

Drainage Evaluation

Property Located at:
Upper Kensington Drive
East Lyme, CT 06333

Reference: Re-Subdivision Nottingham Hills Lots 27, 27-1 and 27-2
Nottingham Hills Subdivision dated 10/07/2021
Lot 27 Re-Subdivision Application

Drainage evaluation of water quality and downstream stormwater flows

SITE DESCRIPTION:

Nottingham Hills Re-Subdivision plan is under review for subdivision approval for Lots 27, 27-1 and 27-2 which are located on the eastern side of Upper Kensington Dr., East Lyme CT. Subdivision Lots 27, 27-1 and 27-2 are located on a cleared west-facing hillside with slopes of 6-14%. The lots are currently well vegetated with native ground cover. Onsite field investigation indicates existing soils are characterized as fine-medium sandy soil with stones. No erosion of soils was noted. Similar soil characterization was also noted on records for deep test pits performed by Ledge Light Health District June 21-2022. This is further depicted in United States Department of Agriculture (USDA) database where the soil is primarily classified as 73C—Charlton-Chatfield complex, with 0 to 15% slopes, well drained hydraulic group B.

Site Development and Drainage:

The original Nottingham Hills Subdivision site plan was approved in 2005 by the East Lyme Planning Commission. The newly proposed plan revises lot lines for approved Lots 26, 27 and 28 to create new lot lines for Lots 27, 27-1 and 27-2. The lot line revision creates two new parcels, Lots 27-1 and 27-2. The existing drainage system has an installed catch basin with sumps. It was designed to collect stormwater runoff from the roadway and lots on the eastern side of Upper Kensington Drive.

Drainage Evaluation Summary:

The addition of the two lots will have minimum effects with slight increase in stormwater runoff due to the change in the runoff curve number (CN) coefficients. New Lot 27-1 will share a driveway with the originally approved Lot 27 so the impervious area of the driveway is effectively the same as the previously approved subdivision. Both new proposed houses will have rain gardens that provides for stormwater remediation from roof runoff. Note that the roof area and back yard (eastern side of house) of Lot 27 drains easterly over the hill instead of to the stormwater collection system in Upper Kensington Dr. New Lot 27-2 is proposed to include a rain garden for the house roof runoff. The driveway and lawn area stormwater will flow westerly along the private drive to the collection system that is routed along a right-of-way between 12 and 14 Upper Kensington Dr. and onto a 38-ac parcel owned by the East Lyme Land Trust. Therefore, no significant increase in drainage to this stormwater collection system is expected. Stormwater best management practices (BMP's) such as rain gardens and catch basins with sumps are incorporated in the subdivision plans and are very effective in maintaining water quality. Also, the grading plan as proposed allows stormwater flows to disperse and infiltrate before entering the collection system. The existing storm water collection system outfalls are directed to large wooded undeveloped areas to allow infiltration and absorption of stormwater runoff, reducing impacts to wetland areas.

Sincerely,

Timothy May, PE
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