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M E M O R A N D U M

September 19, 2025

TO: Connor Frazer
Environmental Compliance Officer
Peterborough District Office
Eastern Region

FROM: Dana Cruikshank
Surface Water Specialist
Water Resources Unit
Kingston, ON.
Eastern Region

RE: Environmental Impact Study
Part Lot 3, Concession 9, Township of Douro-Drummer
County of Peterborough
ECHO Ref #: 1-1524031656

I have reviewed the previous hydrogeological assessment reports prepared by GHD Limited dated January 2023 in a memo dated March 27,2023 and the October 2023 assessment report in a memo dated November 7, 2023 for surface water concerns only. This review is for the Environmental Impact Study (EIS) dated May 2024 prepared by GHD.

GHD reports the following;

- GHD Limited (GHD) has prepared this Scoped Environmental Impact Study on behalf of Leahy Excavations Inc. (the Client) to be submitted as part of an Environmental Compliance Approval (ECA) application to MECP. The ECA is for a proposed soil bank and existing hydro-vac slurry receiving operation at the lands identified on Part Lot 3, Concession 9 in the Township of Douro-Dummer in Peterborough, Ontario.

- This scoped EIS was completed to evaluate the presence/absence of wetland on or adjacent to the site and Species at Risk. The Meade Creek provincially significant wetland complex is located to the southeast of the proposed works area and is the main trigger for this EIS.

- The Site is located in a rural-residential / agricultural area approximately 5 kilometres east of Peterborough. The area is privately serviced for water and sewage. Meade Creek and a tributary of Meade Creek traverse the Site in a southerly direction. Meade Creek is a tributary of the Otonabee River.

- The east side of the Site is designated as an Environmental Conservation Zone (EC) where Meade Creek is situated. Within the western portion of the Site is a tributary of Meade Creek. An earth berm has been constructed along the edge of the operational area and the EC zone

- 5 bird species were identified during the site walk. All were incidental observations by site or sound. This included resident species. Species included belted kingfisher, American crow, European starling and tree swallow. Bank swallows were observed flying on the northern part of the property. Bank swallows are currently listed as threatened in Ontario. Typical mitigation measures are to maintain a minimum 50 m setback from the colony and especially in front of the bank and nesting holes. The proposed footprint of the operations is close to 120 m from the colony.

- The site is being actively used with open sand and gravel areas present throughout. The only vegetation was regenerating field or rehabilitation areas with grasses, some shrubs and early successional species. Species observed included lilac, trembling aspen, American elm, eastern white cedar and white spruce. Those are part of the screening berms and natural regeneration.

- The existing MNRF GIS wetland mapping shows no wetlands on the property. However, the Meade Creek provincially significant wetland is located to the east of the disturbed and proposed work area. There is a woodland associated with the Meade Creek valley, with the PSW and a distinct embankment separating the natural features from the former pit area. There were no Areas of Natural and Scientific Interest, watercourses, or rare vegetation community types present.

- Based on the site plan the creek is over 220 m from the proposed footprint, with the wetland almost 200 m away. As such no impacts on the wetland features or functions as a result of the proposed uses. Woodland is located outside of the property limits and more than 30 m from the proposed works. No impacts on wildlife, wildlife corridors, or the woodland is predicted.

- GHD concludes there will be no significant impacts on the natural features identified on the site. Negative impact on the functions of identified natural heritage features can be minimized by following the recommendations below.

- GHD Recommendations

    - Obtain relevant permits from the MECP for ECA and meet conditions.
    - As the site has been disturbed and soils unvegetated in parts, relandscaping of the area after use has ceased, and other disturbed areas would provide some vegetation cover for wildlife.
    - The construction envelopes must be clearly defined and delineated in the field prior to any construction activities occurring on the site.
    - Discussion with MECP re bank swallow colony, even though almost 120 m from Site.

Reviewer's Comments

Due to the current highly disturbed area within the site boundaries no real habitat exists for bird or other species. Vegetation is sparse. Barn swallows are a protected species and while the colony is supposedly 120 m from the active site area, consultation with MECP's Species at Risk group should be made so that additional recommendations for protecting the colony can be made which are beyond the scope of the reviewer's expertise.

The EIS did not include an assessment of potential impact to waterbodies within and adjacent to the site. No new water samples were taken from groundwater or Meade Creek and its tributary since 2022 as previously recommended in the reviewer's 2023 memos.

The EIS wasn't very detailed but that may because the area is fairly barren.

Since 2023 there has been no additional information sent as per recommendations made in the previous surface water reviews to determine if their ECA application can move forward to the review stage. In order to prevent delays in obtaining an ECA all complete information should be included for review by surface water and groundwater reviewers.

The following information was indicated as missing or required by the surface water reviewer.

1. The proposed surface water monitoring plan of quarterly sampling was acceptable but the parameter list needed to be confirmed as information in October indicated asphalt being stored on site which would require changes to the parameter list.

2. Water quality in Meade Creek and the on-site tributary needs to be characterized better before operations begin with more frequent monitoring throughout the year. As of the date of this memo only one sample was collected in 2023 which is insufficient to characterize the seasonal water quality in Meade Creek. Meade Creek is located in a Provincially Significant Wetland and as such wetland water chemistry can be variable. In order to distinguish natural variation in water quality in the wetland throughout the year samples need to be taken on a regular basis to establish "background" conditions so that potentially water quality impacts from the soil storage facility can be determined or not. Two (2) years of background monitoring have been missed since my last memo pointed out the need for more monitoring.

3. The previous reports mention that asphalt and concrete will be received at the site, crushed and sorted into piles. PAHs and PHCs are known to be found in runoff from these piles and therefore could impact on water quality in the PSW, Meade Creek and/or its tributary. Depending on how stormwater is managed, and best management practices implemented at the site the proposed surface water monitoring program may need to be flexible in order to accommodate monitoring for other contaminates found in the soils received at the site.

4. A stormwater management plan is required for the site that demonstrates that pre and post development runoff is the same so that the areas water balance is maintained. This is important especially for the PSW. The site must be developed so that it is capable of handling 100-year storm events. Based on the site pictures and description it would seem the site may be prone to rapid runoff in some areas that may result in erosion and therefore affect water quality in localized watercourses. The site appears to have little vegetative cover, so TSS and turbidity are a major concern that needs to be addressed.

5. It is my understanding that an application is being made for a Class 1 Soil Management Site Approval as a Soil Bank. This type of facility accepts soil from more than one source. Soils received at this site must have documentation showing the soil has been tested. A Design and Operational Report is required for the Site. This report should include the operational procedure proposed for accepting approved soils and how they are handled on the site as part of their ECA application. The hydrogeological report indicated that soil received at the site will be sorted, screened and stockpiled. It is my understanding that screening is considered a type of processing. Clarification was requested in my previous memo of whether this operation makes the site a processing site in addition to a being a soil bank. This clarification was not provided in this updated report

6. Figure 2 in the Hydro-G report shows five groundwater wells along the east side of the site. From a surface water perspective, I would view these wells as sentinel wells for groundwater entering the wetland and Meade Creek. There are no wells on the west side of the site and therefore no early warning sentinel well for potential impacts to the tributary. The report indicates that the site also slopes towards this tributary and therefore groundwater flow might also go to the tributary. Groundwater can comment on the need for additional wells in this area. The same two wells MW6 and MW2 were sampled in April 2023. My previous memo recommended that MW5 (downgradient of the slurry pond) should also be sampled. Groundwater reviewer can comment further on groundwater flows and quality for the site.

7. My previous memo I noted a discrepancy in the report dates and the lab certificate dates for surface water sampling. The importance of clarifying if the samples were collected the same day or not is important as a significant precipitation event occurred during the days sampling was conducted. The differences in water quality noted in my previous memo may have been due to more water moving through the Creek on the second day of the storm event when the lab certificates indicate Creek 2 was sampled. This needs to be clarified as it impacts water quality impacts in the Creek.

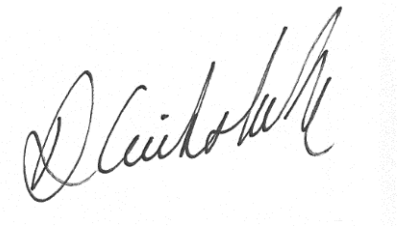
8. The site receives liquid soil which is stored in an on-site receiving pond that has been constructed out of non-granular materials. GHD reports that the slurry generally evaporates off or infiltrates into the pond. The pond is dredged weekly, and material piled and dried on north side of the pond. The report didn’t mention the fate of these dredged soils and in my opinion these dredged soils should also

be sampled.

In conclusion, MECP has not been updated on whether the above missing information to properly assess the site impacts to surface water have been completed or not. As such this surface water reviewer cannot support an ECA application at this time.

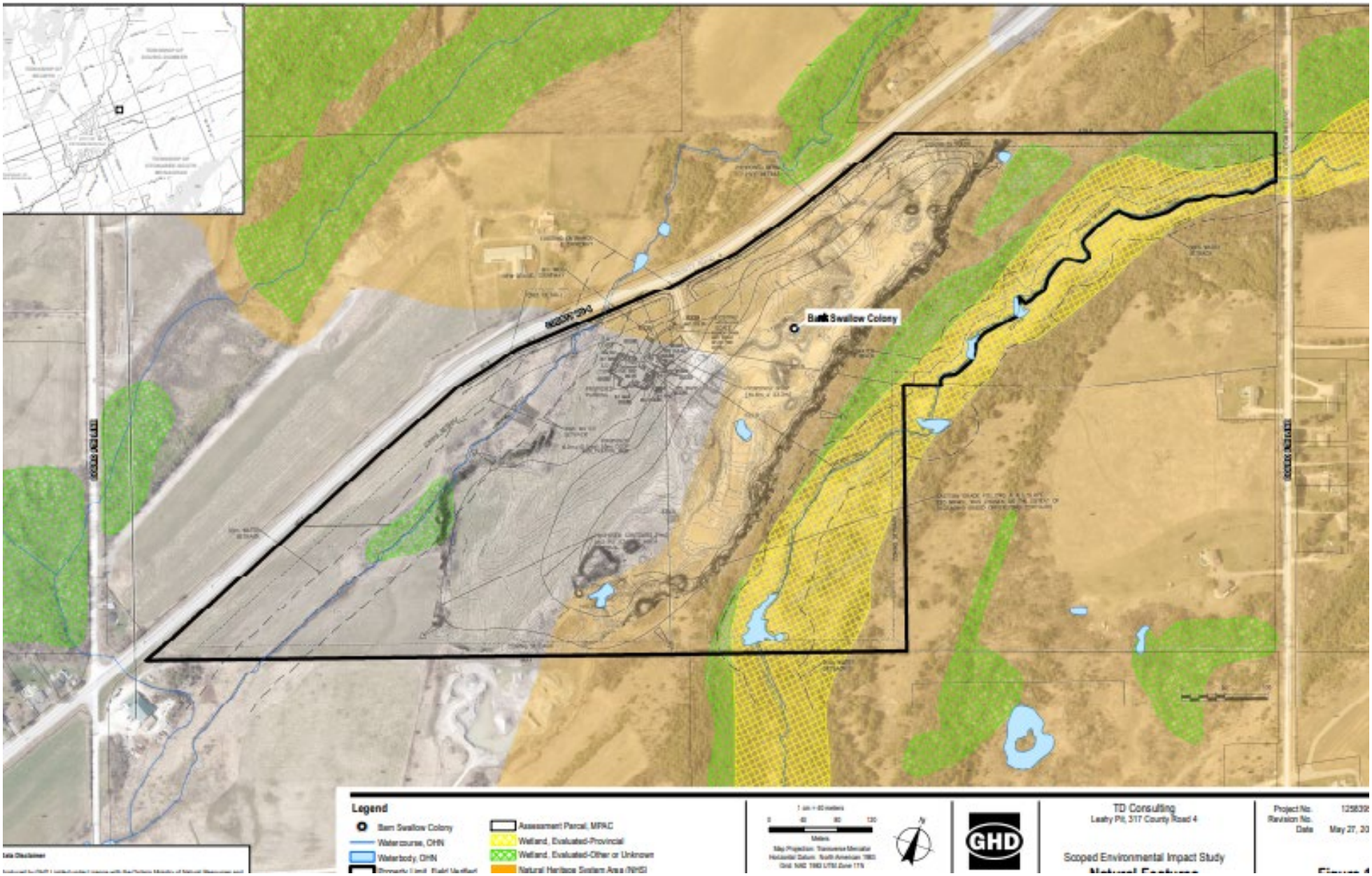
The site will have heavy machinery and crushing etc., has a noise impact study been conducted and due to the barren landscape has an air quality assessment been made. Both are these are outside the expertise of this reviewer but I haven't seen any reference to these issues in the reports forwarded to date. Perhaps they have reviewed separately by our Air section.

If you have any questions regarding the above comments or recommendations, I would be pleased to discuss them with you.



Dana Cruikshank (Surface Water Specialist)

ec: Victor Castro (WRU Supervisor)
David Fisher (Peterborough District Supervisor(A))
Shawn Trimper (Groundwater Reviewer)
Christina Klein (TSS Manager)


Bank Swallow Colony
Legend
Barn Swallow Colony
Watercourse, OHN
Waterbody, OHN
Assessment Parcel, MPAC
Wetland, Evaluated-Provincial
Wetland, Evaluated-Other or Unknown
GHD
TD Consulting
Leahy Pit, 317 County Road 4
Scoped Environmental Impact Study