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**Summary of Issues**  
**Written Submissions of the Saugeen Ojibway Nation**  
**Bruce C Initial Project Description**

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## **Preamble:**

### **SON and Anishinaabekiing**

SON comprises the Anishinaabe People of the Chippewas of Nawash Unceded First Nation and Chippewas of Saugeen First Nation. Anishinaabekiing, SON's traditional and Treaty Territory, encompasses much of the Saugeen (Bruce) Peninsula, extending down south of Goderich and east of Collingwood. The waters surrounding these lands and the lakebed of Lake Huron from the shore to the international boundary with the United States and to halfway across Georgian Bay are also part of SON's Territory.

SON's ancestors have used and occupied Anishinaabekiing since time immemorial and its People continue to do so today. SON's Territory consists of everything integral to life—the lands, rivers, lakes, winds, plants, people, animals, and fish. Anishinaabekiing has sustained SON People physically and spiritually for countless generations and must continue to do so far into the future.

SON has signed numerous treaties establishing a Nation-to-Nation relationship with the Crown that allow others to share the use of SON's Territory while protecting and preserving SON's rights to use and rely on its Territory for all time in the way it always has.

The development of the nuclear industry in SON Territory has played a major role in shaping the land and SON People's place within it. Without consultation, SON became host to:

- Canada's first commercial-scale Canada Deuterium Uranium reactor at Douglas Point,
- one of the world's largest operating nuclear facilities at the Bruce site,
- the vast majority of Ontario's low and intermediate level waste ("L&ILW") at the Western Waste Management Facility,

- the Western Clean-Energy Sorting and Recycling Facility, and
- 40 percent of Canada's spent fuel.

### **Bruce C IPD and Impact Assessment Agency Canada**

The proposed expansion of the Bruce nuclear facility stands to have significant impacts on SON's lands, waters, and People. Considering the potential impacts and risks associated with the Bruce C Project, SON emphasizes the critical need for a rigorous and comprehensive assessment process. It is essential that this process not only fulfills regulatory requirements but also meets the constitutional obligations owed to SON. Ultimately, this process must be capable of providing SON members with the information necessary to weigh the proposal and to determine whether the expansion can be supported.

SON expresses concern that Bruce Power proceeded with its submissions and that IAAC accepted the Initial Project Description (IPD) before a proper plan for assessment and other necessary procedural accommodations could be established. It should be noted that the reviews by SON's experts that follow (referred to herein as SON's "Summary of Issues") regarding the IPD are preliminary and not representative of a rigorous or comprehensive assessment. Within the Summary of Issues, experts express that additional review of past studies, databases, etc., is required. Additional subject matter experts, including in key areas such as social and economic impacts and cumulative effects, are also in the process of being identified and engaged, and plans are being developed for the engagement of SON knowledge holders regarding the potential impact of the project and current understanding of said knowledge. Additionally, the development of the Summary of Issues does not indicate SON's agreement with legislative timelines. SON is providing these comments as part of its ongoing dialogue with IAAC, and not as a response to IAAC's request for SON's participation in the comment period.

On SON's behalf, experts in related areas of study have only begun to review the IPD.

Aquatic, terrestrial, archaeological, hydrogeological and radiological effects have been considered.

SON intends to continue its review of the IPD and to continue to advance its understanding of the issues raised by Bruce Power's proposal both independently, and collaboratively with IAAC and Bruce Power. This work will need to proceed iteratively given SON's ongoing efforts to build its capacity to address the many issues raised by the proposal. It is hoped that the reviews that follow will provide a starting point for substantive discussions between SON, IAAC, and Bruce Power, with the understanding that additional issues will be raised in the coming weeks and months. The comments that follow are not to be taken as SON's comprehensive submissions on the Initial Project Description. As SON continues to build its internal capacity and engages additional experts in key areas such as socioeconomic impacts, cumulative effects, and climate change, SON intends to provide further comments.

## **Saugeen Ojibway Nation Summary of Issues - Bruce C Initial Project Description (August 2024) - Environmental Area of Potential Concern: Nuclear Safety Concerns and Radiological Environmental Impacts**

(By: J. Stewart Bland, SON Technical Advisor, Certified Health Physicist)

### **Overview**

I performed a limited initial review of the Bruce C Initial Project Description (IPD), focusing on nuclear safety concerns and radiological environmental impacts. The IPD is a significant, major step in promoting a site for further development, and in this case new nuclear build at the Bruce Nuclear Site. It represents an overview of the scope and issues that are to be addressed.

With no specific plant design identified, my review is limited to identifying important nuclear safety and radiological environmental issues confronting SON with the existing 8 CANDU reactors and Western Waste Management Facility currently at Bruce.

As stated in Section 10.0:

*“The Project will have a maximum production or generation capacity of up to approximately 4,800 MWe. Bruce Power has not decided on a specific reactor design at this time. Accordingly, the project description uses a technology neutral approach through use of a bounding PPE [plant parameter envelope] as the Project basis. Development of a bounding PPE approach is based on an available set of reactor designs which allows the IA to progress in parallel with a technology evaluation for a preferred reactor design. Within the context of the Project, this approach will provide bounding information to facilitate an assessment that can accommodate multiple reactor designs, while still enabling the CNSC and IAAC to perform required assessments.”*

The IPD identifies five possible reactor designs for consideration; and then further states for illustrative purposes and “... subject to change based on the ongoing technology evaluation process, continued internal development and engagement with Indigenous Nations and Communities.”

Therefore, the IPD focus is not on nuclear safety or radiological environmental concerns that new nuclear would bring, but solely on justifying that the Bruce site is suitable for the addition of 8,400 MWe of new nuclear capacity. A fundamental question is the wisdom and cumulative risks and impact of having over 16,000 MWe of nuclear

capacity, along with waste processing and storage from other nuclear in the Province, at a single site.

In Section 12.1, Alternative Means, it is identified that Bruce Power is considering alternative means of achieving the Project's objective of producing 4,800 Mwe of new nuclear generating capacity at the Bruce site. The alternative means include available reactor technology, alternative locations on the Bruce site, alternative condenser cooling strategies, switchyard design, and radioactive waste management strategies, which includes interim waste storage, pending NWMO's siting of a repository for high-level waste with potentially collocated or proximate projects for intermediate and potentially low-level waste. However, "alternative" does not mean considering the merits or even advantages of location at a different site.

### **Nuclear Safety Design**

New nuclear should not be considered without a comprehensive and complete consideration of nuclear safety and risks. Minimization of the cumulative risks of accidents and the devastating impact that any accident would have on the SON Territory needs to be a top consideration. The 8 CANDU reactors already pose a risk; this is an existing risk. Is adding additional risks (and consequences) acceptable? Is there a limit? While CNSC may consider the risks acceptable from a single nuclear reactor on the order  $10^{-5}$  per year -- that risk is for a single reactor for a single year. What is the cumulative risk for up to 16 times this capacity over 40 to 60 years of operation? Simple math shows that this is no longer trivial. The addition of new nuclear needs to be considered as added risk. One should not just look at the added risks but at measures that could be effective in reducing or mitigating current, along with cumulative, risks. This issue has not been considered in the IPD.

### **Nuclear Emergency Planning and Response**

With new nuclear comes the need for expanded emergency response resources and capabilities. Nuclear is unique in many aspects when ensuring safety of the surrounding communities, one of which is SON. SON's past engagement in nuclear emergency planning and preparedness has been limited; more engagement is required. Overall, the IPD does not address the additional demands needed to address nuclear emergency preparedness and response that new nuclear will require.

### **Nuclear Waste Management and Disposal**

No new nuclear should be considered without clearly identified and integrated waste management and disposal. Radioactive waste disposal, especially for spent fuel

and intermediate level waste, is a problem (risk) that must be solved. While the focus of NWMO, responsible for solving this dilemma, has been on spent fuel and intermediate-level waste, the accumulation of low-level waste should not be ignored. Continued above ground storage exposes the waste to environmental events that could lead to wide-spread environmental dispersion. The transportation of radioactive waste to/from the site for interim storage, poses a day-to-day risk. It is recognized that safety measures, including design, are built into the transportation and storage of radioactive waste; however, these need to be clearly identified and communicated during the planning stage.

### **Cumulative Effects on Environmental and Public Health and Safety**

While the concept of a PPE for defining suitability of a site for new nuclear, it has to carefully weigh and balance against any increase in current effects. Any increase should be mitigated, or balanced, with reductions elsewhere to result in a negative or no increase in risks and effects. One should not just look at what might be considered within acceptable bounds, like a thermal increase in lake water temperature or increases in releases of radioactive materials to the lake or air, but in designs that minimize, or even reduces pollutants for the site *in toto*. Even if it could be postured that new nuclear would be within the bounds of the so-called acceptable PPE, it does not demonstrate that the design represents a balanced and acceptable additional effect. This risk reduction needs to apply across all environmental insults, especially thermal and radiation (routine releases and accidents).



## **Saugeen Ojibway Nation Summary of Issues - Bruce C Initial Project Description (August 2024) - Environmental Area of Potential Concern - Groundwater/Surface Water**

(Prepared by Bill Blackport SON Technical Advisor, Hydrogeology)

### **Qualifying Statement**

The comments and concerns stated below have been prepared by a non-Indigenous technical advisor to Saugeen Ojibway Nation (SON) Environment Office (EO), are preliminary, and are not exhaustive. SON Knowledge Holder, Elder, and Member input will be essential to inform the Impact Assessment process (e.g., to identify Valued Components and assess Cumulative Effects). Additional review of past studies, databases, etc., will also be necessary to provide a more fulsome review of “western science” groundwater characterization and its functional relationship to the terrestrial and aquatic ecology related concerns and knowledge gaps necessary to inform the Impact Assessment process. SON-led, proponent-led and collaborative studies will likely be necessary to address such knowledge gaps.

### **Introduction**

Land use change has the potential to impact various characteristics of the hydrologic cycle including changes to groundwater flow systems, surface water flow, connections of these flow systems to the terrestrial and aquatic environment and the overall water balance. These potential impacts may be site specific or linked to intermediate and larger scales. Land use change typically relates to development for anthropogenic purposes and as such typically brings with it population growth and related impacts. Assessing any proposed land use change to the natural environment would require incorporating an understanding of the impacts related to historical land use changes. The following preliminary review of the Bruce C Initial Project Description (IPD) dated August 2024 relates to the potential impacts and connections described above.

**Potential Area of Concern – IPD Sections 14.2 -14.5, 14.6 and (R-54, R-55)** The IPD relies, in part, on Reference documents R-54 Bruce Power. 2019 Groundwater Monitoring and Sampling Report. and R-55 *Golder Associates Ltd. Bruce Power New Build Environmental Assessment: Geology and Hydrogeology Technical Support Document. Project Number 06-1112-041. 2008*, to support its hydrogeological assessment.

These documents provide various levels of technical detail related to the geology and hydrogeology of the site and regional setting. A preliminary review indicates that:

- Updated groundwater monitoring of existing wells will be necessary as well as the installation of additional monitoring wells to further refine the site specific hydrogeologic conditions.
- A detailed characterization of groundwater/surface water interactions relating to any onsite water courses, wetlands and potential shoreline groundwater discharge has not been documented and needs to be carried out and compared to historical data or observations.

This additional field information needs to be included in an updated hydrogeological characterization report detailing the site specific hydrogeologic flow systems, groundwater surface water interaction, hydrogeologic sensitivity and a more detailed connection to the regional groundwater flow system.

This updated characterization must include Indigenous Knowledge as well as historical and ongoing reports related to watershed studies, water quantity and water quality interference studies, Source Water Protection, Ontario Geological Survey reports etc.

The hydrogeologic sensitivity of the more regional groundwater receptors must be characterized to assess impacts for potential airborne contaminants.

The updated hydrogeological characterization must not only focus on the hydrogeologic sensitivity as it relates to the overall groundwater quality and quantity and ecological groundwater function within a western science approach but also within the SON cultural context.

The IPD provides a list of activities for site preparation, construction, operation decommissioning and abandonment activities. Technical details related to the potential impacts to the natural environment from these individual activities, the management of the potential impacts and the methodology (eg. Terms of Reference) to assess the impacts is required. These activities can directly impact the onsite groundwater recharge, the groundwater flow quantity and direction, the groundwater quality, the groundwater discharge, the overland flow, water course flow and the subsequent groundwater function to terrestrial and aquatic features. The updated site specific and regional characterization described above is needed to support this impact assessment. Various site specific activities include but are not limited to:

- Regrading and removal of existing terrestrial features, overburden, bedrock,
- Existing onsite waste management,
- Construction dewatering,
- Construction rock removal (eg blasting)
- Accidental spills,
- Site operation and construction waste management,
- Increased impermeable surface,
- Permanent and temporary stormwater management,
- Installation of subsurface infrastructure,
- Water and sanitary requirements,

### **Potential Area of Concern – Cumulative Effects**

A larger scale cumulative impact assessment on hydrological and hydrogeological water systems and the subsequent functional relationship to the ecological system resulting from the construction and infrastructure activities pertaining to Bruce C and ongoing operations with the Major Component Replacement needs to be carried out. The impact assessment must consider but not be limited to the following:

- Increased requirements for aggregate material (eg increased quarry and pit operations),
- Construction of housing, related infrastructure (eg water and sanitary, stormwater) and support facilities (eg stores, schools etc.) for increased workforce,
- Necessary upgrades to road network for transportation of material for overall construction and day to day travel for the increased work force.
- Transport of potential contaminants to offsite groundwater and surface water receptors through groundwater, surface water and atmospheric pathways,

Consideration should also be given to the construction and operation of the Deep Geological Repository.

### **Miscellaneous Issues/Questions**

Will land use development for the increased workforce needs only consider development areas within the Official Plan?

Will ecological and hydrogeological sensitive areas be screened out for land use development supporting the increased workforce?

How significant is the local siting of the DGR on the Bruce C impact assessment?

What is the extent of engagement with the respective provincial agencies which review and provide input into potential natural environment impacts (eg. Conservation Authorities, MNRF, MECP etc.) and will the respective agencies have the required resources?

## **Saugeen Ojibway Nation Summary of Issues - Bruce C Initial Project Description (August 2024) - Environmental Area of Potential Concern - Initial Aquatic Environment-related Concerns**

(Prepared by Ryan Lauzon, SON Technical Advisor, Aquatics)

The following is a discussion of the Initial Project Description for the proposed Bruce C with a focus on initial aquatic environment related concerns as requested by the Saugeen Ojibway Nation Environment Office. The relevant section in the Bruce C Initial Project Description for each question or comment is included in brackets for reference.

The discussion that follows is preliminary in nature. An initial plan has been developed to guide SON's assessment of the potential aquatic effects of the proposed Bruce C. That plan contemplates the engagement of several additional technical experts to support SON's assessment including experts in hydrodynamics, lake ecological thresholds and tipping points, acoustic telemetry, the use of AI to assess impingement and entrainment effects, etc. As SON formally retains experts to fill the identified gaps, it is expected that other very significant matters relating to the aquatic environment will be raised and that the Summary of Issues that follows will be updated.

### **1. Site selection**

Given the current known and unknown impacts of Bruce Power, would an alternative site be considered if the level of potential impact is determined to be unacceptable by SON (Bruce C Project 1.0)?

How does this site contribute to increased population growth, and subsequent increased shoreline development and other stressors on the aquatic environment (Bruce C Project 14.22)?

Has an analysis of the environmental impacts of the proposed site been compared with an alternative site (Bruce C Project 1.0, & 13.0)?

### **2. Impact assessment**

In the impact assessment, what would be considered an unacceptable level of impact to the aquatic environment, and how would this be addressed if no mitigation measures would adequately address the impact (Bruce C Project 14.16)?

### **3. Mitigation measures**

Who will determine what mitigation measures are economically feasible and how will economically feasible be defined?

Will Bruce Power take a holistic approach to mitigation measures that include Bruce A, and B, along with the proposed Bruce C (Bruce C Project 19.0)?

Would like to see Bruce Power create a feasibility and level of impact analysis for Bruce A, B and C that includes cooling tower and/or air-cooling technology (Bruce C Project 12.1).

#### Historical issues

As a critical component of the impact assessment, will Bruce Power work with SON to resolve the historical aquatic environment related concerns for impingement, entrainment, thermal effects and related hydrodynamics, cumulative impacts, and water quality (Bruce C Project 21.0)?

#### 4. Thermal effects and related hydrodynamics

What are the effects of the current and proposed additional thermal plume on fish migration, recruitment, mortality (e.g. gizzard shad, lake whitefish etc.), and health (Bruce C Project 14.16)?

Does the thermal plume act as a fish attractant and if so how will the proposed additional thermal plume contribute to this phenomenon (Bruce C Project 14.16)?

If the thermal plume acts as a fish attractant, what does this mean for fish health at an individual level (Bruce C Project 14.16)?

Has the thermal plume altered the fish community and the wider aquatic community and how will the proposed additional thermal plume impact this (Bruce C Project 14.16)?

How does the thermal plume impact lake whitefish fish egg, larval, and juvenile development and what will be the impact of the proposed additional thermal plume (Bruce C Project 14.16)?

Will the altered thermal environment cause the spread and/or establishment of invasive species (i.e., zebra and quagga mussels, round gobies, etc.) (Bruce C Project 14.16)?

How does the thermal plume impact fish spawning success on adjacent spawning

shoals and what will the proposed Bruce C impact be on this (Bruce C Project 14.16)?

Will Bruce Power be applying for an increase in the Thermal maximum as a result of the addition of the proposed Bruce C (Bruce C Project 14.16)?

Will Bruce power be modeling possible climate change scenarios along with the increased thermal load from Bruce C, to evaluate potential aquatic environmental risk (Bruce C Project 14.16)?

#### 5. Impingement and entrainment effects on aquatic environment

How does Bruce Power intend on measuring impingement and entrainment (Bruce C Project 14.16)?

What is the expected magnitude of additional entrainment and impingement on fish including eggs, larvae, juveniles and adults (Bruce C Project 14.16)?

Are there plans in place to update the forebay design or alternative infrastructure to allow for the return of entrained fish to Lake Huron (Bruce C Project 14.16)?

Are there plans in place to update the pumphouse design or alternative infrastructure to reduce the occurrence of fish impingement (Bruce C Project 14.16)?

#### 6. Impacts on SON fishery

How will SON knowledge be included in the assessment (Bruce C Project 4.0)?

Given the well documented gaps in aquatic assessments that SON has provided in past regulatory processes, what additional studies will Bruce Power be conducting to address SON's concerns (Bruce C Project 14.16)?

What are the potential impacts on the effectiveness of fishers through the loss of Indigenous knowledge from loss of access to preferred fishing areas or loss of fish as a result of the project (Bruce C Project 1,4,14.16, & 21.0)?

What are the impacts of an increased human population in SON Territory as a result of the proposed project on the ability of SON members to fish or harvest other country foods (Bruce C Project 1,4,14.16, & 21.0)?

What are Bruce Power's plans for developing a fisheries offsetting plan under the Fisheries Act (Bruce C Project 14.16, & 21.0)?

Please provide a full detailed report on any fish habitat that is expected to be altered or destroyed as a result of this proposed project (Bruce C Project 14.16).

Please provide all proposed baseline studies on fish and fish habitat, including biological indicator species, such as benthic invertebrate species (Bruce C Project 14.16).

What are the effects of the project on SON's rights to the fishery (Bruce C Project 1,4,14.16, & 21.0)?

What are the effects of the proposed Bruce C on fish in general, with a special focus on lake whitefish, lake sturgeon, yellow perch, suckers, bass, northern pike, and walleye (Bruce C Project 14.16)?

What are the effects on the fisheries with respect to economics, food, culture, and ceremony (Bruce C Project 1,4,14.16, & 21.0)?

What are the effects on SON's First Treaty with the swimmers and the responsibilities SON has to protect the swimmers as a result of the Treaty (Bruce C Project 1,4,14.16, & 21.0)?

#### Cumulative impacts

How does Bruce Power intend on addressing cumulative impacts (Bruce C Project 14.16, & 21.0)?

How does this project contribute to cumulative impacts from all anthropogenic stressors on the aquatic environment in SON Territory (using pre-contact as a baseline) (Bruce C Project 14.16, & 21.0)?

How does this project contribute to cumulative impacts from all anthropogenic stressors on lake whitefish in SON Territory (using pre-contact as a baseline) (Bruce C Project 14.16, & 21.0)?

What are the cumulative impacts of the proposed Bruce C on thermal effects and related effects, impingement and entrainment, water quality, and invasive species (Bruce C Project 14.16, & 21.0)?

How does this project contribute to cumulative effects on the ability of SON to catch their traditional fish species for food, commerce and ceremony by their preferred means (Bruce C Project 1,4,14.16, & 21.0)?



Will Bruce Power be including local and regional scales in its assessment of cumulative effects (Bruce C Project 14.16)?

## 7. Changes to water quality

What impact will the project have on the water's ability to support the health and well being of the animals, plants and people that rely on the water (Bruce C Project 14.16, & 21.0)?

What impact will the project have on SON women's special relationship with water and their responsibility to protect the water (Bruce C Project 1,4,14.16, & 21.0)?

What are the potential effects on the aquatic environment and human health, of accidents or malfunctions—including spills of hazardous substances or uncontrolled release of pollutants to the environment from Bruce C operations or malfunctions, and transportation of hazardous materials, and what is the potential for residual effects following an accident or malfunction (Bruce C Project 14.16, & 21.0)?

What emergency response plans and procedures have been created based on potential accidents and malfunctions (Bruce C Project 15.0)?

## 8. Site construction and preparation.

What are the effects of site preparation and construction activities on the aquatic environment(e.g., sediment transfer; construction of cooling water tunnels, forebay, and intake) (Bruce C Project 8.0, & 9.0)?

Will alternative designs for site infrastructure (i.e., forebay, intake, outtake) be considered to improve upon known issues and impacts of the current infrastructure of Bruce A and B (Bruce C Project 8.0, & 9.0)?

## 9. Decommissioning and Reclamation

What are the plans to prevent pollutants from entering the groundwater, or Lake Huron, as a result of decommissioning and reclaiming the site (Bruce C Project 9.0)?

Please provide financial assurance for decommissioning and closure if the Project is no longer viable and must close unexpectedly (Bruce C Project 9.0).

What are Bruce Power's plans for long-term monitoring, from the start of

decommissioning until the end of abandonment (Bruce C Project 9.0)?

#### 10. Sustainability

What is the project's overall contribution to environmental, social, health, and economic sustainability (Bruce C Project 22.0)?

How will Bruce Power ensure environmental resources are sustained over the long term (i.e., the seven generations principle of sustainability)(Bruce C Project 22.0)?

#### 11. Wetlands

What are the potential effects on wetlands, such as changes in availability of rare habitat and loss of ecological functions, during all project phases (Bruce C Project 14.16)?

What mitigation measures and monitoring plans are planned to protect wetlands (Bruce C Project 14.16)?

# **Saugeen Ojibway Nation Summary of Issues - Bruce C Initial Project Description (August 2024) - Environmental Area of Potential Concern - Condensed Summary of Archaeology Issues**

(Prepared by Robert J. Martin, PhD)

## **1. Initial Project Description (IPD) Introduction (Page 10 of 116)**

- Problematic assertion of HSM / MNO rights in SON Territory, with implications for sections of IPD, archaeology, archaeological resources, and consultation. The basis of HSM assertion: that the “Piché Wampum”, represents an 1818 agreement/treaty between the Saugeen and Métis to share the land and resources of the territory of the Saugeen Ojibway Nation has been disproven (Fitzgerald 2018). Also see the 2023 *Response of the Saugeen Ojibway Nation to Assertion of Métis Rights in the Territory* (including discussion of the Piché Wampum).
- The indigenous / pre-contact archaeological sites that have been documented on the Bruce Power property, which are ancestral to SON, are of significant antiquity / often associated with glacial shorelines, and have no relationship with historic Métis activities.

## **2. Figure 3: Lands to be Assessed for the Project (Page 15 of 116) [Siting Locations on Bruce Power Site]**

- No marine archaeological assessments exist for the area surrounding Bruce Power. An appropriate and robust marine archaeological assessment should be undertaken in consultation with SON. At this time, it is not possible to fully comment on the proposed area to be assessed for the new intake and discharge structures without more information on the design; the scope of the proposed assessed area should be determined in consultation with SON. Bathymetric mapping of Lake Huron should be utilized to identify potential archaeological features or sites that may correspond with periods of glaciation / differential lake levels.
- Despite probable widespread disturbance, the lands to be assessed for proposed siting locations have not yet been systematically tested for archaeological resources. A robust Stage 1-2 archaeological assessment should be produced in consultation with SON, with SON Archaeology monitors deployed, before more detailed comments or recommendations can be made.
- ‘Lands to be assessed’: Proposed Site Layout Scenario 3 (Figure 12) should not

encroach upon previously established culturally-sensitive areas (Area A; see Fitzgerald 2009: Figure 23), in proximity to the ancient former Nipissing Shoreline (190 metre contour), containing the archaeological site Jiibegmegoong (BbHj-12).

- Ancient shorelines and post-glacial landscape features denoting archaeological potential may also be a consideration for other proposed siting locations within the lands to be assessed (eg. Proposed Site Layout Scenario 1, Figure 10).
- The location of Jiibegmegoong/Dickie Lake (BbHj-12) appears not to have been updated in the Ministry (MCM) database, which would incorrectly map the site within the proposed development envelope.

**3. 14.0 A brief description of the physical and biological environment of the project's location, based on information that is available to the public (Page 59 of 116)**

- Section 14.0 refers to many of the surrounding areas, which denote pre-contact Indigenous sites: Inverhuron, MacGregor Point, etc. and glacial / geologic / geographic features (p. 59) that relate directly to the presence of such archaeological sites and their distribution (Algonquin and Nipissing Bluff / ancient shorelines). The demonstrable association between these important environs and archaeological potential can be acknowledged without disclosing the precise location of archaeological sites.
- LiDAR mapping from the Ministry of Natural Resources and Forestry (MNRF), the Ontario Digital Terrain Model - Lidar-Derived, should be utilized to identify and interpret ancient shorelines like those mentioned in the IPD and which are found in this region (Nipissing, Algoma, Algonquin, etc.).

**4. 14.21 Cultural and Physical Heritage (Page 77 of 116)**

- Section 14.0 should integrate more substantive discussion of archaeology within the region, and acknowledge the presence of sites ancestral to SON. There is no archaeology section *per se* and virtually nothing about indigenous history / archaeology that is included in the Cultural and Physical Heritage 14.21.
- The 2009 Stage 2 archaeological assessment that is noted did not systematically test pit / physically assess the property; the analysis was focussed more on background research and identifying areas of avoidance termed 'Culturally Sensitive Areas'. Notably, that report discusses widespread destruction of landscapes formerly possessing high archaeological potential, and the partial destruction of the Indigenous archaeological site BbHj-6 (dating to the Archaic Period). Archaeological sites and materials represent non-renewable resources, and cannot be replaced if destroyed.

- Discussion should be included regarding the significance of documented archaeological sites on the property itself, whether in this section or another. There is a brief mention of Spirit Site / Burial Site – Chiibegmegoong in section 21. Also referred to as Jiibegmegoong/Dickie Lake (BbHj-12). However, there are several Historic / Euro Canadian sites, as well as the pre-contact indigenous site Upper Mackenzie (BbHj-6), located just inside the south entrance to the property on the north side of the Southern Access Road.
- The Dickie Lake (BbHj-12) site was re-named Jiibegmegoong, or Spirit Place, by the Saugeen Ojibway Nation (SON) following the re-interment of the remains of two individuals in November 1998 (Fitzgerald 1998). At that time OPG and SON entered into an agreement to provide SON access to the burial site for ceremonial purposes Fitzgerald (2009: 5).
- The archaeological site Upper Mackenzie (BbHj-6) was at least partially destroyed during initial phases of development on the property (Fitzgerald 2009: 16-19). 1938 aerial photographs taken prior to road construction reveal that the BbHj-6 area was a large exposed sandy terrace running along the Nipissing shoreline. The 1961 field books of National Museum of Canada archaeologist James Wright (Wright 1961a, 1961b), note that the Mackenzie (BbHj-6) site had been damaged by the construction of the Southern Access Road into the Bruce Nuclear Site, and that bulldozing had disturbed ~1 acre on the north roadside, exposing at least two cultural features. The site was attributed to the Inverhuron Laurentian Archaic period (Lee 1952:75), likely dating to the Late Archaic period, ca. 2500-800 BC (Fitzgerald 2009; Ellis et al 1990). Fitzgerald (2009: 19) noted that the areas on either side of the South Access Road had not been appreciably modified since the road was initially constructed in the 1960s, and felt that if any of the site had survived the 1960s' road construction, it should remain intact (within his recommended no-disturbance area / 'Culturally Sensitive Areas'). The exact extent of the Upper Mackenzie site has still not been documented and presents an opportunity to work in consultation with SON Archaeology.
- Beyond the archaeological sites documented on the Bruce Power property itself despite the widespread destruction of the landscape, it is significant that the surrounding region exhibits some of the highest Indigenous site distribution within SON Territory, specifically in the areas mentioned in Section 14.0 of the IPD Draft. Bruce County's Archaeological Management Plan, produced in consultation with SON Archaeology, illustrates this spatially utilizing Ministry (MCM) data. The locations of these sites and archaeological resources do not have to be mapped or disclosed in order to address their relevance and the significant archaeological value and potential of this landscape.
- Section 14.21 might be made more robust by also discussing the Historic / Euro Canadian sites that have been documented on the property, and that have been

identified in the region. While not all sites are registered with the Ministry (MCM) or deemed of sufficient antiquity to possess cultural heritage value or interest (CHVI), it is relevant to note within a broader documentation of cultural heritage / history in the region.

- SON knowledge should be sought and utilized when interpreting and documenting cultural and physical heritage.

## **5. 14.22 Cumulative Effects (Page 78 of 116)**

- The majority of the property and the lands to be assessed for proposed siting locations have not been systematically tested for archaeological resources, and therefore it is impossible for SON to fully comment on the extent to which the combined past, present and future impacts of Bruce Power's operations have impacted archaeology and SON's cultural heritage.
- Early archaeological investigations on the property (and the region) for various proponents, were not conducted to modern Ministry (MCM) or SON standards. It has been difficult to locate not only the reports, but the artifacts and finds derived from this work, which should be repatriated to the Saugeen Ojibway Nation.
- The possibility exists for new, emergent archaeological impacts: Previously disturbed archaeological sites or resources could be revealed within the lands to be assessed.
- The development of the Douglas Point and Bruce Power infrastructure has had significant impacts on the land and this area of SON Territory, and these activities would have resulted in the destruction and displacement of archaeological sites / resources that may have been present across a large geographic area formerly possessing high archaeological potential. These impacts are most apparent in the imposition of large installations near Lake Huron, and the various access roads and graded / disturbed landscapes that populate the vicinity. This includes much of the areas now identified in the proposed Bruce C siting locations. At least one indigenous site (Upper Mackenzie: BbHj-6), located just inside the south entrance to the property on the north side of the Southern Access Road, was reportedly partially destroyed (Fitzgerald 2009: 16-19) - this impact should be acknowledged. Archaeological sites and materials represent non-renewable resources, and cannot be replaced if destroyed.
- Archaeological site Upper Mackenzie (BbHj-6) was at least partially destroyed during initial phases of development on the property: Given that the proposed Bruce C will rely upon the existing infrastructure established on the property, this legacy represents a cumulative effect, which could perhaps be addressed / mitigated to some degree by firmly establishing the present status of the Upper

Mackenzie site and prospective future rescue excavations in consultation with SON.

- Of consideration are also the collateral impacts that Bruce Power's establishment and growth have had in terms of regional archaeology (also ecology, etc.). While in some cases development has provided for archaeological investigation, this was not always the case historically, and remains a significant destructive force in terms of residential and commercial development. There has been an increasing need for housing, with Bruce Power reportedly employing over 4,000 people, and the necessary infrastructure to sustain this growing population. This has compounded significant changes to the landscape in a region of high archaeological potential, as Building Permits have not historically / still do not trigger archaeological assessment in Ontario. This problem has been especially visible in Saugeen Shores, with a record number of building permits issued last year, none of which triggered archaeological assessment unless requiring a Minor Variance, Severance or existing trigger under the Planning Act.
- Bruce C may create ~20,000 new jobs and bring even more population and development to the surrounding area, posing similar risks to archaeological resources if assessments are not undertaken and this problem continues.
- Steps must be taken in consultation with SON to address the numerous cumulative effects that derive from the transformation of this very archaeologically significant ancestral landscape, and any further development on the property/within the greater region.

**6. 21. Potential Impacts to Indigenous Peoples: Physical and Cultural Heritage, traditional land use, historical, archaeological and paleontological and architectural resources (Page 86 of 116)**

- See above within relevant discussion of 14.22 Cumulative Effects, which also pertain to impacts to Physical and Cultural Heritage and archaeological resources.
- Section 21 presently contains essentially nothing about archaeology in the body / text apart from "Impacts to ability of SON Members to access the SON Spirit Site / Burial Ground – Chiibegmegoong" (p. 87).
- The burial site is variously referred to as "Chiibegmegoong" (Alder 1997) or Jiibegmegoong (Fitzgerald 2009). Consistent terminology should be used, it is recommended that Jiibegmegoong, the form advanced by Dr. Fitzgerald, is correct.
- The area within and around the Bruce Nuclear Site has been documented as a region where traditional hunting and gathering activities occurred in the 19th and 20th centuries, but also in antiquity based upon the available archaeological data

(see discussion in Fitzgerald 2009: 4-5, also cf. Bridgland 1851:113; Brough 1851:15, 17; Bruce Township Personal Census 1851-1852: Enumeration District No. 2, pages 3-4; Evans 1838:38; Port Elgin Times October 27 and November 3, 1926). It is important to identify this significant impact to traditional land use.

- SON knowledge should be sought and utilized in better understanding potential impacts.

## **7. 22. Potential Impacts to Indigenous Peoples: Social, economic and health conditions (Page 88 of 116)**

- Given the intrinsic importance of sacred places, ancestors and archaeology to both Saugeen First Nation and the Chippewas of Nawash Unceded First Nation, it is necessary to consider access to Jiibegmegoong (BbHj-12) within the context of this section also.
- The fate and current status of the Upper Mackenzie site (BbHj-6) is also relevant.
- Access to ancestral sites is critical along with other elements of archaeology like Monitoring, conducting ceremony, repatriation, stewardship / protection, and these should also be considered and included as positive elements of social / health conditions in consultation with SON leadership and membership.
- SON knowledge should be sought and utilized in better understanding potential impacts.

### **Works Cited**

Alder, E.

1997 Stage 2 - Fuel Dry Storage Facility - Lakeshore range - Bruce Nuclear Plant.

Bridgland, J. W.

1851 Report of the Survey of the Township of Kincardine, District of Bruce. Field Book 1370, Crown Land Surveys, Ministry of Natural Resources, Peterborough.

Brough, A. P.

1851 Field Notes: Front of the Township of Bruce. Field Book 224, Crown Land Surveys, Ministry of Natural Resources, Peterborough.



Ellis, C. J., Ian T. Kenyon and Michael W. Spence

1990 The Archaic. In: The Archaeology of Southern Ontario to A.D.1650. Edited by Chris J. Ellis and Neal Ferris. Occasional Publication of the London Chapter, OAS Number 5:65-124.

Evans, J.

1838 Mission to Lake Superior Diary July 11, 1838 to November 1, 1838. James Evans fonds Box 1 File 6a, E.J. Pratt Library, Victoria University Library, Toronto.

Fitzgerald, W.

2009 Ministry of Culture Stage 2 Archaeological Assessment, Bruce New Build Project and Deep Geological Repository Project, Bruce Nuclear Site, Part Lots 11-31, Concession A (Lake Range), Bruce Township, Municipality of Kincardine, Bruce County

2018 The "Piché Wampum"

Lee, T. E.

1952 A Preliminary Report on an Archaeological Survey of Southwestern Ontario for 1950. National Museum of Canada Bulletin 126:64-75, Ottawa.

## **Saugeen Ojibway Nation Summary of Issues -- Bruce C Initial Project Description (August 2024) Environmental Area of Potential Concern: Terrestrial Ecology**

(Prepared by Jarmo Jalava, SON Technical Advisor, Terrestrial Ecology)

### **Qualifying Statement**

The comments and concerns stated below have been prepared by a non-Indigenous technical advisor to Saugeen Ojibway Nation (SON) Environment Office (EO), are preliminary, and are not exhaustive. SON Knowledge Holder, Elder, and Member input will be essential to inform the Impact Assessment process (e.g., to identify Valued Components and assess Cumulative Effects). Additional review of past studies, databases, etc., will also be necessary to provide a more fulsome review of “western science” terrestrial ecology related concerns and knowledge gaps necessary to inform the Impact Assessment process. SON-led, proponent-led and collaborative studies will likely be necessary to address such knowledge gaps.

### **Introduction**

As was often expressed by the late Saugeen First Nation Elder and former Ogimaa, Vernon Roote, “stewardship of the Land” is a core principle in the culture of the people of Saugeen Ojibway Nation (SON). My understanding of what Elder Roote meant is that stewardship involves thinking many generations ahead (and back) when making decisions that affect the health of the Water, the Air, and all the plants and animals with whom the gifts of the Creator are shared.

Prior to the arrival of Europeans, the forests, lakes, rivers and wetlands of Saukiing Anishinaabekiing (SON Traditional Territory) were clean, and human and non-human beings were sustained by the bountiful gifts of the Creator. Human and non-human beings moved freely across the land, unencumbered by roads, fences and property lines.

Much change has occurred in the two centuries since the treaties between the SON nations and the Crown were signed. Agricultural, urban, industrial, infrastructure and tourism development have destroyed, degraded and fragmented vast areas of natural habitat. In parts of southern Saukiing Anishinaabekiing only 10-20% forest cover

remains<sup>1</sup>, wetlands have been filled, streams have been channelized and turned into agricultural drains. These changes have greatly reduced the capacity of the Land to support the plants, animals, fish and other life that sustained countless generations of Indigenous people since time immemorial. Aggressive non-native species have been introduced that now dominate many of the remaining terrestrial and aquatic ecosystems. Vast areas of formerly diverse natural habitats for wildlife have been converted to cash crop monocultures or covered with asphalt and concrete. This is especially the case in the southern part of Saukiing Anishinaabekiing (Treaty #45½, 1836) where the Bruce nuclear facility has operated for several decades.

Development pressures within commuting distance of the Bruce Power site are already high and will undoubtedly increase if the proposed expansion of nuclear facilities (e.g., Bruce C) results in the need for more staff. Off-site impacts are far-reaching and are not limited to housing, service, commercial and infrastructure development that would occur with the construction Bruce C. For example, the demand for local aggregate to build new nuclear facilities, as well as related off-site development, is likely to be significant. Each local gravel pit and quarry expansion contributes to cumulative environmental impacts in Saukiing Anishinaabekiing.<sup>2</sup>

It is in the cumulative effects context (past, present and future) that the terrestrial ecology component of the Bruce C Initial Project Description (IPD) is considered below<sup>3</sup>.

### **(Preliminary) Annotated Terrestrial Ecology Review of Bruce C IPD**

The IPD **Part A Section 1 (p. 11)** of the IPD states that “The Bruce Power site has been highly studied and characterized and has demonstrated over 50 years of safe nuclear power generation. Bruce Power’s environmental monitoring program conducts extensive year-round sampling to verify the protection of the local environment. This includes water temperature and surface water quality sampling on site and in Lake Huron, and routine monitoring of soil, sediment, groundwater, *vegetation*, agricultural products, and *wildlife*. *Environmental monitoring (measurement, sampling, and analysis)*

<sup>1</sup> In the Penetangore River and Pine River subwatersheds just south of the site less than 11% and 8% forest cover remains (SVCA 2018a, 2018b), respectively, in what was historically a predominantly forested area.

<sup>2</sup> There are over 500 licenced pits and quarries in Saukiing Anishinaabekiing, with each new extraction proposal and licence amendment requiring consultation with SON, and each contributing to cumulative environmental impacts of great concern to SON.

<sup>3</sup> The comments and concerns stated here are preliminary and not exhaustive. Extensive additional review of past studies, databases, etc., will be necessary to provide a more fulsome review of terrestrial ecology related concerns and knowledge gaps.

*ensures that the health of the environment and people are protected and verifies that emissions and effluents from operations result in negligible environmental risks” [italics added].*

- However, the Bruce C IPD includes **no fulsome characterization of the terrestrial ecological landscape that was present at the time when treaties were signed between the SON and the Crown, nor even the conditions in the mid-1900s, prior to nuclear development at the site.** Such characterizations would provide a baseline:
  - Upon which the changes that have already occurred as a result of nuclear development at the site can be understood and measured;
  - That defines the terrestrial ecological conditions that sustained SON communities at the time of signing of Treaty 45½ in 1836;
  - That articulates the conditions that define SON rights and responsibilities as stewards of the Land.
  
- Specifically, cited ecological studies (IPD **Section 5**, “Studies or Plans Relevant to the Project”, **p. 33-35**) of the site and environs between 1954 and 1989 focused on abiotic, radiological and aquatic components of the environment as well as some general characterizations of existing terrestrial conditions but **provide little or no consideration of key habitat functions that support terrestrial native species needs, including Species at Risk (SAR) and species of cultural importance to SON.**
  
- Later sections of the IPD (**14.7-14.15, p. 65-68**) summarize some recent findings of terrestrial ecology-related assessments (wildlife habitat and communities, mammals, culturally significant plants) and taxon-specific (breeding birds, Bald Eagle, winter raptors, amphibians, reptiles) and habitat-related (marsh, shoreline) monitoring programs within and around the site, but do not:
  - **Articulate how such monitoring data are being analyzed and/or applied to protect or improve the quality of the terrestrial ecological environment;**
  - **Articulate how current monitoring results contribute to an understanding of impacts of Site operations on SON rights as stewards of the Land;**

- o **Predict potential impacts (including cumulative and off-site impacts) on SON rights relating to terrestrial ecosystem health and stewardship that may occur with future development at the Site.**
- Cited studies in the “Wildlife and Plant Communities” (**Section 14.7**) focus on impacts and risks associated with exposure to *radiation* (e.g., **2022 ERA R-6, R-53**), and *emissions* and *effluents* (e.g., **2022 EPR R-30, 2023 EPR R-56**). While monitoring and assessing impacts of radiation, emissions and effluents is important, **there appears to be little or no consideration in the IPD of cumulative effects (past, present and future) of the development of the site and ongoing operations on key habitat functions (e.g., overall habitat extent relative to vulnerable species needs, habitat connectivity, extent of interior habitat, configuration of habitat types) essential to sustain viable native species populations, including terrestrial Species at Risk (SAR) and species of cultural importance to SON. There is also little or no consideration in these reports of various other direct and indirect impacts of nuclear development and operations on wildlife and plant communities both within and surrounding the site** (e.g., road mortality, bird window collision fatalities, terrestrial invasive species).<sup>4</sup>
- Cited Ecological Land Classification (ELC) studies and updates (**p. 65-66**) (e.g., **R-58, R-57<sup>5</sup>, R-59**) provide a detailed characterization of the plant communities of the site and its immediate environs (i.e., lands outside the restricted part of the Site that are owned or managed by OPG, Bruce Power or Hydro One). These studies, undertaken over the past 20 years, offer reasonable reference data for monitoring environmental change and impacts moving forward, but these **studies were conducted after the Site was developed when many negative impacts (e.g., habitat loss and all the associated species-specific effects) had already taken place. This is not an appropriate baseline to assess cumulative effects, both from Indigenous and western science perspectives.**<sup>6</sup>

<sup>4</sup> The IPD does, however, note “mortality” as being a potential impact in **Table 6 (p. 83)**.

<sup>5</sup> The identification of 40 *introduced* plant species [in the **R-57** report] as “locally significant” is highly unusual; only native species are normally considered significant in this context.

<sup>6</sup> For example, the IPD (p. 65) states: “Generally, with the exception of the small patch of shrub dominated alvar, the plant communities present...are not outstanding examples of their community types in this part of the province [R-53].” This statement may be valid, but this is to be expected at a high-disturbed

- **Section 14.7.3 (p. 66)** of the IPD states: “Traditional land use and occupancy of lands and waters is an important part of the way of life, culture, history, and economy for Indigenous Nations and Communities.” However, **the IPD does not clearly or fulsomely describe the historical importance to SON and regional ecological context of the Inverhuron area within which the Bruce Power Site is situated.<sup>7</sup> Such context is essential to developing an understanding of cumulative effects.** Notably, the IPD does not adequately emphasize that the Bruce Nuclear site is situated within or near areas *high cultural and ecological importance to SON*, with well-documented:
  - Historical (and ongoing) Indigenous use, harvest, and other cultural activities (e.g., important Inverhuron archaeological sites are not mentioned in the relevant IPD **Section 14.7.3**);
  - High habitat and species diversity, including significant Species at Risk populations and other vulnerable native species, clan animals (such as Black Bear, deer, turtle, eagle), Anishinaabe medicines and other harvested species, that have declined or disappeared from much of the surrounding landscape.
- The IPD **does not articulate that the development of the Bruce Power Site and the associated infrastructure, residential and commercial development over the past 50+ years has contributed to high levels of habitat loss in the southern part of the Huron Fringe area and throughout southern Saukiing Anishinaabekiing.** Impacts of past and ongoing habitat loss within the Site (operational & administrative facilities, transmission corridors) and surrounding the Site (associated residential, commercial, infrastructure development, etc.) include:
  - Loss of entire local ecological communities (e.g., an open water pond/lake near Baie du Dore that was present until at least 1954, based on publicly available aerial photography

location with a major industrial footprint. This may not have been the case 70 years ago, before the Bruce Power Site was developed.

<sup>7</sup> As part of his review of the IPD, citing numerous sources, SON Archaeology Advisor, Dr. Robert Martin states: “The area within and around the Bruce Nuclear Site has been documented as a region where traditional hunting and gathering activities occurred in the 19th and 20th centuries, but also in antiquity based upon the available archaeological data....It is important to identify this significant impact to traditional land use.”

<https://mdl.library.utoronto.ca/collections/air-photos/1954-air-photos-south-ern-ontario/index>);

- Stressed ecosystems within and surrounding the Site associated with high vehicle traffic, industrial noise, occasional accidental spills, site maintenance (e.g., grading, mowing), expansion of facilities;
- Introduction of terrestrial invasive species (e.g., knapweed, white sweet clover) probably largely due to substrate disturbance associated with road and utility corridor construction and maintenance;
- Fragmentation, loss of connectivity and loss of “interior” habitat required by many vulnerable species due to land clearing for Bruce Power-related economic growth and off-site development;
- Reduced or extirpated local populations of vulnerable native species, including Species at Risk (SAR), Anishinaabe medicines, etc.;
- Altered hydrology (e.g., ditching, channelization, infilling of wetlands, etc.) and potential groundwater impacts.
- Increased use of remaining public natural areas in the vicinity of the site for recreation (including fishing, hunting), causing habitat degradation, impacting wildlife behaviour and reducing opportunities for SON membership to practice traditional activities.
- Residential encroachment into natural areas (invasive garden cultivars; roaming pets; proliferation of trails; problematic wildlife encounters; dumping of yard waste) due to Bruce Power-related economic growth and associated development off-site.
- Negative impacts on on-site wildlife, potentially including reproductive success (birds, amphibians) due to operational noise and vibration.
- Increased local air pollution from carbon-burning vehicles and equipment.
- Barriers to movement and reduced access to feeding areas for culturally important animals such as Black Bear due to fencing, vehicle traffic and possibly other deterrents.

### **Three Examples of Specific Terrestrial Ecology Concerns and associated Questions (Preliminary)**

The following are examples of concerns and questions that may require additional studies as part of the Bruce C Impact Assessment process.

#### ***1. Loss of opportunities for SON members to practice traditional activities on***

***the Land.***

***2. How has past development of the Bruce Power facility impacted SON Treaty Rights as they relate to a healthy environment, stewardship of the Land in southern Saukiing Anishinaabekiing and our responsibility to care for our fellow (non-human) beings?***

- i. How has past development of the Bruce Power facility impacted SON spiritual and aesthetic values, including the sense of place?
- ii. How has past development of the Bruce Power facility impacted SON access to the Land for ceremony, harvest of medicines, foods, etc.?
- iii. How has past development of the Bruce Power facility impacted local populations of plants and animals of cultural importance (e.g., availability of habitat for and population sizes of clan animals, medicines, plants used in ceremony, products harvested for practical and artisanal uses)?
- iv. How has past development of the Bruce Power facility resulted in, or increased the likelihood of, contamination of traditional Anishinaabe foods and medicines?
- v. How would the development of Bruce C augment/affect items i-v, above?

***3. Direct loss of habitat, habitat fragmentation and habitat degradation in surrounding landscape due to housing, commercial, infrastructure and services development associated with increased staffing for Bruce C and associated economic activity.***

- i. What are the anticipated population increases in Saukiing



Anishinaabekiing associated with the proposed Bruce C (i.e., including staff, their families, service industry and associated economic activities)?

- ii. Where will new staff, their families, etc., be housed?
- iii. What will the impacts of such population increases be on wildlife populations (including Anishinaabe clan animals, harvested species, Species At Risk and culturally important plants) and their habitats?
- iv. What will the impacts of such population increases be on air quality, water quality and terrestrial habitat in existing natural areas (including public-access parks, beaches, etc.)?
- v. Where will aggregate needed for the construction of Bruce C be sourced?
- vi. How much aggregate will be needed? How many truck loads?
- vii. What will the impacts of the aggregate extraction be on the environment around the extraction sites?
- viii. What will the impacts of the transport of aggregate be on the environment between the extraction sites and the Bruce Power site?
- ix. Where will aggregate needed for the new residential, commercial, service and infrastructure associated with increased staff and economic development associated with Bruce C be sourced?

- x. How much aggregate will be needed to support this new off-site development? How many truck loads?
- xi. What will the impacts of the aggregate extraction needed to support this new off-site development be on the environment around the extraction sites?
- xii. What will the impacts of the transport of aggregate be on the environment between the extraction sites and the new off-site developments?

***4. Increased vehicle impacts (road mortality) on wildlife.***

- i. Over the past 50 years, how has the construction and operation of nuclear facilities and the construction of roadways to accommodate commuting staff, transport vehicles, etc., at the Bruce Power site impacted local populations of:
  - a. Black Bear, White-tailed Deer and other clan animals?
  - b. Turtles, snakes, frogs and salamanders (including Species At Risk)?
  - c. Breeding birds (including Species At Risk)?
  - d. Insects (including Species At Risk and pollinators)?
  - e. Other flora and fauna indigenous to the area, including Anishinaabe medicines and other culturally important plants?
- ii. How are current levels of vehicle traffic accessing the site impacting each of the above-listed wildlife categories?
- iii. What measures are currently being taken and what measures are proposed to prevent wildlife road mortality?
- iv. Has the effectiveness of existing turtle crossing signage been measured? If yes, what are the data showing?

- v. What is the anticipated impact of long term increases in vehicle traffic accessing the site on wildlife populations listed in I, above, should the proposed Bruce C be built?

## **Saugeen Ojibway Nation Summary of Issues - Bruce C Initial Project Description Process Questions**

SON and IAAC are currently engaged in discussions towards a relationship agreement to guide impact assessments in the SON Territory, and on plans for the Bruce C impact assessment. In spite of these discussions, many key issues relating to the Bruce C impact assessment remain unresolved—for example, issues around timing, the integration of SON knowledge, values, and laws into decision-making, cooperation between SON and Canada, etc. Below is a list of some of the many questions that remain unanswered.

### **Timing**

- How will IAAC reconcile Canada's statements in Budget 2024 and the action plan released by the Ministerial Working Group on Regulatory Efficiency for Clean Growth Projects setting a three-year target for nuclear project reviews, with SON's need for a comprehensive assessment that will provide its members with sufficient information on which to decide whether the Project can be supported?
- What if the timelines IAAC is currently contemplating prove to be insufficient? What mechanisms does IAAC have at its disposal to ensure the assessment is not rushed and that its quality and credibility are not compromised?
- How will IAAC determine if this is a situation under 37.1(2) of the Impact Assessment Act which warrants an extension of the time limits? How will IAAC take into consideration differences of opinion between SON and IAAC on the factors set out in 36(2) which are to inform the decision on whether an extension is warranted (e.g., the extent to which potential effects are adverse, the significance of potential impacts on SON, etc.)?

### **Decisions under the Impact Assessment Act**

- How will SON knowledge be meaningfully recognized and integrated into the impact assessment process?
- How will the determination be made of whether a mitigation measure is technically or economically feasible? How will SON be included in this determination?
- How will the determination be made of whether a mitigation measure is appropriate? How will SON be included in this determination?
- How will the determination be made of whether an effect is significant? How would differences in views between SON, Bruce Power, and regulators on significance be reconciled?
- How will the determination be made of whether significant effects are justified? How would differences in views be reconciled?
- How will the precautionary principle, which is referred to in the Impact Assessment Act,

be taken into account? How will differences in tolerance for risk and uncertainty be reconciled?

#### UNDRIP

- How does IAAC intend to fulfill Canada's commitment to implementing UNDRIP and Canada's aims to secure free, prior and informed consent for decisions that affect Indigenous peoples' rights and interests?
- The Truth and Reconciliation Commission called upon the corporate sector to "adopt the United Nations Declaration on the Rights of Indigenous Peoples as a reconciliation framework and to apply its principles, norms, and standards to corporate policy and core operational activities involving Indigenous peoples and their lands and resources." How does Bruce Power intend to respond to this call to action?