



Project Description Report

Grimsby Anaerobic Digestion Site

Escarpment Renewables

January 26, 2022

GHD



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Executive summary

This Project Description Report has been prepared in accordance with Table 1 of Ontario Regulation 359/09. A summary of where information is contained in this report as it relates to these requirements is provided below.

Table E.1 Ontario Regulation 359/09 Compliance Summary

Requirements	Location in Report
Set out a description of the following in respect of the renewable energy project:	
1. Any energy sources to be used to generate electricity at the renewable energy generation facility.	Section 1.3 & Section 2.5
2. The facilities, equipment or technology that will be used to convert the renewable energy source or any other energy source to electricity.	Section 2
3. If applicable, the class of the renewable energy generation facility.	Section 1.1
4. The activities that will be engaged in as part of the renewable energy project.	Section 2
5. The name plate capacity of the renewable energy generation facility.	Section 1.4
5.1 How the requirement set out in section 57.2 is satisfied, including the following:	Section 1.4
i. A description of how the electricity that is proposed to be generated is intended to be used, sold or supplied to other persons.	
ii. The duration of any agreements in respect of the use, sale or supply of the electricity.	Section 1.4
iii. Whether the name plate capacity of the facility exceeds the quantity of electricity that is intended to be used, sold or supplied to other persons and, if so, by how much.	Section 1.4
6. The ownership of the land on which the project location is to be situated.	Section 1.7
7. If the person proposing to engage in the project does not own the land on which the project location is to be situated, a description of the permissions that are required to access the land and whether they have been obtained.	Not Applicable
8. Any negative environmental effects that may result from engaging in the project.	Section 3
9. If the project is in respect of a Class 2 wind facility and it is determined that the project location is not on a property described in Column 1 of the Table to section 19, a summary of the matters addressed in making the determination.	Not Applicable
10. If the project is in respect of a Class 2 wind facility in respect of which section 20 applies and it is determined that the project location does not meet one of the descriptions set out in subsection 20 (2) or that the project location is not in an area described in subsection 20 (3), a summary of the matters addressed in making the determination.	Not Applicable
11. An unbound, well marked, legible and reproducible map that is an appropriate size to fit on a 215 millimetre by 280 millimetre page, showing the project location and the land within 300 metres of the project location.	Figure 1

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1. Introduction

1.1 Purpose

This Project Description Report is prepared to fulfill the Renewable Energy Approval (REA) requirements as set out in Ontario Regulation 359/09. The anaerobic digestion (AD) facility currently operates under Renewable Energy Approval (REA) No. 8541-9HSGG3, as amended. The project has received a Feed-In Tarrif (FIT) Contract No. F-000610-BIG-130-302.

1.2 Project Location

The project construction will occur on lands owned by Escarpment Renewables at 424 Sobie Road in the Town of Grimsby, Ontario (Site). The project will be located on the northwestern 5.4 hectares (ha) of a 10.5-ha Site (hereafter referred to as the AD facility). The Site is located on the south side of Sobie Road approximately 300 metres (m) east of Park Road South. The legal description of the Site is part of Lots 1 and 2, Concession 6, Former Township of North Grimsby being Part 1 on Plan 30R-13677.

The Site location is shown on Figure 1. Site directions (north, east, south, and west) described in this report are referenced to “Project North”, which is oriented perpendicular to Sobie Road.

1.3 The Project

The project will include the expansion of the existing AD Facility located at the Site. The AD facility processes source-separated organics (SSO) and industrial, commercial, institutional (ICI) organic materials. The AD facility is currently operating at a maximum of 23,000 tonnes per year of incoming organic waste and will be upgraded to accommodate a capacity of 159,000 tonnes per year. A new organics pre-processing building will be constructed with the necessary equipment to receive, temporarily store, and process solid organic material for digestion by removing inert contaminants such as plastic packaging. New digesters will be added to the existing AD facility increasing the biogas production at the Site. Escarpment Renewables is proposing to build a new renewable natural gas (RNG) upgrading system on Site to produce RNG from the biogas generated and not utilized by the existing combined heat and power (CHP). The RNG will be compressed and temporarily stored in tube trailers located adjacent to the RNG upgrading system for off-Site transportation. A Site plan showing the Existing Site Conditions is provided on Figure 2 and a Site plan illustrating the Proposed Site Layout is provided on Figure 3.

1.4 Approvals Required

The supply of electricity generated at the Site has already been established. The project has received a FIT contract F-000610-BIG-130-302 that expires on April 22, 2034. The FIT contract allows for the supply of the full name plate capacity of 1 megawatt (MW) of electricity to the electrical grid. The proposed expansion will not increase the amount of electricity generated at the Site for supply to the grid.

1.5 Federal Approvals

No federal government approvals are required.

1.6 Water Taking

No water taking is required for the project.

1.7 Site Ownership

The Site is owned by Escarpment Renewables who is the proponent of the project.

2. Project Description

2.1 Site Description

The Site is flat, sloping gently to the southeast. The Site is developed within the footprint permitted by the current REA. Most development is concentrated in the northwestern area of the Site and consists of staff buildings, AD tanks, digestate storage tanks, and biogas management areas. Most of the Site is gravel and grass covered, with a gravel road running around the perimeter of the AD facility and buildings. To the west of the gravel road is an unused open-air concrete storage bunkers. East of the Site is undeveloped farmland, which will now be partially developed as part of the AD facility. The existing conditions for the Site is shown on Figure 2, following the text.

2.2 Surrounding and Adjacent Land Use

The surrounding area is mostly zoned for agricultural purposes. In the immediate vicinity of the Site are a number of poultry and cattle farms.

The adjacent properties to the Site are as follows:

- North: The Site is bounded to the north by a radio transmission tower field that is zoned SC(H), Specialty Crop with a Holding designation.
- West: The Site is bounded to the west by a closed landfill site owned by The Regional Municipality of Niagara. This landfill site was closed in 1995. The elevation of the landfill is approximately eight metres higher than the surrounding lands. This adjacent property is zoned for agricultural use.
- East: The Site is bounded to the east by undeveloped farmland and a poultry farm that is in the agricultural use zone.
- South: The Site is bounded to the south by tree-covered land and vacant, undeveloped land. A watercourse is located adjacent to the southwest portion of the Site and connects to a creek (Spring Creek) that is located approximately 300 to 400 metres to the south of the Site. The lands to the south of the Site are classified as Significant Woodlands including Other Evaluated Wetland as per The Town of Grimsby's Official Plan. The lands to the south fall under the Environmental Conservation (EC) zoning overlay, which restricts development to conservation use, flood and erosion protection work, forestry use, and trail and pedestrian rest area, but allows for existing agricultural use; with the further reaches also being included in the Hazard (HA) zoning overlay. This area is zoned for agricultural use with a Holding designation, and also has an additional permitted use as a riding stable.

The nearest receptor to the Site is a farmhouse located on the west side of Park Road south. This agricultural property is located approximately 400 m from the western property boundary of the Site and is separated from the Site by the closed landfill and Park Road South.

Based on the Town of Grimsby's Official Plan, the lands to the west and south are considered potential natural heritage corridors.

2.3 Land Use History

The Site was historically used for agricultural purposes prior to the development of the existing AD facility.

2.4 Anaerobic Digestion

Anaerobic digestion is the decomposition of organic materials in an oxygen-free environment. It is a naturally occurring process. Digesters will operate in the mesophilic temperature range, 38 to 43 degrees Celsius (°C) for a minimum period of 25 days. During anaerobic digestion, biogas is produced. Biogas is approximately 60 percent methane (CH₄), with the remainder primarily comprised of carbon dioxide (CO₂). The purpose of the AD facility is to optimize the environment for the anaerobic microbes, decompose organics and maximize biogas production. Biogas is then used to generate renewable energy.

2.5 Project

Escarpment Renewables operates an existing AD facility under an REA that permits the receipt of up to 23,000 tonnes per year of organic waste. The biogas that is currently produced by the anaerobic digestion process is captured and combusted through a 1-MW combined heat and power (CHP) generator, producing electricity that is fed into the electrical grid. Escarpment Renewables intends to complete a Site expansion and additional Site improvements. The amendment to the existing REA will increase incoming feedstock including unprocessed SSO, ICI waste, and liquid organic waste. The expansion to the AD facility includes the construction of additional organics processing equipment, which will be capable of receiving and processing up to 159,000 tonnes of organic waste per year. A new organics pre-processing building will be constructed with the necessary equipment to receive, temporarily store, and pre-process solid organic material for digestion. Pre-processing will allow for the separation of contaminants such as plastic packaging and other inert material from the organic material. Organics will then be conveyed to the anaerobic digesters and the residual contaminants will be disposed of off-Site at licensed disposal facilities.

Existing liquid receiving tanks are located near the existing pump building and will continue to receive liquid organic material for processing. The AD facility process which is currently operational will be expanded with four additional digester tanks and digestate management equipment. Digestate management equipment currently consists of a skimming press and two storage tanks. Two new digestate storage tanks will be constructed to provide approximately three times the total digestate storage on Site, along with off-Site, on-farm digestate storage that has already been established.

The existing biogas management area consists of a CHP engine, flare, and biogas storage area. The Site will continue to utilize biogas in the existing CHP. The existing biogas storage area and flare will be decommissioned and replaced with systems that have larger capacities to manage the increased biogas generation. Biogas will also be upgraded to RNG for temporary storage on Site prior to transportation off-Site for injection into natural gas network. The existing administration buildings which consist of an office and staff building will be relocated and additional administrative areas will be constructed.

Air treatment will be managed by a new air treatment system, managing potentially odour-impacted air generated within the organics pre-processing building.

Two stormwater management ponds are located on the southcentral and southeast portions of the AD facility and will remain unchanged. The Site access consists of a perimeter road which will be realigned to accommodate the new proposed development.

2.5.1 Process Overview

2.5.1.1 Receiving

The AD facility will receive liquid and solid waste. The proposed waste types for receipt at the Site are:

- Agricultural waste including swine manure; poultry manure; cattle manure, and paunch manure; grape pomace; corn silage; silage of all types of grasses; dairies and facilities that process dairy products; fruit and vegetable wastes; wastes from cereal and grain processing facilities, oil seed processing facilities, breweries and distillers grain; glycerin; and herbaceous plant material from greenhouse, nurseries, garden centres and flower shops

- SSO (pre-processed and un-processed), received as either a liquid or solid waste
- Packaged ICI organic waste
- Liquid ICI organic waste including but not limited to fats, oils and grease (FOG); dissolved air flotation (DAF) sludge, wastewaters from food or beverage companies and biosolids

Table 2.1 provides the maximum annual tonnes of waste received by feedstock. The maximum annual tonnes in feedstock composition is intended to provide the AD facility with the flexibility to change the composition of the total combined feedstock to suit current AD facility operation conditions, changing organic waste market conditions, optimize biogas production and AD facility performance. The annual composition of waste received may consist of any combination of the below waste types up to the maximum annual tonnages indicated and not exceeding a combined maximum of 159,000 tonnes per year.

The expected annual tonnage of feedstock (waste type) received at the AD facility is estimated to be approximately 109,000 tonnes of SSO and 50,000 tonnes of ICI liquids.

Table 2.1 Feedstock Type and Maximum Annual Tonnage

Waste Type	Maximum Annual Tonnage (tonnes)
Agricultural Waste	7,000
SSO (pre-processed and/or unprocessed)	120,000
ICI Packaged	100,000
ICI Liquid	100,000
Maximum total	159,000

The mass balance for the AD facility feedstock using average expected volumes of each waste type shown above is presented in Table 7 following the text. The mass balance presents the breakdown of waste composition, including contaminants and resulting organics fraction, by waste type.

Waste will be received 6 days per week (Monday through Saturday) for an average of 525 tonnes per day. The peak daily tonnage is based on 2 times the average for a total of 1,050 tonnes per day. The AD facility will accept a maximum of 1,050 tonnes per day which may be comprised of any combination of the waste types listed above.

Waste will be received as bulk solid waste, containerized solid waste, or liquid waste. Trucks will enter the Site and pass over a weigh bridge (scale) to document the quantity of incoming material. A scale house attendant will direct trucks to the appropriate location for unloading of wastes. All wastes will be received and unloaded in the presence of an operator. Operators within the material receiving areas will perform the following primary tasks:

- Oversight of material receipt including preliminary visual inspection
- Operation of the truck door permitting access and egress from the building
- Assisting truck drivers backing into the building
- Segregation of rejected waste within the receiving area
- Operation of front-end loader, or forklifts for transfer of material into the waste receiving bunkers
- General housekeeping in the receiving area including floor washing and truck wheel washing prior to exit, as needed

Bulk solid waste will be received within the enclosed organics pre-processing building at a tip floor. Organic waste will be temporarily stored adjacent to the tip floor prior to being loaded by front-end loader into the pre-processing units. Liquid waste will continue to be received in the existing receiving tanks, which are mixed and interconnected to mix feedstocks prior to conveyance to the digesters.

2.5.1.2 Pre-processing

Bulk solid organic waste pre-processing equipment is loaded using a front-end loader. The front-end loader operator will visually inspect material as it is loaded to identify any large contaminants that require segregation.

Another operator will be available within the waste processing area for:

- Cleaning
- General equipment maintenance
- Controlling throughput
- Sampling/visual quality control

The pre-processing units separate inert contaminants such as plastic packaging from the organic waste. Residual waste from the waste pre-processing units will be conveyed and dewatered prior loading into a trailer. The resulting organic paste/slurry is conveyed to the existing liquid waste receiving tanks to be mixed with incoming liquid waste prior to being pumped to the digesters or loaded into a trailer and transported off-Site when required. One of the three liquid receiving tanks will be designated for waste requiring pasteurization and the other two liquid receiving tanks will be designated for waste not requiring any pasteurization. Waste may mix between the existing liquid receiving tanks to blend and generate the desired mix for digestion. Remote monitoring will be provided through the Supervisory Control and Data Acquisition (SCADA) system, supplementing the operational oversight of the designated processing operator.

The digester feedstock that requires pasteurization is first conveyed through pasteurization systems, which are existing. Pasteurization involves increasing the temperature of the feedstock to 70°C for one hour to eliminate pathogens. Waste heat from the CHP and additional heat from a new boiler system will be used to achieve the required temperature. Waste not requiring pasteurization will be conveyed from the two liquid receiving tanks to the digesters.

Organic waste pre-processing will be conducted in two, 8-hour shifts to manage material as it is delivered to the Site. While there is storage capacity adjacent to the tip floor to provide buffer for the pre-processing equipment and to help ensure a continuous supply of feedstock to the digesters, waste will not be stored long-term and waste that has been on the tip floor longest will be prioritized for processing to avoid generation of odours.

Residue generated at the Site includes rejected materials, processing residuals, and digestate/digester cleaning residuals. Rejected materials are items incompatible with the waste pre-processing system which are identified in the receiving and storage areas and manually separated from the waste solids intended for pre-processing. The materials will be temporarily stored in the bulk waste receiving area. Arrangements will be made by the waste hauler to remove these materials from the Site.

Residuals separated from the organic waste solids during the pre-processing stage will be conveyed along the residuals conveyor to the residual press systems and ultimately stored in indoor trailers until they are full. Trailers will be backed into the bay and trailers will be disconnected from the truck. Trucks will typically be coordinated to pick up a nearly filled residual waste trailer when delivering an empty trailer to limit truck traffic associated with residual waste disposal.

Residuals from digestate/digester feed skimming and grit removal systems will be conveyed and stored in bunkers prior to being transported to the organics pre-processing building for disposal off-Site.

Residual wastes will be transported off-Site to a waste disposal facility licensed for receipt of the transported materials.

2.5.1.3 Digestion

The Site currently operates two digesters. The expansion will include the construction and operation of four additional digesters, each equipped with self-cleaning skimming and floor sweeping equipment to improve performance and reduce cleaning requirements. Feedstock will be distributed between the six digesters based on the capacity and resulting organic loading rate.

Digestion, digestate management and biogas management systems will be primarily controlled automatically through the SCADA system with remote monitoring of process conditions through the human machine interface (HMI). All systems will be operated 24 hours per day, 7 days per week with remote warnings identifying low-and high-level alarm conditions to standby process operators for determination of manual intervention requirements.

Digester operating pressure will primarily be regulated through the extraction of biogas from the storage tanks. Over/under pressure devices will be equipped on all digesters for safety.

Temperature will be regulated through the inlet material feed, which is cooled to approximately 50°C following pasteurization. Each pasteurization tank has a thermocouple to measure the temperature of the substrate to ensure it maintains the minimum heat requirements for pasteurization. Substrate holding tanks are filled and held for the required duration prior to discharging a batch of feed to the digesters.

Digester feed rate will be set in the HMI and controlled through the SCADA system ensuring appropriate feeding rates and appropriate material retention time.

Routine operational and maintenance requirements will be outlined within the Operation and Maintenance Manual (O&M Manual) prepared during system commissioning.

2.5.1.4 Biogas Management

Biogas is continuously generated in the digesters. The headspace of the digesters and the digestate storage tanks are connected together. Biogas accumulates within the digestate storage tanks, with storage volumes fluctuating due to the use of two, double-membrane roof arrangements, one on each new digestate storage tank.

The double-membrane biogas storage area will be connected to the existing CHP inlet pre-conditioning systems, and a new RNG upgrading system, as well as a backup flare. The CHP and RNG upgrading system will automatically allow biogas input based on their available capacity. If either system is down for maintenance, biogas will accumulate in the biogas storage. If biogas storage pressure is exceeded, then biogas will be burned through the flare.

RNG upgrading will be completed using a packaged system designed by an RNG upgrading technology provider. The RNG upgrading system is used to generate gas with very high CH₄ content suitable for use as RNG. The primary gas to be removed from pre-treated biogas is CO₂.

Two potential and proven technologies may be implemented at the Site; pressure swing adsorption (PSA) or membrane technology.

PSA is an effective method of gas separation, particularly where a complex mixture of gases is generated from feedstock, or where there is high humidity. Under high pressure different gases are attracted to different solid surfaces. The higher the pressure, the more gas is absorbed and when the pressure is reduced, the gas is released or desorbed.

PSA systems monitor the biogas volume and quality to control the system operation. An adsorbent material is used in PSA gas separation vessels to separate CO₂ and oxygen (O₂) from the product gas, producing a CH₄-rich biomethane or RNG gas. A PSA system would be manufactured to meet the requirements of the latest version of CSA B51, Boiler, Pressure Vessel, and Pressure Piping Code. Typically, PSA systems operate in batches to remove CO₂ and O₂ and collect the CH₄-rich RNG, depressurize and regenerate the adsorptive media and then release the captured CO₂ and O₂.

Membrane technology uses a compressor to pressurize the pre-treated biogas to have it pass through a membrane. Selective membranes are utilized that allow the passage of CO₂ but prevent the passage of CH₄ based on the differences in their molecular size. Typically, multiple tubular membrane modules are arranged in parallel and series. Three stage membrane technology will have a higher recovery rate versus the two-stage membrane technology. The retained CH₄ is often recirculated to achieve high rates of CO₂ removal. The final CH₄ concentration will be determined based on the requirements of RNG injection contracts with the natural gas utility owner.

Use of a compressor for both the PSA and membranes technologies will be required to achieve the pressure required for operation. Condensate generated will continue to be re-used in the upstream processes on Site.

Estimated RNG production based on a 95 percent uptime and 98.5 percent recovery rate is estimated to be 900 cubic metres per hour (m³/hr) and 7,585,000 m³ per year.

2.5.1.5 Digestate Management

Digestate from the six digesters will be pumped from the digesters to the digestate storage systems. Digestate storage will be provided in the form of the two existing storage tanks and two proposed new storage tanks. Digestate will continue to be managed as a fertilizer under the Canadian Food Inspection Agency (CFIA), consistent with the current digestate management practices for the Site. In the event that the digestate can't be managed as CFIA fertilizer, it will be managed as Non-Agricultural Source Material (NASM) for land application under a NASM plan.

The existing digestate storage tanks are constructed largely below grade. The storage tanks are constructed of concrete with fixed roofs and are equipped with agitators to keep digestate mixed.

The two new digestate storage tanks will be constructed above grade and include double-membrane biogas bladders installed at the top of the tank.

A digestate filling station will be located beside the secondary containment area, where trucks will be filled with digestate through a discharge pump. Digestate filling may occur during extended hours to accommodate agricultural operations. Trucks transport digestate to farms and lagoons to be applied to fields as a fertilizer.

3. Environmental Effects

The existing operation and proposed expansion provide many positive environmental effects including:

- Diverting organic waste from landfill to support the growing demand for organic waste management options needed to meet the goals of the Strategy for a Waste-Free Ontario.
- Generates renewable energy in the form of both electricity and RNG
- Recovers nutrients in the form of digestate fertilizer for reuse in agricultural operations in accordance with the Resource Recovery and Circular Economy Act and Food and Organic Waste Policy Statement
- Eliminates pathogens from the digester feedstock

Potential effects are detailed in Table 3.1 along with mitigating features and procedures to be implemented.

Table 3.1 Potential Environmental Effects

Environmental Effect	Performance Objective	Mitigation
Noise Emissions	Meet Provincial Standard	<p>The organics pre-processing building will have noise ratings for the pre-engineered steel structure established to provide a minimum standard to ensure noise mitigation for sources within the building.</p> <p>The CHP and backup generator have acoustic enclosures.</p> <p>Truck traffic noise will be mitigated through the implementation of on-Site speed limits and a no idling policy.</p> <p>A berm will be designed and constructed on the eastern side of the Site in order to further mitigate any noise emissions from the Site.</p> <p>Further information is available in the Noise Study Report.</p>

Environmental Effect	Performance Objective	Mitigation
Odour	Meet Provincial standard	<p>Receiving tanks are closed to minimize the possibility of fugitive odour emissions.</p> <p>The organics pre-processing building is fully enclosed and maintained under negative pressure with doors closed at all times unless personnel or trucks are entering/exiting.</p> <p>Digestate is fully contained.</p> <p>Biogas storage permeability requirements are met.</p> <p>Further information is available in the Odour Study Report.</p>
Air Emissions	Meet Provincial standard	<p>The CHP, backup generator, RNG upgrading system boiler and flare emissions will be designed to meet Provincial standards.</p> <p>Further information is available in the Emission Summary and Dispersion Modelling (ESDM) Report.</p>
Spills/Leaks	None	<p>The potential for spills at the Site is minimized by the design of the facilities including the use of a perimeter road and secondary containment to prevent contact between tanks and vehicles.</p> <p>The receiving tanks are lined to reduce potential for leaks.</p> <p>Waste is stored and processed indoors on concrete floors and sumps to minimize potential for leaks.</p> <p>Cam lock connections and grading around receiving tanks ensure that the potential for spillage is minimized and contained.</p> <p>Above-grade tanks are contained in a secondary containment system designed in accordance with the Guidelines for Environmental Protection Measures at Chemical and Waste Storage Facilities.</p>
Siltation Control	None	<p>Silt fencing will be installed at the western perimeter of the Site and in all construction areas. After construction is complete, the disturbed area will be seeded to prevent erosion from occurring.</p> <p>The existing stormwater ponds provide additional erosion and sedimentation protection through the use of rip rap/filter bed and silt socks.</p>
Natural Heritage Impacts	None	<p>Potential natural heritage impacts were identified during the initial development of the Site and remain the same for the expansion. These included:</p> <ul style="list-style-type: none"> - Noise impacts (identified above) - Siltation impacts (identified above) - Potential for winter deer congregation - Lighting <p>Consistent with the mitigation measures proposed for the Site development, a 3.2-m high fence will be considered to prevent deer from entering the Site and new lighting will be installed downward facing to prevent adverse effects to the surrounding natural environment.</p>

The proposed expansion of the AD facility and the long-term operation of the facility will not have an adverse effect on the surrounding environment.

3.1 Cultural Heritage Assessment

The Site has been farmed since it was settled. It is remote from any existing buildings and adjoins a closed landfill site. As a result, there is no cultural heritage to be protected at this Site. Escarpment Renewables has confirmed this through a previous archaeological assessment and contact with the Ministry of Heritage, Sport, Tourism, and Culture Industries during August 2021.

3.2 Natural Heritage

The Site and the surrounding area have historically been used for agricultural purposes and are generally devoid of vegetation. The lands to the west are a closed landfill site. The adjacent property to the south of the Site is tree-covered and vacant, undeveloped land. The proposed expansion to the AD facility will not change the separation distances to these natural features as the expansion footprint is to the east onto historical farmland, and as such, no impacts on the natural heritage features in the area are anticipated. Mitigation measures to the potential impacts are noted above and are consistent with those established when the Site was first developed.

4. Land Use Considerations

4.1 Policy

4.1.1 Provincial Policy Statement

The Provincial Policy Statement 2020 in Section 1.6.11.1 supports the provision of renewable energy systems and alternative energy systems.

4.1.2 Greenbelt Plan

The Site is located on the south side of Sobie Road and is located outside of the Greenbelt Plan (2017). Sobie Road forms the southern limit of the Greenbelt Plan (i.e., the lands on the north side of Sobie Road are inside the Greenbelt Plan, designated as Tender Fruit and Grape Lands). The lands on the north side of Sobie Road are currently used as a radio transmission tower facility and the production of fruit or grapes on the property is not expected within the near future.

4.1.3 Niagara Escarpment Plan

The Niagara Escarpment Plan Area per the Niagara Escarpment Plan (2017) is located 1 kilometre (km) north of Sobie Road. As a result, the Site is not located within the jurisdiction of the Niagara Escarpment Commission.

4.1.4 Regional Official Plan

The Region of Niagara Policy Plan designates the Site as Good General Agriculture. Section 6A7 of the plan permits agriculturally related uses.

4.1.5 Town of Grimsby Official Plan

The Site is designated Agricultural Area in the Town of Grimsby Official Plan. Section 3.3.3.1 of the Official Plan indicates that agriculturally related commercial and industrial uses are permitted in this area. Section 4.5.4 encourages and supports alternative and renewable energy sources developed in accordance with provincial legislation, policies and regulations.

4.1.6 Town of Grimsby Zoning Bylaw

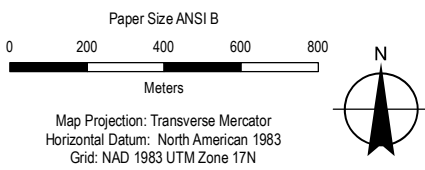
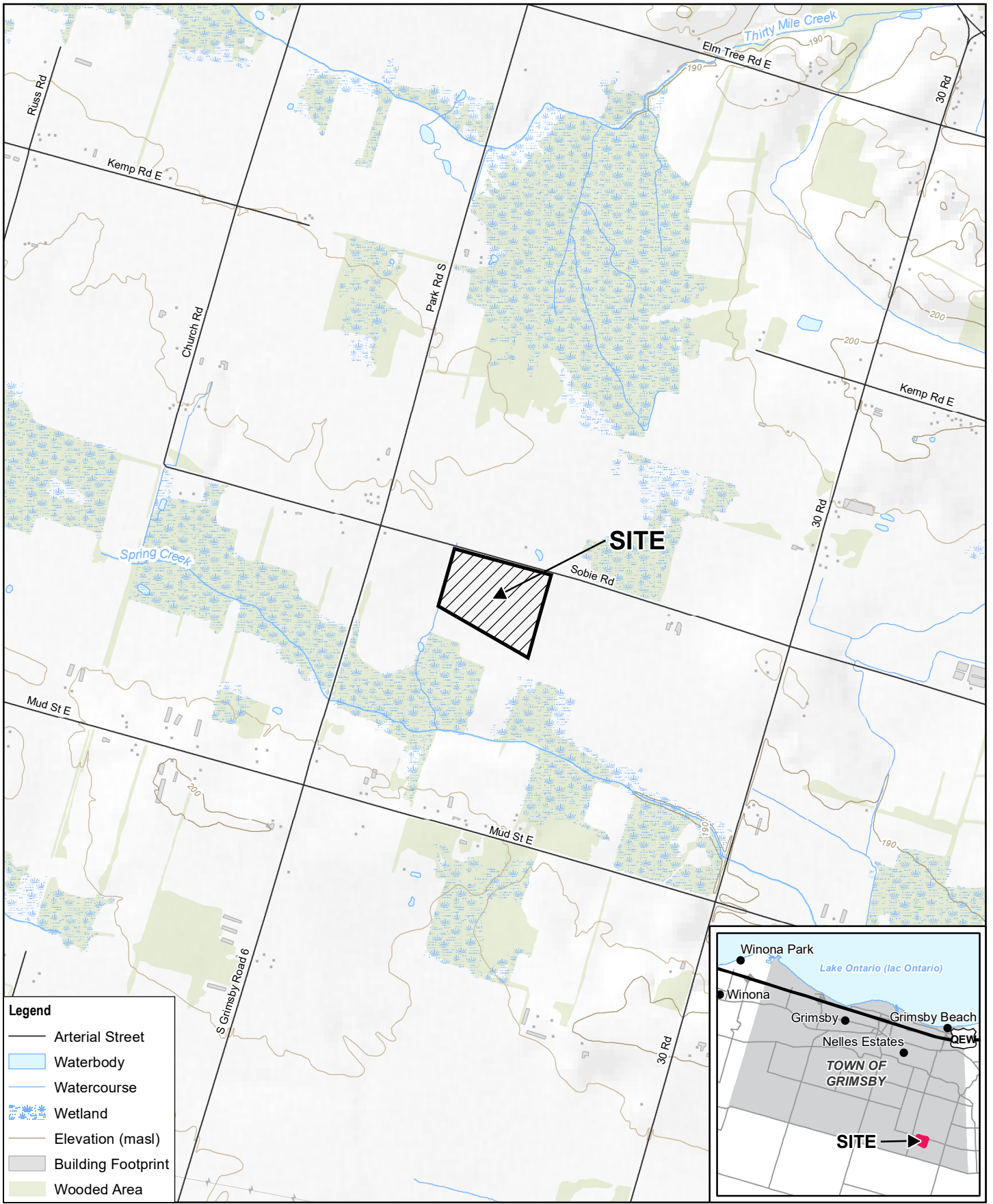
The Site is Zoned RU Rural in the Town of Grimsby Zoning By-law (By-law 14-45, as amended). This zoning permits agricultural uses and uses accessory there to. The Site meets the bylaw requirements:

- Minimum lot size 10 ha
- Minimum frontage 183 m

The minimum front yard setback is 12 m, the minimum side yard setback is 3 m and minimum rear yard setback is 15 m. Maximum building coverage is 20 percent.

4.1.7 Niagara Peninsula Conservation Authority

The Site is located within an area under the jurisdiction of the Niagara Peninsula Conservation Authority; however, it does not include any Niagara Peninsula Conservation Authority Regulated Area. The woodland and the small watercourse to the south of the Site are considered Regulated Areas under the Niagara Peninsula Conservation Authority because they are in a floodplain and are wetland areas. The proposed project will have no impact on these resources.

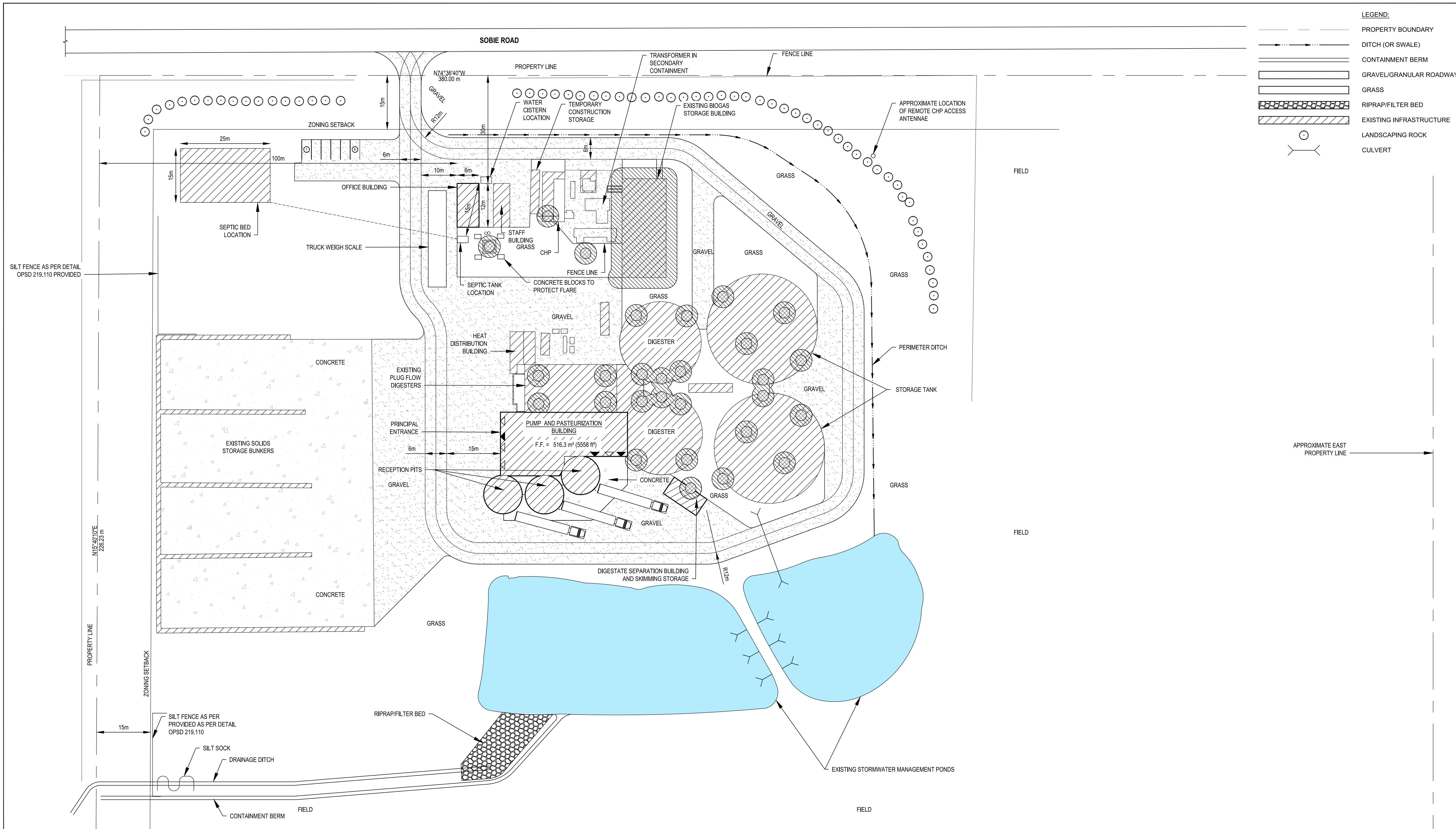


ESCARPMENT RENEWABLES
442 SOBIE ROAD, TOWN OF GRIMSBY, ONTARIO

Project No. 11226032
Date Jun 9, 2021

SITE LOCATION MAP

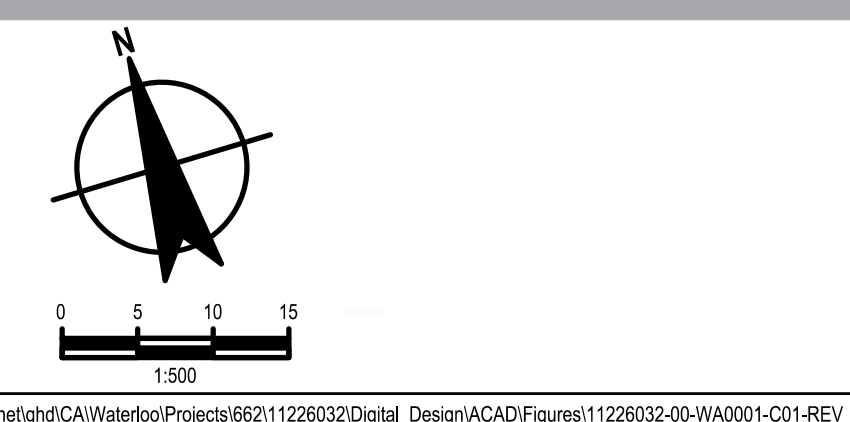
FIGURE 1



- LEGEND:**
- PROPERTY BOUNDARY
 - - - - - DITCH (OR SWALE)
 - ==== CONTAINMENT BERM
 - ==== GRAVEL/GRAVULAR ROADWAY
 - ==== GRASS
 - ▨ RIPRAP/FILTER BED
 - ▨ EXISTING INFRASTRUCTURE
 - LANDSCAPING ROCK
 - ⌒ CULVERT

PRELIMINARY

No.	Issue	Checked	Approved	Date
				2022-01-17
Author	SPENCER H	Drafting Check	KALJINDER D	Project Manager
Designer	JASON W	Design Check	RYAN L	Project Director
			JASON W	
			VICTORIA S	



Bar is 25mm on original size sheet
0 25mm



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Client	ESCARPMENT RENEWABLES		Title
Project	ESCARPMENT RENEWABLE ENERGY APPROVAL AMENDMENT		EXISTING CONDITIONS
Project No.	Date	Scale	Sheet No.
11226032	2022-01-17	1:500	FIGURE 2

