



Peer-Review: EIS and Vegetation Plan SolarBank BESS Facility



Township of Armour



219 Peggs Mountain Road, Armour Township



April 28, 2025 (v1.0)



Planners | Surveyors | Biologists | Engineers

Township of Armour
PO Box 533, 56 Ontario Street
Burk's Falls, Ontario
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April 28, 2025

Subject: Peer Review of SolarBank Environmental Impact Study and Vegetation Management Plan the proposed BESS facility at 219 Peggs Mountain Road, Armour Township.

TULLOCH Engineering ('TULLOCH') has been retained to undertake a peer-review of Environmental Impact Study ('EIS') and Vegetation Management Plan submissions made by SolarBank (the 'Proponent') in partial fulfillment of municipal applications to construct a Battery Energy Storage System ('BESS') facility at 219 Peggs Mountain Road, Armour Township (the 'Site'). Per municipal pre-consultation instructions dated January 11, 2024, the Proponent was instructed to provide a:

"Site assessment / environmental impact study (at application)

A preliminary site assessment may be required for certain types of development proposals as outlined in Official Plan Section 2.4.3(c)(iv). Such an assessment would determine whether more detailed work is warranted by a specialist. Any proposal for development or site alteration within or adjacent to any environmental constraint area including wetlands identified in the Official Plan or through a preliminary site assessment shall provide an inventory and assessment of sensitive features and functions to determine areas to be protected and any mitigation measures necessary. This assessment may include a tree or wetland preservation plan if the proposed development may have an adverse effect on wetlands or a significant tree or group of trees including a woodlot. Ministry of Environment input and approval required (Phase 1) Impacts on air, water, wildlife, habitats, human health – includes mitigation measures."

And a:

"Vegetation Management Plan - Schedule to Site Plan – buffer area from softwood, hayfield, etc."

In response to the above pre-consultation, the Proponent has submitted the following documents that are the subject of this peer review:

- *219 Peggs Mountain Road, Burk's Falls, Ontario: Phase One Environmental Site Assessment*. Prepared by EXP Services Inc. First released in draft on January 16, 2024. Published January 23, 2024. Revised January 10, 2025.
- *EASR Confirmation of Registration*. Provided by the Ministry of the Environment, Conservation and Parks. Filed on August 28, 2024. Revised October 09, 2024.
- *Vegetation Plan: 903 BESS: 219 Pegg's Mountain Road, Burk's Falls, ON*. Prepared by SolarBank. Unspecified date.

Fulsome peer-review comments are tabulated in Attachment I. TULLOCH staff qualifications are provided in Attachment II.

Environmental Impact Study (EIS)

Section 2.4 (Environmental Constraints Areas) of the [Official Plan: Township of Armour](#) open with a definition of Environmental Constraints Area as:

"The purpose of this section is to recognize that certain areas of Armour Township have special environmental values and other constraints which should be taken into account when applications for new or extended development are considered by Council. Such areas include mineral aggregate resource deposits, significant wildlife habitats, deer wintering areas, significant habitat of endangered and threatened species, abandoned mine hazards, significant fish habitat and wetlands. Except for significant habitat of endangered and threatened species, these features, where known, are shown on Schedule "B" to this Plan as environmental constraints to development."

Section 5.1.2(f) of the Official Plan (Site Assessment and/or Environmental Impact Study) defines an EIS study as:

"A preliminary site assessment may be required for certain types of development proposals as outlined in OP Section 2.4.3(c)(iii). Such an assessment would determine whether more detailed assessment is warranted by a specialist. Any proposal for development or site alteration within or adjacent to any environmental constraint area identified in the Official Plan of the Township of Armour or through a preliminary site assessment shall provide an inventory and assessment of sensitive features and functions to determine areas to be protected and any mitigation measures necessary."

And the referenced Official Plan Section 2.4.3(c)(iii) states:

“While a small number of locations of significant habitat of endangered and threatened species and significant wildlife habitat are known, the majority can only be identified through site assessment. Accordingly, before new site-specific planning approvals are granted for larger scale development (e.g. subdivisions/condominiums, major industrial or commercial developments), Council will generally require that an appropriate level of site assessment be carried out by a qualified professional before new planning approvals are granted. This will ensure that such significant habitats, if present, are identified. In the case of habitat of endangered species and threatened species, development and site alteration shall not be permitted, except in accordance with provincial and federal requirements.”

The 219 Peggs Mountain Road, Burk’s Falls, Ontario: Phase One Environmental Site Assessment report was reviewed against the above policies, and industry standards for Environmental Impact Studies, by Kelly Major (M.Sc. EP), Senior Ecologist with TULLOCH. His findings summarize as follows.

- The 219 Peggs Mountain Road, Burk’s Falls, Ontario: Phase One Environmental Site Assessment report appears to be a Phase One Environmental Site Assessment (‘Phase One ESA’) report, which differs in objective and scope from an EIS. As indicated in the executive summary of that report, *“a Phase One ESA is a systematic qualitative process to assess the environmental condition of a Site based in its history and current uses.”* Conversely, an EIS generally considers the current conditions of a site and assesses any foreseen future impacts of a proposed undertaking on the natural environment. The report authors identify that their Phase One ESA *“does not constitute an audit of environmental management practices.”*
 - We recommend that an Environmental Impact Study be prepared in alignment with Section 5.1.2(f) of the Official Plan (Site Assessment and/or Environmental Impact Study). As indicated in Section 2.4.3(c)(iii), this assessment should reflect an appropriate level of site assessments. Given the small footprint of the proposed facility, the passive nature of the land use, the existing similar land use, and the Site’s considerable distance from any major waterway or wetland system, we agree with the pre-consultation instructions that the scope of an EIS should focus on the confirmation of wetland presence / absence, impacts to wetlands (if present) and any impacts resulting from tree removal. In keeping with industry standards set out in Ontario’s [Natural Heritage Reference Manual](#), we recommend that the scope of the EIS include the footprint of the proposed BESS facility and areas within 120m.
 - It is noted that on-site investigations were performed by EXP Services Inc. on December 12, 2023. Site photos indicate snow cover. The timing of this field assessment would not be appropriate for the assessment of some environmental constraint areas. Specifically, wetlands are defined and mapped for municipal planning purposes according to Ontario’s Wetland Evaluation System based on plant community composition; this cannot be accurately assessed when the plant

community has senesced and is obscured by snow. Water features can also be obscured by snow. None of the aerial and site imagery reviewed by TULLOCH suggest the presence of wetlands or surface water features within 120m of the BESS Site. It is none-the-less recommended that an on-site investigation be performed during an appropriate time of year (leaf-on) to allow for a more defensible confirmation of the presence / absence of these sensitive features and functions, and to determine if any areas should be protected and / or any mitigation measures that should be adopted.

- The *219 Peggs Mountain Road, Burk's Falls, Ontario: Phase One Environmental Site Assessment* report included a review of some sources of provincial and federal data that would typically be consulted for an Environmental Impact Study; such as the Natural Heritage Information Centre make-a-map database. We recommend a more fulsome review of available resources be undertaken, such as federal (e.g., Species at Risk Act Aquatic Species Mapping), Provincial (e.g., Geospatial Ontario), Authoritative Atlas (e.g., Ontario Breeding Bird Atlas, Ontario Reptiles and Amphibians Atlas), and citizen science (e.g., iNaturalist, eBird) databases. It is also recommended that the EIS consult Schedule B of the Township's Official Plan (Environmental Constraints Areas). TULLOCH acknowledges that Schedule B of the Official Plan does not appear to attribute any constraint areas with this Site, but this fact should be verified and disclosed in an EIS.
- The *219 Peggs Mountain Road, Burk's Falls, Ontario: Phase One Environmental Site Assessment* report does not provide any assessment of project impacts on environmental constraint areas known (or likely) to be present at the Site. An Environmental Impact Study should assess project impacts on any observed environmental constraint areas on Site, or adjacent to the Site (typically within 120m). An EIS should also include mitigation strategies to avoid, or otherwise minimize, those impacts.
- Pre-consultation directives include "*Ministry of Environment input and approval required (Phase 1) Impacts on air, water, wildlife, habitats, human health – includes mitigation measures.*" The Proponent has consulted the Ministry of the Environment, Conservation and Parks (the 'MECP') via an EASR Registration under Section 20.21 (1) (a) of the Environmental Protection Act. They also sought a Freedom of Information request from the MECP for records pertaining to the Site. An EIS would be necessary to determine if other provincial (or federal) regulatory reviews are warranted. This is because such determinations are based on an understanding of any environmental constraints identified on a site, as well as an assessment of project impacts and residual impacts once mitigation strategies have been considered. Additional regulatory reviews would be triggered per the administering Ministry's policies. For example, the MECP would seek to be consulted should the presence of a threatened or endangered species be

confirmed at a site and actions were being proposed that would harm the species or damage its habitat (required for Endangered Species Act compliance). Fisheries and Oceans Canada (the 'DFO') would seek to be consulted if work is proposed within fish-bearing waters (for Fisheries Act compliance). We recommend provincial and federal consultations be pursued only in alignment with the policies of the corresponding Ministries, and this need should be evaluated by a qualified professional and outlined in an EIS.

Given that the Proponent included a Phase One Environmental Site Assessment in their submission, the Township requested that TULLOCH expand its review to also consider the 219 Pegg's Mountain Road, Burk's Falls, Ontario: Phase One Environmental Site Assessment report against O.Reg. 153/04; the standards of a Phase One Environmental Site Assessment. This expanded review was performed by Adam Kvas (P.Eng), Environmental Engineer with TULLOCH. His review comments are provided in Attachment I.

Vegetation Management Plan

The *Vegetation Plan: 903 BESS: 219 Pegg's Mountain Road, Burk's Falls, ON.*, prepared by SolarBank, was reviewed by Kelly Major (M.Sc. EP), Senior Ecologist with TULLOCH. Vegetation Management Plans are not defined in the Township's Official plan, except with regard to the conservation of shorelines in Section 2.2.17(c) which would not apply in this case. TULLOCH findings are as follows:

- Without a given definition of the intended objectives and scope of a Vegetation Management Plan, all comments below are considered suggestions.
 - The Vegetation Plan sets out objectives *"to establish an integrated vegetation management schedule for battery systems, utility collection lines, and access roads (as necessary) for the Project to preserve the reliability of the Project components."* It seeks to *"prevent outages associated with vegetation located on or near Project components, to minimize outages caused by insufficient clearances from nearby vegetation, and to implement inspection schedules, treatment schedules, and environmental controls to avoid off-site effects."* Given community concerns regarding fire risks, the Proponent may consider including the mitigation of fire risks (from within and from outside of the Site) as another objective of this document. TULLOCH acknowledges that the Proponent has also undertaken a Hazard Mitigation Analysis report (not reviewed by this reviewer); there may be opportunities to draw a more direct connection between the role of vegetation management and fire hazard mitigation.
 - The Vegetation Plan sets out a 30m vegetated setback from the BESS facility, and the facility is situated on a concrete surface. This 30m setback appears to align

closely with mitigations provided in Section 7.5.1.1 of Ontario's [Wildland Fire Risk Assessment and Mitigation Reference Manual](#). This Manual recommends that all vegetation be set back at least 10m from structures to prevent surface fires, followed by 20m of modified vegetation to avoid high-intensity and crowning fires. The Manual refers to these two areas as Priority Zones 1 and 2, respectively. Given community concerns regarding fire risks, the Proponent may consider clarifying how their vegetation management plan aligns with these provincial best practices. The Proponent may also consider if any Priority Zone 3 vegetation management (areas 30-100m of a structure) is warranted for this Site.

- The Vegetation Plan sets out a maintenance schedule that includes approximately four annual mows, with a goal of keeping grasses below 12-18 inches. We question if grass of this height within the 30m vegetative setback has the potential to facilitate ground-level fires under dry conditions. We recommend the Proponent clarify to what standard grasses should be maintained to prevent the spread of ground-level fires and whether the present mowing schedule will be adequate to meet that standard.

Closing

TULLOCH is pleased to provide this letter as record of our review and findings. Please contact the undersigned should you have any questions or require any clarifications.

Sincerely yours,



Kelly Major (M.Sc. EP)
Senior Ecologist
Certified environmental Professional



Adam Kvas (P.Eng)
Environmental Engineer

ATTACHMENT I

Peer-Review Comments

PEER REVIEW OF ENVIRONMENTAL IMPACT STUDY

Comment #	Section/Page number	Report Statement	TULLOCH Comment	Context / Recommendations
TULLOCH Comments with respect to the standards of an Environmental Impact Study (EIS). Reviewer: Kelly Major (M.Sc. EP; Senior Ecologist)				
1	Executive Summary and Section 2.0	"EXP Services Inc. (EXP) was retained ... to complete a Phase One Environmental Site Assessment " "A Phase One ESA is a systematic qualitative process to assess the environmental condition of a Site based in its history and current uses " "This Phase One ESA does not constitute an audit of environmental management practices..."	The pre-consultation dated January 11, 2024 requested a "Site Assessment / Environmental Impact Study." A Phase One ESA differs in objectives and scope from an Environmental Impact Study, with the latter being a forward looking assessment of foreseen project impacts on the natural environment and any proposed mitigations required to eliminate or minimise those impacts. The Township's official plan provides some guidance on their EIS expectations in Section 5.1.2(f) (Site Assessment and/or Environmental Impact Study), Section 2.4.3(c)(iii) , and Section 2.4.1 (Environmental Constraint Areas Definition).	We recommend that an Environmental Impact Study be prepared in alignment with Section 5.1.2(f) of the Official Plan (Site Assessment and/or Environmental Impact Study). As indicated in Section 2.4.3(c)(iii), this assessment should reflect an appropriate level of site assessments. Given the small footprint of the proposed facility, the passive nature of the land use, the existing similar land use, and the Site's considerable distance from any major waterway or wetland system, we agree with the pre-consultation instructions that the scope of an EIS should focus on the confirmation of wetland presence / absence, impacts to wetlands (if present) and any impacts resulting from tree removal. In keeping with industry standards set out in Ontario's Natural Heritage Reference Manual, we recommend that the scope of the EIS include the footprint of the proposed BESS facility and areas within 120m.
2	Section 4 (Records Review)	Various sources of record reviews are listed.	The Phase One ESA report includes a review of some sources of provincial and federal data that would typically be consulted for an Environmental Impact Study; such as the Natural Heritage Information Centre make-a-map database. Several other sources of Natural Heritage information would typically be consulted as part of an EIS. Schedule B of the Township's Official Plan (Environmental Constraints Areas) does not appear to have been reviewed.	We recommend that a more fulsome review of available resources be undertaken, such as federal (e.g., Species at Risk Act Aquatic Species Mapping), Provincial (e.g., Geospatial Ontario), Authoritative Atlas (e.g., Ontario Breeding Bird Atlas, Ontario Reptiles and Amphibians Atlas), and citizen science (e.g., iNaturalist, eBird) databases. It is also recommended that the EIS consult Schedule B of the Township's Official Plan (Environmental Constraints Areas). TULLOCH acknowledges that Schedule B of the Official Plan does not appear to attribute any constraint areas with this Site, but this fact should be verified and disclosed in an EIS.
3	Section 4.3.2 (Topography, Hydrology and Geology)	"The Magnetawan River is located approximately 900 m north o the Site."	This statement may be correct relative to the lot frontage and road right-of-way. Regarding the footprint of the BESS, the Magnetawan River is located approximately 1,400 m to the north.	We recommend that any references to the proximity of the Magnetawan River be revised to 1,400 m.
4	Section 4.3.4 (Water Bodies and Areas of Natural Significance)	Watercourses "were not observed during our site inspection ". The "site was snow-covered at the time ".	See Comment 5 (below) regarding appropriate timing of on-site investigations.	See Comment 5 (below) regarding appropriate timing of on-site investigations.
5	Section 6.1 (Site Reconnaissance General Requirements) Appendix J (Site Photos)	"The Phase One Site reconnaissance was conducted on December 12, 2023..." Site photos indicate snow cover.	The timing of this field assessment would not be appropriate for the assessment of some environmental constraint areas. Specifically, wetlands are defined and mapped for municipal planning purposes according to Ontario's Wetland Evaluation System based on plant community composition; this cannot be accurately assessed when the plant community has senesced and is obscured by snow. Water features can also be obscured by snow.	None of the aerial and site imagery reviewed by TULLOCH suggest the presence of wetlands or surface water features within 120m of the BESS Site. It is none-the-less recommended that an on-site investigation be performed during an appropriate time of year (leaf-on) to allow for a more defensible confirmation of the presence / absence of these sensitive features and functions, and to determine if any areas should be protected and / or any mitigation measures be adopted.
6	General Comment		The Phase One ESA report does not provide any assessment of project impacts on environmental constraint areas known (or likely) to be present at the Site. It also provides no mitigations to eliminate or minimise those impacts.	We recommend an Environmental Impact Study that assesses project impacts on any observed environmental constraint areas on Site, or adjacent to the Site (typically within 120m). The EIS should also include mitigation strategies to avoid, or otherwise minimize, those impacts.



Comment #	Section/Page number	Report Statement	TULLOCH Comment	Context / Recommendations
7	General Comment		Pre-consultation directives include “ <i>Ministry of Environment input and approval required (Phase 1) Impacts on air, water, wildlife, habitats, human health – includes mitigation measures.</i> ” It is unclear the intent of this instruction. The Proponent has consulted the Ministry of the Environment, Conservation and Parks (the ‘MECP’) via an EASR Registration under Section 20.21 (1) (a) of the Environmental Protection Act. They also sought a Freedom of Information request from the MECP for records pertaining to the Site. An EIS would be necessary to determine if other provincial (or federal) regulatory reviews are warranted. This is because such determinations are based on an understanding of any environmental constraints identified on a site, as well as an assessment of project impacts and residual impacts once mitigation strategies have been considered. Additional regulatory reviews would be triggered per the administering Ministry’s policies. For example, the MECP would seek to be consulted should the presence of a threatened or endangered species be confirmed at a site and actions were being proposed that would harm the species or damage its habitat (required for Endangered Species Act compliance). Fisheries and Oceans Canada (the ‘DFO’) would seek to be consulted if work is proposed within fish-bearing waters (for Fisheries Act compliance).	We recommend that any further provincial (or federal) consultations be pursued only in alignment with the policies of the corresponding Ministries, and this need should be evaluated by a qualified professional as part of the EIS. We generally caution against initiating unnecessary provincial (or federal) regulatory reviews as this can misalign with Ministry policies and result in unnecessary regulatory delays.

PEER REVIEW OF ENVIRONMENTAL IMPACT STUDY

TULLOCH Comments with respect to Phase One Environmental Impact Assessment standard in O.Reg. 153/04. Reviewer: Adam Kvas (P.Eng; Environmental Engineer)				
Comment #	Section/Page number	Report Statement	TULLOCH Comment	Context / Recommendations
8	1-Executive Summary/Page 4	It is EXP's understanding that the Client intends to develop the northern portion of the Site with a Battery Energy Storage System (BESS) as continued industrial land use. It is noted that the development will include a concrete slab on-grade structure with associated underground utility lines and small building structures to house the equipment. This report has been prepared to support the continued industrial use of the Site. Given that there is no proposed change in land use, no Record of Site Condition (RSC) will be required for the site as set out in Ontario Regulation 153/04, as amended (O.Reg. 153/04).	<p>A Phase I Environmental Site Assessment (ESA) is typically conducted to evaluate the existing environmental condition of a property in scenarios such as property transactions, financing requirements, or land use changes requiring municipal approval. The primary intent of an ESA is to assess potential environmental risks rather than directly supporting new development.</p> <p>As stated in Ontario Regulation 153/04, an RSC is required when a site's land use transitions to a more sensitive use, including agricultural, institutional, parkland, residential, or commercial purposes. If the proposed development maintains its industrial designation, an RSC would not typically be required under the regulation. However, ensuring compliance with other environmental due diligence processes remains important for site development.</p>	<p>It is recommended that the <i>Township of Armour's Development Application Pre-Consultation Checklist, dated January 11, 2024</i>, be reviewed by all affected parties to ensure alignment with regulatory and procedural requirements.</p> <p>Section 7 of the checklist specifies the need for a Site Assessment/Environmental Impact Study, rather than an Environmental Contamination Report. However, the report provided falls under the category of an Environmental Contamination Report, which was not requested by the Township.</p> <p>To mitigate potential confusion regarding the required environmental deliverable, it is recommended that the Development Application Pre-Consultation Checklist be updated as follows to explicitly clarify distinctions between a Environmental Site Assessment, and Environmental Impact Study.</p> <div><p>Environmental Site Assessment</p><p><input type="checkbox"/> Environmental contamination report (at application <input type="checkbox"/>) (during processing <input type="checkbox"/>)</p><p>Any development or site alteration on lands or adjacent to lands that were previously used for a purpose that may have caused contamination of the property should be reviewed to address the need for further environmental testing or remediation in accordance with Provincial regulations/guidelines.</p><p>Environmental Impact Study</p><p><input checked="" type="checkbox"/> Site assessment / environmental impact study (at application <input checked="" type="checkbox"/>) (during processing <input type="checkbox"/>)</p><p>A preliminary site assessment may be required for certain types of development proposals as outlined in Official Plan Section 2.4.3(c)(iv). Such an assessment would determine whether more detailed work is warranted by a specialist. Any proposal for development or site alteration within or adjacent to any environmental constraint area including wetlands identified in the Official Plan or through a preliminary site assessment shall provide an inventory and assessment of sensitive features and functions to determine areas to be protected and any mitigation measures necessary. This assessment may include a tree or wetland preservation plan if the proposed development may have an adverse effect on wetlands or a significant tree or group of trees including a woodlot. Ministry of Environment input and approval required (Phase 1) Impacts on air, water, wildlife, habitats, human health – includes mitigation measures</p></div>
9	1-Executive Summary/Page 4	It is noted that general environmental management and housekeeping practices were reviewed as part of this assessment insofar as they could impact the environmental condition of the property. However, a detailed review of regulatory compliance issues was beyond the scope of our investigation.	<p>There is a typographical error in "insofar" that should be corrected for clarity. Additionally, the language in this paragraph may be misleading, as it implies a review of environmental management related to the <u>proposed</u> Battery Energy Storage System (BESS) development. However, this is not required and is not further elaborated within the report.</p> <p>Furthermore, the reference to regulatory compliance issues lacks a clear link to relevant regulatory standards or guidelines, making it difficult for the reviewer to assess the intended regulatory scope. Clarifying the specific compliance aspects referenced or removing ambiguous language may help improve the precision of this section.</p>	<p>The sentences in question do not align with the intended scope and context of the Environmental Site Assessment (ESA) report. To ensure accuracy and prevent misinterpretation, it is recommended that the Township seeks clarification from the author regarding the specific regulatory compliance issues referenced in the report.</p>

Comment #	Section/Page number	Report Statement	TULLOCH Comment	Context / Recommendations
10	1-Executive Summary/Page 4	Based on the findings of this Phase One ESA, and work previously completed by EXP, no APECs were identified at the Site.	Typically the Potentially Contaminated Activities (PCA) are presented in the executive summary before providing a conclusion on the APECS. Acronym APECS needs to be defined (first mention).	Industry best practices suggest that key environmental terminology and regulatory acronyms should be clearly introduced upon first use to avoid any potential ambiguity. Providing a definition for APECs ensures that all stakeholders—including non-technical readers—fully understand the environmental assessment findings. Moreover, presenting PCAs before concluding on APECs aligns with standard ESA reporting conventions, reinforcing logical sequencing within the report.
11	2- Introduction/Page 5	It is EXP's understanding that the Client intends to develop the northern portion of the Site with a Battery Energy Storage System (BESS) as continued industrial land use. It is noted that the development will include a concrete slab on-grade structure with associated underground utility lines and small building structures to house the equipment	The inclusion of details regarding the proposed development is not applicable to a Phase I Environmental Site Assessment (ESA) report, as the primary purpose of a Phase I ESA is to identify potential environmental risks based on historical and existing site conditions, rather than assessing future development plans.	
12	4.1.1 Phase One Study Area Determination / Page 8	The Phase One Study Area and a Surrounding Land Use Plan are shown on Figure 2.	Figure 2 does not depict the 250-meter offset for the Phase One Study Area surrounding the site boundary. To maintain consistency with Ontario Regulation 153/04 standards, the rationale for including wholly neighboring properties within the Phase One Study Area should be explicitly stated in this section.	Ontario Regulation 153/04 establishes specific requirements for defining the Phase One Study Area, including a 250-meter offset to assess potential environmental risks. If the study area deviates from this standard by including additional properties, a clear justification should be provided to ensure transparency and regulatory compliance. Clarifying this rationale will help prevent ambiguity and enhance the technical accuracy of the report.
13	4.3.1 Aerial Photographs / Page 11	A solar farm is observed on the Site in 2020. However, it is noted that the solar farm itself is not considered to pose an environmental concern to soil and groundwater at the Site. Furthermore, the transformer associated with the solar panels was pole mounted and not placed directly on the ground. This, it is not anticipated to directly impact soil or groundwater at the Site.	<p>The justification for why the solar farm is not considered an environmental concern is not provided until Section 6.2.16 of the report. To improve clarity, key environmental considerations should be briefly summarized earlier in the report to ensure a logical flow of information.</p> <p>Additionally, it remains unclear whether each individual solar panel has a pole-mounted transformer or whether a single transformer serves the entire solar farm. This distinction should be explicitly clarified within the assessment.</p> <p>Furthermore, Drawing 1 depicts a transformer north of the solar farm, while Drawing 2 identifies PCA 1 as the solar farm itself, introducing potential inconsistencies. Clear differentiation should be provided on what specific feature is designated as the PCA and why.</p> <p>To enhance transparency, a direct inquiry to the Site Owner should be made regarding the presence of insulating fluids within any solar farm components, including transformers, to determine if there is any potential risk associated with Polychlorinated Biphenyls (PCBs).</p>	<p>Transformers used in solar panel systems are typically designed for power conversion and voltage regulation, rather than serving as insulating fluid reservoirs containing PCBs—which were historically used across older transformer technologies.</p> <p>Clarifying this distinction within the report would prevent any misinterpretation of potential environmental risks and ensure that all relevant regulatory considerations are addressed.</p>

Comment #	Section/Page number	Report Statement	TULLOCH Comment	Context / Recommendations
14	4.3.1 Aerial Photographs / Page 11	Quarry Operation - PCA 2 (other) Quarry	The identification of Quarry Operation – PCA 2 (Other) Quarry requires a justification for its inclusion, given that the site is located 500 meters outside the prescribed 250-meter Phase One Study Area. The PCA identifier on Figure 2 should either be adjusted to fall within the 250-meter offset study area or a clear rationale for including the full extent of the quarry property should be provided in Section 4.1.1.	Ontario Regulation 153/04 establishes standard boundaries for defining PCAs within a Phase One Study Area, typically 250 meters from the site boundary. If additional properties beyond this distance are included in the assessment, the basis for their inclusion should be explicitly justified using historical or environmental risk factors. Without further evidence of contaminating activities associated with the quarry, its designation as a PCA could lead to uncertainty <u>regarding its environmental relevance to the site in question.</u>
15	4.3.3 Fill Materials / Page 12	Given that the Site has never been developed prior to the installation of the solar farm structures and the elevation at the developed area does not appear to vary significantly relative to the surrounding properties, it was unlikely that fill material was brought to the Site for grading purposes and fill is not anticipated to be present at the Site	The statement suggests that fill material is not anticipated to be present based on site elevation and historical development patterns. However, without explicit confirmation from interviews, ambiguity remains regarding whether fill was imported as a sub-base for the solar farm structures. If this question was asked during the interview process, documenting the response would eliminate uncertainty in this section.	Under Ontario Regulation 153/04, the Importation of Fill Material of Unknown Quality is classified as a Potentially Contaminating Activity (PCA) when applicable. If fill material was introduced during construction, assessing its source, composition, and potential environmental impact would be necessary. Including direct confirmation from interviews can strengthen the accuracy and transparency of the report.
16	4.3.4 Water Bodies / Page 12	Based on the review of available resources from the Ministry of Natural Resources and Forestry website on December 15, 2023, no areas of natural significance were identified at the Site or within 30 m of the Site.	Each of the nine (9) the definition of the area of natural significance should be presented and justified in this section. This section is incomplete. According to O.Reg 153/04, "areas of natural significance" means any of the following: 1. An area reserved or set apart as a provincial park or conservation reserve under the Provincial Parks and Conservation Reserves Act, 2006. 2. An area of natural and scientific interest (life science or earth science) identified by the Ministry of Natural Resources as having provincial significance. 3. A wetland identified by the Ministry of Natural Resources as having provincial significance. 4. An area designated by a municipality in its official plan as environmentally significant, however expressed, including designations of areas as environmentally sensitive, as being of environmental concern and as being ecologically significant. 5. An area designated as an escarpment natural area or an escarpment protection area by the Niagara Escarpment Plan under the Niagara Escarpment Planning and Development Act. 6. An area identified by the Ministry of Natural Resources as significant habitat of a threatened or endangered species. 7. An area which is habitat of a species that is classified under section 7 of the Endangered Species Act, 2007 as a threatened or endangered species. 8. Property within an area designated as a natural core area or natural linkage area within the area to which the Oak Ridges Moraine Conservation Plan under the Oak Ridges Moraine Conservation Act, 2001 applies.	There should be a table or similar within the body of the report why each of the nine definitions are not applicable to the Site with justification and references.

PEER REVIEW OF ENVIRONMENTAL IMPACT STUDY

Comment #	Section/Page number	Report Statement	TULLOCH Comment	Context / Recommendations
17	4.4 Site Operating Records / Page 13	There were no records of environmental significance available for review at the time of this Phase One ESA.	The report statement should clarify whether no records of environmental significance exist or whether records were unavailable for review at the time of the Phase One ESA.	This distinction is critical to understanding whether the absence of records is due to non-existence or restricted access before the report's preparation.
18	5 - Interview/ Page 14	An interview was conducted with David Creasor, the site owner, via e-mail on December 5,2023. David Creasor has been familiar with the site for 2 years.	<p>The interview provides limited site history based on the interviewee's 2-year familiarity with the site. To strengthen the completeness of the Environmental Site Assessment (ESA), additional site-specific questions should be incorporated to clarify potential environmental risks and site management practices, particularly regarding the solar farm and associated components.</p> <p>Recommended Additional Questions:</p> <ul style="list-style-type: none">- What year was the solar farm constructed? (Provides historical context for potential site modifications or contamination risks.)- Are copies or details available regarding the installed solar panels and associated transformer equipment? (Confirms whether materials or components have known environmental concerns.)- If no imported fill is present, how are the solar panels mounted to the native ground? (Ensures clarity on installation methods and whether any subsurface modifications have occurred.)- How is vegetation maintained within the solar farm? (Determines if herbicides or other environmental management practices could impact the site condition.)	Some solar farms utilize pesticides, particularly herbicides, for vegetation management. If such practices are implemented at the site, Potentially Contaminating Activity (PCA) 40—which includes pesticide manufacturing, processing, bulk storage, and large-scale applications—could be applicable under Ontario Regulation 153/04.
19	6.2.1 Site Description and Buildings /Page 15	Hydro poles were observed along the driveway.	If any of the Hydro poles had mounted transformers and they were located within the 250 m study area, they should be identified as PCAs.	
20	6.2.13 Areas of Stained Soil, Pavement or Stressed Vegetation / Page 17	Given the use of the Site as a solar farm and undeveloped land and because it is mainly covered by undisturbed vegetation, the reduced visibility of the ground surface is considered to be of low concern and is not anticipated to impact the findings and conclusions of this Phase One investigation.	Some vegetation disturbance is evident from aerial imagery for the development of the solar farm and access road.	

Comment #	Section/Page number	Report Statement	TULLOCH Comment	Context / Recommendations
21	6.2.14 Fill and Debris / Page 17	No fill was observed to be present at the Site. Given that the Site has never been developed prior to the installation of the solar farm structures and the elevation at the developed area does not appear to vary significantly relative to the surrounding properties, it was unlikely that fill material was brought to the Site for grading purposes.	Given that the Site was snow-covered at the time of the inspection as described in section 6.2.13, how were the assessors able to determine that no fill was observed at the Site? Investigation of fill could be determined during the interview process.	
22	Section 7.1 - Current and Past Uses/ Page 22	Based on our review of the inspection reports, previous environmental report and aerial photographs, the Site was first developed circa 2016 as the current solar farm.	While the review of inspection reports, previous environmental studies, and aerial photographs provides an approximate development date (circa 2016) for the solar farm, the most reliable determination of the actual construction date should be obtained through direct communication with the Site owner.	
23	Section 7.2 - Potentially Contaminating Activities (PCAs)	No, the solar farm itself is not considered to pose an environmental concern to soil and groundwater at the Site. Furthermore, the transformer associated with the solar panels was pole mounted and not placed directly on the ground. This, it is not anticipated to directly impact soil or groundwater at the Site.	Tulloch agrees with the overall determination that the Potentially Contaminating Activity (PCA) does not contribute to an Area of Potential Environmental Concern (APEC). However, the justification should explicitly confirm that no insulating fluids containing Polychlorinated Biphenyls (PCBs) are present within any components of the solar farm, including the transformer. This confirmation strengthens the environmental assessment and eliminates any remaining ambiguity.	PCBs were historically used in electrical transformers as insulating fluids, and while modern solar farm transformers are generally designed for power conversion and voltage regulation, verification is necessary to ensure compliance with Ontario Regulation 153/04. If PCBs are confirmed absent, this should be clearly stated within the report to reinforce the conclusion that no environmental risks to soil or groundwater exist due to the solar farm infrastructure.
24	Section 7.2 - Potentially Contaminating Activities (PCAs)	No, based on the significant distance (500 m) separating the actual quarry operations from the site.	Tulloch agrees.	
25	Section 7.2 - Potentially Contaminating Activities (PCAs)	Lack of information on vegetation maintenance.	Tulloch suggests that information on vegetation management processes at the solar farm be obtained to assess whether Potentially Contaminating Activity (PCA) 40—which includes pesticide manufacturing, processing, bulk storage, and large-scale applications—is applicable under Ontario Regulation 153/04.	
26	Figures	Satellite Imagery Sources	Source and year of satellite imagery should be referenced within the Drawings.	
27	Appendix D	ERIS report Project Property	The ERIS project property boundary does not match the Site boundary presented within the report. It also includes Pins 0685 and 0684.	In this case this had no impact on the overall report, however, could have created some confusion for determining on-Site vs. off-Site PCAs if any were triggered within the ERIS report.
28	Appendix K	Phase One ESA Conceptual Site Model	The CSM should be included in Section 7 of the report if following the RSC O.Reg 153/04 reporting format.	



Comment #	Section/Page number	Report Statement	TULLOCH Comment	Context / Recommendations
1	General Comment		Vegetation Management Plans are not defined in the Township’s Official plan, except with regard to the conservation of shorelines in Section 2.2.17(c) which would not apply in this case. Without a given definition of the intended objectives and scope of a Vegetation Management Plan, all comments herein are considered suggestions.	
2	Objectives	The Vegetation Plan sets out objectives “to establish an integrated vegetation management schedule for battery systems, utility collection lines, and access roads (as necessary) for the Project to preserve the reliability of the Project components.” It seeks to “prevent outages associated with vegetation located on or near Project components, to minimize outages caused by insufficient clearances from nearby vegetation, and to implement inspection schedules, treatment schedules, and environmental controls to avoid off-site effects”.		Given community concerns regarding fire risks, the proponent may consider including the mitigation of fire risks (from within and from outside of the Site) as another objective of this document. TULLOCH acknowledges that the Proponent has also undertaken a Hazard Mitigation Analysis report (not reviewed by this reviewer); there may be opportunities to draw a more direct connection between the role of vegetation management and hazard mitigation.
3	Vegetated Setbacks	The Vegetation Plan sets out a 30m vegetated setback from the BESS facility, and the facility is situated on a concrete surface.	This 30m setback appears to align closely with mitigations provided in Section 7.5.1.1 of Ontario’s Wildland Fire Risk Assessment and Mitigation Reference Manual. This Manual recommends that all vegetation be set back at least 10m from structures to prevent surface fires, followed by 20m of modified vegetation to avoid high-intensity and crowning fires. The Manual refers to these areas as Priority Zones 1 and 2, respectively.	Given community concerns regarding fire risks, the proponent may consider clarifying how their vegetation management plan aligns with these provincial best practices. The proponent may also consider if any Priority Zone 3 vegetation management (areas 30-100m of a structure) is warranted for this Site.
4	Maintenance Schedual	A maintenance schedule is provided that includes approximately four annual mows, with a goal of keeping grasses below 12-18 inches.	We question if grass of this height within the 30m vegetative setback has the potential to facilitate ground-level fires under dry conditions.	We recommend the Proponent clarify to what standard grasses should be maintained to prevent the spread of ground-level fires and whether the present mowing schedule will be adequate to meet that standard.

ATTACHMENT II

Statement of Qualifications

Kelly Major, M.Sc. EP is a Senior Terrestrial Ecologist and certified Environmental Professional (EP) at TULLOCH Engineering. He has worked as a biologist throughout Ontario for nearly 15 years in the consulting, government, and academic sectors. He began his career as a community ecologist with several academic journal and MNR policy publications to his credit.

As a consultant, Mr. Major is TULLOCH's terrestrial technical lead with specialties in environmental impact assessment, species at risk, Natural Heritage, and wetland evaluation. He has participated in over 350 projects, working with industry and public sector clients to find feasible and reasonable solutions that allow their projects to proceed in compliance with environmental legislation, regulatory policies and general best practices.

Mr. Major is recognized by the MNR as formally trained in the Ontario Wetland Evaluation System (OWES) and the Ontario Ecological Land Classification (ELC) system. He is also recognized by the MTO as RAQS certified in the Natural Sciences. He has served as an expert witness in LPAT tribunals.

Adam Kvas, P.Eng is a Project Engineer at TULLOCH Engineering. Adam is an environmental engineer with extensive experience in various programs across all Ontario, including extensive time spent on active mines and abandoned mines. He has specialized in subsurface investigations, remediation of contaminated soils and groundwater, and regulatory compliance monitoring in remote locations.

Adam possesses a wide range of skills, including project coordination, hydrogeological and hydrology assessments, developing specification packages, contract administration, technical report writing, and has managed hundreds of projects. His expertise includes performing small-scale landfill capacity surveys, expansion designs, site decommissioning, site remediation, remedial options analysis, cost estimates and regulatory compliance monitoring.

