

Environmental and Water Resource Concerns – Irreversible Damage

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Summary

The proposed LCP Quarry in Brechin poses a significant threat to local water resources and the broader ecosystem. Excavation below the water table, combined with the blasting and disruption of natural hydrological patterns, could lead to long-term and potentially irreversible environmental damage. This report reviews key findings from hydrogeological and environmental assessments, demonstrating that the proposed quarry would have severe consequences for groundwater quality, surface water systems, and the overall health of the local environment.

Introduction

Aggregate extraction at the LCP Quarry would involve excavation below the water table, which presents a serious risk of disrupting groundwater flow and contaminating local water sources. The proximity of the quarry to Lake Simcoe and other critical water bodies raises further concerns about the potential for environmental degradation. Water resources in Ramara Township are vital not only for residential use but also for local agriculture and natural ecosystems.

Key Environmental and Water Resource Concerns

1. **Disruption of Groundwater Flow and Contamination Risks** Quarry operations can significantly disrupt the natural flow of groundwater by altering the pressure gradients and hydraulic conductivity in the region. According to the **Maximum Predicted Water Table Report**, excavation below the water table increases the risk of contamination from surface pollutants entering the aquifer [1]. The proximity of the quarry to residential wells further elevates the threat of groundwater contamination, potentially jeopardizing drinking water supplies for local residents.
2. **Impact on Lake Simcoe and Nearby Water Bodies** The quarry's location near Lake Simcoe is a major concern due to the potential for sediment runoff and the introduction of contaminants into the lake's ecosystem. Lake Simcoe is a critical freshwater resource, and any disruption to its natural hydrological processes could have lasting effects on water quality and biodiversity. The **Hydrogeological and Hydrological Assessments** highlight the quarry's potential to disrupt surface water flow into the lake, leading to erosion and sedimentation [2].
3. **Ecosystem Degradation and Loss of Biodiversity** The environmental degradation caused by aggregate extraction extends beyond water concerns. The removal of vegetation and the destruction of natural habitats will lead to a loss of biodiversity in the area. Quarry operations can destroy habitats for local wildlife, including endangered species, and disrupt the ecological balance. Studies have shown that the environmental footprint of quarries often extends far beyond their immediate boundaries [3].
4. **Cumulative Environmental Impacts** The cumulative impact of multiple quarries in the region, including the proposed LCP Quarry, exacerbates the environmental risks. The continual extraction of resources from the local ecosystem without sufficient rehabilitation or mitigation strategies could lead to the irreversible depletion of groundwater and the permanent alteration of local ecosystems. These cumulative effects make the approval of another quarry in Ramara Township particularly untenable [4].

Conclusion

The environmental and water resource concerns posed by the LCP Quarry are substantial and cannot be overlooked. The risks to groundwater flow, surface water systems, and the broader ecosystem are

too great to justify the approval of the quarry license. Given the potential for irreversible environmental damage, the LCP Quarry should not be permitted to proceed.

References:

Reference 1 - Maximum Predicted Water Table Report, 2023.

“Maximum Predicted Water Table Report” LCP Quarry Limited December 2023

https://drive.google.com/file/d/16DjAGgtVFbHZpXbnMyuM7ABw5FHllkix/view?usp=drive_link

Reference 2 - Level 1 and 2 Hydrogeological and Hydrological Assessments, 2023.

“Level 1 and Level 2 Hydrogeological and Hydrological Assessment Proposed Brechin Quarry”

https://drive.google.com/file/d/1LzRoRugrvvgNeebvilQuYmLHOnAOGM5v/view?usp=drive_link

Reference 3 - Environmental Impact of Aggregate Operations on Biodiversity, 2024. And

Reference 4 - Cumulative Effects of Multiple Quarry Operations on Local Ecosystems.

“Planning Justification Report & Aggregate Resources Act Summary Statement”

https://drive.google.com/file/d/1SRsjTdFHg4E_AEH26yWcd9dayxMh_YsC/view?usp=drive_link