

RE BREEN 2 SOLAR PROJECT

PROJECT DESCRIPTION REPORT
VERSION 2.3

RECURRENT
ENERGY

Version 2.3: August 2011





RE Breen 2 ULC

December 22, 2009

Ms. Doris Dumais
Director, Environmental Assessment and Approval Branch
The Ministry of the Environment
2 St. Clair Avenue West, Floor 12A
Toronto, ON M4V 1L5

Re: Project Description Report - RE Breen 2

Dear Ms. Dumais:

RE Breen 2 ULC is excited to submit the following Draft Project Description Report as the first step to completing the Renewable Energy Approval (REA) for this solar generation facility. This project is one of a number of unique projects submitted by Recurrent Energy to the Ministry of the Environment (MOE) following the application for a FIT contract with the Ontario Power Authority under the 2009 FIT launch program.

RE Breen 2 ULC is committed to providing the clean electrical benefits of solar generation and insuring that the environment is protected for the benefit of future generations. The forward thinking for permitting renewable energy projects under the *Green Energy and Green Economy Act* and Ontario Regulation 359/09 will both promote the installation of renewable energy in Ontario and insure that the environment is protected.

This report will provide the MOE and other stakeholders with preliminary information describing the planned solar facility and this company's strategy to mitigate the impact to the environment. This includes:

- Detailed information about the site, including a map showing the land within 300 meters of the project facility;
- Description of the planned 10 MW AC solar photovoltaic system that will be used to generate electricity;
- Expected activities during construction, operation and decommissioning of the facility;
- Potential environmental impact of these activities and preliminary information on mitigation measures;
- Detailed information about the project ownership;
- Outline of future reports, consultations and environmental assessments to be submitted as part of the REA process.

As a response to this submission, please provide RE Breen 2 ULC with the list of First Nations/Aboriginal communities to be consulted with and the form as approved by the Director in which consultation should be carried out as referenced in Section 17(1) of Ontario Regulation 359/09.

Thank you for the opportunity to participate.

Very truly yours,

A handwritten signature in black ink, appearing to be the initials 'SK' with a stylized flourish.

Sheldon Kimber
Authorized Signer
RE Breen 2 ULC

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Disclaimer

This report has been prepared by or on behalf of RE Breen 2 ULC for submission to the Ontario Ministry of the Environment as part of the Renewable Energy Approval process. The content of this report is not intended for the use of, nor is it intended to be relied upon by, any other person. Neither RE Breen 2 ULC nor any of its directors, officers, employees, agents or consultants has any liability whatsoever for any loss, damage or injury suffered by any third party arising out of, or in connection with, their use of this report.

1.0 Introduction

This document is provided to advise provincial agencies, local government, local agencies, the public, and First Nation/Aboriginal communities of the following proposed solar facility (the “Project”).

Project: RE Breen 2

Proponent: RE Breen 2 ULC (the “Company”)

Site: The site consists of approximately 32 hectares (ha) of land located about 8.5 km southwest of Ingersoll, in the Township of North Dorchester.

FIT Project(s): RE Breen 2 (FIT-FCU2DB9)

System: Class 3 solar facility up to 10 MW AC will be located within the boundaries of the Property (see Figure 1).

The Project design will be finalized and documented in the subsequent reports required as part of the MOE and MNR Renewable Energy Approval (REA) process. RE Breen 2 is confident that it fully understands Ontario’s permitting processes for renewable energy projects and will actively continue Ministry and community meetings to refine the project design. We plan to continue participating in meetings and conversations with Ontario’s various ministries (MOE, MNR, MTC, MEI), involve stakeholders in the feedback process, and work with Canadian-based environmental and zoning consultants to further inform the proposal.

Moreover, the company is keenly aware that the passing of the *Green Energy and Green Economy Act* and Ontario Regulation 359/09, transfers the responsibility of reviewing the building of solar projects to the Ministry of the Environment. This Project is subject to the Renewable Energy Approval (REA) process, and must adhere to the requirements of Regulation 359/09 of the *Environmental Protection Act*. Under Regulation 359/09, the applicant will submit an application to and receive approvals from the Director of Environmental Assessment and Approval Branch for the Ministry of the Environment.

A map depicting the Project boundary including at least 300 meters of surrounding area is provided in Figure 1. This site will allow for flexibility in the site layout in consideration of environmental constraints.

2.0 Project Proponent

This Project Description Report for RE Breen 2 (the “Project”) is made by RE Breen 2 ULC, a Nova Scotia Unlimited Liability Company owned by Recurrent Energy, LLC through its subsidiaries Recurrent Energy Portfolio Holdings LLC, Recurrent Energy International Holdings LLC, Recurrent Energy Lux Holdings S.a.r.l, and RE Breen 2 Holdings ULC.

The contact information for the project is:

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3.0 OPA FIT program

Ontario's feed-in tariff or FIT program is North America's first comprehensive guaranteed pricing structure for renewable electrical production. It offers stable prices under long-term contracts for electricity generated from renewable sources.

The FIT program was enabled by the Green Energy and Green Economy Act, 2009 which was passed into law on May 14, 2009. The FIT program was officially launched on October 1, 2009, and the program is designed to encourage and promote greater use of renewable energy sources. According to the program's website, the FIT program will help Ontario phase out coal-fired electricity generation by 2014, boost economic activities and the development of renewable energy technologies and create new green industries and jobs throughout the Province. For more information about the FIT Program:

<http://fit.powerauthority.on.ca/>

RE Breen 2 is actively involved in the FIT program and for this Project has submitted the following FIT Program Applications for a total of 10 MW AC of nameplate generating capacity:

RE Breen 2 (FIT-FCU2DB9)

4.0 Summary of Project

4.1 Project Location

The Company conducted a careful site screening and acquisition process for each Project including a detailed evaluation of hundreds of land parcels in multiple counties. As a result, the Company obtained legal site control and conducted due diligence for the Project site.

This site is near Hydro One's electricity distribution system to ensure low interconnection costs and minimal disruption to the community. RE Breen 2 has targeted land that is mostly cleared and level, is located in areas of high irradiance, and avoids prime agricultural land classifications that are restricted by the OPA under the FIT program. A summary of the project site is as follows:

Project Description	
Description	The site consists of approximately 32 hectares (ha) of land located about 8.5 km southwest of Ingersoll, in the Township of North Dorchester.
Address	6955 Hamilton Road, Putnam, Ontario N0L 2B0
Longitude and Latitude (in Degrees)	Latitude: 42.984959° Longitude: -80.959672°
Legal Description of Site	PT LT 5, CON B, SRT, DESIGNATED AS PART 2, 33R-3007; PT LT 4, CON B SRT, AS IN 329891 & 412218; PT MARSHALL STREET CLOSED & STOPPED UP BY BYLAW REG'D AS 705244 DESIGNATED AS PART 1, 33R-6008; LTS 7, 8 & 9 AND PT LTS 5 & 6, S MAIN STREET ALSO KNOWN AS HAMILTON RD & E OF THAMES STREET, PLAN 192 AS IN 329891; LTS 1, 2 & 3 AND PT LT 4 S MAIN STREET ALSO KNOWN AS HAMILTON ROAD & W THAMES STREET, PLAN 192 AS IN 329891; LOT 9 & PT LTS 6, 7 & 8, W MALAHIDE STREET ALSO KNOWN AS COUNTY RD #30 & AVON RD, PLAN 192 AS IN 329891; PT BLK A, PLAN 192 AS IN 329891; SAVE AND EXCEPT PART 1, 33R-14369; NORTH DORCHESTER TWP." A REFERENCE P LAN WILL BE REQUIRED IN SUBSEQUENT TRANSFERS RE: CREEK"
Site Control Status	The Company has entered into a formal and binding Lease Agreement with the property owner on privately owned land allowing for: Development Term: 5 years Lease Term: 30 years
Zoning	Agricultural
Agricultural Land Class	The Property is approximately 4% class 1, 27% class 2, 40% class 3, 28% class 4 and 1% unclassified. Please find Soil Capacity Map (Figure 2) at the end of report for further details.
Aboriginal Communities	Mississaugas of the Credit First Nation, Oneida Nation of the Thames, Six Nations of the Grand River, Six Nation of the Grand River (Haudenosaunee Confederacy Council), Bkejwanong Territory Walpole Island First Nation, Chippewas of the Thames First Nation, Chippewas of Kettle and Stony Point First Nation, Munsee-Delaware Nation, Grand River Metis Council, and Metis Nation of Ontario.
Conservation Authority	Upper Thames River Conservation Authority
Township and County	Thames Centre, Middlesex

4.2 Technical Information

The proposed Project is a solar electric generating facility that will utilize photovoltaic (PV) panels installed on fixed racking structures. DC electricity generated from the PV panels is converted to AC electricity by an inverter. The voltage level of the AC electricity produced by the inverter is stepped-up to distribution level voltages by a series of transformers. All equipment and services shall be manufactured and procured in Ontario as required by the Ontario Power Authority's Feed-in Tariff Program.

Specification	Details
System Nameplate Capacity	10 MW AC/10 MVA
Output	Estimated first year energy production: 13,568,646 kWh
Local Distribution Company	Hydro One Networks Inc.
Transmission Station	Ingersoll
Feeder	38M45
Connection Voltage/Phases	27.6 kV/3 phase
Proposed Point of Connection	The intersection of Hamilton Rd. and Putnam Rd.
GPS Coordinates of Connection point	Latitude: 42.990240° Longitude: -80.954366°
Estimated Life of Facility	The FIT Contract with the OPA has a term of 20 years, however the manufacturer's warranty on the PV Modules is 25 years and the expected life of this solar power facility is approximately 30 years.

4.3 Major Project Phases and Schedule Milestones

The following table provides the original estimated starting dates for pre-construction, construction, commissioning, operations and decommissioning activities. These dates for REA Approval and start of construction were estimated near the beginning of the REA process. These dates are identified in several of the other documents prepared for this project, including for example, the Executive Summary and the Construction Plan Report.

However, the REA process has taken significantly longer than originally anticipated and it is not likely that REA Approval will be received by the originally estimated date, so the start of construction will be delayed. It is not possible to conclusively determine the start of construction due to uncertainties in expected timeframes for regulatory approval. Likewise, it is not feasible to continually update the anticipated dates for receipt of REA approval, start of construction and COD. However, the schedule below is representative of the potential construction duration that could be anticipated following eventual receipt of REA Approval. The actual schedule will continue to be adjusted as the REA process proceeds. For the final public meeting and again at the REA Application stage, RE Breen 2 ULC will provide the most up-to-date anticipated construction start and COD dates.

Milestone	Date
FIT Application	November 30, 2009
FIT Contract	September 16, 2010
REA Approval	September 2011 (estimated)
Start of Construction	July 2012 (estimated)
Commercial Operation Date	February 2013 (estimated)
Decommissioning	The year 2043 (estimated)

4.4 Detailed Project Activities

The activities for the construction, operation and decommissioning phases of the project are described below. A detailed analysis of the social, economic, environmental and/or cultural effects of the Project and the significance of any residual effects will be completed as part of the REA process.

4.4.1 Construction

General Description of Construction Activities

Activity	Description
Surveying	The boundaries of the construction area, including transformer and inverter site, access roads and transmission cable will be identified and staked. All existing buried infrastructure, such as pipelines and cables will also be located and marked.
Site Preparation - Mobilization and Staging	A logical progression of access road construction and laydown area preparation will be completed followed by the sequential arrival of temporary work trailers, material and equipment delivery, and commencement of project construction. Minimal site preparation is typically required due to the natural attributes of the site.
Access Road Construction	Access roads, if necessary, will be built using tracked bulldozers and backhoes to strip topsoil and subsoil as required, to create an even travel surface.. Culverts, tiling or other drainage structures may be required to maintain adequate site drainage. Soil management will be incorporated into this process to facilitate site reclamation. Existing vegetation will be stripped with the topsoil, which will be stockpiled separately from subsoil and stabilized to prevent erosion. When the project operation is complete, stripped subsoil and topsoil will be replaced as required. No topsoil will be removed from the property.
Site Preparation - Civil	Site preparation will include as required clearing and grubbing, grading as required, pier installation preparations, access points required to install frames and panels, access points to site from public roads, drainage features suitable to site requirements, all electrical installation civil preparations and features necessary to support future operations necessary for local weather conditions and permitting requirements.
Structural Support and Racking of PV Modules	Structural work associated with the support and racking of the photovoltaic modules will include the setting of foundations, construction of array structures and sub-structures. High precision GPS & laser equipment is used to set-up the site, and then using customized drilling equipment, highly precise drilling of holes for the support structure is performed. Mounting of beams are installed and attached to the support via pre-drilled holes. Once the support structure is completely installed and checked for quality the installation of modules is commenced and wiring is completed sequentially as sub-arrays and arrays are completed.
Structural Support for Inverter & Transformer	It is expected that equipment pads can be constructed using conventional concrete slab-on –grade techniques. It is anticipated that the existing topsoil material will be stripped from the area, and it will be stored or respread on the property. . Engineered fill may be required beneath the concrete slabs after the removal of all organic and/or deleterious soils, as discussed previously.

Activity	Description
DC Conduit and Cabling	All DC wiring for array and sub-array aggregation shall be run along the array structural supports and attached appropriately. Array home run wiring will be run underground in a trench back to the centrally located inverters. Conduit will be used as necessary for DC wiring into and out of equipment.
AC Conduit and Cabling	AC wiring will be used to interconnect with the local distribution system and on site using a mixture of overhead and underground cable and will be constructed primarily following access routes in the final Project design.
Gates and Fencing	The entire facility will be fenced and secured based with the installation of a 2.7m (9') fence. The project will have a lockable gate(s) with a minimum width of 3.7m (12') for large trucks to enter and exit the site.
Lighting & Security	Lighting and protecting system will be provided as necessary and could include motion sensor tripped flood lighting. Video camera or web cams with recording capabilities and remote viewing, and response security services.
Clean Up and Reclamation	Construction debris will be collected and disposed of at approved location. All equipment and vehicles will be removed from the construction areas. Stripped soil will be replaced and disturbed areas (including trenches and plough seams) will be re-seeded. Site clean-up and reclamation will be conducted concurrently with construction, and will be completed within one month of installation of the Project equipment.

4.4.2 Operation

The Facility operates 365 days per year when sufficient solar irradiation exists to generate electricity. Typical electricity generation begins shortly after sunrise, and stops shortly before sunset. Operation is remotely monitored, but unattended and does not require any on-site employees.

The Facility requires periodic visits for maintenance during the operation phase, such as checking and replacing worn parts, checking electrical connection and cleaning panels. Approximately seventeen (17) visits per year are required for routine maintenance and cleaning of the panels.

General Description of Operating Activities

Activity	Description
Expected Commercial Operation Date	February 2013
On-site Employees	Zero (0) on-site employees
Periodic Inspection & Maintenance	Approximately fourteen (14) times per year, consisting of inspection of primary system components, replacement of air filters and other minor adjustments or maintenance as needed.
Major Maintenance	In the event of a component failure, all major maintenance can be performed utilizing existing roads and site access.
Cleaning of Panels	Approximately 3 times per year on average, it is anticipated that two crews will take approximately 4 to 5 days to wash the panels in the facility for each maintenance period. It is expected that a total 25,700 litres of water are required for each maintenance period. A flow meter will be installed on the well in order to monitor the amount of drawn for maintenance. Only water is used for cleaning - no cleaning solutions of any kind are used to wash the panels.
Fuel Consumption	None
Waste	None – the system does not produce waste of any type. All debris as a result of maintenance or cleaning will be removed from the site immediately by the contracted party.

4.4.3 Decommissioning

All decommissioning and restoration activities will adhere to the requirements of appropriate governing authorities, and in accordance with all applicable federal, provincial, and local permits. The decommissioning and restoration process comprises the following:

- Removal of above ground structures
- Removal of below ground structures
- Replacement of topsoil
- Re-vegetation and seeding

RE Breen 2 pays particular attention to agricultural lands, respecting Ontario's long-term planning and protection of such lands, and insuring that land used for solar production will be returned to its original use.

5.0 Potential Environmental Effects

The operation and construction of the proposed RE Breen 2 project could potentially impact the environment. The table below identifies the potential adverse effects of the Project, mitigation measures to prevent or alleviate effects and the net effects that will occur after mitigation measures have been implemented. Subsequent documents (e.g., Construction Plan Report, Design and Operations Report and Environmental Impact Studies) will further discuss any environmental effects.

Environmental Effects and Proposed Mitigation Measures

Environmental Component		Potential Environmental Effect	Mitigation Measures	Residual Effects
Natural Environment	Physiography/Topography	During construction, regrading of excavated soils and some minor alterations to local topography may occur.	Areas disturbed will be regraded to match existing topography to the greatest extent possible.	Minor long term effect on site topography may occur due to site preparation prior to construction.
	Soils	Reductions in soil quality/loss of soils as a result of accidental spills, erosion, soil compaction during construction.	The use of standard construction best management practices and mitigation measures will be implemented to mitigate impacts to soils. These may include development of an Erosion and Sediment Control Plan and a Spill Response Plan.	No residual effect following proper mitigation.
	Surface Water	Surface water quality could be impaired due to contamination from accidental spills or increased turbidity due to erosion during construction.	Solar panels will be set back at least 30 m from watercourses. Sediment and erosion control measures and spill prevention and response measures will be implemented.	No residual effect following proper mitigation.
	Groundwater	Groundwater may be impaired by contamination due to accidental spills. Changes in groundwater levels due to potential water takings during construction and operations	Spill prevention and response measures will be implemented throughout the life of the Project. Groundwater availability to be determined during design stage. Sufficient resources must be available to satisfy taking requirements and prevent effects on adjacent wells for takings to occur.	No residual effect following proper mitigation. Minor, localized changes in groundwater table if water withdrawn from a new on site well. No changes in groundwater table at adjacent properties.
	Aquatic Habitats/Biota	Potential adverse effects due to construction of project in vicinity of waterbodies	30-m setback from watercourses, as well as sediment and erosion controls and spill prevention and response measures will be implemented to prevent	No residual effect following proper mitigation.

Environmental Component	Potential Environmental Effect	Mitigation Measures	Residual Effects
		impacts due to Project installation.	
Vegetation, including hedgerows	Vegetation clearing on agricultural land will be required.	Work areas will be flagged to ensure clearing does not extend beyond those bounds. Construction staff will be instructed not to enter any not effected vegetated areas. Native vegetation species will be planted following construction	No residual effect anticipated.
Terrestrial Wildlife (including species at risk)	Potential loss of wildlife habitat and potential wildlife avoidance of the Project location during construction and operation may occur as a result of disturbance.	Work areas will be flagged to ensure clearing does not extend beyond those bounds. Best management practices with respect to work during the breeding bird season will be followed to ensure no impact to nesting birds. This may include timing of major construction activities outside of the breeding bird period.	Some disturbance to wildlife will occur as a result of construction and operation.
Air Quality	Reductions in local air quality due to emissions from construction equipment and dust displacement due to vehicle traffic.	The use of standard construction best management practices and mitigation measures will be implemented to suppress dust and protect local air quality. These may include use of dust suppressant (i.e. water) and limitation of soil exposure.	Minor potential increase in fugitive dust emissions during construction. No residual effect with effective mitigation.
Social Environment	Local Traffic	Increased traffic volumes and equipment delivery as well as temporary disruption along routes utilized by construction vehicle may result in delays to local community traffic.	Potential short-term disruption and minor delays along routes used during construction period.
	Municipal Roadways	Construction vehicle traffic in the vicinity of the Project location may result in damage to local roadways.	No residual effect following proper mitigation.
	Public and Construction Site Safety	Construction of the Project may result in a risk to community and workforce safety.	No residual effect following proper mitigation.

Environmental Component	Potential Environmental Effect	Mitigation Measures	Residual Effects
Waste Management and Disposal Sites	Construction and operation of the Project will likely result in the generation of recyclable material, and municipal hazardous and sanitary waste.	Proper storage and disposal of wastes and recyclables will be practiced.	Minor increases in wood waste during construction period, otherwise no additional residual effects.
Visual Landscape	Installation of the Project may result in a change to the local landscape.	Visual barriers will be considered, if necessary, and will be reviewed based on viability and effectiveness.	Visual landscape of the Project site will change for the duration of the Project.
Sound Levels	Temporary disturbance to neighbouring residents may occur during construction, while the operation of inverters and transformers may result in increased ambient sound levels.	Noise studies will be conducted to ensure adherence to provincial sound level requirements.	No residual effect following proper mitigation.
Land Use	Land use will be changed for the duration of the Project. The property does contain Class 2, 3 and 4 agricultural lands, though only Class 3 and 4 will be developed on.	The proposed Project will not build on any Class 2 agriculture lands.	A minor decrease in the amount of agricultural land can be expected for the life of the Project. Following decommissioning, agricultural land use will be restored.
Archaeological Resources	Excavations during Project construction may result in the discovery of archaeological resources.	An Archaeological Assessment will be completed to determine potential resources and mitigation requirements.	Careful adherence to mitigation measures will avoid negative residual effects.
Cultural Heritage Resources	Construction of the Project may result in negative effects to built heritage and cultural heritage landscapes.	Potential heritage resources will be determined and assessed as per the requirements of the Ministry of Tourism and Culture.	Careful adherence to mitigation measures will avoid negative residual effects.

6.0 Outline of Renewable Energy Approval (REA) Process

In order to obtain the REA approval for the Project, the proponent must meet the requirements as set out in Ontario Regulation 359/09 jointly published by the Ministry of Environment and Ministry of Natural Resources. The completion of this Project Description Report (PDR) is the first step in obtaining the REA Approvals. Following publication of this PDR, the Company will receive from the MOE a list of First Nations and Aboriginal communities to be consulted and will then commence with First Nation/Aboriginal consultations.

Upon submission of the PDR, the Company will then undergo the following activities to complete the REA process:

- Place a posting in the local newspaper with general circulation (on two separate days), the Notice of a proposal to engage in a Renewable Energy Project.
- Send a copy of the Notice to those outlined in Section 15(6) (5) of Ontario Regulation 359/09.
- Meet with Ontario Ministry of Natural Resources (MNR) to discuss the natural heritage features and confirm requirements, review results and then obtain a letter confirming their agreement with methodology and results.
- Complete First Nation and Aboriginal consultation
- Complete municipal consultation with the Municipality of Thames Centre, Middlesex County and any service boards in accordance with the consultation form provided by MOE.
- Complete public consultation process including the first and second public information session in the area of the project.
- Determine which natural heritage features are within the setbacks identified in Ontario Regulation 359/09 and complete site investigations, if required.
- Complete the archaeological and heritage assessment and preparation of the report
- Generate the following reports:
 - Construction Plan Report
 - Consultation Report
 - Design and Operations Plan Report
 - Decommissioning Plan Report
 - Noise Study Report
 - Archeology Report
 - Natural Heritage Records Review Report
 - Natural Heritage Site Investigation Report and Natural Heritage Evaluation of Significance Report, if required
 - Water Records Review Report
 - Water Site Investigation Report
 - Environmental Impact Study(ies), if required.
- Submit application forms and documents to MOE.

7.0 Project's Social and Environmental Benefits

Social Environmental Benefit	How Addressed
Increasing Diversity, Reliability, Public Health, and Environmental Benefits of Energy Mix	Solar photovoltaic electricity production is a nearly emission free electricity generation method. Solar PV has become a reliable electricity producer, which has a strong value-add to electricity portfolios because its production curve, with peak power produced in the middle of the day, is positively correlated to peak demand.
Promoting Stable Electricity Prices	With the sun as the fuel source, there is no fuel cost associated with operating a solar PV plant. Solar production forecasting is fairly well known, leading to reliable annual production estimates for this plant. This yields a stable and predictable power supply to OPA throughout the plant's lifecycle.
Protecting Public Health and Improving Environmental Quality	As stated above, solar PV plants have nearly no emissions. As electricity demands are increasing, solar PV plants offer a method of producing peak power without building new fossil-fuel plants that release noxious emissions into the environment.
Ameliorating Air Quality Problems	Operating and maintaining a solar PV plant creates almost no emissions. By producing needed power without the need for additional fossil fuel plants, solar PV helps slow the increasing rate of air quality problems.
Improving Public Health By Reducing the Burning of Fossil Fuels	Solar PV produces electricity without the combustion of any fossil fuels.
Resource Diversity	Less than 1% of Canada's power comes from solar energy. New solar PV plants therefore greatly increase the diversity of the generation portfolio mix.
Environmental Stewardship	Solar PV is among the safest, cleanest sources of energy available. PV has a lower elevation than many solar thermal technologies and wind turbines, minimal noise impacts, and does not release carbon dioxide through its operating life as do biomass/biogas generators.
Environmental Effects	Taking into account the mitigation measures that will be implemented; the project is not anticipated to cause any significant environmental effects. Please see the Negative Environmental Effects, Mitigation Measures and Environmental Effects Monitoring Plan for RE Breen 2 Report for a full description of potential negative environmental effects and mitigation measures.

Signature Page

This Project Description Report is being submitted by:

RE Breen 2 ULC

A handwritten signature in black ink, appearing to be 'SK', written over a horizontal blue line.

Sheldon Kimber
Authorized Signer

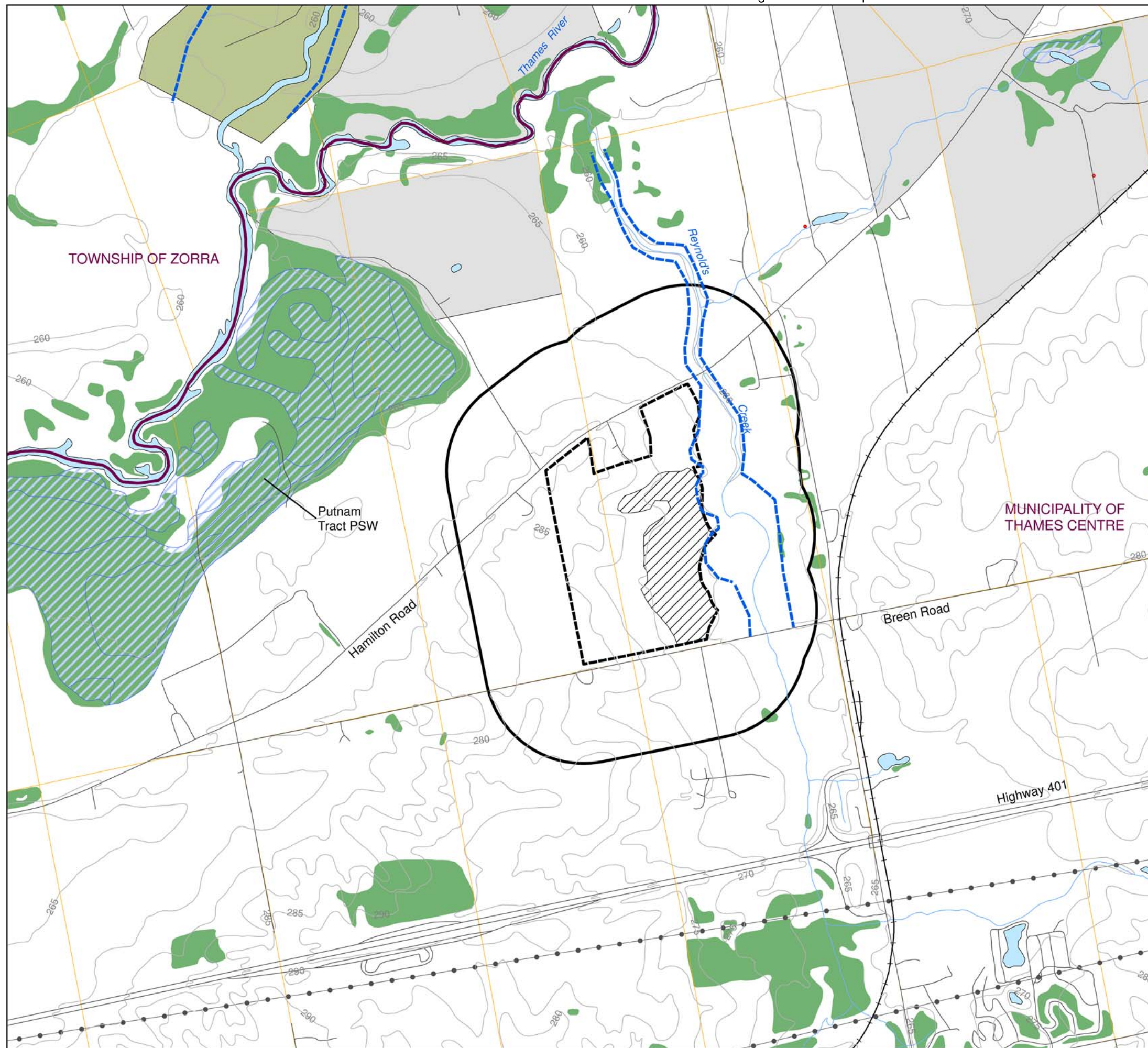
Figures

Figure 1 – Area Map

Figure 2 – Soil Capacity Map

Figure 3 – Site Layout

Figure 1 - Area Map



Legend

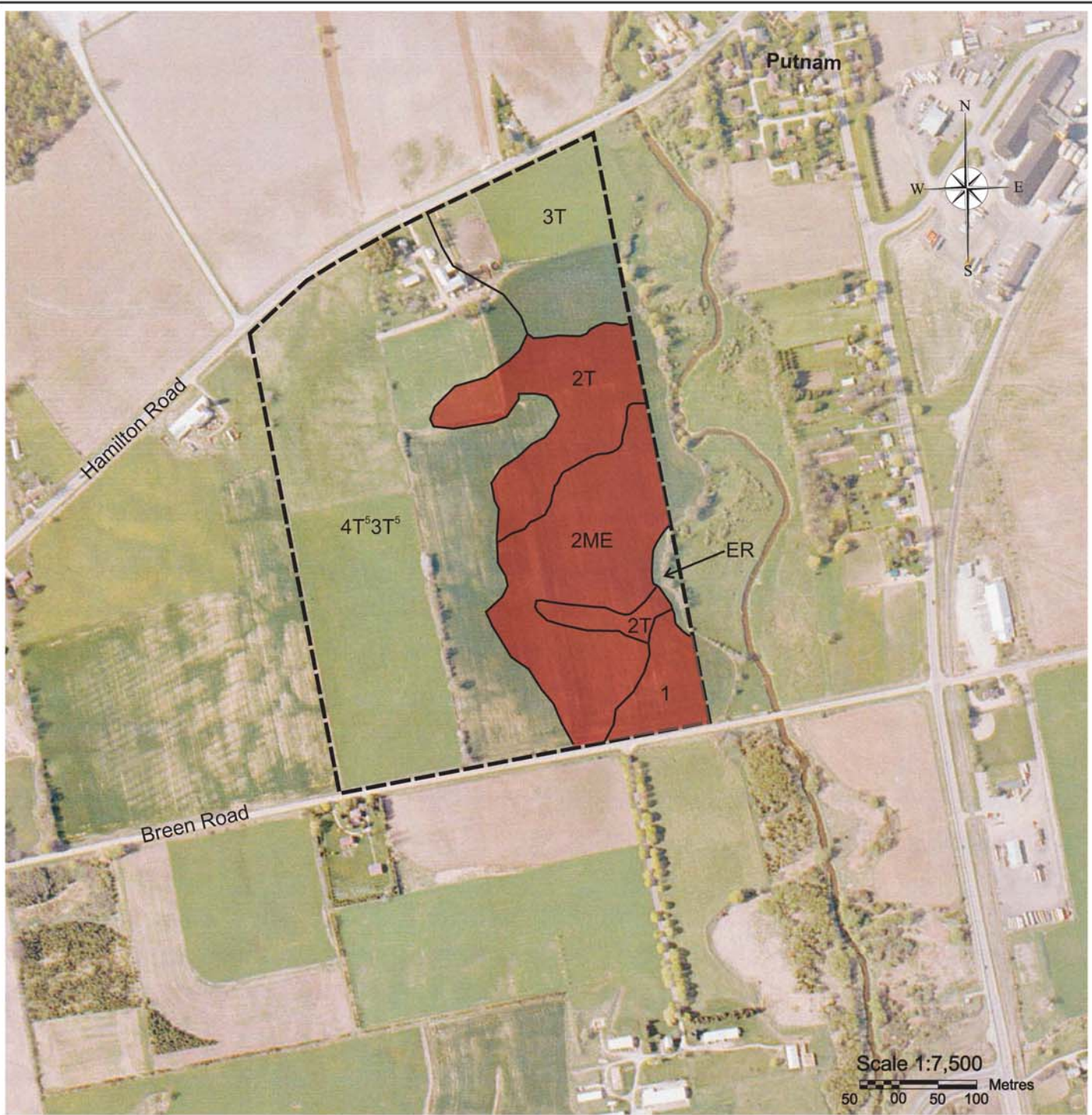
- Roads
- Rail
- Topographic Contour (5m interval)
- Utility Line
- Flood Line
- Watercourse
- Project Location
- Temporary Construction Laydown Area
- 300 m from Project Location
- Parcels
- Municipal Boundary
- Erosion Hazard Land
- Wooded Area
- Pit/Quarry
- Waterbody
- Wetlands

PSW Provincially Significant Wetland
 LSW Locally Significant Wetland



Notes:
 1. Base data downloaded from www.geographynetwork.ca, other environmental data from LIO,
 2. Groundwater Recharge, Erosion Hazard and Floodplain information from Oxford County,
 3. Spatial referencing UTM NAD83, May 2009, updated May 2011.

Figure 2 – Soil Capacity Map



Legend

CLI Agricultural Capability Classes

 CLI Classes 1 & 2

- 1 - No limitations for common field crops
- 2T - Moderate limitations due to topography
- 2ME - Moderate limitations due to droughtiness & erosion
- 3T - Moderately severe topographic limitations
- 4T - Severe topographic limitations

4T⁵3T⁵ Indicates a complex unit comprised of 50% CLI Class 4 and 50 % CLI Class 3

ER Eroded Channel - not classified

 Property Boundary

 Border of Leased Lands


 Proposed Location of Ground-mounted PV Facility

FIGURE 2
Soil Capacity Map

Part Lots 4 and 5, Concession B
Township of Dorchester

Prepared for: **RECURRENT ENERGY**

Prepared by: **COLVILLE CONSULTING INC.**

DATE: NOVEMBER 2009

FILE: C09026_02Brulotte

Figure 3 - Site Layout



PRELIMINARY DRAWING
NOT TO BE USED FOR CONSTRUCTION

NOTES:

- AERIAL IMAGERY OBTAINED FROM GOOGLE EARTH PRO, IMAGERY DATE 2006
- ROAD CONSTRUCTION PROCEDURES
 - CLEAR & GRUB ALL AREAS PROPOSED FOR ROAD AND PARKING LOT CONSTRUCTION.
 - STRIP & REMOVE ALL TOPSOIL.
 - SHAPE & PROOF-ROLL SUBGRADE.
 - SHAPE & GRADE DITCHES & SWALES.
 - PLACE, SHAPE AND COMPACT GRANULAR SUBBASE AND BASE MATERIALS AS FOLLOW:

TYPE 1 - 300mm GRANULAR "B" SUBBASE, 150mm GRANULAR "A" BASE.
 TYPE 2 - 200mm GRANULAR "B" SUBBASE, 150mm GRANULAR "A" BASE.
 TYPE 3 - 150mm TO 200mm GRANULAR "A".

-RE-VEGETATE DITCHES AND SWALES.

CULVERTS:

- CULVERT SHALL BE CORRUGATED STEEL PIPE OR RIBBED PVC PIPE INSTALLED IN ACCORDANCE WITH OPSD.
- MINIMUM CULVERT DIAMETER:
300mm Min. Dia. FOR MINOR CULVERTS
600mm Min. Dia. FOR MAIN CULVERTS
REFER TO PLANS FOR CULVERT LOCATIONS.

APP. SCALE:
1:1500

LEGEND:

- INVERTER / XFMR EQUIPMENT PAD
- SOLAR ARRAY
- LEASE BOUNDARY
- ACCESS ROAD
- PROPOSED FENCE
- ADDITIONAL CONSTRUCTIBLE AREA THAT MAY BE USED FOR THE FACILITY
- POTENTIAL TEMPORARY LAY-DOWN AND PARKING AREA

REFERENCE NO. 1088760100-E0001-05

REV.	DATE	DESCRIPTION	APPROVED BY
05	11.01.26	ISSUED FOR REVIEW	
04	11.01.24	ISSUED FOR REVIEW	
03	10.09.30	ISSUED FOR REVIEW	
02	10.06.21	ISSUED FOR REVIEW	
01	10.05.21	ISSUED FOR REVIEW	

RECURRENT ENERGY - BREEN 2 10MW AC

SOLAR GENERATION FACILITY - SITE LAYOUT

WARDROP | A TETRA TECH COMPANY

