



# REC

## Rimmer Environmental Consulting, LLC

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March 7, 2018

Town of Newbury Zoning Board of Appeals  
Municipal Offices  
12 Kent Way, Suite 200  
Byfield, MA 01922

**Re: Site Plan Review - Byfield Estates Comprehensive Permit Application  
Response to Reviewer Comments Feb. 8, 2018**

Dear Members of the ZBA:

Rimmer Environmental Consulting, LLC (REC) was retained by the applicant to assist with environmental compliance issues relating to the proposed development. REC performed wetland delineations and vernal pool evaluations on the site and have been advising the applicant on relevant performance standards under the Massachusetts Wetlands Protection Act (MGL Ch. 131 s. 40).

The following are responses to comments from your environmental peer reviewer, Ann Marton of LEC, dated February 8, 2018. The responses are ordered similarly to Ms. Marton's letter, with the subject of each comment paraphrased in italics.

1. *Vernal Pools*: REC has no further response to comments regarding the status of two vernal pools on the property, other than to report that Mass. Natural Heritage and Endangered Species Program confirmed receipt and processing of an electronic request for certification of the vernal pool within Wetland A submitted on February 7. As soon as information on certification is available it will be forwarded.
2. *Historic Filling on Lots R-20, Lot 75 and R-20 Lot 76*: REC has reviewed historic aerial photographs of the site provided by Col-East dated 1975 and 1980 (see Figures 1 and 2 attached). These photos were taken before and during site preparation for construction of the house at 57 Pearson Drive respectively. In order to compare the wetland signature on the photos with the current conditions, the current wetland boundary was overlaid onto the aerials. Based on this method, it was determined that some wetlands were likely filled or altered on the 55 Pearson Drive lot from construction activities at 57 Pearson Drive, between the current wetland flags D21 and E21 during the period between 1975 and 1980. The area of filling was estimated by Ranger Engineering based

on these figures to be 651 square feet. This alteration occurred prior to the effective date of the relevant Wetland Protection Act Regulations (310 CMR 10.00) in 1983<sup>1</sup>.

The house at 55 Pearson Drive was constructed in approximately 1983. At some time after that date, a small concrete block and timber retaining wall was constructed and some grading was done in the rear yard close or possibly within the limits of a regulated wetland between. Based on the aerial images, current field inspection, and review of the topographic plan from the original Pearson Drive Subdivision (Plan Book 152 Plan 63) this encroachment appears to have occurred in the vicinity of wetland flags E15-E19 and was estimated by Ranger Engineering to be approximately 970 square feet.

The combination of the two alterations is estimated to be 1,621 square feet. While it can be argued that the statute of limitations limits the ability to enforce the unauthorized alteration which occurred in 1980 by a prior owner (or likely the original contractor), the applicant has agreed to incorporate mitigation for both of these alterations into its project plans by expanding the proposed wetland replication area that is required for mitigation of impacts associated with the roadway crossing by the amount of the estimated historic alterations so that there is no long term net loss of wetland resource areas.

3. *Northern Long- Eared Bat*: REC agrees with LEC's assessment and has no further comment.

#### *Design Considerations*

4. *Stormwater Best Management Practices*: As recommended by LEC, plans have been revised so that all BMPs located within 100 feet of the Vernal Pool boundaries recently established within the D-series wetland will be relocated more than 100 feet from the Vernal Pool boundary. The stormwater structure identified as Detention Pond P1-2 was originally located within 100 feet of this Vernal Pool. This structure was designed to control the rate of runoff prior to discharge only and was not designed to provide treatment and renovation of stormwater runoff, as treatment was being fully provided as required by the Stormwater Regulations by other upstream structures, so the quality of discharge from this structure was presumed under the Regulations to be clean. However, since it is technically a stormwater structure that is described in the Stormwater Regulations, its location has been revised so that it is entirely outside of the vernal pool buffer zone.
5. *Design Considerations – Wildlife Habitat Evaluation*: As described above, revised plans locate all stormwater structures greater than 100 feet from Vernal Pool boundaries, including Detention Pond P1-2 closest to the Vernal Pool in the D-series wetland and the infiltration chambers in the rear of the houses that were proposed within 100 feet of the Vernal Pool within the A series wetland. The infiltration chambers are proposed to simply enhance the recharge to the groundwater table of clean roof runoff. While the original proposed location of these structures would have had no adverse effect on the

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<sup>1</sup> The Regulations to the Mass. Wetlands Protection Act were originally promulgated in 1974 but contained little detail on types of wetlands or protection measures until 1983.

function of the Vernal Pool within the A-series wetland, a strict reading of the Stormwater Regulations suggests these structures may be permitted within 100 feet of a Vernal Pool only upon completion of a Wildlife Habitat Evaluation. By relocating all of these BMPs, a Wildlife Habitat Evaluation is no longer triggered. The revision will allow the project to be in full compliance with this provision of the Stormwater Regulations and compliance presumes that the work will not result in an adverse impact to wetlands or their ability to continue to provide wildlife habitat.

6. *Project Impacts to Vernal Pool Hydrology:* The project has been designed to balance pre- and post-development hydrology contributing to the vernal pools/wetland systems. The pre and post-development watersheds contributing to the two vernal pools was calculated by Ranger Engineering on Figures 3 and 4 attached. The vernal pool abutting state land in wetland D has an approximately 18 acre watershed and the project will reduce that contributing watershed area by .9 acres or 5%. This change occurs at the most downstream end of the wetland where the pool is located, where the change has the least potential for impact to the hydro-period of the pool. In addition, groundwater contributions from the immediately adjacent watershed are likely to be greater due to infiltration from the septic treatment areas, more than off-setting any change in the watershed area. All discharge from the septic system is presumed under Title V to be clean.

The contributing drainage area to the vernal pool in Wetland A is much smaller, at 2.81 acres. It is being reduced by 0.46 acres or 16%. Groundwater contributions are expected to be similar to existing conditions by infiltrating roof runoff in this area, resulting in no significant change to the hydrology of this pool.

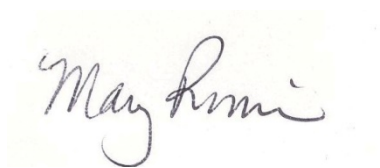
7. *Construction up to the boundary of and very close to Wetlands C and D:* The relocation of BMPs described in item 4 above will result in significantly expanded undisturbed buffer zone in the vicinity of Wetland D and will consolidate buffer zone impacts to the southern portion of the site. Plans have been revised at Detention Pond P3-2 to limit the extent of grading in close proximity to Wetland C. This change will create a minimum of 10+/- feet setback from the toe of grading to the wetland edge making it easier to construct without accidental incursion into the wetland providing a natural vegetated buffer to the wetland. In addition, the outer slope of the detention basin facing the wetland is proposed to be planted with a variety of native, berry-producing shrubs to further expand the undisturbed buffer zone upon completion of work by another 15+/- feet. This change will improve the wildlife habitat quality of the buffer zone beyond the typical loam and seeding that is traditionally specified on the back slope of these basins. A planting plan detailing the types, numbers and density of plantings will be provided as part of the Notice of Intent filed with the Conservation Commission and MassDEP.
8. *Review the extent and proximity of proposed clearing in the Buffer Zone:* These comments have largely been addressed under item 7 above. The changes described above will greatly minimize potential for short term construction related impacts to wetlands, including sedimentation from erosion of exposed soils, inadvertent cutting and clearing of vegetation too close too or beyond the limit of work. They will also protect long-term wetland function by minimizing loss of shade and cover near the

wetland boundary that can affect surface water and forest floor temperatures, and minimize loss of nutrient inputs from changes in vegetative communities.

*Plan Content:*

9. *Sheet 3: Setbacks and Buffer Zones* will be added to Sheets 4-8, 14 and 16.
10. *Detail 11- Modular Retaining Wall, Sheet 10:* The proposed wall does not require a footing other than the stone base indicated on the detail. A heavy duty siltation fence detail has been added to the detail sheets for use in this area.
11. *Construction of Modular Block Retaining Wall:* The temporary wetland impacts associated with construction of the retaining wall required to support construction of the access road were reviewed and the 5-foot width estimated for construction was determined to be reasonable to allow construction for this wall due to the absence of a poured footing. Equipment will be operated from the upland side of the wall and the proposed construction methods do not require heavy equipment access within the temporary impact area. The location of the erosion control barrier has been adjusted on the plan to reflect this temporary disturbance.
12. *Detail 3-Silt Fence/Hay Bale Barrier:* This detail will be revised as recommended to depict entrenchment of siltation fence.
13. *Detail on Wetland Replication Area:* General grading of the wetland replication area is depicted on the revised Grading and Drainage Plan. Details on wetland replication construction, plant types, sizes and densities as well as post-construction monitoring will be prepared and submitted to MassDEP and the Conservation Commission as part of a Notice of Intent for this project.
14. *Working Session among Applicant's and Town's Technical Advisors:* At LEC's recommendation, a working session among the applicant's and Town's representatives was conducted at LEC on February 15, 2018 to further discuss comments and potential responses. This session was extremely useful in understanding reviewers' concerns and obtaining feedback on the applicant's proposed responses.

Very truly,



Mary Rimmer, M.A., P.W.S.  
Principal/Sr. Wetland Scientist

## VERNAL POOL DRAINAGE AREA - D SERIES WETLAND

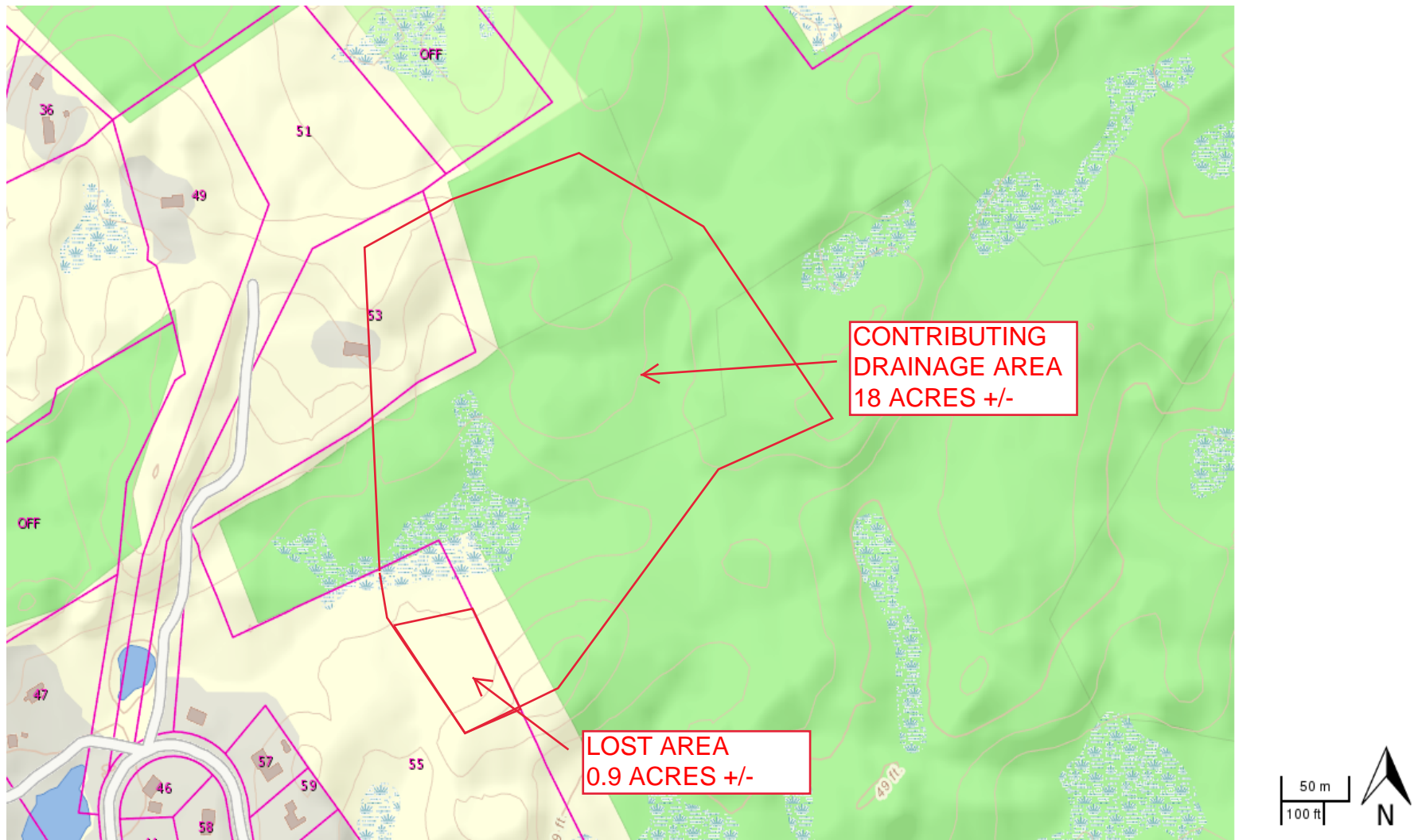


FIGURE 3



## VERNAL POOL DRAINAGE AREA - A SERIES

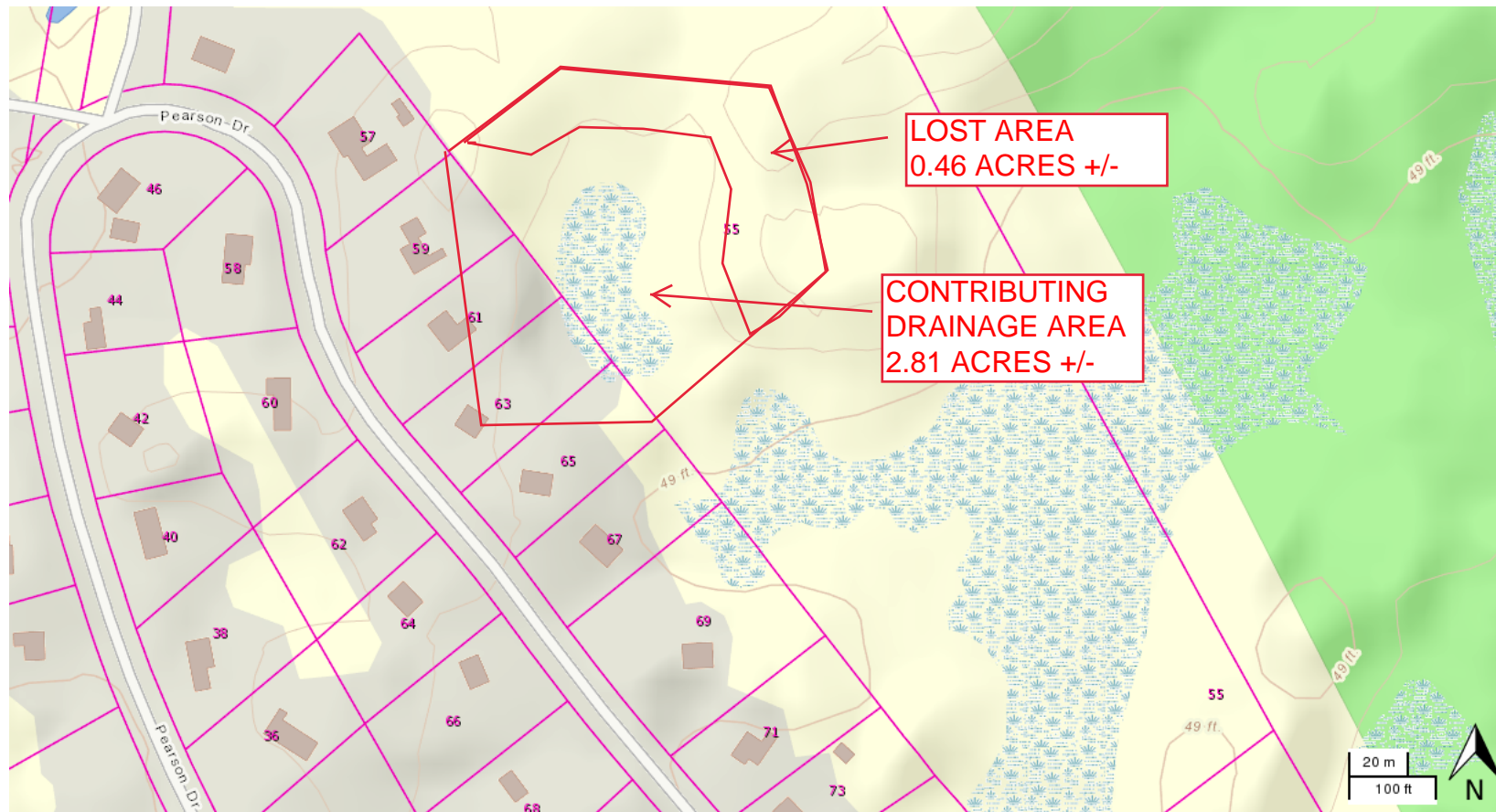


FIGURE 4