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September 9, 2026
Reference No. 136546 (30261055)

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Attention: Udo Ehrenberg, P.Eng.
Senior Project Manager

Subject : Main & Whitney (HD17A) Water Pumping Station
Municipal Class Environmental Assessment and Conceptual Design
Final Project File Report

Arcadis Professional Services (Canada) Inc. (Arcadis) is pleased to submit this Final Project File Report for the Municipal Class Environmental Assessment (Class EA) and Conceptual Design of Main & Whitney (HD17A) Water Pumping Station (WPS). This report documents the Schedule B Municipal Class EA planning process undertaken, including communication and consultation, the preferred solution, mitigation measures and next steps.

Following MECP's and the City's review of the Project File Report, Arcadis has incorporated the comments received and circulated the revised report to the review agencies before filing it for the 45-day public review period, exceeding the minimum 30-day requirement.

We trust the Final Project File Report is satisfactory and look forward to receiving comments. Should you have any questions or require additional information, please do not hesitate to contact me the underwriter.

Best Regards,

Arcadis Professional Services (Canada) Inc.



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Principal, Senior Practice Lead –
Transportation Planning

cc: Christine Hill, Arcadis



Hamilton



September 2026

Main & Whitney (HD17A) Water Pumping Station

Municipal Class Environmental Assessment and Conceptual Design

Final Project File Report



Prepared By:

Arcadis Professional Services (Canada) Inc.

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Terms of Acronyms

ANSI	Area of Natural and Scientific Interest
Arcadis	Arcadis Professional Services (Canada) Inc. (Formerly Arcadis IBI Group Inc. and/or IBI Group Inc.)
ASI	Archaeological Services Inc.
ATRIS	Aboriginal and Treaty Rights Information System
BHR	Built Heritage Resource
Class EA	Class Environmental Assessment
CHL	Cultural Heritage Landscapes
COLE	Cole Engineering Group Ltd. (now Arcadis Professional Services (Canada) Inc.)
CVC	Credit Valley Conservation
DFO	Fisheries and Oceans Canada
DWWP	Drinking Water Works Permit
EA Act	Environmental Assessment Act
ELC	Ecological Land Classification
ESA	Environmentally Sensitive Area
ESC	Erosion and Sedimentation Control
ESR	Environmental Study Report
HD17A	Existing Main & Whitney Water Pumping Station for Pressure District 17
HCA	Hamilton Conservation Authority
GGH	Greater Golden Horseshoe
IBI	IBI Group Inc. (now Arcadis Professional Services (Canada) Inc.)
km	Kilometre
L/s	Litre per Second
LID	Low Impact Development
LGL	LGL Limited
m ²	Metres squared
MCM	Ministry of Citizenship and Multiculturalism
MEA	Municipal Engineers Association

MNR/MNR	Ministry of Natural Resources and Forestry / Ministry of Natural Resources
MECP/MOE	Ministry of the Environment, Conservation and Parks / Ministry of the Environment
MTCS	Ministry of Tourism, Culture and Sport
MHSTCI	Ministry of Heritage, Sport, Tourism and Culture Industries
MCM	Ministry of Citizenship and Multiculturalism
NEC	Niagara Escarpment Commission
NEP	Niagara Escarpment Plan
PD	Pressure District
PIC	Public Information Centre
PPS	Provincial Policy Statement
PRV	Pressure Reducing Valve (PRV)
PTTW	Permit to Take Water
SAR	Species at Risk
Stage 1 AA	Stage 1 Archaeological Assessment
SUE	Subsurface Utility Engineering
TCPL	TransCanada PipeLines Ltd
TM	Technical Memorandum
TSSA	Technical Standards and Safety Authority
WPS	Water Pumping Station

Executive Summary

The City of Hamilton retained Arcadis Professional Services (Canada) Inc. (formerly Arcadis IBI Group, IBI Group and/or Cole Engineering Group Ltd) to complete a Schedule B Municipal Class Environmental Assessment (Class EA) for a new Water Pumping Station (WPS) for Pressure District (PD) 17, in accordance with the planning process outlined in the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment document (February 2024).

The new WPS is to replace the existing Main & Whitney (HD17A) WPS, which is beyond its recommended useful life and requires substantial rehabilitation and it does not meet the current design standards or eliminate existing health and safety risks.

The Problem / Opportunity Statement for this Class EA Study is:

A solution is required for a new water pumping station to service development within PD17, to enhance water system security and reliability, and to meet the Ministry of the Environment, Conservation and Parks (MECP) guidelines and City design standards, while improving system operating efficiencies.

This project involves:

- Constructing a new WPS near the existing HD17A WPS and continuing to provide long term water servicing for the customers within Pressure District 17 (PD17).
- Decommissioning the existing HD17A WPS, once the new water pumping station is commissioned and fully operational.
- Watermain construction may be required depending on the preferred location.

The purpose of the Class EA is to select the preferred sites for a new WPS and to provide the conceptual design of the proposed WPS.

A total of 21 alternative sites were identified as the long list for evaluation. Through the evaluation and screening of the long list of sites, seven (7) alternative sites were carried forward to the short list for further evaluation.

Following the evaluation of the seven (7) short-listed alternative sites against natural, social, economic, and technical criteria, the preferred site for the WPS is Site 6, located at 1845 Main Street West and Whitney Avenue. The following must be completed prior to implementation of the preferred WPS site:

- Negotiations with the impacted property owner(s) to secure lands required to implement the preferred solution will be initiated during the detailed design phase of the study.
- Advance the detail design stage and confirm the mitigation measures outlined in **Section 6** of this report, including further refinement as appropriate. Confirm the specific site is subject to property acquisition by the City of Hamilton.

- Continue to consult with review agencies, including Ministry of the Environment, Conservation and Parks (MECP), Utilities, Indigenous Communities, Ministry of Natural Resources and Forestry (MNRF), Ministry of Tourism Culture and Sports (MTCS), and Hamilton Conservation Authority, as applicable.
- Notify the interested parties, including the Indigenous Communities of any future field work related to environmental and archaeological assessment.
- Notify Indigenous Communities, which requested updates of any archaeological findings and any follow-up investigative reports, Indigenous communities include:
 - Six Nations of the Grand River Elected Council (SNEC), Land & Resources Dept, Land Use Unit, Consultation & Accommodation Process Team (CAP).
 - Haudenosaunee Confederacy Chiefs Council (HCCC) - copy Haudenosaunee Development Institute (HDI) with all correspondence
 - Mississaugas of the Credit First Nation (MCFN)
 - Wendat First Nation at Wendake (Formerly Huron Wendat First Nation at Wendake)
- Undertake a geotechnical investigation, hydrogeological investigation and Subsurface Utility Engineering (SUE) would be required to confirm construction methods during detailed design.
- Complete a Heritage Impact Assessment (HIA) for possible indirect adverse impacts due to construction related vibrations for cultural heritage landscape within 50 m of the proposed work at the preferred Site 6. Findings from HIA may result in additional study or mitigations measures to be completed prior to implementation.
- During detailed design, comply with zoning requirements where possible, or apply for zoning variances where regulations cannot be met.
- Maintain a Permits and Approvals Status Log and Schedule, after reviewing and confirming the following list of identified permits and approvals:
 - MECP Environmental Compliance Approval
 - MECP Permit to Take Water (PTTW)
 - Drinking Water Works Permit (DWWP) Amendment
 - DWWP Schedule 'C' for watermain extension/installation
 - Watermain in all potential sites utilize the road right-of-way (ROW) for the construction of the required linear infrastructures; thus, no additional land is required for the installation of the watermains – Schedule 'A'
 - Ministry of Natural Resources and Forestry (MNRF)
 - City of Hamilton permits such as site plan approval, building permit, etc.

- City of Hamilton Zoning Variance, if current zoning requirements cannot be met
- Ministry of Tourism, Culture and Sport
- Electrical Safety Authority (ESA)
- Transport Canada Notification
- Technical Standards and Safety Authority (TSSA) Approvals
- Approvals from or notification to Horizon Utilities, Bell Canada, Hydro One and Rogers may also be required and will be determined at the detailed design stage

1 Introduction

The City of Hamilton is planning to construct a new Water Pumping Station (WPS) for Pressure District 17 (PD17) to replace the exiting HD17A WPS at Main Street West and Whitney Avenue. HD17A WPS was originally built in 1968 and draws water from Pressure District 2 and provides booster capability to maintain water pressure in Pressure District 17 (PD17).

This study is being conducted in accordance with the approved requirements for a Schedule B, which includes Phases 1 and 2 of the Municipal Class EA planning and design process.

Once the new pumping station is commissioned, the existing HD17A WPS will be decommissioned.

1.1 Background

The need for a new WPS was documented in the facility Condition Assessment (CA) Report (WSP, October 2012), which found the existing HD17A WPS to be in a fair to poor state of repair and beyond its recommended useful life and requiring substantial rehabilitation.

The “Do Nothing” alternative was evaluated in the Osler & Main/Whitney Pump Station Feasibility Study (WSP, 2015) and it was ruled out as the existing HD17A WPS does not meet the current design standards or eliminate existing health and safety risks.

Based on age, level of deterioration and deficiencies, and the confined space nature of a below grade water pumping station, construction of a new above ground pumping station was recommended to replace the existing HD17A WPS.

1.2 Study Purpose

The purpose of this Municipal Class EA is to select a preferred site(s) for a new WPS through a comprehensive and environmentally sound planning process open to public participation.

By completing the Municipal Class EA planning process, the preferred solution should address the problems or opportunities by taking into consideration the existing environment and establish the preferred solution taking into considering review agencies, public, stakeholder and Indigenous Communities review and input.

The project involves:

- Constructing a new WPS near the existing HD17A WPS and continuing to provide long term water servicing for the customers within Pressure District 17 (PD17).
- Decommissioning the existing HD17A WPS, once the new water pumping station is commissioned and fully operational.
- Watermain construction may be required depending on the preferred location.

1.3 Description of Study Area

One of the alternative solutions (alternative 2: separate pumping station upgrades) presented in the 2015 study prepared by WSP (formerly GENIVAR) proposed that the new WPS for Pressure District 17 (PD17) be located hydraulically close to the existing pumping station. This was suggested to provide for similar hydraulic conditions and minimal linear infrastructure.

1.3.1 Initial Study Area

The initial project Study Area was presented in Technical Memorandum #1 – Phase 1 Problem/Opportunity (TM #1) and at the first Public Information Centre (PIC No.1). It was defined by the existing PD17 service area boundary plus a 500 m radius buffer around a potential alternative location/site.

1.3.2 Study Area Expansion

Following the first PIC, 10 potential site locations (9 along Osler Drive and Main Street West from Osler Drive and Ainslie Wood Road plus one alternative site located at the Osler WPS, HD011) were identified based on the initial Study Area. These 10 alternative sites were presented at meetings with City staff in the middle of 2022. As a result of discussions at the meetings, as well as other input from City staff, the initial Study Area was expanded to include a larger area (i.e., along Whitney Avenue, Lower Horning Road, and Rifle Range Road plus the location at Ainslie Wood Park). As such, 11 additional locations (for a total of 21) were identified and added to the long list of alternatives for evaluation. **Section 5** provides further details on the selection of the alternative sites.

Through the evaluation and screening of the potential alternative sites, seven (7) sites have been placed on the short list. Among these, two are outside the initial Study Area presented at the first PIC. As such, the Study Area was expanded east to Bowman Street and includes a buffer area of approximately 500 m radius from each of the seven sites. The Class EA Study Area has thus been expanded to include the initial Study Area and the Study Area expansion shown in **Figure 1-1**.

1.4 Project Team

Arcadis Professional Services (Canada) Inc. (Arcadis) was retained by the City of Hamilton to complete the Main & Whitney (HD17A) WPS Class EA and Conceptual Design. The project team includes Arcadis staff as prime consultant. LGL Limited (LGL) was retained to provide a Natural Environment Assessment, and Archaeological Services Inc. (ASI) was retained to provide Cultural Heritage and Stage 1 Archaeological Assessment (Stage 1 AA).

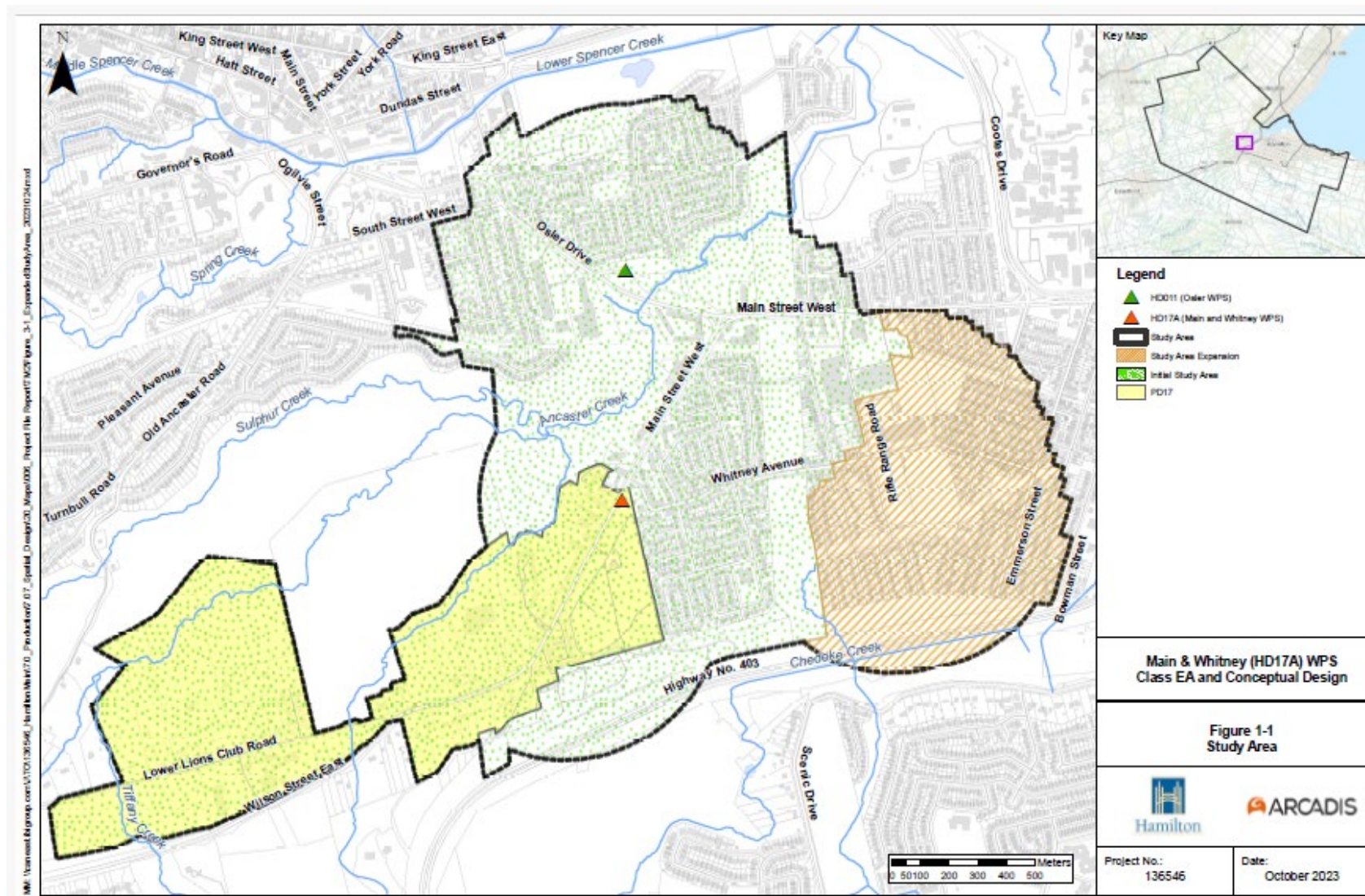


Figure 1-1 Study Area

2 Municipal Class Environmental Assessment Planning Process

The planning of major municipal projects or activities is subject to the *Ontario Environmental Assessment Act (EAA)*, R.S.O. 1990, and requires the proponent to complete an Environmental Assessment, including an inventory and description of the existing environment in the area affected by the proposed activity.

2.1 Overview of the Municipal Class Environmental Assessment

The Municipal Class Environmental Assessment (MCEA) process was developed by the Municipal Engineers Association (MEA) as an alternative to individual Environmental Assessments for recurring municipal projects that were similar in nature, usually limited in scale, and with a predictable range of environmental effects which were responsive to mitigating measures.

The MCEA process applies to municipal infrastructure projects including roads, water and wastewater projects, etc. The study was completed in accordance with the Municipal Class EA process as set out by the Municipal Engineers Association (MEA, February 2024). When the project began in 2021, Schedule B was confirmed as the appropriate project schedule under Class EA guidance as amended to 2015. The February 2024 EA guidance was reviewed, and Schedule B was again confirmed as the appropriate project schedule.

According to the MCEA Companion Guide (February 2024) and the project list for Municipal Water and Wastewater Projects included in the MCEA document, the project will include activities under the following schedules:

Except Project: “*Retire any water infrastructure facility (see Glossary for definition of Retirement)*” is categorized as “*exempt*” project. (Project list for Municipal Water and Wastewater Projects included in Appendix 1 of the MCEA document (Project list for Municipal Water and Wastewater Projects included in Appendix 1 of the MCEA document, Project 7 on Page 176);

“Retirement Means the taking out of operation, abandonment, removal, demolition or disposal of a road, water or wastewater facility for which a process under the EAA would have been necessary for its establishment and includes sale, lease, or other transfer of the facility for purposes of taking out of operation, abandonment, removal, demolition or disposal” (Glossary on Page 18); and,

“Except Project means an undertaking which is exempt from the EAA” (Glossary on Page 14).

Schedule B: “*Establish, extend or enlarge a water distribution system and all works necessary to connect the system to an existing system or water source, where such facilities are not in either an existing road allowance or an existing utility corridor*” (Project 4c on page 175).

In addition, according to Table of Contents (Page 7) of MECA 2024 - Amendment:

“These projects, most of which were formerly classified as Schedule A and A+ projects, include various municipal maintenance, operational activities, rehabilitation works, minor reconstruction or replacement of existing facilities, and new facilities that are limited in scale and have minimal adverse effects on the environment. These projects are exempt from the requirements of the Environmental Assessment Act”.

As described in the MCEA 2015 Amendment, the retirement / decommissioning of the existing HD17A WPS is considered Schedule A+ (pre-approved and the public will be advised prior to the implementation (Phase 5) for the existing HD17A WPS. However, according to the MCEA 2024, the retirement/ decommissioning of the existing HD17A WPS is categorized as exempt project from EAA requirements and will proceed directly without further study.

This Class EA will include an evaluation of environmental, social and cultural conditions as well as a technical assessment of the feasibility of alternative new pumping station solutions. To meet the requirements of a Schedule B Class EA, this study will complete Phases 1 and 2 of the Municipal Class EA Process (**Figure 2-1**).

This report documents Phase 1 and Phase 2 of the Municipal Class EA process including consultation. **Figure 2-1** illustrates the Class EA planning flowchart.

To meet the requirements of a Schedule B Class EA, this study will complete Phases 1 and 2 of the Municipal Class EA Process (**Figure 2-1**):

- Phase 1: **Problem or Opportunity:** Identify the problems (deficiencies) or opportunities to be addressed and the needs and justification.
- Phase 2: **Alternative Solutions:** Identify alternative solutions to address the problems or opportunities by taking into consideration the existing environment and establish the preferred solution taking into considering review agencies, public, stakeholder and Indigenous Communities review and input.

The specific mandatory public and agency consultation contact points and methods for Schedule B undertakings as outlines in the MCEA process is to be completed.

At the end of the Class EA process, a Project File Report must be prepared to document the planning process and made available for review by any interested person or party. To complete the Schedule B process, a Notice of Completion will be issued to Indigenous Communities, review agencies and the public and a period of at least 30 calendar days will be allowed for comment and input. The Notice will include information on requesting the Section 16 Order. If there are no concerns raised and/or no Section 16 Order requested, Phase 5 (Implementation) can be proceeded, based on the preferred solution.

EXHIBIT A.2. MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

NOTE: This flow chart is to be read in conjunction with Part A of the MCEA

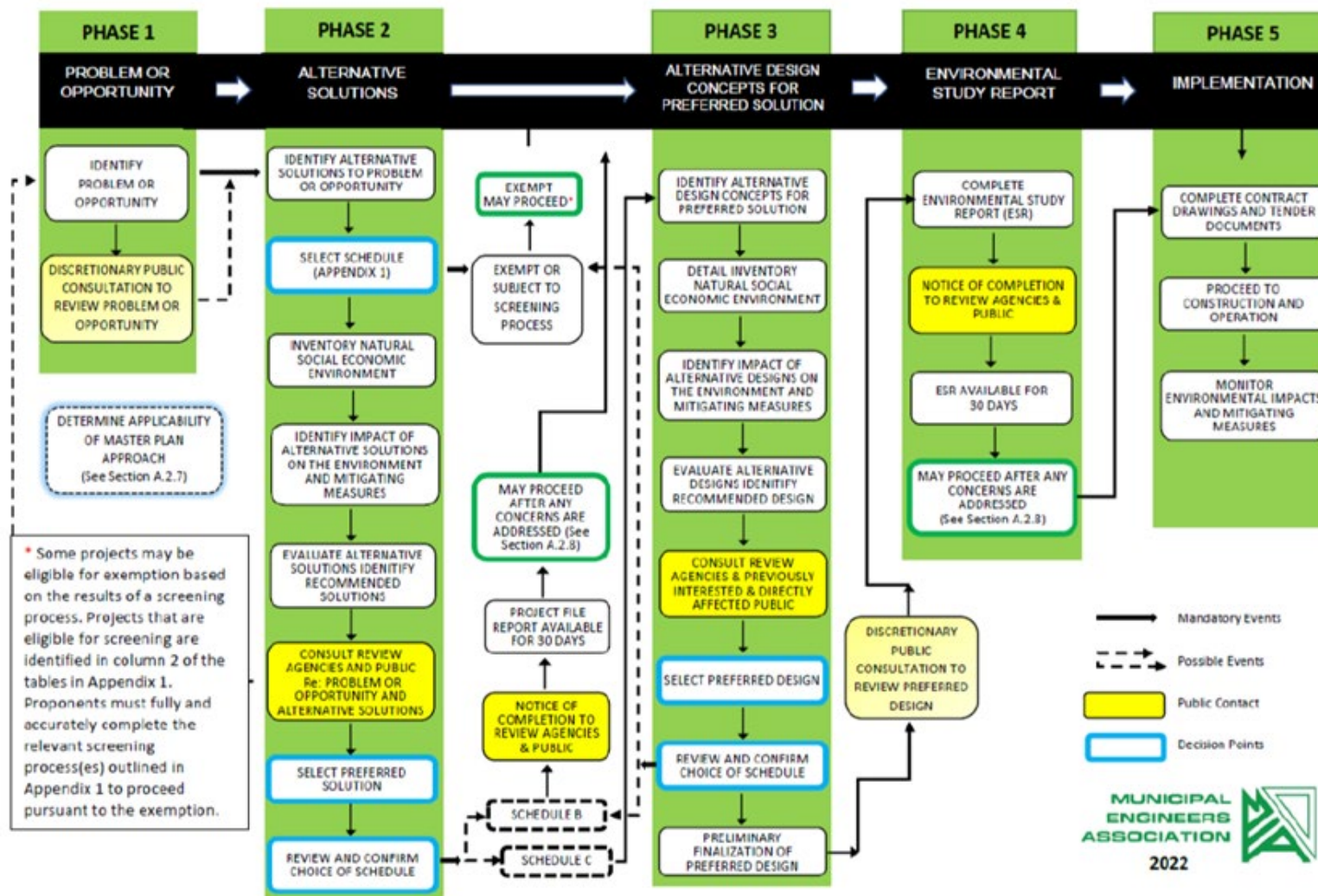


Figure 2-1 Overview of the Municipal Class EA Planning Process

2.2 Communications and Consultation

Consultation with a range of stakeholders was undertaken throughout the Municipal Class EA planning process. A variety of communications strategies were used, including newspaper notices, written correspondence, postings on the City's website, two Public Information Centres, Individual stakeholder meetings were also held throughout the study. Consultation with Indigenous Communities was also conducted at key points throughout the study to ensure their interests and historical connections in the area were respected. Communications were conducted by mail, phone, and/or email. Details of the communications and consultation program are discussed in **Section 7**. A summary of the comments and questions received from the public, agencies, and Indigenous Communities representatives during the Class EA process is provided in **Appendices H to J**. Copies of the actual written correspondence received from agencies and the public (confidential information redacted) are provided in **Appendices K to M**.

2.2.1 Public Review of Project File and Next Steps

This Project File Report completes the planning stages for a Schedule B Municipal Class EA as required under the MEA Class EA process. The Project File Report will be made available for public review and comment for a period of 45-calendar days starting on September 15, 2026 and ending on October 30, 2026. To facilitate public review of the Project File, the report is available on the City's website: www.hamilton.ca/main-whitney-hd17a-water-pumping-station as well as at the following locations:

1. Dundas Municipal Service Centre at 60 Main Street, Dundas ON L9H 0B7, Tel: 905-546-2489
2. Hamilton Public Library - Westdale Branch at 955 King Street West, Hamilton ON L8S 1K9, Tel: 905-546-3200
3. Municipal Clerk's Office, City Hall, 1st Floor, 71 Main Street West, Hamilton, ON L8P 4Y5

Alternative arrangements to view the report are available upon request. Interested parties are encouraged to review this report and submit written comments by **October 30, 2026**, to one of the study team representatives listed below:

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2.2.2 Section 16 Order Requests

The EAA allows a person with concerns pertaining to potential adverse impacts to Aboriginal or treaty rights that have not been addressed through the Class EA process to make a Section 16 Order request. A request can only be made on the grounds that the order may prevent, mitigate or remedy adverse impacts on Constitutionally protected Aboriginal or treaty rights. Requests that are not made on these grounds will not be considered by the Minister. If a Section 16 Order request is received by the Minister, the proponent shall not proceed with their project until a decision is made by the Minister on the request, or the ministry notifies the proponent that they may proceed. The Minister's (or delegate's) decision may include a request for information, consultation, monitoring, or requiring an individual/ comprehensive Environmental Assessment, or that further studies be completed.

The request for a Section 16 Order must also be submitted to the study team at the same time it is submitted to the Minister. Written requests for a Section 16 Order must be submitted to the MECP within the 30-calendar day review period after the Notice of Completion is issued. Requests after the 30-calendar day review period will not be considered.

The request should be sent to both the Minister of Environment, Conservation and Parks (MECP) and the Director of Environmental Assessment Branch. Their contacts are as follows:

Ministry of the Environment, Conservation and Parks

777 Bay Street, 5th Floor
Toronto ON M7A 2J3
Email: Minister.mecp@ontario.ca

Director, Environmental Assessment Branch
Ministry of the Environment, Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto, ON M4V 1P5
Email: EABDirector@ontario.ca

For further information on requests for orders under Section 16 of the Environmental Assessment Act., please visit the MECP's website at: www.ontario.ca/page/class-environmental-assessments-section-16-order.

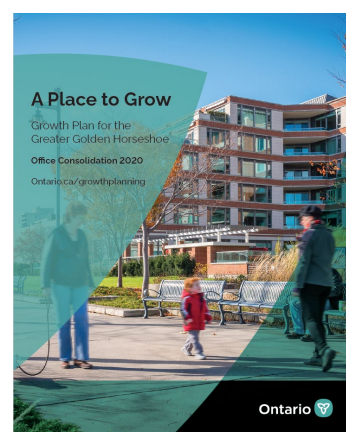
3 Planning Context

As with all municipalities in Ontario, the City of Hamilton must operate according to the planning frameworks established by senior levels of government. Among other administrative, legislative and financial frameworks, this includes policies and legislation by the federal government and the Province of Ontario. In addition, the *Planning Act* requires that municipalities such as the City of Hamilton prepare their own Official Plans to govern land use. The following sections discuss the applicable legislation and relevant planning policies considered as part of this study.

3.1 A Place to Grow - Growth Plan for the Greater Golden Horseshoe

A Place to Grow: Growth Plan for the Greater Golden Horseshoe (“Growth Plan”), 2020, was prepared and approved under the Places to Grow Act (2005) as a legal framework to implement the Province’s vision for managing growth within the Greater Golden Horseshoe (GGH).

The Growth Plan for the Greater Golden Horseshoe (2020) explains that “municipal water and wastewater systems will be planned, designed, constructed or expanded” accordingly so that opportunities for optimization and improved efficiency within existing systems will be prioritized and supported by strategies for energy and water conservation and water demand management; and, the system will serve growth in a manner that supports achievement of the minimum intensification and density targets in this plan



Relevance to the Study: One of the stated purposes of the study is to ensure that the present level of service is maintained, and future needs can be achieved. Additionally, the purpose of this study was to select a preferred solution through environmentally sound planning for the protection of the environment. The above policies were considered in the evaluation of alternatives.

3.2 Provincial Policy Statement

The Provincial Policy Statement (PPS), 2024, provides direction to municipalities on matters related to land use planning and development.

Policy 3.1 of the PPS provides direction to municipalities regarding water services. Key policies state that infrastructure shall be provided in a coordinated, efficient and cost-effective manner that considers impacts from climate change while accommodating projected needs.

Policies 3.1.2 and 3.1.3 state that the use of existing infrastructure should be optimized before consideration is given to developing new infrastructure, and infrastructure should be



strategically located to support effective and efficient delivery of emergency management services.

With respect to water specifically, key sections of Policy 3.6 state that planning for water services shall:

- Direct and accommodate expected growth or development in a manner that promotes the efficient use and optimization of existing i) municipal water services, and ii) private communal water services, where municipal services are not available.
- Ensure that these systems are provided in a manner that: i) can be sustained by the water resources upon which such services rely, ii) is feasible, financially viable and complies with all regulatory requirements, and iii) protects human health and the natural environment.
- Promote water conservation and water use efficiency.
- Integrate servicing and land use considerations at all stages of the planning process.

The directions and methods outline the policies to support the Climate Change:

- Policies 5.2.4 and 3.6.8 encourage green infrastructure (e.g., permeable surfaces) and strengthen stormwater management requirements.
- Policy 2.2.9 requires the consideration of energy conservation and efficiency, reduced greenhouse gas emissions and climate change adaptation (e.g., tree cover for shade and for carbon sequestration).
- Policy 2.9.1 requires consideration of the potential impacts of climate change that may increase the risk associated with natural hazards (e.g., flooding due to severe weather).

Policy 4.0 provides direction regarding the protection and management of natural heritage features and resources. The PPS defines the following natural heritage features and provides planning policies for each, including:

- Significant wetlands and coastal wetlands – designated by the Ministry of Natural Resources and Forestry (MNRF) and/or the municipality.
- Significant woodlands – identified using criteria established by the MNRF.
- Significant valleylands – the responsibility of the municipality or other planning authority, in this case the Hamilton Conservation Authority (HCA).
- Significant wildlife habitat of endangered or threatened species – determined in accordance with provincial and federal requirements.
- Areas of Natural and Scientific Interest (ANSIs) – the responsibility of the municipality or other planning authority, in this case the HCA.
- Fish habitat – governed by Fisheries and Oceans Canada.

Each of these features is afforded varying levels of protection subject to guidelines, and in some cases, regulations, further discussed below.

Relevance to the Study: One of the stated purposes of the study is to ensure that the present level of service is maintained, and future needs can be achieved. Additionally, the purpose of this study was to select a preferred solution through environmentally sound planning for the protection of the environment. The above policies were considered in the evaluation of alternatives.

3.3 Clean Water Act

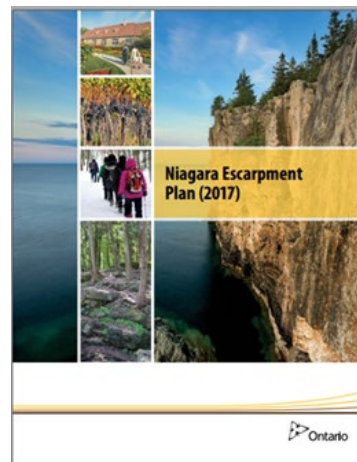
As a requirement of the Municipal Class EA process, proponents are required to include reference to the Clean Water Act (2006) and must identify in the process whether a project is, or could potentially be occurring, within a vulnerable area. An objective of the Clean Water Act seeks to stop contaminants from getting into sources of drinking water and the construction work associated with the new WPS for PD17 could pose a risk. The Study Area doesn't fall within the plan jurisdiction of the Niagara Peninsula Source Water Protection Area, nor the Hamilton Region Source Water Protection Area and it is not located within an Intake Protection Zone where the Source Protection Plan Policies apply. Additional information regarding geotechnical conditions is presented in **Section 4.4**.

3.4 Niagara Escarpment Plan

The *Niagara Escarpment Planning and Development Act* established a planning process to ensure that the Niagara Escarpment area is protected. As a result of this Act, the NEP was originally approved on June 12, 1985. Since then, there have been several revisions and updated with the most recent NEP 2017 being approved on June 1, 2017.

Policy 2.12 of the NEP “provide the objective to design and locate infrastructure so that the least possible impact occurs on the Escarpment environment and to encourage green infrastructure and low impact development, where appropriate”.

Policy 2.12.7 “Municipal water and wastewater systems and private communal water and wastewater systems shall not be located in or extended into Escarpment Natural Area, Escarpment Protection Area, Escarpment Rural Area, or Mineral Resource Extraction Area, unless such servicing is required to address failed individual on-site sewage or water services, or to ensure the protection of public health where it has been determined by a medical officer of health (or health authority) that there is a public health concern associated with the existing services. The capacity of services provided in these circumstances will be restricted to that required to service the affected area and shall not allow for growth or development beyond what is permitted in this Plan”.



Relevance to the Study: The NEP outlines the objectives and policies relating to development, preservation and enjoyment of the Niagara Escarpment. The NEP designates the Escarpment Protection Area within PD17 and along Main Street West and/or Lower Lion Club Road (west of Filman Road) were identified as Significant Woodlands and/or

Escarpment Protection Area (Natural Heritage system (NHS) Area). Thus, alternative locations within PD17 and west of Filman Road would not be considered for the new WPS of PD17.

3.5 Greenbelt Plan

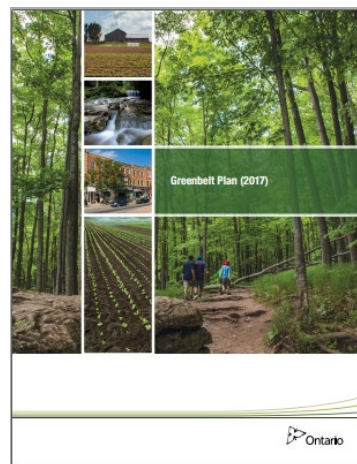
The *Greenbelt Act* (2005) resulted in the Greenbelt Plan (Ministry of Municipal Affairs and Housing, 2005, amended in 2017). The Greenbelt is a broad band of permanently protected land which supports agriculture as its predominant land use.

The Study Area partially falls within the Greenbelt Plan Natural Heritage System, specifically Protected Countryside, and is subject to the Greenbelt Plan. The policies for the Protected Countryside and Natural Heritage System outlined in the Greenbelt Plan

Policy 1.2.2.5 “support for infrastructure which achieves the social and economic aims of the Greenbelt and the Growth Plan and improves integration with land use planning while seeking to minimize environmental impacts” and “provision for the availability and sustainable use of those resources critical to the region’s social, environmental, economic and growth needs”.

Policy 4.2.2.d “New or expanding infrastructure shall avoid key natural heritage features, key hydrologic features or key hydrologic areas unless need has been demonstrated and it has been established that there is no reasonable alternative”.

Relevance to the Study: Based on the above policy, the project will not contravene the Protected Countryside policies and are consistent with the direction of the Greenbelt Plan.



3.6 Hamilton Conservation Authority – Regulations and Policies

The Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses (Ontario Regulation 161/06), is a regulation issued under Conservation Authorities Act, R.S.O. 1990. Through this regulation, the HCA has the responsibility to regulate activities in natural and hazardous areas, including ravines, valleys, sections of the Niagara Escarpment or other steep slopes, areas in and near rivers, streams, floodplains of Dundas Valley land, wetlands, Hamilton Harbour and the Lake Ontario shoreline and adjacent lands to the natural features listed above. The project limits are located within HCA regulated lands, as it is located on the Niagara Escarpment and within the Davis Creek valley.

Therefore, a permit will be required from the HCA under the O. Reg. 161/06 to proceed with site alteration within these areas (see Figure 3 in **Appendix C** (Natural Environment Study) for details).

Relevance to the Study: Any ground disturbance activities within HCA regulated areas would require permits under O. Reg. 161/06. A portion of the project limits are owned by HCA, therefore a separate land access permit is required for all activities on HCA lands.

3.7 Urban Hamilton Official Plan

Volume 1, Chapter C, Policy 3.2.1 (b) (Urban Area General Provisions (Policies)) of the Urban Hamilton Official Plan (2013) permits the following uses in all land use designations: “utilities, municipal infrastructure and transportation facilities, corridors and easements, electrical facilities use directly for the generation and distribution of electric power, natural gas and oil pipeline lines, telecommunication and new facilities approved under relevant statutes, where land(s) are less than 4 hectares in size, provided that the facility is not used for the purpose of maintenance, storage or railway yard”.

Volume 1, Chapter C, Policy 5.3.12 states that “water and wastewater systems shall be designed and constructed in accordance with the specifications and standards of the City, provincial guidelines and other applicable standards, regulations and guidelines”.

Volume 1, Chapter C, Policy 5.3.14 states that “expansion of water and wastewater systems within the urban area shall be in accordance with the Water and Wastewater Master Plan and Staging of Development Plan as well as supporting the City’s density and intensification targets as detailed in Section A.2.3.3 – Other Targets and B.2.4 – Residential Intensification”.

Relevance to Study: The above was considered in the evaluation of alternatives.



4 Existing Conditions

4.1 Existing Infrastructure

PD17 is supplied from PD2/HDR02 via the existing HD17A WPS. Currently the existing HD17A WPS provides booster capability for downstream domestic use in PD17 and maintains water pressure within PD17.

The PD2 system could provide a limited security of supply to PD17 via the check valve on Main Street West if the PD17 pressure downstream of the check valve/existing HD17A is lower than the PD2 pressure upstream of the check valve/existing HD17A WPS (e.g., both pumps offline). The apartment buildings in PD17 that have booster pumps, can run off of PD2 pressure if the existing HD17A WPS is out of service. PD17 is the single branch water distribution network (i.e., limited looping) and the watermain sizes within PD17 range from 150 mm to 300 mm.

PD17 currently functions as a closed system as no floating storage exists within PD17.

Figure 4-1 shows the existing PD17.

4.2 Natural Heritage overview

LGL completed a review of the natural heritage features within the Study Area. LGL indicated that multiple natural heritage features are known to occur, and their functions are relatively well documented. Osler Road between Main Street and Grant Boulevard presents the largest natural heritage constraints in the Study Area. These constraints include watercourses, wetlands, significant wooded area, environmentally sensitive area and Niagara Escarpment designated area. The natural heritage constraints are illustrated in Technical Memorandum (TM) #1 – Phase 1 Problem/Opportunity. These constraints were considered in the evaluation of alternative locations and identified for the proposed new WPS.

The potential for Species at Risk (SAR) and SAR habitat has been based on a variety of background data sources and were refined through field studies. Subsequently, field studies for vegetation communities and wildlife were conducted for the shortlisted alternative sites in 2022 and the details are provided in **Appendix C**.

4.3 Cultural and Archaeological Heritage Overview

ASI completed both above ground-built heritage resources and cultural heritage landscapes. Preliminary review indicates that the Class EA Study Area meets the following criteria indicative of archaeological potential, as per the MHSTCI Standards and Guidelines Section 1.3.1. The Study Area consists of previously identified archaeological sites and Cultural Heritage Value or Interest (CHVI) sites. These constraints were considered in the evaluation of alternative locations and identified for the proposed new WPS.

TM #1 identifies the potential heritage features including Cultural Heritage Landscape (CHL), historic neighbourhood inventories, inventoried properties, registered (non-designated) properties and other archaeological/heritage potential for the Study Area may include:

- Early historic transportation routes (Hamilton-Brantford Rail Trail, near Main Street West and Osler Drive)
- Proximity to early settlements (Dundas and Ancaster)
- Four cemeteries are located within the Study Area:
 - Old Union (Dundas Old Union) Cemetery (19th century), at 60 Osler Drive
 - White Chapel Memorial Gardens/Cemetery (early 20th century), at 1895 Main Street, Hamilton
 - Binkley Hollow (Henry Binkley) Cemetery (19th century), located at the end of Desjardins Avenue, Dundas
 - St. Augustine Catholic Cemetery (19th century), at 54 East Street South, Dundas

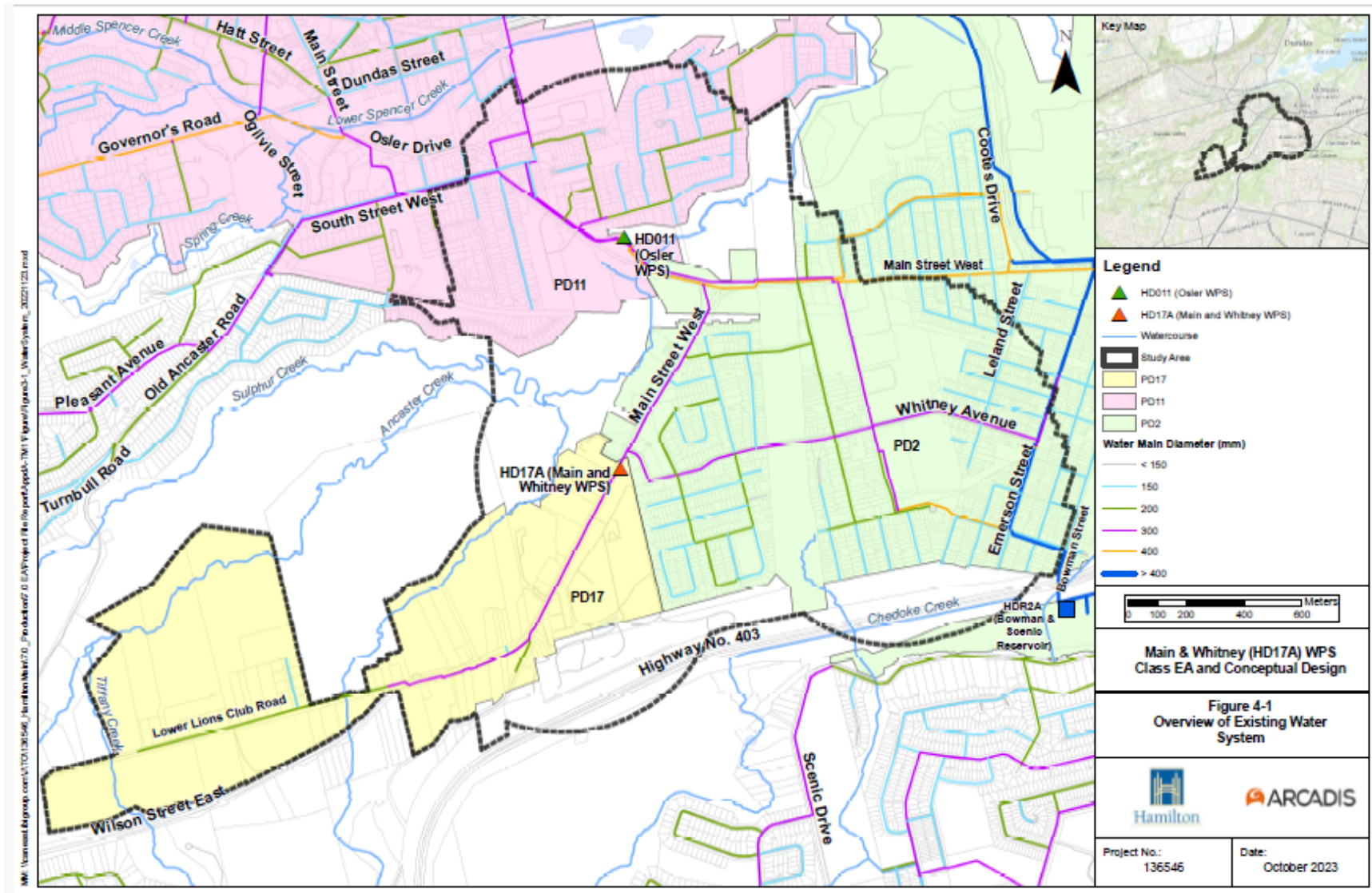


Figure 4-1 Overview of Existing Water System

Natural wetlands and extreme sloped areas are considered to have low archaeological potential. Undeveloped areas which have not been previously assessed will exhibit high archaeological potential.

4.4 Geotechnical Conditions

Over 30 documents were provided to Arcadis on the geotechnical conditions in the vicinity of the Study Area. A Geotechnical-Environmental Investigation (Report No. GTR_1281) was conducted for a proposed upgrade of municipal services as well as road re-construction along a portion of Main Street West (AMEC, December 2007).

The section of Main Street West under investigation was between Osler Drive to Lower Lions Clubs Road, where nine (9) boreholes were placed for the depths between 1.8 m and 2.7 m. The findings on the groundwater from the studies are summarised as follows:

- Most of the boreholes remained dry and open upon completion of drilling.
- Free groundwater was observed in the vicinity of two boreholes. The water levels at the depths of 2.6 m (near Ofield Road) and 1.8 m (at a short distance south of Osler Drive) were observed.

No major groundwater problems are anticipated for the excavation depths at these borehole locations. Excavation deeper than those levels in these areas could result in significant groundwater problems that may need to be addressed by a dewatering specialist.

Subsurface Utility Engineering (SUE) and additional investigations would be required to confirm construction methods during detailed design.

4.5 Socio-Economic Environment

The socio-economic environment includes land uses, and the transportation network within the Study Area.

4.5.1 Existing Land Uses

Schedule E-1 of the Urban Hamilton Official Plan (June 2023) designates the majority of the Study Area as being within the Hamilton urban area. Land use designations within the Study Area include Industrial land, District Commercial, Mixed Use - Medium Density, District Commercial Neighbourhoods, industrial land, Institutional, Utility, and Open Space. Schedule D¹ of the Rural Hamilton Official Plan (November 2022) designates a portion of the Study Area as agriculture with a small area designated as open space. TransCanada PipeLines Ltd. (TCPL) indicates that TCPL has one high-pressure natural gas pipeline contained within an easement crossing the Study Area.

¹ www.hamilton.ca/sites/default/files/2022-12/rhop-volume1-schedule-d-rural-landusedesignations-nov2022.pdf

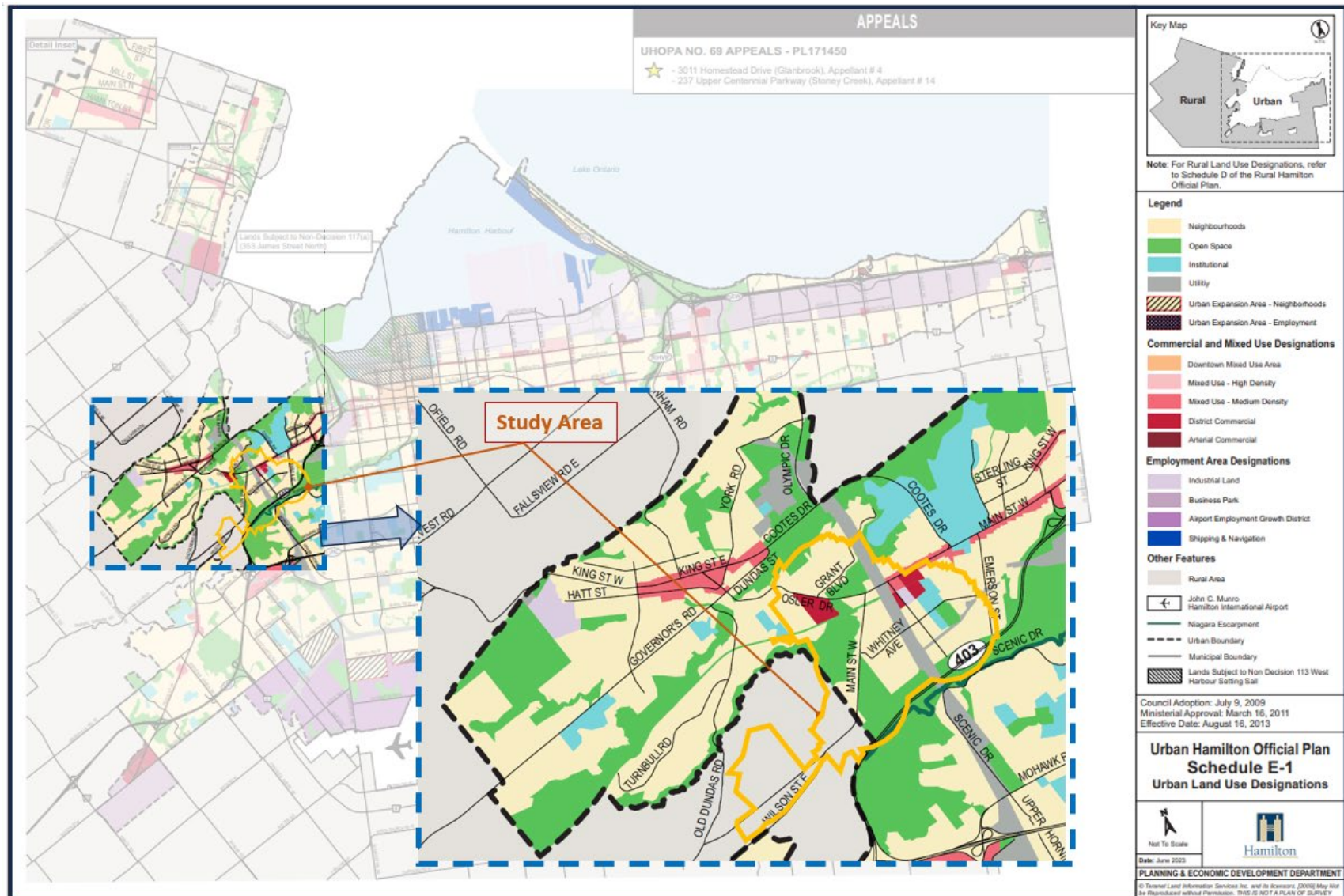


Figure 4-2 Existing Land Uses

4.5.2 Transportation Network

There are no major highways that traverse the Study Area. Highway 403 is located southeast of the Study Area. Regional Road 8 (Main Street west) and Wilson Street W that is a continuation of Main Street West run through the Study Area. All other roads within the Study Area are local roads.

A TransCanada Trail runs east-west (south of Osler Drive/Main Street) through the Study Area. This section of the TransCanada Trail is known as the Hamilton-Brantford Rail Trail². The Hamilton-Brantford Rail Trail is 32 km in length and is part of an abandoned rail corridor that links Hamilton to Brantford. This is jointly owned and maintained by the Hamilton and Grand River Conservation Authorities. The Hamilton trailhead locates at Ewen Road and South of Main Street (within the Study Area). Activities on the trail include walking, hiking, cycling, horseback riding and cross-country skiing.

4.6 Hydraulic Analysis and Required Pumping Capacity

A hydraulic analysis was completed in the revised TM #1 – Phase 1 Problem/Opportunity prepared by Arcadis in October 2023 as shown in **Appendix A**. The hydraulic analysis reviewed water demand, fire flow, system pressure, watermain sizes, and required pumping station capacity for the new WPS of PD17.

The following sections describe the existing HD17A WPS capacity and required capacity for the new WPS of PD17.

4.6.1 Existing Pumping Capacity

The existing HD17 WPS is equipped with two pumps, each with a capacity of 91L/s. The City noted two pumps were recently (in mid-2021) replaced with two slightly smaller pumps.

4.6.2 Pumping Station Capacity Requirement

As per the City of Hamilton Water Outstations Design Manual (October 2020):

- For PD17, “Firm Capacity” is defined for a closed distribution system with a single water pumping station and is based on the two largest pumps being out of service. The following criteria are indicated in the Design Guidelines for Drinking-Water Systems (MECP 2008):
- The firm capacity of the pumping station should be provided with the two largest units out of service, if the pumping station serves a pressure zone that does not have adequate floating storage available, and is the sole source of supply in the area, is to be designed, as per Section 7.3.1 of MECP, 2008.
- If no or inadequate storage is available, the proposed booster pumping station should be designed in a manner that will allow it to supply all the extreme flow conditions (e.g.,

² www.conservationhamilton.ca/wp-content/uploads/2020/08/HBCTrails2019-FIN-LR.pdf

peak hour demand, low flow demand (during nighttime) and/or maximum day demand plus fire flows), as per Section 7.4.3 of MECP, 2008.

Based on current design standards and hydraulic analysis, the system needs are defined:

- The existing HD17A WPS is equipped with two pumps: each with a capacity of 91L/s. The City noted two pumps were recently (in Mid-2021) replaced with two slightly smaller pumps.
- The recommended firm pumping capacity for PD17 is 171L/s under maximum day demand (21L/s) plus fire flow conditions (150L/s). The design firm capacity for the new WPS of PD17 will be subject to confirmation/revision and the required capacity will be confirmed as part of the current Master Planning Study and/or detailed design.
- The MECP guidelines recommend that booster pumping stations servicing areas with inadequate storage be sized for a firm capacity able to handle peak hour demand or maximum day demand plus fire flows (whichever are higher). The firm capacity of the existing HD17A WPS is insufficient to meet current maximum day plus fire flow requirements.
- Furthermore, the existing HD17A WPS is beyond its recommended useful life and requires substantial rehabilitation. Based on the age, level of deterioration and deficiencies and confined space nature of a below grade pumping station, construction of a new above ground pumping station is recommended to replace the existing HD17A WPS.

For additional information, refer to TM #1 in **Appendix A**.

4.7 Problem and Opportunity

Phase 1 of the Municipal Class EA planning process defines the starting point for any Class EA as the “Problem/Opportunity Statement”. This statement assists in defining the scope of the project and serves as its central theme and integrating element. In developing the Problem / Opportunity Statement for this Class EA, the following key points were considered:

- The need for a new WPS was documented in the facility Condition Assessment (CA) Report (WSP, October 2012), which indicated the existing HD17A WPS is beyond its recommended useful life and requires substantial rehabilitation.
- The existing HD17A WPS does not meet the current design standards or eliminate existing health and safety risks.
- The Provincial Policy Statement (2024) mandates municipalities ensure necessary infrastructure are or will be available to meet current and projected needs.
- The Growth Plan for the Greater Golden Horseshoe (2020) explains that municipal water and wastewater systems will be planned, designed, constructed, or expanded accordingly so that the system will serve growth in a manner that supports achievement of the minimum intensification and density targets in this plan.

Considering the above listed points, the Problem or Opportunity Statement for this Class EA Study is:

A solution is required for a new water pumping station to replace the existing HD17A WPS at a new site near its current location to service customers within PD17, to enhance water system security and reliability, and to meet the MECP guidelines and City design standards, while improving system operating efficiencies.

In accordance with the requirements of the MEA Municipal Class EA planning process for Schedule B projects (as previously described in **Section 1**), the City of Hamilton initiated this Municipal Class EA to identify and evaluate alternative solutions to address this Problem / Opportunity.

5 Alternative Concept Generation

The following section summarizes the development and evaluation of alternative sites for a new WPS. The evaluation of alternative sites is detailed in **Appendix B**.

5.1 Overview

The development of the list of alternative sites was based on previous studies (the facility condition assessment of the existing HD17A WPS (WSP, 2012), the feasibility study for a new WPS (WSP, 2015), and the as-built drawings for the Highland Gardens Park WPS (WSP, 2016)), a review of the existing system characteristics, and input from the City.

Building on this knowledge, an initial long list of alternative sites was developed. From the long list of alternative sites different stages of evaluation were undertaken starting with pre-screening to eliminate any sites that do not meet the basic site needs. This was followed by a comparative assessment of alternative sites to arrive at a shortlist of alternatives sites for a detailed evaluation.

The alternative sites on the short list underwent a detailed evaluation based on the natural, sociocultural and technical aspects including the hydraulic performance, requirement for new linear infrastructure, land ownership, and costs (see **Section 5.6** and **Section 5.7** for details) to identify a preferred location for a new WPS for PD17.

5.2 “Do Nothing” Scenario

The “Do Nothing” alternative, represents replacing the existing HD17A WPS with a ‘like-for-like’ facility. This “Do Nothing” alternative was identified as Alternative 1- Status Quo in the feasibility study (WSP, May 2015). This alternative was screened out as it does not meet current design standards, or eliminate existing health and safety risks, or meet future servicing needs, and the existing HD17A WPS is not feasible to rehabilitate as it is beyond its recommended useful life.

The “Do Nothing” scenario is not a viable alternative. This alternative is eliminated from further consideration. The selection for potential locations of the new WPS is detailed in the following sections.

5.3 Key Considerations for Selection of Potential Sites

Based on the review of the system and discussions with the City, the key considerations for selecting alternative sites were based on the following:

- A publicly owned land (preferable)
- An open space (or no existing building)
- A larger land parcel
- Near a larger watermain
- Proximity to existing HD17A WPS (or PD17)

5.4 Long-Listed Alternative Sites

The initial longlist of alternative sites comprises 21 locations, which are shown in **Figure 5-1**. The locations and details for these alternative sites are shown in Technical Memorandum #2 – Phase 2 Alternative Solutions (TM #2).

Appendix B provides a brief description of each of the 21 alternative locations. To evaluate the 21 alternatives sites, a pre-screening of the 21 sites was done to reduce the number of sites to the best locations available before undertaking a detailed evaluation of alternative sites.

The pre-screening of the 21 alternative sites involved two criteria categories: **must meet** and **should meet**. This was followed by a qualitative evaluation to identify a shortlist of alternative sites. **Table 5.1** presents the criteria used for pre-screening.

Table 5.1 Pre-Screening Criteria for Long List of Alternative Sites

The site must...	The site should...
Meet the size requirement	Minimize the impact on the natural environment
	Minimize the impact on sociocultural environment
	Be relatively close to the existing HD17A WPS (or PD17)

Following the background review and discussions with City staff, the design of the recently constructed Highland Gardens Park WPS (HD03A) was used as the basis for the site area requirement for the new WPS for PD17. Thus, the most important mandatory criterion was that each site had to be at least 35 m by 22 m, including a building footprint of 20 m by 12 m plus a parking area. These dimensions are considered for the new WPS for PD17 and are deemed sufficient for preliminary screening and site selection. However, these dimensions, as well as orientation of the site, are subject to change during subsequent design phases.

At this stage, if a site does not meet the area requirement it was no longer considered as the site area was identified as a **must meet** criteria. Based on must meet criteria, six (6) alternative locations were eliminated from further consideration. The remaining 15 sites met the must meet and should meet criteria.

The next level of pre-screening was a qualitative evaluation of the remaining 15 sites. The qualitative evaluation considered social, cultural, natural environment, and technical factors as well as looked at the relative advantages and disadvantages of each location.

Table 5.2 presents a summary of the qualitative evaluation identifying seven sites (Sites, 1, 4, 6, 8, 9, 12, and 19) as the most promising locations for a new WPS. **Figure 5-2** shows the location of the seven shortlisted locations. The shortlist of seven alternatives locations is carried forward for more detailed consideration and evaluation. Supporting information for **Table 5.2** is found in **Appendix B** showing the details of each site and summarizing the advantages and disadvantages of each site. The alternative evaluation for these seven short-listed alternative sites is also provided in **Section 5.6** below.

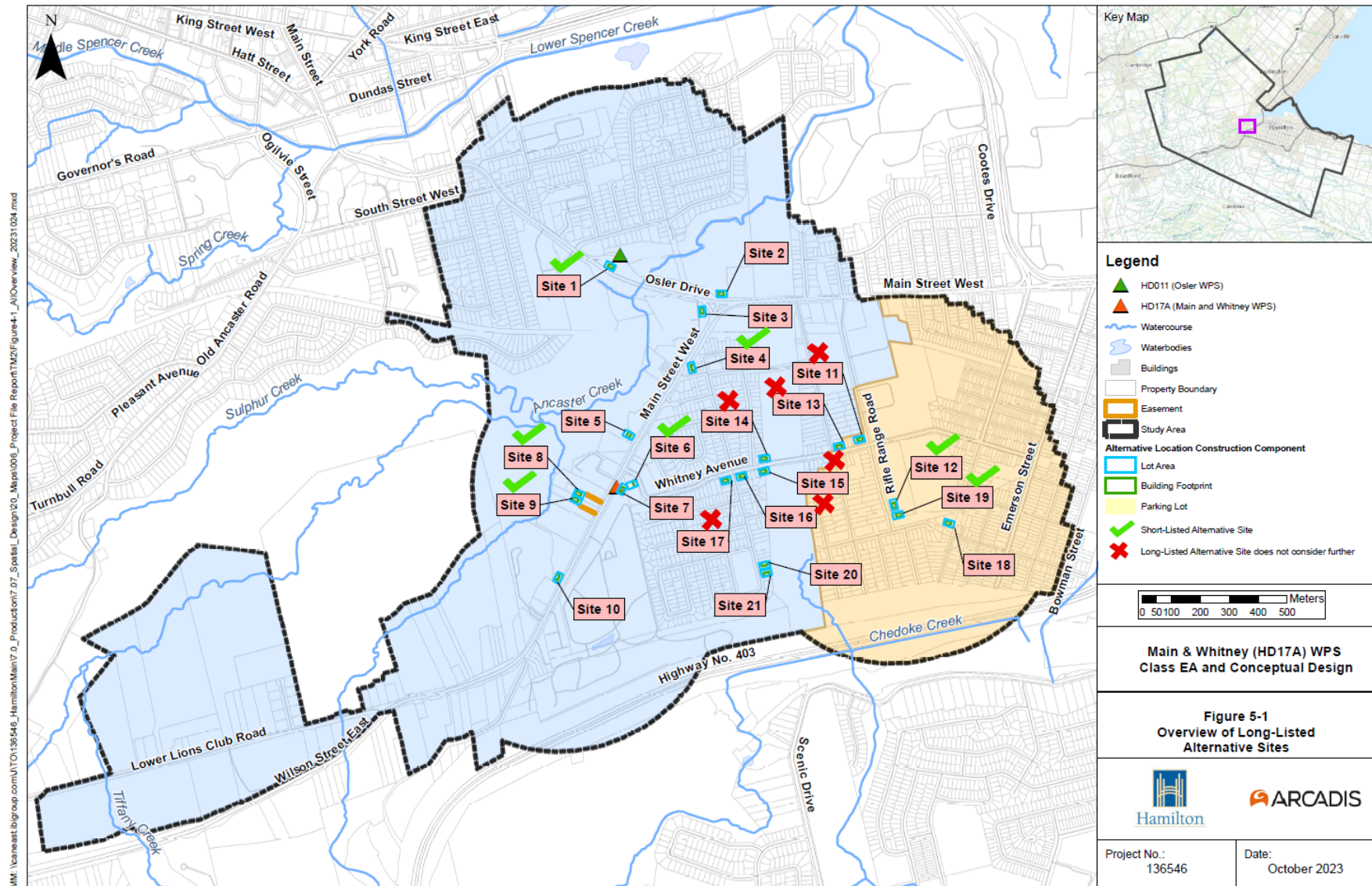


Figure 5-1 Overview of Long-Listed Alternative Sites

Table 5.2 Pre-Screening Long-Listed Alternative

Summary of the Qualitative Evaluation

Legend

Symbol	Evaluation
X	Not considered further
◆	Considered further
◐	Acceptable
◑	Preferrable
◒	Highly Preferrable
●	Most Preferrable

Notes

A total of 21 alternative sites has been reviewed and evaluated.

Six (6) alternative sites have indicated land restrictions through pre-screening and are not considered further. These are sites 11, 13, 14, 15, 16, and 17 indicated by a red cross mark (X) in Table 5.2.

15 alternative sites are large enough indicated by a blue diamond (◆) in **Table 5.2** and considered for further evaluation.

Seven (7) alternative sites have scores at least 2-1/4 pies and are short-listed for detailed evaluation. These are Sites 1, 4, 6, 8, 9, 12, and 19, as shown in **Table 5.3**.

Site No.	Address	Land use	Ownership	Site Area Suitable (Pre-Screening)	Natural Environment	Social Cultural Environments	Technical Considerations	Score Summary
1	Adjacent to and SW of 130 Osler Drive (Adjacent to exiting Osler WPS, HD011)	Open Space	City	◆ Considered further	◑ • Adjacent to environmentally sensitive area (ESA). • Within Hamilton Conservation Authority (HCA) regulated area.	● • Minimal impact to local area and traffic	◑ • Away from existing HD17A WPS	●●◐

Site No.	Address	Land use	Ownership	Site Area Suitable (Pre-Screening)	Natural Environment	Social Cultural Environments	Technical Considerations	Score Summary
2	1688 Main St W	Agriculture	City	◆ Considered further	◐ - Within HCA regulated Area. - Significant wooded area.	◑ Medium Impact to local area	◐ - Away from existing HD17A WPS - Steep slope	● ◐
3	Osler Dr and Main St W	Open Space	City	◆ Considered further	◑ Mature trees	◐ - Closure of an informal path through site to intersection. - Adjacent to residential - Negative impacts to traffic sight lines	◐ - Away from existing HD17A WPS. - Potential watermain relocation. - Adjacent to a private underground sewer pumping station.	●
4	88 Ofield Rd	Residential	Private	◆ Considered further	● Minimal Impact	◑ - Adjacent to residential. - Insufficient setback at rear yard. - A minor variance may be required.	◑ Near existing HD17A WPS	● ● ◐
5	On Main St–W - between 1770 and 1830 Main St W	Open Space	City	◆ Considered further	◐ - Within HCA regulated area. - Significant wooded area part of Dundas Valley.	● Minimal Impact	◐ - Near existing HD17A WPS. - Steep slope.	● ◐

Site No.	Address	Land use	Ownership	Site Area Suitable (Pre-Screening)	Natural Environment	Social Cultural Environments	Technical Considerations	Score Summary
6	1845 Main St W	Commercial (The Treehouse Cannabis)	Private	◆ Considered further	● • Minimal Impact	◐ • Adjacent to Cultural Heritage Landscapes (CHL-7) - White Chapel Cemetery and would require additional cultural heritage reporting and development of mitigation measures.	● • Adjacent to existing HD17A WPS	●●◐
7	1895 Main St W	Cemetery	Private	◆ Considered further	◐ • Mature trees	◐ • Within CHL-7 (White Chapel Cemetery) and would require additional cultural heritage reporting and development of mitigation measures	◐ • Adjacent to existing HD17A WPS. • Require new address and new entrance	●●◐
8	1870 Main St W	Commercial (Haven Inn)	Private	◆ Considered further	● • Minimal Impact	◐ • Easements that are near the cemetery (CHL-7) may trigger additional cultural heritage work and development of mitigation measures	● • Near existing HD17A WPS	●●●◐
9	1872 Main St W	Commercial (Westdale Car Service)	Private	◆ Considered further	◐ • Potential soil contamination which requires additional studies and development of mitigation measures	◐ • Easements that are near the cemetery (CHL-7) may trigger additional cultural heritage work and development of mitigation measures	● • Near existing HD17A WPS	●●●◐

Site No.	Address	Land use	Ownership	Site Area Suitable (Pre-Screening)	Natural Environment	Social Cultural Environments	Technical Considerations	Score Summary
10	1940 Main St W	Commercial -Your Wellness Centre	Private	◆ Considered further	● • Minimal Impact	◐ • Near CHL-7 (White Chapel Cemetery), and this would require additional cultural heritage reporting and development of mitigation measures • Insufficient setback at rear yard • A minor variance may be required	◐ • Near existing HD17A WPS. • Steep slope at rear yard.	●◐
11	252/254 Whitney Ave	Commercial (Hamilton Hydro Inc. / Alectra Utilities Corporation)	Private	✗ Not considered further	-	-	-	✗
12	125 Rifle Range Rd	Institutional - Open Space (Conseil Scolaire Viamonde -French School Board)	Private	◆ Considered further	● • Minimal Impact	◐ • Adjacent to Alexander Park (CHL-11), and this would require additional cultural heritage reporting and development of mitigation measures	◐ • Away from existing HD17A WPS	●●◐
13	107 Ewen Ave	Residential	Private	✗ Not considered further	-	-	-	✗
14	340 Whitney Ave plus Hydro Corridor	Residential	Private	✗ Not considered further	-	-	-	✗

Site No.	Address	Land use	Ownership	Site Area Suitable (Pre-Screening)	Natural Environment	Social Cultural Environments	Technical Considerations	Score Summary
15	341 Whitney Ave plus Hydro Corridor	Residential	Private	X Not considered further	-	-	-	X
16	91 Lower Horning Rd	Residential	Private	X Not considered further	-	-	-	X
17	90 Lower Horning Rd	Residential	Private	X Not considered further	-	-	-	X
18	At Clifford St. and Ainslie Ave. (Adjacent to 102 & 106 Ainslie Ave)	Ainslie Wood Park	City	◆ Considered further	🕒 • Wooded area	● • Minimal Impact	🕒 • Away from existing HD17A WPS. • Require site access and/or an easement to the site.	●🕒
19	161 Rifle Range Rd	Residential/ Institution - Trustees of Meeting Rooms Association Hamilton-Burlington Area	Private	◆ Considered further	● • Minimal Impact	🕒 • Adjacent to Alexander Park (CHL-11), and this would require additional cultural heritage reporting and development of mitigation measures	🕒 • Away from existing HD17A WPS	●●🕒
20	Roadway plus 159 Lower Horning Rd	Roadway and Residential	City/Private	◆ Considered further	● • Minimal Impact	🕒 • Adjacent to Residential	🕒 • Away from existing HD17A WPS	●●

Site No.	Address	Land use	Ownership	Site Area Suitable (Pre-Screening)	Natural Environment	Social Cultural Environments	Technical Considerations	Score Summary
21	Roadway plus 163 Lower Horning Rd	Roadway and Residential	City Private	◆ Considered further	● Minimal Impact	◐ - Adjacent to residential - Adjacent to an existing easement to Ontario Hydro	◐ Away from existing HD17A WPS	●◐

5.5 Short-Listed Alternative Sites

Seven (7) of the most promising site options were short-listed (**Figure 5-2**) and carried forward to the next level of assessment. These sites are:

- Site 1: 130 Osler Drive (HD011 WPS)
- Site 4: 88 Ofield Road (Residential)
- Site 6: 1845 Main Street West (Commercial)
- Site 8: 1870 Main Street West (Commercial)
- Site 9: 1872 Main Street West (Commercial)
- Site 12: 125 Rifle Range Road (Residential/Institutional)
- Site 19: 161 Rifle Range Road (Institutional)

Figure 5-3 to **Figure 5-9** present details for each of the short-listed sites. Further evaluations of the short-listed alternative sites are presented in **Sections 5.6**.

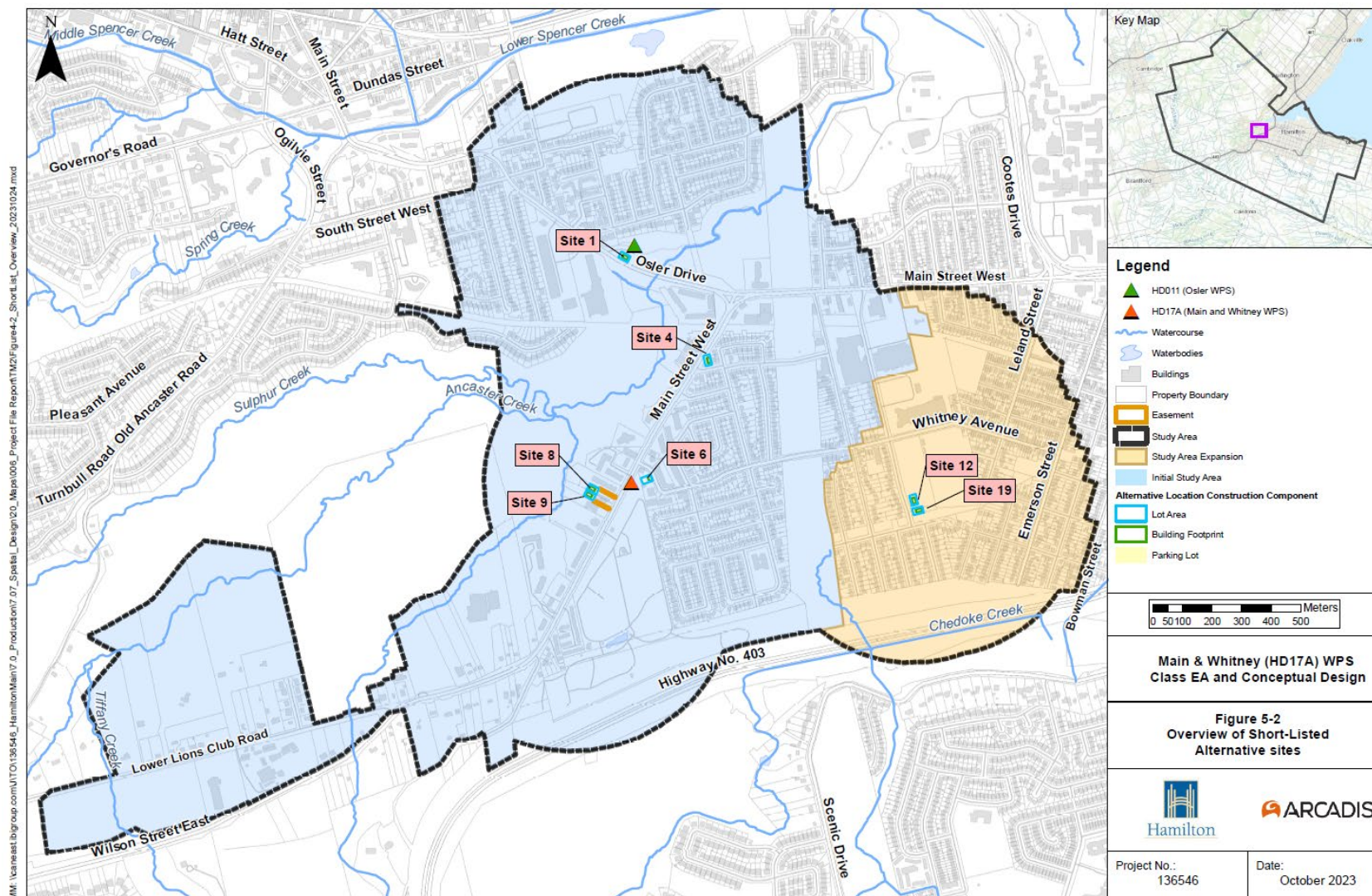


Figure 5-2 Overview of Short-Listed Alternative Sites

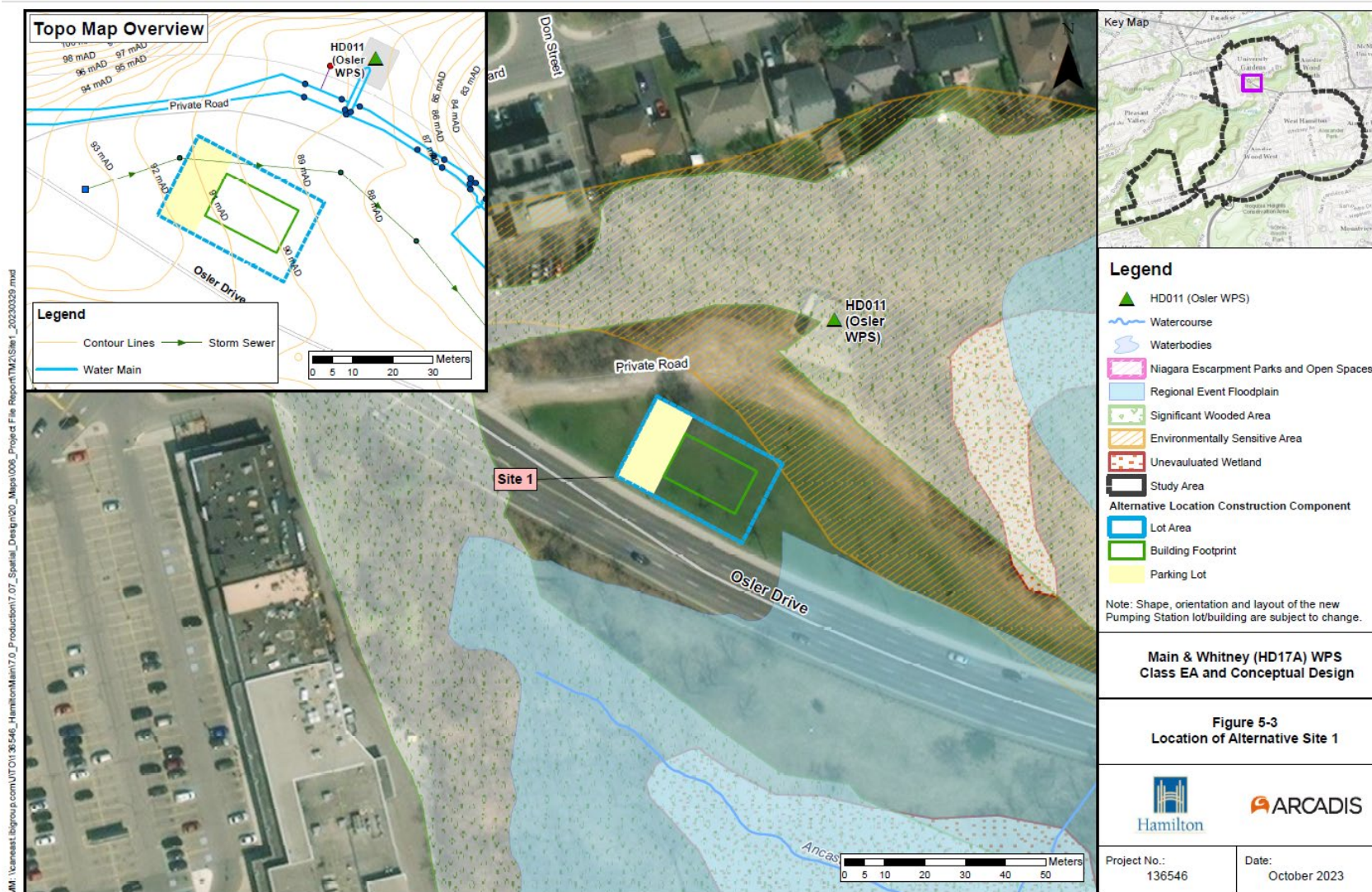


Figure 5-3 Location of Alternative Site 1



Figure 5-4 Location of Alternative Site 4



Figure 5-5 Location of Alternative Site 6



Figure 5-6 Location of Alternative Site 8

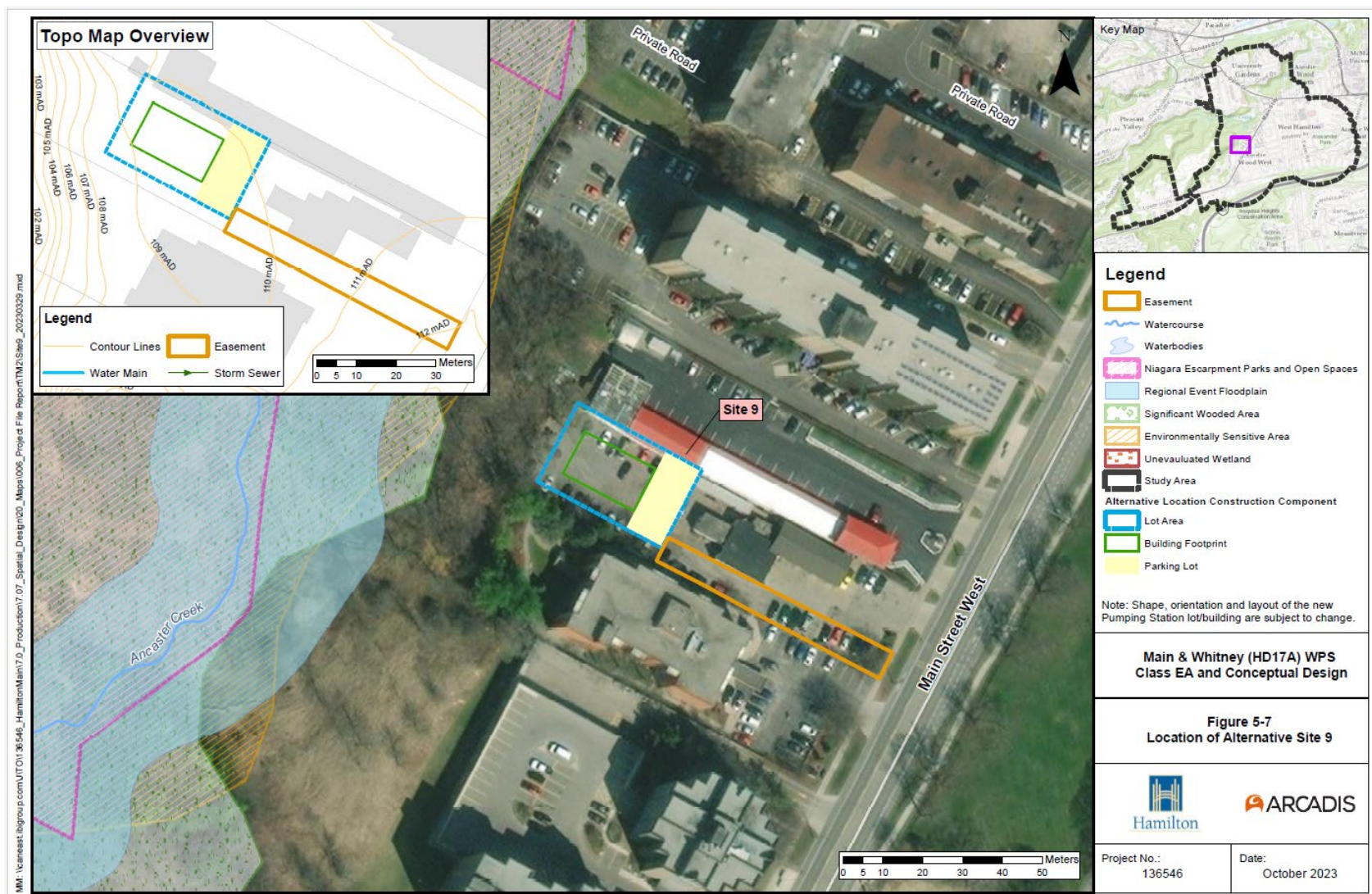


Figure 5-7 Location of Alternative Site 9



Figure 5-8 Location of Alternative Site 12

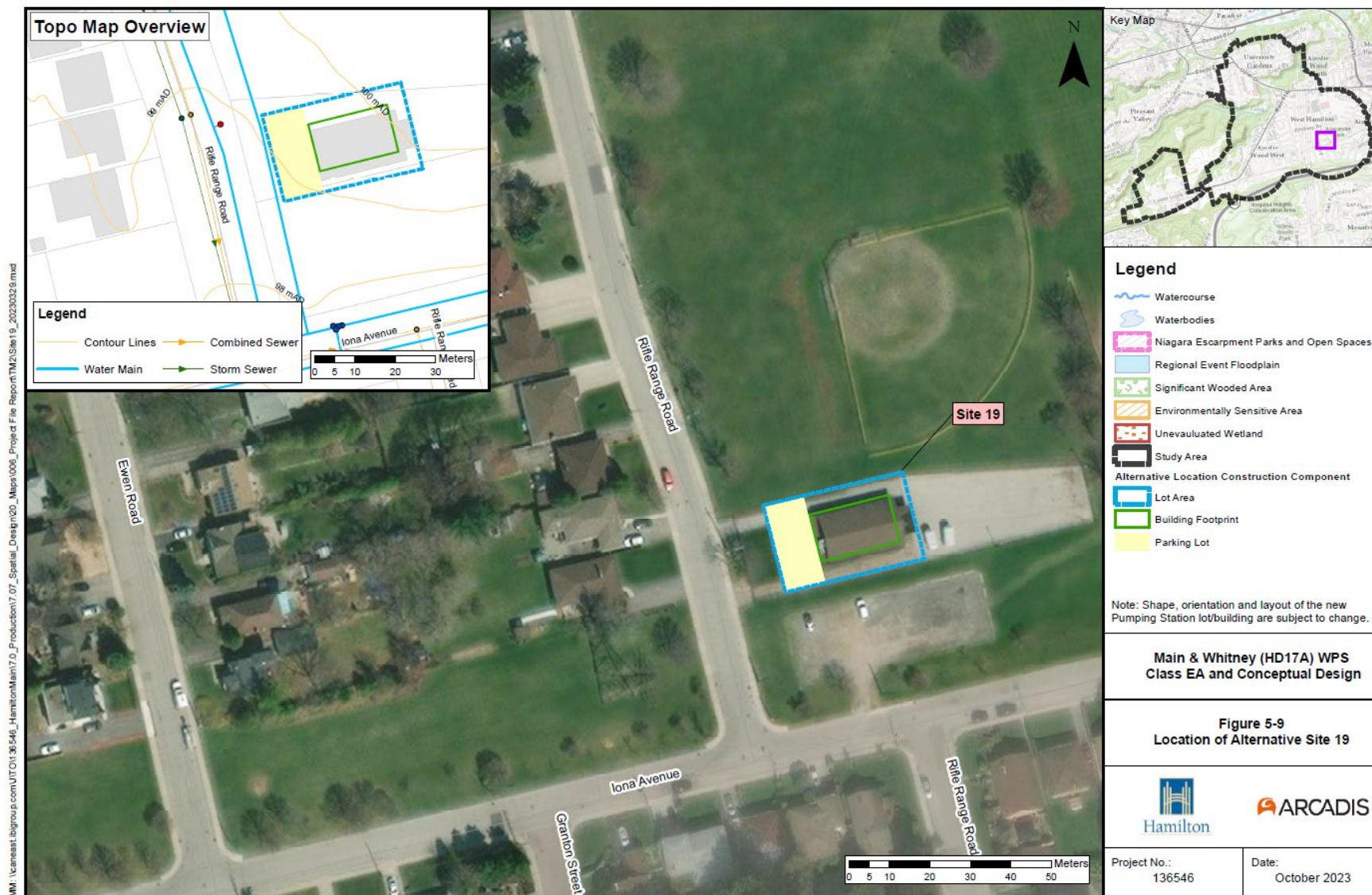


Figure 5-9 Location of Alternative Site 19

5.6 Alternative Refinement and Evaluation

Based on the results of the screening process described in **Section 5.4**, the seven short-listed alternative sites for the new WPS for PD17 were carried forward for further analysis and evaluation. To assist in the evaluation a conceptual plan for each alternative site to assess hydraulic performance, watermain requirements and costs.

An overview of the conceptual plans for the seven short-listed alternative sites and their associated discharge watermain is shown in **Figure 5-10**.

5.6.1 Description of Short-Listed Alternative sites

- The following section presents the detailed assessment for the short-listed alternative sites as shown in **Figure 5-10**. All the short-listed alternative sites have some common elements and assumptions. These include:
- All potential alternative sites utilize the road right-of-way (ROW) for the construction of the required linear infrastructures; thus, no additional land is required for the installation of the watermain.
- The layout and locations of the new WPS (including requirement of lot area, building footprint area and parking lot) identified in this report is preliminary only. The layout of the new WPS presented here may be amended based on input from the review agencies and the public.
- Modelling and analysis exercises were completed for all seven alternative sites. It was assumed that the requirement for a designated discharge watermain (450 mm in diameter) would be from the new WPS to the connection for the PD17 system (which is located near the existing HD17A WPS). The size of the watermain will be determined at the design stage. In addition, modelling and analysis exercises were completed for Sites 12 and 19 to determine the feasibility of a shorter discharge watermain and/or pressure district conversion. A shorter discharge watermain would be required if the existing PD2 watermain along Whitney Avenue is used as the discharge pipeline to PD17. A few isolation valves (along Ewen Road) to convert the existing PD2 area west of Ewen Road to PD17 would also be required. The results of these exercises indicated a reduction in supply flow to HD011 and a significant pressure increase to the discharge header of the new WPS under the fire-flow conditions. This shorter watermain and/or pressure district conversion option was not recommended nor considered further.
- Costs for acquiring the land for each alternative site are based on the land requirement (35 m by 22 m) for the new WPS and may not reflect the actual cost of purchasing the entire property. The costs for Sites 8 and 9 have included the land requirement for the easements.

The seven short-listed alternative sites are discussed separately in the following sub-sections.

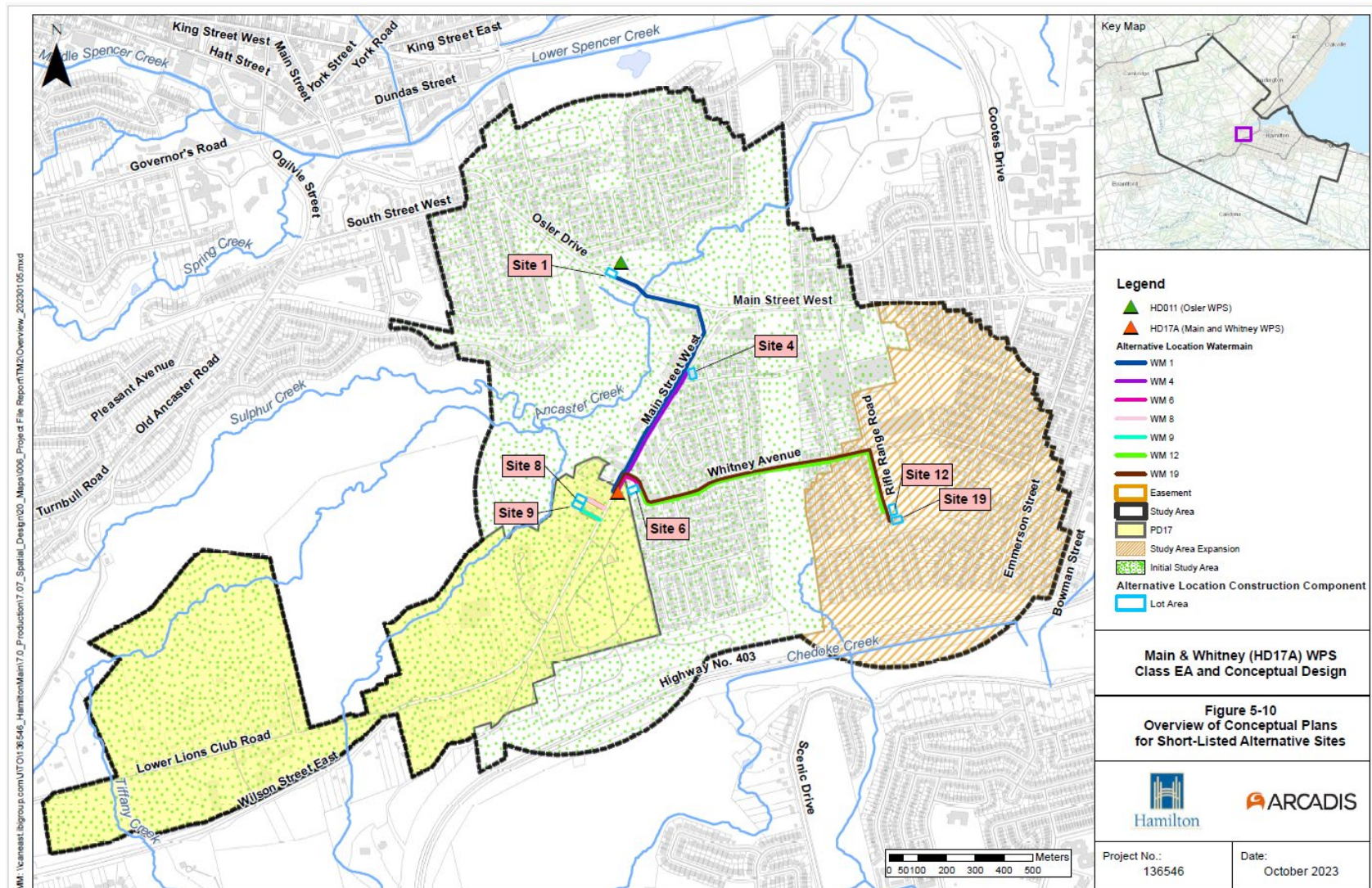


Figure 5-10 Overview of Conceptual Plans for Short-Listed Alternative Sites

5.6.1.1 Site 1 - 130 Osler Drive (HD011 WPS)

The conceptual plan for alternative Site 1 is presented in **Figure 5-10**. This plan is consistent with the conceptual design for the preferred alternative outlined in the WSP 2015 feasibility study. This alternative would involve the following:

- Construction of a new WPS within Site 1. The proposed pump station location is on City-owned property (HD011, existing Osler WPS), so no land would need to be purchased.
- A new watermain (approximately 1 km in length) would need to be installed from Site 1 to the connection of the PD17 system, which is located near the existing HD17A WPS.
- The new watermain would have to cross under a creek and a railway. The railway has been replaced by a recreational trail (Hamilton Brantford Rail Trail1) and is no longer active. This trail is jointly owned and maintained by the Hamilton and Grand River Conservation Authorities. Permits and approvals would be required from the Hamilton Conservation Authority (HCA) and Grand River Conservation Authorities (GRCA). The creek crossing would present some challenges during design and construction and would require additional approvals.
- The crossing would present some challenges during design and construction and would require additional approvals.
- A watermain would need to be constructed along Osler Drive. These would turn south along Main Street West and connect to the existing PD17 system, which is located near the existing HD17A WPS.

5.6.1.2 Site 4 - 88 Ofield Road (Residential)

The conceptual plan for Site 4 is presented in **Figure 5-10**. This alternative would involve the following:

- Purchasing the site, as it is on privately owned residential property.
- Removing an existing residence on the site.
- Building a new WPS within Site 4.
- Constructing watermain along Main Street West that would connect to the existing PD17 watermain near the existing HD17A WPS.
- Constructing a new watermain (approximately 0.5 km in length) from Site 4 to the connection for the PD17 system, which is located near the existing HD17A WPS.

5.6.1.3 Site 6 - 1845 Main Street West (Commercial)

The conceptual plan for Site 6 is presented in **Figure 5-10**. This alternative would involve the following:

- Purchasing the property, as it is privately owned commercial site (The Treehouse Cannabis Company).
- Construction of a new WPS in the parking lot area of Site 6.
- Installation of a watermain from Site 6 to the connection of the PD17 system. The required works would be minimal, as the site is located near the existing HD17A WPS.
- Watermains would need to be constructed along Whitney Avenue. They would then turn south along Main Street West and connect to the existing PD17 watermain, which is located near the existing HD17A WPS.

5.6.1.4 Site 8 - 1870 Main Street West (Commercial)

The conceptual plan for Site 8 is presented in **Figure 5-10**. This alternative would involve the following:

- Purchasing of the property, as it is privately owned commercial site (Haven Inn).
- Construction of a new WPS within Site 8.
- Removal of a back portion of the existing building within Site 8.
- A watermain would need to be installed from Site 8 to the connection of the PD17 system. The required works would be minimal, as the site is located near the existing HD17A WPS.
- Watermains would need to be constructed underneath the proposed easement within Site 8 and connected to the existing PD17 watermain, which is located near the existing HD17A WPS.

5.6.1.5 Site 9 - 1872 Main Street West (Commercial)

The conceptual plan for Site 9 is presented in **Figure 5-10**. This alternative would involve the following:

- Purchasing of the property, as it is privately owned commercial site (Westdale Car Service).
- Construction of a new WPS within Site 9.
- A watermain would need to be installed from Site 9 to the connection of the PD17 system. The required works would be minimal, as the site is located near the existing HD17A WPS.
- Watermains would need to be constructed underneath the proposed easement within Site 9 and connected to the existing PD17 watermain, which is located near the existing HD17A WPS.

5.6.1.6 Site 12 - 125 Rifle Range Road (Institutional)

The conceptual plan for Site 12 is presented in **Figure 5-10**. This alternative would involve the following:

- Purchasing of the property, as it is privately owned institutional Site (Conseil Scolaire Viamonde - French School Board).
- Construction of a new WPS within Site 12.
- Site 12 is a relatively large site that is adjacent to Alexander Park, which means the proposed location for the new WPS might have some potential sociocultural impacts; however, the final location will be determined during the conceptual design stage.
- A new watermain (approximately 1.3 km in length) would need to be installed from Site 12 to the connection of the PD17 system, which is located near the existing HD17A WPS.
- Watermains would need to be constructed along Rifle Range Road. They would then turn west along Whitney Avenue and then southwest along Main Street West before connecting to the existing PD17 watermain, which is located near the existing HD17A WPS.
- The new watermain would have to cross under a high-pressure gas line. The crossing would present some challenges during design and construction and would require additional approvals.

5.6.1.7 Site 19 - 161 Rifle Range Road (Residential/Institutional)

The conceptual plan for Site 19 is presented in **Figure 5-10**. This alternative would involve the following:

- Purchasing of the property, as it is privately owned Residential/institutional Site (Trustees of Meeting Rooms Association Hamilton-Burlington Area).
- Construction of a new WPS within Site 19.
- Removal of the existing building on the site.
- A new watermain (approximately 1.3 km in length) would need to be installed from Site 19 to the connection of the PD17 system, which is located near the existing HD17A WPS.
- Watermains would need to be constructed along Rifle Range Road. They would then turn west along Whitney Avenue and then southwest along Main Street West before connecting to the existing PD17 watermain south of the existing HD17A WPS.
- The new watermain would have to cross under a high-pressure gas line. The crossing would present some challenges during design and construction and would require additional approvals.

5.6.2 Evaluation of Short-Listed Alternative Sites

To evaluate the alternative pumping station sites, including potential watermain requirements, each evaluation criterion presented in **Table 5.3** was described in detail. A numerical or weighted ranking system was not used; instead, the evaluation

concentrated on the strengths and weaknesses of each alternative to identify the best possible solution. While set weightings for the evaluation criteria were not assigned, these criteria are not necessarily equal; therefore, professional judgment and knowledge of the area and related issues were used to determine preferences. The potential effects on the environment (natural, social, etc.) were identified for each criterion for each proposed alternative. The selection of the preferred site for this criterion is thus based on the relative advantages and disadvantages of each location in relation to the potential environmental impacts.

The alternative sites were assessed for each evaluation criterion using a colour-coded system where green indicates most preferred and yellow indicates least preferred. The comparison of each criterion was made horizontally between the alternatives (i.e., within a category, such as natural environment) and then vertically between categories to identify the preferred site. Based on the relative advantages or disadvantages of the net environmental effects, including the results of applying mitigating measures, the location that received the greatest number of most-preferred ratings and/or the fewest number of least-preferred ratings was identified as the preferred site.

Taking into consideration the potential environmental impacts of a new WPS at each of the sites, the seven short-listed pumping station sites were comparatively evaluated to consider the suitability of each. A qualitative evaluation (descriptive assessment) is performed using criteria that were developed based on the broad definition of environment described in Ontario's *Environmental Assessment Act* and other sources. Specifically:

- Natural environment: Having regard for protecting the natural and physical components of the environment (e.g., air, land, water, and biota).
- Sociocultural environment: Having regard for residents, neighbourhoods, businesses, community character, social cohesion, community features and land uses, property requirements, historical and archaeological resources, and heritage features.
- Technical environment: Having regard for the constructability, operability, and potential conflicts as well as other engineering aspects associated with the alternatives.
- Economic/Financial environment: Having regard for the cost implications associated with the alternatives.

The natural heritage study, cultural heritage resource assessment and Stage 1 Archaeological Assessment were completed for the seven short-listed alternative sites. These are summarized in the following sub-sections.

5.6.2.1 Natural Environmental Considerations

- ASI completed the natural heritage study including field investigations to evaluate the potential impact of the natural environment. The evaluations for the 7 short-listed alternative sites include vegetation and tree, wildlife, aquatic and Species

at Risk (SAR). The findings are summarized in **Table 5.3** and details are provided in ASI's report (see **Appendix C**).

5.6.2.2 Sociocultural Considerations

ASI completed the cultural heritage resource assessment for the existing conditions and preliminary impact assessment for the preferable alternative site. The objective was to present a built heritage and cultural landscape inventory of cultural heritage resources, identify existing conditions of the Study Area, identify impacts to cultural heritage resources, and propose appropriate mitigation measures. The findings are summarized as follows:

- Site 1: Potential negative impact to CHL-5 (Coldwater Creek). A Heritage Impact Assessment (HIA) is required if this site is selected.
- Site 4: this site is a potential Built Heritage Resources (BHR-21) with potential cultural heritage value or interest, the removal of the residence would be a direct negative, irreversible impact. Site 4 is the least preferred location from a cultural heritage perspective and should be eliminated from further consideration in the selection of the preferred site location.
- Sites 8 and 9: No negative impacts to identified cultural heritage resources. No further concern regarding cultural heritage resources.
- Sites 12 and 19: Potential negative impact to CHL-11 (Alexander Park). A Heritage Impact Assessment is required if either site is selected.
- Site 6: Potential impact to CHL-7 (White Chapel Memorial Gardens Cemetery and Crematorium). A Heritage Impact Assessment was recommended if this site is selected in preliminary cultural assessment. It was determined through the EA process, after PIC2, that this is the preferred location. Subsequently, a preliminary Impact Assessment was conducted, and the findings are as follows:
 - No direct adverse impacts to the CHL-7 are anticipated the limits of the construction for Site 6 will be confined to the property.
 - Indirect adverse impacts due to construction related vibrations are possible as there are gravestones that sit within 50 m of the proposed work for Site 6. These impacts are anticipated to be limited and temporary.
 - The HIA may result in additional study or mitigations measures and must be completed prior to implementation.

For additional information, refer to **Appendix D** for the Cultural Heritage Resource Assessment: Built Heritage and Cultural Heritage Landscapes report completed by ASI.

5.6.2.3 Archaeological Heritage

ASI completed a Stage 1 Archaeological Assessment (**Appendix E**). The objective was to determine the presence or absence of known archaeological sites in the Study Area and in proximity to the alternative sites for the proposed PD17 WPS and to identify the need for Stage 2 archaeological assessments for areas identified during the Stage 1 assessment as having potential archaeological planning concerns. The findings are as follows:

- Sites 4, 9 and 12: There are potential for archaeological resources. A Stage 2 archaeological assessment is required if either site is selected.
- Site 1, 6, 8 and 19: There are no retained archaeological potential at these sites.

The evaluation of the seven short-listed alternative sites for the new WPS of PD17 is presented in **Table 5.3**.

Table 5.3 Evaluation of Short-Listed Alternative Sites

EVALUATION CRITERIA	DESCRIPTION	SITE 1 adjacent to and SW of 130 OSLER DRIVE (Adjacent to existing Osler WPS, HD011)	SITE 4 88 OFIELD ROAD	SITE 6 1845 MAIN STREET WEST	SITE 8 1870 MAIN STREET WEST	Site 9 1872 MAIN STREET WEST	SITE 12 125 RIFLE RANGE ROAD	SITE 19 161 RIFLE RANGE ROAD
NATURAL ENVIRONENT								
Vegetation and Tree Impacts	Requirement of vegetation and/or tree removals	• Adjacent to natural area of Cootes Paradise Environmental Sensitive Area (ESA). • Some amenity tree removals may be required.	• Minor vegetation removals associated with amenity trees.	• No vegetation or tree impacts anticipated.	• Adjacent to natural area, no vegetation or tree impacts anticipated within the proposed footprint area. • Possible impacts to amenity trees for site access.	• Adjacent to natural area, no vegetation or tree impacts anticipated within the proposed footprint area. • Possible impacts to amenity trees for site access.	• No vegetation or tree impacts anticipated within the proposed footprint area - Possible impact to amenity trees depending on orientation of site within the property.	• No vegetation or tree impacts anticipated within the proposed footprint area. • Possible impact to amenity trees for site access.
Wildlife Impacts	Potential impacts to wildlife	• Potential for indirect impacts through construction disturbance and noise. • Disturbance expected to be temporary in nature.	• Limited wildlife habitat removal is proposed within the hedgerow along Main Street West.	• Wildlife habitat impact not anticipated, as proposed footprint entirely within a paved area.	• Wildlife habitat removal anticipated to be limited to amenity trees on the lot as required. It is assumed no intrusion to the natural feature to the north.	• Wildlife impact minimal and limited to possibly amenity trees.	• Vegetation impacts minimal and limited to manicured lawn and possibly amenity trees.	• Wildlife impact minimal and limited to possibly amenity trees.
Groundwater/ Aquifer Vulnerability	Proximity to areas of high aquifer vulnerability	• Medium, requirement of watermain crossing under creek.	• Minimal	• Minimal	• Minimal	• Potential soil contamination which requires additional studies and more mitigation measures.	• Minimal	• Minimal

EVALUATION CRITERIA	DESCRIPTION	SITE 1 adjacent to and SW of 130 OSLER DRIVE (Adjacent to existing Osler WPS, HD011)	SITE 4 88 OFIELD ROAD	SITE 6 1845 MAIN STREET WEST	SITE 8 1870 MAIN STREET WEST	Site 9 1872 MAIN STREET WEST	SITE 12 125 RIFLE RANGE ROAD	SITE 19 161 RIFLE RANGE ROAD
Aquatic Impacts	Potential impacts to aquatic	• No direct aquatic impacts anticipated. This is regulated in part under O.Reg. 161/06. • approximately 110 meters from open aquatic habitat of Coldwater Creek. • Best Management Practices and a robust Erosion and Sediment Control plan will minimize risk of indirect impact during construction. • Special construction method (e.g., directional drill) for watermain installation under Coldwater Creek to minimize impacts to aquatic.	• No direct aquatic impacts anticipated. • Approximately 148 meters from open aquatic habitat of Coldwater Creek. • Best Management Practices and a robust Erosion and Sediment Control plan will minimize risk of indirect impact during construction.	• No direct aquatic impacts anticipated. • Approximately 244 meters from open aquatic habitat of Coldwater Creek. • Best Management Practices and a robust Erosion and Sediment Control plan will minimize risk of indirect impact during construction.	• No direct aquatic impacts anticipated. • Approximately 87 meters from open aquatic habitat of Coldwater Creek. • Best Management Practices and a robust Erosion and Sediment Control plan will minimize risk of indirect impact during construction.	• No direct aquatic impacts anticipated. • Approximately 79 meters from open aquatic habitat of Coldwater Creek. • Best Management Practices and a robust Erosion and Sediment Control plan will minimize risk of indirect impact during construction.	• No direct aquatic impacts anticipated. • Not near an open aquatic habitat, but likely near a catch basin. • Best Management Practices and a robust Erosion and Sediment Control plan will minimize risk of indirect impact during construction.	• No direct aquatic impacts anticipated. • Not near an open aquatic habitat, but likely near a catch basin. • Best Management Practices and a robust Erosion and Sediment Control plan will minimize risk of indirect impact during construction.

EVALUATION CRITERIA	DESCRIPTION	SITE 1 adjacent to and SW of 130 OSLER DRIVE (Adjacent to existing Osler WPS, HD011)	SITE 4 88 OFIELD ROAD	SITE 6 1845 MAIN STREET WEST	SITE 8 1870 MAIN STREET WEST	Site 9 1872 MAIN STREET WEST	SITE 12 125 RIFLE RANGE ROAD	SITE 19 161 RIFLE RANGE ROAD
Species at Risk (SAR) Impacts	Potential impacts to SAR or SAR habitat	No SAR or SAR habitat identified, therefore no anticipated impact.	No SAR or SAR habitat identified, therefore no anticipated impact.	No SAR or SAR habitat identified, therefore no anticipated impact.	No SAR or SAR habitat identified, therefore no anticipated impact.	No SAR or SAR habitat identified, therefore no anticipated impact.	No SAR or SAR habitat identified, therefore no anticipated impact.	No SAR or SAR habitat identified, therefore no anticipated impact.
SOCIOCULTURAL								
Construction impacts	Potential for dust, traffic and noise issues stemming from construction activities with proximity to nearby communities	- High, near residential areas and potential traffic disrupting to a larger area during construction. - Requirement of more linear infrastructures.	- Medium, near residential areas and potential traffic disrupting to the local area during construction. - Requirement of less linear infrastructures.	- Low, near commercial areas and potential traffic disrupting to a smaller area during construction. - Requirement of the least linear infrastructures.	- Low, near commercial areas and potential traffic disrupting to a smaller area during construction. - Requirement of the least linear infrastructures.	- Low, near commercial areas and potential traffic disrupting to a smaller area during construction. - Requirement of the least linear infrastructures.	- High, near residential areas and potential traffic disrupting to a larger area during construction. - Requirement of the most linear infrastructures	- High, near residential areas and potential traffic disrupting to a larger area during construction. - Requirement of the most linear infrastructures.
Archaeological Potential	Construction activities within undisturbed areas with proximity to archaeological sites.	Does not retain archaeological potential.	Archaeological potential and requires Stage 2 archaeological assessment by test pit survey at five metre intervals, prior to any proposed construction activities on these lands.	Does not retain archaeological potential.	Does not retain archaeological potential.	Archaeological potential and requires Stage 2 archaeological assessment by test pit survey at five metre intervals, prior to any proposed construction activities on these lands.	Archaeological potential and requires Stage 2 archaeological assessment by test pit survey at five metre intervals, prior to any proposed construction activities on these lands.	Does not retain archaeological potential.

EVALUATION CRITERIA	DESCRIPTION	SITE 1 adjacent to and SW of 130 OSLER DRIVE (Adjacent to existing Osler WPS, HD011)	SITE 4 88 OFIELD ROAD	SITE 6 1845 MAIN STREET WEST	SITE 8 1870 MAIN STREET WEST	Site 9 1872 MAIN STREET WEST	SITE 12 125 RIFLE RANGE ROAD	SITE 19 161 RIFLE RANGE ROAD
Proximity to Cultural Heritage Resources	Potential impact of construction activities on cultural heritage resources potentially located within proximity of construction site.	• Coldwater Creek (Cultural Heritage Landscapes, CHL-5) is located approximately 110 metres east of Site 1, However direct or indirect negative impacts are not anticipated due to the distance from the site to the creek. • A HIA is required if Site 1 is selected as the preferable site.	• Site 4 is a potential Built Heritage Resources (BHR-21) with potential cultural heritage value or interest, the removal of the residence would be a direct negative, irreversible impact. • Site 4 is the least preferable location from a cultural heritage perspective and should be eliminated from further consideration in the selection of the preferable site.	• Adjacent to White Chapel Memorial Gardens Cemetery and Crematorium (CHL-7), • Indirect negative impacts are possible during construction. • An HIA is required for CHL-7 if Site 6 is selected as the preferable site.	• Not adjacent to any identified BHRs or CHLs and so there would be no impacts from a cultural heritage perspective.	• Not adjacent to any identified BHRs or CHLs and so there would be no impacts from a cultural heritage perspective.	• Adjacent to Alexander Park (CHL-11) • Direct or indirect negative impacts are possible. • A HIA is required if Site 12 is selected as the preferable site.	• Adjacent to Alexander Park (CHL-11) • Direct or indirect negative impacts are possible. • A HIA is required if Site 19 is selected as the preferable site.
TECHNCIAL								

EVALUATION CRITERIA	DESCRIPTION	SITE 1 adjacent to and SW of 130 OSLER DRIVE (Adjacent to existing Osler WPS, HD011)	SITE 4 88 OFIELD ROAD	SITE 6 1845 MAIN STREET WEST	SITE 8 1870 MAIN STREET WEST	Site 9 1872 MAIN STREET WEST	SITE 12 125 RIFLE RANGE ROAD	SITE 19 161 RIFLE RANGE ROAD
Construction Site Access	Ease of access to location of planned construction activities	• Accessible by medium traffic road Osler Drive.	• Accessible by light traffic local road Ofield Road.	• Accessible by light traffic road Whitney Avenue.	• Accessible by medium traffic road Main Street West.	• Accessible by medium traffic road Main Street West.	• Accessible by light traffic local road Rifle Range Road.	• Accessible by light traffic local road Rifle Range Road.
Geotechnical/ Ease of Construction	The potential for encountering problems with the construction of the alternative (i.e., soil stability, geotechnical considerations, ease of excavation)	• Mild slope - Typical foundation and construction works.	• Mild slope - Typical foundation and construction works.	• Mild slope - Typical foundation and construction works.	• Mild slope - Typical foundation and construction works.	• Mild slope - Typical foundation and construction works.	• Mild slope - Typical foundation and construction works.	• Mild slope - Typical foundation and construction works.
Proximity to PD17	Distance of site to existing HD17A WPS (or connection point of PD17)	1 km	0.5 km	<0.1 km	<0.1 km	<0.1 km	1.3 km	1.3 km
Hydraulic Suitability	Head losses through the proposed watermain	• Least preferable hydraulically due to the longest distance to the PD17, which system results in the greatest head losses along the watermain.	• Preferable hydraulically.	• Most preferable hydraulically.	• Most preferable hydraulically.	• Most preferable hydraulically.	• Least preferable hydraulically due to the longest distance to the PD17, which system results in the greatest head losses along the watermain.	• Least preferable hydraulically due to the longest distance to the PD17, which system results in the greatest head losses along the watermain.

EVALUATION CRITERIA	DESCRIPTION	SITE 1 adjacent to and SW of 130 OSLER DRIVE (Adjacent to existing Osler WPS, HD011)	SITE 4 88 OFIELD ROAD	SITE 6 1845 MAIN STREET WEST	SITE 8 1870 MAIN STREET WEST	Site 9 1872 MAIN STREET WEST	SITE 12 125 RIFLE RANGE ROAD	SITE 19 161 RIFLE RANGE ROAD
Operations and Maintenance Considerations	Operation and maintenance efforts/costs (e.g., inspections/repair)	High operation and maintenance efforts/costs due to longer watermain.	Low operation and maintenance efforts/costs due to requirement of shorter watermains.	Lowest operation and maintenance efforts/costs due to shorter watermain.	Lowest operation and maintenance efforts/costs due to shorter watermain.	Lowest operation and maintenance efforts/costs due to shorter watermain.	Highest operation and maintenance efforts/costs due to the longest watermain.	Highest operation and maintenance efforts/costs due to the longest watermain.
Approvals and Implementation	Requirement of approval and implementation during construction	Constructing a watermain under a creek and under a medium traffic road (Osler Drive) may require special construction techniques, such as horizontal directional drilling, and additional approvals.	Typical approval and Implementation.	Typical approval and Implementation.	Typical approval and Implementation.	Typical approval and Implementation.	Constructing a watermain under a high-pressure gas line may require special construction techniques, and additional approvals.	Constructin a watermain under a high-pressure gas line may require special construction techniques, and additional approvals.
FINANCIAL								
Land acquisition for new water pumping station	Capital costs determined by purchasing property for a new water pumping station	Negligible to None	\$0.8M	\$0.6M	\$1.0M	\$1.0M	\$0.6M	\$0.8M
Linear infrastructures	Capital costs determined by installation of watermains	\$1.0M	\$0.5M	\$0.1M	\$0.1M	\$0.1M	\$0.8M	\$0.8M

EVALUATION CRITERIA	DESCRIPTION	SITE 1 adjacent to and SW of 130 OSLER DRIVE (Adjacent to existing Osler WPS, HD011)	SITE 4 88 OFIELD ROAD	SITE 6 1845 MAIN STREET WEST	SITE 8 1870 MAIN STREET WEST	Site 9 1872 MAIN STREET WEST	SITE 12 125 RIFLE RANGE ROAD	SITE 19 161 RIFLE RANGE ROAD
Due diligence costs	Capital Costs due to additional studies, and demolition, etc.)	<\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M
New pumping station	Capital costs determined by construction of anew water pumping station	\$8M	\$8M	\$8M	\$8M	\$8M	\$8M	\$8M
Estimated total Construction Costs* including Land Acquisition	Total capital costs determined by construction of new water pumping station (including land acquisition, as applicable) and watermains	\$9.1M	\$9.4M	\$8.8M	\$9.2M*	\$9.2M*	\$9.5M	\$9.7M
PROPERTY ACQUISTION								
Ownership and Landuse	Ownership and Landuse	City - open space	Private – residential	Private – commercial (Parking lot area for the Treehouse Cannabis Company)	Private – commercial (Haven Inn)	Private – commercial (Westdale Car Service)	Private – institutional (Open space, Conseil Scolaire Viamonde - French School Board)	Private – Residential/ Institutional (Trustees of Meeting Rooms Association Hamilton-Burlington Area)
Property Acquisition	Potential for property acquisition requirements	No additional property required	Property acquisition required	Property acquisition required	Property acquisition required	Property acquisition required	Property acquisition required	Property acquisition required

EVALUATION CRITERIA	DESCRIPTION	SITE 1 adjacent to and SW of 130 OSLER DRIVE (Adjacent to existing Osler WPS, HD011)	SITE 4 88 OFIELD ROAD	SITE 6 1845 MAIN STREET WEST	SITE 8 1870 MAIN STREET WEST	Site 9 1872 MAIN STREET WEST	SITE 12 125 RIFLE RANGE ROAD	SITE 19 161 RIFLE RANGE ROAD
SUMMARY / RECOMMENDATION								
SUMMARY / RECOMMENDATION	SUMMARY / RECOMMENDATION	- While having little potential for natural environment impacts during construction and some potential for sociocultural impacts, this alternative presents technical challenges for watermain installation, but does not require property acquisition and is a moderately cost-effective option. - Site 1 is the second-most preferable site.	- While having little to no potential for natural environment impacts, this site has potential for the highest sociocultural impacts (This residence is a Built Heritage Resources site), therefore property acquisition would be required. This alternative is technically moderately attractive and relatively expensive. - Site 4 is the least preferable site.	- While having the lowest potential for natural environment impacts and some potential for sociocultural impacts, this alternative requires property acquisition and is the most cost effective, and technically sound option. - Site 6 is the most preferable site.	- While having little to no natural environment and/or sociocultural impacts, this alternative requires property acquisition and is a moderately cost-effective and technically sound option. *However, the total capital cost for the new WPS could be significantly higher (e.g., \$2M higher), if the entire property must be purchased, making it a more expensive and less preferable alternative. - Site 8 is the fifth-most preferable site, due to the potential high cost in purchasing the entire property.	- While having some potential natural environment impact but low to no sociocultural impacts, this alternative requires property acquisition and is a moderately cost-effective; and technically sound option. *However, the total capital cost for the new WPS could be significantly higher (e.g., \$3M higher), if the entire property must be purchased, making it a more expensive and less preferable alternative. - Site 9 is the sixth-most preferable site, due to the potential high cost in purchasing the entire property.	- While having little to no potential for natural environment impacts, this alternative has high potential for sociocultural impacts, requires property acquisition and is technically un-attractive and relatively expensive. - However, since Site 12 consists of a relatively large parcel, it might have little sociocultural impacts if the new WPS is relocated at a location (within Site 12) further away from the Alexander Park (CHL-11). - Site 12 is the third-most preferable site.	- While having little to no potential for natural environment impacts, this alternative has high potential for sociocultural impacts, requires property acquisition and is technically un-attractive and expensive. - Site 19 is the fourth-most preferable site.

EVALUATION CRITERIA	DESCRIPTION	SITE 1 adjacent to and SW of 130 OSLER DRIVE (Adjacent to existing Osler WPS, HD011)	SITE 4 88 OFIELD ROAD	SITE 6 1845 MAIN STREET WEST	SITE 8 1870 MAIN STREET WEST	Site 9 1872 MAIN STREET WEST	SITE 12 125 RIFLE RANGE ROAD	SITE 19 161 RIFLE RANGE ROAD
RANKING	RANKING	2	7	1	5	6	3	4

Note in **Table 5.3:**

- **Green** – Most preferable (Rank 1)
- **Blue** – Preferable (Ranks 2 to 6)
- **Red** – Least preferable (Rank 7)

5.7 Recommended/Preferrable Alternative

The seven short-listed sites below are listed in order, from most preferred to least preferred, together with the rationale for this ranking based on the evaluation results presented in **Table 5.3**.

5.7.1 Most-preferrable and recommended alternative - Site 6

Site 6 is located at 1845 Main Street West and currently leased to a commercial tenant, the Treehouse Cannabis Company.

Rationale:

- Presence of a commercial parking lot
- Located adjacent to the existing HD17A WPS (or PD17)
- Lowest impact on local neighbourhoods during construction
- Lowest potential for natural environment impact
- Most hydraulically sound option
- Most cost-effective option

Considerations:

- The City would need to acquire at least part of the property
- Some potential for sociocultural impacts (location is adjacent to White Chapel Memorial Gardens, a cemetery and crematorium CHL-7); however, these can be mitigated

5.7.2 Second-most preferable alternative - Site 1

Site 1 is located adjacent to and SW of 130 Osler Drive (adjacent to existing Osler WPS, HD011).

Rationale:

- Open space
- The City owned property
- No need to acquire property
- Low potential for natural environment impact
- Moderately cost-effective

Considerations:

- Not located close to either the existing HD17A WPS or PD17 which results in the need for more linear infrastructure works
- Adjacent to an environmentally sensitive area

- Some potential for sociocultural impacts during construction; however, these can be mitigated
- Installing the watermain will have some technical challenges (as a result of the proposed watermain having to cross under an existing creek and a road with moderate traffic (Osler Drive))
- Less hydraulically sound option

5.7.3 Third-most preferable alternative - Site 12

Site 12 is located at 125 Rifle Range Road and owned by the Conseil Scolaire Viamonde - French School Board.

Rationale:

- Open-space institutional property
- Low potential for natural environment impact
- Moderately cost-effective

Considerations:

- Not located close to the existing HD17A WPS (or PD17)
- The City would need to acquire part of the property
- Some potential for sociocultural impacts (e.g., adjacent to Alexander Park [CHL-11]) and construction activities within undisturbed areas; this can be mitigated, although additional studies may be required
- Installing the watermain will have some technical challenges (as a result of the proposed watermain having to cross under an existing high-pressure gas line)
- Less hydraulically sound option

5.7.4 Fourth-most preferable alternative – Site 19

Site 19 is located at 161 Rifle Range Road and owned by the Trustees of Meeting Rooms Association Hamilton-Burlington Area (Residential/institutional property).

Rationale:

- Low potential for natural environment impact

Considerations:

- Not located close to the existing HD17A WPS (or PD17)
- The City would need to acquire the property
- Some potential for sociocultural impacts (e.g., adjacent to Alexander Park [CHL-11]) and other impacts (construction activities within undisturbed areas); these can be mitigated, although additional studies may be required
- Installing the watermain will have some technical challenges (as a result of the proposed watermain having to cross under an existing high-pressure gas line)

- Less hydraulically sound option
- Less cost-effective

5.7.5 Fifth-most preferable alternative - Site 8

Site 8 is located at 1870 Main Street, site of Haven Inn (commercial site).

Rationale:

- Located at 1870 Main Street, site of Haven Inn (commercial site)
- Located adjacent to the existing HD17A WPS (or PD17)
- Hydraulically sound option
- Low potential for sociocultural impacts
- Low potential for natural environment impact

Considerations:

- The City would need to acquire the property
- Moderately cost-effective; however, land acquisition cost could be significantly higher if the entire property must be purchased, making it a more expensive and less preferable alternative

5.7.6 Sixth-most preferable alternative - Site 9

Site 9 is located at 1872 Main Street West, site of Westdale Car Service (commercial site)

Rationale:

- Located near the existing HD17A WPS (or PD17)
- Low potential for natural environment impact
- Hydraulically sound option

Considerations:

- The City would need to acquire at least part of the property
- Some potential for sociocultural impacts (e.g., construction activities within undisturbed areas); however, these can be mitigated, although additional studies may be required
- Moderately cost-effective; however, land acquisition cost could be significantly higher if the entire property must be purchased, making it a more expensive and less preferable alternative

5.7.7 Least preferable alternative - Site 4

Site 4 is located at 88 Ofield Road, a residential site.

Rationale:

- Low potential for natural environment impact

- Moderate hydraulically sound option
- Moderately cost-effective
- Located near the existing HD17A WPS (or PD17)

Considerations:

- The City would need to acquire the property
- High potential for sociocultural impacts; Site 4 is a potential Built Heritage Resources site (BHR-21) with potential cultural heritage value or interest; thus, the removal of the residence would have a direct, negative, and irreversible impact
- Least preferable alternative from a cultural heritage perspective and should be eliminated from further consideration in the selection of the recommended/preferred alternative site

All seven short-listed sites, except for Site 4, are considered feasible for the new WPS.

Site 6 offers the most cost effective and technically sound option, while having the lowest potential for natural environment impact compared to the other alternative sites. This was presented in PIC No. 2, which was held from April 28, 2023 to May 19, 2023. See consultation details in **Section 7**.

There were no concerns raised during or after PIC No. 2. Therefore Site 6 is carried forward as the preferred location for the new WPS of PD17.

The conceptual plan for the preferred alternative Site 6 is shown in **Figure 5-11**. The final layout, building location/footprint and property requirements for Site 6 will be determined during the detailed design stage.

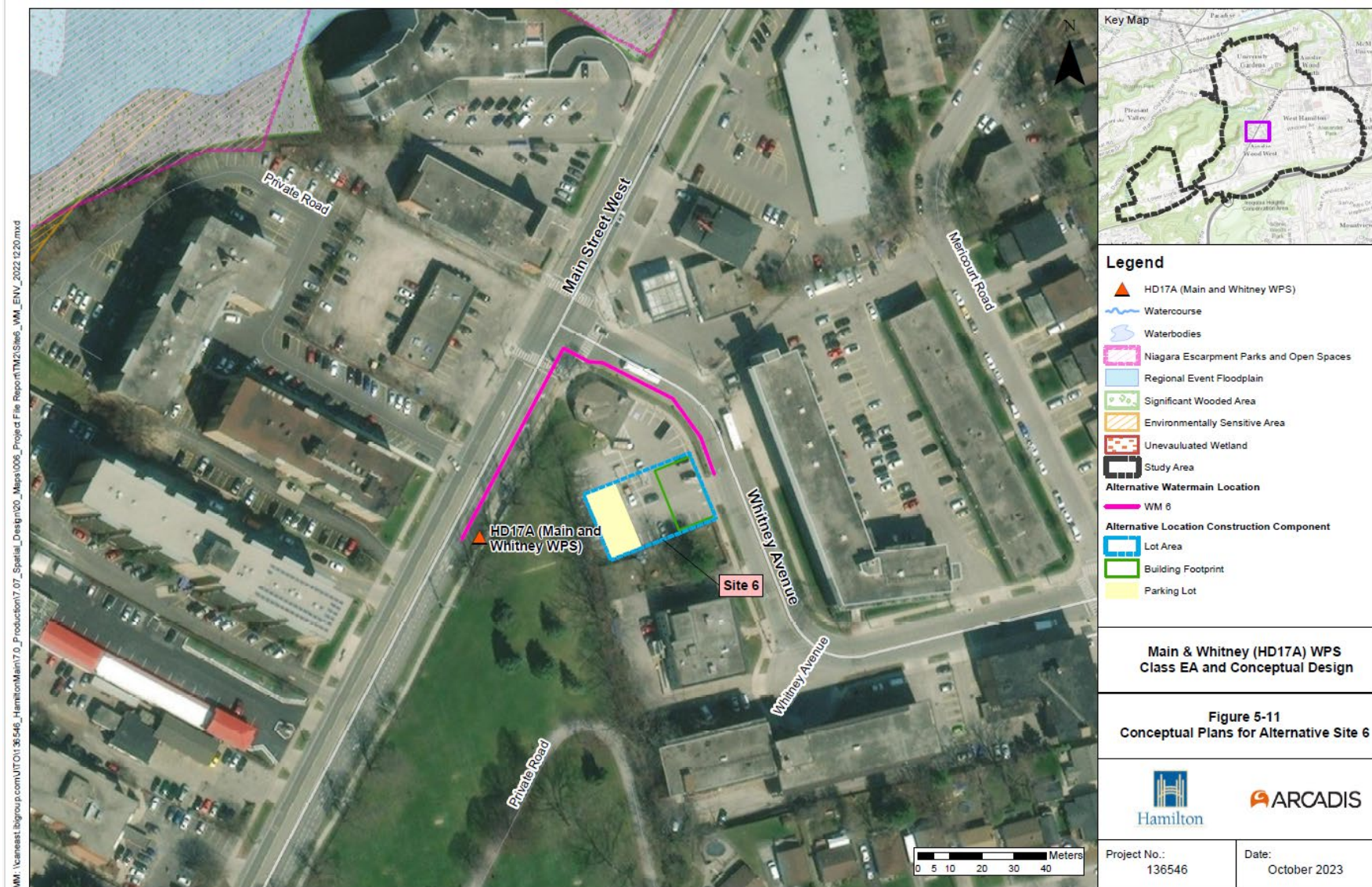


Figure 5-11 Conceptual Plan for Preferred Alternative Site 6

6 Mitigation Measures and Climate Change Considerations

The mitigation measures and the considerations for the climate change are described in the following sections:

6.1 Mitigation Measures

Construction of the water pumping station are likely to result in some negative impacts. In most cases however, potential impacts will be limited to the period of construction and are considered manageable with the appropriate mitigation measures. Mitigation involves the application of appropriate measures to eliminate or reduce the negative impacts to ensure that any disturbances are managed by best available methods (e.g., restoration of areas disturbed during construction is considered mitigation). The following mitigation measures outlined in **Table 6.1** are recommended to ensure that any short term and long-term disturbances are managed by best available methods. These measures will be confirmed and further defined during detailed design.

Table 6.1 Mitigation Measures

Potential Impact / Consideration	Mitigation Measures
Natural Environment	
Tree and vegetation removal	• An Arborist should mark trees to be retained, complete a full assessment during detailed design, and prepare a tree protection plan in accordance with City of Hamilton guidelines. • Install tree protection hoarding before construction. • Remove trees only outside the migratory bird nesting season (October 31 to March 31). • Replace removed trees/vegetation and restore disturbed areas to existing or better conditions. • All trees to be retained shall be clearly marked by an Arborist.
Wildlife Habitat and/or Species at Risk removal	• As Site 6 is outside HCA Regulated Areas, an HCA permit may not be required. • Consult City Natural Heritage staff to confirm an appropriate buffer based on further study and Official Plan policies.

Potential Impact / Consideration	Mitigation Measures
Groundwater Management	• Conduct detailed geotechnical and hydrogeological investigations during detailed design to confirm dewatering needs. • Obtain a Permit to Take Water (PTTW) or register under the EASR, as required.
Erosion and Sedimentation Control (ESC)	• Prepare and implement an ESC plan in accordance with the ESC Guideline for Urban Construction (2020), including stockpile location and protection measures. • Monitor ESC measures on site during and after wet weather events. • Restore and stabilize disturbed areas as soon as practical.
Contamination of Soils through Spills and Leaks	• Prepare and implement a Spills Management Plan that includes material handling instructions, emergency contacts, and MECP Spills Action Centre information. • Train contractor personnel on the plan.
Waste Disposal	• Dispose of all construction waste in accordance with MECP requirements. • Dispose of any contaminated soil in compliance with Part XV.1 of the Environmental Protection Act and O. Reg. 153/04.
Sociocultural Environment	
Property Requirements	• The preferred new PS17 WPS location will require 770 m² of parking lot property at 1845 Main Street West. • Land negotiations with affected owner(s) will begin during detailed design; discussions with the property owner started during the EA study. • Notice of the preferred location was sent to the property owner(s) by mail and follow-up phone calls. • Final property requirements will be confirmed during detailed design.

Potential Impact / Consideration	Mitigation Measures
Noise / Vibration / Dust Control during construction	• Construction will occur during normal working hours and comply with the City's noise by-law. • Dust will be controlled using non-chloride suppressants, water spraying, or street sweeping. • Construction vehicles and equipment should be well maintained, with emission controls and noise-reduction features in good working order. • Construction and staging should avoid unintended impacts to identified BHRs and CHLs, using measures such as temporary fencing, buffer zones, and crew instructions. • A baseline vibration assessment should be completed during detailed design to evaluate potential vibration impacts.
Long-term Noise/Lighting/Visual Barrier Plan	• Provide a landscape and/or mitigation measure plan for noise, lighting, and visual barrier plan (e.g., landscapes, trees or others) to minimize the lighting, noise and visual impact on the neighbouring environment during design stage.
Archaeological and Cultural Heritage Resources	• Complete a Heritage Impact Assessment (HIA) for Site 6, adjacent to CHL-7, to assess potential temporary construction impacts. • If archaeological resources are found during construction, work must stop immediately and a licensed archaeologist must be retained in accordance with Section 48(1) of the Ontario Heritage Act. • If a burial site is discovered, notify the police or coroner immediately, as required under the Funeral and Cremation Services Act, and also notify the Registrar of Cemeteries, Ministry of Consumer Services.
Private Property Access	• Limit construction to designated work areas. • The contractor may not enter private property without written landowner permission, with a copy provided to the Region.

Potential Impact / Consideration	Mitigation Measures
Traffic Management	• Disruptions to traffic should be restricted to off-peak hours. • Advanced notification of traffic disruptions should be provided in addition to the use of signs to direct motorists.
Municipal Infrastructure and Utilities	• Confirm all utility impacts, including locations, depths, and relocation needs, early in detailed design with the affected utility companies.
Excess Materials Management	• Prepare required excess soil management reports and plans in accordance with O. Reg. 406/19 and current MECP guidance.
Monitoring during Construction	• Monitor construction to ensure all environmental commitments in the PFR and contract documents are met. • A qualified Certified Inspector will verify that mitigation and design measures are properly implemented and maintained, and that contingency plans are in place if needed.

6.2 Climate Change Considerations

In 2017, the MECP released a document entitled “Considering Climate Change in the Environmental Assessment Process” (2017) that provides guidance relating to the ministry’s expectations for considering climate change during the environmental assessment process. There are two key approaches to address climate change, including reducing a project’s impact on climate change (climate change mitigation) and increasing the local ecosystem’s resilience to climate change (climate change adaptation).

6.2.1 Potential for Project to Impact Climate Change

The existing HD17A WPS was constructed in 1968, serving PD17 for many decades. The station is beyond its recommended useful life. An investigation determined that replacing the pump station would be more cost effective and efficient than repairing or rebuilding the facility in its current location.

The new WPS project impacts to climate change can be considered in terms of greenhouse gas emissions from the pump operations. The PD17 currently functions as a closed system as no floating storage exists within PD17. The new pumping station for PD17 is recommended to be completed with Variable Frequency Drive (VFD). It is anticipated that recirculation flow from pump discharge to suction system would be minimized and improve the operating efficiencies. Further, the emission of greenhouse

gases may be reduced compared to existing conditions with a modern and more efficient system.

The recommended location (Site 6) was chosen primarily for its lowest natural environment impact when compared with other alternative sites. In addition, the proximity to the existing HD17 WPS facilitates connecting the new WPS to the existing piping, reducing the overall need for new construction. Currently, there are trees along the north and west property boundaries, which may be protected during construction. A full arborist assessment is recommended during detailed design including a tree protection plan according to the City of Hamilton guidelines. Maintaining the existing trees would help reduce the impact on climate change.

6.2.2 Potential for Climate Change to Impact this Project

Climate change has the potential to result in increased storm events that can lead to flooding. The new WPS is to be constructed at the existing parking lot located at 1845 Main Street West. Low Impact Development (LID) measures for increased quantity and quality stormwater control will be considered during detailed design which would assist in reducing potential flooding impacts. This undertaking is expected to make the area less vulnerable to climate change.

7 Consultation

To meet the Municipal Class EA communications and consultation requirements for this Schedule B study, a variety of tools were used including: notices; letter and email correspondence; two Public Information Centres (PICs); and posting relevant information on the City's project website.

Consultation with the public (which includes stakeholders and interested parties) and review agencies is a necessary and important component of the Municipal Class Environmental Assessment process. To meet the consultation requirements for this Schedule B project, the City of Hamilton ensured that the public and review agencies were informed of the Study and given the opportunity to provide input on the assessment and alternative evaluation process.

As per the requirements of the Municipal Class EA process, Schedule B projects have two (2) mandatory points of public consultation: one during Phase 2 to review the Problem & Opportunity and Alternative Solutions, and one during Notice of Completion. For this project, the City included a discretionary public meeting during Phase 1 to review the Problem and Opportunity. The following describes the three Notices and PIC presentations issued for this study.

The following sections describe the communications and consultation activities undertaken throughout the course of the Study, as well as a summary of comments and feedback received.

7.1 Study Commencement and Public Information Centre No. 1

7.1.1 Notice of Study Commencement and Public Information Centre No. 1

This study was formally introduced to the public and agencies via a Notice of Study Commencement and PIC No. 1. The notice was distributed to those on the study mailing list via mail or email and was also published in a local newspaper, as described in **Table 7.1**. The Notice of Study Commencement and PIC No. 1, as well as the letter and response form can be found in **Appendices F, H to M**.

The City of Hamilton and/or Arcadis sent an email along with a copy of the Notice to stakeholders including the public, affected agencies, property owners, and potential interested Indigenous Communities. Each recipient was asked to respond to the project team, indicating their interest in receiving further correspondence on the Study. Stakeholders remained on the mailing list for the duration of the public consultation process unless they requested to be removed.

Three (3) Indigenous Communities were identified as potentially interested in the project by the Ministry of the Environment, Conservation and Parks (MECP):

- Six Nations of the Grand River (SNGR)
- Haudenosaunee Confederacy Chiefs Council (HCCC) - copy Haudenosaunee Development Institute (HDI) with all correspondence
- Mississaugas of the Credit First Nation (MCFN).

The email and mailout records are summarized as follows:

- Public: Approximately 1,600 mailouts and/or emails
- Agencies: Over 200 emails and/or mailouts
- Indigenous Communities: A total of 3 Indigenous Communities and/or organizations were notified via mailouts/ emails.
- Copies of the notices for the Indigenous Communities are provided in **Appendix L**.

7.1.2 Public Information Centre No. 1

A virtual PIC No. 1 was held at the City website at www.hamilton.ca/main-whitney-hd17a-water-pumping-station between May 12 to June 2, 2022 and presented the study background, an overview of the Class EA process, Study Area and the problem/opportunity statement. A comment sheet was made available for those who wished to provide comments via the project email or mail-in. A copy of the virtual presentation for PIC No. 1 is provided in **Appendix F**. Comments and responses can be found in **Appendices H to J**. Study Area Expansion and Notice of Public Information Centre No. 2

7.1.1 Notice of Study Area Expansion and Public Information Centre No. 2

The Notice of PIC 2 was published in the local news on Friday, April 14, 2023 and Friday, April 21, 2023, as shown in **Table 7.1**. The notice briefly outlined the purpose and justification for the Study Area Expansion. The notice also indicated that the second PIC would be held between April 28, 2023 to May 19, 2023, to present the alternative solutions, the evaluation of the alternatives and the recommended/preferable solution.

Similar to PIC No. 1, the City of Hamilton and/or Arcadis sent an email along with a copy of the Notice to invite all those on the stakeholders mailing list including potentially impacted property owners. Each recipient was asked to respond indicating their interest in receiving correspondence on the study. The Notice of Study Commencement and PIC No. 2, presentation, response form, as well as the letter and response form can be found in **Appendices G, H to M**.

As suggested by the City, two (2) additional Indigenous Communities and/or organizations were identified as potentially interested in the project and added to the contact list for PIC No. 2. These two Indigenous Communities are:

- Wendat First Nation at Wendake
- Metis Nation of Ontario

A total of five (5) Indigenous Communities and/or organizations were notified via mailouts/ emails.

These five (5) Indigenous Communities have been invited to review on the Stage 1 Archaeological Assessment (Stage -1 AA) Report (dated April 11, 2023) prepared by ASI. The final Stage-1 AA Report (dated October 11, 2023) was provided in **Appendix E**. The follow-up phone calls with the above Indigenous Communities were

made by the City. The follow-up letters were prepared by the City and Arcadis and sent out to all five Indigenous Communities and/or organizations, except the Six Nations of the Grand River (SNGR), which confirmed receipt of Stage-1 AA report.

In addition, the City of Hamilton conducted a 'Kitchen Table Meeting' by sending copies of the Notices via registered mails to the owners/properties managers an/or tenants/occupants of the preferred alternative location (Site 6) property and immediately adjacent properties. The location map showing these properties can be found in

Appendix J.

The email and mailout records are summarized as follows:

- Public: Approximately 2,800 mailouts and/or emails
- Agencies: Over 200 emails and/or mailouts
- Indigenous Communities: Email and mailout were sent to each of the five (5) Indigenous Communities; Follow-up phone calls and emails were made to ensure awareness of the PIC No. 2. Copies of the notices for the Indigenous Communities are provided in **Appendix L.**
- 'Kitchen Table Meeting': Approximately 16 registered mails for the Notice of Study Area Expansion and PIC No. 2 were sent to the property owners/managers and/or occupants adjacent to the preferable or recommended alternative site (Site 6). Attendees included the White Chapel Memorial Gardens Cemetery, St. Joseph's Healthcare and other neighbouring entities. The deliveries of the notice for all registered mails were confirmed, except one returned mail from a store owner, which was no longer in business. Follow-up phone calls were made to notify these immediate neighbours to ensure awareness of the PIC No. 2. The contact records are documented in **Appendix J.**

7.1.2 Public Information Centre No. 2

A virtual PIC No. 2 (PIC 2) was held between April 28, 2023 to May 19, 2023 and presented to present the alternative solutions, the evaluation of the alternatives and the recommended/preferable solution. A comment sheet was made available for those who wished to provide comments via the project email or mail-in. A copy of the virtual presentation for PIC 2 is provided in **Appendix G.**

7.2 Notice of Study Completion

A Notice of Class EA Study Completion will be prepared and distributed via the same means as the previously described notices. The purpose of the Notice will be to announce the Class EA Study completion and start of the 30-day public review period for the Project File Report.

The Project File Report will be made available for public review online at <https://www.hamilton.ca/environmental-assessments/main-whitney-hd17a-water-pumping-station>. Alternative arrangements to view the report are available upon request.

Similarly, the notice will be published in City's project website and local newspapers, as described in **Table 7.1**.

Table 7.1 Class EA Schedule

Task	Publication	Date
Notice of Study Commencement and PIC No. 1	Newspaper – The Hamilton Spectator	Friday, April 29 and Friday, May 6, 2022
PIC No.1	City's Project Website	May 12 to June 2, 2022.
Notice of Study Area Expansion and PIC No. 2	Newspaper – The Hamilton Spectator	Friday, April 28 and Friday, May 19, 2023
PIC No.2	City's Project Website	April 28 to May 19, 2023
Notice of Study Completion	September 15, 2026	October 30, 2026

7.3 Public and Review Agency Consultation

Consultation with review agencies and local stakeholders is key to identifying area-specific interests and constraints so that they can be considered early in the study and included in the development and evaluation of alternative solutions and design concepts.

At the beginning of the study, the project team compiled a list of technical agencies that may have an interest in the study. These agencies were first contacted through the Notice of Study Commencement and the first PIC. Key agencies that were consulted with to review the project scope and identify issues included the Ministry of Environment, Conservation and Parks (MECP), Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI), the Ministry of Northern Ministry of Natural Resources and Forestry (NDMNRF), and the Hamilton Conservation Authority (HCA).

Comments received from the public and key review agencies are summarized in **Table 7.2**. A summary of the comments and questions received from the public and agency representatives during the Class EA process has been provided in **Appendix H**. Copies of the actual written correspondence received from the public and agencies have also been provided in **Appendix K**.

Table 7.2 Comments Received from Local Stakeholders, Review Agencies and Interest Groups

Ref	Public / Review Agency	Date	Comment Received	Project Team Response
A1	Ministry of Environment, Conservation and Parks (MECP)	April 12, 21 and 29, 2022 and June 1, June 14 & August 27, 2026	MECP identified three Indigenous communities/organizations with potential interest in the project: - Six Nations of the Grand River (SNGR) - Haudenosaunee Confederacy Chiefs Council / Haudenosaunee Development Institute - Mississaugas of the Credit First Nation (MCFN). • MECP issued a Letter of Acknowledgement and related attachments in response to the Notice of Commencement. MECP also requested that a draft Project File Report be submitted for review at least 30 days before filing the final report, and that the final notice be sent to the West Central Region EA notification email account at eanotification.wcregion@ontario.ca Once finalized.	• These three Indigenous Communities/organizations were contacted through the Class EA process. • Two additional Indigenous Communities were identified by the City as potentially interested in the project and added to the contact list after PIC No. 1: Wendat First Nation at Wendake; and Metis Nation of Ontario. A total of five Indigenous Communities were notified for this Study via mailouts/ emails and follow-up phone calls. • A draft Project File Report was sent directly to Joan Del Villar Cuicas at the MECP prior to filing the final report for the ministry review. • The Notice of Study Completion, together with responses to MECP comments on the Draft Project File Report was sent to the Ministry's West Central Region EA notification email account eanotification.wcregion@ontario.ca

Ref	Public / Review Agency	Date	Comment Received	Project Team Response
A2a	NAV Canada	April 28, 2022	The Land Use evaluation process determines any potential impacts that may affect the safety of the Air Navigation System from various proposals. NAV Canada requested that a Land Use submission be completed for the project (NAV File 22-1623) would be required. The NAV CANADA Land Use webpage. https://www.navcanada.ca/en/products-and-services/Pages/land-use-program.aspx	Once the alternative locations for the new pumping station are identified, a location map and other documents will be provided to NAV Canada for review and comment.
A2b	NAV Canada	August 19 & 25, 2026	The file was formally closed due to insufficient actionable information. Upon a request to reopen it, it was advised that, as of August 2025, a new submission through the Land Use Portal is required. All proposals must be submitted through the portal and include specific coordinates and building data.	Initial consultation was completed during Class EA. Technical review was not completed at this stage. Reassess and submit through NAV Canda Land Use Portal during detailed design, if required once building data are available.

Ref	Public / Review Agency	Date	Comment Received	Project Team Response
A4	Ministry of Northern Development, Mines, Natural Resources and Forestry (NDMNRF)	May 2, 2022	The NDMNRF guidance to complete this Class EA was provided.	The information was forwarded to LGL Limited, the project team retained to complete the Natural Environment Assessment.
A7	Transport Canada	May 16, 2022	Transport Canada requested that the City self-assess the project. If the selected alternative location for the new Water Pumping Station (WPS) interacts with a federal property and/or waterway, approval and/or authorization under Acts administered by Transport Canada will be required.	The project team will perform the self-assessment once the preferred location is selected for a new water pumping station for PD17. The Environmental Assessment program will be included in any further correspondence if this project will interact with a federal property and/or waterway. Following selection of Site 6, the project team completed the self-assessment and determined that interactions with federal property or waterways are not expected. Accordingly, no Transport Canada approvals or authorizations are currently anticipated.

Ref	Public / Review Agency	Date	Comment Received	Project Team Response
A8	IAAC (Impact Assessment Agency of Canada)	May 24, 2022 (including response letter dated May 2, 2022) via email	Regulations were reviewed by IAAC and the project does not fall under the specified Project. As a result, the proponent is not required to submit an Initial Project Description.	Noted.
A9a	MHSTCI (Ministry of Heritage, Sport, Tourism and Culture Industries) / MCM (Ministry of Citizenship and Multiculturalism)	December 5, 2022	MCM confirmed to ASI that no properties have been designated by the Minister. MCM was not aware of any provincial heritage properties within or adjacent to the revised study area.	Noted.
A9b	MHSTCI	June 6 and 10, 2023	MCM confirmed to ASI that no properties have been designated by the Minister. MCM was not aware of any provincial heritage properties within or adjacent to the revised study area.	A copy of the cultural heritage studies, prepared by ASI and dated October 20, 2023, was provided to MHSTCI/MCM on November 20, 2023.

Ref	Public / Review Agency	Date	Comment Received	Project Team Response
A9c	MHSTCI	November 21, 2023	Feedback on Cultural Heritage Report from MCM included the following: a) MCM will review the Cultural Heritage Report and provide comments by late December, if needed. b) MCM records show that a Stage 1 archaeological assessment has been initiated (Form number P1066-0330-2022) for this project, and the licensed archaeologist should submit the report before the notice of completion is issued. c) Proponents should wait for MCM's review letter confirming the report has been entered into the Register before making a decision or starting ground-disturbing activities.	a) Noted. MCM provided feedback on December 17, 2023. b) The Stage 1 archaeological assessment, prepared by ASI (project report package for P1066-0330-2022), was submitted to the ministry by the licensed archaeologist of ASI on September 27, 2024. c) Noted.

Ref	Public / Review Agency	Date	Comment Received	Project Team Response
A9d	MHSTCI	December 14, 2023	Feedback on Cultural Heritage Report from MCM included the following: a) No direct adverse impacts to CHL-7 are expected; construction and staging should avoid unintended effects on identified heritage resources and landscapes. b) Baseline vibration monitoring should be completed for CHL-7 during detailed design, and a vibration monitoring plan prepared if any structures or heritage attributes may be affected. c) The Cultural Heritage Report should also be submitted to the City of Hamilton's heritage planning staff for review and comment. d) MCM found the report generally consistent with Municipal Class EA requirements and MCM best practice guidance.	a) Construction activities and staging should be planned and undertaken to avoid unintended impacts on identified built heritage resources and cultural heritage landscapes. b) A vibration monitoring plan should be prepared and implemented during the detailed design phase. c) The heritage planning staff at the City of Hamilton reviewed the revised Cultural Heritage Report on August 4, 2023 and confirmed that the City has no further comments or concerns. d) MCM reviewed the Cultural Heritage Report and found it generally consistent with the requirements, guidance and standards of the Municipal Class Environmental Assessment and with MCM best practice guidance.

Ref	Public / Review Agency	Date	Comment Received	Project Team Response
A9e	MHSTCI	October 12, 2024	The ministry screened the project report package for P1066-0330-2022 submitted on September 27, 2024 for completeness. The package was deemed complete and the report is considered filed with the ministry. Next, the ministry will either place the in the review queue or enter it into the register without technical review.	As of May 7, 2026, the report remains under review and is not yet confirmed in the register. The estimated review date is December 2, 2026. Follow up with MCM on the review letter and confirm the Stage 1 archaeological assessment is entered into the register before issuing a decision or proceeding with ground-disturbing activities.
A10	TC Energy	June 10, 2022 and May 15, 2023	TransCanada PipeLines Ltd. (TCPL) has one high-pressure natural gas pipeline contained within an easement crossing the Study Area. A written consent form from TC Energy will be required if the selected alternative locations cause ground disturbance within 30 m of TC Energy pipelines.	Should the selected alternative locations cause ground disturbance within 30 m of TC Energy pipelines, written consent will be required. Subsequently, the project team reviewed the location of the preferred Site 6 and confirmed that no ground disturbance is proposed within 30 m of TC Energy pipelines; therefore, written consent from TC Energy is not required.
A15	Hydro One	May 15, 2023	Hydro One confirmed that there are no existing Hydro One Transmission assets in the preferred Site 6.	Should the Study Area expand further or the preferred and recommended site (Site 6) change, Hydro One will be notified.

Ref	Public / Review Agency	Date	Comment Received	Project Team Response
B1, B2 and B4	Public	May 11, 2022 and November 2022 (via phone calls)	Phone calls regarding the City's other projects.	Because the comments related to another project, the concern was directed to the appropriate City contact.
B3	Public	May 11 & May 12, 2022 (via voicemails) ; April 18, 25, 27, 2023 and May 8, 2023 (via voicemails; and May 25, 2023 (via email)	The resident had questions on the Opportunity Statement of PIC No. 1, specifically "enhance water supply security and reliability," as it relates to the requirement for a new WPS. The resident subsequently called and emailed to clarify the expanded Study Area, the selection of the most preferable location (Site 6), and the water servicing area of the new WPS after receiving the Notice of Study Area Expansion and PIC No. 2.	The City had several discussions over the phone to address these questions. All comments have been addressed via Arcadis/IBI and/or City phone calls and email responses.

Ref	Public / Review Agency	Date	Comment Received	Project Team Response
B5	Public	June 7, 2023 (PIC No. 2 comment sheet via email)	Alternative Sites east of Site 6 are not preferable due to the high number of existing infrastructure and utility lines. Alternative sites west of Site 9 and/or within PD17 should be considered.	Noted. Three potential sites near and/or west of Site 9 within PD17 were reviewed and two sites (Sites 8 and 9) were short-listed for detailed evaluation. The open area within PD17 and along Main Street West and/or Lower Lion Club Road was also reviewed. These lands were identified as Significant Woodlands and/or Escarpment Protection Area (Natural Heritage System Area), which are to be avoided as suggested in the Niagara Escarpment Plan (2017). Therefore, no alternative sites west of Site 9 within PD17 were considered for further evaluation.
B6	Public	June 10, 2023 (via PIC No. 2 comment sheet)	Minimal environmental impact should be considered for evaluation of the alternative sites.	Environmental impact has been considered for evaluation of the alternative sites. The preferred location (Site 6) has the lowest potential for natural environment impact compared to the other alternative sites.

7.4 Indigenous Community Consultation

As part of the Class EA planning process, Indigenous Communities were contacted. As suggested by the MECP, the following three were initially included:

- Mississaugas of the Credit First Nation (MCFN)
- Six Nations of the Grand River;
- Haudenosaunee Confederacy Chiefs Council (HCCC) - copy Haudenosaunee Development Institute (HDI) with all correspondence

The notice of Study Commencement and the first PIC were sent to the three (3) Indigenous Communities listed above electronically and a hard copy was sent to the potential affected Indigenous Communities.

Subsequently, two additional Indigenous Communities were suggested to be included by the City:

- Wendat First Nation at Wendake; and,
- Metis Nation of Ontario

All study notices were sent to all (5) Indigenous Communities listed above electronically and a hard copy was sent to directly affected Indigenous Communities. Efforts were also made to follow up with all Indigenous communities via phone that had not provided any response to the notices in case they did not receive it.

A Consultation Log containing a summary of the Project Team's liaison with Indigenous communities during the study is included in **Table 7.3**.

Indigenous Communities were sent a copy of the notices described previously in **Sections 7.1.1, Section 7.1.1 and Section 7.2** which included: Notice of Study Commencement and PIC No. 1, Study Area Expansion and Notice of PIC No. 2 and the Notice of Study Completion. Follow-up phone calls were also conducted with communities where no comments were received. Records of these phone calls have been provided in **Appendix I**. Copies of the actual written correspondence received from the public and agencies have also been provided in **Appendix L**. The following responses were received from indigenous communities. **Table 7.3** provides a summary of consultation with Indigenous Communities.

Table 7.3 Summary of Consultation with Indigenous Communities

Ref.	Indigenous Community	Point of Contact / Date	Comments/Purpose	Project Team Response
C1, C2 & C3	- Mississaugas of the Credit First Nation (MCFN), C1 - Six Nations of the Grand River (C2) - Haudenosaunee Confederacy Chiefs Council / Haudenosaunee Development Institute (C3)	Notice of Study Commencement and PIC No. 1 - Emails sent by the City on April 28, 2022 - Mails sent by Arcadis/IBI on May 27, 2022	Individual notices were sent to each Indigenous Community to notify them of the project the date and the City website of the first PIC.	N/A
C1, C2 & C3	All 3 Indigenous Communities	Follow-up phone calls made by the City on June 23, 2022	Follow-up phone calls and emails with Indigenous Communities to confirm receipt the first notice of PIC and ask if they have any comments.	N/A
C1, C2 & C3	All 3 Indigenous Communities	Follow-up emails sent by the City on June 23 and 24, 2022	Follow-up phone calls and emails with Indigenous Communities to confirm receipt the first notice of PIC and ask if they have any comments.	N/A

Ref.	Indigenous Community	Point of Contact / Date	Comments/Purpose	Project Team Response
C4 & C5	Two (2) additional Indigenous Communities (C4 and C5) - Wendat First Nation at Wendake (C4) - Metis Nation of Ontario (C5)	Notice of Study Area Expansion and PIC No. 2 - Emails sent by the City on April 14, 15, 24 & 27, 2023 and May 16, 2023 - Mails sent by Arcadis/IBI on May 2023	Individual notices were sent to each Indigenous Community to notify them of the Study Area Expansion and date of the second PIC.	N/A
C1 to C5	All 5 Indigenous Communities	Draft Stage 1 AA report sent to each Indigenous Community and invited to review the Report. - Emails sent by the City on April 12, 14 & 24, 2023 - Mails sent by Arcadis/IBI on April 27 & 28, 2023 and June 2, 2023	Report sent (via email) by the City to each Indigenous Community and invited to review the report.	N/A
C1 to C5	All 5 Indigenous Communities	Follow-up phone calls made by the City on June 2 and June 5, 2023	Follow-up phone call with Indigenous Communities to confirm receipt of the second PIC Notice and ask if they have any comments or feedback.	N/A
C1, C3, C4 & C5	All 4 Indigenous Communities, except for SNGR	- Follow-up emails sent by the City on June 9, 2023 - Mails were sent by Arcadis/IBI on June 9, 2023	Follow-up phone call with Indigenous Communities to confirm receipt of the second PIC Notice and ask if they have any comments or feedback.	N/A

Ref.	Indigenous Community	Point of Contact / Date	Comments/Purpose	Project Team Response
C1	Mississaugas of the Credit First Nation (MCFN)	Signed Stage 1-AA review agreement was provided by MCFN on April 24, 2023. • Phone-call made by the City on June 2, 2023 • Email sent by the City June 9, 2023 • Mail sent by Arcadis/IBI on June 9, 2023	No comments or concerns have been received by the City.	N/A
C2	Six Nations of the Grand River	• Phone-call made by the City on June 2, 2023	Six Nations of the Grand River confirmed (on June 7, 2023) that they don't have any comments or concerns pertaining to this Study and/or Draft Stage 1 Archaeological Assessment Report. Based on updated information, the City advised that consultation with Six Nations of the Grand River should be directed to the Six Nations of the Grand River Elected Council (SNEC), Land & Resources Dept, Land Use Unit, Consultation & Accommodation Process Team (CAP).	Noted. The contact list has been updated accordingly

Ref.	Indigenous Community	Point of Contact / Date	Comments/Purpose	Project Team Response
C3	Haudenosaunee Confederacy Chiefs Council / Haudenosaunee Development Institute	• Phone-call made by the City on June 2, 2023 • Email sent by the City June 9, 2023 • Mail sent by Arcadis/IBI on June 9, 2023	No comments or concerns have been received by the City.	N/A
C4	Wendat First Nation at Wendake	• Phone-call made by the City on June 2 and June 5, 2023 • Email sent by the City June 9, 2023 • Mail sent by Arcadis/IBI on June 9, 2023 • On September 27, 2024, the City was notified of an updated general contact for Wendat First Nation at Wendake.	No comments or concerns have been received by the City. The City was advised that: • Send all new consultation correspondence to consultations@wendake.ca. • Use the updated community name: Wendat First Nation at Wendake. • No other representatives need to be copied.	N/A
C5	Metis Nation of Ontario	• Phone-call made by the City on June 2, 2023 • Email sent by the City June 9, 2023 • Mail sent by Arcadis/IBI on June 9, 2023	No comments or concerns have been received by the City. Based on updated information, the City advised that circulation to the Metis Nation of Ontario is no longer required.	The contact list has been removed from the project.

7.5 “Kitchen Table Meeting” Consultation

Notice of Study Area Expansion and Notice of PIC No. 2 was sent to the property owners/managers and/or occupants for five (5) properties located adjacent to the preferable alternative location (Site 6). See **Appendix J** for the property locations. They were invited to attend the “Kitchen Table Meeting” via both normal and registered mails.

Follow-up phone calls were also conducted, and virtually no concerns on the preferable location at Site 6 from the “Kitchen Table Meeting” consultation, except for one general comment, which was received through the follow-up phone call with a local business representative (White Chapel Memorial Gardens), who advised that that traffic interruption should be minimized during the construction. Arcadis replied that the traffic management will be included as part of the mitigation measures during the detailed design stage.

Record of these phone calls have been provided in **Appendix J**. Copies of the actual written correspondence sent to the “Kitchen Table Meeting” have also been provided in **Appendix M**.

Table 7.4 provides a summary of consultation with “Kitchen Table Meeting” and **Appendix J**.

Table 7.4 Summary of Consultation with “Kitchen Table Meeting”

“Kitchen Table Meeting”	Date Point of Contact/ Date	Comments/Purpose	Project Team Response
Owners/ Managers/ Occupants adjacent to the preferred location (Site 6)	Notice of Study Area Expansion and Public Information Centre (PIC) No. 2 - Both normal and registered mails sent by Arcadis/IBI on May 16, 2023 - Emails sent by Arcadis/IBI to 2 members.	Individual notices were sent to each member to inform them about the project, the date and the City website for the second PIC, and to encourage their participation in the study.	N/A
All	Follow-up phone calls made by Arcadis/IBI for the period between April 6, 2023 and October 26, 2023.	Follow-up phone calls with each member with available phone number to confirm receipt of the second PIC Notice and ask if they have any comments or concerns. One local property representative (White Chapel Memorial Gardens) advised that the traffic interruption should be minimized during the construction for the new WPS.	A traffic management plan during construction will be included as part of the mitigation measures during the detailed design stage.

8 Permits/Approvals and Future Commitments.

Numerous approvals will be required to implement the works. Exact approvals requirements would be determined through the EA update and design phases of the project. The contractor may need to acquire additional permits from the City of Hamilton prior to construction. **Table 8.1** presents the reviews and approvals that will be required from agencies prior to construction.

Table 8.1 Permits and Approvals

Permits and Approvals
• MECP Environmental Compliance Approval
• MECP Permit to Take Water (PTTW)
• Drinking Water Works Permit (DWWP) Amendment
• DWWP Schedule 'C' for watermain extension/installation
• Watermain in all potential sites utilize the road right-of-way (ROW) for the construction of the required linear infrastructures; thus, no additional land is required for the installation of the watermains – Schedule 'A'
• Ministry of Natural Resources and Forestry (MNRF)
• City of Hamilton (site plan approval, building permit etc.)
• City of Hamilton Zoning Variance, if current zoning requirements cannot be met
• Ministry of Tourism, Culture and Sport
• Electrical Safety Authority (ESA)
• Transport Canada Notification
• Technical Standards and Safety Authority (TSSA) Approvals
• Maintain Permits / Approvals Status Log and Schedule
• Approvals from or notification to Horizon Utilities, Bell Canada, Hydro One and Rogers may also be required and should be determined at the detailed design stage

8.1 Ministry of Environment, Conservation and Parks (MECP)

The City will need to complete an amendment to its existing DWWP to add the new WPS and decommissioning of the existing HD17A WPS. This will involve a technical review by the MECP. A new and/or watermain extension, if required, is a pre-approved work requiring completion of "Schedule C" to the DWWP.

8.2 Hamilton Conservation Authority (HCA)

To determine if HCA approvals are required for the works, the study team reviewed available online regulation mapping from HCA. The online mapping indicates that the only portion of the Study Area which is regulated under O.Reg.161/06. The preferred alternative Site 6 does not include any work in this area and therefore a permit from HCA is not required based on our current understanding of the project. However, if other aspects of the project include works in this area, a permit from HCA may be required.

8.3 City of Hamilton

A site plan approval and building permit will need to be obtained from the City of Hamilton.

The preferred alternative Site 6 is located within Zone C5 (Mixed Use Medium Density), as per By-Law: Hamilton Zoning By-Law 05-200.

Area Requirements:

- Building Setback from a street line: 4.5 metres
- Side Yard Depth: 7.5 metres abutting a residential or Institutional zone
- Rear Yard: 7.5 metres
- Height: 7.5-metre façade height; maximum 22 metres
- Maximum Gross Floor Area (most restrictive): 700.0 metres squared
- Ground Floor Façade: For a corner lot 50% or more of all faces abutting a street line
- Addition provisions may apply as they relate to mechanical/ utility uses

The footprint of the building does not appear to be 50% or more of the length of all lot lines along Whitney Avenue and/or Main Street. As such, a minor variance may be required to permit a façade of less than 50% to face the front and flankage lot lines.

Variances may be required if the site design cannot comply with the regulations of the zone where it is located.

8.4 Future Commitments

This Municipal Class EA was completed in accordance with the *Environmental Assessment Act*. Following the 30-day public review period and EA clearance, it is recommended that the preferred solution proceed to detailed design, approvals and construction as outlined in this report.

The following must be completed prior to implementation of the preferred locations for the proposed elevated water storage facility and/or pumping station:

- a) Continue to contact and complete additional consultations / negotiations with the impacted property owner(s) to secure lands required to implement the preferred solution.
- b) Confirm the mitigation measures outlined in **Section 6** of this report, including further refinement to be completed during detailed design stage.
- c) Conduct mitigation measures as per **Table 6.1**.
- d) Obtain the permits and approvals as identified in **Table 8.1**.
- e) Continue to consult with review agencies, (including MECP, Utilities, Indigenous Communities, MNRF, MTCS), as applicable.
- f) Notify Indigenous Communities, which requested updates of any archaeological findings and any follow-up investigative reports, Indigenous communities include:
 - Six Nations of the Grand River
 - Haudenosaunee Confederacy Chiefs Council (HCCC) - copy Haudenosaunee Development Institute (HDI) with all correspondence
 - Mississaugas of the Credit First Nation (MCFN)
 - Wendat First Nation at Wendake

9 Conclusions and Recommendations

To select the preferred location for the new WPS of PD17, the development and evaluation of the alternative sites are as follows:

- A total of twenty-one (21) alternative sites were reviewed and evaluated.
- Six (6) alternative sites had indicated land restrictions through pre-screening and were not considered further.
- Fifteen (15) alternative sites would be provided with large enough land and were evaluated further.
- Following the qualitative evaluation of each alternative against preliminary natural and sociocultural criteria, the seven most promising and feasible short-listed alternative sites were identified and evaluated in more detail:
 - Site 1 - adjacent to and SW of 130 Osler Drive (adjacent to existing Osler WPS, HD011)
 - Site 4 - 88 Ofield Road
 - Site 6 - 1845 Main Street West
 - Site 8 - 1870 Main Street West
 - Site 9 - 1872 Main Street West
 - Site 12- Rifle Range Road
 - Site 19- Rifle Range Road

Following the evaluation of each alternative against natural, social, economic, and technical criteria, Site 4 was eliminated from further consideration, and the remaining six short-listed sites were considered feasible for the new WPS. **The most preferable and recommended alternative site was determined to be Site 6 - 1845 Main Street West.**

Site 6 offers the most cost effective and technically sound option, while having the lowest potential for natural environment impact compared to the other alternative sites. This was presented in PIC No. 2, which was held from April 28, 2023 to May 19, 2023.

There were no concerns raised during or after PIC No. 2. Therefore Site 6 has been carried forward as the preferred location for the new WPS of PD17.

The recommended alternative location for the new WPS of PD17 will require approximately 770 m² (35 m x 22 m) of property from the commercial site parking lot located at 1845 Main Street West.

Negotiations with the impacted property owner(s) to secure lands required to implement the preferred solution will be initiated during the detailed design phase of the study. Discussions with the Plaza owner at 1845 Main Street West commenced during the EA Study. After PIC No. 2, the notice of the preferred location at 1845 Main Street West for the new WPS of PS17 was sent to property owner(s) via registered mail(s).

Although anticipated preliminary property requirements to implement the study recommendations have been identified, actual requirements are to be confirmed during detailed design.

10 References

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- WSP (2015, MAY). Osler & Main/Whitney Pump Station Feasibility Study: Feasibility of Combining HD17A (Main/Whitney PS) and HD011 Osler PS (Report No. 141-25216-00).
- WSP (2016, January) New Highland Gardens Park Water Booster Pumping Station, As-Built Drawings.

Appendix A

Technical Memorandum # 1 – Phase 1 Problem/Opportunity

Appendix B

Technical Memorandum # 2 – Phase 2 Alternative Solutions

Appendix C

Natural Heritage Investigation

Appendix D

Cultural Heritage Investigation

Appendix E

Archaeological Investigation

Appendix F

Notice of Study Commencement and PIC No. 1

PIC No. 1 Presentation

PIC No. 1 Response Form

Appendix G

Notice of Study Area Expansion and PIC No. 2

PIC No.2 Presentation

PIC No. 2 Response Form

Appendix H

Agency and Public Comments and Responses

Appendix I

Indigenous Communities Comments and Responses

Appendix J

“Kitchen Table Meeting” Comments and Responses

Appendix K

Agency and Public Correspondence

Appendix L

Indigenous Communities Correspondence

Appendix M

“Kitchen Table Meeting” Correspondence

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