

Memorandum

To: Genevieve Scott, Cuesta Planning Consultants

From: Shannon Catton

Date: March 19, 2025

File: Caledon Pit/Quarry Peer Review - Town of Caledon

cc: Jason Elliott and Harsh Padhya - Town of Caledon

Re: **Natural Heritage Peer Review - Fish habitat, blasting impacts and dewatering impacts**

CVC provided a Brook Trout data summary for the Credit River located east of the proposed Caledon Pit / Quarry. Upon review of the data, it was confirmed that a number of Brook Trout and redd (spawning habitat) locations have been recorded throughout the section of the Credit River that spans the length of the proposed pit / quarry.

The confirmation of the locations and volume of redds requires further assessment of potential impacts on this sensitive habitat from the proposed pit / quarry.

Therefore, the following comments should be submitted to CBM and their consultants and addressed as part of the peer review comment/response matrix.

1. Through consultation, CVC has indicated to the Town that since 1997, they have recorded a substantial amount of Brook Trout and redd data in the Credit River in proximity to the proposed pit / quarry (see figure below). Data from more recent surveys, including those from 2024, are not shown on the figure but were recorded from Charleston Sideroad upstream to the end of CVC's property (yellow area shown in figure), adding to the existing amount of confirmed and sensitive data in this area; the largest spawning aggregation in the area is located upstream and close to Charleston Sideroad.

Redd locations are recorded within 400 m of the proposed extraction limit, as well as beside the golf course where pit / quarry dewatering discharge is proposed.

- a. Blasting impact assessment: Thank you for assessing the potential impacts on fisheries (Blast Impact Assessment December 2022, Revised July 2023; prepared by Golder Member of WSP). The assessment applies the Wright and Hopky (1998) threshold of

100 kPa. DFO considers both the source / reference and maximum threshold out of date. DFO now applies a 50 kPa maximum threshold and refers to the Monitoring Explosive-Based Winter Seismic Exploration in Waterbodies, NWT 2000-2002 by Cott and Hanna (2005).

The blasting impact assessment notes that the minimum separation of the proposed extraction limit and the Credit River is approximately 400 m. However, the two Credit River fish habitat receptors assessed in the report are located at further distances. Please include two additional fish habitat receptors upstream and downstream of Charleston Sideroad (each is approximately 400 m from the proposed extraction limit) and apply the current DFO threshold (50 kPa) to the assessment.

- b. Quarry / pit dewatering assessment: comment 51 in the CAART Comment Table states: "Water will be discharged via pipe to the Osprey Valley Golf Course. Please provide information regarding the existing, during and post-operational discharge timing, volumes and duration; how/if storage capacity will accommodate the quarry discharge; and any changes to base flows as the water enters the Credit River. Brook Trout, a sensitive coldwater species, habitat is confirmed in the Credit River in close proximity to the proposed quarry (see comment 7). Temperature impact assessments should be addressed in the NER."

Further to this and given the confirmed Brook Trout and redd locations adjacent to and downstream from the golf course, pit / quarry dewatering and discharge details continue to be necessary to inform the impact assessment on the Credit River and the sensitive fish and fish habitat conditions.

Therefore, additional details and impact assessments (e.g., impact on groundwater contributions, impact on groundwater upwellings in the Credit River, etc.) of the proposed pit / quarry dewatering activities on Brook Trout species and their spawning habitat (redds) in the adjacent Credit River are necessary.

Also, additional details and impact assessments of the proposed pit / quarry dewatering discharge locations, pipe location and installation, golf course irrigation pond(s) and inlets, infrastructure, discharge locations and details, and any other relevant information, on Brook Trout species and their spawning habitat in the adjacent Credit River are necessary. The Study Area should be expanded to include the extent of these project details and locations (e.g., pipe, Osprey Valley Golf Course - scoped to the irrigation infrastructure).

