



## Technical Services Memo

**To:** Don Allin  
**From:** Neil MacFarlane  
**CC:** File  
**Date:** July 26, 2024  
**Subject:** 192 County Road4, Township of Douro-Dummer  
**Roll #:** 1522 010 004 10500  
**File:** PPLD-2315

The Otonabee Region Conservation Authority (Otonabee Conservation) technical staff has been given the following items to review with respect to the proposed development project:

- Stormwater Management and Floodplain Cut and Fill Balance Report (Tatham Engineering, May 7, 2024)
  - SC-1 Siltation and Erosion Control Plan (Tatham Engineering, rev. May 2024)
  - SG-1 Site Grading Plan (Tatham Engineering, rev. May 2024)
  - DT-1 Notes and Details (Tatham Engineering, rev. May 2024)
  - DT-2 Details (Tatham Engineering, rev. May 2024)
  - DT-3 Details (Tatham Engineering, rev. May 2024)
  - DT-4 Details (Tatham Engineering, rev. May 2024)
  - CF-1 Existing Condition Floodplain Cut/Fill Plan (Tatham Engineering, rev. May 2024)
  - CF-2 Proposed Condition Floodplain Cut/Fill Plan (Tatham Engineering, rev. May 2024)
- Topographic Sketch of 192 County Road 4 (Richmond Surveying Inc., December 9, 2023)
- County of Peterborough GIS – LiDAR/DEM Layer (County of Peterborough 2024)

Otonabee Conservation technical staff has reviewed the above noted documents and has the following comments.

### Floodplain Cut & Fill

1. Under existing conditions, flood water is conveyed onto/across the site as represented by the blue arrows on Figure 1.
  - a) Under the proposed conditions, with the new raised laneway and raised entrance, the flood water needs to rise above 209.60m to spill across into the floodplain storage area identified by the red line on Figure 1.

- b) With the laneway grades being raised to 209.80m, the flood water is not spilling into the storage area.
- c) Please add multiple cross-culverts to allow flood water to be conveyed into the provided flood storage area.
- d) With flood water not crossing the laneway and blocked flows through/along the ditch by grading for the entrance, does the cut & fill balance need to be adjusted?

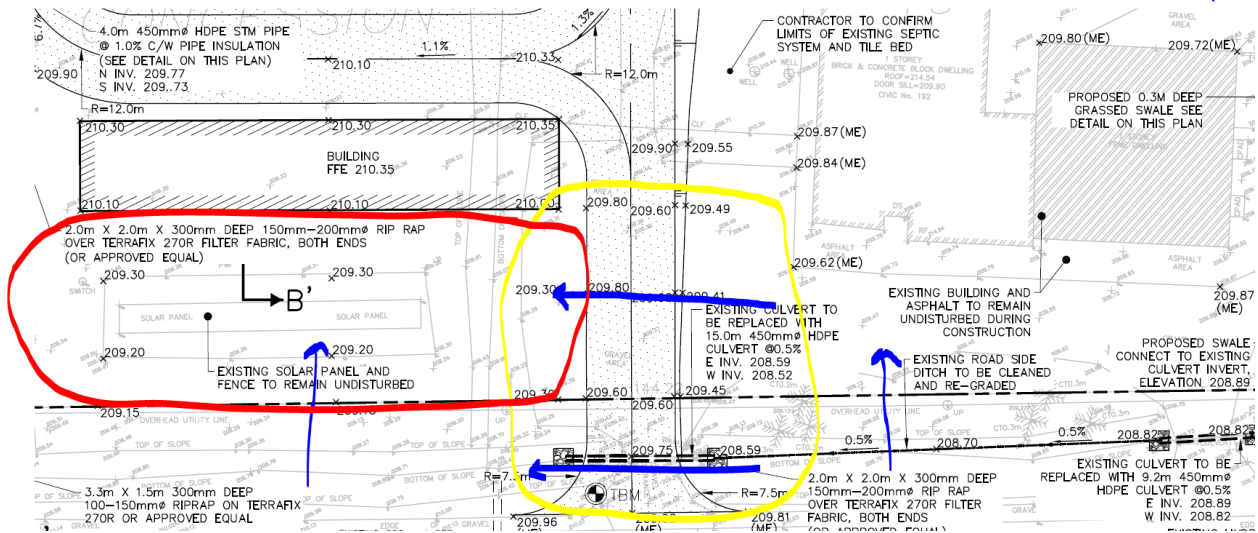


Figure 1 - Snapshot of Site Grading Plan

### Stormwater Management

2. Please provide a pre-development and post development schematic for the VO models.
3. Please provide the detailed summary for all VO models.
4. What is the seasonal groundwater elevation across this site, especially in the location of the three underground chambers?
5. The chamber storage volume sizing only accounts for chamber volume and does not include the gravel surrounding the chambers.
  - a) Are you assuming there is high groundwater?
  - b) If there is high groundwater, then the chambers need to be designed with an impermeable liner. Please modify the chamber drawings to include the impermeable liner and appropriate notes.
  - c) If a liner is required, how does the water within the gravel lens drain?

## Erosion and Sediment Control

6. The Siltation and Erosion Control Plan delineates a proposed dry cell for water quality control.
  - a) What is a dry cell?
  - b) There is no detail on drawing SG-1. Please provide.
7. The entire site will be stripped and excavated. Please provide adequate overland flow conveyance and sediment settling control measures prior to release from site.
  - a) Please provide sizing calculations for settling measures.
  - b) Please provide detail and/or OPSD.

The above comments are based on the latest information received by this office, should additional information become apparent or changes to the plans occur in the future, ORCA engineering staff will review said changes and may provide additional comments. If you have any questions related to this correspondence, please contact our office.

Sincerely,



Neil MacFarlane  
Engineering Technologist