

**TOWN OF RYE – PLANNING BOARD
WORK SESSION
Wednesday, April 26, 2017, 5:00 p.m.
Rye Town Hall**

Members Present: Chairman Bill Epperson, Patricia Losik, J.M. Lord, Mell Low and Jeffrey Quinn.

Others Present: Attorney Michael Donovan and Planning Administrator Kimberly Reed

I. Call to order and Pledge of Allegiance

Chairman Epperson called the meeting to order at 5:00 p.m. and led the Pledge of Allegiance.

II. List of all information that has been submitted

1. DLA Compliance: Lots, 17, 13 and maybe 5 unresolved

Chairman Epperson stated that the Board has received a lot of new information and updates from the applicant over the last few weeks. It has raised some questions that will be addressed with the applicant's experts that are present. He continued that additional test pits were dug on April 20th. Information was received back on April 21st that had specifically to do with DLA compliance on several of the lots. Some of the lots were certified as acceptable for their 4,000sf DLA compliance; however, lots 17, 13 and maybe 5 were unresolved.

Attorney Michael Donovan, representing the Board, stated that he spoke with Joe Noel to make sure he was going to be at this meeting in order to understand the status of the lots that were flagged on his memorandum of March 28th, as a result of his work on April 20th. Mr. Noel said that the survey crew was out there the same day surveying the location of the new pits, such that they would be standing around waiting until a pit was dug and tested. Mr. Noel has not received a set of plans from Beals that show those locations. Until he has those, he cannot make any final conclusions with respect to lots 17, 13 and maybe 5, with respect to DLA compliance. Mr. Noel's concerns were addressed with respect to other lots in his May 28th memo.

Chairman Epperson commented that the Board will probably have the information on lots 17, 13 and 5 at the May 9th meeting.

Scott Cole, Beals and Associates, representing the applicant, explained that in addition to those tests, they have done additional testing in the field and have obtained that information as recent as yesterday. Lots 17 and 13 will be revised and that will be submitted early next week for review.

Chairman Epperson asked if there was more information on lot 5.

Mr. Cole stated that they believe lot 5 is all set. There was a ledge probe that was done in the area and the 4k has been revised to cover two adequate test pits.

Attorney Donovan stated there needs to be some communication between Beals and Joe Noel. Mr. Noel's concern is that between two iteration of plans the soil boundaries were drawn back from, and were inconsistent, with one of the test pits that he had done.

Mr. Cole stated the plans will be updated and reviewed by Jim Gove, soil scientist.

Member Losik stated that on the Development Plan, lot 16, the test pit 21JN, which is located in the DLA, actually appears on lot 7 as a location. In looking at the detail from Joe Noel, it has similar characteristics to 20 JN. She noted that it is odd to her that it would have similar characteristics. The test pit from lot 16 may be misidentified.

Mr. Cole replied that he will look into this.

Referring to lot 7, 25JN, Member Losik pointed out there are two sets of notes regarding that test pit. She stated that Joe Noel's memo of April 20th addresses test pit 25JN. Mr. Noel talks about the soil series being chatfield with bedrock range from 30" to 36". On lot 7, test pit 25JN, the soil characteristics do not mention this. She would like clarification.

Mr. Cole replied that the actual test pit is accurate. He will follow up with Jim Gove to get this information.

Attorney Donovan stated there was an exchange between him and Peter Loughlin about a memo that was sent by Doucet in regards to lot 5 and the setback of the vernal pool from the road. He does not see this in any of the information that the Planning Board has. He continued that he questioned the DLA's that are shown on the Lot Development Plan. Referring to the Lot Development Plan, he stated that it seems to show a reconfigured DLA which only had one test pit located in it. It was reconfigured so that test pit 9 and test pit 5JN were no longer in that. If this is the case, the newly located DLA should have another test pit. He commented that it is not clear to him what Doucet was saying; if the two test pits were in the DLA or which drawing was significant. This needs to be clarified for lot 5. This may be related to the question Mr. Noel has on lot 5.

Mr. Cole stated that has since been revised.

Member Losik stated that she cannot find test pit 1XY in the detail, for lot 1.

Member Lord commented that all test pits and probes should be on each individual Lot Development Plan. This would help tremendously.

Mr. Cole agreed. This can be done before the meeting on the 9th.

Member Losik stated that the Topographic Plan do not have the ledge probes. She asked if these can be put on the plan.

Mr. Cole replied yes.

Attorney Donovan commented that the drainage facilities should be shown on the Lot Development Plans as well.

2. Impact of nitrates on AWCF and vernal pools.

- **Will the nitrate levels and the chemicals of concern emanating from the septic system pose an unacceptable risk to the viability of the vernal pools and the Atlantic White Cedar Forest?**
- **If so, what additional measures, if any, can be taken to reduce risk?**

Chairman Epperson stated that the Board has reports from Danna Truslow; one that is dated April the 10th and another for April 20th.

Danna Truslow, Hydrologist, consultant for the Town, stated that the nitrogen level based on the most recent layout of plumes, and the reevaluation of where those plumes may overlap, with the current lot configuration, there looks like there may be an exceeded limit of nitrate concentration of 10 milligrams per liter. She continued that the question is whether the nitrate impact the wetland and the Atlantic White Cedar. In looking at the distances, there is a considerable distance between where the nitrates are expected to enter the wetland and the Atlantic White Cedar area. From doing some recent study on the effect of this on the wetlands, she thinks a lot of the nitrate can be attenuated before it reaches the Atlantic White Cedar; however, she is still concerned about phosphorous, which for a fresh water system is a little more critical. There was some mention that there was some uptake by the sediments but it does get stored in the sediments and recycled within a wetland. That and the overall poor quality changes still may impact the wetlands to some extent. She does not think she has the expertise to say that absolutely it is going to impact it. There will be water level changes and from what this load has presented in the past it is very sensitive to water quality change.

Regarding the 10 milligrams per liter for drinking water standard, Chairman Epperson stated the information the Nature Conservatory gave to the Board states the Atlantic White Cedar are sensitive to any additional nitrate loading.

Ms. Truslow agreed (that increases in nitrate concentration could negatively impact the Atlantic White Cedar Community). Regarding the 10 milligram per nitrate concentration, she stated that this ordinance limit was originally established to protect public drinking water quality. However, elevated nitrate in surface waters that discharge to the estuary systems, is a concern. Just because elevated nitrate (from this development) may not impact drinking water quality it does not mean it is not worthy of consideration.

Regarding Tim Stone's March 31st report, table 2B, Attorney Donovan stated that he is not really sure he completely understood what this intended to show. He asked for an explanation.

Tim Stone, Stonehill Environmental, representing the applicant, explained the reason he put the table together was to put the distances in perspective and show it all in one location. It shows the septic system for each of the lots and the distance of the septic system to the northern lot boundary for the development. The predicted nitrate numbers are also shown on the table. The two closest septic systems to the northern boundary are on lots 5 and 6. Those are lots that are a primary concern; lot 8 was mentioned also. Also, the table shows the estimated distance to the White Cedar Swamp from the leachfield. The closest leachfield is 1400 to 1600ft. There really are extraordinary distances between the leachfields and the White Cedar Swamp. The last table shows the distance between the northern site boundary to the White Cedar Swamp. With the level of organic matter and plant growth in the wetland areas, there can be a tremendous amount of denitrification taking place in the carbon re-sediment and the plant uptake of nitrates. He continued the table shows there is extraordinary distances. First, there are buffers to the wetlands themselves. Assuming there are detachable levels of nitrogen concentrate at the northern property boundary, which he questions particularly in shallow water, there is an additional distance of 1000ft or more before getting to the White Cedar Swamp. Assuming the water is essentially at the surface because most of the vegetation is drawing water from the top 6" to 2'. The White Cedar Swamp is doing the same thing. He thinks it is just implausible that nitrate concentrations would be seen at the swamp.

Attorney Donovan stated that in some places it seems that the northern lot boundary may actually be up into the wetlands. If that is the case, would the critical distance be where the plume goes into the wetlands, rather than where the plume crosses the boundary in terms of impact on the White Cedar Forest.

Mr. Stone stated that if they wanted to take the distance from where it hits the wetlands that would be an even greater distance.

Attorney Donovan asked if it would be possible that the nitrate loading would be higher because the wetland is closer to the source (leachfield).

Mr. Stone replied that it would be a little bit higher; however, the standard is at the site boundary. Once it gets beyond the northern boundary, it really makes no difference because there are such long distances and such great buffer capacity. He continued that this also touches upon groundwater flow also. This is not a small isolated wetland. This is a large area with a lot of drainage coming in from the lots to the west and the northwest. There is a lot of water flowing through the system. There is a tremendous amount of additional pollution from recharge from water coming into the drainage that is not even taken into account. It is not like the nitrate plumes are following this solo path to the White Cedar Swamp, if it even goes to the White Cedar Swamp. It might even be veering to the north and Bailey Brook, which would be an even greater distance. He pointed out that the numbers are very conservative numbers. He explained that the numbers that were submitted recently were based on extending the northern boundary by 50ft on lots 5 and 6. The numbers do not extend 10 milligram per liter at this point.

Chairman Epperson asked where the vegetative buffer is on lots 5 and 6.

Member Lord commented that it is right behind the house. A portion of it goes through the DLA.

Chairman Epperson asked the distance between the house to the vegetative buffer.

Member Lord replied that it is about 40ft. It is about 35ft on one side and 60ft on the other side.

There was discussion on the report submitted by Tim Stone.

Mr. Stone stated that based on the location of the site and the distances, if anything were to make it beyond the northern property boundary, there is a tremendous buffering capacity in the wetlands that are available. It is not like everything is being pumped into one little spot. Also, there is a lot of water coming into the wetlands, not just off of this site.

Speaking to Member Lord, Chairman Epperson asked him to identify the vernal pools on lot 2. He asked the direction the plume is heading.

There was review of the vernal pools on the plan.

Speaking to Mr. Stone, Chairman Epperson asked if he is saying that in his opinion there is zero chance of the vernal pools and the White Cedar Swamp being effected.

Mr. Stone replied that he cannot see that there is any possibility that the White Cedar Swamp would be effected. As far as the vernal pools, based on how groundwater flows, nothing would be seen at the surface. He cannot guarantee everything but this is based on the information available about the site. It would be extraordinary to see an impact.

Referring to lot 1, Member Lord stated it seems there is somewhere between 50 to 20ft to a house, where there is a foundation drain that discharges directly into the wetlands.

Mr. Stone explained that there is a potential in a very high water table condition that there could be some limited capture of that and it does go off to the drain on the side. He commented that the drains go to a buffer.

Member Lord commented that lot 1 goes directly to the wetlands. Regarding the Lot Development Plans, he stated that a lot more information is needed on the plans. The elevation of the basement and first floor is needed. It needs to show where the house sits in relation to the septic field and the foundation drain.

Mr. Stone stated that lot 1 shows the foundation drain going to the edge of the setback. The high water table is around 71ft. The drain elevation is at 72ft. He continued that he and Scott Gove have gone through every site.

Member Lord stated that without knowing the elevation of the house and the foundation location, it is hard to understand the plans.

Attorney Donovan asked if there were any additional measures that were explored that will reduce the risk of impact on the White Cedar Forest. In looking at lots 8 and 9, he asked if a shared leachfield would reduce the impact. If lots 8 and 9 shared the leachfield on lot 9 it would pull the leachfield back for lot 8 even further from the White Cedar Forest.

Mr. Stone explained that there would be the same amount of treatment. The overall pounds of nitrate leaving the system would be similar. The input is still the same. It is being pulled away so it provides a little more dispersion at the boundary; however, little things like that are inconsequential in the whole picture. In regards to lots 8 and 9, it is likely that the flow, as shown in lot 1 for the eastern lots, is in the wetland area in the northeast boundary and not directed to the White Cedar Swamp. There is also a drainage divide that runs down through the center of the site. There is a high area between the White Cedar Swamp and the wetland to the north of lot 9. It is predicted that the flow is going to follow a path that ultimately goes out to Bailey Brook off to the northeast.

Referring to lots 5 and 6, Attorney Donovan asked if the lots shared a leachfield on lot 5 it would basically be reducing the nitrate impact on lot 6, which is the highest of lots 5, 6 and 8. It would push it further away and get rid of the leachfield that is right up against the wetland buffer. He asked if any of these options were explored.

Mr. Stone replied that this was not discussed. Historically, shared septic systems are something to avoid. He continued that it gives a little more distance but in the end it does not add any truly meaningful difference. The loading remains the same and reduces the number at the northern property boundary a little bit. It would provide a little more treatment distance and it may drop the nitrate level by a couple of milligrams. He noted that all calculations are based upon dispersion and recharge from rainfall.

Joe Falzone, Developer, stated that the Town's Zoning Regulations clearly state that a leachfield has to be provided for on its own lot.

Attorney Donovan pointed out that the Town has approved shared systems. Attorney Loughlin was the lawyer for one of them on Harbor Road.

- 3. Impact of rapid changes in Ground Water levels on infrastructure, homes.**
 - **What specific potential problems will the documented changes in groundwater levels pose for the infrastructure and structures within the development?**
 - **What measures, if any can be taken to reduce damage potential?**

Chairman Epperson pointed out that the Board has Steve Harding's report of April 10th.

Steve Harding, Sebago Technics, consultant for the Board, stated that if the groundwater is within the roadway gravel sub-base it would affect the strength of the road. If there was a freeze thaw cycle, the road would get alligator cracking on the pavement. The road is not going to last as long. Typically that is handled by using underdrains or relief through the ditches. In regards to the water line, the Water District would have 5ft of cover to keep it out of the frost zone to prevent freezing pipes. In regards to the basements, if the basements are going to be kept above the seasonal high water groundwater is, basement and floor elevations are needed on the Lot Plans. If there is a significant amount of fill that has to happen, a potential buyer should be well aware of that before they purchase the lot. He continued that he looked at the Lot Plans. There were a lot of inconsistencies. He commented that he got frustrated halfway through the review and provided some general comments.

Chairman Epperson asked what the major frustrations were in reviewing the plans.

Mr. Harding replied the flow arrows did not make sense. There were some conflicting grading contours. It was difficult to see from the presentation what was going on. The first floor elevations were not shown. One driveway was picked up at 19% grade. There really needs to be some thought as to how the house is going to look in proportion to the proposed driveway elevation.

Speaking to Mr. Harding, Attorney Donovan asked for a review of the table at the end of his report.

Mr. Harding stated that he looked at it in relation to two things. One is the distance of the groundwater to the sub-base groundwater. The groundwater elevations are shown to be higher than the roadway groundwater. That is an area where they need to make sure the relief is there. Referring to the groundwater and the bottom of the water line, it is not going to be unusual to have water in the trenches; however, situations should be avoided that have long runs of water traveling downhill and coming out through the roadway, making problems at the bottom of the hill. The distance between the bedrock and the bottom of the water line is the area that will need mechanical means to excavate the ledge for installation of the line.

Mr. Cole stated that he and Christian Smith had a conversation with Caitlyn at Sebago Technics to go over some of these issues. On the Development Plans, he will fade back the road grade and beef up the septic grades so it will be easier to understand where they tie in to each other. He commented that he has a solution to the groundwater levels at Station 100 and 150. (He submitted this information to the Board.) He explained that this is on Francis Path, Station 100 and 150. He continued that they are proposing an underdrain system within the water main trench. This will take the groundwater away from the actual water main. This will convert into an underdrain system that ties into a drain manhole, which will be provided at the request of Sebago at Station 450. This is a subsurface gravity system that will actually take care of the water in the road and the main at the same time.

Attorney Donovan stated that in an email exchange with Christian Smith, he identified the lots that would require blasting. He identified lots 7, 10, 12, 13, 14 and 17 as lots that will require

ledge removal for house construction. He asked if the estimated depth of ledge could be put on the Lot Development Plans.

Mr. Cole agreed. He commented that he will also provide the sill and side elevations.

Member Lord stated that if the road is built and becomes level with Woodland Road, it seems that as it turns along the pavement drainage swales are being picked up along South Road to come back into the property. The existing stonewell catch basins are probably going to be a high point could be eliminated from the property. This should be checked.

Chairman Epperson asked if the Board had any specific questions about the elevation of the road.

Member Lord stated that on lot 9 there is a level spreader. He asked if the elevation could be checked in relation to the profile plan.

Mr. Cole agreed.

Referring to page 12 of the Plan Profile, Member Lord stated that it shows a 36" pipe having an invert of 59/12. It shows the contour below and having an elevation of about 56'.

Mr. Cole explained that this was done to show the pitch of where the drain is going. The water department is going to want to see the separation.

Member Lord stated that the inlet from the 36" pipe is basically 5ft from the edge of the wetlands. It is 3ft lower than the elevation of the wetland. He asked what is going to keep the wetland from going away if the soils are so good at transmitting water through them. He asked if the roadway could be raised so the invert of the pipe is really the existing elevation of the wetland.

Mr. Cole stated that the road has already been elevated but they will look at this.

Mr. Harding stated the details of the gravel wetlands are really unclear. There are some inconsistencies between the model and the report that need to be cleaned up. There needs to be some measure of protection for the wooded buffers that are shown on the plans. The builders and homeowners may do certain things to the buffer. The gravel and retention basin are lined with a synthetic liner so the stormwater and the groundwater are separated. If there is a true concern both the synthetic and clay liner should be used.

Speaking to Mr. Harding, Attorney Donovan stated that they have heard from the applicant's consultant that the impact on the water levels in the wetland that impact the White Cedar Forest would be negligible. He heard that until there is hydrocad modeling that can be relied on, this cannot be confirmed.

Mr. Harding replied that right now there are too many inconsistencies. It may very well be true that it will be a negligible affect; however, that is not known yet.

Speaking to Danna Truslow, Chairman Epperson asked if she had any other comments.

Ms. Truslow stated that in looking at vernal pools 3 and 4, those are in the lower part of this flow system. They might receive some of that flow into the vernal pools, as opposed to under them, because they are very close to the point of discharge to the wetlands. There is probably less potential impact to vernal pool 1, from septic systems and from runoff, than possibly 3 and 4.

Attorney Donovan asked if nitrates adversely affect the viability of a vernal pool.

Ms. Truslow explained it is a small aquatic system. Adding too many nutrients could adversely impact the vernal pool.

Chairman Epperson stated he is concerned about the impact on the vernal pools with people living there.

Regarding the proposed bridge on lot 2, Member Lord stated that it looks like there are contours in the roadway at elevation 70. The contours of the wetland are about 68. There is about a 2ft differential from the top of the roadway and the top of the existing wetland. There may be a 6” span on that to give a 1.5ft clearance from the bottom of crossing and the wetland. Going down 4ft below 68, to have a foundation that is not going to be frost susceptible, there is only about 5ft between the two abutments that is not going to be disturbed. He cannot see how there is going to be no wetland impact. There is going to be digging in the wetlands to put the foundations in. If the waterlines and utilities are going to go underground, there will certainly be digging through that area. He questions the no impact in that wetland area. He thinks this should be revisited. Also, he does not see how the wetlands are going to be able to thrive with no light.

Mr. Falzone disagreed.

Tom Severino, Severino Trucking, stated that they can put holes through the deck to light through those areas to let the light in. The excavation can be straight down to get the footings. He commented that they have done several of these in towns around New Hampshire.

- **Stoneleigh Way design at Station 3+50 to 4+50**

Referring to the design plan that was submitted for fitting Stoneleigh Way between Stations between 3+50 and 4+50, Attorney Donovan stated that there is a proposed wall at the edge of wetlands buffer boundary and also some curbing. In his last letter, he made the suggestion that the scale of the drawings make it to be outside the vernal pool buffer and should be verified by the survey. He continued that it was determined by Doucet that it is actually 102ft beyond the wetlands buffer. It was also indicated that the closest point of the vernal pool was marked by flags that was agreed upon with Mark West, West Environmental. He noted that he has sent this information to Mark West to verify that this information is correct.

Mr. Falzone commented that Mark West signed off on the design. This is the same design that has been certified by Doucet in the field. He reviewed the design that Beals submitted.

Attorney Donovan commented that he did not put anything in writing about the measurements. The Board is just looking for Mr. West to verify this information.

The Board summarized -

Items to be included on the Plans:

- Sheets 6, 7 and 8 should show all the woodlands that will be retained;
- Also show woodlands to be retained for the whole site;
(This will lead to woodland restrictions imposed on the lots; deed restrictions, no cut easement and indication on the plans.)
- Remove the catchment lines from the plans.

Attorney Donovan stated that all woodlands to be retained including those by road way construction the woods that are going to be retained for whole site.

Mr. Falzone asked about lot numbers he thought they were just the ones near the Atlantic White Cedar restrictions for those homeowners so they will not cut trees.

Attorney Donovan stated he wanted them for all the lots.

Mr. Falzone stated that what if a homeowner wanted a build a swing set in the woods near their home.

Attorney Donovan commented that Attorney Loughlin offered to send him drafted restrictions but he thought it was premature at this stage. He think the suggestion should be to is to have woodland restrictions on every one of those lots.

Chairman Epperson asks as a deed restriction?

Attorney Donovan replied deed restriction or there are several ways to do that one being the deed restriction, no cut easements, call attention to that on the plans. Belt and Suspender approaches.

Mr. Falzone commented that one of the big problems he had with his prior development was that last wind storm we had, 15 pine trees came down and when they go to sell a house, they are going to have to remove any pine trees that are at risk of collapsing on the house or houses. 5 home owners, including former vice-chairman's, had these nasty trees fall down and block the road so we have to figure out a way to do swing sets and like that.

Attorney Donovan replied that if he is concerned about the trees falling on homes to be built then he should adjust his plans and adjust what you are showing on those lot plans to take that into account and show wider areas.

Mr. Falzone agreed.

Chairman Epperson stated that there was a suggestion by the Board and independent of one of the abutters about going to the site to take another look. It has changed significantly. There has

been a lot of changes in topography, roadway and drainage. The Board will have a discussion on whether or not a second site walk is needed.

Mr. Falzone noted that he had to call the Building Inspector to the site. There is an abutter that keeps tearing off the flags and moving the stakes. The Building Inspector verified that this is being done.

Chairman Epperson commented that this is not fair to the developer, the Board or anyone else. He asked that any abutters that are present to not do this because it does not help the situation.

Mr. Falzone noted that the current owners of the property are posting “No Trespassing” signs. People will not be able to go on the property unless it is in a forum that is agreed to with the Board.

- **Driveway sight distances**

Chairman Epperson stated that there was a report from Beals that the driveway sight distances were based on 25 miles per hour when the statute is 35 miles per hour.

Mr. Falzone explained that under Rye’s Land Use Regulations there is a chart that sets the distance. That is what was used. The site meets the Town’s regulations.

Attorney Donovan replied that speed is not set by the Town. Speed is set by State statute. The Board received a report from the consultant that was based on 25 miles per hour and stopping sign distance. He suggests that they document that statutory sight distances in accordance with the statutory speed limit. They should provide the information for 35 miles per hour. The Town cannot change State statute.

Member JM asks that the catchment lines taken off the plans.

- **Application to be heard at the May 9th Planning Board Meeting.**

Adjournment

Motion by J.M. Lord to adjourn at 7:00 p.m. Seconded by Mel Low. All in favor.