



COMMENT RESPONSE SUMMARY

FROM: Maureen FitzGerald, Environmental Planner

DATE: December 9, 2020

RE: Waterford Woods, Conservation Commission Site Plan Review

1. A portion of the cleared area within the upland review area is to be revegetated with conservation seed mixture to provide vegetated buffer area between the maintained surface areas and the wetland boundaries. The restored buffer width ranges between 40-50 feet. The boundary of the restored vegetated buffer should be marked with a fence, boulder wall or a line of woody shrubs to identify the limit of lawn area maintenance and provide a minimum 50 ft wetland buffer.

Response. Additional native trees and shrubs have been added to the landscape plan on Sheets 9 and 10 to delineate the edge of maintained landscape and the restored 50' wetland buffer.

2. The limits of vegetation disturbance and soil grading associated with the removal of past debris stockpiles should be minimized where possible to reduce soil disturbance to where debris is identified for removal. Per the E&S plan, perimeter silt fence is shown at the limit of clearing and grading 15-30 feet from the wetland boundary. It is not clear that debris stockpiles occur along the entire wetland perimeter. Measure to preserve undisturbed buffer area are recommended.

Response. Based on field observations, we believe the limit of clearing and the downstream row of silt fence will allow removal of debris and stockpiles within contained areas. Disturbed buffer areas will be restored as shown on the plan or will remain undisturbed if debris is not present.

3. Based on soil test data provided, the floor of the stormwater basins will be excavated close to seasonally high-water table, limiting the ability to infiltrate stormwater. Details for the stormwater wet pond construction should be provided in the site plans, indicating substrate/growing media depth, vegetation cover and wetland planting species and number.

Response. Details have been added to the plan set for the stormwater basins.

The bottom of Pond-01A is at elevation 29.5, which is approximately 4.5' to 2.5' below existing grades. Soil testing in this area indicates that seasonally high groundwater occurs between 2.5' and 3' below grade at the bottom of a silty loam layer. The bottom of the basin is generally set at the seasonally high groundwater level to remove the silty loam layer, install a suitable filter and growing medium and encourage infiltration into the sand and gravel till layer.

The bottom of Pond-02A at elevation 27.5, which is approximately 2.5' to 1.0' below existing grades. Soil testing in this area indicates that seasonally high groundwater occurs between 2.5' and 3' below grade at the bottom of a silty loam layer. The bottom of the basin is generally set at the seasonally high groundwater level to remove the silty loam layer, install a suitable filter and growing medium and encourage infiltration into the sand and gravel till layer.

4. In accordance with the DEEP Stormwater Manual, the wet ponds should be provided with a forebay sized to hold 10% of the water quality volume to allow for removal of suspended sediments and preserve the function and capacity of the main basin component. The applicant should address what modifications are incorporated to provide this recommended pretreatment.

Response. Sediment forebays are shown for both Pond-01A and 02-A. The combined forebay volume for 01A has 100% of the WQV capacity and 02A has greater than 50% WQV capacity.

5. The stormwater basins are proposed to serve as temporary sediment traps during construction. The construction sequence or narrative should include details for the conversion of the temporary sediment traps to permanent stormwater basins and any temporary soil stabilization measures to protect from soil erosion.

Response. Details have been added to the plan and note 7A added to the Erosion and Sedimentation Control Notes.

6. The wetland assessment indicates there is a likely vernal pool in the on-site southwestern wetland. The applicant should evaluate whether exclusion measures should be incorporated into the stormwater pond design to deter amphibians from using the basins as potential decoy pools.

Response. In general, the primary function of Pond 01A and 02A is peak flow attenuation. Sediment forebays are proposed to provide pretreatment. The floor of each detention pond is depressed 8" to 12" below the lowest stage orifice to promote groundwater recharge through a filter bed growth media consisting of a topsoil, mulch and sand mixture. While the depressed bottom of the basins may hold stormwater for 48 to 72 hours after a storm event, we do not anticipate the temporary ponding to last long enough to warrant exclusion measures. An underdrain will be installed at the bottom of the filter bed to ensure the filter bed does not hold water for excessive periods of time.

7. Construction and stabilization details are required for the vegetated filter swales and rain garden area.

Response. Details have been added to the plan set.

8. The stormwater operations and maintenance narrative must include timing and frequency of inspection and maintenance of the vegetated swales, wet pond and stormtech infiltration units.

Response. Inspection and maintenance information added to Sheet 5.

9. Test pits in the vicinity of the infiltration chambers indicate potential for bedrock 4-6 ft below surface grade. A minimum of 3 feet of separation between the bottom of the infiltration stone and bedrock is recommended to maintain adequate drainage. Additional test pit data should be developed to determine whether the infiltration galleys can be installed and function where proposed.



Response. The bottom of the Stormtech System B stone is set at elevation 28.50, which is 2.5' to 1.0' into existing grade. Test pits performed in the area (D101 & D102) indicate that ledge is present at depths ranging from 5' to greater than 7'. A minimum separation of 2.5' to bedrock is anticipated, with most of the system providing a separation of 3' or greater. As a conservative measure, the infiltration system has been designed with a minimal 1" per hour infiltration rate.