



March 26, 2021

Clinton Stredwick  
Municipal Planner  
Township of Southgate  
185667 Grey County Rd 9  
Dundalk ON N0C 1B0

Dear Mr. Stredwick,

**RE: Site Plan Application SP13-20  
100 Eco-Parkway, Dundalk  
Township of Southgate (Geographic Township of Proton)  
Applicant: Petawawa Biofuel LP**

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The Grand River Conservation Authority (GRCA) has now had the opportunity to review the following information submitted in support of the above noted application:

- Comment Response Letter, Site Plan Application SP13-20, 100 Eco-Parkway, Dundalk, WalterFedy, February 5, 2021.
- Servicing & Stormwater Management Report – Southgate Biofuel Facility. Eco-Park Lot, Dundalk, ON. WalterFedy, February 5, 2021. Including Appendix C drawings - Grading Plan, Erosion and Sediment Control Plan.

Based on the information provided, the GRCA recommends deferral of the site plan application to allow the applicant an opportunity to respond to the comments provided below.

**Required Comments:**

1. Please confirm the maximum flow rate that can be manually released from Catchment 203 (Containment Area) following rain event, and that flow rates will be safely conveyed and do not exceed the capacity of the western ditch.
2. Please provide profile drawings of the proposed dry pond, overflow weir and outlet details. Include the outlet on the design drawings of the stormwater management facility.
3. Please provide detailed design of the “enhanced filtration swale” and outlet to the watercourse, including typical cross-section.
4. The Servicing & Stormwater Management Report states that “groundwater in the area is expected to be at an elevation of approximately 505.0 m”. Please clarify what this groundwater expectation is based on.

5. A minimum detention time of 24 hours, up to 48hrs, is recommended for dry pond facilities. Please provide performance calculations demonstrating active storage detention time.

#### **Advisory Comments to the Municipality:**

6. In the Comment Response Matrix, (February 5, 2021), the response from WalterFedy for GRCA Comment #4 states “According to the Stormwater Management Planning and Design Manual, a dry pond needs to provide 40 m<sup>3</sup> per hectare to achieve 80% TSS removal.” This is also referenced in the Servicing and Stormwater Management Report under Section 6.3 Quality Control (WalterFedy, February 5, 2021).

This statement appears to be incorrectly interpreting the design manual, and should be reviewed. The MECP Stormwater Management Planning and Design Manual does not indicate that a dry pond is able to achieve 80% TSS removal, and is only able to achieve 60% TSS removal at most based on recommended design parameters. Please refer to Table 3.2 in this manual. For a dry pond (achieving only Basic 60% TSS removal) with a catchment area imperviousness level of 70%, 200m<sup>3</sup>/ha storage volume is required for quality control. As Catchment 201 draining to the dry pond for this proposal is 75% impervious, this can be interpolated as 213m<sup>3</sup>/ha of storage volume required for quality treatment of 60% TSS Removal.

If this statement is intended to reference that 80% TSS Removal can be achieved for an Infiltration Facility, then proposed design details for an Infiltration Basin instead of a Dry Pond, in accordance with the MECP Stormwater Management Planning and Design manual, or otherwise demonstrate the design meets the criteria, should be provided for review. In addition, supporting groundwater monitoring data to confirm adequate separation and site specific percolation rate to meet the design objectives would be required. However, Infiltration Basins are not recommended for industrial and commercial uses and may not be supported.

It is understood that the dry pond will be part of a treatment train approach to water quality treatment, including an OGS unit pre-treatment for the dry pond, which will outlet to a filtration swale.

It is recommended that this swale be designed as a “bioswale” in order to provide additional water quality treatment to achieve the required Enhanced (80% TSS Removal) water quality treatment criteria. The use of an OGS unit and Dry Pond will not be able to achieve removal of finer, suspended particles and will not be able to cumulatively achieve 80% TSS Removal. More information on the design of bioswales can be found on the Sustainable Technologies Wiki at <https://wiki.sustainabletechnologies.ca/wiki/Bioswales>.

7. Consideration of directing clean roof runoff to a separate infiltration facility or directly to the enhanced grass swale may be beneficial, in lieu of directing roof runoff through the dry pond facility.

Should you have any questions regarding this letter, please contact the undersigned at 519-621-2763 ext. 2231 or [lwerner@grandriver.ca](mailto:lwerner@grandriver.ca).

Sincerely,



Laura Warner  
Resource Planner  
Grand River Conservation Authority  
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c.c. Elisha Milne, Township of Southgate (via email)  
Mark Bell, Petawawa Biofuel LP (via email)