



Antrim Gypsum Mine Project EARD - Comments from Ecology Action Centre

October 2024

The Ecology Action Centre is an environmental charity based in Mi'kma'ki/Nova Scotia. We have a leadership role in working on critical environmental issues from biodiversity protection to climate change to environmental justice. Grounded in over five decades of deep environmental change work and fuelled by love and grief, EAC takes a 50-year perspective on what is needed to build towards a time of thriving and flourishing. We work to equip human and ecological communities for resilience and build a world where ecosystems and communities are restored not just sustained.

Ecology Action Centre staff have only been able to comment on some aspects of this EARD. This is in part due to the limitations of our expertise – we only hold knowledge in certain subject areas and have commented on those. However, this is also because the 30 day comment period is too short to comment completely on any EARD, including this one. Public comment periods for EARD should be 60 days, minimum. Additional time would have allowed us to hone our comments further and make additional, relevant comments.

We encourage the proponent and department staff with the provincial government to reach out to us directly regarding our comments.

Specific comments

6.1 - Air Quality and Light

There are 3 air quality monitoring stations proposed, to the north, west, and east for the mine. We recommend that the proponent also install a fourth monitoring station to the south. In our experience with other mines and quarries, wind can sometimes come from the not-prevalent direction, including before, during and after a hurricane or major storm. These weather events and abnormal wind direction can create the conditions to spread dust to atypical locations. An air quality monitoring station to the south would cover this eventuality. The location for the fourth air quality monitoring station could be at Noise

Monitoring Location N2. Baseline air quality monitoring at the fourth location should be completed before commencement of the project.

6.1.5.2 - Light Trespass

This section is pretty “light” on specifics of how light pollution affects wildlife. The effects can be substantial, including from just a few lights positioned in a way that causes light pollution including glare off of structures, and from the wavelength of light used. The proponent should commit to a program (more than the uncoordinated mitigation measures proposed) to examine how light pollution can be reduced in their operations including a night (more than what is described in Table 6.8-6).

6.6 - Wetlands

There is concern regarding the extent to which the proponent has proposed alterations of wetlands for this project.

Globally, over 64% of wetlands have been lost due to human activity since 1900, and as we lose wetlands, we also lose their incredible benefits and services that they provide to both humans and the natural environment. A GPI Atlantic study (2000), on Nova Scotia’s water resource values wetlands provide an estimated \$7.9 billion worth of benefits in ecosystem services to Nova Scotians annually. Given the value over the long term, we have concerns about the direct and indirect impacts of this project and how it will contribute to the continued loss and destruction of natural wetlands. The loss or destruction of wetlands can result in: degradation, fragmentation and loss of wetland habitat and local biodiversity, deterioration of water quality from lack of natural water purification, increased sedimentation and soil erosion, changes in natural hydraulic systems and disruption to the local watershed, reduction in water supply and water storage, higher threat of flooding, and reduction in groundwater recharge and higher vulnerability to droughts.

The proponent discusses plans to alter portions of 3 Wetlands of Special Significance (WSS). This is highly concerning. Furthermore the proponent writes that “The NS Wetland Conservation Policy applies to all freshwater and certain tidal wetlands with the objectives to prevent loss a net loss of wetland area or function, particularly Wetlands of Special Significance (WSS).” This statement is not totally accurate. The Nova Scotia Wetland Conservation Policy has an important goal **of no loss in Wetlands of Special Significance, and** the goal of preventing net loss in area and function for other wetlands. It is everyone’s responsibility to contribute to achieving these goals. **The proponent should avoid all alterations of WSSs.**

There is also concern that the discussions by the proponent do not fully consider the important value of treed wetlands. For example, according to Table 6.6-3, there are 22



treed wetlands listed to be destroyed either partially or completely. These wetlands are exceptionally good carbon sinks (see Kendall et al. 2021 for research in Nova Scotia on this subject). The results from a local study “strongly suggest that forested wetlands are avian diversity hotspots and, as such, key habitats for bird conservation in Nova Scotia. Forested wetlands in general had more bird species, more individuals, and higher abundance of several species and guilds of conservation concern than mature and regenerating upland sites” (Brazner & MacKinnon, 2020). In another study on bird communities in forested wetlands in Nova Scotia, it was found that “of the 208 documented breeding bird species in Nova Scotia, [the researchers] found evidence (mainly singing males) that 95 (46%) were breeding in the 229 FWs [they] surveyed. Given that [their] surveys were restricted to a single visit at only two points within each wetland, this is no doubt a conservative estimate of the diversity of breeding birds that are using these habitats.....These results and other studies suggest that a large number of bird species depend on or at least utilize [forested wetlands] in Nova Scotia during the breeding season and that they may play important roles in the conservation of several at-risk species” (Brazner & Achenbach, 2019). However, despite their high value, these types of wetlands “are being converted to other uses at a higher rate in Nova Scotia than other wetland types” (Brazner & Achenbach, 2019). These studies demonstrate that treed wetlands need to stay intact not just to help mitigate climate change, but also to support wetland functions, including to maintain biodiversity.

6.8 – Terrestrial Environment

6.8.2.4 – Fauna

Wood Turtle

This section should state if protocol for surveying for Wood Turtles was the approach endorsed by NSDNRR.

“Observed no Wood Turtles during Wood Turtle survey, however, noticed one during late summer botanical survey (WL 24).”

The Antrim Gypsum Mine site has Wood Turtles, and Wood Turtle habitat (which should be incorporated by the provincial Reptile Recovery Team as core habitat/ critical habitat for Wood Turtle). The proposed pit is only 13m from the Wood Turtle observation that occurred during late summer botanical survey. This is a site where the risk to the nationally and provincially Threatened Wood Turtle should be taken very seriously. If this project is Approved with Conditions, there should be a section in the Terms and Condition about turtle observations (i.e., when to search for turtles, what to do when turtles are observed) and techniques for reducing threats to turtles. This should go beyond what will be in the Wildlife Management Plan.



6.8.5.1.3 Impacts to Flora and Lichen Species at Risk

Black Ash

The EARD correctly describes that Black Ash as a SAR listed species, and has a “specific, narrow niche” with regards to its habitat needs. Therefore it is deeply concerning that the proponent is proposing to remove (“transplant”) a Black Ash tree. The proponent should instead be required to avoid the tree and avoid impacting its habitat.

Transplanting is not viewed as a viable mitigation technique for impacts from industrial projects by the Canada Botanical Association (Canadian Botanical Association, no date). Transplanting should not be an acceptable form of mitigation here. Researchers in Nova Scotia, including from Mi'kmaw-led organizations, could examine and share knowledge about how transplanting efforts on Black Ash are going in Nova Scotia so far, at other sites. But without any evidence presented in this EARD there is no reason to think the transplanting of this species at risk with specific habitat needs would work. If the tree that would be impacted by alteration of WL34 is removed, this should be considered a violation under Nova Scotia's *Endangered Species Act*. If the Nova Scotia government would like to develop and share publicly its approach on transplanting or translocating SAR to facilitate industrial projects, it should formally do so. Research on transplanting Black Ash in Nova Scotia should absolutely involve interested Mi'kmaq, and should also involve researchers at an academic institution, such as a university, or ideally, the Nova Scotia Museum of Natural History.

Lichens

There is no discussion in the EARD of how deposition of dust can affect lichens, which it can. There is research on this issue; please refer to it and describe how at-risk and SOCI lichens could be impacted by project construction and activities within 100m of lichen bodies.

Avian SAR

The report dismisses the idea that Common Nighthawk nesting at the site, though Common Nighthawk was observed incidentally at the site, and could breed at the site. Common Nighthawk can be attracted to quarries specifically as nesting habitat. Please refer to the literature on this, describe how nesting Common Nighthawks might be impacted during the operational phase of the quarry, and commit to not impacting nesting Common Nighthawk through the implementation of measures in a Wildlife Monitoring and Management Plan.



References

Brazner, B., and MacKinnon, F. (2020). Relative conservation value of Nova Scotia's forests: forested wetlands as avian diversity hotspots. *Canadian Journal of Forest Research* 50 (12), 1307 – 1322.

Brazner, J., & Achenbach, L. (2020). Do Breeding Bird Communities or Conservation Value Differ Among Forested Wetland Types or Ecoregions in Nova Scotia? *Wetlands* (Wilmington, N.C.), 40(4), 811–823. <https://doi.org/10.1007/s13157-019-01222-2>

Canadian Botanical Association. (no date). Transplanting and seeding as a means of preservation. Position Papers of the Canadian Botanical Association. https://www.cba-abc.ca/wp-content/uploads/2020/01/ecolconspospaper_v4.pdf

Kendall, R.A., Harper, K.A., Burton, D., and Hamdan, K. (2021). The role of temperate treed swamps as a carbon sink in southwestern Nova Scotia. *Canadian Journal of Forest Research*, 51 (1), 78 - 88. <https://doi.org/10.1139/cjfr-2019-0311>

