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Town of Carlisle

Office of
CONSERVATION COMMISSION
66 Westford Street
Carlisle, Massachusetts 01741

Tel. (978) 369-0336
Fax: (978) 369-4521

R E C E I V E D
JAN 26 2015

TOWN CLERK-CARLISLE
CHARLENE M. HINTON

MEMORANDUM

To: Carlisle Zoning Board of Appeals (ZBA),
Lisa Davis Lewis, Chair
FROM: Carlisle Conservation Commission
DATE: 1/26/2015
RE: "The Birches" 100 Long Ridge Road, Comprehensive Permit Application
comments

The Carlisle Conservation Commission (Commission) is pleased to provide this response to your request related to the above-mentioned project. Thank you for the opportunity. The Commission opened its public hearing under the Massachusetts Wetlands Protection Act on August 28, 2014 and held a continued hearing on November 6, 2014 to hear and review the report from the peer review of the wetland delineation and the Notice of Intent document conducted in the interim. The Notice of Intent document and plan were submitted for Peer Review to Dr. John Rockwood of EcoTec, Inc. and, following a site visit with the applicant's wetland consultant, a report of findings was submitted to the Commission. That report was previously submitted to your board. The public hearing was then continued to February 12, 2015 at 8:00 PM. On January 8, 2015, the Commission held a discussion, with appropriate notice to the applicant, the neighborhood and the Carlisle Town Clerk in order to provide this memorandum to your board. The Commission expects to continue its discussion January 29, 2015 and in future hearings.

The Commission has jurisdiction over the 100-foot Buffer Zone of a Bordering Vegetated Wetland easterly of the housing project itself. The Commission also holds the abutting conservation land, the Davis Corridor, referenced often in the application itself, and is therefore an abutter. The Davis Corridor property is encumbered by a Conservation Restriction held by The Trustees of Reservations (TTOR). As such, the Town of Carlisle is responsible for making sure that any damage done to the property identified by TTOR personnel on their annual inspections is repaired.

1). Density and Impervious Surfaces in the 10-Foot Buffer Zone

The Commission continues to be concerned, as was expressed early in the hearing process, with both the extent and density of the alteration of the 100-foot Buffer Zone, particularly by houses 13, 14, 15 and 16, the grading proposed for them and their related infrastructure. At the Commission's last hearing on November 6, 2014, Mr. Brem was asked to reduce the extent of the use of the Buffer Zone by moving the houses back from the BVW; reducing the houses to a smaller footprint or turning the houses was suggested. The revised plan shows the same size



houses. The foundations of houses 13 and 15 have remained in place and now have decks extending further toward the BVW. The foundations of houses 14 and 16 moved back modestly by 9' and 13' respectively but now have decks extending toward the BVW. Grading is proposed to less than 10 feet from the resource area.

In addition to the structures, the stormwater management system discharges into the Buffer Zone between houses 13 and 14. Roof drains, drinking water wells, sewer lines and underground propane tanks of unknown size are also sited in the Buffer Zone. This additional infrastructure adds to the hardscape (propane tanks) and could interfere with access needed for maintenance necessary in the rear of some of the proposed homes. The Commission believes that this plan does not adequately address their concerns.

2). Stormwater Management

The Commission shares the concerns expressed by Nitsch Engineering regarding the complexity of and inadequate data to support the proposed stormwater management system. The Commission's concerns, as noted in Point 1, above, are heightened if the stormwater system does not function as intended. The location of housing (again proposed units 13, 14, 15 and 16) will change the characteristics of the surface runoff along the wetland edge and into the intermittent stream. In addition, due to the steep grading immediately behind the structures down to the wetland edge, the Commission is concerned that during events with heavy precipitation, the built-out buffer zone will be inadequate to infiltrate or dissipate the stormwater, and result in essentially point source discharges into the wetland rather than more gentle discharges along the entire edge of the wetland. Runoff will also concentrate sediment, fertilizers and other surface contaminants such as animal waste at these points. There is also the potential for erosion as the water cascades down to the wetland. A more detailed plan showing at least 1' contours would be helpful in better assessing this area of the project. It is imperative that the applicant demonstrate that the stormwater system will function as designed to properly manage the runoff from the road as well as the discharge located between houses 13 and 14. The amount of hardscape proposed, including asphalt and roofs will also change the temperature of stormwater being discharged toward the resource area either by the Stormwater Management system itself or by overland flow between the homes. As noted in more detail below under Landscaping, this can be expected to have a detrimental effect on the wetland wildlife habitat both on the property and downstream.

3). Snow Storage

The Commission is also concerned about the lack of adequate snow storage and questioned the proposal to locate snow storage in the stormwater features themselves, including within the cul-de-sac and the bio-retention/raingarden facilities. The Commission is supportive of the use of rain gardens and low impact development (LID) design, but is concerned about the potential for this system to become inefficient with time because snow with included sand and other particulates would be plowed into them during routine plowing. Occasionally Carlisle experiences particularly heavy snow years with the potential for snow amounts to exceed the capacity of what is shown on the plans. Unless enforceable conditions are imposed to remove snow from the site when this occurs, the stormwater management system could be further compromised. As noted above, there is a stormwater discharge located in the buffer zone on a somewhat steep slope. Discharge of a heavy snow melt at this location can lead to erosion of

soil into the wetland resource area and can possibly alter the wetland edge itself over time and cause scour within the resource area.

4). Landscaping

The Commission is always concerned about the use of pesticides and fertilizers within the buffer zone. While the Commission can issue conditions that address this, we have found that such conditions are nearly impossible to enforce. Again, the ideal is to limit incursion in the buffer zone to a lesser amount than is proposed by maintaining a wider undisturbed area between landscaped areas and the resource area to protect the surface water quality.

The Commission also has concerns about the large amount of tree removal proposed within the buffer zone. While the Commission regularly allows some tree removal in the buffer zone, we are normally reviewing applications limited to single-family houses, often limiting tree removal to 50 feet from the resource area or to trees that homeowners consider a hazard to their home. Trees not only provide soil stability, but their canopy provides shading of wetland areas, especially important to control the wide swings in the temperature of water important for wetland wildlife habitat protection both on site and downstream. A natural forested area also slows the overland flow of water to the resource area limiting erosion and flooding potential. The applicant provided the Commission with hand-colored plans showing a row of either trees or other vegetation along the wetland edge, but given the extensive grading and the excavation needed to construct the proposed retaining wall, it is not clear that even this narrow area of vegetation, as little as 7 to 8 feet wide in one place, would or could be preserved. The Commission recommends the ZBA get a definitive plan of what trees will be removed and what trees will remain after the proposed construction as well as a tree and tree root protection plan.

5). Further recommendations

Given the concerns expressed above related to the November 14, 2014 plan, the Conservation Commission recommends the following:

- a. A haybale siltation barrier be erected on the project side of the 50-foot long stone wall property line in order to protect the stone wall from the damage that can be caused by heavy machinery grading close and pulling stumps from the stone wall area. As noted above, the Town of Carlisle is responsible for damage to the Conservation Land and stone walls are easily damaged during construction.
- b. The hay bale siltation barrier shown along the northerly property line adjacent to a stone wall be continued further along that stone wall at least to the end of the 100-foot Buffer Zone to more adequately show the limit of work and to protect the stone wall from construction damage.
- c. Any dumpsters needed during the construction be covered at the end of each day, during rain events, and located outside of the Commission's jurisdictional areas to prohibit drainage from entering the wetland resource area on the property and downstream.
- d. Water supply wells located within the 100-foot Buffer Zone and those abutting the Buffer Zone be protected by a double hay bale line during installation to prevent drilling spoils from entering the resource area. This protection must be shown on a final plan.

- e. Resource Area Protection Plan submitted to the Commission for review at least one month prior to any either 24 or 48 hour continuous pump test of the proposed wells or abutters' wells in order to adequately evaluate the potential impacts of the pumped water to any wetland resource area.
- f. A bridge stated in the NOI and by the applicant to be sited over the BVW to the Open Space over the most narrow section of wetland should be shown on the plan. WF-18A is the likely location but is now shown to be behind a house and a stone wall. The application states the open space will be used and accessible to homeowners. We ask that this be confirmed by the ZBA and the plans corrected accordingly.
- g. Considering the steepness of the grade, the retaining wall proposed behind houses 15 and 16 be extended to at least beyond house 14 and moved further back from the resource area. To accurately assess the proposed work in that area, a detail provided on the plan with 0.5 foot contours along the resource area from WF-16A to, and including WF-24A.
- h. A detail is needed for the proposed stone wall on the plan.
- i. Identify the location of the water softener discharge drywells on the plan. If the applicant plans to use the roof run off infiltration system for this purpose, this should be noted on the plan.
- j. To reduce the negative impact of this project on wildlife landscape planting proposed for the project be restricted to native plants of high wildlife value at least within the 100-foot Buffer Zone.
- k. Outside lighting, including those on the homes, be provided by full cut/off light fixtures like those approved by the International Dark-Sky Association. This will help reduce the impact of the project on abutters, including the Commission's conservation land, and on wildlife in the area.
- l. Details about maintenance of the Open Space area be provided. Much of the Open Space is within the Conservation Commission's jurisdiction under the Wetlands Protection Act and the Carlisle Wetlands Protection Bylaw. The Commission recommends that the ZBA require that the applicant submit deed language for the Open Space for review prior to the granting of any permit and also identify any proposed work to be undertaken on the far side of the resource area and how it will be accessed by any necessary equipment. A management plan is also highly recommended for the Open Space.
- m. The ZBA place a condition requiring that the applicant/owner obtain all approvals required from any local, state and federal agency prior to initiation of any construction.
- n. The ZBA place a condition requiring that the applicant/owner comply with the Orders of Conditions issued by the Carlisle Conservation Commission or by MassDEP in the event of an appeal to their Orders of Conditions.

6). FEES:

- a). The Wetlands Protection Act fees have not yet been fully submitted to the Conservation Commission and to MassDEP, at least partly due to ongoing changes in the

plan. Per our review of the MassWPA regulations (310CMR 10.00), approximately \$1,000 may be outstanding. According to the most recent plan, dated 11/14,2014, there is a point source discharge for the stormwater management system in the 100-foot Buffer Zone and a deck has been added to house #12 which places a portion of the house in the Buffer Zone and therefore subject to Category 2 fees.

b). Under the Carlisle Wetlands Protection Bylaw, the applicant submitted a fee of \$500 for this project and at the same time stated that he anticipated requesting its return upon project approval. The applicant has asked for a waiver from the Carlisle Wetlands Protection Bylaw. The bylaw fee schedule developed by the Conservation Commission has categories for projects that are the same categories and project descriptions as under the 310 CMR 10:03(7)(C)1 through 5 As such, the \$500 was inadequate. The Town of Carlisle should receive a further \$2,500. (Fee Schedule attached.)

c). **Waiver Request:** The Commission revised its bylaw fees in 2011 with the expressed encouragement of the Carlisle Finance Committee. The purpose of this fee revision was to begin to reimburse the Town of Carlisle for work associated with projects that are in the Conservation Commission's jurisdiction. Considering the scope of this project and the work's proximity to the protected resource area, the Commission recommends that the ZBA deny the applicant's request for a waiver from the Wetlands Protection Bylaw. Wetlands permitting and monitoring activities are public health and safety activities and the nature of the project and time required by the Conservation Administrator to review and monitor the project justify these fees.

Fees Required for Filings Under The Carlisle Local Wetlands Protection Bylaw

All filings submitted to the Carlisle Conservation Commission under the Massachusetts Wetlands Protection Act (M.G.L. Ch. 131 s. 40) must be co-filed under the Carlisle Local Wetlands Protection Bylaw. In addition to any filing fees required under the WPA, the following is a schedule of filing fees required under the bylaw. *Additionally, when work within the Conservation Commission's jurisdiction has begun and then comes to the attention of the Commission, any subsequent filing must be accompanied by a fee, double that of a traditional filing, submitted within the categories listed below in bold.*

	<u>FEE</u>
1). Request For Determination of Applicability (RDA)	\$150
2). Abbreviated Notice of Intent	\$200
3). Notice of Intent (NOI)	
Category* #1	\$250
Category* #2	\$500
Category* #3	\$1,500+\$.50/sf
Category* #4	\$1,500+\$1/sf
Category* #5	\$500
Category* #6 (ANRAD)	
Single Family Home	\$2/lf to \$500
All Other Projects	\$2/lf to \$1,000
4). Riverfront Area	Add 25% to total fee
5). Amended Order of Conditions	\$100
6). Extension Permit	\$100
7). Certificate of Compliance (for current "Orders")	\$100
8). Certificate of Compliance (for expired "Orders")	\$100
9). Carlisle Youth Project:	Exempt**

* For description of work covered under this category, see the Massachusetts Department of Environmental Protection Fee Schedule located in the instructions to the WPA Instructions for Completing Application for the appropriate category or see 310 CMR 10:03(7)(c)1 through 5.

**To be exempt from the Carlisle Wetlands Protection Bylaw fees, the applicant must be a Carlisle resident youth with a project associated with a youth organization. Examples of organizations include: Boy Scouts, Girl Scouts, church or school group, or other community service organization. This fee exemption applies only to the Carlisle Bylaw fee, and not the state (DEP) filing fee.

Approved 1/13/2011
Effective 3/1/2011