



Town of Northborough

Office of the Town Engineer

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Groundwater Advisory Committee

February 13, 2018

Conference Room B

7:00 p.m.

Present: Bill Pantazis (Board of Selectmen); Bryant Firmin (Water and Sewer Commission); George Pember (Planning Board); Diane Guldner (Conservation Commission); Tina Hill (Board of Health)

Absent: None

Also Present: Fred Litchfield–Town Engineer; Vito Colonna–Connorstone Engineering

Mr. Pantazis called the meeting to order at 7:00 P.M.

7:00 p.m. (Continued) To consider the petition of Daniel Yarnie, for a Special Permit from Sections 7-07-010 D.(3)(b)[4] and 7-07-010 D.(3)(c)[3] and 7-07-010 D.(3)(c)[6], Groundwater Protection Overlay District, to allow the construction of a 2865 s. f. commercial building with 3 residential units and a hair salon, in the Downtown Business Zoning District and Groundwater Protection Overlay District Area 3, on the property located at 89 West Main Street.

Applicant: Daniel Yarnie

Representative: Michael Sullivan, Connorstone Engineering, Inc.

Vito Colonna (Connorstone Engineering) was present. Mr. Litchfield commented for the record that he did not realize when he was preparing the agenda that the application had changed from the previous submission; it is now for 6 residential units and the building size has increased (4275 square feet) as referenced in his letter. Mr. Firmin read that it is now “to allow the construction of a 4,275 s.f. commercial building with 6 residential units and a hair salon”. The hair salon is one of the commercial tenants on the first floor with the six apartments on the top.

Mr. Colonna said originally only the hair salon would be on the first floor. There will now be multiple commercial tenants (unknown at this time). The residential units are 2.5 stories. The applicant proposes to remove the existing building; the new building will have a total of 3.5 stories. Access for the commercial portion of the building (the lowest level) will be from the front portion which faces West Main Street; access to the residential units is from the rear of the building. The units are town-house style. The applicant will be meeting with the Design Review Committee prior to the ZBA meeting.

The lot is steep and drops off from the rear to the front towards West Main Street; the soils are in the Groundwater 3 District, test pits were done in the front of the development; the soils are tilled; they are in Groundwater Overlay Area 3. To mitigate for the increase in pervious area, the two drainage systems will be put in the front of the site where the soils are better. One system is a detention system only; it is a closed pipe system to control the peak rate of runoff. The infiltration is what you would be most concerned about, the recharge of the aquifer. The system from the roof and the upper parking lot come down and are routed into the infiltration system. The elevations in the front of the site don't allow them to get the lower parking lot drainage into that infiltration area. The overflow goes into the underground detention system. From there it goes out into the drainage system on Monument Drive. There will not be any more flow created for the peak rate; the volume will be kept below the 15%. The underground detention system is a series of 4 48 inch diameter pipes, 60' long each, which is underneath the parking area. Mr. Colonna was asked how it is maintained. He indicated there is access point, 24" manhole covers on each corner, which is outlined in the Operation and Maintenance Plan included in the engineering documents. It should be inspected twice/year; more frequently during construction. He was asked if he will be cutting into the hill at the rear of the property to put in the second parking area. Mr. Colonna said yes (a 22' cut). A 5' wall is proposed with 1:1 riprap slope. There will be a subdrain along the bottom of it. He explained how it connects to the drainage system and goes into the infiltration system. Mr. Litchfield said it should be included in the design because of the amount of water that runs off of the site. Ms. Guldner asked if there was a lot of water that comes off of Monument Drive onto Route 20. Mr. Litchfield was not aware of any ponding situation. She asked if there was going to be any traffic management. Mr. Litchfield said there will be an Earthworks Permit that will require a tracking pad and direction. Originally they were going to build up and rehab the building but the foundation was found to be inadequate for additional loading. They will go back to the ZBA for a variance for the parking setback.

The Fire Chief, Police Chief, DPW, Building Inspector and Mr. Litchfield met today and will put together a letter for the ZBA regarding site plan issues. Mr. Litchfield's letter pertains only to the groundwater section of the bylaw. The project is in Area 3, does meet the land area requirements, there is no septic so the loading requirements for sewerage are not applicable. When he was reviewing the impervious cover calculation sheet, he used the town's GIS system and did not get the same numbers Mr. Colonna has on his sheet, although when he added it all up, it does not show a more than 15% increase in the amount of impervious cover over the existing conditions. He would like to get more accurate numbers on file in the Building Department.

Mr. Litchfield reviewed his letter regarding the project. The applicant indicated that the storage of hazardous chemicals will not be allowed by the owner. The Building Inspector and Fire Chief conduct an annual review of buildings for safety and to be sure they are in compliance with the allowable limits within a groundwater area. If the applicant is stating there will not be any storage of hazardous chemicals, there would be no need for the Fire Department and the Building Inspector to go there. He recommended that a condition be made part of the ZBA decision along with an annual certification if that is still the case. The Stormwater Operation & Maintenance Plan is included in the engineering information. He asked that contractor invoices for work performed be supplied to the engineer and the Groundwater Advisory Committee, and that all material removed from the drainage system is properly disposed of off-site.

The impervious cover calculation sheet does not match what he obtained from the town's GIS system, but is within the 15% limit. Regarding the two sections of the bylaw referred to in the agenda, one is for the commercial aspects of the project which allows for no more than a 40% increase in impervious cover, and the other is for the multi-family which allows for no more than 15% increase in impervious cover; they should be held to the 15% maximum for the lot.

Mr. Litchfield did not see in the engineering document the location of any permeability tests which are normally required. Because the infiltration area is long and narrow, he recommended two tests being performed in the area of the dry well for the roof runoff prior to the issuance of a Building Permit so any changes that need to be made to the system can be done before the system is put in. The hydrological analysis also indicates that because the large portion of the underground detention basin discharges to Monument Drive, the pipe on Monument Drive should be analyzed to make sure it can handle that. His concern is not only the small pipe highlighted on the plan, but the entire system as it goes to the ultimate discharge point. He believes that MassDOT will require that because the applicant is tying into their system which then goes outside the right-of-way. The analysis should include the section of pipe all the way to the discharge point to make sure none of the pipes are compromised. The way the study read, it sounded like they only analyzed the pipe on Monument Drive. Mr. Colonna said they are sending it to the state to see what their jurisdiction is.

Mr. Litchfield asked if the parking lot in the back is discharging to the infiltration system; Mr. Colonna said yes. Is there a water quality separator in line in between; no. There are only deep sump catch basins. Mr. Litchfield said there should be an oil separator in between the catch basins. He said there will be a letter outlining the site plan issues, traffic flow, utility connections, DPW comments. The drainage computations appear to include water from the dry well going into the detention system but he didn't see the connection on the plan. Mr. Colonna said the standard they had to meet was 2' separation. Mr. Litchfield asked how far down is he going with the chambers? They are very shallow. He was asked if he located the septic system; not yet. DPW is concerned with the driveway and the access; Mr. Litchfield has concerns with the slope of the driveway.

Mr. Litchfield will make an additional recommendation for the installation of an oil water separator between the catch basins that come off the upper parking lot and where they connect to the detention basin. The discussion was continued to March 20, 2018.

Old/New Business:

The next meeting is scheduled for March 13, 2018.

Review and Approve minutes of August 16, 2016, September 13, 2016, November 8, 2016, February 14, 2017, June 20, 2017, August 8, 2017 and January 16, 2018 – The minutes were not ready for approval tonight.

The meeting adjourned at 7:45 p.m.

Respectfully submitted,

Groundwater Advisory Committee – February 13, 2018

Fred Litchfield
Town Engineer