



PROJECT DESCRIPTION REPORT

Southgate Solar Project

DRAFT— June 2014

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1. INTRODUCTION

Southgate Solar LP proposes to develop a solar facility with a maximum nameplate capacity of 50 megawatts alternating current (MWac), located near Mount Forest, in the Township of Southgate, County of Grey, Ontario (**Figure 1**). The renewable energy facility will be known as the Southgate Solar Project.

The project will require approval under *Ontario Regulation 359/09 (O. Reg. 359/09) – Renewable Energy Approval (REA)* under Part V.0.1 of the *Ontario Environmental Protection Act*.

This draft Project Description Report (PDR) provides an overview of the proposed project including location, components, activities and potential negative environmental effects.

2. THE PROPONENT

Southgate Solar LP is coordinating and managing the approvals process for the Southgate Solar Project. Southgate Solar LP is located at 55 Standish Court, 9th Floor, Mississauga, ON, L5R 4B2 (1-866-234-7094). Dillon Consulting Limited (Dillon) has been retained by Southgate Solar LP to prepare the REA application for the Southgate Solar Project. The contact at Dillon is:

Full Name of Company:	<i>Dillon Consulting Limited</i>
Prime Contact:	<i>Michael Enright, Project Manager</i>
Address:	<i>1155 North Service Road West, Unit 14, Oakville, Ontario, L6M 3E3</i>
Telephone:	<i>1-866-234-7094</i>
Email:	<i>ssp@samsungrenewableenergy.ca</i>

3. PROJECT LOCATION

The proposed Class 3 Solar Facility is to be located within the Township of Southgate, in the County of Grey, approximately 11 kilometres north of the community of Mount Forest. The proposed project location is contained within an area bounded in the north by Southgate Road 24, Southgate Road 14 to the south, Southgate Sideroad 47 to the east, and Highway 6 to the west. The proposed project location, consisting of multiple privately-owned parcels, is to be leased by Southgate Solar LP. It has an approximate centroid at the following geographic coordinates:

- Latitude: 44° 6' 09.06" N
- Longitude: 80° 44' 56.22" W

Figure 1 shows the general location of the project in Ontario. The project location is defined in *Ontario Regulation 359/09* to be “a part of land and all or part of any building or structure in, on or over which a person is engaging in or proposes to engage in the project”. While facility components making up the project location have been identified, their exact location within the marked property boundaries have yet to be determined. **Figure 2** shows the project location as the boundary within which all project components will be located. **Figure 2** also identifies natural features and water bodies based on the Natural Heritage Assessment (NHA) Records Review within 300 m of the project location and identifies the required setbacks around these features for the purpose of assessing potential environmental effects.

Updated maps will be provided in subsequent versions of the PDR based on site investigation and evaluation of significance field work as the REA process progresses. More detailed site plan layouts will also be provided in the draft Design and Operations Report as the REA process progresses.



SOUTHGATE SOLAR PROJECT

**FIGURE 1
GENERAL PROJECT LOCATION**



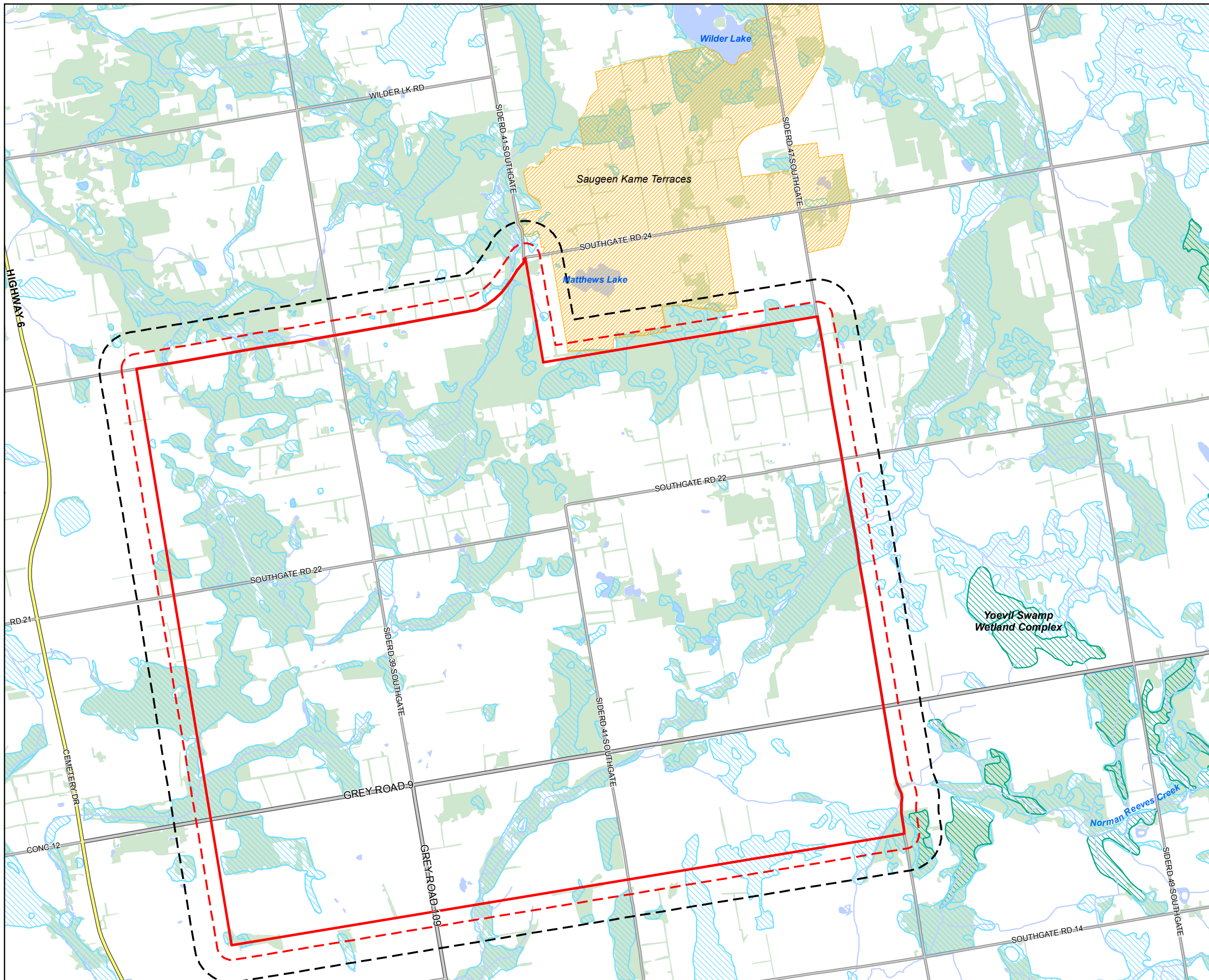
MAP DRAWING INFORMATION:
DATA PROVIDED BY MNR

MAP CREATED BY: GM
MAP CHECKED BY: MB
MAP PROJECTION: NAD 1983 UTM Zone 17N

FILE LOCATION: I:\GIS\149154 - Samsung Southgate\mxd\PDR\



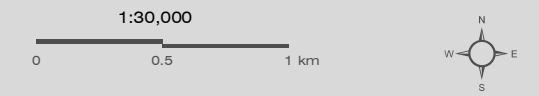
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STATUS: DRAFT
DATE: 4/15/2014



SOUTHGATE SOLAR PROJECT

**FIGURE 2
PROJECT LOCATION AND
NATURAL FEATURES**

- Project Location
- 120 m Project Location Setback
- 300 m Project Location Setback
- Watercourse
- Water Body
- ANSI, Earth Science
- Provincially Significant Wetland
- Unevaluated Wetland
- Woodland



MAP DRAWING INFORMATION:
DATA PROVIDED BY MNR

MAP CREATED BY: GM
MAP CHECKED BY: MB
MAP PROJECTION: NAD 1983 UTM Zone 17N

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PROJECT: 149154
STATUS: DRAFT
DATE: 5/30/2014

4. AUTHORIZATIONS

Table 1 provides a list of authorizations (applicable permits, agreements, licenses, approvals and confirmation letters) that Southgate Solar LP expects may be required in addition to the REA. The necessary permits will be obtained prior to construction of the proposed solar facility. Information contained in **Table 1** is preliminary at this point and will be refined as the REA process progresses. The final list of permits required will be updated in subsequent versions of this PDR.

Table 1: Possible Authorizations and Requirements for the Project

Authority, Agency or Governing Body	Requirement
Department of Fisheries and Oceans (DFO)	<ul style="list-style-type: none"> • Fisheries Act subsection 35(2) authorization for watercourse crossings (or Letter of Advice)
Electrical Safety Authority	<ul style="list-style-type: none"> • Connection Authorization • Safety Inspection
Hydro One (HONI)	<ul style="list-style-type: none"> • Customer Impact Assessment - Integration of project within HONI and effects on customers • Connection Cost Recovery Agreement
Independent Electricity System Operator (IESO)	<ul style="list-style-type: none"> • Authorization as market participant • Registration of facility • Registration of metering service • System Impact Assessment (SIA) - Integration of project with Hydro One’s transmission and distribution infrastructure • Connection Assessment Approval (CAA)
Landowners	<ul style="list-style-type: none"> • Lease Agreements

Authority, Agency or Governing Body	Requirement
Ministry of Natural Resources (MNR)	<ul style="list-style-type: none"> • Water Crossings Work Permit under Regulation 453/96 of the <i>Lakes and Rivers Improvement Act</i> • Species at Risk Permit under the <i>Endangered Species Act (2007)</i> if designated species habitat is impacted – (to be confirmed) • Confirmation Letter for the Natural Heritage Assessment
Ministry of Tourism, Culture and Sport (MTCS)	<ul style="list-style-type: none"> • Comment Letter for the Stage 1 and 2 Archaeological Assessments and the Cultural Heritage Assessment
Ministry of Transportation (MTO)	<ul style="list-style-type: none"> • Compliance with Road User Safety Policy and Corridor Management Permits, including <i>Highway Traffic Act</i> and Road Safety Regulations • Highway Entrance Permit(s), Transportation Permits (e.g. Oversize, Overweight Permit or Special Vehicle Configuration Permit)
Saugeen Valley Conservation Authority (SVCA)	<ul style="list-style-type: none"> • Permit for development in natural hazard lands under <i>Regulation 169/06 (Regulation of Development, Interference with Wetlands and Alterations to Shorelines and Watercourses)</i>
Ontario Energy Board (OEB)	<ul style="list-style-type: none"> • License to Generate under Section 57(c) of the OEB Act
Ontario Power Authority (OPA)	<ul style="list-style-type: none"> • Power Purchase Agreement • Notice to Proceed • Domestic Content Plan, security deposits, financing plan, metering plan, etc.
Township of Southgate and/or County of Grey	<ul style="list-style-type: none"> • Building Permit(s) • Transportation and public safety permits (e.g. entrance permit, road occupancy, moving permit, encroachment permit) • Tree Cutting Permit (to be confirmed) • Road Use Agreement

Authority, Agency or Governing Body	Requirement
Transport Canada	<ul style="list-style-type: none"> Approval under <i>Canadian Aviation Regulation (CAR)</i> Standard 621, Aeronautical Assessment Form
Industry Canada	<ul style="list-style-type: none"> Communication Frequency License

5. PROJECT INFORMATION

5.1 Nameplate Capacity and Classification

The Southgate Solar Project is designed to generate a maximum of 50 MWac of electricity. According to Part II, Section 4 of *O. Reg. 359/09*, the proposed project is a Class 3 Solar Facility. The characteristics of a Class 3 Solar Facility, as described in the regulation, are as follows:

- The location of solar photovoltaic collector panels and devices are at any location other than mounted on the roof or wall of a building; and
- The nameplate capacity of the solar facility is greater than 10 kilowatts.

5.2 Land Ownership

The project location is comprised of land that is privately owned and will be leased to operate Southgate Solar LP's ground-mount solar project for 20 years with an option to extend (see **Figure 2**). Detailed land ownership information will be provided in a subsequent version of this PDR.

5.3 Energy Sources

The primary source of energy that will be used to generate electricity will be the kinetic solar energy of moving photons, which will be converted to electrons by the solar photovoltaic (PV) modules. This will create direct current (DC) electricity, which is converted to AC electricity by inverters.

5.4 Project Components

PV panels will be the technology used to convert solar energy into electricity. DC electricity generated from the panels will be collected and converted into AC electricity by inverters. From the inverters, the AC voltage will be "stepped-up" and connected to the transmission grid at

which point it will be metered and transferred into the transmission grid for general regular use.

Details about the project components, both temporary and permanent, that will be used to construct, operate, maintain and decommission the solar energy facility are provided below. More detailed information regarding project components will be provided in subsequent drafts of this PDR.

5.4.1 Solar Modules and Mounting System

Approximately 197,000 to 207,000 solar panels of between 290-305 watts (DC) each will be installed for the Southgate Solar Project. The estimated number of panels uses a conservative 1.2 DC to AC conversion rate. This results in a high level estimate for the number of modules (panels) to be installed. This number will change depending on the number of strings and the matching between the panel and inverter, which has not been finalized at this time.

The panels will be aligned in rows to be spaced according to design criteria and will be mounted on the racking systems. The type of anchoring system and/or foundation supports for the racking structures will be determined based on a preliminary geotechnical assessment, but it is anticipated that the racks will be supported by screw or driven piles into the ground. The racking system will be in a fixed position facing south and will not track the movement of the sun. Further details on the racking system and supporting structures will be provided in subsequent versions of this report and in the Design and Operations Report as the project progresses.

5.4.2 Medium Voltage Stations and Equipment

Solar panels create DC electricity, which is then converted to AC electricity through the inverters. The AC voltage created by the inverters will be “stepped-up” through multiple Medium Voltage (MV) Stations. A MV Station houses multiple components, including inverters, and a MV transformer. Each MV Station will include two 800 kW inverters and one MV transformer with a capacity rating of 1600 KVA. The MV transformer consists of a three-phase high-voltage winding and two separate low-voltage windings each rated for 360 volts. The number of MV Stations to be used will be determined based on the electrical design. Additional details will be provided in subsequent versions of this report and in the Design and Operations Report as the project progresses.

5.4.3 Electrical Collector System

The AC electrical energy output from the MV Stations will be collected via underground and/or overhead cables and connected to the high-voltage transformer (main substation). The location of these lines has yet to be determined but will be within the project location as shown in **Figure 2** and in close proximity to the transmission line shown running northwest to southeast.

5.4.4 Substation and Other Equipment

The collector system voltage will be stepped up to the IESO's transmission grid voltage at one collector/interconnection substation. The location of the collector/interconnection substation will be determined through consultation with HONI and is assumed to be located within the project location boundary with no transmission lines required. The size of the main substation will be determined in a subsequent version of this report, but it is expected that the main substation will be of a size similar to the total nameplate capacity of the project (50 MW). The main substation will also include a DSTATCOM, a Dynamic VAR compensator which will be used to regulate the IESO transmission grid voltage to an established set point as defined by the IESO. In conjunction with the DSTATCOM, switched static capacitors and reactors may be required for this project. The size of the capacitors and reactors will be determined by IESO. In addition, it will be assumed that the local distribution utility will have nearby suitable distribution lines to provide the project location with auxiliary power as required. If no distribution supply is available nearby, the requirements for an auxiliary generator will be determined once the layout of the solar facility is reviewed. Additional details will be provided in subsequent versions of this report and in the Design and Operations Report as the project progresses.

5.4.5 Access Roads

The Southgate Solar Project will be accessed with one or more main access roads allowing vehicles and equipment to enter the project location. One or more interior on-site access roads will also be developed, and their exact location and nature (permanent or temporary) has yet to be determined. Details on the access roads are not yet available but will be provided in subsequent reports as the project progresses.

5.4.6 Perimeter Fence

For the safety of the public and to prevent vandalism, a perimeter fence will be installed. This will be a chain link fence of standard height that will be installed around the entire project location. The perimeter fence is a requirement of the Electrical Safety Authority and will be

built to their specifications. Typically, the Electrical Safety Authority requires a 1.8 m high fence with three strands of barbed wire on top.

5.4.7 Temporary Storage and Construction Areas

During construction it will be necessary to designate/construct temporary storage areas for equipment and components. These areas form part of the project location and will be included in the detailed Site Plan of the Design and Operations Report. Such areas will fall within the project location as shown in **Figure 2**.

5.4.8 Operations and Maintenance Building

An Operations and Maintenance Building may be required for the Southgate Solar Project. It is likely that temporary office buildings (e.g., portable trailers) will be required during construction. Any such buildings would be located within the Optioned Lands of the project location as shown on **Figure 2**.

5.4.9 Water Crossings

Based on preliminary assessment of the study area, water crossings within the project location over unnamed waterways may be required for development of the solar facility. Additional details on water bodies within the project location are provided in **Section 6.3** and will be further refined during the approvals process.

5.5 Project Activities

The following subsections outline project activities during the construction, operations and maintenance and decommissioning phases of the project. The Southgate Solar Project will not require the collection, transmission, treatment, storage, handling, processing or disposal of sewage, biogas, biomass or source separated organics or surface water. The operation of the facility will not discharge contaminants to the air. Some management of stormwater may be required. Further detail on stormwater management will be provided in subsequent versions of this report.

5.5.1 Construction

The following activities associated with construction of the solar facility will take between 12 to 14 months and are anticipated to begin in 2016. They will occur in the relative order in which they are presented below. More information will be forthcoming in the draft Construction Plan Report. Pre-construction activities to be undertaken include: Stage 1/Stage 2 Archaeological

Assessment, field studies for the Natural Heritage Assessment, topographic surveys, geotechnical studies, soil studies, and preliminary stormwater studies.

Table 2: Construction Activities

Activity	Description
Clearing, ground levelling and grading	Selective clearing of trees and vegetation may occur based on the results of the NHA. Minimal ground levelling and grading to ensure proper drainage and to facilitate construction activities may be required.
Installation of stormwater management equipment/facility	Based on the results of the NHA and stormwater management plans, temporary and/or permanent equipment to manage flow and protect natural features during construction/operations may be installed.
Installation of the perimeter fence	Installation of temporary fencing to delineate the construction area and installation of a permanent chain-link perimeter fence.
Installation of Security Lighting	During construction, the site will be monitored by the supervising construction staff and 24-hour on-site security will also be utilized. Lights will be installed near the entrance to the facility and task-specific lights will be installed where required throughout the project location.
Construction of access roads	Temporary and/or permanent gravel access roads will be constructed to facilitate installation and delivery of equipment as well as maintenance requirements during operations.
Delineation of temporary storage and construction areas and installation of temporary facilities	Equipment lay-down and materials storage areas will be delineated with fencing or other materials and temporary office buildings (trailers) will be constructed. These areas will be used for: construction office trailers, washrooms, first aid station, vehicle parking, construction equipment parking, storage sheds, truck unloading/loading areas, waste disposal pick-up areas, equipment and material lay-down. If a permanent operations and maintenance building is required, it will be constructed at this time.

Activity	Description
Construction of foundations	Engineered foundations for the MV Station, main substation and operations and maintenance building (if any) will be constructed. The type of foundation will depend on the results of the geotechnical assessment.
Installation of supports and PV modules	The type of anchoring system and/or foundation supports for the racking structures will be determined based on a preliminary geotechnical assessment, but it is anticipated that the racks will be supported by screw or driven piles into the ground. The racking system will be in a fixed position facing south and will not track the movement of the sun. PV modules will be mounted to the racking system.
Wiring, MV Station and main substation	DC electrical cabling from the solar PV modules to the MV Stations will be trenched underground. The AC cables from the MV Stations to the main substation will be trenched underground or installed overhead. The collector system voltage will be stepped up to the IESO's transmission grid voltage at one collector/connection substation to be constructed at a location to be determined through consultation with HONI (assumed to be located within the project location boundary with no transmission lines required).
Remediation and clean-up of work areas	Removal of all construction-related waste from the project site (reuse/recycle where applicable).
Site landscaping	Site landscaping will take place in the form of berms and/or planting of vegetation suitable to the native climate and type of solar panels/equipment.

Construction activities will be conducted by licensed contractors in accordance with required standards and codes and all activities will abide by local laws. All construction-related activities will be conducted within the project location outlined in **Figure 2**. Testing and commissioning of the facility will occur over the last few weeks of construction. During construction, fuel, oils or grease may be stored on site. These materials will be stored in accordance with a Spills Response Plan to be developed prior to the start of construction. Decisions on waste disposal or recycling during, and immediately after, construction will be made by the on-site contractor who will refer to the *Environmental Protection Act*.

5.5.2 Operation and Maintenance

The following activities are associated with the operation and maintenance of the solar facility. These activities will take place over the lifetime of the facility. More information will be forthcoming in the draft Design and Operations Report.

Overall, few activities are associated with the operational phase of the project. The proposed solar energy facility will be monitored and managed remotely and minimal on-site activity is required for its daily operation. An operations and maintenance manual will be prepared prior to the start of construction of the project. Security and minor maintenance will be the only regular activities anticipated on site.

Table 3: Operations and Maintenance Activities

Activity	Description
Monitoring and meter calibrations	Ongoing remote monitoring. Meter calibrations as needed.
Periodic maintenance and inspection of project components	Regular inspections of project components will occur on a monthly/quarterly/semi-annual basis. Routine maintenance will occur on a scheduled basis. Security visits and measures will be conducted as needed.
Cleaning of panels	Cleaning of panels and equipment if required.
Major or additional maintenance	While unlikely, major maintenance will be undertaken as needed if equipment fails or is damaged and needs to be repaired or replaced.
Periodic landscape maintenance	Short native vegetation will be planted once construction activities are complete. Ground maintenance will take place (frequency to be determined) to ensure that weeds are contained and that the panels are not shaded.
Inspections and testing	Activities will be carried out as required by the governing bodies.

During the operations phase, no hazardous materials will be stored on-site with the exception of oil for transformers, which will be adequately contained and accompanied by a Spills Response Plan, which will be developed prior to the start of construction.

5.5.3 Decommissioning

Most of the materials used in a solar energy facility are reusable or recyclable, and some equipment may have manufacturer take-back and recycling requirements. Through the decommissioning phase of the project, the site will be returned to a state similar to its pre-construction condition. Materials such as steel/aluminum from the racking and copper from the electrical infrastructure will be removed and recycled. The PV panels will be removed and either returned through manufacturers' recycling protocols or refurbished and recycled where possible. Any remaining materials will be removed and disposed off-site at an appropriate location.

The following activities are associated with the decommissioning of the solar facility. These activities will take place approximately 20 years after commissioning. Decommissioning activities are expected to take between 6-9 months and will occur in the relative order in which they are presented below. More information will be forthcoming in the draft Decommissioning Plan Report:

- Disconnection and removal of above and below-ground wiring;
- Removal of PV modules, steel/aluminum structures and electrical equipment;
- Removal of foundations and any maintenance buildings or other structures;
- Removal of access roads;
- Topsoil replacement as necessary;
- Site grading and rehabilitation as necessary; and
- Removal of waste from the project location.

The final decision on waste disposal or recycling will be contracted to the on-site contractor that will refer to the *Environmental Protection Act* before submitting a Generator Registration Report for each waste produced at the facility.

6. DESCRIPTION OF ENVIRONMENTAL EFFECTS

The following subsections provide a summary of potential effects that may result from the construction, installation, operation, use and retirement of the solar facility at the project location and within 300 metres. Appropriate mitigation and monitoring requirements to minimize negative effects will be evaluated and implemented, where necessary. Details on mitigation measures and monitoring will be provided in subsequent reports.

6.1 Cultural Heritage and Archaeological Resources

The construction of the proposed Southgate Solar Project has the potential to impact cultural heritage and archaeological resources. A combined Stage 1/ Stage 2 Archaeological Assessment (background study and property inspection) will be undertaken. The assessment will be conducted in accordance with the *Ontario Heritage Act* and using the Ministry of Tourism, Culture and Sport's (MTCS) *Draft Standards and Guidelines for Consultant Archaeologists*. This work will confirm the need for additional archaeological investigations, which will be undertaken as necessary. A full Cultural Heritage Assessment will be completed for the project. This work will be carried out for the purpose of minimizing, or where appropriate, avoiding, possible impacts. The results and recommendations of these assessments will be provided in subsequent versions of this report.

6.2 Natural Heritage Resources

A Records Review for the Southgate Solar Project is ongoing, consistent with Section 25 of *Ontario Regulation 359/09*, for the project location and lands within 300 m of the project location using secondary source information. The purpose of the Records Review is to determine whether the project location is:

- In or within 120 m of a provincial park or conservation reserve;
- In a natural feature, as defined to be:
 - A wetland (coastal wetland, northern wetland or southern wetland);
 - A valleyland;
 - A wildlife habitat;
 - A woodland; or
 - An Area of Natural and Scientific Interest (ANSI).
- Within 50 m of an area of an ANSI (earth science); or
- Within 120 m of a natural feature that is not an ANSI (earth science).

Based on the Records Review information collected to date, the project location is a mixture of meadows, agricultural fields, woodlands, and wetlands. Preliminary site investigation work to be undertaken will confirm the results of the Records Review. No associated wildlife habitat has been identified to date. Background information indicates that there are a few unevaluated wetlands within the Optioned Lands and within 300 m. The Yoevil Swamp Wetland Complex is a provincially significant wetland (PSW) located to the south of the project location within 300 m. Various woodlands are also mapped within the project location and surrounding 300 m. The

Saugeen Kame Terraces Earth Science ANSI is located within the northern portion of the project location. The features noted above likely provide habitat for a variety of wildlife and plants.

No Provincial Parks, Conservation Reserves, Valleylands, or Life Science ANSIs were identified within the project location or surrounding 300 m. At the time of submission of this report, no Species of Conservation Concern have been noted in the Optioned Lands or within 300 m.

Figure 2 maps the features identified during the NHA Records Review and includes required setbacks. The evaluation of natural features is currently ongoing as the final extent of the project location has yet to be determined, and only basic construction practices are known at this time. Thus, site specific potential impacts to the natural features have yet to be determined. Most of the potential impacts to natural features are expected to occur during the construction phase and will likely be reduced significantly through the use of mitigation and monitoring measures. Appropriate mitigation and/or monitoring measures will be developed and outlined in future reports.

6.3 Water Bodies

No lakes or seepage areas are within the Optioned Lands or within 300 m based on the records review and **Figure 2**. There are various potential water bodies located within the project location (**Figure 2**); however, potential water bodies are unnamed. The potential water bodies will be evaluated for potential impacts during site investigation field work. Most of the potential impacts to water bodies are expected to occur during the construction phase and will likely be reduced significantly through the use of mitigation and monitoring measures. Appropriate mitigation and/or monitoring measures will be developed and outlined in future reports.

6.4 Air, Odour and Dust

Once operational, the solar facility will not create dust, odour or emissions to the air. During construction, increases in particulate matter (dust) will be experienced in the adjacent area, which are predominantly agricultural with some isolated residential dwellings. Additionally, there will be emissions from the diesel engines of construction machinery and equipment which may cause temporary negative impacts to local air quality. The impacts from construction will be localized and temporary in nature and are very unlikely to be of a level capable of having a residual impact on regional air quality or climate change. Appropriate air quality mitigation measures will be implemented during construction.

6.5 Noise

During the construction period, which is expected to be 8 to 10 months, construction activities will lead to elevated levels of noise in the area. Efforts will be made to minimize this noise. Once the solar facility has been constructed and is operational, the only noise generated will be from the MV Stations and main substation transformer. This equipment will be located so as to minimize noise impacts on receptors and noise levels will be modelled to confirm that regulated levels are met. Minimal noise (from vehicles, spray washing, etc.) may be experienced during the operations phase at nearby receptors during times of periodic maintenance.

6.6 Land Use and Resources

The proposed solar facility will be located primarily within lands currently zoned by the Township of Southgate for agriculture, aggregate extraction, wetland protection and environmental protection. The Official Plan for the Township of Southgate designates the project location as agricultural, rural, hazard lands and wetlands. The upper-tier municipality (County of Grey) designates the lands as agricultural, hazard lands and rural. Temporary loss of agricultural land will occur for the duration of the project. Short native vegetation will be grown beneath and between the panel rows to control erosion. The project location will be returned to its original condition or similar after decommissioning.

The proposed facility is physically low-profile and would be non-obtrusive to the surrounding community. Visual impact studies will be conducted as necessary and appropriate vegetative screening may be installed.

6.7 Provincial and Local Infrastructure

Local roads may experience additional wear from heavy construction loads. Road damage will be repaired by Southgate Solar LP based on a Road Use Agreement to be established between Southgate Solar LP and the Township of Southgate. Periodic traffic disruptions are possible along Southgate Road 24, Southgate Road 22, Grey Road 9, Grey Road 109/Southgate Sideroad 39, Southgate Sideroad 14, and Southgate Sideroad 47 during the construction phase of the project. Connection to the provincial grid has been considered as part of the project and no negative effects are predicted during the operational phase of the project.

6.8 Public Health and Safety

Potential impacts to public health and safety are minimal but include those generally related to construction. Noise, vibration and dust during construction are the key potential causes of

human health impacts. The level of noise, vibration, and dust emissions expected during construction are anticipated to be low, localized and temporary in nature and mitigation measures will be implemented to address or eliminate the impacts.

Temporary and permanent fencing will prevent unauthorized access and ensure public safety during the construction and operations phases. Appropriate signage, flagging and other safety measures will be taken to notify the public and ensure public safety. Applicable safety policies and procedures will be adhered to during the construction phase of the project.

An Emergency Response Plan and Emergency Communications Plan will also be prepared prior to construction and will outline the protocol to be followed in the event of an emergency at the Southgate Solar Project. This plan will be developed in consultation with the local emergency services department from the Township of Southgate. The Emergency Response Plan will provide key contact information for relevant responders, regulators, landowners and other stakeholders.

6.9 Areas Protected under Provincial Plans and Policies

The project is not located in areas subject to Land Use Plans. Specifically, the project does not lie within the Niagara Escarpment, Lake Simcoe Watershed, Oak Ridges Moraine or the Greenbelt. The project supports the goals of the Province's *Green Energy and Green Economy Act, 2009*.

7. BENEFITS OF THE PROJECT

The generation of power from solar energy will displace approximately 60 GWh of electricity annually that otherwise may have been generated by fossil fuel burning or non-renewable power plants. As a result, the energy generated will not contribute to climate change or emissions-related health impacts. A further benefit is that jobs will be created, especially during the construction phase.