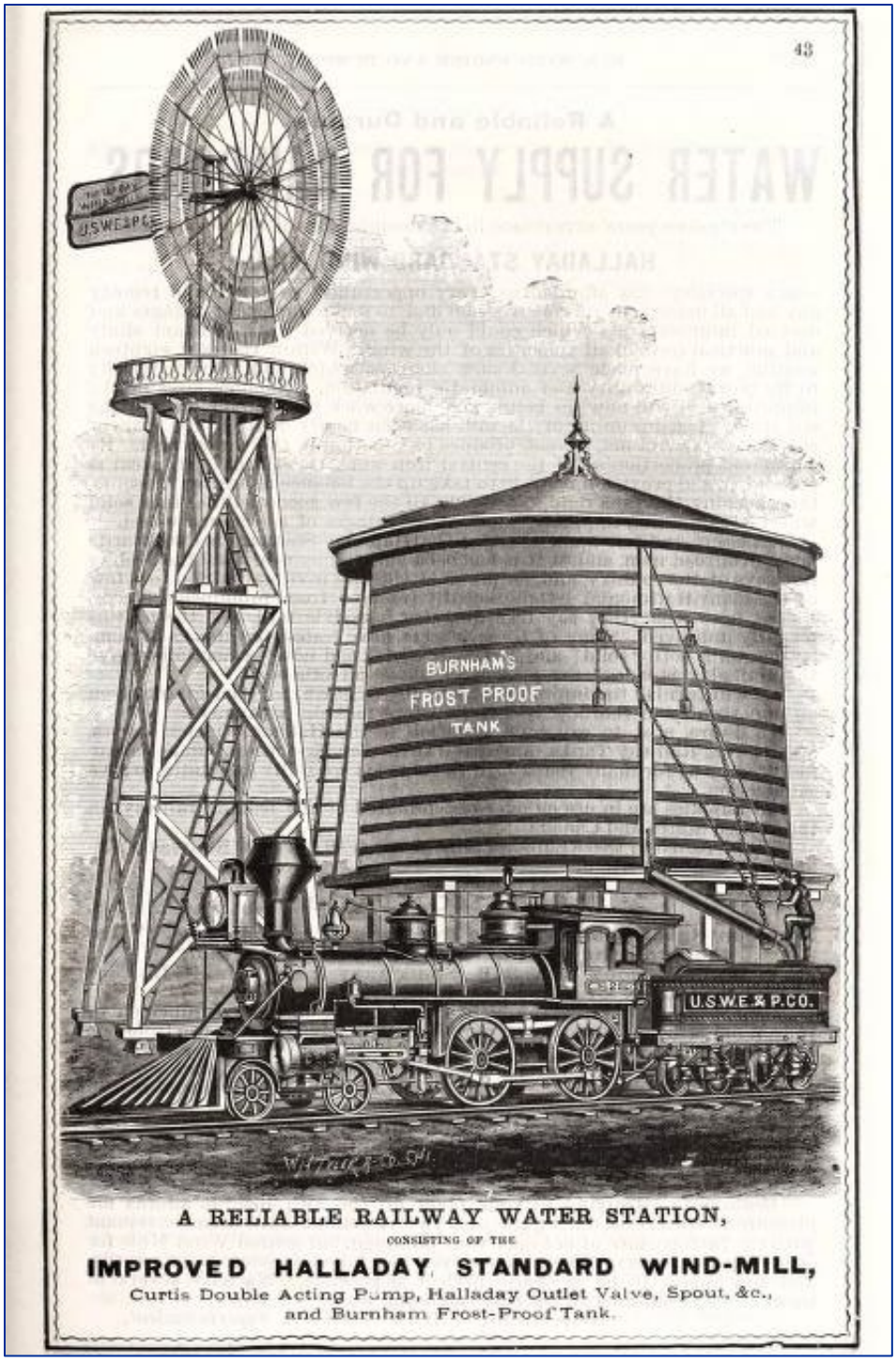


Image 2: An advertisement for a Halladay Standard windmill and Burnham's Frost Proof Tank, 1878.[47]

[47] U.S. Wind Engine & Pump Co., *Descriptive catalogue of U.S. Wind Engine & Pump Co. Batavia, Illinois,* Chicago, IL: Culver, Page, Hoyne & Co., 1879, 43-45.

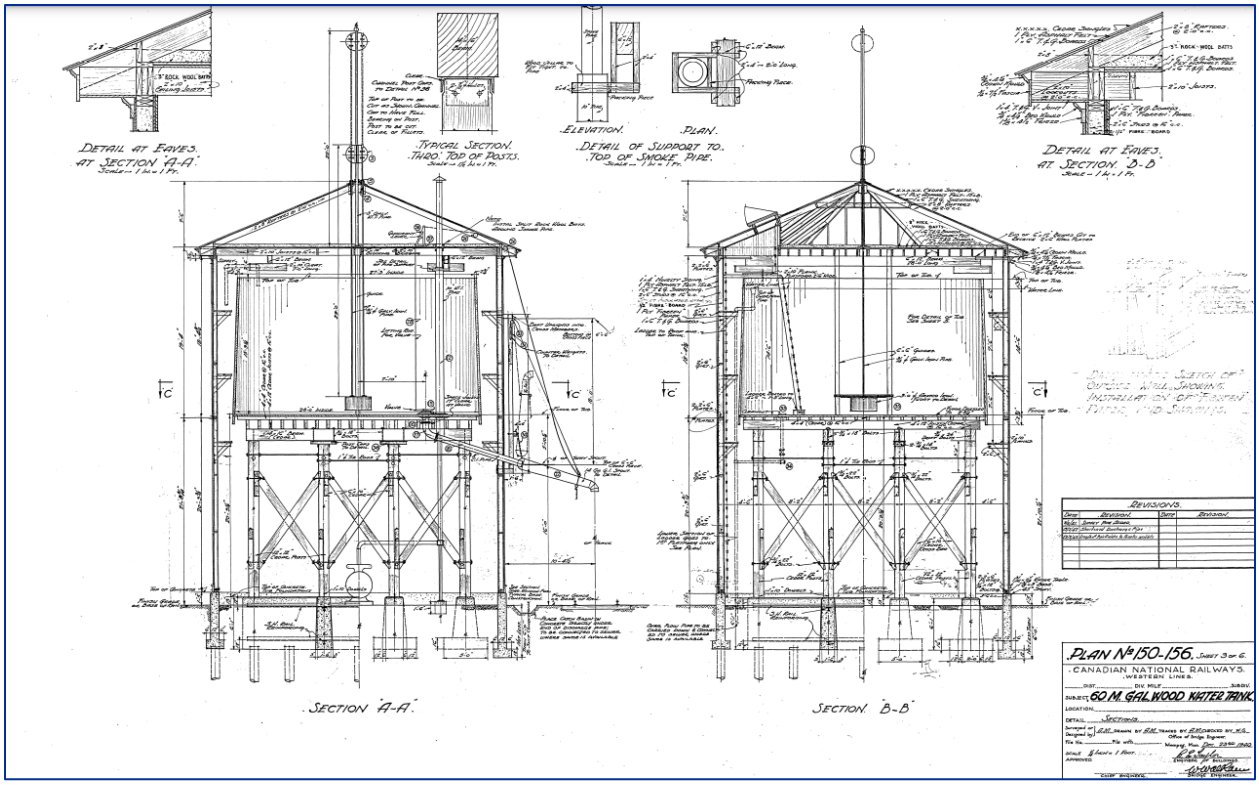


Image 3: CNR Plan No. 150-156, showing an enclosed 60,000 gallon water tower, 1940.[48]

4.3.1 Barry's Bay Water Tower History

In June 1894, materials for the construction of the Water Tower were purchased and transported from Ottawa. It was constructed under the supervision of Ottawa contractor and architect George Tomlinson at a cost of $2,000.[49] It was located adjacent to the railway station and to the rear of Frank Stafford's general store. The wooden tub measured 16.25 by 23.25 feet (4.95 by 7.08 m) in diameter and was designed to hold a capacity of 60,000 gallons (284,000 L) of water.[50] A separate six-inch (15 cm) Worthington standpipe was located nearby. Connected by a 172 feet (52.42 m) conduit pipe, the water pumping station was located on the north side of a creek running from Drohan's Lake near the location of the former Dixie Lee restaurant. It was managed by section foreman, Benjamin Kish.[51] In November 1894, the station and Water Tower were completed. In December 1894, a land dispute over right-of-way access occurred between the OA&PS and Frank Stafford. On 1 May 1913, the Water Tower was partially damaged by fire from Stafford's general store. Carpenters from the Grand Trunk Railway

[48] Canadian Pacific Historical Association, "CNR Enclosed Water Tank 60K Gallon", Plan No. 150-156, 1940, accessed 23 April 2024, https://www.cptracks.ca/data/other_cnr_railway/150-156.pdf

[49] G.A. Mountain, "Estimate of the Cost of Construction of That Portion of the Ottawa, Arnprior, and Parry Sound Railway from Barry's Bay, in the Township of Sherwood, County of Renfrew, to Murchison, District of Nippissing, Province of Ontario, *Sessional Papers*, No. 115, 1894, 58.

[50] *Renfrew Mercury*, 8 June 1894; G.A. Mitchell, *Grand Trunk Railway System, Bridges and Buildings Middle Division*, 1907, 10.

[51] Theresa Prince, *The Kovalskie (Kowalski) Family of Barry's Bay*, 2007, 51.

replaced the damaged wooden tub.[52] A late 1910s photograph depicts the Water Tower with 21 iron hoops, a conical roof, a galvanized iron sway pipe spout, two access ladders, and a wooden timber frame on concrete piers (Image 4). The 1942 CNR Plan *C-10161* illustrates the position of buildings and tracks including the location of the original Water Tower beside the Station. It notes that a 3-inch water main ran between the Water Tower and the Engine House adjacent to the wye formed by the two railway tracks (Figure 3).

In 1943, the original c.1894 Water Tower was dismantled and the second Water Tower was constructed at its current location, a wye between two railway tracks (Figure 4). At this time, the engine house, bunkhouse, and maintenance shop were constructed behind the Water Tower (Image 5).[53] An early 1950s photograph depicts a close-up view of the galvanized iron sway pipe spout and the pulley mechanism (Image 6). A 1956 photograph depicts surrounding maintenance facilities, and the side profile of the Water Tower with a view of the galvanized iron sway pipe spout, trap door, pulley system, frost box with lean-to shed structure, and access ladder (Image 7). By 1964, the Water Tower was noted as being in good condition but unused and empty.[54] In 1965, the Village of Barry's Bay purchased the Water Tower from the CNR for a sum of $75.[55]

A 1972 photograph depicts the Water Tower with a small wood lean-to shed structure in a deteriorated condition. The galvanized iron sway pipe appears to have been removed (Image 8). By 1975, the Water Tower had deteriorated to a condition where it was condemned as a safety hazard.[56] In 1975, the Water Tower was proposed to be demolished but was saved by a petition from local citizen group called Committee To Save The Water Tower.[57] In 1977, the Water Tower was designated under Section 29, Part IV of the *OHA*. In 1989, the Barry's Bay Railway Station Restoration Committee was established. In 2000, the Water Tower was dedicated and restored as part of Water Tower Park.[58]

[52] Theresa Prince, *The Kovalskie (Kowalski) Family of Barry's Bay*, 2007, 41.
[53] "Railway Construction", *Railway Age*, Vol. 114, 1943, 85.
[54] Fred Angus, "The O.A.& P.S. Revisited", *Canadian Rail*, No. 156, June 1964, 139, https://exporail.org/canrail/canadian_rail_1962_1989/canadian-rail-156-1964.pdf
[55] Bill Collins, "Barrys Bay plans railway museum", *Ottawa Journal*, 23 February 1973, 5.
[56] Bill Collins, "White elephant", *Ottawa Journal*, 22 December 1975, 3.
[57] *Eganville Leader*, 24 September 1975.
[58] "Ontario's Last Remaining Water Tower Dedicated", *Eganville Leader*, 18 October 2000.

Image 4: View of the Station and the Water Tower at right, 1918-1923.[59]

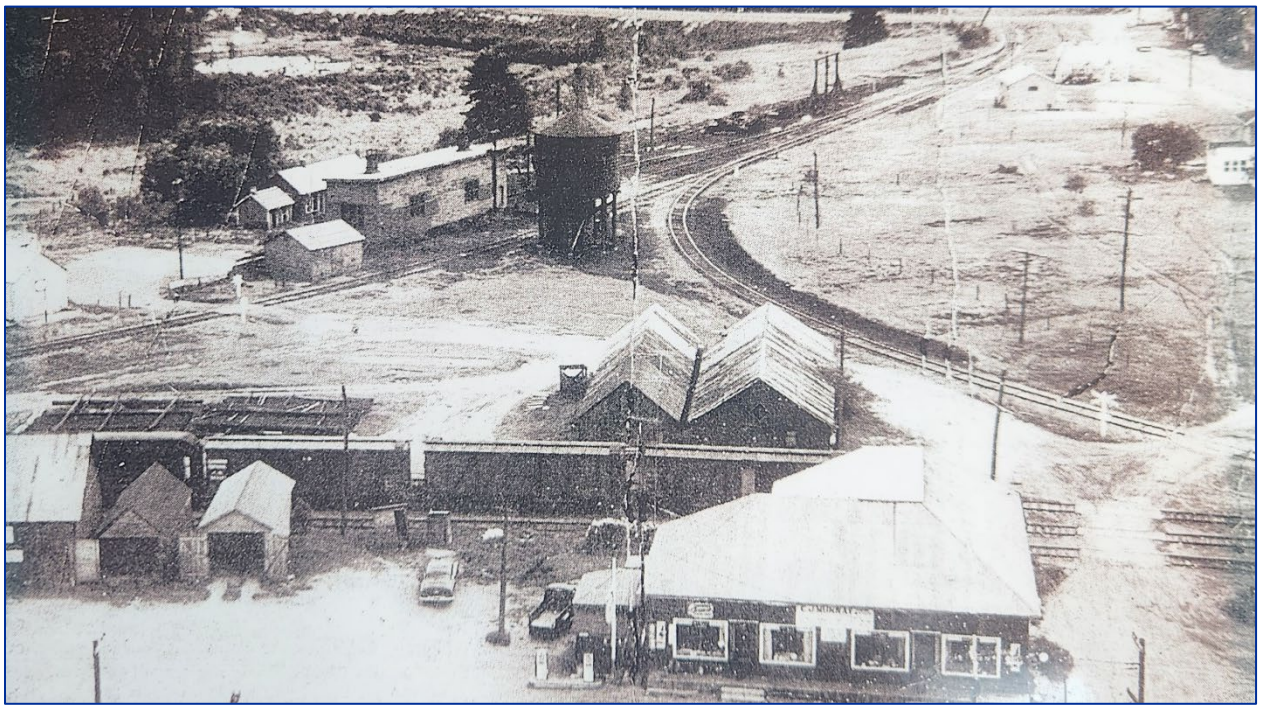


Image 5: View of the Water Tower at centre with the locomotive shed, bunkhouse, and engine house visible. C.J Murray's store is visible at right, 1940s.[60]

[59] Barry's Bay Station Museum, 1910s.
[60] Barry's Bay Station Museum, 1940s.

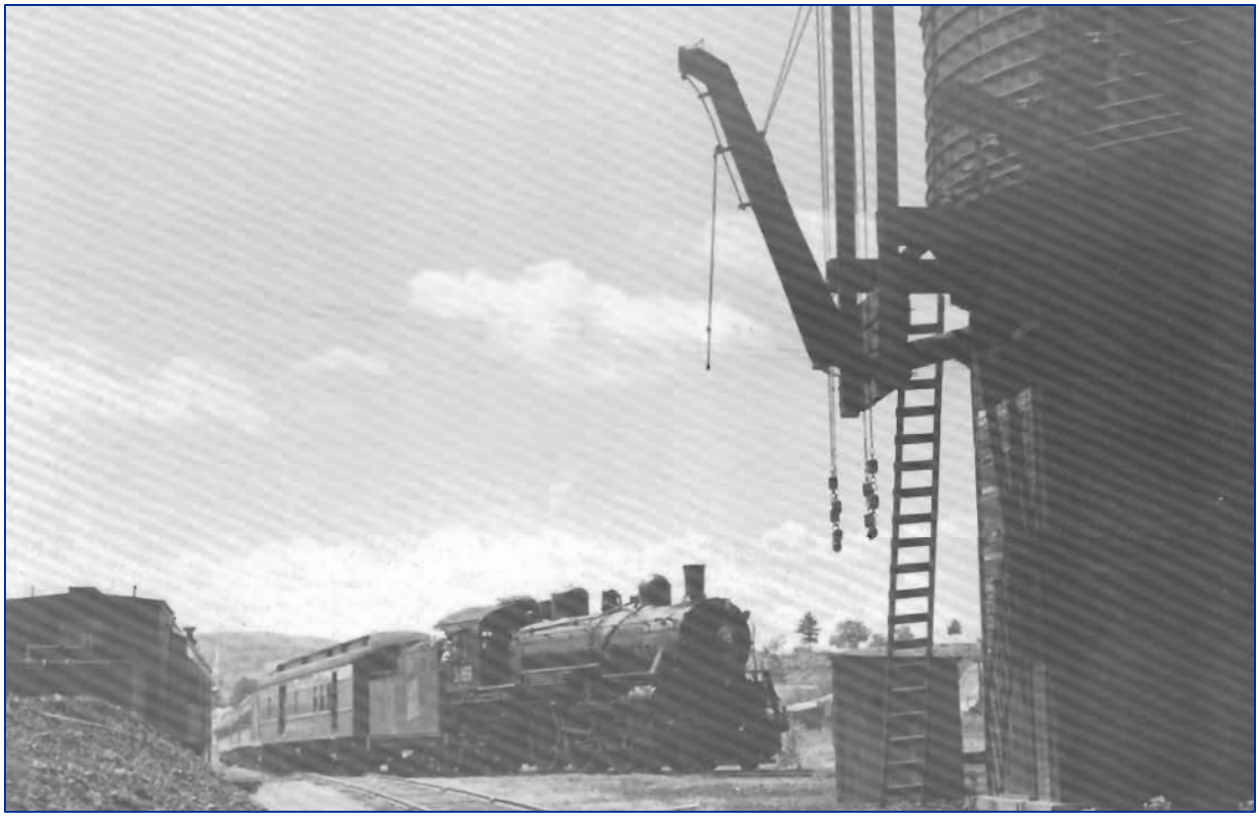


Image 6: View of the Water Tower, early 1950s.[61]

Image 7: View of the Water Tower in 1956.[62]

[61] *Canadian Rail*, No. 409, March-April 1989, 1, https://exporail.org/canrail/canadian_rail_1962_1989/canadian-rail-409-1989.pdf

[62] "Canadian National Railways, Barrys Bay, Ontario", CSTM Archives, Aubrey Mattingly Transportation Collection, MAT-00796, June 1956, accessed 24 April 2024, https://collection.ingeniumcanada.org/en/id/MAT-00796/

Image 8: View of the Water Tower with a small lean-to shed structure, 1972.[63]

[63] "Canadian National Railways, Water tank", CSTM Archives, Aubrey Mattingly Transportation Collection, MAT-07019, June 1956, accessed 24 April 2024, https://collection.ingeniumcanada.org/en/id/MAT-07019/

Legend

- Property
- 1894 Water Tower

NOTE(S) 1. All locations are approximate.
REFERENCE(S)
1. Canadian National Railways, "Central Region. Ottawa Division. Renfrew Subdivision. Mile 108.21. Plan showing new tracks and facilities, Barry's Bay, Ont.", provided by the Library and Archives Canada, reference RG30M 65/213, item no. 797, Toronto: Office of Chief Engineer, 1942.

TITLE
The Water Tower on 1942 Historic Maps.

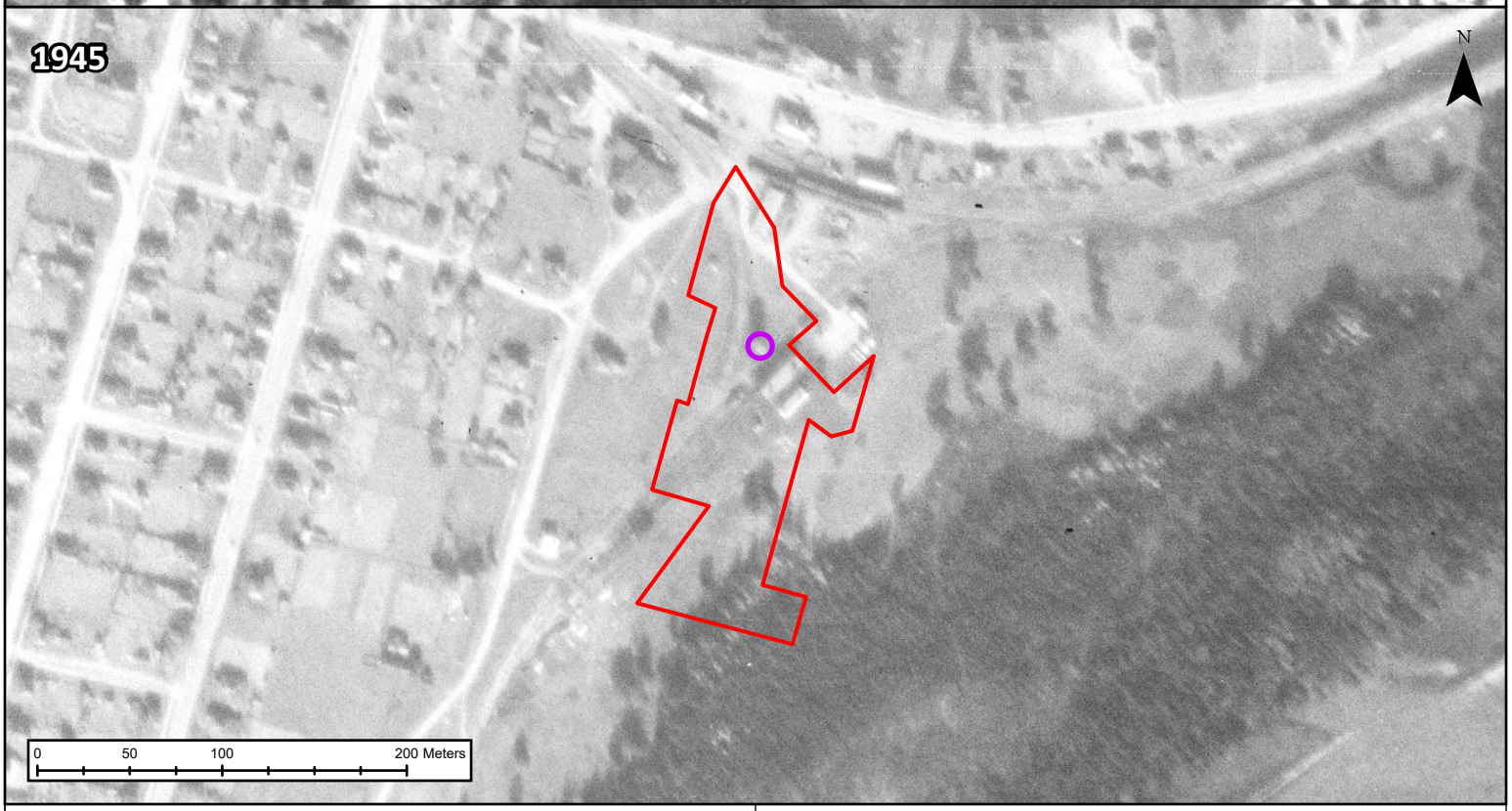
CLIENT
Township of Madawaska Valley

PROJECT
Cultural Heritage Assessment Report
CNR Water Tank Barry's Bay, Township of Madawaska Valley, Renfrew County, ON

PROJECT NO. LHC0434

YYYY-MM-DD 5/14/2024

FIGURE # 3



Legend

- Property
- 1894 Water Tower
- Current Water Tower

NOTE(S) 1. All locations are approximate.
REFERENCE(S)
1. National Air Photo Library, "A6410-17", roll A6410 line 18W photo 17, scale 1:25,000, 1938.
2. National Air Photo Library, "A9571-43", roll A9571 line 24W photo 43, scale 1:20,000, 1945.

TITLE
The Water Towers on 1938 and 1945 Aerial Photographs

CLIENT
Township of Madawaska Valley

PROJECT
Cultural Heritage Assessment Report
CNR Water Tank Barry's Bay, Township of Madawaska Valley, Renfrew County, ON

PROJECT NO. LHC0434

LHC

YYYY-MM-DD 5/14/2024

FIGURE # 4

4.1 Historical People Associated with the Water Tower

4.1.1 George Tomlinson (1855-1930)

George Tomlinson was born in Beckwith, Lanark County, to parents John Tomlinson (1813-1892) and Margaret Tomlinson (*née* Campbell). He married Margaret Tomlinson (*née* Kyle) (1856-1933) in the 1890s, and they had two children, Elsie (1893-1973) and Helena (1897-1957). In Ottawa, he owned a lumber yard and planing mill near Main Street.[64] Working for the CAR and the OA&PS, he designed and built Coteau Station in 1892, Kinburn, Carp, Arnprior, Renfrew, and Eganville Stations in 1893, Barry's Bay, Golden Lake, and Killaloe Stations in 1894, Madawaska, Canoe Lake, and Central Depot in 1896.[65] In 1899, he moved from Main Street to Waverley Street in Ottawa. In 1906, he purchased the Ottawa Furnace and Foundry Company for a sum of $47,500.[66] In 1913, he purchased the Stanley building for a sum of $41,000.

The 1911 *Census* notes that he lived 348 Waverley with his family and his occupation was listed as an architect and builder.[67] In 1920, he relocated to Toronto. The 1921 *Census* notes that he lived at 45 Glenwood Avenue with his family and his occupation was listed as a builder.[68] He passed away in 1930 and was buried at Park Lawn Cemetery in Toronto.[69]

[64] Colin Churcher, "Rideau Junction", *Branchline*, September 2007, 10, https://bytownrailwaysociety.ca/phocadownload/branchline/2007/2007-09.pdf

[65] David Jeanes, "A note on OA&PS and Canada Atlantic Railway Station Builders", Colin Churcher's Railway Pages, January 2017, https://churcher.crcml.org/circle/Central_Despot_stations.htm; "New Line of Railway", *Ottawa Citizen*, 4 July 1895.

[66] "Property Sold", *Ottawa Citizen*, 17 July 1906, 4.

[67] Library and Archives Canada, *Fifth Census of Canada, 1911*, 1911, District No. 105 Ottawa, Enumeration District No. 30, Sub-district Ottawa Central Ward 11, 1, Line 40, https://www.ancestry.ca/discoveryui-content/view/5444930:8947

[68] Library and Archives Canada, *Sixth Census of Canada, 1921*, 1921, District No. 195 York West, Enumeration District No. 69, Sub-district West Toronto Ward 7, 6, Line 2, https://www.ancestry.ca/discoveryui-content/view/8845:8991

[69] "George Tomlinson Passes", *Toronto Daily Star*, 30 June 1930, 9.

5.0 EXISTING CONDITIONS

5.1 Surrounding Context

The Water Tower is located in Water Tower Park on the west side of Mahon Street (Photo 1 and Photo 2). It is bounded by Mahon Street to the north and east, 17 Billings Street to the south, and 29 and 39 Stafford Street to the west.

Water Tower Park contains various commemorative historical plaques and railway artifacts including a CPR caboose and a velocipede.

The Water Tower is south of several historic buildings with railway connections. The CNR Barry's Bay Station building is located to the north of the Water Tower on a triangular lot west of Stafford Street, south of Opeongo Line (Hwy 60) and north of Opeongo Square (Photo 3 and Photo 4). The Balmoral Hotel is on the west corner of Opeongo Square and Stafford Street (Photo 5). The Community Living Building located to the north of the Water Tower was the site of Frank Stafford's general store (Photo 5).

Mahon Street is a two-lane road with hydro utility poles on the west and east sides of the street and asphalt parking stalls on the west side of the street. It follows the path of the former railway tracks, however, there are no remaining railway tracks left in the vicinity.

Photo 1: View looking south towards the Water Tower.

Photo 2: View along Mahon Street looking west towards the Water Tower.

Photo 3: View of the CNR Barry's Bay Station building.

Photo 4: View looking south towards the Water Tower from the station building.

Photo 5: View looking east along Highway 60 of the streetscape including the Balmoral Hotel (centre of image), the station building with Community Living Building behind it (left side of image).

5.2 The Water Tower

The Water Tower is legally described as being on Part Lot 182, Range B, South of the Opeongo Road.

5.2.1 Description of the Water Tower

5.2.1.1 Exterior

The water tower is a two-storey structure consisting of a round wood tank with a conical roof supported on a wood frame (Photo 6). A section of the area under the tank is enclosed –the frost box (Photo 6). The roof structure is wood-frame construction with laminated asphalt shingles, a metal float rod on the rooftop (Photo 7), a smokestack pipe, plywood boards, and a painted wood soffit at the perimeter of the roof. Access to the trap door at the rooftop is provided by a metal ladder which is installed on the exterior (Photo 8). Wood plank (2" x 6") siding with 14 malleable galvanized iron hoops fastened with iron lugs labelled "CNR-M" are installed on the exterior of the Water Tower (Photo 9).[70] The frost box structure is situated between the timber posts and clad in wood siding (Photo 10).The floor structure upon which the wooden tub sits, consists of wood joists (2.5" x 11") with wood plank deck. It is supported by 12 wood columns measuring (12" x 12") and beams in a cruciform plan on concrete piers—some of which are in deteriorated condition (Photo 11). A large metal sway pipe spout extends from the frost box structure (Photo 12). The frost box structure sits on a concrete slab surface which has voids (Photo 13).

Photo 6: View of the Water Tower.

[70] Accent Building Sciences, *Building Condition Assessment - 2021 Heritage Attribute Barry's Bay Wooden Tower 19 Stafford St., Barry's Bay*, 11 July 2021, 2.

Photo 7: View of the metal float rod on the rooftop.

Photo 8: View of the metal ladder.

Photo 9: View of hoops and lugs marked “CNR-M”.

Photo 10: View of the wood siding of the frost box indicating horizontal checking damage.

Photo 11: View of damaged and decaying wood timber supports.

Photo 12: View of the metal spout.

Photo 13: View of a void underneath the concrete slab foundation.

5.2.1.2 Interior

The interior frost box of the Water Tower is accessed through a wooden door. It is a rectangular space with pipes. The walls are clad in horizontal wood siding (Photo 14 and Photo 15). It contains the remnants of large metal pipes and a T. McAvity & Sons valve (Photo 16).

Photo 14: View looking up towards the ceiling with the wood siding and pipe remnants visible.

Photo 15: View looking up towards the ceiling with pipe remnants visible.

Photo 16: View of a McAvity 175 W.H.P. valve remnant.

5.2.2 Summary of Condition

A brief structural technical memorandum was prepared by WSP dated 8 September 2023. It noted structural deterioration of several timber columns, beams, and braces, particularly at the base of timber columns, and longitudinal checking and splitting in some beams and braces due to age. One timber column was observed as having been impacted by insect infestation. The concrete slab foundation was observed as having voids. The existing ladder installed at the side of the Water Tower was observed as being unsafe under the Ontario Health and Safety Act due to loose connections to the structure, not being vertical, and not having a safety cage present.[71]

A building condition assessment was prepared by Accent Building Services Inc. dated 11 July 2021. It noted the following: the roof structure, wood soffit, and covering was in very good condition, the wood staves and iron hoops were in good condition, the wood siding of the frost box was in good condition with localized damage from checking and splitting, and the front door was in good condition.[72]

The ladder to the roof of the water tower has been cut well above the ground. Photographs from 1956 show the ladder extending to the ground (Image 7). The ladder had been cut by 1972 (Image 8). It is understood this was a safety measure. Historically, a wood frame supported the sway pipe spout and the pulley system to operate it (Image 6 through Image 8). By 1972 the sway pipe spout was removed (Image 8). The sway pipe spout was restored but without its frame and pulley system. The door frame for the frost box door includes a decorative horizontal piece with “c. 1904” engraved in it. This decorative element does not match the historic photos of the water tower which appear to show a simple, flat board as trim (Image 8).

[71] WSP, *Madawaska Water Tower – Brief Structural Memo*, WSP Ref: 221-08024-00, 8 September 2023.

[72] Accent Building Sciences, *Building Condition Assessment - 2021 Heritage Attribute Barry’s Bay Wooden Tower 19 Stafford St., Barry's Bay*, 11 July 2021.

6.0 COMPARISON WITH OTHER HISTORIC RAILWAY WATER TOWERS

Properties with water towers constructed by Canadian railway companies utilizing standard plans during the nineteenth and twentieth centuries are described in Table 1. A sample of nine wooden water towers were chosen which reflect those characteristics. Some of these comparison examples have a similar design as the one in Barry's Bay but have been demolished. Others still exist but are different designs. However, they all have characteristics common to railway water towers that assist in understanding this general type of structure.

The water towers included on this list are:

- CPR French River Bungalow Camp Water Tower;
- CNR Washago Water Tower;
- CNR Leaside Branch Water Tower;
- CNR Heinsberg Water Tower;
- CPR Clearwater Water Tower;
- CPR MacGregor Water Tower;
- CPR Cranbrook Water Tank;
- CPR Parksville Water Tower; and,
- CPR Dalhousie Mills Water tower.

The water towers at Leaside Branch and Washago were demolished in the 1960s and 1970s respectively. One CPR water tower is designated as a provincial historic site: Heinsburg (Alberta). Two CPR water towers are designated as municipal heritage resources: Clearwater and MacGregor (Manitoba).

The CNR French River Bungalow Camp Water Tower remains as possibly the only other extant railway water tower with a wooden tub in Ontario. However, unlike the CNR Barry's Bay Water Tower, it is supported on a steel frame. Across western Canada, many of the extant CPR water towers are sheathed by an octagonal wooden outer shell (as discussed in Section 4.3), however, the internal design is notably similar with the circular wooden tub and timber frame supports remaining in place. The CNR Leaside Branch water tower and CPR Parksville water tower from British Colombia were/are both very similar designs as the Barry's Bay water tower.

This comparison demonstrates that wood water tanks all have metal hoops with metal lugs. All the tanks have more hoops near the bottom of the tank that spread out as they extend to the top. The lugs are usually arranged in a regular pattern. The most common is a pattern that gradually curves up around the edge of the tank. All water tank designs have some form of float extending from the centre of the roof. Several styles include a small chimney stack.

Water towers with exposed frames tend to have a very similar frame and cross brace arrangement as the Barry's Bay water tower. They also tend to have a wooden frame supporting the sway pipe and its pulley system. The frost boxes appear to fit the space available.

Table 1: Comparison With Other Historic Railway Water Towers

Address	Recognition	Notes	Photo
490 Hwy 607A, French River, ON	None	CPR French River Bungalow Camp Water Tower Constructed c.1923. The CPR French River Bungalow Camp Water Tower is a large water tower with a wooden tub, conical roof, and on a high steel structural frame (Image 9). The CPR French River Bungalow Camp was constructed by the CPR in 1923 (Image 10). It was a resort-style station with a main lodge, a station building, and small cabins. In 1928, it was opened to public use. In 1939, King George VI dined at the main lodge during their cross-country tour.[73] The station building was relocated across the street and converted into a residence (Image 11).[74] This water tower was constructed by the CPR, it served to supply the resort buildings and did not directly supply steam locomotives via a spout. Instead, it may have been connected to a standpipe as the railway tracks were located further down the hill.	 Image 9: View of the French River water tower, 2021.[75]  Image 10: View of the French River water tower, 1924.[76]

[73] "French River C.P.R. Bungalow Camp", OldTimeTrains, 2015, accessed 24 April 2024, http://www.trainweb.org/oldtimetrains/photos/cpr_steam/French_River_bungalow_camp.htm
[74] Amanda Hicks, "French River train station celebrates its centennial", CTV News, 7 August 2023, accessed 24 April 2024, https://northernontario.ctvnews.ca/french-river-train-station-celebrates-its-centennial-1.6509811
[75] EnaahtigNorth, https://www.enaahtig.ca/services
[76] WorthPoint, "French River Bungalow Camp Canada 1924 Travel Brochure Promo W/Map", accessed 24 April 2024, https://www.worthpoint.com/worthopedia/french-river-bungalow-camp-canada-1847418322

Address	Recognition	Notes	Photo
			 Image 11: View of the French River water tower, 1940s. [77]
3325 Quetton Street, Washago, ON	None	CNR Washago Water Tower The first water tower was constructed by the Canada Northern Railway (CNoR) in 1906 (Image 12). It was rebuilt by CNR in the 1930s (Image 13 and Image 14). Demolished in 1979.[78]	 Image 12: View of Washago water tower, 1910.[79]

[77] Nipissing University and Canadore College, "Item 023 - Main Lodge, French River Chalet Bungalow Camp, French River, Ont., Canada.", Francoise Noel Collection, accessed 24 April 2024, https://archives.eclibrary.ca/main-lodge-french-river-chalet-bungalow-camp-french-river-ont-canada

[78] Anne M. de Fort-Menares, Former Canadian National Railways Station Washago, Ontario", RSR-229, Historic Sites and Monuments Board of Canada, http://www.cnr-in-ontario.com/Reports/index.html?http://www.cnr-in-ontario.com/Reports/RSR-229.html

[79]

Address	Recognition	Notes	Photo
			 Image 13: View of Washago water tower, 1952.[80]  Image 14: View of the Washago water tower, 1973.[81]

[80] Anthony Clegg, "Canadian National Railway", JBC Visuals, 1952, https://www.canada-rail.com/galleries/ontario/washago5.jpg
[81] "WashagoWaterCNR1973", Toronto Railway Museum, 1973.

Address	Recognition	Notes	Photo
Leaside, ON	None	CNR Leaside Branch Water Tower Constructed c.1919 as the Canadian Northern Railway locomotive yard and facilities (Image 15 and Image 16). Demolished by 1960.	 Image 15: View of Leaside Branch water tower (left side of image), 1920.[82]  Image 16: View of the Leaside Branch tower, 1955.[83]

[82] "CNR locomotive and car shops, Leaside, Ont.", CSTM Archives, CN Images of Canada Collection, 16501, 1920, accessed 24 April 2024, https://collection.ingeniumcanada.org/en/id/16501/

[83]

Address	Recognition	Notes	Photo
Township Road 553A, Heinsberg, AB	Alberta Provincial Historic Resource	CNR Heinsberg Water Tower Constructed c.1928. With a capacity of 60,000 gallons, it was one of eight of this size built in Alberta and only one still standing at its original location (Image 17). In 1999, it was designated as a Provincial Historic Resource and added to the Canadian Register of Historic Places. Heritage attributes that define the water tower's utilitarian character and standard CPR design include: • Mass, form, and style; • Slight tapering of outside walls; • Octagonal pyramidal cedar shingled roof; • Large galvanized ball on central mast to indicate water level; • Smokestack; • Fenestration style and pattern; • Wooden tank; Original elements, including ladder and parts of pulley system and spout mechanism.[84]	 Image 17: View of the Heinsburg water tower.

[84] Canada's Historic Places, "C.N.R. Station and Water Tower", Parks Canada, accessed 23 April 2024, https://www.historicplaces.ca/en/rep-reg/place-lieu.aspx?id=5002

Address	Recognition	Notes	Photo
11th Street, Clearwater, MB	Municipal Heritage Resource	CPR Clearwater Water Tower Constructed c.1904. The CPR Clearwater Water Tower is an excellent example of an intact railway water tank one of only two such industrial facilities that remain of the 75 built by the CPR in Manitoba from 1902 to 1925 (Image 18). Heritage attributes that define the water tower's utilitarian character and standard CPR design include: • the tall narrow octagonal massing with a shallow octagonal roof and concrete foundation; • the narrow horizontal wood siding, set between vertical corner boards and painted in the standard CPR maroon colour; • the single, solid wood entrance door and fenestration limited to two rectangular openings; and • functional features such as the exterior elements of the water level indicator, consisting of a sliding ball affixed to a rooftop pole, and the supports for the pipe and spout. Key interior elements that define the tower's heritage character include:	 Image 18: View of the Clearwater water tower.

Address	Recognition	Notes	Photo
		• the framework that supports the water tank, comprised of 12 thick timbers set upon concrete bases and strengthened with cross-braces; • the cedar-lined water tank taking up the top half of the structure except for a narrow walkway around its circumference; and • the pipes, valves and controls for filling and using the tank.[85]	
Austin, MB	Municipal Heritage Resource	CPR MacGregor Water Tower Constructed c. 1904. It is one of only two surviving examples of the now lost 75 "CPR Standard Plan No.1" water tanks across Manitoba (Image 19). In 1987, the water tank was donated and moved to the Manitoba Agricultural Museum. It is one of a few water tanks to have been relocated.	 Image 19: View of the MacGregor water tower.

[85] Canada's Historic Places, "Clearwater Canadian Pacific Railway Water Tower", Parks Canada, accessed 23 April 2024, https://www.historicplaces.ca/en/rep-reg/place-lieu.aspx?id=5114&pid=0

Address	Recognition	Notes	Photo
1 Van Horne Street, Cranbrook, BC	None	CPR Cranbrook Water Tank Constructed c.1946 to replace a c.1898 tank. One of the last railway wooden water tanks constructed in British Columbia (Image 20). Relocated to the Cranbrook History Centre.[86]	 Image 20: View of the Cranbrook water tower.
Parksville, BC	None	CPR Parksville Water Tower Constructed c.1910. It was proposed to be demolished in 1996 and saved by the Vancouver Island Water Tower Preservation Society in 1997. It is the only railway water tower on Vancouver Island and one of four remaining in British Columbia (Image 21).[87]	 Image 21: View of Parksville water tower.

[86] Cranbrook Heritage Centre, "The Railway Heritage Area - showing existing and former structures", February 2020, accessed 23 April 2024, https://www.cranbrookhistorycentre.com/wp-content/uploads/sites/107/2020/02/Railway-Heritage.pdf

[87] "Parksville Water Tower", Esquimalt & Nanaimo Division Canadian Railway Historical Association, accessed 26 April 2024, https://www.encrha.com/watertower

Address	Recognition	Notes	Photo
Dalhousie Mills, QC	None	CPR Dalhousie Mills Water tower Constructed c.1898. One of the last railway wooden water tanks constructed in Quebec. This water tower features a wooden tub fastened with iron hoops and bolts, and a conical roof. It sits on a stone masonry foundation (Image 21).	 Image 22: View of the Dalhousie Mills water tower.

7.0 UNDERSTANDING OF CULTURAL HERITAGE VALUE OR INTEREST

7.1 Ontario Regulation 9/06 Evaluation

The property comprising the Water Tower was evaluated for cultural heritage value or interest against *Ontario Regulation 9/06* (***O. Reg. 9/06***) under the *OHA* with the goal of identifying and articulating heritage attributes (Table 2).

Table 2: *Ontario Regulation 9/06* Evaluation for the Barry's Bay CNR Water Tower

Criteria	Criteria Met	Justification
1. The property has design value or physical value because it is a rare, unique, representative or early example of a style, type, expression, material or construction method.	Yes	The CNR Water Tower on the property meets this criterion. The CNR Water Tower on the property is a rare and representative example of a utilitarian wooden railway water tower. It is the only extant railway wooden water tower supported on a timber frame in Ontario. This design was once common across Canada during the period of steam-powered locomotives from the mid-nineteenth to mid-twentieth centuries. The structure appears to be designed based on a CNR Standard Plan.
2. The property has design value or physical value because it displays a high degree of craftsmanship or artistic merit.	No	The CNR Water Tower on the property does not meet this criterion. The CNR Water Tower appears to be designed following a CNR Standard Plan. It does not display a high degree of craftsmanship or artistic merit.
3. The property has design value or physical value because it demonstrates a high degree of technical or scientific achievement.	No	The CNR Water Tower on the property does not meet this criterion. The CNR Water Tower on the property does not demonstrate a high degree of technical or scientific achievement. There is no evidence to suggest that the CNR Water Tower meets this criterion.
4. The property has historical value or associative value because it has direct associations with a theme, event, belief, person, activity,	Yes	The CNR Water Tower on the property meets this criterion. As described in Section 4.0, the CNR Water Tower is generally associated with the OA & PS Railway and the CNR and the railway history of Barry's Bay.

Criteria	Criteria Met	Justification
organization or institution that is significant to a community.		
5. The property has historical value or associative value because it yields, or has the potential to yield, information that contributes to an understanding of a community or culture.	No	The CNR Water Tower on the property does not meet this criterion. There is no evidence to suggest it meets this criterion.
6. The property has historical value or associative value because it demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.	No	The CNR Water Tower on the property does not meet this criterion. The 1894 water tower was designed and built by George Tomlinson, who was a contractor and architect who worked for the CAR and the OA & PS, designing many station buildings and facilities. However, the 1943 CNR Water Tower appears to be based on CNR Standard Plans and designs that were widely available at the time. A specific designer and builder is not known.
7. The property has contextual value because it is important in defining, maintaining or supporting the character of an area.	Yes	The CNR Water Tower on the property meets this criterion. It is important in maintaining the railway heritage of Barry's Bay. It also supports the character of the area through its direct relation to the railway history of Barry's Bay.
8. The property has contextual value because it is physically, functionally, visually or historically linked to its surroundings.	Yes	The CNR Water Tower on the property meets this criterion. It is visually and historically linked to its surroundings. The water tower is part of a complex of buildings in the landscape connected to local railway heritage. This includes the former railway station, Balmoral Hotel and former general store. These buildings and the water tower are visually linked because they can be viewed from each other across the former railway lines that connected them. The water tower is historically linked to these buildings as components of the historic rail landscape in the village.
9. The property has contextual value because it is a landmark.	Yes	The CNR Water Tower on the property meets this criterion. The CNR Water Tower is a landmark. The MCM defines landmark as:

Criteria	Criteria Met	Justification
		a recognizable natural or human-made feature used for a point of reference that helps orienting in a familiar or unfamiliar environment; it may mark an event or development; it may be conspicuous.

7.2 Summary of Evaluation

In our professional opinion, LHC finds that the CNR Water Tower on the property **meets** five criterion of *O. Reg. 9/06* (criterion 1, 4, 7, 8 and 9), a proposed Statement of Cultural Heritage Value or Interest is found below (Section 6.3).

7.3 Statement of Cultural Heritage Value or Interest

7.3.1 Description of Property

The CNR Barry's Bay Water Tower is located at 20 Mahon Street, Barry's Bay, ON, in the Township of Madawaska Valley in Renfrew County. It is located in the geographic township of Sherwood on the west side of Mahon Street within Water Tower Park. It is bound by Mahon Street to the north and east, 17 Billings Street to the south, and 29 and 39 Stafford Street to the west. The CNR Barry's Bay Water Tower is legally described as being on Part Lot 182, Range B, South of the Opeongo Road.

7.3.2 Statement of Cultural Heritage Value or Interest

The CNR Barry's Bay Water Tank has design value because it is a rare and representative example of a wooden railway water tower. It is rare as the only extant railway wooden water tower supported on a timber frame in Ontario. It is representative because the design was once common across Canada during the period of steam-powered locomotives from the mid-nineteenth to mid-twentieth centuries.

The CNR Barry's Bay Water Tower has historical and associative value because it is associated with the OA & PS Railway and Canadian National Railway. It is connected to the railway history of the community.

The CNR Barry's Bay Water Tower has contextual value because it is important in maintaining the railway heritage landscape of the village and supporting the character of the area through its direct relation to the railway history of Barry's Bay. It is visually connected to the railway station building, Balmoral Hotel and former general store along former railway lines. The CNR Barry's Bay Water Tower is a landmark.

7.3.3 List of Heritage Attributes

LHC finds that heritage attributes of the CNR Barry's Bay Water Tower include:

Heritage Attribute	How the Heritage Attribute Contributes to the CHVI of the Property
The location of the Water Tower.	The location of the Water Tower contributes to the historical value and contextual value of the water tower. Its location is visually and historically linked to with the historic railway station, Balmoral Hotel building and former general store. The location of the water tower also connects to the history of the railway in the community. As a remnant railway structure the Water Tower—along with the railway station—maintain the railway heritage characteristics of the area.
The two-storey form and massing of the wooden tank with shallow, conical roof supported on an open wood frame.	The form and massing of the water tower contributes to its design value because this form of structure is a rare surviving example of a railway water tower. The form of the water tower also contributes to the design value because it is representative if a railway water tower based on standard plans for this type of structure. The form and massing of the Water Tower contributes to its contextual value because they are the main features
The wooden tank formed of vertical wood staves and 14 iron hoops and lugs. The hoops close together near the bottom of the tank and gradually spaced further apart as they extend up the tank walls. The lugs arranged in a gentle curve pattern as they wrap around the tank.	The wooden tank with vertical staves and iron hoops with lugs contributes to the design value of the Water Tower as a representative example of this type of structure. The pattern of hoops and lugs was a common practice on many water tower tanks.
The form and location of the frost box inside the support frame of the tower.	The form and location of the frost box contributes to the design value of the water tower because it is representative of the style of water tower and essential to its function.
Horizontal wood siding of the frost box.	The horizontal wood siding of the frost box contributes to the design value of the water tower as a representative example of this type of structure.
The framework that supports the water tank, comprised of 12 thick timber posts set upon a concrete slab and concrete pier foundation in a cruciform plan, and	The structural frame of the water tower in wood contributes to the physical and design value of the water tower as a rare surviving example of this type of structure.

Heritage Attribute	How the Heritage Attribute Contributes to the CHVI of the Property
strengthened with large timber cross-braces bolted to the support timbers.	
Smokestack chimney pipe.	The smokestack chimney pipe contributes to the design value of the water tower as a representative example of this type of structure. The stove pipe reveals part of the function of the water tower and was a common feature on similar structures.
Sliding float rod extending from the centre of the roof.	The sliding float rod contributes to the design value of the water tower as a representative example of this type of structure. The sliding float rod reveals part of the function of the water tower and is found on most railway water towers.
The metal sway pipe spout.	The sway pipe spout contributes to the design value of the water tower as a representative example of this type of structure. The spout is essential to the function of the water tower.
The ladder from the roof.	The ladder contributes to the design value of the water tower as a representative example of this type of structure. It is an original part of the water Tower and the original way to access the water tank.
Interior elements including the remnants of the inlet and outlet pipes and valves.	The interior pipes and valves contribute to the physical value of the Water Tower as part of its functional equipment. This equipment is required for a railway water tower and is representative of its function.

8.0 CONSERVATION STRATEGY

8.1 Principles and Standards

Conservation strategies for built and cultural heritage resources are developed in accordance with the Federal S&Gs (Section 3.1.1) and Ontario's Eight Guiding Principles (Section 3.2.3). A heritage conservation project focuses on a main treatment but may involve more than one. Planning for conservation should clearly identify the primary focus or objective. The S&Gs outline three primary treatments for Conservation:

- Preservation;
- Rehabilitation; and,
- Restoration.

Preservation is "the action or process of protecting, maintaining and/or stabilizing the existing form, material and integrity of an historic place, or of an individual component, while protecting its heritage value."

Rehabilitation is "the action of process of making possible a continuing or compatible contemporary use of an historic place, or an individual component, while protecting its heritage value."

Restoration is "the action or process of accurately revealing, recovering or representing the state of an historic place, or of an individual component, as it appeared at a particular period in its history, while protecting its heritage value."[88]

The conservation approach for the Water Tower should be focused on Preservation. However, the deteriorated condition of the support structure will be rehabilitation and this project includes opportunity for limited restoration. The CHVI of the Water Tower can be conserved through preservation and rehabilitation. This can include repair and maintenance of heritage attributes. It can include replacement of parts of the Water Tower as required.

The *Eight Guiding Principles* and the Standards from the S&Gs share basic principles. Discussion of the application of these principles and standards is included in Table 3 and Table 4.

Table 3: Conservation of the Water Tower based on the *Eight Guiding Principles*

Guiding Principle	Commentary
Respect for documentary evidence: do not restore based on conjecture. Conservation work should be based on historic documentation such as historic photographs, drawings, or physical evidence.	Conservation work must be based on documentation which includes this CHAR and the condition assessments. Current condition engineering drawings should be prepared for the Water Tower, including a record of dimensions of all

[88] Canada's Historic Places, "Standards and Guidelines for the Conservation of Historic Places in Canada," prepared for Her Majesty the Queen in the Right of Canada, second edition, 2010, 17.

Guiding Principle	Commentary
	structural members. Conservation work must be based on current conditions and historic photographs of the Water Tower.
Respect for the original location: do not move buildings unless there is no other means to save them. Site is an integral component of a building or structure. Change in site diminishes the cultural heritage value considerably.	The Water Tower must remain in its current location. If it must be fully or partially disassembled or moved to rebuild footings and the timber structure it must be reassembled in the current location.
Respect for historic materials: repair/conserve–rather than replace building materials and finishes, except where absolutely necessary. Minimal intervention maintains the heritage content of the built resource.	Historic materials on the Water Tower should be preserved wherever possible. Deterioration that can be stabilised and repaired should be. Replacement parts should be limited to only areas that require it.
Respect for original fabric: repair with like materials. Repair to return the resource to its prior condition, without altering its integrity.	If wood members of the Water Tower need to be replaced then the same type of wood should be used if possible. If a species needs to be changed it should be documented.
Respect for the building's history: do not restore to one period at the expense of another period. Do not destroy later additions to a building or structure solely to restore to a single time period.	Not Applicable in this case. Conservation of the Water Tower is not expected to restore anything to one period over another.
Reversibility: alteration should be able to be returned to original conditions. This conserves earlier building design and technique, e.g. When a new door opening is put into a stone wall, the original stones are numbered, removed and stored, allowing for future restoration.	Not Applicable in this case. Conservation work is not expected to alter the structure.
Legibility: new work should be distinguishable from old. Buildings or structures should be recognized as products of their own time, and new additions should not blur the distinction between old and new.	Not Applicable in this case. Conservation work is expected to repair or replace deteriorated elements but not make changes that require differentiation from the original timber structure. However, if any missing elements will be restored this change should be documented and a record should be kept.
Maintenance: with continuous care, future restoration work will not be necessary. With	Conservation of the Water Tower should include a plan for long-term maintenance.

Guiding Principle	Commentary
regular upkeep, major conservation projects and their high costs can be avoided.	

Table 4: General and Rehabilitation Standards for the Conservation of Historic Places in Canada

Conservation Approach	Standard	Identified Standard / Guideline	Commentary
Standards and Guidelines for the Conservation of Historic Places in Canada - General Standards	1	Conserve the heritage value of an historic place. Do not remove, replace or substantially alter its intact or repairable character defining elements. Do not move a part of an historic place if its current location is a character-defining element.	The Water Tower must remain in its current location. However, depending on what work is required for the footings, disassembly, partial disassembly, removing and storing parts or moving the Water Tower entirely while conservation work is underway is acceptable for the short-term. Repair may involve limited replacement of deteriorated parts based on surviving prototypes (Guideline 4.1.11.8 and 4.1.11.9). Detailed measurements are required to replicate deteriorated parts accurately.
	2	Conserve changes to an historic place that over time, have become character-defining elements in their own right.	Not applicable to the Water Tower.
	3	Conserve heritage value by adopting an approach calling for minimal intervention.	Minimal intervention refers to only undertaking work that needs to be done. However, this may still involve extensive work if it needs to be done for the long-term conservation of the structure.

Conservation Approach	Standard	Identified Standard / Guideline	Commentary
	4	Recognize each historic place as a physical record of its time, place and use. Do not create a false sense of historical development by adding elements from other historic places or other properties, or by combining features of the same property that never coexisted.	Not applicable, it is understood that alterations as described by this Standard are not planned for the Water Tower.
	5	Find a use for an historic place that requires minimal or no change to its character-defining elements.	The Water Tower is currently functions as a monument. It will continue to be a monument after conservation work.
	6	Protect and, if necessary, stabilize an historic place until any subsequent intervention is undertaken. Protect and preserve archaeological resources in place. Where there is potential for disturbing archaeological resources, take mitigation measures to limit damage and loss of information.	It is understood that in the short-term the Water Tower is stable but conservation work does need to be completed soon. If conditions change protection and stabilization methods may need to be employed.
	7	Evaluate the existing condition of character-defining elements to determine the appropriate intervention needed. Use the gentlest means possible for any intervention. Respect heritage value when undertaking an intervention.	The heritage attributes (character-defining elements) of the Water Tower were evaluated by Accent Building Sciences as part of the 2021 Building Condition Assessment.
	8	Maintain character-defining elements on an ongoing basis. Repair character-defining elements by reinforcing their materials using recognized conservation methods. Replace in kind any	Rehabilitation work involving the repair of damaged timber posts, repair/replacement of deteriorated wooden staves and iron hoops forming the tub, repair/replacement

Conservation Approach	Standard	Identified Standard / Guideline	Commentary
		extensively deteriorated or missing parts of character-defining elements, where there are surviving prototypes.	of deteriorated wooden siding on the frost box, and repair of the concrete foundation can be undertaken using identical or similar materials in-kind.
	9	Make any intervention needed to preserve character-defining elements physically and visually compatible with the historic place and identifiable on close inspection. Document any intervention for future reference.	It is understood that interventions needed to preserve the Water Tower will be physically and visually compatible. The repairs and replacement parts should be documented and a record of these changes should be maintained by the municipality.
Standards and Guidelines for the Conservation of Historic Places in Canada - Rehabilitation Standards	10	Repair rather than replace character-defining elements. Where character-defining elements are too severely deteriorated to repair, and where sufficient physical evidence exists, replace them with new elements that match the forms, materials and detailing of sound versions of the same elements. Where there is insufficient physical evidence, make the form, material and detailing of the new elements compatible with the character of the historic place.	Rehabilitation work involving the repair of damaged timber posts, deteriorated wooden staves and iron hoops forming the tub, deteriorated wooden siding on the frost box, and the concrete foundation can be undertaken using identical or similar materials in-kind.
	11	Conserve the heritage value and character-defining elements when creating any new additions to an historic place or any related new construction. Make the new work physically and visually compatible with, subordinate to and distinguishable from the historic place.	It is understood that conservation of the Water Tower will not require creating new additions.

Conservation Approach	Standard	Identified Standard / Guideline	Commentary
	12	Create any new additions or related new construction so that the essential form and integrity of an historic place will not be impaired if the new work is removed in the future.	It is understood that conservation of the Water Tower will not require creating new additions.
Standards and Guidelines for the Conservation of Historic Places in Canada - Restoration Standards	13	Repair rather than replace character-defining elements from the restoration period. Where character-defining elements are too severely deteriorated to repair and where sufficient physical evidence exists, replace them with new elements that match the forms, materials and detailing of sound versions of the same elements.	Restoration work involving the repair of damaged timber posts, deteriorated wooden staves and iron hoops forming the tub, deteriorated wooden siding on the frost box, and the concrete foundation can be undertaken using identical or similar materials in-kind.
	14	Replace missing features from the restoration period with new features whose forms, materials and details are based on sufficient physical, documentary and/or oral evidence.	Restoration work could involve the recreation of the iron sway pipe spout and pulley mechanism which existed prior to the 1960s but was removed when the Water Tower ceased to function. This would be possible through following similar CNR Standard Plans such as *No. 150-156* from 1940 and historic photographs of the Water Tower.

8.2 Guidelines

The S&Gs also include guidelines for specific types of historic places and structures. Guidance for built features in Section 4.1.11, guidance for Buildings in Section 4.3, guidance for engineering works in Section 4.4 and guidance for materials in Section 4.5 can be applied to conservation of the Water Tower. The guidelines allow changes to a cultural heritage place where required for human safety, accessibility or environmental sustainability however the guidelines require changes to be sensitive to the heritage character of the place and be based on understanding its heritage value and character-defining elements.

Many of the guidelines that apply to conservation of the Water Tower are straightforward, such as:

- Retaining sound built features or deteriorated built features that can be restored;
- Repairing a deteriorate built feature by using recognized conservation methods. Repair may also include the limited replacement in kind of those extensively deteriorated or missing parts or build features;
- Replacing in kind extensively deteriorated parts of build features where there are surviving prototypes. The new work should match the old in form and detailing;
- Replacing in kind an entire built feature by using the physical evidence of its form, material and detailing to reproduce it. If using the same kind of material is not technically, economically or environmentally feasible, then a compatible substitute material may be considered; for example, replacing redwood decking with cedar, a less endangered species. The replacement feature should be as similar as possible to the original, both visually and functionally.
- Recreating a missing built feature that existed during the restoration period, based on physical, documentary and oral evidence, such as duplicating a corn crib from an existing prototype.
- Protecting adjacent character-defining elements from accidental damage or exposure to damage materials during maintenance or repair work.
- Complying with health and safety requirements, in a manner that minimizes impact on the character-defining element.

Do Not:

- Replace an irreparable built feature with a new feature that does not convey the same visual appearance.

8.3 Commentary on Engineering Report Recommendations

8.3.1 WSP

The WSP 2023 memo on the Water Tower identified four main areas of concern:

- Timber support structure requires replacement;

- Voids below the concrete slab on grade;
- Pier foundations are at grade level; and,
- Existing ladder unsafe.

The recommendations about the timber support structure are consistent with the S&Gs, they only propose replacement of deteriorated timbers and only because the deterioration has affected critical connection points. The recommendation on the voids below the concrete slab and pier foundation is generally consistent with the S&Gs. Correcting pier and foundation problems will support long-term conservation of the structure. Furthermore, historic photos (Image 7 and Image 8) appear to show that the concrete slab and pier foundations used to be above grade more than they are now. The recommendation that the ladder be removed would remove a heritage attribute from the Water Tower. The ladder should be kept on the Water Tower. However, safety considerations can allow changes to the ladder –if necessary. For example, a fine metal grid or plate could be affixed to the ladder, in a way that is reversable, that could prevent anyone who could reach the ladder from using it.

8.3.2 Accent Building Sciences

The Accent Building Sciences Inc. *Building Condition Assessment* 2021 outlined a general conservation strategy based on the S&Gs. The report recommends following the S&G guidance when repairs and replacement is required.

LHC would qualify one recommendation. The *Building Condition Assessment* recommended replacing the asphalt shingle roof covering with wood shake shingles. Historic photographs of the Water Tower do not appear to show wood shake shingles on this water tower. LHC recommends that future roofing material should be chosen based on documentary evidence.

8.4 Conservation Strategy Recommendations

LHC recommends that the Water Tower's water tank be preserved. Deteriorated staves, joists and tank floorboards should be replaced in kind as needed. The chimney, sliding float rod and ladder should be kept on the Water Tower. The iron hoops and lugs should be kept in their current arrangement around the tank. The frost box should be preserved with limited replacement of deteriorated wood cladding.

The timber structure supporting the Water Tank should be documented in detail and rehabilitated. This rehabilitation will require replacement of timbers and bolts as needed. Any replacement must be the same dimensions as the original.

There is opportunity for restoration of missing components of the Water Tower. The wood frame and pulley system for the spout could be rebuilt based on photographs. The fame around the frost box door should be restored to a plain frame and the decorative part with "c. 1904" be removed because this was not originally part of the Water Tower.

9.0 CONCLUSION AND RECOMMENDATIONS

LHC was retained by the Township of Madawaska Valley to prepare a Cultural Heritage Assessment Report for the CNR Water Tower. This report is intended to assist in understanding the cultural heritage value or interest and heritage attributes of the Water Tower and introduce a conservation strategy.

The Water Tower is located at 20 Mahon Street, Barry's Bay, ON, in the Township of Madawaska Valley in Renfrew County. It is located in the geographic township of Sherwood on the west side of Mahon Street. It is in Water Tower Park bound by Mahon Street to the north and east, 17 Billings Street to the south, and 29 and 39 Stafford Street to the west.

LHC found that this Water Tower is likely the last wood water tank on a wood structure in Ontario. It is rare. It is also representative of a style of railway water tower that was once common with many variations but has increasingly disappeared over time. The Water Tower has significant historical value to the Community and has contextual value for maintaining and supporting the local rail heritage, for historical and visual links to other historic buildings connected to local history and as a landmark. The heritage attributes of the Water Tower are:

- The location of the Water Tower.
- The two-storey form and massing of the wooden tank with shallow, conical roof supported on an open wood frame.
- The wooden tank formed of vertical wood staves and 14 iron hoops and lugs. The hoops close together near the bottom of the tank and gradually spaced further apart as they extend up the tank walls. The lugs arranged in a gentle curve pattern as they wrap around the tank.
- The form and location of the frost box inside the support frame of the tower.
- Horizontal wood siding of the frost box.
- The framework that supports the water tank, comprised of 12 thick timber posts set upon a concrete slab and concrete pier foundation in a cruciform plan, and strengthened with large timber cross-braces bolted to the support timbers.
- Smokestack chimney pipe.
- Sliding float rod extending from the centre of the roof.
- The metal sway pipe spout.
- The ladder from the roof.
- Interior elements including the remnants of the inlet and outlet pipes and valves.

Conservation of the Water Tower should focus on preservation with some rehabilitation and restoration elements. It should be guided by the *Eight Guiding Principles* and *S&Gs*. This CHAR,

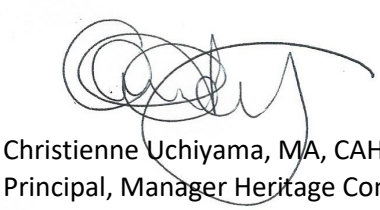
supplementary photographs taken during the site visit for this CHAR, historic photographs of the Water Tower and previously completed engineering studies should inform conservation planning.

LHC recommends:

- Documentation of the Water Tower should include detailed drawings of its current condition along with measurements of structural members. This may include creation of engineering drawings or a computer model of the Water Tower.
- The wood tank condition should be monitored and stabilized—as required.
- Deteriorated staves, joists and tank floorboards should be replaced in kind as needed.
- The chimney, sliding float rod and ladder should be maintained on the Water Tower.
- The iron hoops and lugs should be maintained in their current arrangement around the tank.
- The frost box should be preserved with limited replacement (as needed) of deteriorated wood cladding.
- The timber structure supporting the Water Tank should be documented in detail and rehabilitated.
- Replace structural timbers and bolts as needed.
- Address the void under the concrete slab and grading around the base of the Water Tower, including around the pier footings.

There is opportunity to restore missing components of the Water Tower. The wood frame and pulley system for the spout could be rebuilt based on photographs. The trim around the frost box door should be restored and the decorative trim with “c. 1904” engraved in it should be removed.

SIGNATURES



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APPENDIX A Qualifications

Benjamin Holthof, MPl, MMA, MCIP, RPP, CAHP – Senior Heritage Planner

Ben Holthof is a heritage consultant, planner and marine archaeologist with experience working in heritage consulting, archaeology and not-for-profit museum sectors. He has a Master of Urban and Regional Planning degree from Queens University; a Master of Maritime Archaeology degree from Flinders University of South Australia; a Bachelor of Arts degree in Archaeology from Wilfrid Laurier University; and a certificate in Museum Management and Curatorship from Fleming College.

Ben has consulting experience in heritage planning, cultural heritage screening, evaluation, heritage impact assessment, cultural strategic planning, cultural heritage policy review, historic research and interpretive planning. He has been a project manager for heritage consulting projects including archaeological management plans and heritage conservation district studies. Ben has also provided heritage planning support to municipalities including work on heritage permit applications, work with municipal heritage committees, along with review and advice on municipal cultural heritage policy and process. His work has involved a wide range of cultural heritage resources including on cultural landscapes, institutional, industrial, commercial, and residential sites as well as infrastructure such as wharves, bridges and dams.

Ben spent over 7 years working in museums as a curator which included caring for collections and exhibit development. He has experience with museum strategic planning, interpretive planning and policy development. His experience includes caring for historic museum buildings, sites and specialized large artifacts such as ships, boats and railway cars. Ben is also a maritime archaeologist having worked on terrestrial and underwater sites in Ontario and Australia. He has an Applied Research archaeology license from the Government of Ontario (R1062).

Diego Maenza, MPl CAHP Intern – Heritage Planner

Diego Maenza is a Heritage Planner with LHC Heritage Planning & Archaeology Inc. He holds a B.A. in Human Geography and Urban Studies from the University of Toronto and a Master of Planning degree from Dalhousie University. His thesis considered the urban morphological changes of railway infrastructure, landscapes, and neighbourhoods before and after the 1917 Halifax Explosion. Diego is a heritage professional with three years of public sector experience in Alberta, Nova Scotia, and Ontario through team-based and independent roles. He is an intern member of the Canadian Association of Heritage Professionals (CAHP) and a candidate member of the Ontario Professional Planners Institute (OPPI).

At LHC, Diego has worked on numerous projects dealing with all aspects of Ontario's cultural heritage. He has been lead author or co-author of over twelve cultural heritage technical reports for development proposals including Cultural Heritage Evaluation Reports, Heritage Impact Assessments, and Heritage Documentation Reports. Diego has also provided heritage planning advisory support for the Town of Niagara-on-the-Lake and the Municipality of Port Hope which included work on heritage permit applications and work with municipal heritage

committees. His work has involved a wide range of cultural heritage resources including institutional, infrastructural, industrial, agricultural. and residential sites in urban, suburban, and rural settings.

Jordan Greene, B.A. (Hons) – Mapping Technician

Jordan Greene, B.A., joined LHC as a mapping technician following the completion of her undergraduate degree. In addition to completing her B.A. in Geography at Queen's University, Jordan also completed certificates in Geographic Information Science and Urban Planning Studies. During her work with LHC Jordan has been able to transition her academic training into professional experience and has deepened her understanding of the applications of GIS in the fields of heritage planning and archaeology. Jordan has contributed to over 100 technical studies and has completed mapping for projects including, but not limited to, cultural heritage assessments and evaluations, archaeological assessments, environmental assessments, hearings, and conservation studies. In addition to GIS work she has completed for studies Jordan has begun developing interactive maps and online tools that contribute to LHC's internal data management. In 2021 Jordan began acting as the health and safety representative for LHC.

Christienne Uchiyama, MA, CAHP – Principal, LHC

Christienne Uchiyama MA CAHP is Principal and Manager - Heritage Consulting Services with LHC Heritage Planning & Archaeology. She is a Heritage Consultant and Professional Archaeologist (P376) with more than a decade of experience working on heritage aspects of planning and development projects. She is a member of the Board of Directors of the Canadian Association of Heritage Professionals and received her MA in Heritage Conservation from Carleton University School of Canadian Studies. Her thesis examined the identification and assessment of impacts on cultural heritage resources in the context of Environmental Assessment.

Since 2003 Chris has provided archaeological and heritage conservation advice, support and expertise as a member of numerous multi-disciplinary project teams for projects across Ontario and New Brunswick, including such major projects as: all phases of archaeological assessment at the Canadian War Museum site at LeBreton Flats, Ottawa; renewable energy projects; natural gas pipeline routes; railway lines; hydro powerline corridors; and highway/road realignments. She has completed more than 100 cultural heritage technical reports for development proposals at all levels of government, including cultural heritage evaluation reports, heritage impact assessments, and archaeological licence reports. Her specialties include the development of Cultural Heritage Evaluation Reports, under both O. Reg. 9/06 and 10/06, and Heritage Impact Assessments.

APPENDIX B Glossary

Definitions are based on the *OHA*, the *PPS* and the *S&Gs*.

Adjacent Lands means those lands contiguous to a protected heritage property or as otherwise defined in the municipal official plan (*PPS*).

Alter means to change in any manner and includes to restore, renovate, repair, or disturb and "alteration" has a corresponding meaning ("transformer", "transformation") (*OHA*).

Built Heritage Resource means a building, structure, monument, installation or any manufactured or constructed part or remnant that contributes to a property's cultural heritage value or interest as identified by a community, including an Indigenous community. Built heritage resources are located on property that may be designated under Parts IV or V of the Ontario Heritage Act, or that may be included on local, provincial, federal and/or international registers (*PPS*).

Character-defining elements (éléments caractéristiques) means the materials, forms, location, spatial configurations, uses and cultural associations or meanings that contribute to the heritage value of an historic place, which must be retained in order to preserve its heritage value. (S&Gs)

Conservation (conservation) means All actions or processes that are aimed at safeguarding the character-defining elements of a cultural resource so as to retain its heritage value and extend its physical life. This may involve "Preservation," "Rehabilitation," "Restoration," or a combination of these actions or processes. (S&Gs)

Conserved means the identification, protection, management and use of built heritage resources, cultural heritage landscapes and archaeological resources in a manner that ensures their cultural heritage value or interest is retained. This may be achieved by the implementation of recommendations set out in a conservation plan, archaeological assessment, and/or heritage impact assessment that has been approved, accepted or adopted by the relevant planning authority and/or decision maker. Mitigative measures and/or alternative development approaches can be included in these plans and assessments (*PPS*).

Cultural heritage landscape means a defined geographical area of heritage significance that human activity has modified and that a community values. Such an area involves a grouping(s) of individual heritage features, such as buildings, spaces, archaeological sites, and natural elements, which together form a significant type of heritage form distinct from its constituent elements or parts. Heritage conservation districts designated under the Ontario Heritage Act, villages, parks, gardens, battlefields, mainstreets and neighbourhoods, cemeteries, trails, and industrial complexes of cultural heritage value are some examples (*PPS*).

Heritage Attributes means the principal features or elements that contribute to a protected heritage property's cultural heritage value or interest, and may include the property's built, constructed, or manufactured elements, as well as natural landforms, vegetation, water features, and its visual setting (e.g., significant views or vistas to or from a protected heritage property). (*PPS*).

Heritage Attributes means in relation to real property, and to the buildings and structures on the real property, the attributes of the property, buildings and structures that contribute to their cultural heritage value or interest; ("attributs patrimoniaux") (*OHA*).

Heritage value (valeur patrimoniale) The aesthetic, historic, scientific, cultural, social or spiritual importance or significance for past, present or future generations. The heritage value of an historic place is embodied in its character-defining materials, forms, location, spatial configurations, uses and cultural associations or meanings. (S&Gs)

Historic place (lieu patrimonial) A structure, building, group of buildings, district, landscape, archaeological site or other place in Canada that has been formally recognized for its heritage value. (S&Gs)

Intervention (intervention) Any action, other than demolition or destruction, that results in a physical change to an element of a historic place. (S&Gs)

Minimal intervention (intervention minimale) The approach that allows functional goals to be met with the least physical intervention. (S&Gs)

Preservation (préservation) The action or process of protecting, maintaining, and/or stabilizing the existing materials, form, and integrity of a historic place or of an individual component, while protecting its heritage value.

Property means real property and includes all buildings and structures thereon (*OHA*).

Protected Heritage Property means property designated under Parts IV, V or VI of the Ontario Heritage Act; property subject to a heritage conservation easement under Parts II or IV of the Ontario Heritage Act; property identified by the Province and prescribed public bodies as provincial heritage property under the Standards and Guidelines for Conservation of Provincial Heritage Properties; property protected under federal legislation, and UNESCO World Heritage Sites (*PPS*).

Rehabilitation (réhabilitation) The action or process of making possible a continuing or compatible contemporary use of a historic place or an individual component, while protecting its heritage value. (S&Gs)

Restoration: (restauration) The action or process of accurately revealing, recovering or representing the state of a historic place or of an individual component, as it appeared at a particular period in its history, while protecting its heritage value. (S&Gs)

Significant in regard to cultural heritage and archaeology, resources that have been determined to have cultural heritage value or interest. Processes and criteria for determining cultural heritage value or interest are established by the Province under the authority of the Ontario Heritage Act. (*PPS*)