

Conservation Commission Minutes, 09/21/2017

Lenox Conservation Commission Landuse Meeting Room September 21, 2017 Minutes

Members present: Chair Neal Carpenter, (NC); Tim Flanagan, (TF); David Lane, (DL); Joseph Strauch, (JS); Vince Ammendola, (VA); Dick Ferren, (DF)

Absent with notification: Rose Fitzgerald Casey, (RFC)

Staff Present: Peggy Ammendola, Land Use Clerk, (PA)

Also present were the following: Rob Akroyd of Greylock Design; Mark Smith of Mark Smith Design; and Carolyn Newberger, abutter to Mr. Merritt's property.

Notice of Intent, Edward Merritt, 139-2 Lime Kiln Road, Map 27 Lot 18-2. The project proposed is for the re-construction of the existing garage into an approximate 3,600 square foot studio expansion and to alter the existing drive to a new layout with comparable dimensions to service the studio expansion.

There was a site visit on September 16th that was attended by Mr. Akroyd, TF, NC and VA.

Mr. Akroyd presented to the Commissioners the following:

- Supplemental Notice of Intent Information of September 2017
- Topographic Survey of Land of December 16, 2016-Taconic Land Consultants
- Revised NOI Site Plan P-100 GDA-Reviewed February 16, 2017 Reduction of Building Size- Revised September 18, 2017
- Revised NOI Grading Plan P-101 Reviewed October 20, 2016 Reduction of Building Size. Revised September 18, 2017
- Permanent Marker Plan October 6, 2006
- Site Plan Greylock July 11, 2005-Revised Property Lines May 9, 2006-Add J.Barrier to S&E Control Layout
- Re-Vegetation Plan August 2, 2012

Mr. Akroyd gave a detailed summary of the supplemental information and review of the plans. He noted that the marker pins have been located and both the stakes and pins are labeled in lavender and green.

NC stated that he had no problems with the supplemental information, but did note that Mr. Akroyd didn't indicate on the plans where he would have the excavated materials stockpiled. Mr. Akroyd said that this was not noted as he was trying to keep the drawings "clean". NC said that there would be a condition that the materials would be hauled off of the site.

It was noted that for the Order of Conditions for File Number 198-0219, issued June 15, 2006, there were six Special Conditions. One, number 3, "Planting of tree replication must be finished before construction begins. Call Lenox Conservation Commission (LCC) when complete." has been completed. The Commission will issue a Partial Certificate of Compliance and the other five Special Conditions can be added to the Order of Conditions for this project.

TF asked Mr. Akroyd to clarify how the flood plain elevation was established. Mr. Akroyd described step by step the process used by Patrick McColgan of Taconic Land Consultants

TF noted that in the letter of September 12, 2017 from Mass DEP assigning the File Number, Mark Stinson stated the following: "Panel 2500290001B should be used in conjunction with the FIS (Flood Insurance Study) to correctly arrive at the 100 year base flood elevation." According to the plans submitted by Mr. McColgan, his calculations were made based on Panel 2500290002B. It is critical to have accurate calculations to determine if the building will be in the flood plain. Mr. Akroyd will check with Mr. McColgan to find out what Panel was used to arrive at the base flood elevation.

TF said that he had questions about the performance standards for the Bordering Vegetated Wetland (BVW)~ buffer as there are so many overlapping jurisdictions, it is necessary to be clear on the BVW buffer. He referred to Mr. Akroyd's presentation in which he spoke of the possibility of trenches along the drip line, but without a design of the building and roof to show where the drip lines are, then there could not be any calculations on infiltrations. Without that information it can't be determined if the performance standards for a BVW are met in terms of increasing the impervious areas by enlarging the roof line.

Mr. Akroyd responded that there are no performance standards for the buffer zone. TF stated that there are performance standards on resource areas and the purpose of a buffer zone is that work has an obvious potential to alter the hydrology and that it has to be determined if the wetlands will be altered by the changes that are proposed. The design of the building is required to be able to make that determination. Mr. Akroyd said that there is no final design for the structure. Plans are that Mr. Merritt will go before the Zoning Board of Appeals to apply for a variance to build on the footprint that is being proposed. A variance is necessary due to the required setbacks. If the variance is not approved the structure would be

reduced in size which would change the hydrology in the local area. TF also mentioned that it is important to know how the force from the runoff from the roof would be mitigated before it goes into the resource area.

TF commented that the proposal constitutes an enormous alteration to the site and at least ¾ of the buffer has already been altered. He feels that these alterations have impaired the function of the buffer zone. Mr. Akroyd responded that there is a significant amount of invasives in the wetland and under the previous Order the area has been revegetated and Mr. Merritt has increased the vegetation in the BVW. Mr. Akroyd felt that this had a positive impact on the BVW. TF stated that this work in the BVW was done because it had been altered and was in violation of the Wetland Protection Act. Mr. Merritt had been ordered to do the restoration. TF stated that the Commission is asking for mitigation for this proposal which is adding significant impervious surfaces to the buffer zone. TF added: "I have not seen any calculations of the ability of this landscape to handle the alterations that you are proposing."

JS said that the Commission needs more information. Mr. Akroyd questioned what information the Commission was lacking. JS responded that the Commission does not know the effect this "maybe" building would have on the stormwater. TF added he would like to have discussion of buffer zone functioning and what is it that is being impaired by the project. He said that it is known that buffer zones contribute to the welfare of the resource area the Commission is trying to protect. He asked Mr. Akroyd how he would quantify impacts. TF said that there are many effects which include runoff acceleration, runoff of the roof, pavement, etc. and the NOI is lacking any discussion of buffer zone functions. He reminded Mr. Akroyd that this had been requested at the last meeting. Mr. Akroyd responded that his understanding was that he needed to reduce the size of the building, pull it back and give additional space between the building and the buffer zone.

Mr. Akroyd felt that he had provided enough information to render a decision. Discussion ensued and it was concluded that the Commission had insufficient information to make a determination as to the suitability of the project proposed.

DF made a motion to continue. Mr. Akroyd said that he was not sure that they wanted to continue as he felt they have gone as far as they could if the Commission did not believe that the performance standards were met. He asked if the Commission had any other issues. TF responded that he didn't think that it would be productive to examine all of the issues as there are lots of overlapping matters interconnected with the building design. Mr. Akroyd said it would be helpful for him and Mr. Merritt to know if there was one issue or dozens of issues. TF responded saying that the Commission had this discussion with Mr. Merritt at the last meeting. The Commission needs a finished project with all essential information to be able to review and determine if the project could be conditioned and if it meets the performance standards. The responsibility lies with the Applicant to provide all of the necessary details. If the ZBA doesn't approve a variance, the footprint of the structure would have to be reduced to meet the setbacks. Mr. Akroyd stated that if it was reduced, he doesn't believe that they would have to come back to the Commission.

Mr. Akroyd was asked if he wanted to continue. He agreed, stating that they could get a roof line and apply stormwater standards to it.

JS seconded DF's motion to continue and the Commission voted to agree 4-2. TF wanted to make sure it was clear that the Commission was asking the Applicant to provide information about meeting the performance standards with all the different performance standards that apply so that the hearing could be closed and the Commission could make a decision as to whether or not the work as proposed was likely to alter the wetlands. The Commissioners agreed that TF stated this at the last hearing. The Commission voted to agree 5-1 with TF voting against a continuation. The hearing was continued to October 5, 2017 at 7:30 PM.

Approve Minutes: September 7, 2017 DF made a motion to approve the minutes and DL seconded the motion. The Commission voted to approve by a vote of 6-0.

JS brought up the Gateways CR and the restricted area. He would like to get Natural Heritage to write a new management plan. The Commissioners believe annual mowing is required but Matt Ward said that had been changed. JS will compose a draft and forward to PA who will then create a letter that the Commission will send to NHESP.

TF asked to speak on a procedural question that had been asked by DL earlier in the meeting. The question was why I was concerned about buffer zone performance. It was noted that this would be a general discussion, and not related to a particular project. TF felt that it was important that the Commissioners understood the regulations regarding buffer zones. He detailed what a buffer zone does and explained that if trees are cut you can have too much light coming into the wetlands which is an open invitation to many invasive species. He said that a nice forest cover, complex vegetation, shrub layer, herb layer, organic layer and soil slows down the run off tremendously, eliminating a surge of water running into the wetlands. A cumulative development on site with cutting down a few trees changes a little bit, but clear cutting changes a lot more. It is important to recognize how much change accumulates over time that each change can eat up a little bit more of the buffer.

TF said a single family home on a typical 2 acre residential lot increases nutrient run off into the wetland at the minimum of double the phosphorous that goes into the wetland and can range as high as ten times as much. This is when a lot is built correctly. Most of it is from lawn management, some is tracked in by vehicles and even a working septic system is dumping phosphorous.

A big lot is filtering the pollutants and pollutants associated with a driveway are sand, salt, oil, gas, and antifreeze. Also there are many toxins including metals and synthetic polymers that comes off of tires. When managing buffer zone impact, you have to be sure that there is either a way to move impact away from the wetlands or a way to intercept and deal with the pollutants.

TF said that if you have an intact buffer zone at least the first 25 or 50 feet, a lot more of the material that does get shed off the house, lawn, and driveway has contact time with the soil so the bacteria and fungi can it break down and clean it. The closer one crowds a project to the soil the more material ends up in the wetlands. This is why the distance of the setback is significant. Ideally one would want a minimum of forested area, lawn area and then the house. The root system of shrubs and trees multiply these functions. If you are converting shrubs and trees to lawn you lose a lot of that function. Certainly the wildlife habitat and wildlife corridor consideration and in some sites it is not just a matter of "don't fill in the vernal pool" you also get into wildlife function. If there are salamanders you want to make sure there are intact corridors between forested area and vernal pools.

Driveways, lights on houses, etc., are all buffer zone concerns. Setback distances from the wetlands are important. In some places where there are cold water fisheries you want to pay attention to the temperature increases. If you know you are going to be generating heat you would also want a cooling strip between the runoff and wetland. The best way to do a cooling strip is to have trees in the buffer and an organic leaf layer. Both can drop the temperature back down so by the time the runoff reaches the wetland it is OK.

Those are a few of the things a Commission looks at. It would be hard for an applicant to quantify any of these things, but some easy questions to ask would be:

- What percent of the transpiration is lost by converting from one land cover type cover to another?
- What percent of the rainfall is converted to direct runoff?

The footprint of the house and footprint of the driveway no longer have infiltration. Another one that is a part of normal stormwater evaluation is: What is the change in timing? Run off from the roof is fast. Run off across soil under a forest canopy is slow. TF said that all of the floodplain regulations and all of the stormwater management regulations try to stop us from allowing direct runoff into the wetland. He said that the Commission should still be asking the applicants not to accelerate flow into wetlands especially over short distance.

Respectfully submitted,
Peggy Ammendola