New Septage Waste
Haulage Receiving Station
Schedule B Municipal Class
Environmental Assessment

Project File Report

Prepared for:
The Corporation of the City of Hamilton

Prepared by:
Stantec Consulting Ltd.

June 21, 2019
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Sign-off Sheet

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NEW SEPTAGE WASTE HAULAGE RECEIVING STATION SCHEDULE B
MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

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1.0 Introduction and Background

The City of Hamilton (City) has retained Stantec Consulting Ltd (Stantec) to complete a Schedule ‘B’ Municipal Class Environmental Assessment (Class EA) to identify a recommended location for a new septage waste haulage receiving station (SWHRS).

The City currently operates two septage waste haulage receiving stations, located at the Woodward Avenue Wastewater Treatment Plant (WWTP) and Upper Ottawa Street, respectively. These stations allow waste haulers to discharge ‘Hauled Liquid Waste’ which includes septage and holding tank waste from domestic sources, and certain hauled industrial wastes including liquid wastes. The waste haulage receiving stations currently operate using Hauled Sewage Discharge Declarations and tickets which are purchased by the haulers proving that the hauler has paid to discharge the waste.

Previous studies have determined that both existing stations need to be decommissioned and replaced. One new SWHRS is currently under construction at the Eastport Drive Sewage Pumping Station (to be completed in 2019). The purpose of this EA is to identify the recommended location for the second new SWHRS.

1.1 Municipal Class Environmental Assessment Process

The Ontario Environmental Assessment Act (EA Act) mandates that an Environmental Assessment (EA) be completed before the construction of any major municipal infrastructure, including drinking water systems. All municipalities in Ontario are subject to the provisions of the EA Act. The Municipal Engineer’s Association (MEA) Municipal Class Environmental Assessment process (2000 as amended in 2007, 2011, and 2015), provides municipalities with a five-phase planning process approved under the EA Act to plan and undertake all municipal infrastructure projects in a manner that addresses all aspects of the environment as defined by the EA Act, including the Socio-economic, Cultural, Technical, Natural, and Economic Environments.

Key components of the Class EA planning process include:

- Public consultation early and throughout the planning process;
- Identification of a reasonable range of alternatives;
- Consideration of effects on the environment and ways to avoid/reduce impacts (mitigation);
- Systematic evaluation of alternatives;
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• Clear documentation; and
• Traceable and transparent decision making.

1.1.1 Types of Projects

The MEA Class EA projects are classified as Schedule A, A+, B, or C based on a variety of factors including the general complexity of the undertaking, level of investigation required, and the extent of potential impacts on the environment that may occur. While the schedules provide a general framework for the Class EA undertaking, they each contain points of contact with the public and stakeholders that should be considered as minimum in fulfilling the requirements of the Class EA process under the EA Act.

Schedule A projects are generally small projects, have minimal impacts on the natural and social environments, and include the majority of municipal sewage operations, stormwater management, water operations, and maintenance activities. These projects are pre-approved, and do not require public consultation. Examples of Schedule A projects include watermain and sewer extensions where all such facilities are located within the Municipal road allowance or an existing utility corridor.

Schedule A+ projects are similarly pre-approved, but require that affected stakeholders be notified of the project.

Schedule B projects have the potential for some environmental and social impacts, and proponents are required to undertake a screening process involving mandatory contact with potentially affected members of the public, Indigenous communities, and relevant review agencies to ensure that they are aware of the project and that their concerns are addressed. Schedule B projects require the completion of Phases 1 and 2 of the Class EA planning process, which is documented in a Project File that is submitted for a mandatory 30-day public review period. Projects may include minor expansions to existing facilities, or other infrastructure installations requiring property acquisition.

Schedule C projects have the potential for significant environmental impacts and must follow the full planning process specified in the Class EA document including Phases 1 through 4. The project is documented in an Environmental Study Report (ESR), which is then filed for review by the Public, review agencies, and Indigenous communities. Projects generally include the construction of new facilities, and major expansions to existing facilities.

1.1.2 Five-Phase Planning Process

The main elements of the Class EA process have been incorporated into the five phases discussed below.
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- **Phase 1** Identify the problem (deficiency) or opportunity, which may include public consultation to confirm/review the problem or opportunity.

- **Phase 2** Identify a reasonable range of alternative solutions to address the problem or opportunity. This phase also includes an inventory of the existing environment, and to assist in the evaluation of alternatives. A preferred solution is chosen based on the results of the evaluation and taking into account input from the public, review agencies, and Indigenous communities. It is at this point that the appropriate project Schedule is chosen and/or confirmed. If the project is identified as a Schedule B activity, the process and decisions are then documented in a Project File, which is made available for consideration by the public, review agencies, Indigenous communities for a mandatory 30-day review period. Schedule C projects proceed through Phases 3 and 4.

- **Phase 3** (For Schedule C projects only) Examine the alternative methods for implementing the preferred solution, i.e. design alternatives, based upon the existing environment, public and agency input, anticipated environmental effects and methods for minimizing negative effects and maximizing positive effects.

- **Phase 4** (For Schedule C projects only) Document the Class EA Process followed in an Environmental Study Report (ESR), which includes a summary of the rationale and the planning, design, and consultation process followed for the project and make the documentation available for consideration by the public, review agencies, Indigenous communities for a mandatory 30-day review period.

- **Phase 5** Complete contract drawings and documents, and proceed to construction and operation with monitoring to ensure adherence to environmental provisions and commitments.

Figure 1.1 illustrates the Class EA planning process, including mandatory points of contact with stakeholders throughout the project.

### 1.1.3 Project Schedule

Based on the framework provided Appendix 1 – Project Schedules of the MEA Class EA, the SWHRS Class EA is being planned as a Schedule B undertaking.
Figure 1.1 – Municipal Class EA Planning Process
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1.2 Study Area

The overall study area for this Class EA includes areas throughout the City of Hamilton which are at a higher elevation that are serviced by the existing sanitary sewer collection system (excluding areas with combined sewers). These initial key areas are shown on Figure 2.1, and included: Flamborough, Dundas, Ancaster, Hamilton Mountain (both East and West Mountain), Glanbrook and Stoney Creek.

1.3 Consultation Plan

Consultation is a vital part of the Class EA process. Active engagement with all potentially affected parties including government agencies, members of the community, special interest groups, and Indigenous communities ensures a transparent and responsible planning process.

A contact list was created and updated throughout the study to include relevant Federal and Provincial government agencies, local government officials, Indigenous communities throughout Southern Ontario, neighbouring municipalities, and all others who have expressed interest in the study. Contact lists for study mailouts are included in Appendix A.

All communication with stakeholders has been documented and included in Appendix A. TRACER (Team Response and Commitment to Environmental Requirements) tables have been maintained to document all input received from the public, agencies, and Indigenous Communities, along with responses and commitments to carry forward. TRACER Tables are included in Appendix A.

The following provides an overview of the points of contact with stakeholders throughout the study. All project notifications were posted in the Hamilton Spectator for two consecutive editions.

- The Notice of Commencement and Notice of Public Information Centre (PIC) No. 1 introducing the project was mailed or emailed (where requested) to all stakeholders identified on the contact list starting October 20, 2017. A sample of the notice package is provided in Appendix A1.
- PIC No. 1 was held on November 9, 2017 from 6:00 - 8:00 pm at the Canadian Warplane Heritage Museum. The PIC was held during Phase 1 of the study to obtain initial feedback on potential SWHRS locations, existing study area conditions, and evaluation criteria. A comment sheet was provided to all PIC participants. PIC No. 1 materials are provided in Appendix A2 and A3.
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• PIC No. 2 was held on September 19, 2018 from 6:00 - 8:00 pm at the Turner Park Library Programming Room. The PIC was held to present information on the long list and short list of alternative SWHRS sites, evaluation methodology and results, and the preliminary preferred site. All notices were mailed/ emailed starting on August 31, 2018 to stakeholders identified on the contact list, those who attended PIC No. 1, and others who expressed interest in the study. A comment sheet was provided to all PIC participants. PIC No. 2 materials are provided in Appendix A4, A5 and A6.

• The Notice of Completion was published in the Hamilton Spectator newspaper (June 21, 2019 and June 28, 2019), mailed to all stakeholders and Indigenous communities (June 14, 2019), and posted to the City of Hamilton website starting June 21, 2019. The Project File was made available at the Office of the City Clerk, the Public Works Department, the Turner Park Library, and digitally on the City’s website (http://www.hamilton.ca/newwastehaulageea). The Notice of Completion is available in Appendix A10.
Legend

- Study Area
- Community Boundary
- City Boundary

Notes

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under license with the City of Hamilton © 2017 and the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2017.

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Prepared by KDB on 2017-10-11

City of Hamilton

Study Area

Project

City of Hamilton

Prepared by KDB on 2017-10-11

Client/Project

CITY OF HAMILTON
NEW SEPTAGE WASTE HAULAGE RECEIVING STATION
MUNICIPAL CLASS EA

Report No.

1.2

Study Area

Legend

- Study Area
- Community Boundary
- City Boundary

Notes

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Prepared by KDB on 2017-10-11

Client/Project

CITY OF HAMILTON
NEW SEPTAGE WASTE HAULAGE RECEIVING STATION
MUNICIPAL CLASS EA

Report No.

1.2

Study Area
2.0 Class EA Phase 1 – Identification of Problem and/or Opportunities

Phase 1 of the Class EA process involves identification of the need and justification for undertaking the study, leading to a clear statement of the problems and/or opportunities being addressed as part of the study. This includes a review of the City’s two existing Waste Haulage Receiving Stations, as shown in Figure 2.1, as well as relevant background studies and reports.

2.1 Existing Waste Haulage Receiving Stations

2.1.1 Upper Ottawa Street Waste Haulage Receiving Station

The Upper Ottawa Street Station is located at the Mountain Transfer Station on Upper Ottawa Street and the corner of Kilbride Road. The majority of the area surrounding this station is commercial. The station currently operates to receive a discharge of hauled liquid waste directly into the sanitary sewer. The City has had ongoing odour problems and complaints at this station from the surrounding businesses. As a result, the City has identified the need to close this station and construct a new waste haulage receiving station to function as the main station for the City.

2.1.2 Woodward Avenue Waste Haulage Receiving Station

This waste haulage station, located at the Woodward Wastewater Treatment Plant (WWTP), contains three bays, two of which were originally intended for the disposal of hauled liquid waste through the use of a ‘sample and hold’ technique. Bay 1 is currently being used for loading and hauling of dewatered biosolids cake. Waste from each bay was intended to be channeled into holding tanks for the purpose of sampling prior to discharge to the wet well. A sluice gate functions to control the discharge from the holding tanks to the wet well whereby two pumps (one duty and one standby) are used to pump the liquid waste to the main on-site sewage pumping station. Due to the frequency and quantity of liquid waste being disposed of at this facility, the WWTP can no longer support the operation of this facility.

The WWTP currently experiences significant truck traffic linked to plant operations as well as the waste haulage station. The WWTP is presently undergoing significant expansion and upgrades and in an effort to reduce truck traffic at the site as well as free-up building space, the City has identified the need to close this waste haulage site and construct a new facility to better meet the needs of the City.
2.1.3 Operational Deficiencies

In addition to the site-specific issues with the two existing waste haulage stations (odour problems at Upper Ottawa Street and truck traffic/limited space at the WWTP), the City has identified a number of operational deficiencies related to the two existing waste haulage stations including:

- The October 2010 “Sewer Use By-Law Review Phase II Report Part 1” by R.E. Poisson confirmed the two current stations cannot be upgraded to meet the requirements of the City’s Hauled Waste Management Program;
- Although both current stations have security personnel to control access, the guard currently does not confirm the rated volume capacity of trucks or if the hauler has accurately measured the amount that the truck is filled;
- Due to the limited sampling conducted at the two current stations, there is currently little quality control to determine if the loads are in compliance with the City’s By-Law; and
- Hours of operation for haulers is limited at both current locations.
Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
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City of Hamilton
CITY OF HAMILTON
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MUNICIPAL CLASS EA

Figure No. 2.1
Existing Waste Haulage Receiving Stations
2.2 Background Studies and Reports

A number of background studies and reports have been undertaken to identify the desired location and criteria for the new SWHRS, which provide the context for this Class EA:

2.2.1 Septage Receiving System Location Criteria Memorandum, R.E. Poisson, December 23, 2009

The memorandum summarizes the criteria to be used for the selection of the new septage waste haulage receiving stations to replace both the Upper Ottawa and Woodward Avenue stations. The memo focused solely on the criteria for locating the septage haulage facility at an existing sewage pump station.

The memorandum concluded the following desired criteria for the Septage Haulage Station location:

- Non-residential location;
- Central location for majority of waste haulers;
- Ease of access and close to major thoroughfares;
- Sufficient land area for large access driveways and additional staging areas;
- Sufficient Pump Station Capacity to contain several loads and pump potential solids; and
- Sufficient forcemain and downstream sewer capacity to handle solids.

2.2.2 Sewer Use By-Law, By-Law No. 14-090, Effective May 1, 2014

This City By-Law regulates the discharge of waste into the City’s sewer works. It outlines the requirements for sewage discharge. Specifically, for hauled liquid waste, the By-Law states:

- Only hauled liquid (septage) waste originating from a generator within the City of Hamilton boundaries can be discharged to a haulage station;
- All haulers must have a valid Annual Carrier Permit to Discharge Hauled Sewage, be operating under a valid environmental compliance approval or is registered under the Environmental Protection Act and submits a signed Hauled Sewage Discharge Declaration to the City; and
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- Waste haulers can discharge liquid waste to either of the approved locations: Upper Ottawa Street or Woodward Avenue.

2.2.3 Sewer Use By-Law Review Phase II Report – Part 1, R.E. Poisson, October 2010

The report provides a review of the City’s Sewer Use By-Law 04-150 to determine recommendations for better enforcement of the By-Law. In addition, the study evaluated ten sewage pump stations for the potential location of a new SWHRS.

The report concluded the need for a monitoring program at the SWHRS to:

- Control access to the station to approved haulers only;
- Allow sampling capability for any load to confirm the accuracy of the hauler’s trip declaration;
- Permit recording of load volume and identification of volume for a specific load for billing purposes; and
- Provide a debit system for automatic payments.

Based on the evaluation of the 10 sewage pump stations as potential options for the new station, it was determined that the Eastport Drive Sewage Pump Station was the preferred location to replace the Woodward Avenue SWHRS.

2.2.4 Sewer Use By-Law Review Phase II Report – Part 2, R.E. Poisson, October 2010

The report reviews the concept of providing separate By-Law parameter limits for multiple components of the hauled waste including metals and other parameters such as Biological Oxygen Demand (BOD), Total Suspended Solids (TSS), Oil and Grease, Total Kjeldahl Nitrogen (TKN) and phosphorus. Outcomes of this study concluded:

- It is feasible to determine screening limits for metals which was based on metal concentrations in the form of dry solids. These limits will be included in the By-Law parameter. The purpose of these screening limits was to determine if hauled wastes, including those from septic tanks, contain high concentrations of metals compared to raw domestic sewage;
- The elevated concentrations of metals are a result of the concentrating effect of the septic tank that retains the solids and metals;
- Maximum screening limits for the By-Law were determined for BOD, TSS, Oil and Grease, TKN and phosphorus; and
• A cost structure for septage and domestic holding tank waste was developed where non-compliant haulers would get charged at a differed rate than the compliant rate.

2.2.5 Eastport Conceptual Design Report, R.E. Poisson, April 2011

The conceptual design for the station includes two separate receiving stations to be used simultaneously. The plans provide provision for card access for haulers, an automated valve to control discharge to the receiving station as well as the ability to measure and record the volume of each load. Based on recommendations from the evaluation of the existing stations, the new station will allow for sampling. Due to concerns with debris and solids in the receiving waste stream, the design has included a rock trap, grinder and 6mm rotary screen that comes with a screenings washer compactor.

2.2.6 Evaluation of locations for a new waste haulage receiving station, City of Hamilton Staff, 2014

City staff completed an evaluation of 6 additional sites (not located at existing sewage pump stations) for the potential location of a new SWHRS.

The evaluation of the 6 additional sites concluded the following:

• Burlington Street and Gage Avenue North: City owned land, sufficient land to accommodate truck traffic; however, Gage sewer surcharges and has caused historic flooding upstream.

• Gage Avenue North and Industrial Drive: City owned land, sufficient land to accommodate truck traffic; however, hydraulic modelling indicated surcharging in the downstream sewer.

• Kenilworth Avenue and Burlington Street (South East Corner): Only select land parcels in this area are City owned.

• Kenilworth Avenue and Burlington Street (South West Corner): Contains major underground infrastructure as well as an abandoned historic Sewage Pumping Station; history of sewer surcharge in downstream.

• Rennie Street (east end at Brampton Street): City owned land; however, site is located near residential area.

• Woodward WWTP: City owned with large area however concerns with plant operations and restrictions.

The evaluation of these locations concluded that none of these sites met the criteria.
2.3 Problem Statement

Based on the review of background information, studies, and reports, the following Problem Statement was identified for the study:

The City currently operates two SWHRS: one at the Woodward Avenue WWTP, and one at the Mountain Transfer Station on Upper Ottawa Street. The Woodward Avenue WWTP is scheduled to be replaced with a new SWHRS at the Eastport Drive Sewage Pumping Station.

Due to a number of operational challenges and site constraints at the Upper Ottawa Street SWHRS, the City of Hamilton requires a new SWHRS to service the southern portion of the City.

The new station should support the objectives of the City’s Septage Waste Haulage Program and the Sewer Use By-Law, while minimizing impacts to the social, cultural, and natural environments.
Phase 2 of the Class EA process includes the identification of alternative solutions to address the study’s Problem Statement. Since the initial study area included a large portion of the City, a long list of Target Areas was identified based on a review of available background documents, previously evaluated sites, input from the City, and preliminary feedback received during PIC No. 1. These included the following considerations:

- Non-residential location (industrial area preferred);
- Near or along designated truck routes;
- Not located within the City’s combined sewer system, or immediate areas with a history of sewer surcharging / basement flooding;
- Close proximity to existing sanitary trunk sewers (600mm DIA or above) or major sanitary pumping stations;
- In combination with the proposed SWHRS at the Eastport Pumping Station (PS) site, provide central locations for majority of waste haulers;
- Not to be located on prime agricultural lands;
- Suitable land uses available within target area, such as vacant industrial land or transportation/utility.
### 3.1 Long List of Target Areas

The long list of Target Areas is illustrated on Figure 3.1, and key features are identified below:

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<th>Target Area</th>
<th>Key Features</th>
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| **1 – Clappison’s Corners** | • Nearby truck routes: Highway 6 / Highway 5 – Meets Objectives  
• Nearby trunk sewer/pumping station: Borer’s Creek Sanitary Trunk sewer – Meets Objectives  
• Few residential properties located within target area - Meets Objectives  
• City owned properties within target area appear to have existing land uses, property acquisition likely required - Does not meet Objectives  
• Centrally located to Flamborough, Dundas, and Ancaster areas, but far from Stoney Creek and Glenbrook - Does not meet Objectives |
| **2 – Ancaster** | • Nearby truck routes: Highway 403 / Highway 52 / Wilson Street - Meets Objectives  
• Nearby trunk sewer/pumping station: HC014, Ancaster Sanitary Trunk sewer - Meets Objectives  
• Designated industrial area (Ancaster Industrial Park) - Meets Objectives  
• Ancaster Sanitary Trunk eventually discharges to the 403 Sanitary Trunk and Western Sanitary Interceptor, which collects majority of combined sewer flows from the Lower City area - Does not meet Objectives  
• Centrally located to Flamborough, Dundas, Ancaster, and Glenbrook areas, but far from Stoney Creek – Partially meets Objectives |
| **3 – Airport** | • Nearby truck routes: Upper James Street / Rymal Road / Highway 6 - Meets Objectives  
• Nearby trunk sewer/pumping station: HC019, Upper James Sanitary Trunk - Meets Objectives  
• Some residential parcels within target area, primarily industrial land use - Meets Objectives  
• City owned property within target area - Meets Objectives  
• Centrally located to Flamborough, Dundas, Ancaster, Glenbrook, and Stoney Creek areas - Meets Objectives |
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### MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

**Phase 2 – Alternative Solutions**  
**June 21, 2019**

<table>
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<th>Target Area</th>
<th>Key Features</th>
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| **4 – Upper James / Twenty Road** | • Nearby truck routes: Upper James Street / Rymal Road / Highway 6 - Meets Objectives  
• Nearby trunk sewer/pumping station: HC018, Upper James Sanitary Trunk - Meets Objectives  
• Some residential parcels present within target area, though large open space present behind HC018 – Partially meets Objectives  
• City owned property within target area - Meets Objectives  
• Centrally located to Flamborough, Dundas, Ancaster, Glanbrook, and Stoney Creek areas - Meets Objectives |
| **5 – Rymal / Hannon North** | • Nearby truck routes: Lincoln Alexander Pkwy / Dartnall Rd / Rymal Rd Ease - Meets Objectives  
• Nearby trunk sewer/pumping station: Red Hill Sanitary Trunk sewer - Meets Objectives  
• Primarily commercial/industrial land use, however residential areas to west of Upper Ottawa Street have reported odour issues - Does not meet Objectives  
• Limited vacant or City owned land available within target area - Does not meet Objectives  
• Centrally located to Flamborough, Dundas, Ancaster, Glanbrook, and Stoney Creek areas - Meets Objectives |
| **6 – Hannon South**      | • Nearby truck routes: Lincoln Alexander Pkwy / Dartnall Rd / Rymal Rd E - Meets Objectives  
• Nearby trunk sewer/pumping station: Red Hill Sanitary Trunk sewer - Meets Objectives  
• Primarily industrial land use - Meets Objectives  
• Vacant industrial and City owned land appears available within target area - Meets Objectives  
• Centrally located to Flamborough, Dundas, Ancaster, Glanbrook, and Stoney Creek areas - Meets Objectives |
### 3.1.1 Short List of Target Areas

Based on a comparison of the key features for each Target Area, the following areas were selected to proceed to the short list phase: 3 – Airport, 4 – Upper James/Twenty Road, and 6 – Hannon South.

<table>
<thead>
<tr>
<th>Target Area</th>
<th>Key Features</th>
</tr>
</thead>
</table>
| **7 – Heritage Green** | • Nearby truck routes: Centennial Pkwy / Mud St - Meets Objectives  
• Nearby trunk sewer/pumping station: Upper Centennial Sanitary Trunk sewer (estimated completion, April 2019) - Meets Objectives  
• City owned property within target area appears to have existing land uses - Heritage Green Sports Park & Dog Park - Does not meet Objectives  
• Other than private landfill site (Terrapure Environmental) and Heritage Green Park, primarily residential land use growth area - Does not meet Objectives  
• Centrally located to Glenbrook and Stoney Creek, far from Flamborough, Dundas, and Ancaster - Does not meet Objectives |
| **8 – Rymal Rd E & Regional Rd 56** | • Nearby truck routes: Rymal Rd E / Regional Rd 56 - Meets Objectives  
• Nearby trunk sewer/pumping station: Upper Centennial Sanitary Trunk sewer (estimated completion, April 2019) - Meets Objectives  
• Primarily residential / agricultural land use within target area, with some industrial properties. Vacant lands planned for future residential development – Does not meet Objectives  
• Centrally located to Glenbrook and Stoney Creek, far from Flamborough, Dundas, and Ancaster - Does not meet Objectives |
3.2 Identification of Alternative Sites

The short list of Target Areas was reviewed to identify specific candidate sites within the target areas where the proposed SWHRS could be located. The candidate sites were selected based on the following criteria:

- Vacant property with no existing land use;
- Suitably sized land parcel to accommodate the proposed SWHRS;
- Proximity to existing sanitary trunk sewer;
- Proximity to designated truck routes.

Based on these criteria, five total candidate sites were identified within the three Target Areas. The candidate sites were identified as:

1. Airport – Option 1
2. Airport – Option 2
3. Upper James / Twenty Road
4. Hannon – Option 1
5. Hannon – Option 2

Figure 3.2 shows the shortlisted sites. Relevant technical information considered as part of the evaluation included:

- Existing small diameter sanitary sewers and flow direction (maximum diameter 250mm);
- Intermediate sized sanitary sewers and flow direction (300 – 525mm diameter);
- Trunk sanitary sewers including pipe diameter and flow direction (600mm diameter and larger);
- Designated truck routes;
- City-owned property (Public Land); and
- Suitably sized land parcel to accommodate the proposed SWHRS.
4.0 Phase 2 – Existing Conditions

The following chapters provide a description of the socio-economic, cultural, and natural environments potentially impacted by the project, generally including a 120m area surrounding each of the proposed alternative sites. This inventory is used to evaluate the impacts of each alternative site being considered for the new SWHRS.

4.1 Socio-Economic and Cultural Environment

A socio-economic review was undertaken, which included a review of existing land uses, Official Plan policies and land use designations, and planning applications located within and adjacent to each site. A background review of potential cultural heritage resources was undertaken through the completion of the Ministry of Tourism, Culture, and Sport’s checklist *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes*, and the completion of a Stage 1 Archaeological Assessment. An overview of the review for each site is presented below.

4.1.1 Existing Land Use, Future/Planned Land Use, and Adjacent Land Uses

It is noted that Section C.3.2.1 of the City of Hamilton Urban Official Plan states that municipal infrastructure (under which the new Septage Waste Haulage Receiving Station falls) is permitted in all land use designations, and where possible, *shall be integrated with the general character of the surrounding uses through the provision of landscaping, screening and buffering, siting of structures, height control, and any other measures deemed to be appropriate by the City* (City of Hamilton Official Plan C.3.2.1).

4.1.1.1 Airport Option 1

This site consists of vacant land subject to an approved Plan of Subdivision (25T-200525 partially registered as 62M-1229). It is located within the Airport Employment Growth District Secondary Plan Area and designated as “Airport Prestige Business” land use. The Airport Prestige Business land use is planned for employment uses that will benefit from frontage on the existing and future major roads in the Airport Employment Growth District, incorporate urban design treatments because of their visibility from major roads, and are able to accommodate buffering from sensitive land uses (Urban Hamilton Official Plan V. 2 Chapter B.8.4.5 – Airport Employment Growth District Secondary Plan). The site is located adjacent to an approved self-storage facility (DA-17-115 – 9 Aeropark Boulevard), and across from a draft approved car dealership (DA-18-012 – 2411 Upper Thames St.). A photo of the existing site is provided in Figure 4.1
Figure 4.1 Airport Option 1 Facing South

4.1.1.2 Airport Option 2

This site consists of vacant land, subject to a draft approved development application for two motor vehicle dealerships (FC-17-025, DA-18-012). As with Airport Option 1, it is located within the Airport Employment Growth District Secondary Plan Area and designated as “Airport Prestige Business” land use, as well as a Site-Specific Policy Area (G). The special policy area permits a range of additional permitted uses, including a financial establishment; motor vehicle dealership; motor vehicle rental establishment; motor vehicle washing establishment; personal services; restaurant; retail; and accessory uses (City of Hamilton Official Plan Chapter B.8.17.7 – Airport Employment Growth District Secondary Plan). This site is located adjacent to an approved development application for a commercial garden centre (FC-12-157 – 2475 Upper James St.), and a draft approved car dealership (DA-18-012 – 2411 Upper James St.). A photo of the existing site is provided in Figure 4.2
This site is located adjacent to an existing sanitary Pumping Station (PS) (HC018). It is designated as Arterial Commercial on Schedule E-1 of the City of Hamilton Official Plan. Arterial Commercial land uses are intended to cater to the travelling or drive-by consumer as well as provide for land extensive retail stores which require outdoor storage or sales, and permit a range of commercial and automotive related uses (City of Hamilton Official Plan E.4.0/E.4.8.2). There are no active planning applications on the site.

This site is surrounded by Arterial Commercial land uses, an institutional land use (place of worship), two residential properties, and a naturalized wetland complex to the southwest. A photo of the existing site is provided in Figure 4.3.
Figure 4.3 Upper James/Twenty Road (Facing West)

4.1.1.4 Hannon Option 1

This site encompasses an area on both the east and west side of Dartnall Road. Lands along the east side of the road consist of currently vacant lands, subject to a draft-approved subdivision (25T-80024) for the development of an eight-block industrial subdivision. The site is designated as Business Park within the City of Hamilton Official Plan (Prestige Business Park (M3) within the current Zoning Bylaw). Business Parks are “planned for a broad range of employment uses compatible with the design policies for business parks… are well served by roadway infrastructure and are generally more able to accommodate proper buffering from sensitive land uses” (City of Hamilton Zoning Bylaw). Permitted uses include a range of employment uses including manufacturing, warehousing, office, transportation, uses supporting industrial developments, waste processing and transfer facilities, etc.

The east side of Dartnall Road is also Zoned M3 (exception 403), and includes an existing asphalt plant, surrounded by undeveloped Business Park lands. A photo of the existing site is provided in Figure 4.4. An existing Hydro One corridor is also located adjacent to the site, and a TransCanada pipeline is also located within the Hydro corridor.
4.1.1.5 Hannon Option 2

This site is located on vacant lands currently owned by the City of Hamilton, subject to a draft approved subdivision (25T-90015). As with Hannon Option 1, the site is designated as Business Park within the City of Hamilton Official Plan, permitting the same range of permitted uses discussed above.

The site is located adjacent to undeveloped industrial lands as well as the Maple Leaf food processing and Navistar auto-parts distribution centre. A photo of the existing site is provided in Figure 4.5.
4.1.2 Nuisance Impacts, Truck Routes, and Location

Consistent with all alternatives, the potential exists for increased noise/odours to nearby/proposed businesses and properties from site activities which will include truck unloading, and general site traffic. Odour control mitigation can be incorporated into the design of the SWHRS at each proposed site to significantly reduce impacts on adjacent land uses. Potential impacts were assessed based on surrounding land uses relative to the five potential sites and an overview is provided below.

4.1.2.1 Airport Options 1 and 2

Impacts to businesses and properties adjacent to these sites were considered moderate, based on the proposed car dealership and self-storage facilities, which include outdoor sales areas; however, due to the nature of the adjacent uses, which may also include noise/odour impacts from truck traffic and automotive exhaust, impacts are not considered significant or incompatible. Twenty-four-hour access at the SWHRS is not anticipated to negatively impact adjacent properties.
The Airport options are located along a north-south truck route (Upper James Street), but further from east-west truck routes (Rymal Road/Highway 6). These options have the potential to increase truck traffic within the Mount Hope area.

### 4.1.2.2 Upper James/Twenty Road

Due to the adjacent residential properties, impacts to surrounding land uses are anticipated to be greater at this location, particularly the noise and traffic impacts due to 24-hour access to the site.

This site is located along a north-south truck route (Upper James Street), and closer to east-west truck route (Rymal Road). This option also has the potential to increase truck traffic through the Mount Hope area.

### 4.1.2.3 Hannon Options 1 and 2

Land uses surrounding the Hannon sites are considered to have similar noise and odour impacts (i.e. truck traffic from asphalt plant, general asphalt plant operations, and industrial food operations), and are considered the most compatible locations.

The Hannon options are located along north-south truck routes (Dartnall Road), are close to east-west truck routes (Rymal Road) and are close to the Lincoln Alexander Parkway. Unlike the Airport and Upper James/Twenty Road sites, access to the Hannon sites has the least potential traffic impacts on residential areas.

### 4.1.3 Built Cultural Heritage

Based on the background review which included historical mapping review, agency consultation, and a review of the City of Hamilton’s Heritage Volume 2: Inventory of Buildings of Architectural and/or Historical Interest, one potential cultural heritage resource was identified adjacent to the Upper James Street/Twenty Road site. While this property is not recognized as part of the Ministry of Tourism Culture and Sport (MTCS) checklist criteria, it was identified by City of Hamilton heritage planning staff during consultation. As a property included on the City’s Inventory of Buildings of Architectural and Historical Interest, a Cultural Heritage Resource Assessment (CHRA) is required to meet the policies outlined in the City of Hamilton Rural Official Plan should the Upper James/Twenty Road location be selected as the preferred alternative. No built cultural heritage resources were identified at the either of the Airport, or Hannon sites. A copy of the Cultural Heritage review report completed for this study is included in Appendix B.
4.1.4 Archaeological Resources

A Stage 1 Archaeological Assessment was undertaken to identify areas of archeological potential at each of the sites. A copy of the Stage 1 report is provided in Appendix C, and has been submitted to MTCS. The following highlights the main findings of the Stage 1 investigation:

- The Airport sites contained no areas of archaeological potential and require no further assessment.
- The Upper James Street/Twenty Road site contains undisturbed areas of archaeological potential and requires a Stage 2 Archaeological Assessment prior to land disturbance.
- Portions of the Hannon sites contain undisturbed areas of archaeological potential and require a Stage 2 Archaeological Assessment prior to land disturbance.

4.2 Natural Heritage

A desktop background review of natural environment features was undertaken, including potential Species at Risk (SAR) and Species of Conservation Concern (SOCC), for the short-listed options, including a review of information provided by City of Hamilton Staff. A field visit was also undertaken by Stantec ecologists in October 2018. A full record of the Natural Heritage assessment of options is included in Appendix D.

The background review, terrestrial, and aquatic field assessments were incorporated into the evaluation of alternative sites, and used to identify impacts and mitigation measures.

4.2.1 Airport Option 1

Terrestrial

This area was comprised of recently disturbed soils that have been left to naturalize to a Mineral Cultural Meadow (CUM1). Species consisted of forbs including wild carrot, goldenrod, sow thistle and asters. Narrow-leaved cattails surrounded a drainage feature on the northern border of this area. Two small Cattail Mineral Shallow Marsh (MAS2-1) communities have formed in a low area downstream from the drainage feature near the southwest corner of Dickenson Road West and Upper James Street. Land Information Ontario (LIO) mapping showed a hydrologic connection between the Airport 1 Option and the Upper Twenty Mile Creek Provincially Significant Wetland (PSW) Complex on the northwest corner of the intersection of Dickensen Rd. Upper James St. There were
NEW SEPTAGE WASTE HAULAGE RECEIVING STATION SCHEDULE B
MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

Phase 2 – Existing Conditions
June 21, 2019

tree cavities observed in the sugar maple trees that comprised the Deciduous Hedgerow (HR) along Upper James Street in the south section of this area.

Although tree cavities were observed in the deciduous hedgerow in this area, it is unlikely that they would provide habitat for SAR bats since bats prefer to roost in tall, large-diameter snags that are in the early to middle stages of decay and located in open areas within mature-over mature forest (Jung et al. 2004). The cultural meadow community did not provide suitable habitat for Bobolink due to the lack of an abundance of grasses that this species prefers; however, the cultural meadow community may provide suitable habitat for Eastern Meadowlark. No other potential SAR or SAR habitat was identified in this area.

The cattail marsh communities may provide amphibian breeding habitat; however, there was no standing water in the feature to support overwintering amphibians. No other potential Significant Wildlife Habitat (SWH) was identified in this area.

Aquatic

A drainage feature that is mapped by Fisheries and Oceans Canada (DFO) as supporting habitat for Grass Pickerel (SAR) was observed on the northwest corner of the site. Based on aerial photos from 2018, it appears that this feature may have been realigned into a different configuration than is currently shown on mapping. This feature drains southeast into low areas on the site that are dominated by cattail and phragmites and then continues through culverts under Upper James Street. The feature is likely ephemeral and functions to convey flow to downstream areas that support fish.

4.2.2 Airport Option 2

Terrestrial

This area was comprised of Mineral Cultural Meadow (CUM1) dominated by Kentucky bluegrass and New England aster, with occasional goldenrod, teasel and sweet clover. Ground cover was not very dense. There was a low area dominated by highly invasive common reed (Common Reed Mineral Shallow Marsh; MASM1-12) at the southeast corner of Dickenson Road West and Upper James Street. LIO mapping showed a hydrological connection along a drainage feature through the marsh to the Upper Twenty Mile Creek PSW Complex on the north side of Dickensen Rd. E.

Although this area has an abundance of grasses preferred by Eastern Meadowlark and Bobolink, the area is not likely to attract these species due its small size and lack of density. No SAR or SAR habitat and no potential SWH was identified in this area.
Aquatic

A drainage feature that is mapped by DFO as supporting habitat for Grass Pickerel was observed along the perimeter of the northwest corner and north boundary of this site. The feature was dominated by phragmites or common reed. The feature drains north under Dickenson Road East. The feature is likely ephemeral and functions to convey flow to downstream areas that support fish.

4.2.3 Upper James/Twenty Road

Terrestrial

Approximately half of this area was comprised of an old homestead with young to mid-aged black locust, Manitoba maple and black walnut scattered throughout. This community was classified as a Mineral Cultural Savannah (CUS1). The ground cover of the cultural savannah community was comprised of cultural meadow species dominated by Canada Goldenrod.

The other half of the area was comprised of a Mineral Cultural Meadow (CUM1) that was dominated by Canada Goldenrod. There was a section of the Upper Twenty Mile Creek PSW Complex comprised of Cattail Mineral Shallow Marsh (MAS2-1) along the southern border of the cultural meadow that extended into the southwest corner of the site. The cattail marsh surrounded a drainage feature that originated from an on-line pond immediately upstream from this area.

A small building on the old homestead had the potential to provide breeding habitat for Barn Swallow. The cultural meadow community did not provide suitable habitat for Bobolink due to the lack of an abundance of grasses that this species prefers; however, the cultural meadow community may provide suitable habitat for Eastern Meadowlark. No other SAR or SAR habitat was identified in this area. None of the trees provided suitable SAR bat habitat.

The shallow water pond immediately west of this area may provide amphibian breeding habitat and turtle overwintering habitat. No other potential SWH was identified in this area.

Aquatic

A drainage feature was observed on the southwest corner of the site and is mapped by DFO as supporting aquatic habitat for Grass Pickerel. The feature flows south under 20 Road West and exhibited active flow on October 3, 2018. The feature potentially supports permanent fish habitat.
4.2.4 Hannon Option 1

Terrestrial

The area to the west of Dartnall Road was highly disturbed; the lands are currently occupied by an asphalt manufacturing facility. Lands to the north and south of the facility were comprised of Mineral Cultural Meadow (CUM1) dominated by Canada goldenrod and other forb species.

The lands to the east of Dartnall Road consisted mainly of Mineral Cultural Meadow (CUM1) dominated by Canada goldenrod and other forb species including asters and teasel. There was a Gray Dogwood Cultural Thicket (CUT1-4) and a Reed Canary Grass Meadow Marsh (MAM2-2) adjacent to Dartnall Road in the northern section of the area. Narrow-leaved cattails lined the drainage feature close to the road immediately south of this feature.

The cultural meadow community did not provide suitable habitat for Bobolink due to the lack of an abundance of grasses that this species prefers; however, the cultural meadow community may provide suitable habitat for Eastern Meadowlark. No other SAR or SAR habitat was identified in this area.

The watercourse to the south does not provide suitable turtle habitat (water only appeared to be present at the culvert and was not deep enough to curtail freezing). It is unknown whether the MAM2-2 community provides amphibian breeding habitat; however, there was no standing water in the feature to support overwintering amphibians. No other potential SWH was identified in this area.

Aquatic

A drainage feature traverses the site east of Dartnall Road in a southwest to northeast direction. Drainage flows from lands west of Dartnall Road and cross under Dartnall Road in a large concrete box culvert. From the culvert, the flow path extends northeasterly through the proposed site. Pooled water was present in the culvert at Dartnall Road on October 3, 2018.

Previous investigations documented in the Upper Hannon Creek Master Drainage Plan Municipal Class Environmental Assessment (AECOM 2017) identified that tributaries of Hannon Creek are generally intermittent in nature. Studies were completed in August 2002, April 2005, May 2010 and August 2010 and no fish were observed or captured during the field investigations. The report noted that several barriers to upstream fish movement were located downstream of Rymal Road, and there was generally short duration of flow and absence of persistent pools. The report concluded that the likelihood of fish moving through the Rymal Road culvert would be low during low flow periods.
Stream classifications were applied to all reaches of Hannon Creek, and the reach crossing the site was identified as *High Constraint – Potential to Rehabilitate* (AECOM 2017). Reaches in this category are to be protected but require enhancement. Enhancement can include relocation of the reach as an open channel, depending on the stream characteristics (AECOM 2017).

### 4.2.5 Hannon Option 2

**Terrestrial**

This area was similar in composition to the Mineral Cultural Meadow (CUM1) community in Hannon Option 1, with Canada goldenrod and forb species dominating.

The cultural meadow community did not provide suitable habitat for Bobolink due to the lack of an abundance of grasses that this species prefers; however, the cultural meadow community may provide suitable habitat for Eastern Meadowlark. No other SAR or SAR habitat was identified in this area.

No potential SWH was identified in this area.

**Aquatic**

The mapped aquatic feature was not observed on this site. Ephemeral sheet drainage may occur over the site in periods of high flow such as spring freshet, however aquatic vegetation was not observed indicating lack of sustained flow or water holding capability on the site.

### 4.3 Drinking Water Source Protection

Drinking Water Source Protection represents the first barrier in the protection of drinking water. Protecting surface and ground water from becoming contaminated or overused will ensure a sufficient supply of clean, safe drinking water. The Clean Water Act 2006 (CWA) is intended to protect existing and future sources of drinking water as part of the government’s overall commitment to protecting human health and the environment. The CWA sets out a framework for source protection planning on a watershed basis with Source Protection Areas established based on the watershed boundaries of Ontario’s 36 Conservation Authorities. Conservation Authorities are required to prepare Source Protection Plans (SPPs) which detail policies that to protect against significant threats to drinking water systems.

In 2015, amendments to the Municipal Engineers Association Municipal Class Environmental Assessment included the requirement to consider Drinking Water Source Protection and the policies of the applicable SPP as part of the assessment of project impacts. A review was undertaken of vulnerable areas within the study areas for the Class EA using the Source Water Protection Information Atlas administered by the
Ontario Ministry of the Environment, Conservation and Parks (http://www.applications.ene.gov.on.ca/swp/en/index.php), and the local SPPs for the Niagara Peninsula and the Hamilton Region Source Protection Areas (SPAs). Figure 4.6 identifies the source protection mapping for each of the sites.

4.3.1 Airport Options 1 and 2, and Upper James/Twenty Road

The Airport sites and the Upper James/Twenty Road site are located within the Niagara Peninsula SPA. Based on the Source Water Protection Information Atlas mapping, Airport Option 1 and the Upper James/Twenty Road sites are located within a Highly Vulnerable Aquifer (HVA), as well as a Significant Groundwater Recharge Area (SGRA) with a vulnerability score of 6. Airport Option 2 is not located within any identified vulnerable areas. Policies of the Niagara Region Source Protection Plan (SPP) generally address significant drinking water threats, which can generally only occur within Wellhead Protection Areas (WHPAs) and Intake Protection Zones with a vulnerability score over 9. Therefore, no impacts to drinking water source protection or the policies of the Niagara Peninsula SPP are anticipated at any of the proposed sites.

4.3.2 Hannon Options 1 and 2

Hannon Options 1 and 2 are both located within the Hamilton Region SPA. Based on the Source Water Protection Information Atlas mapping, the sites are located within an HVA. Since policies of the Hamilton Region SPA generally apply to significant threats, which do not generally apply within an HVA, there are no anticipated impacts to drinking water source protection or the policies of the Niagara Peninsula SPP.

4.4 Technical Review

A number of technical components were reviewed in order to determine impacts of the new station. This includes a review of linear infrastructure required based on proximity to trunk sanitary sewers for each location, potential pumping requirements, impacts to downstream and local sewers based on capacity, and any additional constructability considerations.

4.4.1 Proximity to Trunk Sanitary Sewer

The proximity of the proposed site location to the trunk sewer will help identify the amount of linear infrastructure required to connect the proposed site to the local trunk sewer. As part of the evaluation, the short list of candidates for the target areas were reviewed to identify which sites will require the least amount of linear infrastructure to connect to the local trunk sewer.
Source Protection Areas

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under licence with the City of Hamilton, C 2013 and the Ontario Ministry of Natural Resources and Forestry, © Queen’s Printer for Ontario, 2017.

Legend

- Significant Groundwater Recharge Area
- Highly Vulnerable Aquifers

Notes

- Source Protection Areas, NAD 1983 UTM Zone 17N
- Source Protection Areas are defined under the Water Protection Act, 2000, S.O. 2000, c. 18 and the Ontario Ministry of the Environment, Water and Climate Change, 2009.

Project Location

Client/Project

Figure No.

Title

Notes

Prepared by SB on June 28, 2018
Additionally, the velocity in the sewer at the approximate station discharge was reviewed to confirm that the minimum velocity will be achieved with the addition of the new SWHRS flows. Based on the City of Hamilton’s Sewer Servicing Guidelines, the minimum allowable velocity for sanitary sewers is 0.75 m/s. A summary of the calculated velocity in the downstream trunk sewer as well as the potential linear infrastructure required for each of the short-listed candidates is provided below.

### 4.4.1.1 Airport 1

The proposed location, as shown on Figures 4.7 and 4.8, is on west side of Upper James St, south of Dickenson Road East and north of Glanair Drive. The proposed site is located adjacent to the 675mm sanitary trunk sewer which runs along Upper James Street to the Twenty Road PS (HC018). At the approximate point of discharge to the local trunk sewer (between MH GD05A003 and MH GD05A004) the velocity in the sewer is approximately 1.5 m/s based on 2-Year Storm flows, which meet the City’s minimum velocity guidelines. There is currently no connection to the trunk sewer at this location therefore construction would be required within the existing sewer Right-of-Way (ROW) to connect the station to the sewer system.

### 4.4.1.2 Airport 2

The proposed site location, also illustrated on Figures 4.7 and 4.8, is opposite of the Airport 1 option, and is located on the east side of Upper James St, south of Dickenson Road East and north of Glanair Drive. Similar to Airport 1, the site is adjacent to the existing 675mm sanitary sewer on Upper James St. At the approximate point of discharge to the local trunk sewer (between MH GD05A003 and MH GD05A004) the velocity in the sewer is approximately 1.5 m/s based on 2-Year Storm flows, which meet the City’s minimum velocity guidelines. There is currently no connection to the trunk sewer at this location therefore construction would be required within the existing sewer ROW to connect the station to the sewer system.

### 4.4.1.3 Upper James/Twenty Road

The proposed location of this option is on the west side of Upper James St, just north of the Upper James and Twenty Road West intersection, as illustrated on Figure 4.9 and 4.10. There is an existing Sanitary Pump Station (PS) at this location (HC018) with a wet well and discharge to the Hamilton Mountain Sanitary Trunk sewer. For this option, minimal sewer construction would be required as the new SWHRS could connect directly to the wet well at the PS and be contained to the existing site.

### 4.4.1.4 Hannon 1

The proposed location is on the east side of Dartnall Road, north of Twenty Road East and south of Rymal Road East, as depicted in Figure 4.11 and 4.12. There is a 600mm...
sanitary trunk sewer that passes through the proposed site location from Dartnall Road and then connecting to the 900mm sanitary trunk sewer that also runs through the proposed site location and travels north towards the Red Hill Sanitary Trunk Sewer. At the approximate point of discharge to the local trunk sewer the velocity in the sewer is approximately 1.95 m/s based on 2-Year Storm flows, which meet the City’s minimum velocity guidelines. Since there are existing sanitary trunk sewers within the proposed area, minimal construction would be required to connect to the sanitary system and any construction would be contained to the proposed site area.

4.4.1.5 Hannon 2

The proposed location, also illustrated in Figures 4.11 and 4.12, is in the south west corner of the Glover Road and Twenty Road East intersection. The proposed location is adjacent to an 825mm sanitary trunk sewer that travels south along Glover Road and connects 900mm sanitary trunk that travels north towards the Red Hill Sanitary Trunk Sewer. There is currently no connection to the trunk sewer at this site area therefore construction would be required within the existing sewer ROW to connect station to the sewer system.

Based on the evaluation, the Upper James/Twenty Road site and the Hannon 1 site are within the closest proximity to the local trunk sewer.
Airport Option 1 and Option 2

Aerial Imagery

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under licence with the Ontario Ministry of Natural Resources and Forestry © Queen’s Printer for Ontario, 2017.

CITY OF HAMILTON
NEW SEPTAGE WASTE HAULAGE RECEIVING STATION
MUNICIPAL CLASS EA

Map scale: 1:5,000 (at original document size of 11x17)

Legend
- Sanitary MH
- Sanitary Sewer
- 2-600 mm
- 300-125 mm
- ≤ 250 mm
- Watermain
- Truck Route
- Public Land (Local)
- Other Parcel
- Possible site locations for Airport Option 1
- Possible site locations for Airport Option 2

Notes
- Data sourced from Stantec. Stantec assumes no responsibility for data supplied in this format. The recipient assumes full responsibility for verifying the accuracy and completeness of the data. All recipient receptions, consultants and agencies are to verify the data being used in any way from this format or portion of the data.

Prepared by: KDB on 2019-06-26

Claro Project: CITY OF HAMILTON
NEW SEPTAGE WASTE HAULAGE RECEIVING STATION
MUNICIPAL CLASS EA

Report No: 4.7

Airport Option 1 and Option 2
Aerial Imagery

Layout of Waste Haulage Receiving Station is conceptual only. Final configuration of site subject to change.
Possible site locations for Airport Option 1
Possible site locations for Airport Option 2

Legend
- Sanitary MH

Sanitary Sewer
- 600 mm
- 300 - 525 mm
- 5 - 250 mm

Watermain

Truck Route

Public Land (Local)

Other Parcel

Existing Land Use

Agricultural

Commercial/ Office

Residential

Vacant Land

Open Space

Transportation and Utility

Possible site locations for Airport Option 1
Possible site locations for Airport Option 2

Notes
1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under licence with the Ontario Ministry of Natural Resources and Forestry © Queen’s Printer for Ontario, 2017.
Legend

- Sanitary MH
- Sanitary Pumping Station
- Force main

Sanitary Sewer
- ≤ 400 mm
- 300 - 525 mm
- ≤ 250 mm
- Water main
- Truck Route
- Public Land (Local)
- Other Parcel

Existing Land Use
- Agricultural
- Commercial/Office
- Residential
- Institutional
- Vacant Land
- Open Space

Transportation and Utility
- Possible site locations for Upper James / Twenty Road option

Notes

- Coordinate System: NAD 1983 UTM Zone 17 N
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Surrounding Land Use

Classification:
- City of Hamilton

Prepared by KDB on 2019-05-29

City LIMITS

Lake Ontario

CITY OF HAMILTON

New Septage Waste Haulage Receiving Station
Municipal Class EA

Location:
Upper James / Twenty Road

Surrounding Land Use

Layout of Waste Haulage Receiving Station is conceptual only. Final configuration of site subject to change.
Hannon Option 1 and Option 2

Aerial Imagery

1. Coordinate System: NAD 1983 UTM Zone 17N
2. Base features produced under licence with the Ontario Ministry of Natural Resources and Forestry © Queen's Printer for Ontario, 2017.

Layout of Waste Haulage Receiving Station is conceptual only. Final configuration of site subject to change.
Hannon Option 1 and Option 2

Legend
- Sanitary MH
- Sanitary MH with Odour Lid

Sanitary Sewer
- 2 - 600 mm
- 300 - 525 mm
- 250 mm
- Watermain
- Truck Route
- Public Land (Local)
- Other Parcel

Existing Land Use
- Agricultural
- Residential
- Institutional
- Industrial
- Vacant Land
- Open Space
- Transportation and Utility

Possible site locations for Hannon Option 1
Possible site locations for Hannon Option 2

Notes
- Coordinate System: NAD 1983 UTM Zone 17N
- Data extracted and produced under licence with the Ontario Ministry of Natural Resources and Forestry © Queen’s Printer for Ontario, 2017.

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Prepared by KDB on 2019-05-29

Class Project
CITY OF HAMILTON
NEW SEPTAGE WASTE HAULAGE RECEIVING STATION
MUNICIPAL CLASS EA

Report No.
4.12

Hannon Option 1 and Option 2
Surrounding Land Use

Layout of Waste Haulage Receiving Station is conceptual only. Final configuration of site subject to change.
4.4.2 Pumping Requirements

The pumping requirements for the proposed site candidates will be evaluated based on the requirements to convey flows from the site to the existing sanitary system and the impact to the existing downstream pumping stations. The flows from the existing Upper Ottawa SWHRS currently conveys flows via gravity into the Rymal Road area sewer. The City has indicated that minimal or no pumping of the new SWHRS flows is preferred to reduce the reliance on mechanical components. A summary of the general site topography, on-site pumping requirements and sewer depth is provided in Table 4.1 below:

Table 4.1 Summary of Pumping Requirements

<table>
<thead>
<tr>
<th>Proposed Locations</th>
<th>Topography</th>
<th>Pumping Requirements</th>
<th>Sewer Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Airport 1</strong></td>
<td>Overall flat topography at the proposed site location</td>
<td>Pumping requirements for the site will depend on the final site arrangement and the need for a holding tank as part of the site design.</td>
<td>Approximate depth of the sewer below grade at the proposed connection point is 7.5m to the pipe invert.</td>
</tr>
<tr>
<td><strong>Airport 2</strong></td>
<td>Overall flat topography at the proposed site location</td>
<td>Pumping requirements for the site will depend on the final site arrangement and the need for a holding tank as part of the site design.</td>
<td>Approximate depth of sewer below grade at the proposed connection point is 7.5m to the pipe invert.</td>
</tr>
<tr>
<td><strong>Upper James/Twenty Road</strong></td>
<td>Low lying area which would likely require imported fill to build up the existing site area.</td>
<td>Pumping is not anticipated for this option as the site could connect to the existing HC018 PS wet well which may allow for gravity discharge to the trunk sewer.</td>
<td>Approximate depth of sewer below grade at HC018 Twenty Road Pump Station is 8m.</td>
</tr>
</tbody>
</table>
4.4.3 Impacts to Local Sewers

A key factor when selecting the optimal location for the new station is identifying any capacity constraints in the local collection system. The impact to the local sanitary sewer for each of the short-listed options was analyzed using the City’s current Mike Urban Model of the existing sanitary system. A peak flow of 37 L/s from the new SWHRS was used for this analysis to determine the impact of the local sanitary systems for each of the 5 options considered. The 2010 Sewer Use By-Law Review, Part III Report (R.E. Poisson) recommended that a peak flow of 33 L/s should be used, however the ECA update for the new SWHRS at the Eastport PS (HC017) used a higher design discharge flow of 37 L/s. As a result, the more conservative design flow of 37 L/s was used for this analysis. It is noted that there has been limited reported of basement flooding issues within the local sewer systems in the vicinity of the proposed sites.

For this analysis, the City of Hamilton provided the following scenario results from the City’s Mike Urban sewer model, in order to estimate the impact to the local sewer capacity with the addition of the new SWHRS:

- Full-pipe capacity
- Peak 2-Year Storm Flows
- Peak 5-year Storm Flows

The results of the analysis are summarized in the table below.
Table 4.2 Sewer Capacity Analysis

<table>
<thead>
<tr>
<th>Site Location</th>
<th>Airport 1</th>
<th>Airport 2</th>
<th>Upper James/ Twenty Road</th>
<th>Hannon 1</th>
<th>Hannon 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local sewer</td>
<td>675mm Trunk</td>
<td>675mm Trunk</td>
<td>HC018 Twenty Road PS</td>
<td>900mm Trunk</td>
<td>825mm Trunk</td>
</tr>
<tr>
<td>Full Pipe Capacity</td>
<td>540 L/s</td>
<td>540 L/s</td>
<td>590 L/s (PS capacity)</td>
<td>1140 L/s</td>
<td>1200 L/s</td>
</tr>
<tr>
<td>2-Year Event - Peak Flow</td>
<td>279 L/s</td>
<td>279 L/s</td>
<td>151 L/s</td>
<td>419 L/s</td>
<td>196 L/s</td>
</tr>
<tr>
<td>5-Year Event – Peak Flow</td>
<td>430 L/s</td>
<td>430 L/s</td>
<td>760 L/s</td>
<td>624 L/s</td>
<td>217 L/s</td>
</tr>
<tr>
<td>Sewer Capacity Impact during 5-Year Storm</td>
<td>80% of the sewer capacity is reached</td>
<td>80% of the sewer capacity is reached</td>
<td>Flows at pump station exceed station's rated capacity</td>
<td>55% of the sewer capacity is reached</td>
<td>18% of the sewer capacity is reached</td>
</tr>
</tbody>
</table>

The results of the modelling analysis of the proposed locations indicated the following:

- The 5-Year Storm model shows the local trunk sewers reaching 80% capacity for site options Airport 1 and Airport 2.
- There is greater capacity in the local sewers for options Hannon 1 and Hannon 2 in comparison to the Airport 1, Airport 2 and the Upper James/Twenty Road PS options.
- The model showed that the HC018 PS Capacity will be exceeded during a 5-Year Storm event with the addition of the new SWHRS at the Upper James/Twenty Road option. For this proposed area, discharge from the SWHRS to the PS would likely need to be limited during high flow events.
In addition to the model results which indicate that the Hannon 1 and Hannon 2 options have the greatest available sewer capacity, the City is currently completing the construction of the new Upper Centennial Trunk Sewer, which will collect flows from the Binbrook PS (HC058), and further reduce flows to the both the Dartnall Road and Glover Road sanitary trunk sewers, thereby providing further available capacity for the flows from the proposed SWHRS.

4.4.4 Impacts to Downstream Sewers

After reviewing the impact to the local sanitary system using the City’s model results, the impact to the downstream sewer systems was evaluated for each of the proposed site locations to determine if there are any capacity constraints, basement flooding issues or possible combined sewer overflows.

A summary of the impacts to the downstream sewer systems for each of the short-listed candidates is provided below.

4.4.4.1 Airport 1

Flows from the proposed Airport 1 location would be conveyed via gravity along Upper James St to the HC018 PS at Upper James St and Twenty Road West. The rated capacity of HC018 PS has increased to 590 L/s, however there are capacity concerns as shown in the modelling results for a 5-Year Storm event. Flows from the HC018 PS discharge to the Hamilton Mountain Sanitary Trunk sewer and are then conveyed to the Red Hill Sanitary Trunk Sewer. The downstream conveyance of flows from this proposed area does not pass through any combined sewer areas therefore this station location is not expected to increase the risk of combined sewer overflows or basement flooding.

4.4.4.2 Airport 2

Since the discharge location for the Airport 2 site would be near the discharge point for Airport 1, the impact to the downstream sewer system for the proposed Airport 2 location is considered same as the Airport 1 option.

4.4.4.3 Upper James / Twenty Road

Flows from the HC018 PS discharge to the Hamilton Mountain Sanitary Trunk sewer and then to the Red Hill Sanitary Trunk Sewer. The modelling analysis detailed in the previous section (Impacts to Local Sewer Section) showed that there is sufficient capacity in the gravity sewer downstream of the station’s forcemain discharge point for both 2-Year and 5-Year storm events. The downstream conveyance of flows from this proposed area does not pass through any combined sewer areas therefore this station...
Phase 2 – Existing Conditions
June 21, 2019

location is not expected to increase the risk of combined sewer overflows or basement flooding.

4.4.4.4 Hannon 1

Flows from the proposed Hannon 1 site will be conveyed to the Dartnall Road Area Sanitary Trunk Sewer and the Red Hill Sanitary Trunk Sewer. The proposed Hannon 1 location will have a similar flow path to the existing Upper Ottawa SWHRS.

Although there is currently sufficient capacity in the downstream sewers, flows from the Binbrook PS (HC058) will be re-directed via the new Upper Centennial Trunk Sewer. Construction of the new Upper Centennial Trunk Sewer and re-direction of Binbrook flows will increase capacity in the Hannon area trunks.

The downstream conveyance of flows from this proposed area do not pass through any combined sewer areas therefore this station location is not expected to increase the risk of combined sewer overflows or basement flooding.

4.4.4.5 Hannon 2

Due to the same downstream conveyance, the impact to the downstream sewer system for the proposed Hannon 2 location is the same as the Hannon 1 site.

Based on this evaluation, proposed site locations Hannon 1 and Hannon 2 show the least impact the downstream sewer system due to the greater available capacity in the downstream sewer and conveyed flows do not pass through an existing pumping station or combined sewer areas.

4.4.5 Site Design Considerations and Constructability

The following design and constructability considerations were reviewed for the proposed site locations:

- Servicing requirements/availability
- Site accessibility in terms of traffic and if alternative entrances are available
- Constructability issues such as soil conditions and groundwater issues
- Existing Topography
NEW SEPTAGE WASTE HAULAGE RECEIVING STATION SCHEDULE B
MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

Phase 2 – Existing Conditions
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Table 4.3 Site Design and Constructability

<table>
<thead>
<tr>
<th></th>
<th>Airport 1</th>
<th>Airport 2</th>
<th>Upper James/ Twenty Road</th>
<th>Hannon 1</th>
<th>Hannon 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Site Servicing</strong></td>
<td>Property has been previously serviced and is development ready</td>
<td>Property has been previously serviced and is development ready</td>
<td>Servicing available for existing HC018 PS</td>
<td>Property has been previously serviced and is development ready</td>
<td>Property has been previously serviced and is development ready</td>
</tr>
<tr>
<td><strong>Site Access</strong></td>
<td>Local street access (Aeropark Blvd) for potential entrance instead of Upper James</td>
<td>Entrance via Upper James (high traffic)</td>
<td>Entrance via Upper James (high traffic)</td>
<td>Low traffic area, though truck traffic increasing with development</td>
<td>Low traffic area, though truck traffic increasing with development</td>
</tr>
<tr>
<td><strong>Construct-ability</strong></td>
<td>No anticipated constructability issues</td>
<td>No anticipated constructability issues</td>
<td>Constructability issues could arise due to adjacent wetland therefore potential for high groundwater and poor soil conditions</td>
<td>No anticipated constructability issues</td>
<td>No anticipated constructability issues</td>
</tr>
</tbody>
</table>

Overall, servicing is available for each of the potential site locations. For site access, sites Airport 1, Hannon 1 and Hannon 2 are the preferred options as they are located in low traffic areas. Airport 2 and the Upper James/Twenty Road sites are located along Upper James and therefore access may be difficult for trucks due to high traffic. The Airport 1 site could be accessed via Aeropark Boulevard instead of Upper James Street.

Constructability issues are not anticipated for sites Airport 1, Airport 2, Hannon 1 and Hannon 2. Due to the adjacent wetland at the Upper James/Twenty Road site, constructability issues may occur due to the high groundwater table and poor soil conditions. Due to the low-lying area, the existing site would likely need to be built-up with imported fill.
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Overall, the proposed sites Airport 1, Hannon 1 and Hannon 2 present the least amount of site design challenges and constructability issues.

4.5 Permits and Approvals

For sites located adjacent to a Conservation Authority Regulated Area, a Conservation Authorities Act Section 28 Permit may be required (O. Reg. 161/06 – Hamilton Region Conservation Authority Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses; O. Reg. 155/06 Niagara Peninsula Conservation Authority: Regulation of Development, Interference with Wetlands, and Alterations to Shorelines and Watercourses).

Where alternative sites have the potential for SAR habitats, confirmation of permitting requirements under the Endangered Species Act and/or Registration may be required.

For potential impacts to Hydro One lands, additional approvals may be required, which may include approval under the Infrastructure Ontario Public Work Class Environmental Assessment.

An Environmental Compliance Approval will also be required for the new station, along with typical utility coordination including a City of Hamilton Site Plan application.
5.0 Cost Estimates

The budgetary cost for the new SWHRS for Airport 1, Airport 2, Hannon 1 and Hannon 2 sites is approximately $4.5 – 5 million. The estimated capital cost for the facility was based on the cost for the recent Eastport Pump Station SWHRS, however additional costs are anticipated for the new site since it will be a greenfield facility, requiring additional site servicing, grading, and electrical components. The new facility will also be large enough to accommodate two trucks offloading at the same time, and provide an adequate turning radius on the site. The estimated budgetary cost for the Upper James/Twenty Road site is higher at $5.5 – 6 million, due to the increase in construction costs anticipated in order to raise the existing site grade and manage poor soil conditions and a high water table. Estimated capital costs for the preferred alternative will be refined further during the Conceptual Design phase.

Overall, property acquisition and operating and maintenance costs are expected to be similar between the short-listed sites.
6.0 Evaluation of Sites and Preliminary Recommendations

As part of Phase 2 of the Class EA process, the framework and criteria for assessing alternative solutions are identified to determine the advantages and disadvantages with respect to the Social/Cultural, Natural, Technical, and Economic components of the project. The criteria were developed to identify impacts to the Social/Cultural, Natural, Technical, and Economic Environments to satisfy the requirements under the EA Act. Each short-listed site was evaluated based on these criteria and given a score of 0, 3 or 5. A 5 rating represents a positive or minimal impact to the criteria, 3 represents a neutral/limited impact and a 0 represents a negative impact. Each environmental component was given the same overall weight.

The evaluation criteria and methodology used for the short list evaluation are described in Table 6.1, and the evaluation of options is provided in Table 6.2.

Based on the review of the Social/Cultural, Natural, Technical, and Economic Environment impacts for each of the short-listed sites, a scoring matrix was developed using the evaluation criteria presented earlier in this report. The scoring for each site location and criteria is presented in Table 6.2.

The results of the scoring evaluation indicate that the Hannon Option 1 site is the preliminary preferred location for the proposed SWHRS. The preliminary preferred location was presented to the public and stakeholders at Public Information Centre No. 2 to solicit feedback and input from the local community and stakeholders.
Table 6.1 – Short List Evaluation Criteria

<table>
<thead>
<tr>
<th>Environmental Component</th>
<th>Criteria</th>
<th>Description</th>
<th>5 Positive</th>
<th>Scoring</th>
<th>3 Neutral</th>
<th>0 Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio-Economic/Cultural</td>
<td>Existing land use</td>
<td>Existing developments on the site</td>
<td>Positive – there are no conflicting land uses currently on the site.</td>
<td>Neutral - There are existing uses on the site (e.g. pump station) which can be incorporated into the site design</td>
<td>Negative – There are existing incompatible uses on the site that would be displaced.</td>
<td></td>
</tr>
<tr>
<td>Future/Planned Land Use including Active Development Applications</td>
<td>This includes consideration for existing active development applications as well as Provincial and local planning policy (Official Plan, Secondary Plans, etc.). Official Plan policies permit municipal infrastructure in all land use designations within Rural Hamilton (Policy C.3.0), and Urban Hamilton (Policy C.3.2.1 b), with consideration for the integration of the site with the character of surrounding land uses through landscaping, buffering, etc.</td>
<td>Positive – consistent with all policy objectives, and no impacts to existing development applications.</td>
<td>Neutral – May not be consistent with all policy objectives, no significant impacts to existing development applications.</td>
<td>Negative – may not be consistent with all policy objectives and negatively impacts existing development applications on the site.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjacent land use (within 300m)</td>
<td>This criterion speaks to both existing and planned land uses adjacent to the proposed site.</td>
<td>Positive – there are no sensitive land uses (i.e. residential) within 300m of the site</td>
<td>Neutral – there may be other/non-sensitive land uses within 300m of the site</td>
<td>Negative – there are sensitive land uses within 300m of the site.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nuisance impacts (noise/odour)</td>
<td>The extent to which adjacent land uses may be impacted by operation of the SWHRS, including noise, odour, aesthetic, or other nuisance impacts.</td>
<td>Positive – Adjacent land uses are not expected to be impacted.</td>
<td>Neutral – adjacent land uses may be impacted to a degree, but mitigation measures can be identified to minimize impacts.</td>
<td>Negative – adjacent land uses are expected to be impacted by WHRS operations and there are no effective mitigation measures available.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Truck Route/Impacts of increased traffic</td>
<td>Site location relative to identified truck routes, and impacts of increased traffic within existing communities. Increased truck traffic is expected to have similar impacts to road wear and tear for all site locations.</td>
<td>Positive – located along an identified truck route, no significant impacts to surrounding neighbourhoods.</td>
<td>Neutral – Not located along an identified truck route, but minimal anticipated impacts of increased truck traffic to surrounding communities.</td>
<td>Negative – not located along an identified truck route with potential impacts of increased truck traffic to surrounding communities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central location (Convenience for Waste Haulers)</td>
<td>Site location complements the location of existing SWHRS to provide a centralized location for waste haul contractors.</td>
<td>Positive – central location that complements existing SWHRS.</td>
<td>Neutral – less central location in relation to other proposed sites.</td>
<td>Negative – inconvenient location in relation to other proposed sites.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural Heritage</td>
<td>Impacts to potential/identified built cultural heritage resources.</td>
<td>Positive – no impacts to built cultural heritage resources.</td>
<td>Neutral – located in proximity to a built cultural heritage resource, where mitigation can be identified (screening, architectural site design features, etc.)</td>
<td>Negative – significantly impacts a built cultural heritage resource.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Archaeology</td>
<td>Impacts to areas of archaeological potential as identified within the Stage 1 Archaeological Assessment</td>
<td>Positive – no areas of archaeological potential</td>
<td>N/A</td>
<td>Negative – impacts to areas of identified archaeological resources.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Natural Environment</td>
<td>Vegetation</td>
<td>Potential impact on woodlands and other areas of natural vegetation communities (excluding wetlands)</td>
<td>Positive – little-no impact. Limited areas of natural vegetation communities.</td>
<td>Neutral – limited areas of natural vegetation, impacts can be mitigated through site design and other best practices.</td>
<td>Negative – significant loss of wooded area/vegetation communities.</td>
<td></td>
</tr>
</tbody>
</table>
## Technical Considerations

<table>
<thead>
<tr>
<th>Environmental Component</th>
<th>Criteria</th>
<th>Description</th>
<th>5 Positive</th>
<th>3 Neutral</th>
<th>0 Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wetlands/PSW</td>
<td>Potential impact on Provincially Significant Wetlands, locally significant wetlands and unevaled wetlands.</td>
<td>Positive – no wetlands in proximity to the site.</td>
<td>Neutral – wetlands present within the project area, potential for impacts can be mitigated through site design and other best practices.</td>
<td>Negative – loss of wetland areas.</td>
<td></td>
</tr>
<tr>
<td>Features designated in City of Hamilton OP</td>
<td>Potential impact on Core Areas and Linkages</td>
<td>Positive – no Core Areas/Linkages located in proximity to the site.</td>
<td>Neutral – Core Areas/Linkages located in proximity to the site. Potential impacts can be mitigated through site design and other best practices.</td>
<td>Negative – loss of Core Areas/Linkages.</td>
<td></td>
</tr>
<tr>
<td>Wildlife and Wildlife Habitat (SWH), including Species of Conservation Concern (SOCC)</td>
<td>Potential impact on Significant Wildlife Habitat (SWH), including Species of Conservation Concern (SOCC)</td>
<td>Positive – low-no potential for SWH.</td>
<td>Neutral – potential for SWH, Potential impact can be mitigated through species-specific measures (timing windows, etc.)</td>
<td>Negative – permanent loss of SWH.</td>
<td></td>
</tr>
<tr>
<td>Species at risk</td>
<td>Potential impact on Species at Risk (SAR) (habitat and species)</td>
<td>Positive – low-no potential for SAR.</td>
<td>Neutral – potential impacts to SAR habitat. Impacts can be mitigated through site design/best management practices, and/or opportunities for enhancement.</td>
<td>Negative – permanent loss of SAR habitat.</td>
<td></td>
</tr>
<tr>
<td>Watercourses/fisheries/aquatic impacts</td>
<td>Potential impact on existing watercourses Potential impact on fish/fish habitat</td>
<td>Positive – no watercourses/aquatic features present.</td>
<td>Neutral – aquatic resources present, impacts can be mitigated through site design/best management practices, and/or opportunities for enhancement.</td>
<td>Negative – permanent loss of fish habitat.</td>
<td></td>
</tr>
<tr>
<td>Drinking Water Source Protection</td>
<td>Assess location within a vulnerable area (Wellhead Protection Area, Intake Protection Zone, Significant Groundwater Recharge Area, Highly Vulnerable Aquifer) and threat to the drinking water source.</td>
<td>Positive – not located within a vulnerable area.</td>
<td>Neutral – may be located within a SGRA/HVA, but no applicable significant threat policies apply.</td>
<td>Negative – Located within a SGRA/HVA. Significant threat policies apply.</td>
<td></td>
</tr>
<tr>
<td>Proximity to Trunk Sewer (amount of sewer construction needed)</td>
<td>Amount of linear infrastructure required to connect to available trunk sewer.</td>
<td>Positive – least amount of linear infrastructure required.</td>
<td>Neutral – moderate amount of infrastructure required</td>
<td>Negative – significant amount of infrastructure required.</td>
<td></td>
</tr>
<tr>
<td>Pumping requirements</td>
<td>Pumping requirements to convey flows from the site to the existing distribution system, including impacts to existing downstream pumping stations.</td>
<td>Positive – least impact to downstream pumping stations, and no pumping requirements for conveyance of flows from the site.</td>
<td>Neutral – some impact to downstream pumping stations. Pumping may be required for conveyance of flows from the site.</td>
<td>Negative – most impact to downstream pumping stations and/or pumping required for conveyance of flows from the site.</td>
<td></td>
</tr>
<tr>
<td>Impacts to local sewer system</td>
<td>Identify if local collection system near the proposed station has capacity constraints or concerns.</td>
<td>Positive – least amount of impact to local sewer system; sewers have significant capacity available including additional reserve capacity.</td>
<td>Neutral – some impacts to local sewer system; sewers have sufficient capacity available.</td>
<td>Negative – significant impact to local sewer system, insufficient capacity available.</td>
<td></td>
</tr>
<tr>
<td>Impacts to downstream sewer system</td>
<td>Identify if existing system downstream has capacity constraints, basement flooding issues, or incidence of combined sewer overflows.</td>
<td>Positive – least amount of impact to downstream sewer system; sewers have significant capacity available including additional reserve capacity.</td>
<td>Neutral – some impact to downstream sewer system; sewers have sufficient capacity available.</td>
<td>Negative – significant impact to downstream sewer system, insufficient capacity available.</td>
<td></td>
</tr>
<tr>
<td>Site Design Considerations</td>
<td>Identify if site location has site design constraints such as existing topography, high traffic area, availability of services, etc.</td>
<td>Positive – least amount of site design challenges.</td>
<td>Neutral – some site design challenges that are not expected to greatly impact overall capital costs.</td>
<td>Negative – significant constructability issues that are</td>
<td></td>
</tr>
<tr>
<td>Environmental Component</td>
<td>Criteria</td>
<td>Description</td>
<td>Scoring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 Positive</td>
<td>3 Neutral</td>
<td>0 Negative</td>
<td></td>
</tr>
<tr>
<td>Constructability</td>
<td>Any known soil conditions, groundwater issues, etc. that may impact construction of the station.</td>
<td>Positive – least amount of constructability issues.</td>
<td>Neutral – some constructability issues that are not expected to greatly impact overall capital costs.</td>
<td>Negative – significant constructability issues that are likely to increase overall capital costs.</td>
<td></td>
</tr>
<tr>
<td>Permits and Approvals</td>
<td>Number and complexity of permit and approval requirements for candidate site.</td>
<td>Positive – fewer or limited permits and approvals required.</td>
<td>Neutral – typical permits and approvals required.</td>
<td>Negative – significant or challenging permits and approvals required.</td>
<td></td>
</tr>
<tr>
<td>Economic</td>
<td>Capital Costs</td>
<td>Capital costs for construction, including linear upgrades, downstream upgrades, pumps, etc.</td>
<td>5 points for least capital cost</td>
<td>3 points for average capital cost</td>
<td>0 points for highest capital cost</td>
</tr>
<tr>
<td>Property acquisition costs</td>
<td>Potential for costs associated with property acquisition. Actual property acquisition costs would be determined by realty services should preferred location be located on private property.</td>
<td>Positive – property acquisition not required (City property), minimal loss of revenue from sale of property.</td>
<td>Neutral – If property acquisition required, typical acquisition costs anticipated. If located on City property, results in large loss of revenue from potential sale of property.</td>
<td>Negative – Property acquisition required. High property acquisition costs anticipated.</td>
<td></td>
</tr>
<tr>
<td>Operations and maintenance costs</td>
<td>Additional long-term operations/ maintenance considerations including increased pump maintenance, energy costs, etc.</td>
<td>Positive – no significant increase in overall system operations and maintenance costs.</td>
<td>Neutral – potential for increase in overall system operations and maintenance costs.</td>
<td>Negative – potential for significant increase in overall system operations and maintenance.</td>
<td></td>
</tr>
</tbody>
</table>
Table 6.2 – Short List Evaluation Scoring

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Airport 1</th>
<th>Airport 2</th>
<th>Upper James/ Twenty Road</th>
<th>Hannon 1</th>
<th>Hannon South</th>
<th>Hannon 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Socio-Economic/ Cultural</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Existing land use</td>
<td>Part of active site plan application (site plan within approved subdivision)</td>
<td>Part of an active site plan application (car dealership)</td>
<td>Vacant land</td>
<td>Vacant land</td>
<td>Vacant land</td>
<td>Vacant land</td>
</tr>
<tr>
<td></td>
<td>Lands not owned by City</td>
<td>Lands not owned by City</td>
<td>Lands not owned by City</td>
<td>Lands not owned by City</td>
<td>Lands owned by City</td>
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<td>5</td>
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</tr>
<tr>
<td>Future/Planned Land Use including Active Development Applications</td>
<td>Airport Employment Area/ Airport Prestige Business Area within the Airport Secondary Plan. Not consistent with vision for “Prestige Business Area” land use.</td>
<td>Airport Employment Area/ Airport Prestige Business Area within the Airport Secondary Plan (SP). Not consistent with vision for “Prestige Business Area” land use.</td>
<td>Arterial Commercial</td>
<td>Located in Business Park Land Use</td>
<td>Part of Subdivision Application - Glanbrook Industrial Park (1980, Draft Approved)</td>
<td>Located in Business Park Land Use</td>
</tr>
<tr>
<td></td>
<td>Active site plan application with approved draft plan.</td>
<td>Special Policy Area G within SP – permits a range of uses including restaurants, motor vehicle sales/rental, Active site plan application (car dealership).</td>
<td>No Active planning applications.</td>
<td>Part of Subdivision Application - McNally Industrial Park (1990, In Progress)</td>
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<td>3</td>
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</tr>
<tr>
<td>Adjacent land use (within 300m)</td>
<td>Adjacent to proposed self-storage facility.</td>
<td>Adjacent to Airport Prestige Business Area land use designations within SP, Rural and Open Space within OP.</td>
<td>Surrounded by Arterial Commercial land use designations; Across from some residential properties; Adjacent to sanitary pump station, car dealership, and institutional uses (place of worship)</td>
<td>Located within industrial land use area.</td>
<td>Adjacent to existing asphalt plant.</td>
<td>Located within industrial land use area.</td>
</tr>
<tr>
<td></td>
<td>Across from proposed car dealership.</td>
<td></td>
<td></td>
<td>Located at high profile intersection within Business Park.</td>
<td></td>
<td>Adjacent to Maple Leaf Foods processing plant. Near existing industries including Canada Bread, Navistar, and Fibracast.</td>
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</tr>
<tr>
<td>Nuisance impacts (noise/odour)</td>
<td>Potential for increased noise/odours to nearby / proposed businesses from site activities (truck unloading, site traffic)</td>
<td>Potential for increased noise/odours to nearby / proposed businesses from site activities (truck unloading, site traffic)</td>
<td>Odour control mitigation measures will be integrated into design.</td>
<td>Sufficient land available to provide adequate setbacks &amp; shielding from surrounding properties.</td>
<td>Odour control mitigation measures will be integrated into design.</td>
<td>Sufficient land available to provide adequate setbacks &amp; shielding from surrounding properties.</td>
</tr>
<tr>
<td></td>
<td>Odour control mitigation measures will be integrated into design.</td>
<td>Odour control mitigation measures will be integrated into design.</td>
<td>Potential for increased noise/odours to nearby residences and businesses from site activities (truck unloading, site traffic)</td>
<td>Odour control mitigation measures will be integrated into design.</td>
<td>Potential for light/noise pollution to surrounding</td>
<td>Odour control mitigation measures will be integrated into design.</td>
</tr>
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<td></td>
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</tr>
</tbody>
</table>
**NEW SEPTAGE WASTE HAULAGE RECEIVING STATION SCHEDULE B MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT**
*April 17, 2019*

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Airport 1</th>
<th>Airport 2</th>
<th>Upper James/ Twenty Road</th>
<th>Hannon 1</th>
<th>Hannon South</th>
<th>Hannon 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck Route/Impacts of increased traffic</td>
<td>• Located along north-south truck route (Upper James Street).</td>
<td>• Located along north-south truck route (Upper James Street).</td>
<td>• Located along north-south truck route (Upper James Street).</td>
<td>• Located along north-south truck route (Upper James Street).</td>
<td>• Not directly located on established truck route.</td>
<td>• Located along north-south truck route (Dartnall Road). Close to east-west truck route (Rymal Road). Close to Lincoln Alexander Parkway.</td>
</tr>
<tr>
<td></td>
<td>• Not close to east-west truck routes (Rymal Road / Hwy 6).</td>
<td>• Not close to east-west truck routes (Rymal Road / Hwy 6).</td>
<td>• Both within commercial/residential areas.</td>
<td>• Located along north-south truck route (Rymal Road). Close to Lincoln Alexander Parkway.</td>
<td>• Dartnall Road passes mainly through commercial/industrial areas.</td>
<td>• Dartnall Road passes mainly through commercial/industrial areas.</td>
</tr>
<tr>
<td></td>
<td>• Additional truck traffic along Upper James Street (high traffic area).</td>
<td>• Additional truck traffic along Upper James Street (high traffic area).</td>
<td>• Additional truck traffic near Upper James Street / Twenty Road (high traffic area).</td>
<td>• Potential for increased traffic through Mount Hope area.</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>• Increased traffic through Mount Hope area.</td>
<td>• Increased traffic through Mount Hope area.</td>
<td>• Located along north-south truck route (Upper James Street).</td>
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<td></td>
<td></td>
<td></td>
<td>• Located along north-south truck route (Rymal Road).</td>
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<td></td>
<td></td>
<td></td>
<td>• Both within commercial/residential areas.</td>
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<tr>
<td>Central location (Convenience for Waste Haulers)</td>
<td>• Centrally located to Flamborough, Dundas, Ancaster, Glanbrook, and Stoney Creek areas.</td>
<td>• Centrally located to Flamborough, Dundas, Ancaster, Glanbrook, and Stoney Creek areas.</td>
<td>• Centrally located to Flamborough, Dundas, Ancaster, Glanbrook, and Stoney Creek areas.</td>
<td>• Centrally located to Flamborough, Dundas, Ancaster, Glanbrook, and Stoney Creek areas.</td>
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<td>• Centrally located to Flamborough, Dundas, Ancaster, Glanbrook, and Stoney Creek areas.</td>
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<tr>
<td>Cultural Heritage</td>
<td>• No impacts.</td>
<td>• No impacts.</td>
<td>• Located in proximity to a listed property – Cultural Heritage Resource Assessment required.</td>
<td>• No impacts.</td>
<td>• No impacts.</td>
<td>• No impacts.</td>
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<td></td>
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<td>5</td>
<td>5</td>
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</tr>
<tr>
<td>Archaeology</td>
<td>• No archaeological potential.</td>
<td>• No archaeological potential.</td>
<td>• Areas of archaeological potential – Stage 2 required (field investigation). Results of Stage 2 may clear site.</td>
<td>• Areas archaeological potential – Stage 2 required (field investigation). Results of Stage 2 may clear site.</td>
<td>• Areas of archaeological potential – Stage 2 required (field investigation). Results of Stage 2 may clear site.</td>
<td>• Areas of archaeological potential – Stage 2 required (field investigation). Results of Stage 2 may clear site.</td>
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</tr>
<tr>
<td>Socio-Economic/ Cultural Summary</td>
<td>Category score: 27 / 40</td>
<td>Category score: 21 / 40</td>
<td>Overall score: 38 / 40</td>
<td>Overall score: 32 / 40</td>
<td>Overall score: 20 / 25</td>
<td>Overall score: 32 / 40</td>
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<tr>
<td></td>
<td>Category Rank: T-3#</td>
<td>Category Rank: T-3#</td>
<td>Overall score: 45 / 80</td>
<td>Overall score: 32 / 40</td>
<td>Category Rank: 14</td>
<td>Category Rank: 21</td>
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<tr>
<td>Natural Environment</td>
<td>Vegetation</td>
<td>Vegetation</td>
<td>Vegetation</td>
<td>Vegetation</td>
<td>Vegetation</td>
<td>Vegetation</td>
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<tr>
<td></td>
<td>• Sparsely vegetated old field habitat.</td>
<td>• Old field habitat with scattered trees.</td>
<td>• Old field/meadow habitat with scattered trees. Riparian habitat along watercourse; wetlands present.</td>
<td>• Mostly old field/meadow, with small areas of thicket. Marsh habitat along periphery of site; treed areas along watercourse.</td>
<td>• Old field/meadow habitat with small treed areas.</td>
<td>• Old field/meadow habitat with small treed areas.</td>
</tr>
<tr>
<td></td>
<td>• Little-no impact.</td>
<td>• Little-no impact.</td>
<td>• Little-no impact.</td>
<td>• Little-no impact.</td>
<td>• Little-no impact.</td>
<td>• Little-no impact.</td>
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<tr>
<td>Criteria</td>
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<td>Hannon 1</td>
<td>Hannon 2</td>
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<tr>
<td></td>
<td>Little-no impact. Impacts to riparian habitat can be mitigated through site design/BMPs.</td>
<td>Moderate impact to vegetation and marsh habitat.</td>
<td><strong>mitigated through side design/BMPs.</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Wetlands/PSW</td>
<td>5</td>
<td>3</td>
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<tr>
<td>PSW on the northeast corner of Dickenson and Upper James Street, outside of the 120-metre area. No impact.</td>
<td>PSW present on the western edge of the site. Little-to-no potential for impact. Impacts can be mitigated through site design/best practices.</td>
<td>No wetlands located in proximity to the site. No impact.</td>
<td>No wetlands located in proximity to the site. No impact.</td>
<td></td>
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<tr>
<td>Features designated in City of Hamilton OP</td>
<td>3</td>
<td>3</td>
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<tr>
<td>There are Core Areas (streams) which are regulated by the Conservation Authority. Significant woodlands may be present on adjacent lands. Little-no impact, can be mitigated through site design/best practices.</td>
<td>There are Core Areas (streams) which are regulated by the Conservation Authority. Little-no impact, can be mitigated through site design/best practices.</td>
<td>Significant woodlands may be present on or adjacent to the site. From City: this site is outside of the Core Areas and is outside of the area regulated by the Conservation Authority. However, it is adjacent to (within 120 metres of) a wetland and stream. Little-no impact, can be mitigated through site design/best practices.</td>
<td>Most of this site is regulated by the Hamilton Conservation Authority and contains a Core Area (streams). Linkage areas may be present on adjacent lands. Can be mitigated through site design.</td>
<td></td>
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<tr>
<td>Wildlife and Wildlife Habitat</td>
<td>3</td>
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<tr>
<td>Species at risk</td>
<td>3</td>
<td>3</td>
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</tr>
<tr>
<td>No recent NHIC records for Threatened or Endangered species. Grassland habitat appears to be low quality (recent disturbance) and so unlikely to support grassland bird SAR.</td>
<td>No recent NHIC records. This site may also contain habitat for grassland bird species at risk (Eastern Meadowlark, Bobolink). Potential SAR bat maternity habitat in treed areas.</td>
<td>No recent NHIC records. Barn Swallow records from E-bird. This site may also contain habitat for grassland bird species at risk (Eastern Meadowlark, Bobolink).</td>
<td>No recent NHIC records. No recent E-bird records for bird SAR. This This site may contain habitat for grassland bird species at risk (Eastern Meadowlark, Bobolink, Barn Swallow). No recent NHIC records. No recent E-bird records for bird SAR. This This site may contain habitat for grassland bird species at risk (Eastern Meadowlark, Bobolink, Barn Swallow).</td>
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<tr>
<td>Criteria</td>
<td>Airport 1</td>
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</tr>
<tr>
<td>Watercourses/fisheries/aquatic impacts</td>
<td>• Little-no impact.</td>
<td>• Potential impact to grassland SAR to be confirmed.</td>
<td>• Potential impact to grassland SAR to be confirmed.</td>
<td>• Potential impact to grassland SAR to be confirmed.</td>
<td>• Potential impact to grassland SAR to be confirmed.</td>
<td>• Potential impact to grassland SAR to be confirmed.</td>
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</tr>
<tr>
<td>Drinking Water Source Protection</td>
<td>• Located within HVA. No significant threats to municipal drinking water sources.</td>
<td>• Not located within a vulnerable area.</td>
<td>• Located within SGRA with vulnerability score of 6 and HVA. No significant threats to municipal drinking water sources.</td>
<td>• Located within HVA. No significant threats to municipal drinking water sources.</td>
<td>• Located within HVA. No significant threats to municipal drinking water sources.</td>
<td>• Located within HVA. No significant threats to municipal drinking water sources.</td>
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</tr>
<tr>
<td>Natural Environment Summary</td>
<td>Category Score: 25 / 35</td>
<td>Category Score: 28 / 35</td>
<td>Category Score: 29 / 35</td>
<td>Category Score: 21 / 35</td>
<td>Category Score: 21 / 35</td>
<td>Category Score: 27 / 35</td>
</tr>
<tr>
<td></td>
<td>Category Rank: 3rd</td>
<td>Category Rank: 1st</td>
<td>Category Rank: T-4th</td>
<td>Category Rank: T-4th</td>
<td>Category Rank: 2nd</td>
<td>Category Rank: 2nd</td>
</tr>
<tr>
<td>Technical</td>
<td>Proximity to Trunk Sewer (amount of sewer construction needed)</td>
<td>• Adjacent to 675mm DIA trunk sewer along Upper James Street.</td>
<td>• Adjacent to 675mm DIA trunk sewer along Upper James Street.</td>
<td>• Located adjacent to Twenty Road PS. Potential for connection directly to PS wet well.</td>
<td>• 600mm DIA and 900mm DIA trunk sewer passes through site.</td>
<td>• Adjacent to 875mm DIA trunk sewer at Twenty Road East and Glover Road.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Connection to trunk sewer within existing ROW required.</td>
<td>• Connection to trunk sewer within existing ROW required.</td>
<td>• Minimal sewer construction required, may be contained to site.</td>
<td>• Minimal sewer construction required, may be contained to site.</td>
<td>• Connection to trunk sewer within existing ROW required.</td>
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<tr>
<td>Pumping requirements</td>
<td>• Pumping may be required depending on final arrangement of site and whether holding tank is integrating into design.</td>
<td>• Pumping may be required depending on final arrangement of site and whether holding tank is integrating into design.</td>
<td>• Pumping not anticipated as connection to existing PS wet well would potentially allow for gravity discharge.</td>
<td>• Pumping may be required depending on final arrangement of site and whether holding tank is integrating into design.</td>
<td>• Pumping may be required depending on final arrangement of site and whether holding tank is integrating into design.</td>
<td>• Pumping may be required depending on final arrangement of site and whether holding tank is integrating into design.</td>
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<td></td>
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<td>• Depth of trunk sewer within ROW approx. 7.5m below grade.</td>
<td>• Depth of trunk sewer within ROW approx. 7.5m below grade.</td>
<td>• Depth of trunk sewer within ROW approx. 6.0m below grade.</td>
<td>• Depth of trunk sewer within ROW approx. 6.3m below grade.</td>
<td>• Depth of trunk sewer within ROW approx. 6.3m below grade.</td>
</tr>
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</table>
### Impacts to Local Sewer System

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Airport 1</th>
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<th>Hannon South</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impacts to Local Sewer System</td>
<td>• Local 67.5mm DIA trunk sewer&lt;br&gt;Full-pipe capacity (immediately adjacent sewer): 540 L/s&lt;br&gt;Peak 5-YR Storm Flow: 279 L/s&lt;br&gt;Peak 5-YR Storm Flow: 430 L/s&lt;br&gt;Est. Peak Flow from WHRS: 33 L/s&lt;br&gt;• 5-YR Storm Peak Flow ~ 80% of sewer capacity.&lt;br&gt;• Limited reports of sewer system issues within vicinity of proposed site. Not a known problematic area with history of basement flooding.&lt;br&gt;*Source – City Mike Urban Model.</td>
<td>• Local 67.5mm DIA trunk sewer&lt;br&gt;Full-pipe capacity (immediately adjacent sewer): 540 L/s&lt;br&gt;Peak 2-yr Storm Flow: 279 L/s&lt;br&gt;Peak 5-YR Storm Flow: 430 L/s&lt;br&gt;Est. Peak Flow from WHRS: 33 L/s&lt;br&gt;• 5-YR Storm Peak Flow ~ 80% of sewer capacity.&lt;br&gt;• Limited reports of sewer system issues within vicinity of proposed site. Not a known problematic area with history of basement flooding.&lt;br&gt;*Source – City Mike Urban Model.</td>
<td>• HC018 (Twenty Road PS) Rated station capacity: 590 L/s&lt;br&gt;Peak 2-YR Storm Flow: 151 L/s&lt;br&gt;Peak 5-YR Storm Flow: 760 L/s&lt;br&gt;Est. Peak Flow from WHRS: 33 L/s&lt;br&gt;• Model flows to pumping station exceed station capacity during 5-year event.&lt;br&gt;• Limited reports of sewer system issues within vicinity of proposed site. Not a known problematic area with history of basement flooding.&lt;br&gt;• Possible to limit/prevent WHRS discharge into pumping station high flow events.&lt;br&gt;*Source – City Mike Urban Model.</td>
<td>• Local 900mm DIA trunk sewer&lt;br&gt;Full-pipe capacity: 1140 L/s&lt;br&gt;Peak 2-YR Storm Flow: 419 L/s&lt;br&gt;Peak 5-YR Storm Flow: 624 L/s&lt;br&gt;Est. Peak Flow from WHRS: 33 L/s&lt;br&gt;• 5-YR Storm Peak Flow ~ 55% of sewer capacity.&lt;br&gt;• Limited reports of sewer system issues within vicinity of proposed site. Not a known problematic area with history of basement flooding.&lt;br&gt;• Existing flows from Binbrook PS (HC058) will be re-directed to Upper Centennial Trunk Sewer once completed, further reducing flows along Dartnell Road area sanitary trunk sewer.&lt;br&gt;*Source – City Mike Urban Model.</td>
</tr>
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<td>• HC018 (Twenty Road PS) discharges to Hamilton Mountain Sanitary Trunk Sewer, which discharges to Red Hill Sanitary Trunk Sewer&lt;br&gt;Model results (2-Yr, 5-Yr) show sufficient capacity available in gravity sewer downstream of forcemain discharge point from Twenty Road PS. However model may need to be updated with increased capacity of Twenty Road PS (590 L/s)&lt;br&gt;• Downstream conveyance of flows does not pass through combined sewer areas (Lower Hamilton), therefore</td>
<td>• Downstream system includes Dartnell Road Area Sanitary Trunk Sewer and Red Hill Sanitary Trunk Sewer.&lt;br&gt;• Similar flow path to existing Upper Ottawa WHRS, which discharges into Rymal Road area sewer.&lt;br&gt;• Existing flows from Binbrook PS (HC058) will be re-directed to Upper Centennial Trunk Sewer once completed, further reducing flows within Glover Road sanitary trunk sewer and downstream conveyance system.&lt;br&gt;• Downstream system includes Dartnell Road Area Sanitary Trunk Sewer and Red Hill Sanitary Trunk Sewer.&lt;br&gt;• Similar flow path to existing Upper Ottawa WHRS, which discharges into Rymal Road area sewer.&lt;br&gt;• Existing flows from Binbrook PS (HC058) will be re-directed to Upper Centennial Trunk Sewer once completed, further reducing flows within Glover Road sanitary trunk sewer and downstream conveyance system.</td>
</tr>
<tr>
<td>Impacts to Downstream Sewer System</td>
<td>• Discharged flows would be conveyed via gravity along Upper James Street to HC018 (Twenty Road PS).&lt;br&gt;• Twenty Road PS has capacity issues, however recent upgrades increased station rated Peak Flow capacity to 590 L/s.&lt;br&gt;• HC018 (Twenty Road PS) discharges to Hamilton Mountain Sanitary Trunk Sewer, which discharges to Red Hill Sanitary Trunk Sewer&lt;br&gt;• Downstream conveyance of flows does not pass through combined sewer areas (Lower Hamilton), therefore</td>
<td>• Discharged flows would be conveyed via gravity along Upper James Street to HC018 (Twenty Road PS).&lt;br&gt;• Twenty Road PS has capacity issues, however recent upgrades increased station rated Peak Flow capacity to 590 L/s.&lt;br&gt;• HC018 (Twenty Road PS) discharges to Hamilton Mountain Sanitary Trunk Sewer, which discharges to Red Hill Sanitary Trunk Sewer&lt;br&gt;• Downstream conveyance of flows does not pass through combined sewer areas (Lower Hamilton), therefore</td>
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<tr>
<td>not expected to increase risk of combined sewer overflows or basement flooding.</td>
<td>not expected to increase risk of combined sewer overflows or basement flooding.</td>
<td>not expected to increase risk of combined sewer overflows or basement flooding.</td>
<td>Downstream conveyance of flows does not pass through combined sewer areas (Lower Hamilton), therefore not expected to increase risk of combined sewer overflows or basement flooding.</td>
<td>Downstream conveyance of flows does not pass through combined sewer areas (Lower Hamilton), therefore not expected to increase risk of combined sewer overflows or basement flooding.</td>
</tr>
</tbody>
</table>

| Site Design Considerations | • Site property has been previously serviced and is ready for development. Flat topography.  
| • Local street access provides potential alternative entrance instead of Upper James Street. | • Site property has been previously serviced.  
| | • Site entrance would be off Upper James Street, which is a high traffic area. May cause difficulty entering/exiting site for trucks. | • Services anticipated to be available from existing HC018.  
| | • Site entrance would be off Upper James Street, which is a high traffic area. May cause difficulty entering/exiting site for trucks. | • Site property has been previously serviced and is ready for development. Flat topography.  
| | • Downstream conveyance of flows does not pass through combined sewer areas (Lower Hamilton), therefore not expected to increase risk of combined sewer overflows or basement flooding. | • Low traffic area.  
| | • Low traffic area. | • Site property has been previously serviced and is ready for development. Flat topography.  
| | | • Low traffic area. |

| Constructability | • Previously serviced property ready for development. Little-no anticipated constructability issues. | • Previously serviced property ready for development. Little-no anticipated constructability issues. | • Adjacent to identified wetland. Potential for high groundwater table and poor soil conditions.  
| | | • Low lying area would likely require imported fill to build-up existing site. | • Previously serviced property ready for development. Little-no anticipated constructability issues. | • Previously serviced property ready for development. Little-no anticipated constructability issues. |

| Permits and Approvals | • New site location, Environmental Compliance Approval (ECA) required.  
| | • Niagara Peninsula Conservation Authority permit review required (regulated area).  
| | • Typical utility coordination and approvals for construction (Site Plan Approval, Building Permit, etc.) | • New site location, Environmental Compliance Approval (ECA) required.  
| | | • Niagara Peninsula Conservation Authority permit review required (regulated area).  
| | | • Typical utility coordination and approvals for construction (Site Plan Approval, Building Permit, etc.) | • Existing ECA in place for pumping station, amendment to existing ECA possible.  
| | | | • Niagara Peninsula Conservation Authority permit review required. Located within 120m of Regulated Wetland.  
| | | | • Typical utility coordination and approvals for construction (Site Plan Approval, Building Permit, etc.) | • New site location, Environmental Compliance Approval (ECA) required.  
| | | | | • Hamilton Conservation Authority approval required (regulated area).  
| | | | | • Typical utility coordination and approvals for construction (Site Plan Approval, Building Permit, etc.) | • New site location, Environmental Compliance Approval (ECA) required.  
| | | | | | • Hamilton Conservation Authority approval required (regulated area).  
| | | | | | • Typical utility coordination and approvals for construction (Site Plan Approval, Building Permit, etc.) |

<p>| Technical Summary | Category Score: 25 / 35 | Category Score: 23 / 35 | Category Score: 25 / 35 | Category Score: 29 / 35 | Category Score: 27 / 35 |</p>
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<th>Criteria</th>
<th>Airport 1</th>
<th>Airport 2</th>
<th>Upper James/ Twenty Road</th>
<th>Hannon 1</th>
<th>Hannon South</th>
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<td>Recent Eastport PS SWHRS tender results - $2.0 million</td>
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<td>Additional costs anticipated due to greenfield site:</td>
<td>Low level site with existing wetland, imported fill likely required to raise existing grade. Poor soil conditions and high water table anticipated, increasing construction capital costs.</td>
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<td>Capital costs to be further refined at Conceptual Design stage if selected as Preferred Alternative.</td>
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<td>Remaining lands may be difficult to market if existing parcel is split up.</td>
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</table>

Note: The table contains detailed information about the criteria and their scores for each site location, including economic considerations, property acquisition costs, and operating and maintenance costs, with specific details for each location.
## Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Airport 1</th>
<th>Airport 2</th>
<th>Upper James/ Twenty Road</th>
<th>Hannon 1</th>
<th>Hannon South</th>
<th>Hannon 2</th>
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<td>1st</td>
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</table>
7.0 Overview of Stakeholder Input Received

The main points of contact with the public, stakeholders, and Indigenous communities is discussed in Section 1.3 above, and included two open house Public Information Centres, and direct project notifications. All comments received throughout the study have been documented in TRACER tables included in Appendix A7, A8, and A9. Input from stakeholders was incorporated into the evaluation of alternative solutions, and where appropriate, mitigation measures have been identified and will be carried forward through detailed design and construction. A brief overview of input received is provided below, in addition to how concerns will be addressed, where necessary:

- The station should not be located on lands designated as prime agricultural lands
  - Alternative sites avoided prime agricultural lands, and include lands designated for future development within the City of Hamilton Official Plan.

- Impacts of odours on residential areas from the new station is a concern
  - The design of the station will incorporate an odour control unit. Additionally, the station will include a direct piped connection which will also contribute to the mitigation of potential odours. The evaluation of alternative locations also took into consideration the proximity to residential areas.

- Increased truck traffic within residential areas that may be caused by the new station, and the resulting impact to physical road conditions. Concerns over the capacity of the existing road network, and the ability for adjacent roads to accommodate increased truck traffic from the new station
  - The evaluation of alternative locations considered the impacts to increased traffic on adjacent land uses, and the location along the City of Hamilton’s identified Truck Routes. Truck volumes from the new station are not anticipated to significantly impact existing traffic volumes, or exceed the thresholds of the identified truck routes.

- Potential impacts to property values
  - The evaluation of alternative solutions took into consideration the character and nature of adjacent land uses. Site design will also incorporate urban design measures to mitigate impacts.

- Concerns surrounding a potential location of the facility near many major food processing plants may represent incompatible land uses
The evaluation of alternative solutions took into consideration the nature of adjacent land uses. Major food processing plants represent an industrial use with similar impacts, and appropriate site design measures can be incorporated into the design to mitigate perceived impacts of the facility.

- Preference was expressed for trucks to drive around the rear of the station building in order to screen from adjacent land uses
  - Screening will be incorporated into the design of the station in order to reduce visual impacts on adjacent land uses.

- No septage should be received from other municipalities
  - By-law 14-090 states under Section 9.1 that “no person shall, directly or indirectly, discharge or permit the discharge of hauled sewage into a sewer works or into a connection to a sewer works, except where: (a) the hauled sewage originates from a generator located within the geographical boundaries of the City of Hamilton”.

- Equipment should be incorporated into the station to reduce the potential for debris entering the existing sewers (e.g. screens, filters)
  - Appropriate equipment such as rock traps, grinders, etc. will be incorporated into the design, as appropriate.

Requests were made by City of Hamilton Councillors that additional consultation be undertaken with businesses located in proximity to the recommended site in order to provide additional opportunities to discuss the project, concerns, and impacts. Registered letters were sent in November 2018 to three existing businesses/property owners, providing details of the study, and offering to meet to discuss any potential concerns. The details of the additional consultation is provided in the TRACER table in Appendix A8.
Hannon Option 1 has been identified as the recommended site for the new septage waste haulage receiving station.

In conjunction with City capital works and operations staff, the conceptual design for the facility will proceed following the 30-day review period for the Class EA. In general, the site layout is anticipated to include the following components:

- A process building housing septage receiving equipment, including electrical room;
- Odour control equipment to treat potentially odorous air from the process building;
- Two hard-piped connection locations (Cam-lock) for trucks to connect to for emptying their hauled waste;
- Spill containment area for truck off-loading locations;
- Water available outdoors at truck off-loading locations for minor wash down;
- Motion-activated outdoor lighting for truck discharge locations;
- Perimeter fencing for site security;
- 24-hour card access entrance for septage haulers;
- Adequate paved areas for truck turning radius;
- Underground sanitary sewer to connect the SWHRS discharge to the existing trunk sanitary sewer system nearby.
9.0 Environmental Impacts and Mitigation

9.1 Socio-Economic

The recommended location for the new SWHRS is expected to have minimal impact on existing or future surrounding land uses, which include a range of business and industrial uses. It is recommended that the design of the new station incorporate appropriate urban design and screening features to complement future development within the Prestige Business Park zoning to minimize any perceived impacts on neighbouring developments.

A direct piped connection and odour control unit shall be incorporated into the design of the station in order to mitigate the potential for odour impacts.

9.1.1 Property Acquisition

Acquisition of a parcel of land approximately 0.5 ha will be required to accommodate the new station. The exact location with Hannon Option 1 will be determined through the property acquisition process and a legal survey will be undertaken.

9.1.2 Traffic and Transportation

Based on the operations of other stations, it is estimated that 20 trucks, on average, will utilize this facility daily within a Monday to Friday operation; It is estimated that 16 trucks, on average, will utilize this facility daily within a Monday to Saturday operation.

Dartnall Road is designated as a Full Time Truck Route for vehicles weighing more than 4.5 tonnes (registered gross weight) and was designed to accept these truck loads. Therefore, no traffic or transportation impacts have been identified as a result of the new station.

9.1.3 Archaeological and Built Cultural Heritage

The Stage 1 Archaeological Assessment identified areas that retain archaeological potential. Prior to development, a Stage 2 Archaeological Assessment shall be completed in accordance with the recommendations within the Stage 1 assessment (see Appendix C).

The Criteria for Determining Built Cultural Heritage and Cultural Heritage Landscapes did not identify any potential for built cultural heritage or cultural heritage landscapes associated with the recommended site.
9.2 Natural Heritage

An Environmental Impact Study (EIS) may be required in order to identify key natural heritage features, assign appropriate setbacks and provide mitigation recommendations to reduce the risk of impact of the site development. The EIS should include targeted field investigations to assess the presence of SAR, SOCC and SWH, assess aquatic habitat in greater detail and delineate the boundaries of the natural heritage features.

Mitigation measures can be built into the design of the preferred site to reduce the risk of impacts to terrestrial and aquatic habitats. Activities related to construction including grading, cut-and-fill, and presence of heavy machinery can cause soil erosion and compaction, and mobilize silt and sediment into adjacent watercourses. Potential for machinery to destroy over-hanging vegetation may occur while working in natural areas. Encroachment into the natural areas can also occur by machinery, foot traffic, and discarding or storage of construction materials outside the construction envelope if not properly mitigated. The following strategies are recommended to mitigate impacts to aquatic and terrestrial habitats that will be retained through the site design, and should be incorporated into contract documentation:

- Clearly delineate/demarcate work areas to avoid encroachment and incidental damage to native trees and areas of natural vegetation.
- Educate workers on the requirements for and importance of avoiding entrance to the demarcated area.
- Inspectors should commit to maintaining construction vehicles and personnel to stay within the construction envelope, thereby limiting the disturbance of natural vegetation.
- All maintenance activities, vehicle refueling or washing, as well as the storage of chemical and construction equipment should be located >30 m from wetlands and floodplains, and >10m from Significant Woodland and other natural areas where possible.
- In the event of an accidental spill, the MECP Spills Action Centre should be contacted and emergency spill procedures implemented immediately.
- Accidental damage to trees, or unexpected vegetation removal, should be replaced/restored with native species.

9.2.1 Erosion and Sediment Control

- Minimize the access and temporary work space to the extent possible to limit destabilization of soils near the work area.
- Timing of the work to minimize impacts to downstream fish habitat in the Hannon Creek system using the warm water timing windows that allow work to occur from July 1 to March 31 (no work from April 1 to June 30) of any given year.
NEW SEPTAGE WASTE HAULAGE RECEIVING STATION SCHEDULE B
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Environmental Impacts and Mitigation
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- Silt fencing and/or barriers could be used along all work zones where there is potential for sedimentation of watercourses or wetlands, or inadvertent encroachment of construction vehicles into trees or natural areas.
- Dust could be controlled by using water and not chemical suppressants in dust-sensitive areas such as the mapped natural heritage features.
- No equipment should be permitted to enter any natural areas beyond the barrier fencing.
- All exposed soil areas should be stabilized (native seed mixes; sourced locally if possible) and re-vegetated, through the placement of seed and mulching or seed and an erosion control blanket, promptly upon completion of construction activities.
- Equipment should be re-fueled 30 m away from sensitive natural features (e.g. watercourses) to avoid potential impacts if an accidental spill occurs.
- In addition to any specified requirements, additional silt fence and/or silt logs should be available on site, prior to grading operations, to provide a contingency supply in the event of an emergency.
- Sediment and erosion controls should be monitored regularly and properly maintained as required. Controls are to be removed only after the soils of the construction area have been stabilized and adequately protected or until cover is re-established.
- The limits of construction adjacent to natural features to be retained will be fenced prior to construction and monitored during construction (along with sediment and erosion control measures) to make sure that the limits are maintained with respect to vehicular traffic and soil or equipment stockpiling.
- The Contractor is required to restore any disturbed natural areas to pre-construction conditions.

9.2.2 Migratory Bird Convention Act

Vegetation removal is recommended to occur outside of the core breeding bird season (i.e., April 15-August 9), which would avoid incidental take of any migratory bird nests, and thus be in compliance with the Migratory Bird Convention Act.

Nest sweeps are a secondary tool to avoid incidental take, but only if timing windows described above cannot be met and in simple habitats where vegetation is easy to search.

9.2.3 Endangered Species Act, 2007

Potential habitat for SAR Eastern Meadowlark have the potential to occur on the recommended site based on the suitability of habitat. Targeted SAR surveys are recommended to determine if these species are present. If the species are present, rules outlined in the Endangered Species Act, 2007 must be followed.
9.2.4 Aquatic Habitat

A warmwater watercourse is present on the east side of Dartnall Road, which was identified as a candidate for rehabilitation (including realignment) in the City of Hamilton Upper Hannon Creek Master Drainage Plan Municipal Class Environmental Assessment (AECOM, 2017). Should the design of the new station impact the existing watercourse, a detailed rehabilitation plan should be developed.

9.2.5 Climate Change

With respect to climate change mitigation, the new station will provide a centralized location for waste haulage that originates on the upper-mountain area of the City of Hamilton. This will in-turn reduce travel distances for waste haulage vehicles and contributions to greenhouse gas emissions. With respect to climate change adaptation, the site will be designed with appropriate storm drainage infrastructure and building code requirements in order to address severe weather events.

9.3 Permits and Approvals

Development or site alteration within the recommended site on the east side of Dartnall Road will be subject to a Section 28 permit under O. Reg. 161/06: Hamilton Conservation Authority Development, Interference with Wetlands and Alterations to Shorelines and Watercourses.

Consultation with Hydro One should be undertaken early in the detailed design process in order to confirm potential impacts to Hydro One lands and approval requirements. A TransCanada pipeline is also located within the Hydro corridor, and TransCanada should also be contacted during detailed design to confirm setback requirements.

Typical utility coordination, including a City of Hamilton Site Plan application will also be required.
NEW SEPTAGE WASTE HAULAGE RECEIVING STATION SCHEDULE B
MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

Class EA Filing Procedure
June 21, 2019

10.0 Class EA Filing Procedure

The Project File is being placed on public record for the statutory 30-day review period, and all previously identified stakeholders will be provided notification in accordance with the consultation plan followed throughout the project. The Notice of completion is included in Appendix A10 and details the 30-day review period (June 21, 2019 to July 22, 2019), the locations at which the Project File is available, where comments should be directed during the review period, and outlines the Part II Order procedure discussed below. The Notice of Completion was published in the Hamilton Spectator newspaper (June 21, 2019 and June 28, 2019), mailed to all stakeholders and Indigenous communities (June 14, 2019), and posted to the City of Hamilton website starting June 21, 2019.

10.1 Formal Appeal Process – Part II Order

The Class EA planning process encourages the identification and resolution of concerns early and throughout the project, and it is the obligation of the proponent to adequately address concerns raised by the public, Indigenous communities, and review agencies. If an interested party feels as though their concerns have not been adequately addressed, and that the proposed undertaking needs to be subject to a more in-depth planning process, a request for a Part II Order may be submitted to the Ministry of the Environment, Conservation and Parks. Under the provisions of Section 16 of the EA Act, the Minister or delegate may require a proponent to comply with Part II of the EA Act by elevating the status of the project to a higher level of assessment before proceeding to implementation.

The Minister may deny the request, impose conditions on the proposed undertaking, or for Schedule B projects, the Minister may elevate the status of the project to a Schedule C project, requiring the completion of the full planning process prior to implementation. As per Section A.2.8 of the MEA Municipal Class EA document, the process for requesting a Part II Order involves the following:

- Persons with a concern bring it to the attention of the proponent during the planning process;
- If the concern is not resolved through consultation with the proponent, the person may request that the proponent voluntarily elevate the status of the project to a Schedule C project, or an Individual Environmental Assessment; and
- If the proponent refuses to elevate the status of the project, the person with the concern may send a written request to the Minister of the Environment, Conservation and Parks during the 30-day review period to issue an order to comply with Part II of the EA Act, with a copy to the proponent. A Part II Order request form
Some additional considerations for the Part II Order process are noted below:

- The request must be made upon the completion of the planning process (i.e. after a Notice of Completion is issued and all project documentation has been made available) so that all potential environmental impacts and impact management measures are understood;
- Must not be made for the sole purpose of delaying, stopping, or frustrating the planning and implementation of a project;
- Must focus on potential environmental effects (including the social, cultural, and natural environments) of a project, and not on decisions made outside of the Class EA process (for example, land use planning decisions made under the Planning Act, or issues related to municipal funding of projects);
- Must not raise issues that are not related to the projects; and
- Should be withdrawn promptly by the request if the proponent has satisfied the concerns of the requester.

It is the proponent’s responsibility to provide several opportunities for public, Indigenous communities, and agency review and input, as well as that of the public, Indigenous communities and agencies to bring their concern to the attention of the proponent early in the planning process. Every reasonable effort must be made by the proponent to address concerns brought forward. If concerns have not been addressed upon the issuance of the Notice of Completion, any member of the public may submit a request to the Minister of the Environment, Conservation and Parks within the 30-day review period.

10.2 CLOSING

This Project File has been prepared to document the Municipal Class EA planning process completed for this Schedule B project. It outlines the process which the City of Hamilton has undertaken to address the problems identified, and the potential solutions to be implemented. This process has involved mandatory contact with the public, Indigenous communities and review agencies to ensure that they are aware of the project and that their concerns have been addressed, along with an evaluation of a range of alternatives leading to the project recommendations. The Notice of Completion
NEW SEPTAGE WASTE HAULAGE RECEIVING STATION SCHEDULE B
MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

Class EA Filing Procedure
June 21, 2019

has been posted for 30-day review, and all correspondence received during this period will be appended to the final report in Appendix A10.