TOWN OF RYE - PLANNING BOARD

Tuesday, January 10, 2017 – 7:00 p.m. Rye Junior High

Members Present: Chairman Bill Epperson, Vice-Chair Phil Winslow, Mel Low, Keriann Roman, Jerry Gittlein, Selectmen's Rep Priscilla Jenness and Alternate Patricia Losik.

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 7:00 p.m. and led the Pledge of Allegiance.

II. Designation and appointment of alternates

• Chairman Epperson seated Patricia Losik for J.M. Lord

Motion by Phil Winslow to take the agenda out of posted agenda order as suggested by Chairman Epperson. Seconded by Keriann Roman. All in favor.

III. Submittal of Applications for Determination of Completeness. Not a public hearing – Action Required:

a. Re-subdivision of the Myrica by the Sea Subdivision by Stephen Brown, SKRJ Realty Trust of Rochester, NH for 0 Big Rock Road, Tax Map 8.1, Lot 45 and Tax Map 5.2, Lots 79 & 80 to merge 11 lots and create 2 new lots. Properties are in the General Residence & Coastal Overlay Districts. Case #01-2017.

Continued

IV. Communication

• Consideration of Katy Sherman as Alternate PB member

Katy Sherman, 25 West Road, spoke to the Board in regards to her reasons for wanting to join the Planning Board as an alternate.

Chairman Epperson noted the he and Mrs. Sherman were on the Beach Committee together. He knows her to be very energetic and organized. He recommends the Board vote on accepting her to the Board.

Motion by Bill Epperson to accept Katy Sherman as an alternate to the Planning Board starting in February. Seconded by Jerry Gittlein. All in favor.

• Consideration of Anne Richter Arnold as an Alternate PB member

Anne Richter Arnold, 746 Long John Road, spoke to the Board in regards to becoming an alternate member.

Motion by Phil Winslow to accept Anne Richter as an alternate to the Planning Board. Seconded by Keriann Roman. All in favor.

• Rye Civic League News comments

Chairman Epperson stated that in the last Civic News there was a comment about the Planning Board meeting last month. (He read from the Rye Civic League News).

(It was stated in the Rye Civic League News that less than one half hour of comment was made available to the public at the December meeting for the South Road Subdivision case.)

Speaking to the audience, Chairman Epperson asked if the Board heard from everyone who wanted to speak at the last Planning Board meeting.

No complaints were heard some agreed there was ample time heard.

Chairman Epperson read his Planning Board update from the recent Rye Newsletter.

*Recently, I read an online local publication which has criticized the work of various committees here in town including the Planning Board. As a reminder, these committees are made up of resident volunteers who are unpaid and unreimbursed for any expenses they may incur. Most have full time jobs and some have small children to be attended to. All have one thing is common, busy lives. We are committed to the Town. Our motives are to keep Rye a desirable place to live. Putting pressure on individuals or the committees they work on is counterproductive. If they were to quit because of negativity and we had to pay for the time and effort put in on a volunteer basis your tax bill would be more akin to Stratham or Exeter. The solution is to get on one of these committees as an alternate or simply attend their meetings. We can do this but only with your help.

Bill Epperson, Chairman Rye Planning Board

^{*(}December Rye Newsletter.)

Speaking to the audience, Chairman Epperson asked if there is anyone from the Rye Civic League who would like to respond.

Peter Crawford, 171 Brackett Road, Rye Civic League, stated the statement was accurate; however, he did not mean to imply the comments from the public were cut off. It was just to point out the facts.

Chairman Epperson stated that anyone who read the comments would be led to believe the public comments were cut off. If anyone was not at the meeting and read that, they would ask why the Planning Board was cutting the discussion off. The statement is not accurate and is hurtful to the Planning Board.

V. Public Hearings on Applications:

Note: Selectmen's Rep Priscilla Jenness recused herself from the following application, as she is one of the property owners involved in the case. An alternate cannot be seated in place of a Selectmen's Representative. The Selectmen have declined to send an alternative representative for this case.

a. Major Subdivision, Lot Line Adjustment and Conditional Use Permit by Harbor Street Limited Partnership of Stratham NH for properties located at 421 South Road Tax Map 4, Lots 25, 27, 31 & 32 for a 22 19 Lot subdivision. Properties are in the Single Residence District and within the Aquifer and Wellhead Protection District. Case #13-2016.

Christian Smith, Beals and Associates, noted that the traffic experts are on hand for discussion. He asked if the Board would like to take up the issue of traffic first.

It was agreed to start with the discussion on traffic.

Stephen Pernaw, Pernaw and Company, representing the Board, stated that he was retained to the do the peer review for the traffic study that was done for this particular subdivision. He was given a memorandum dated September 1st, which was the subject of the review. The review memorandum is dated December 6th. As a result of that review, the applicant's traffic engineer provided a supplemental memorandum dated January 4th. The scope of the study covered the two existing intersections on South Road. It also included two proposed intersections on South Road. In his view, this is appropriate for a development of this size.

Chairman Epperson asked if there was any comment on the time of year that the study covers.

Mr. Pernaw explained that when he reviews a report he looks to see if the traffic volume was adjusted. His company does traffic counts all twelve months of the year. Depending on the time of year, he will factor up the traffic count to take into consideration peak month conditions. He looks for a peak month weekday volume.

Chairman Epperson asked if there was any consideration given for beach traffic.

Mr. Pernaw stated that he noticed in the traffic study that they went to a permanent recording station in North Hampton, which is fairly close by. They used that data to come with an adjustment factor. They did calculations to determine the a.m. and p.m. data and rounded up to 6% across the board. He noted that if his company was doing the study they would have done exactly the same thing.

Chairman Epperson asked where the permanent recording station is located.

Mr. Pernaw commented that it is listed as north of B&M Railroad crossing on Route 1, North Hampton.

Chairman Epperson noted that he is trying to establish if this is a major road to the beach.

Giles Ham, Vanasse and Associates, representing the applicant, stated the location is just north of the North Hampton Town Line. He believes it is off Atlantic Ave. That was the closest station that they could find. The initial counts were taken in May 2016. The adjustment for seasonal traffic was 6%.

Member Gittlein asked for more specifics on what was counted.

Mr. Ham explained that they physically counted the cars from 7 to 9 in the morning and 4 to 6 in the evening. Every car is counted that goes through the intersection. Within those timeframes, the highest hour is determined and that is the basis for the analysis. He continued that a seasonal adjustment is made, along with a growth rate.

Member Gittlein asked if the study took into consideration the number of houses that are in the development.

Mr. Ham explained that the study projects the traffic based on the number of units in the development. When the study was conducted, there were 24 units in the development. The development has now been downsized to 19 units. Traffic is estimated from the development based on standard industry rates and that is included in the analysis. That is projected onto the roadway network and how it operates. The report looks at safety conditions, access, speed data and sight distance all within the site.

Chairman Epperson noted that he requested information on accidents along South Road from the Rye Police Department, which has not been received.

Mr. Ham stated that they could research accidents from the local police department. That would certainly be appropriate. He continued that he did reach out to the police department and discuss

safety conditions in the area. There only concern was the island on Woodland Road. The department thought that was a safety concern.

Chairman Epperson clarified that the site distances on the chart have to do with the 85th percentile of traffic.

Mr. Ham confirmed. He explained the speed is posted at 30 miles per hour. The average speed is 33mph in each direction. Eight-five percent of the people travel 37mph or under on this road. He commented that people are traveling a little too fast on this road overall.

Vice-Chair Winslow asked if the 6% had turned out to be 20% if there would have been different recommendations.

Mr. Ham explained it would increase the base traffic. He continued that there are about 200 cars on South Road during the peak hours, which included the 6% adjustment. If another 14% was added, it would be 230 cars traveling on the roadway. It would increase the traffic but would not really change the findings.

Vice-Chair Winslow stated that coming in from Stratham, there is a direct line down South Road to the beach. That is used quite heavily during the summer time. He thinks 6% is way underestimating the summer time period. It is more like a 50% increase on that road.

Mr. Ham stated that if the Board would like them to look at that they can; however, it is not going to change the findings. He noted that they used the best data that could be provided.

Vice-Chair Winslow commented that his concern is would the recommendations change if it was substantially beyond 6%.

Mr. Ham stated that the recommendations would not change. The volumes are around 200 and the changes are not significant. He continued that the one issue they may need direction on is the island. The police department raised this as a concern.

Chairman Epperson asked about the sight distance between the proposed subdivision and Love Lane.

Mr. Ham stated that with some of the vegetation cut back there would be adequate sight lines. There are industry standards for sight distances based upon speeds. At 30mph there needs to be about 200ft. At 37mph, there needs to be about 267ft. There are things the town could do to help reduce the speed on this road; enforcement is one. The speed of 37mph is typically higher than what is expected on a road like this. He pointed out the safety analysis is based on the speeds that are out there.

Member Roman noted that the turn onto Love Lane is very dangerous. She asked if there should be any consideration given to the cars speeding along South Road and the sharp turn onto Love Lane.

Mr. Ham stated he can reach out to the town's safety officer to see if there are any concerns with the intersection of Love Lane. He continued that he knows the area fairly well. He understands the issues and concerns of the community.

Pointing to an area on the map, Chairman Epperson noted that most of the accidents he knows of are in this area.

Mr. Pernaw stated that page 4 of his memo, shows a recommendation that he made in regards to sight distance. He recommended that the triangle sight distant easements be shown on the plan. This would be to ensure that nothing gets planted or built in the future that would obstruct sight distance. He continued that the sight distance is shown at 250ft. He is recommending that it be redesigned to be 270ft. The 200ft sight distance is required for the posted speed limit. The 85th percentile travels 37mph, which requires 267ft. The site should be set up for 270ft of sight distance.

Attorney Donovan asked if the 270ft can be provided on the land that is under control of the applicant.

Mr. Smith stated that he is not sure off the top of his head. He will have to review this and report back.

Attorney Donovan commented that it looks like it may not be possible east of Woodland Drive.

Mr. Pernaw stated that it should at least be on the property that is under control of the developer up to that property line.

Referring to the intersection of Route 1 and North Road, Vice-Chair Winslow stated that adding additional traffic in that area is problematic. He asked if there are any recommendations on how to mitigate the concerns in this area.

Mr. Pernaw stated that the area was not included in the study; however, it could be determined there are about 15 to 18 trips from the site during a peak hour period. Over a 60 minute period, that is about 20 trips from the site, which is an additional car every three minutes. In his view, this is not a huge impact. Looking at the total number of cars entering the intersection, percentage wise, it is really pretty small. He continued that his office analyzed that intersection for a development in 2002. Fifteen years ago, he had nothing good to say about that intersection. There is no practical way to mitigate anything at that intersection when talking about 18 trips. The engineering solution is to relocate the intersection where it can have a 90 degree angle, flat grade and a standard T intersection, which is probably not feasible.

Vice-Chair Winslow stated that Rye has four access roads off Route 1. One is Elwyn Road, which is near Market Basket. This area has a traffic light that is well controlled. The second access is Lang Road, which goes into the center of town. That road is very problematic. The Rockingham Planning Commission is looking at the possibility of rerouting that road behind the Service Credit Union. If that were to happen, it would intersect with Ocean Road with an intersection that is well controlled. The other section is Washington Road, which has a traffic light. The only road there is no control over is the intersection of North Road and Route 1.

Mr. Pernaw stated that under the study recommendations, he agreed with just about everything that Giles Ham came up with. He was a little surprised there was no statement or recommendation for the small island near Woodland. To him, the island sends up a red flag. From a traffic engineering standpoint, the recommendation is to either make it bigger, so it meets minimum area requirements, or get rid of it.

Chairman Epperson asked what the result would be if it was made bigger.

Mr. Pernaw explained that it would be a long island about 4ft wide of an area of at least 75sf. To go that route, "keep right" signs would be needed on both ends of the island facing approaching vehicles. An object marker would be needed to bring attention to the sign and a stop sign.

Chairman Epperson stated that the department heads had some comment on the island.

Planning Administrator replied that they want to get rid of the island.

Attorney Donovan stated there is also the question of a four way stop versus a two way stop.

Referring to the four way stop control, Mr. Pernaw stated that he recommended that Vanasse and Associates look at that. There are criteria when using this form of traffic control. The response from Vanasse was that this intersection does not meet those guidelines. There is not enough through traffic, east bound and west bound, on South Road. There will not be enough traffic coming out of the two minor approaches. The area also does not have the delays needed to meet the criteria. He pointed out that in the manual there is a clause that might justify the four way stop because of limited sight line distance. This may be a way to get that through; however, he does not think there that kind of visibility problem. He would recommend stop sign control on the two minor approaches.

Chairman Epperson asked if there are any other comments in regards to the peer review.

Mr. Pernaw noted that he was sent two documents; one had an appendix. He recommends having something in the file that has the document all together. The last recommendation was in regards to pavement markings at the two subdivision road approaches.

Mr. Ham stated the in his original meeting with the town, there were concerns about Route 1 and the intersection. He noted that he did traffic counts in this area and can provide the town with that record. The counts were done in July. He noted that Route 1 has about 1300 cars during a peak hour.

Chairman Epperson opened to the public for comments or questions regarding the traffic study.

Stephanie Patrick, 410 South Road, asked if the study consider what people who live on the road do and the kind of vehicles that come in and off their properties. She continued the access to her barn on the corner is important. She needs to bring in an 18-wheeler and horse slants. She often has to direct the rigs down to the flat irons. She also puts cones out when she is working in that section of the barn. She asked if this is considered in any of the reports.

Mr. Ham explained that when they count cars they do summarize cars and trucks. If there were large trucks on the roadway that would be documented.

Speaking to Ms. Patrick, Chairman Epperson asked how often this happens.

Ms. Patrick stated that it happens at least once a month through the year. The farm is the most active with riding activities from March through September and it could be every other weekend. She commented that during that time she has riding clinics and people come in a train their horses on her property. She also houses the Prescott Park trailers on her property. She noted that her property is right at the intersection of Woodland Road and her barn is partially located on Woodland Road.

Anne Hodsdon, 427 South Road, pointed out that she lives near Love Lane. She stated that in the ten years that she has lived there, many nights there are screeching of tires. There is a lack of sight in this area. Taking care of vegetation might be an answer; however, in the wintertime over the last couple of years, it has been worse. The snow blocks the line of sight. She continued that during the day, there are bigger trucks that are supplying the beach businesses and that is the road they take. She has been paying a lot more attention leaving her driveway, since this project was put on the table, and it takes a lot of time to get out onto the road. More cars in this intersection is a concern. There are a lot of blind areas coming around the corners. There is a lot of concern for safety.

Carol Menard, 495 South Road, commented that she did not hear in the discussion anything about the orientation of South Road. She is talking about glare and loss of sight. She explained that a driver cannot see at certain times of the day because the glare from the sun is so bad. This happens in the afternoon, heading towards the beach. The cars go too fast and the drivers can't see for 20 to 25ft. There are a lot of accidents on this road.

Chairman Epperson stated that this is why he would like the traffic engineer to look at the police reports regarding collisions along the entire stretch.

Shelly Patrick, 410 South Road, asked if there was consideration of rerouting the whole road of the development, so it takes out the access across from Woodland Road, and put a loop road into the development with only one access onto South Road. She has seen multiple accidents at that intersection. She does not think it is feasible to put more traffic in this intersection where there are bad sight lines. She believes the plan could be reworked to eliminate the roadway onto South Road altogether.

Susan Cole Ross, 333 West Road, stated that Rye is a biking town and the bikers needs to be safe. It should be considered there will be an increase, not a decrease, in bikers over the years. The town needs to consider what can be done for their safety now.

Speaking to Planning Administrator Reed, Chairman Epperson asked if she knew how wide the right-of-way is on that road.

Planning Administrator Reed noted that she will ask the DPW Director.

Kevin Bosman, 416 South Road, stated the he is just to the east of Woodland and South. He has a concern about when the traffic study was done. He does not think that 37mph is accurate. The town is also a runner's town. He has been run off the road many times and this is also a concern. He asked if Woodland Road was taken into account. The reason he asks this is because the property line for Rye ends at the back of his property. Coming from North Hampton towards this intersection along Woodland, the speed of traffic of those cars are going well over 40mph. The speed of the traffic is dangerous. The island alone is dangerous.

Mr. Ham noted that Woodland Road was not considered; however, the intersection of Woodland was included in the study. He continued that he is hearing the concerns about the speed and safety. He can reach out to the police department for more information on accidents along this roadway. The town needs to decide what they want to do with the island. The intersection will be designed accordingly, but the question is whether it will be with or without the island. He stated that a safer intersection can be designed and improvement made over what is there today.

Speaking to Mr. Ham, Member Roman asked what the additional trips are for the number of lots in the development.

Mr. Ham explained that South Road has close to 200 cars during a one hour peak period. West Road has about 60 to 70 cars. The project itself will generate between 23 to 24 peak hour trips. It needs to be kept in mind, that as the cars come out some may go left and some will go right. They will not all go in one direction. More of the cars will go towards Route 1. During peak hour times, this would be an increase of about 13 to 15 cars an hour. The estimate was 80% would turn in the direction of Route 1. More cars will be taking a right. This is certainly less complicated with only dealing with one direction of traffic.

Member Roman commented that during the summer, she thinks that more cars would be turning left towards the beach and there would be more cars travelling along the road also.

Mr. Ham explained that the traffic study really looks at just the commuter hours. The orientation is going to be toward Route 1 during that time.

Referring to the plan, Member Losik asked what it would look like. She asked if any vegetation will be seen. There is also mention of stopping the cars 14ft back. She asked if that means the vegetation 14ft back on both sides will be gone.

Mr. Pernaw replied yes. Page 4 of the report illustrates a schematic diagram of what the triangle would look like. A lot of the brush coming out of that access road is going to be history. Looking further down the road is where the sight distance triangle comes in. That is where it should be cleared to the extent possible.

Member Losik commented that coming from the beach towards Love Lane is going to be very open heading west.

Mr. Persaw stated that how much of the vegetation is cut back, he does not know. A lot of vegetation can stay, as long as it is outside of that triangle.

Member Losik asked where someone would see a sign, coming up South Road, indicating that there is an intersection.

Attorney Donovan explained that at some point there will be a sign plan from the applicant that would show all the sign locations.

Mr. Pernaw noted that a yellow warning sign for the intersection would be about 200ft from the intersection.

Attorney Donovan reiterated that the applicant should be required to provide a signage plan.

Member Roman asked if there are guidelines to follow for unique circumstances, such as beach traffic. Peak hour local traffic is extremely different from summer beach traffic. This is a major access way to the beach. She can't understand how that cannot be accounted for in a much more significant way.

Mr. Pernaw stated that one analysis that it could show up in is the capacity analysis in table 5. The analysis that goes into this is traffic volume. A traffic projection for a Saturday, mid-day, during the summer, would show higher delays, more demand and less capacity. In looking at the results, he doubts very much that the findings would change. The bottom line is that it is not going to change any recommendations that have been made to the town. It is not a situation where travel lanes are going to have to be added. The data is well below those guidelines for any month out of the year.

Vice-Chair Winslow asked if there is a safety advantage of having a median island.

Mr. Pernaw explained the advantage of a having a median island is to separate inbound and outbound vehicles. A shopping center, with a lot of trips in and out, would meet the guidelines for that kind of treatment. He does not see the purpose of the median for this intersection. The disadvantage is that the island is a fixed object that can be hit by a vehicle. In this location, the island is not needed.

Ms. Menard noted that a traffic study done in May would not capture all the residents who leave in the wintertime and have not come back. May seems like it would be the quietest month on South Road. It is not just the beach people coming, it is also people coming home. She also noted that South Road, Woodland Road and Mill Road are involved in planned races that are annual events. There is a lot of activity that is not being captured. She asked what goes into the study and what is unchanging to the people that live there.

Chairman Epperson stated that there are land use and planning regulations. The traffic study does not take into account the nuances of all of this and that is unfortunate. The overall scheme of this project, traffic and safety, will be considered.

Hearing no further comments or questions from the public, Chairman Epperson closed the public hearing at 8:15 p.m.

Mr. Smith stated that he would like to review the revisions to the roadway and the lots. He stated that the first plan refers to the basic ledge removal between the original 22 lot plan and the revised 19 lot plan. He noted the road loop will be angled down with a bit more of a curve. The cul-de-sac will be pulled much further away as well. The conservation component of this will receive about another 2 acres. The largest vernal pool will actually be in the conservation area. He pointed out that the lot grading plans have not yet been completed for this reiteration. It is about a 75 to 80% reduction in rock removal based on the road construction. He continued that they tried to come up with a plan to address Attorney Donovan's comments in regards to each lot, the septic receiving areas (DLA) and separation from exposed rock. He noted that the plan shows small pink dots that captures all of Attorney Donovan's comments. On lots 15, 16, and 17, what the Board thought was a ledge outcrop was actually deemed boulders or surface stones. That is referenced in Joe Noel's plan and the email from Mark West. With that, the DLA's were able to be moved very far away from the back of the lots on the northerly side of the road. The only lot that has a septic system beyond the house is lot number 7. That is still a great distance from the Cedar Swamp and is approximately 100ft or better from the wetland feature itself. He noted that Jim Gove mapped the Cedar Swamp area and that is shown on the plan. He is requesting input from Attorney Donovan on the proposed changes.

Chairman Epperson commented that the Board is considering having a public work session for this case with the applicant. It would be a public meeting; however, there would not be any public input so the Board can review and discuss the proposal. He would like the meeting to be held before the regularly scheduled Planning Board Meeting in February. The date that is being considered is February 8th at 5:00 p.m. at the Town Hall. He noted that a lot of information has come before the Board in the last two weeks. There has also been a significant amount of

alterations to the plan. After the work session, there would be another public meeting to discuss the findings of the work session.

Mr. Smith confirmed that the date of February 8th would work for his team. He noted that the full design will be back to the Planning Board by January 31st. This would also include response to Sebago Tech's comments.

Chairman Epperson asked for the members of the board to have their questions ready for Mr. Smith by February 1st so those could be addressed at the work session.

Speaking to Mr. Smith, Chairman Epperson asked how much proposed blasting has been reduced by the new plan.

Mr. Smith stated the physical area of rock removal is down by 75 to 80%. The calculations are about 3000+/- yards. A good deal of that is for the trench for the water main and utilities, which is obviously very shallow.

Chairman Epperson stated that the completed road design is needed. The drainage plans will be needed with the grading on all the lots.

Attorney Donovan pointed out the grading and drainage plans are needed for each lot. The cross sections and road profiles are needed. Also, the updated drainage plan and drainage study should be submitted.

Chairman Epperson opened to the public for comments.

Peter Crawford, 171 Brackett Road, commented that he heard there is more land going into conservation. He asked if this will still be a gift to the town.

Joseph Falzone, applicant, confirmed.

Beverly Levesque, 381 South Road, asked if the information from Chief Walsh in regards to accidents and safety will be part of the working session.

Chairman Epperson commented that it could be.

Tom Clifford, 95 Washington Rd, Rye Water District Commissioner, stated that he would like to remind the Board that all of the work is being done in the Wellhead Protection area. The district pulls approximately 43 million gallons of water, 35% of the water supply, from this land area. There is no guarantee that the blasting that is going to take place will not affect the water supply.

Chairman Epperson asked if the Water District's consultant could attend the work session on the 8th.

Art Ditto, Water District Commission Chair, commented that he will make that request to Wright Pierce.

Referring to the plan showing the pink circles, Attorney Donovan recommended that when the pits are done that Joe Noel, the Board's soil scientist, witnesses the testing.

Member Losik noted that the Board does not have HISS information, or HISS legend, on the plans. There is no classification under the LDR.

Mr. Smith noted there is site specific soils mapping on the plans, which is a bit more detailed than HISS mapping. This is required by the Alterations of Terrain Bureau.

Member Losik pointed out it does not meet the Town's LDR.

Jim Gove, Gove Environmental, representing the applicant, commented it would be very easy to provide a HISS Map.

Mark West, West Environmental, representing the Board, stated that he would like to clarify that Joe Noel did not map the ledge outcrop. The ledge outcrop was mapped by Doucette Survey based on visual indications of stone at the surface. Test pits were done on those areas to determine if they were rubble, ledge or bedrock. The additional work that is being required to look next to those outcrop areas is the follow up work to see how deep the ledge is. He reiterated that the outcrops were already part of a plan and were not mapped by himself or Joe Noel.

Speaking to Danna Truslow, Chairman Epperson stated that the Board received her report. He asked her to summarize her report.

Danna Truslow, representing the Board, stated that she reviewed the report of Stonehill Environmental. She also reviewed Wright Pierce's report. Referring to Stonehill Environmental's report, she noted that it indicates that there will be a requirement that all septic systems will be advanced septic systems. That will be helpful in reducing the nitrate impact. There will also be a homeowner agreement to maintain those on a regular basis. There were several additional water quality samplings. Incorporated into the nitrate study was an increase in background nitrate concentrations to account for existing nitrate in the groundwater. One of the things that was not incorporated, was her request to reflect the cumulative impact of multiple septic systems. Tim Stone has agreed to incorporate this information in the upcoming report for the Board. She continued that one of the things that was also requested was an estimate of the impervious surface coverage. She has not seen this information and it should be listed in the developed area on the plan.

Chairman Epperson stated that this is 50 acres. With 30% coverage, it represents about 15 acres. The impact on the recharge would be something that would need to be looked at.

Ms. Truslow commented that she would like to know the total impervious coverage, not just for the house but also for the patio areas, etc. as well.

Chairman Epperson stated that the 2005 Mack Report talks about 7% impervious. Rye is now about 12% impervious. The guideline is that when 10% impervious is reached, it can be expected there would be degradation to the water.

In regards to the blasting impacts, Ms. Truslow stated it was helpful to have the additional information from Stonehill on their estimate of blasting impacts. To have the actual lot layout with all the blasting on the lots will be helpful. It was also mentioned in the report there will be a monitoring plan for blasting. That would be helpful to see before the work session.

Chairman Epperson asked Ms. Truslow if she had a chance to review Wright Pierce's report in regards to blasting.

Ms. Truslow stated that Wright Pierce's concerns were for the blasting impacts that might be fairly deep that might have impacts on the fractures. It will be helpful to see where the impacts are going to be. Also, there are nitrates in the blasting materials that may cause short term impacts to the water quality. She commented that it was interesting that Wright Pierce pointed out that the town should think about evaluating the water supply potential of the land. She continued that she did a quick summary of the Atlantic White Cedar Community and what could potentially impact that. These are typically low nutrient and low PH environments. Some increase in nutrients can have impacts on the White Cedar Communities. They are sensitive to changes in water levels.

Chairman Epperson stated they are particularly sensitive to rapidly rising water, which kills trees and seedlings. He asked for a list of things needed to finish their analysis from Ms. Truslow and Mr. West.

Both agreed.

Referring to Wright Pierce's report, Member Losik asked Ms. Truslow to comment on the recommendation to drill wells for monitoring the blasting.

Ms. Truslow stated that this was brought up because of the deep blasting that was going to take place. This review was done before the modifications were made. Being able to look at where the blasting is going to occur and how deep it will be, will help determine if there is a need for a deeper monitoring well.

Member Losik asked if the issue of impacts to the bedrock wells goes away.

Ms. Truslow stated that impacts to the bedrock wells cannot be totally ruled out. There is a possibility that the impact will be reduced because of the reduced blasting that is going to be required.

Attorney Donovan asked if not blasting at all would remove the risk.

Ms. Truslow commented it would be one less variable. The blasting that is going to be required, from what has been described, is going to be fairly shallow and limited in area. When the larger outcrops were going to be severely changed, that would've made a big difference.

Member Low stated he would like to know the distance in feet between the cul-de-sac to the town wells. This land is probably the largest area of undeveloped land in Rye. He thinks that Wright Pierce hit the "nail on the head" when their report mentioned the possibility of a deep rock well in this area. This is a big area for clean water for the future of this town and maybe for the whole area.

Tim Stone, Stonehill Environmental, stated that he would like to give a picture of where this site sits in the hydrogeologic scenario in Rye. (He presented a slide show based on the site showing the drainage flows.) He pointed out the location of the wells, along with the area for the proposed development. The water, in the big picture, moves from the west to the east across the Seacoast area. The thing that makes the Cedar Run and Bailey Brook Wells so successful is that they are on the perimeter of the sand and gravel aquifer, which provides additional recharge to the bedrock in that area. Locally, the water flows from the north to the southwest, to the southeast and to the east. Stepping across South Road, the groundwater flow is to the south. The majority of the groundwater is staying on the site and flowing off to the north, leaving the site somewhere near the Berry Brook Wetlands.

Chairman Epperson asked what would happen to the amount of volume that runs into the location of the white cedars.

Mr. Stone explained that surface water from the site needs to be contained in the site drainage structures, as part of the normal site development. He continued that there was a memo from one of the board members about the increase in groundwater from septic systems. The estimate is about 75 gallons per person, per day. The estimated gallons are about 300. That would be about 2 million gallons approximately over the course of a year. That equates to about an inch and a half of rain additional from the septic systems. Putting this into perspective, since October there has been about 17 inches of rain. It is not a big number in the long run.

Attorney Donovan commented that the lots on the periphery drain right into the wetlands.

Mr. Stone replied that the drainage cannot be increased in the development.

Attorney Donovan stated those lots on the periphery are all draining into the wetlands, which is on the property. The wetlands are falling into the Cedar Swamp. That flow is not being contained on the site.

Mr. Stone agreed. He replied that it is not being contained on the site today either.

Attorney Donovan pointed out that there are not houses, patios and driveways built there now.

Mr. Stone agreed. He noted that there will be measures taken by the Homeowners' Association to try to minimize those impacts.

Attorney Donovan stated that the drainage plans should show what is going to be happening on the lots.

(Mr. Stone continued his slide presentation.) He stated that they collected a half dozen rounds of water levels on December 21st. There all generally consistent, even though there have been some significant increases in water because of the 17 inches of rainfall that has been received over this monitoring period. It has resulted in slight changes in movement of flow direction on the site but nothing too significant. There is a strong flow direction to the south. He continued that at the previous meeting, he was asked to look at the records at NH DES in regards to private wells in the area. He has done that; however, there is not a record of every well in the area. The wells that are on record have been added to the plan to show their location. It is unlikely that any wells in the area would see any impact from this property.

Speaking to Ms. Menard, Chairman Epperson asked if she completed her survey of the wells.

Ms. Menard noted that she submitted the information to the Board.

Mr. Stone stated that there has been a lot of discussion on blasting and the potential impact to the Rye Water District Wells. The groundwater flow is to the east and the southeast, away from the supply wells. It is very clear from the data that the vast majority of the water that is drawn by the Bailey Brook Well and the Cedar Run Well is coming from up gradient, the northeast/southwest lineament zone. He thinks he can very comfortable say there would not be an impact from this site, particularly with the blasting, which is such a short term localized impact. The blasting is going to be about 5 or 6ft deep, which is very shallow blasting. There will be a small temporary impact from the blasting. The studies that he has been involved with have found that the impacts are over a time period of weeks to a couple of months. Whatever little residuals are left from the blasting will just wash through the system. He continued that he has spoken with the company that is going to be doing the blasting. They will be using nitrate based explosive but it is going to be in packages. There have been tremendous improvements in the past decade with regard to Best Management Practices for blasting. In his opinion, blasting is virtually a non-existent issue. There will be a pre-blasting survey done of the homes within 500ft. If there are private wells in that area, those will become part of the survey also.

Mr. Stone noted the developer is going with advanced treatment systems. This will bring the nitrate concentration at the effluent tank from 40mg per liter nitrate down to 15mg per liter nitrate. All of the plumes stay within the site boundary. The only plume that extends beyond the lot boundary, but stays within the site boundary, is on lot 7. He pointed out it is still 250ft from the edge of the White Cedar Swamp. He noted that these will be large lots on a relatively large site. This will allow for enough distance for treatment between the properties.

Chairman Epperson requested a copy of the presentation for the Board.

Mr. Stone agreed to forward the presentation electronically to the Planning Administrator.

Chairman Epperson stated that since the last meeting, it was found out that Greenland will be attaching to Rye Water in some way. It is possible that there could be 278 hookups.

Mr. Ditto, Rye Water District Commissioner, stated that no one has approached Rye Water about purchasing any additional water, other than for 10 homes. He noted that the water is purchased in bulk from the City of Portsmouth and it is provided to those homes. There is no obligation on the district's part to do anything further. The district has not been approached about providing water to Greenland. He knows that it has been talked about but nothing is on the table.

Chairman Epperson asked how much the consumption would be for those 10 homes.

Mr. Ditto replied that 600 gallons per day is the number that is typically used per home.

Referring to the proposed development, Chairman Epperson stated that the concern was about water use for irrigation systems. He asked if irrigation systems were not used, would it be less than 600 gallons.

Mr. Ditto confirmed.

Chairman Epperson stated that he read that Berry's Brook is being tested for possible pollutants. Berry's Brook runs adjacent to this property. There is also a continued mitigation of the Coakley Landfill pollution plume toward the Garland Well, which is exactly 1.2 miles away. There is also a possible contamination from the town's dump, which is less than a .5 mile away. Garland Well is down gradient from both of those. There is also no monitoring between Coakley and Garland at the moment. He asked if Garland Well provides about 60% of the water in the town.

Mr. Ditto confirmed.

Mindi Messmer, 291 Washington Road, stated that the Greenland Selectmen presented their analysis of the Portsmouth system capacity. It was determined that they don't have enough water to supply the water to the residents at Breakfast Hill Road. She requested copies of the reports that have been submitted to the Board. She would like to provide written commits. She noted that she is a hydrogeologist. She has been working on the Coakley Landfill investigation. She is on the Governor's Task Force and is the House Representative for Rye and New Castle.

Chairman Epperson asked if he is out of bounds in thinking about Coakley Landfill with the water.

Representative Messmer stated that it should certainly be considered with respect to the amount of water that might be required as an emergency supply for the Greenland residents. She noted

that the DES is conducting samples on the Greenland wells. It has not yet been determined what is going to happen in the future with supplying those people with water. She pointed out that residents of Greenland have gone to the City Council of Portsmouth to request water. The analysis has shown that Portsmouth does not have enough. This is causing angst on the residents of Greenland and they are going to find water somewhere.

Joanne Glode, NH Nature Conservancy, Brown Pond Preserve Manager, spoke to the Board in regards to the mission of the Nature Conservancy and their concerns with the proposed development.

*Please see attached

- Planning Board Work Session February 8th, 5:00 p.m., Town Hall
- Planning Board Regular Monthly Meeting February 14th, 7:00 p.m.

Chairman Epperson closed the public hearing at 9:50 p.m.

Motion by Keriann Roman to continue the application of Harbor Street Limited Partnership to the February 14, 2016 meeting. Seconded by Jerry Gittlein. All in favor.

Note: Selectman Jenness was reseated for the remainder of the meeting.

Motion by Keriann Romand second jerry Gittlein.

VI. Public Hearings on Application (if complete)

a. Re-subdivision of the Myrica by the Sea Subdivision by Stephen Brown, SKRJ Realty Trust of Rochester, NH for 0 Big Rock Road, Tax Map 8.1, Lot 45 and Tax Map 5.2, Lots 79 & 80 to merge 11 lots and create 2 new lots. Properties are in the General Residence & Coastal Overlay Districts. Case #01-2017.

Motion by Phil Winslow to continue the application of Stephen Brown, SKRJ Realty Trust, to the March Planning Board meeting. Seconded by Priscilla Jenness. All in favor.

VII. Approval of the meeting minutes

December 13, 2016

The following corrections were noted:

• Page 2, 2nd paragraph from bottom, 3rd sentence should read: Attorney Donovan stated it would be governed by the height limitation.

- Page 7, 3rd paragraph, 3rd sentence should read: She continued that when a professional looked at the ordinance last year and there was a complete overhaul, there was <u>sentiment</u> that it was too much, too soon.
- Page 8, 1st paragraph, 3rd sentence should read: It simply takes the fence requirements that are in the Rye Building Code and puts them in the zoning ordinance.
- Page 9, 2nd paragraph from bottom, 3rd sentence should read: There was some question on the <u>connectivity</u> between Wetland W and Wetland Z and those have been <u>connected</u> together.
- Page 11, 4th paragraph, 4th sentence should read: **Mr. Gove has updated his soil survey to reflect** the complexity of soils.
- Page 11, 4th paragraph, 1st sentence should read: Chairman Epperson stated that test wells were drilled. There was significant recharge on very little rain water.
- Page 15, 4th paragraph from bottom, 3rd sentence should read: He commented if there could be a way to put Best Management Practices in place in how irrigation is done for this particular development, it should be done.
- Page 21, 2nd bullet under minutes should read: Vice-Chair Winslow stated the Board would like to have a pest control company do a pest control survey <u>prior</u> to the demolishing of the buildings.

Motion by Phil Winslow to approve the minutes of December 13, 2016 as amended. Seconded by Pat Losik. Vote: 6-0-1 Note: Priscilla Jenness abstained from the vote for part of the minutes (pages 8-19).

VIII. Public Hearing on Proposed Zoning Amendments - Action Required:

• Amendment No. 2017-07: Frontage to amend the definition

Explanation: The amendment eliminates a conflict in the ordinance between the definition of frontage and Section 202.6, which requires corner lots to meet the frontage requirements on both sides.

Member Roman stated that an issue was presented by an applicant's attorney that corner lots were being treated differently throughout the applications. This is an attempt to eliminate that issue. This is a correction or clarification.

Chairman Epperson opened to the public.

Peter Crawford, 171 Brackett Road, stated that he does not see a definition in the ordinance for corner lot.

Member Roman explained that several ordinances do not define corner lot because it creates these issues. If corner lot is defined, which side is treated as frontage? Which side is treated as a

side line? What is the front yard depth? By eliminating a definition of corner lot, it simplifies it. The towns of Hampton, North Hampton and City of Portsmouth have eliminated the definition of corner lot. It was felt that this would be a better solution.

Motion by Keriann Roman to move Amendment 2017-07 to the Town Warrant. Seconded by Phil Winslow. All in favor.

• Amendment No. 2017-08: Amend the stormwater management ordinance

Attorney Donovan explained that originally there was a pretty detailed Section 507, Stormwater Management. At some point, the Board wanted to simplify it so it has been reduced to what it is now. This amendment shows some changes that came from Sam Winebaum that he thought would make this more purposeful.

Chairman Epperson read the amendment.

Chairman Epperson opened to the public.

Mr. Crawford stated that the amendment looks good. He noted an editorial change.

Motion by Pat Losik to send Amendment 2017-08 to the Town Warrant. Seconded by Priscilla Jenness. All in favor.

- IX. New Business:
- None
- X. Payment of Escrows:
- Mark West \$1886.10
- Sebago Technics \$2168.75
- Danna Truslow \$3097.50

Motion by Bill Epperson to pay Mark West, in the amount of \$1886.10, Sebago Technic \$2168.75 and Danna Truslow, \$3097.50. Seconded by Phil Winslow. All in favor.

• Sebago Technics - \$1,750.75

Motion by Phil Winslow to pay Sebago Technics in the amount of \$1750.75. Seconded by Priscilla Jenness. All in favor.

• Sebago Technics - \$666.10

Motion by Phil Winslow to pay Sebago Technics in the amount of \$666.10. Seconded by Priscilla Jenness. All in favor.

• Sebago Technics – \$1973.95

Motion by Phil Winslow to pay Sebago Technics in the amount of \$1973.95. Seconded by Priscilla Jenness. All in favor.

• Sebago Technics - \$496.25

Motion by Phil Winslow to pay Sebago Technics in the amount of \$496.25. Seconded by Priscilla Jenness. All in favor.

XI. Sub-Committee Discussion(s):

- TRC
- Rules & Regulations Committee
- Wetlands Subcommittee
- Long Range Planning

No meetings were held within the last month for the committees.

XII. New Business/Old Business

None

XIII. Communication

- Consideration of Katy Sherman as Alternate PB member (See minutes above)
- Consideration of Anne Richter Arnold as an Alternate PB member (See minutes above)

XIV. Other

• Discussion about another meeting date and moving the March meeting.

Motion by Phil Winslow to move the March meeting to Thursday, March 2^{nd} . Seconded by Pat Losik. All in favor.

Adjournment

Motion by Mel Low to adjourn at 10:32 p.m. Seconded by Phil Winslow. All in favor.

Respectfully Submitted, Dyana F. Ledger



The Nature Conservancy in New Hampshire

22 Bridge Street, 4th Floor

tel [603] 224.5853

fax [6031228.2459

January 10, 2017

Town of Rye Planning Department 10 Central Road Rye, NH 03870

RE: Harbor Street Limited Partnership Development proposal for 421 South Road, Rye NH.

Dear Members of the Rye Planning Board:

Thank you for this opportunity to provide comments in the above referenced matter. My name is Joanne Glode, and I am the Southern NH Stewardship Ecologist for The Nature Conservancy in New Hampshire. The Nature Conservancy owns land abutting the proposed development.

TNC Background

The Nature Conservancy's mission is to conserve the lands and water on which all life depends. To fulfill this mission in New Hampshire, our chapter has worked to identify and protect the most important places for the long-term health of nature and people. Many of these places are home to rare natural communities that are inherently vulnerable to habitat change. These same habitats provide valuable benefits to people such as maintaining clean drinking water and reducing the risk of downstream flooding. We understand the need for available housing in our growing seacoast communities. However, we believe that this growth can be undertaken in a manner that maintains our natural environment and the vital services that these resources provide to people. Depending on the layout of the proposed development it could pose a significant threat to a rare and sensitive wetland community and the associated benefits this wetland provides to the people living in Rye.

Brown Mill Pond Preserve and Atlantic White Cedars

The Nature Conservancy owns and manages 54-acres of conservation land immediately adjacent to the proposed development. It is called the "Brown Mill Pond and White Cedars Preserve". The land was donated to us between 1999 - 2005 by the Brown family of Rye for the purpose of protecting the Atlantic White Cedar Swamp. Atlantic White Cedar (AWC) is geographically restricted to a narrow band along the eastern coast of the US. It grows with a distinctive suite of plant species adapted to swampy, acidic sites with low nutrients, and is associated with numerous rare species including the butterfly, Hessel's hairstreak, which is dependent on the AWC. These swamps are threatened throughout their

range, and currently occupy less than 5% of their original habitat. In New Hampshire, Atlantic white cedar wetlands comprise only about .01% (one tenth of one percent) of our state's wetlands, an indication of their rarity and ecological significance.

The cedar swamp on our Brown Mill Pond Preserve is considered exemplary by the New Hampshire Natural Heritage Bureau. This means it is one of the best examples of an AWC swamp in the state. Because of its good condition and size, the swamp in Rye has been the focus of many research studies. Numerous students from many different Universities up and down the East coast have studied this site to better understand the ecology of these fascinating and rare swamps. Currently, a PhD student from Woods Hole Oceanographic Institution is looking at historic climate records using AWC tree rings, and a post-doc from North Carolina State University is studying gene conservation and diversity of AWC swamps across their range.

Right here in Rye, you have a high quality, globally-rare forest home to "Old Knobby", the State Champion AWC, which has been quietly serving as an outdoor laboratory and contributing to science for decades. As you can imagine, we care deeply about the long-term health of this wetland system and are concerned about any activities that might impact the swamp and its viability.

TNC Concerns - Overview:

The biggest threats to AWC swamps are increased development, land clearing, alterations to the natural hydrology, and increased urban run-off and pollutants (Laderman, 1989). Our comments and questions relating to the proposed development will focus on these issues.

The 17-acre Atlantic White Cedar Swamp at this site, like all others, is the ultimate expression of its surrounding landscape. Right now, this swamp is surrounded with an intact buffer of red maple swamp and pine forest that will protect its existence and keep it functioning into the future. But, studies and history have shown that urbanization of watersheds have negative impacts on AWC swamps in many interconnected ways (Ehrenfeld & Schneider, 1990). TNC has protected only a portion of the AWC swamp at this site. The majority and the heart of the wetland is on the adjoining unprotected property on which the development is proposed. We have reviewed many of the studies and analyses the Town has collected on the impacts of this development, and toured the site, and we offer some additional questions that would be helpful to answer to fully understand the potential impacts on the AWC swamp and our Preserve.

Nutrient loading into the Atlantic White Cedar Swamp:

All water flowing off the entire proposed development, whether through a ground or surface pathway, travels northeast directly into the swamp and our preserve. Septic systems and lawn chemicals are likely to increase the nutrient load in waters received by the swamp. Nitrogen loading into a nutrient poor, low pH environment has been found to result in dramatic changes to the system, and these impacts to the swamp and our property were not considered or modelled as part of the hydrogeologic study.

- Groundwater: Groundwater was found to flow to the north northeast. As the abutter immediately on the downgradient side of the development, we will be the direct recipient of excess nutrients and pollutants from the entire development site.
- <u>Septic Plumes</u>: The downgrade compliance used for the Hydrogeologic study was the Property boundary, not the forested swamp. The StoneHill report concludes that there will be no impacts to abutters from the proposed development – but it clearly shows impacts to the forested swamp from the septic plumes. As the down-gradient abutter, we are concerned about the fate of the water-borne pollutants and septic plumes as they move through the swamp to our property.
- Nitrogen levels and concentrations: The 10 mg/L contamination threshold for nitrogen (a drinking water standard) is not appropriate for determining impacts to an ecologically sensitive Atlantic White Cedar swamp. Increases in nitrogen concentrations above background nitrogen levels have been demonstrated to have negative impacts to AWC swamps by changing the pH, improving conditions for invasive non-native species, changing the successional dynamics, and ultimately reducing species diversity of the swamp (Ehrenfled & Schneider, 1990). Furthermore, the nitrogen concentrations modelled in the StoneHill report may underestimate the actual delivery to the swamp as N from lawn fertilization was not included in the models. Given these concerns, we ask the Planning Board to exercise caution when evaluating this measurement of impact.

Hydrologic alterations to the Swamp the TNC preserve:

The proposed development will change the water budget for the site and result in a change to the hydrology of the Atlantic White Cedar Swamp. Any increase or decrease in water levels may compromise the long-term viability of the cedar swamp as water levels are critical to successful germination and growth of cedar seeds and seedlings.

- Germination: Dr. Lara Gengarelly studied the cedars at this site for both her Master's and PhD work. Her research focused on determining the physical and biological parameters that control successful germination of AWC seedlings. Her results showed AWC seedling germination to occur only in a very specific elevation zone within the swamp, generally 4-7 inches above the water table on the moist sides of the peat hummocks. Therefore, any alterations to the hydrology of the swamp could have serious implications on the successful recruitment of the cedars and the long-term viability of the species at this site. If the site dries out, through too much water extraction, the site will revert to drier site species such as red spruce and hemlock (Gengarelly & Lee, 2006). Conversely, if the site become wetter and the water levels increase, the swamp could suffer from tree death and peat loss. This exact scenario played out in Sharon, MA when a new housing development was placed within the wetland buffer of a large AWC resulting in raised groundwater levels (Fletcher et al 2012).
- Water Budget: The numerous reports have not clearly described what will happen to the water budget of the swamp. A more complete analysis of how the water budget in the swamp would

change as a result of the proposed development, would help us understand the degree of impact on the hydrology of the exemplary AWC swamp and The Nature Conservancy's adjoining preserve. It is clear that the shallow groundwater and surface water inputs would increase, the flow paths would change from primarily infiltration to surface discharge, and the source aquifer would be taxed with greater withdrawals. But, it is unclear to us whether this means the wetland water levels will increase, decrease, or stay the same.

To summarize, our concerns with the conceptual plan layout relate primarily to the potential nutrient loading and hydrologic manipulations that will impact the Atlantic White Cedar Swamp system as a whole. As abutters, and stewards of the exemplary Atlantic White Cedar swamp at Brown Mill Pond, we believe that the best way to protect the cedar swamp at this site is to conserve as much of the wetland system and surrounding land as possible. However, there may be opportunities to minimize the impacts of the proposed development within the watershed by assessing: 1) A water budget for the wetland system that clearly demonstrates how there will be no alterations to the hydrology of the wetland as a result of the proposed development; and, 2) confirming that nutrient pollution from septic, groundwater, and stormwater run-off will not impact the AWC swamp.

We are happy to provide whatever assistance is necessary to the community as it considers how best to protect this valuable resource and the services it provides for its current and future residents.

Sincerely,

Joanne S. Glode

Southern New Hampshire Stewardship Ecologist

References:

Ehrenfeld J., Schneider J. 1990. The response of Atlantic White Cedar to varying levels of disturbance from suburban development in the New Jersey Pinelands. Wetland Ecology and Management: Case Studies. Vol 25. Pp 63-78.

Ehrenfeld I., Schneider J. 1991. Chamaecyparis thyoides wetland and suburbanization: effects on hydrology, water quality and plant community composition. Journal of Applied Ecology 28: 467-490.

Fletcher P., A. Laderman, P. Polloni. 2012. Restoration and revitalization of the Sharon Great Cedar Swamp. Progress report. Prepared for the Sharon Conservation Commission. Available online: http://www.townofsharon.net/sites/sharonma/files/file/file/sharongcs progress report june2012absfinal.pdf

Gengarelly L. 2003. Factors Associated with Atlantic White Cedar deeling recruitment on mictrotopographic and landscape scales, Brown Mill Pond, Rye, New Hampshire. PhD Dissertation. University of New Hampshire. 107pp.

Gengarelly L., T. Lee. 2006. Dynamics of Atlantic White Cedar Populations at a Northern New England Coastal Wetland. Natural Areas Journal. 26(1): 5-16.

Laderman A. D. 1989. The ecology of the Atlantic White cedar wetlands: a community profile. U.S. Fish and Wildlife Service Biol. Rep. 85(7.21). 114 pp.

Sperduto, D., N. Ritter. 1994. Atlantic White Cedar Wetlands of New Hampshire. NH Natural Heritage Bureau. Report prepared for Environmental Protection Agency, Wetlands Protection Section – Region 1, Boston, MA. 96 pp.

Attachments PB 1-10-17

RYE PLANNING BOARD PUBLIC HEARING NOTICE

Proposed Zoning Ordinance Amendments

The Rye Planning Board will hold a public hearing on January 10, 2017 at 7:00 p.m. in the Rye Junior High School cafeteria on the following two proposed zoning ordinance amendments. Amendment 2017-07 amends the definition of "Frontage" to strike the sentence which states that a corner lot must satisfy the frontage requirement on one of its side streets. The amendment eliminates a conflict with Section 202.6 which requires a corner lot to meet the frontage requirement on both side streets. Amendment 2017-08 amends "Section 507 Storm Water Management" to provide that stormwater management and erosion control plans may be required by the building inspector whenever there is construction of a new building/structure; expansion of a building/structure; reconstruction; or changes to the impervious surface. The amendment also elaborates on the purposes of the section. Copies of the proposed amendments are posted at the Rye Town Hall; available from the Planning Office; and on the town website.

William Epperson, Chair Rye Planning Board December 30, 2016

RYE PLANNING BOARD 2017-07 PROPOSED ZONING ORDINANCE

Re: Frontage

I. Amend the Appendix of Definitions as follows: (Note: Deleted language struck through.)

FRONTAGE: All that continuous side of a lot or tract of land abutting on one side of a street, or proposed street, measured along the street line. A corner lot must satisfy the frontage requirements of the district in which it is situated on one of its two street sides, and the depth requirements on the other street side.

Explanation

The amendment eliminates a conflict in the ordinance between the definition of "Frontage" and Section 202.6 which requires a corner lot to meet the frontage requirements on both streets.

RYE PLANNING BOARD PROPOSED ZONING AMENDMENT 2017-08

Re: Amendment to the Stormwater Management Ordinance

Amend the Section 507 Stormwater Management (Note: Deleted language struck through. New language emboldened and italicized.)

SECTION 507 STORM WATER MANAGEMENT

- 507.1 Purpose: It is the intent of this section to protect, maintain and enhance the public health, safety and environment by regulating regulate building and land development so that surface water drainage from building and land development does not adversely affect adjacent properties, watercourses or the town's storm drainage system.
- 507.2 Drainage Onto Adjacent Properties: No use of land; no construction, reconstruction, alterations, replacement, or expansion of buildings, structures and impervious surfaces; no grading of the land; and no destruction or alteration of natural vegetation or ground cover shall increase the surface water drainage flowing onto an adjacent property unless a drainage easement allowing such flowage in perpetuity is recorded.
- 507.3 Drainage Into Watercourses/Town Drainage System: No use of land; no construction, reconstruction, alterations, replacement, or expansion of buildings, structures and impervious surfaces; no grading of the land; and no destruction or alteration of natural vegetation or ground cover shall drainage water drainage or flowage into existing water courses or into the town's storm will have the capacity to accommodate the additional flow, both now and in the future.
- 507.4 Drainage and Grading Plan: The Building Inspector may require submission of a detailed stormwater management and erosion control plan which includes drainage and grading drainage and grading drainage and grading drainage and grading drainage construction of a new building/structure; expansion of a building/structure; reconstruction; or changes to the impervious surface or whenever there is a question regarding compliance with this section. (Rev. 2002)

Explanation

Subject: Attachments:

KE: Ledge probes per Attorney Donovan's corresp. Review of South Road Subdivision 1.7.17.docx

11.0

much of it has come in this past week and I see more information that is needed before we could adequately start to As you know, I will not be at the Planning Board meeting on the $10^{\rm th}$. There was a lot of new information to review, make any decisions.

see these as points of discussion with a few of my own thoughts included and hopefully some of these can be addressed following up on the last meeting along with my concerns basically in the order Mike addressed them in his latest letter. I I'm not sure what will be discussed this week and which order it will be discussed in. I wrote down my thoughts at the meeting in my absence.

There is so much to discuss and digest, perhaps we could schedule a working session with just this on the agenda?

Good luck!

2057

J M Lord P.E. Maple Rock LLC PO Box 28, 560 South Road Rye Beach, NH O3871 603.502.3650

jmlord560@gmail.com

REVIEW OF PLANS

I agree with Mike that without revised road profiles and cross sections, revised drainage plans and study, a revised hydrogeologic study and grading plans for build out of the lots it difficult to review the modifications to the proposed layout of the subdivision.

Preservation of Natural Features and the Environment

- I think there is much more ledge on this property then literally meets the eye. I agree with Mike that road profiles, road cross sections and grading plans for build out of lots are needed and critical to fully understanding the project impacts;
- Blasting and impact on the RWD wells I have not discussed this with other Board members but I'd recommend that there be no blasting within the 4000' well radius based on the following:
 - 1. Testimony at the public hearing by the consultants for both the Town and the Developer that there is a possibility that flow could make it to the wells based on their information;
 - 2. That there is no guarantee that the wells would not be impacted;
 - 3. The reliance of the RWD on the Garland well (60% of Rye water), it's close proximity to the Coakley Land fill and the suggestion that test wells be placed to monitor contamination migration to that well;
 - 4. The concern that there may be a possible issue with contamination coming from the Rye Maintenance Facility that could impact the Garland well;
 - 5. That RWD is now being asked to expand service to serve areas of contamination near the Coakley land fill;
 - 6. That review of open areas in Rye and most probable location for an additional well in the future is probably between South Road and the present well is needed to plan for the future moving these impacts closer than what exists today.

Wetlands

- 1. The Environmental Fact Sheet WMB-CP-20 dated 2005 by the NHDES concerning the Atlantic White Cedar Swamp Communities points out some areas of concern. Although there are 30 documented in 20 Towns in NH, basically they are concentrated in three (3) major areas, one being the Rye Portsmouth area. They point out that:
 - Rapid prolonged change in water depth stresses or kills mature trees and kill seedlings outright;
 - There is a rare emerald green buttery fly that feeds high in the cedar canopy and hard to detect;
 - Any abrupt change in water, light weather and other conditions (flooding a dry site or drying a flooded site) introduces a stress factor which may negatively impact the community;
 - Changes in water chemistry and enrichment of surface waters to due stormwater runoff and waste water discharges lead to the loss of characteristic swamp plant species and permit the influx of non-native species;
 - The swamps are especially sensitive to chloride, elevated nitrogen concentrations, hydrological changes and other consequences of suburban development.

impact due to very high use of South Road for beach goers or surfers or the safety of pedestrians along South Road;

- The applicant had the opportunity to monitor summer traffic between their initial May submittal and the last submittal of September 1, 2016 but they did not;
- I personally have witnessed 23-25 vehicles stacked up 2-3 times on at the intersection of Route 1 and North Road in North Hampton that turns to South Road at the Town line with people exiting from the beach in the summer. This intersection must be at failure during these times.
- Access from Route 1 begins at 35 mph but the straightness of the roadway increases the speeds
 dramatically. It drops to 30 mph on the east side of the West/South Road intersection but few
 people heed that speed. The Roadway east of the West/South Intersection is curvier, the area is
 more densely populated and the sight distances are greatly reduced;
- With the increased population base in NH and limited beach access, South Road has become a
 major artery for both beach goers and surfers and that has not been addressed for either
 roadway conditions or pedestrians using the roadway;
- The road shoulders for pedestrians are almost non-existent for walkers, joggers or bikers along the intersection area of South and Woodland Road presently creating a hazard and this development would only exasperate that issue.
- I believe the island at the intersection of Woodland Road should be eliminated. Landscaping vehicles with trailers and trucks with trailers are incapable of navigating the current layout and adding an opposing rad way would only make a more dangerous situation;
- I believe making the proposed South Road/Woodland Road/Francis Way intersection a 4-way stop could address several present and future safety issues;
- There is insufficient data available to determine what drainage makes it way to the existing CB on the north side of South Road at the Woodland Road Intersection. The CB is presently 4'-6" below finish pavement and is shown in the middle of the proposed roadway. If stormwater drains to this present CB from both directions on South Road, CB's should be placed at each edge of the proposed roadway to pick up this flow, transferring it to the present CB that could be raised to pavement height, making a smooth roadway transition between South Road and Francis Way;
- The present CB (noted above) was identified by the developer as a just an infiltration basin.
 However, Pubic Works believes that a drain used daylight further down of Woodland and has
 since been silted in. This needs to be resolved along with the flows entering this system to
 ensure there is adequate drainage in this area;
- The plans show a relocation of the present electrical/communication pole further back into and south of its present location at the intersection of South and Woodland Roads. In review of the present overhead lines and estimating the location of the proposed new pole, it appears as if easements might be needed from the abutting property owners as those lines would be outside of the present ROW's. This needs to be reviewed and addressed.

From Loe Falzone JO Mike Donavan

1/6/17

Good Morning Peter,

As per our detail discussion regarding compliance with the attached section of Mike's letter of January 5, 2017 and his prior reference that we must comply as we did on Brackett Road to meet the (DLA) subdivision requirement. The purpose was to meet the test of test pitting between the agreed rock plan that was approved at the last hearing. I have more than complied by far with pits within the 75'. I have attached Mike's Brackett Road plan to prove the point to comply with Mike's new extreme request. On Brackett Road these pits were witnessed and paid for to have Dennis Plante as he is the test pit agent for the town required. Dennis also performed all the test pitting on South Road. I have already paid for the services to the town as required to perform the test pits, paid an engineer to be present as required by the town and a machine with operator at a cost of \$2,500+/- per day. This was to dig 2' holes and the pits on South Road are much deeper because we were performing test pits for septic systems in all locations.

- 1. The required number of pits for Brackett Road by Mike was 14 pits to prove to 2', see results in right top margin of his plan attachment # 1. There were a total of 9 lots so this was about 1.5 pits per lot for achieving a reasonable cross section.
- 2. The second attachment is Mike's instructions that the South Road pits be performed the same as Brackett Road. They were performed in the exact manor using the towns designated representative with a licensed engineer present.
- 3. Attached is the South Road plan showing all the test pits conducted and we have provided the test witnessed data. I understand Mike may not have clear copies of some pit results and he can request those that are not legible. I have marked them like Mike did on Bracket Road in red. There are comments to certain lots that I need to Lot 3 there is no conflict the test pits are numbered as pits 12 and 12AB to show the new pit. They have been field measured and the lot lines have changed on the 19 lot plan. We did not use a 12A as you note.

Lot 4 see on plan TP 4AB was witnessed by the town.

Lot 5 see TP6ab and 6abc

Lot 6 see TP6ab and 6abc - 18,18ab,17

Lot 17 see TP 19 and 19N,19ab

Lot 18 see 19n and 19

Lot 6 - Mike there is no requirement for shape and these are 4,000sf and our advanced system size of fields may be 1,000sf we only must prove 4,000sf, has no bearing on how it will function.

Lot 7 see test pit 31,32 and AB unable to make number out.

Lot 10 see test pit 46 and it is right against the agreed rock and passed.

Lot 11 see 13abc there is no requirement as to shape

Lot 12 see TP49 see the mapping you note 3 rock areas there are some as boulders, all are over 75' with a pit within the 75' (DLA)

Lot 14 more than meets setbacks why would this even be noted

Lot 15 has TP 24 and 23 within the 75' and passed with no issue witnessed by the towns

From: "Joe Falzone" < ifalzone@weinvestinland.com>

To: "Michael Donovan" < MDonovan@town.rye.nh.us >, "'Peter Loughlin'" < peter.loughlin@pjllaw.com >, "Mark B. Johnson (Mark@jbllclaw.>, "T Stone (tstone@stonehillenvironmental.com)"

< tstone@stonehillenvironmental.com >, "Joe Falzone" < ifalzone@weinvestinland.com >

Subject: FW: Ledge probes per Attorney Donovan's corresp.

I feel no need to address your summary subject 1 and 2 they are understood and 3 and 4 have been completed in the same process as Brackett Road. Mike, you required 14 pits for 9 lots on Bracket Road equal to 1.5 pits per lot. The revised 19 lot subdivision has 47 additional pits for a cross section in and around the (DLA) or 2.5 pits per lot.

I consider myself to be a respectable developer always trying to give balance in working with communities. I felt compelled to address this because if you read your chain of comments you want to take this land in a manner that would force me to cut all the trees, bring a D-8 bull dozer in and strip 100% to 24" all soil within the (DLA). That is not as Peter noted prior to you the intent of the regulation, impossible. I can assure you I am not doing any more than what was required as you note had to be done on Brackett Road unless I am told Dennis Plante was not the towns representative.

I will be meeting with Peter shortly and you two can take it from here.

Thanks, Joe

Joseph Falzone 78 Emery Lane Stratham, NH 03885 (O) 603-772-9400 (C) 617-510-6565 (F) 603-772-8999

ifalzone@weinvestinland.com

From: Christian Smith [mailto:csmith@bealsassociatesnh.com]

Sent: Thursday, March 12, 2015 10:37 AM

To: Kim Reed; Michael Donovan (MDonovan@town.rye.nh.us); dplante@town.rye.nh.us

Cc: Harding, Stephen (stephen.harding@amecfw.com) (stephen.harding@amecfw.com); Joe Falzone; Peter Loughlin (peter.loughlin@pjllaw.com); Mark B. Johnson

Subject: Ledge probes per Attorney Donovan's corresp.

Good morning all,

We were able to complete the additional soils testing to demonstrate compliance with Section 603.3.A1(c) as prescribed by Mike's memo and sketch location plan of 2-25-15. The pits were logged by James Gove and myself and witnessed by Dennis Plante. We have prepared the attached exhibit plan, which Jim & I have both stamped and signed. Dennis if you could reply all that the exhibit correctly depicts locations & pit results, it would be greatly appreciated. Please advise if there are any questions regarding this correspondence. Best regards,

Christian

Christian O. Smith, P.E. Principal

Beals Associates, PLLC csmith@bealsassociatesnh.com

Stratham, NH Office 70 Portsmouth Avenue Stratham, NH 03885 Tel: 603-583-4860 Fax: 603-583-4863

Cell: 603-234-2180

Kim Reed

From:

Patricia Losik <patlos@comcast.net>

Sent: To:

Tuesday, January 10, 2017 3:53 PM

Subject:

Kim Reed Info re PB

Attachments:

RYEPB421SoilsPlan12.12.16.pdf; ATT00003.htm; RYE421TP.xlsx; ATT00004.htm

1/10/17

Review

Site geology:

Bedrock – has been more fully identified via West/Noel work with revisions to legend #'s. Town may not yet have adequate identification of subsurface bedrock or impervious substrata.

Soils Plan revised 12/12/16 (see attachment below), GES used NH State-Wide Numerical Soils Legend. In general, one State Legend # represents only one unique soil map unit concept per NRCS data. The Plan classifies non bedrock, non wetland area as predominantly 445B (yellow highlighted area) – Newfields, very stony, 0-8% slope. The properties and interpretations of this designation are set forth in: https://www.nrcs.usda.gov/internet/FSE_DOCUMENTS/nrcs144p2_014940.pdf)

Of interest: Range of: depth to bedrock (inches): >60.

NRCS soil mapping (https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx) identifies several other types of soils on this site and does not designate as 445B. 140B, 43B and 395 are utilized. The range of depth to bedrock (inches) for 140B is 10"->60". A further understanding of the geologic make up of the site will facilitate planning.

Where is HISS info? LDR 403 E.3. requires HISS mapping on the Preliminary Topographic and Soils Plan. Did we receive this in early documents? LDR 603.2 and Appendix B address Minimum Lot Size By Soils Classification. Given the restrictive features of the site, these characteristics should be determined to facilitate lot sizing as this data may be relevant to the smaller lots. West Environmental (P.4 of 11/16/16 letter) noted the plan contained a HISS Soils Key and recommended removal because there is no HISS mapping. The recently revised small plan set has removed the HISS reference.

West Environmental suggested that the Town might utilize the certified soil scientists from Rockingham County Conservation District and we should discuss same.

Test pits:

Attached is a spreadsheet of the test pit data (RYE421TP). There are a few data points which need to be reconciled (see right margin). The tests in May and December convey seasonal ground water conditions and underlying ledge remains a concern especially in view of the test pit characteristics as grouped by lots (see refusal data). Revised drainage plans/study info are needed. Further investigation should be made to determine relationship to bedrock and its substrata slope.

StoneHill Environmental, Inc. updated report 1/5/16

P.3 of 8 – StoneHill concludes there are no id'd water supply wells downgradient of the Site....should Developer survey based on testimony at 12/13/16 meeting?

P. 4 of 8 – working estimate of the volume of bedrock is 3500 cu. yds. (roadway, utility trenches, foundation excavations)...at upper estimates per StoneHill's report, this could be over 5K. Merrimack's ordinance is mentioned as requiring groundwater monitoring for blasting projects greater than 36K. Per 102.24A in their ordinance, 36K is a threshold and the ordinance is expanded to include: "...and/or within 2,000 feet of a public or private well, wellhead protection area or public water supply." DES suggests water quality monitoring above 5K.

p. 8 of 8 – StoneHill concludes that additional hydrogeological study of the Site is not warranted since "it is extremely unlikely" that RWD bedrock wells could be impacted due to distance and the main replenishment from the NE/SW fracture zone. Wright-Pierce suggests on p.2 of 3 of 12/22/16 letter: "It is recommended that deep bedrock wells be drilled in association with the lineaments to assess the fractured bedrock aquifer flow relative the established overburden flow regime." The adjacent lineaments were discussed at the 12/13/16 PB meeting in connection with the Truslow presentation.

Water:

Wright-Pierce Report 12/22/16

The assertion of lineaments and bedrock groundwater sourcing merits which has been raised in the W-P report merits further discussion.

1/10/17

Review

Site geology:

Bedrock – has been more fully identified via West/Noel work with revisions to legend #'s. Town may not yet have adequate identification of subsurface bedrock or impervious substrata.

Soils Plan revised 12/12/16 (see attachment below), GES used NH State-Wide Numerical Soils Legend. In general, one State Legend # represents only one unique soil map unit concept per NRCS data. The Plan classifies non bedrock, non wetland area as predominantly 445B (yellow highlighted area) – Newfields, very stony, 0-8% slope. The properties and interpretations of this designation are set forth in: https://www.nrcs.usda.gov/internet/FSE_DOCUMENTS/nrcs144p2_014940.pdf)

Of interest: Range of: depth to bedrock (inches): >60.

NRCS soil mapping (https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx) identifies several other types of soils on this site and does not designate as 445B. 140B, 43B and 395 are utilized. The range of depth to bedrock (inches) for 140B is 10"->60". A further understanding of the geologic make up of the site will facilitate planning.

Where is HISS info? LDR 403 E.3. requires HISS mapping on the Preliminary Topographic and Soils Plan. Did we receive this in early documents? LDR 603.2 and Appendix B address Minimum Lot Size By Soils Classification. Given the restrictive features of the site, these characteristics should be determined to facilitate lot sizing as this data may be relevant to the smaller lots. West Environmental (P.4 of 11/16/16 letter) noted the plan contained a HISS Soils Key and recommended removal because there is no HISS mapping. The recently revised small plan set has removed the HISS reference.

West Environmental suggested that the Town might utilize the certified soil scientists from Rockingham County Conservation District and we should discuss same.

Test pits:

Attached is a spreadsheet of the test pit data. There are a few data points which need to be reconciled (see right margin). The tests in May and December convey seasonal ground water conditions and underlying ledge remains a concern especially in view of the test pit characteristics as grouped by lots (see refusal data). Revised drainage plans/study info are needed. Further investigation should be made to determine relationship to bedrock and its substrata slope.

StoneHill Environmental, Inc. updated report 1/5/16

P.3of 8 – StoneHill concludes there are no id'd water supply wells downgradient of the Site....should Developer survey based on testimony at 12/13/16 meeting?

P. 4 of 8 – working estimate of the volume of bedrock is 3500 cu. yds. (roadway, utility trenches, foundation excavations)...at upper estimates per StoneHill's report, this could be over 5K. Merrimack's ordinance is mentioned as requiring groundwater monitoring for blasting projects greater than 36K. Per 102.24A in their ordinance, 36K is a threshold and the ordinance is expanded to include: "...and/or within 2,000 feet of a public or private well, wellhead protection area or public water supply." DES suggests water quality monitoring above 5K.

p. 8 of 8 – StoneHill concludes that additional hydrogeological study of the Site is not warranted since "it is extremely unlikely" that RWD bedrock wells could be impacted due to distance and the main replenishment from the NE/SW fracture zone. Wright-Pierce suggests on p.2 of 3 of 12/22/16 letter: "It is recommended that deep bedrock wells be drilled in association with the lineaments to assess the fractured bedrock aquifer flow relative the established overburden flow regime." The adjacent lineaments were discussed at the 12/13/16 PB meeting in connection with the Truslow presentation.

Water:

Wright-Pierce Report 12/22/16

The assertion of lineaments and bedrock groundwater sourcing merits which has been raised in the W-P report merits further discussion.



e la la caracteria de conserva esculpira fastra consesti proprieto de 150 se por la como

Lots Revise 12/29/16	d Test	Depth	ESHWT	Oba C- 115	0 D .			
DLA's	1.500	Берці	ESHWI	Obs Gr H2	0 Roots	Restr Laye	r Refusal	Date of T
1	4	72"	26"	62"	30"	26"	none	F /12 /2/
1	3	72"	26"	70"	26"	26"	none	5/12/20
1	1XY	All Contains	MAN LIGHT		La Company		none	5/12/20
2	6	70"	26"	69"	28"	none		
2	8	72"	30"	68"	30"	none	none	5/12/20
2	5	70"	25"	68"	29"	25"	none	5/12/20
2	7	70"	24"	68"	28"	none	none	5/12/20
3	12	48"	none	none	42"			
3	12AB		28"	N/A	23"	none	48"	5/12/20
			120	IW/A	23	38"	56"	6/30/20
4	4AB	42"	38"	N/A	32"	38"	42"	6/20/20
4	11	58"	42"	none	46"	none	58"	6/30/20
4	11AB	72"	37"	none	35"	37"	none	9/12/20
5	CAR	- C2/I						3/12/20
5	6AB	62"	28"	N/A	31"	28"	62"	6/30/20
5		52" 58"	32"	37"	29"	none	52"	5/12/20
	10	58"	29"	53"	29"	none	62"	5/12/20
6	6ABC	44"	32"	43"	31"	11./4		
	17NO	65"	27"	none	28"	N/A	44"	6/30/20
6	17	58"	26"	none	34"	27" 26"	none	9/12/20
	18NO	66"	30"	none	31"		none	5/12/20
6	TP18	60"	32"	n/a	34"	none 32"	none	9/12/20
6	17AB	(4) - (8) (6) (5)	N. White stable	The section	(frankling)	32	60"	5/12/20
6	17ZY			ta esmastra	12.24.10		ar to sa	Carlo Ballonia Carlottina
7	32	47"	31"	N/A	33"	1		
7	31	62"	28"	N/A	26"	N/A	47"	5/12/20
7	8AB	55"	33"	N/A	36"	N/A	62"	5/12/20
7	32ABC	51"	27"	none	28"	33"	55"	6/30/20
7	32AB	67"	26"	none	28"	27" 26"	51" 67"	9/12/20
					20	20	6/	9/12/20
8	27	64"	44"	N/A	48"	N/A	0-64"	5/12/20
8	28	43"	28"	38"	29"	none	43"	5/12/20
8	29	51"	36"	N/A	38"	N/A	51"	5/12/20
8	30	44"	30"	38"	29"	N/A	44"	5/12/20
8	33	62"	34"		30"	N/A	0-62"	5/12/20
8	34	43"	25"	N/A	27"	N/A	43"	5/12/20
8	25ZYX 25ZY		24 m (4.55)	1.00.000	(1) (1-w152) (8	36,46775933	and the legal of	现场看到上
	2321	12.5 - 16 16 16 16 16 16	100000000000000000000000000000000000000	1 1971 647 - 1874	THE PROPERTY.	- 建智量系统	用工作學科學	STATE OF
9	39	60"	26"	42"	30"	N/A	60"	F/12/20
9	40	62"	36"		38"	N'A	62"	5/12/20:
9	41	62"	28"		30"		62"	5/12/201
9	43	57"	32"		32"		57"	5/12/201
9	10ABCD		31"		30"		62"	6/30/201
9	10ABC	49"	24"		25" .		49"	6/30/201
9	10AB	59"	32"	1	28"		59"	6/30/201
9	42	60"	25"	44"	30"		60"	5/12/201
10	44	47"	25"	37"	7711			
10	46	56"	36"		27" 39"		47"	5/12/201
	<u> </u>	L	1-4	130	בנ	N/A	56"	5/12/20:

10	45	44"	29"	44"	30"	N/A	57"	F/42/204
10	45AB	62"	33"	none	42"	40"	62"	5/12/2010
					1.0	10	02	9/12/201
11	48	53"	28"	50"	26"	N/A	53"	E/12/201/
11	13AB(45"	45"	N/A	34"	N/A	45"	5/12/2016
11	13AB	46"	24"	N/A	25"	24"	46"	6/30/2016
11	13ABC	CD 48"	24"	none	30"	none	48"	6/30/2016
						none	140	9/12/2016
12	49	45"	30"	N/A	31"	N/A	45"	5/12/2016
12	50	48"	33"	N/A	27"	N/A	48"	5/12/2016
12	50QR	数十数単元		ma Libraria	nee andre		and horneys	3/12/2010
13	52	62°	50"	N/A	52"	21/2		
13	51	56"	31"	N/A	34"	N/A 31"	N/A	5/12/2016
		1	0.1	INTA	34	31"	56"	5/12/2016
14	22	49"	37"	n/a	36"			
14	21	52"	37"	none	36"	none	49"	5/12/2016
		17-7	137	Trione	30	none	52"	5/12/2016
15	23	47"	32"	none	32"	none	47"	E/12/2016
15	24	60"	37"	none	39"	none	0-60"	5/12/2016
15	24X	49"	29"	none	34"	29"	49"	5/12/2016
15	24XY	46"	none	none	41"	none	46"	12-Sep
						, i.o.i.c	140	9/12/2016
16	19AB	55"	32"	N/A	36"	N/A	55"	6/20/2010
16	19ABC	37"	none	none	32"	none	37"	6/30/2016
16	25	54"	26"	none	30"	none	54"	9/12/2016
16	25XY	67"	32"	35"	30"	none	0-67"	5/12/2016
16	26	65"	29"	65"	30"	N/A		12/8/2016
					30	IN/A	0-67"	5/12/2016
17	19NO	65"	25"	none	26"	none	65"	0/12/2016
17	20	65"	31"	62"	39"	43"	none	9/12/2016
17	20AB	66"	32"	N/A	33"	32"	66"	5/12/2016 6/30/2016
								0/30/2010
18	15	58"	38"	38"	29"	none	58"	5/12/2016
18	19N							3/12/2010
18	21N	145102.16		5 4 25 1 1		dis Harana	est la la colutie	
18	21AB	57"	32"	N/A	33"	32"	57"	6/30/2016
								0/30/2010
19	16	38"	25"	none	28"	none	38"	5/12/2016
19	14	46"	24"	38"	26"	none	46"	5/12/2016
19	16X	1,41,51,51	100			St. Lewistin		3/12/2010
	5QR	55"	32"	none	34"	none	55"	9/12/2016
Road (W)	1	76"	48"	74"	37"	56"	none	5/12/2016
Road (W)	2	67"	31"	63"	35"	none	none	5/12/2016
Road	13	52"	31"	50"	36"	none	52"	5/12/2016
Road	19	62"	30"	50"	33"	none	0-62"	5/12/2016
	21NO	69"	24"	none	29"	none	69"	9/12/2016
pen Space	35	41"	29"	41"	30"	29"	41"	
pen Space	36	45"	28"	N/A	31"	N/A	45"	5/12/2016
pen Space	37	58"	35"	N/A	36"	N/A	58"	5/12/2016
pen Space	38	52"	25"	N/A	26"	N/A	52"	5/12/2016
	47	61"	31"	N/A	31"	N/A	61"	5/12/2016
Road	1 000							5/12/2016
Road Road		57"	30"	None	132"	None	0 6 711	c 10 - '
	19AC	57" 65"		None 37"	32"	None	0-57"	6/30/2016
	19AC 27ZYX		30" 31" 32"	None 37" 53"	32" 31" 36"	None None	0-57" 0-65" 0-68"	6/30/2016 12/8/2016 12/8/2016

MICHAEL L. DONOVAN

Attorney and Counselor at Law

52 Church Street PO Box 2169 Concord, NH 03302-2169

Tel. (603) 731-6148 Fax: send a pdf mdonovanlaw62@gmail.com

MEMORANDUM

TO: Rye Planning Board

RE: Proposed Stoneleigh Preserve Subdivision

DATE: January 5, 2017

Dear Board Members:

This memorandum follows-up on my December 8, 2016 memorandum with respect to LDR § 603.3, A.1.c. which prohibits DLA's from being within 75 feet of soils where bedrock or impervious substrata are within 24 inches of the surface.

I have reviewed the applicant's Sheets 6, 7, 8 of 23, revised 12/29/16. By moving the last \pm 900 feet of Stoneleigh Way and the loop further south and eliminating 3 lots the applicant has been able to relocate several DLA's on the remaining lots so that they are not within 75 feet of exposed bedrock (with the possible exception of Lots 16, 17).

However, several of the DLA's are within 75 to 100 feet of the exposed bedrock. Subsurface excavation between the exposed bedrock and the DLA will be required to verify that there is no subsurface bedrock or impervious substrata within 24 inches of the surface and within 75 feet of the DLA. The applicant was asked to do this on his Brackett Road Subdivision on some lots where there was exposed rock.

I recommend that this further investigation be done. I also recommend that the board ask its soil scientist, Joel Noel, to be present to witness the additional exploratory excavations and that he provide his opinion for the board as to whether each respective DLA complies with LDR § 603.3, A.1.c.

I have attached an updated analysis of this aspect of the proposed subdivision. As indicated, it appears that the DLA's on 11 proposed lots require this further investigation.

Several new test pits were dug on 9/12/2016 and 12/08/2016. I assume the test pit logs indicate compliance with the SHWT requirement. I have not yet verified that in part because the labeling of some of the test pits in the logs is different than on the drawings.

Memo: Rye Planning Board Stoneleigh Preserve January 5, 2017 Page 2 of 2

I look forward to working further with the board on its review of this application at the January 10 public hearing.

Very truly yours,

Michael L. Donovan

Attachment: Analysis of DLA & House Site Locations.

Cc: (By Email)
Stephen Harding, PE
Caitlyn Abbott, PE
Peter Loughlin, Esq.
Christian Smith, PE
Mark West
Danna Truslow
Joe Falzone

Analysis of DLA & House Site Locations.

The following analysis is based on review of the 12/29/16 Revised Sheets 6, 7 & 8 showing house sites and DLA's.

Sheet 6 of 23.

- $\underline{\text{Lot 2}}$. The board should not approve a subdivision plan which plats lots which require a driveway to cross wetlands or wetlands buffers absent the applicant obtaining the required special exception from the ZBA prior to board approval of the plan.
- Lot 3. There is a conflict here in that the relocated DLA has two test pits (#'s 12 & 12A) which are depicted in different locations on the prior plan set. Also, a large part of the new DLA is within 75 to 100 ft. of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required in order to determine compliance with LDR § 603.3, A.1.c.
- <u>Lot 4</u>. A large part of the new DLA is within 75 to 100 ft. of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required in order to determine compliance with LDR § 603.3, A.1.c.
- Lot 5. Parts of the new DLA are within 75 to 100 ft. of 2 areas of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required in order to determine compliance with LDR § 603.3, A.1.c. Also, the West Report indicates that these outcroppings may be smaller than shown on the plans.
- Lots 17, 18. There is a rock outcropping at the southeast corner of Lot 17. The DLA's on these two lots are within 75 ft. of it. Additional investigation is required to determine if this outcropping is bedrock. If so, neither lot appears viable. Also, for Lot 18 a large part of a large part of the new DLA is within 80 to 100 ft. of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required in order to determine compliance with LDR § 603.3, A.1.c.

Sheet 8 of 23.

- Lot 6 appears not viable. The DLA has been "gerrymandered" with 800 sf of it appearing to consist of a 10 ft. x 80 ft. finger likely too narrow for a leachfield. Also virtually all of the new DLA is within 85 to 100 ft. of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required in order to determine compliance with LDR § 603.3, A.1.c.
- <u>Lot 7.</u> A large part of the new DLA is within 80 to 100 ft. of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required in order to determine compliance with LDR § 603.3, A.1.c.

<u>Lot 10</u>. A large part of the new DLA is within 80 to 100 ft. of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required in order to determine compliance with LDR § 603.3, A.1.c.

Sheet 7 of 23.

Lot 11. A large part of the new DLA is within 80 to 100 ft. of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required in order to determine compliance with LDR § 603.3, A.1.c. Also, the DLA is irregularly shaped. Applicant should demonstrate its suitability for a leachfield.

<u>Lot 12</u>. Parts of the new DLA are within 80 to 100 ft. of three different areas of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required in order to determine compliance with LDR § 603.3, A.1.c.

Lot 14. A large part of the new DLA is within 80 to 100 ft. of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required LDR § 603.3, A.1.c.

<u>Lot 15</u>. Part of the new DLA is within 100 ft. of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required LDR § 603.3, A.1.c. in order to determine compliance with LDR § 603.3, A.1.c.

Summary: 19 lots are proposed.

Not viable due to new wetlands mapping = 1 (Lot 2).

Possibly not viable due to shape of DLA = 1 (Lot 6).

Possibly not viable due to noncompliance with LDR § 603.3, A.1.c. = 2 (Lots 17, 18).

Further subsurface investigation required = 11 (Lots 3, 4, 5, 6, 7, 10, 11, 12, 14, 15, 18)

Prepared January 5, 2017 Michael L. Donovan, Esq.

Analysis # 3 of DLA & House Site Locations.

The following analysis is based on review of the 12/29/16 Revised Sheets 6, 7 & 8 showing house sites and DLA's. It includes review of additional test pits located between exposed bedrock and the DLA in response to Mr. Falzone's email of 1/6/17. New comments italicized.

Sheet 6 of 23.

 $\underline{\text{Lot 2}}$. The board should not approve a subdivision plan which plats lots which require a driveway to cross wetlands or wetlands buffers absent the applicant obtaining the required special exception from the ZBA prior to board approval of the plan.

No change in above comment.

<u>Lot 3</u>. There is a conflict here in that the relocated DLA has two test pits (#'s 12 & 12A) which are depicted in different locations on the prior plan set. Also, a large part of the new DLA is within 75 to 100 ft. of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required in order to determine compliance with LDR § 603.3, A.1.c.

No change in above comment.

<u>Lot 4</u>. A large part of the new DLA is within 75 to 100 ft. of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required in order to determine compliance with LDR § 603.3, A.1.c.

TP 4AB dug 6/30/16 indicates a restrictive layer at 38" and refusal at 42". TP 4AB is 40 ft. from the DLA. The DLA is 75 ft. from exposed bedrock. I believe further subsurface investigation is required adjacent to the exposed bedrock.

<u>Lot 5</u>. Parts of the new DLA are within 75 to 100 ft. of 2 areas of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required in order to determine compliance with LDR § 603.3, A.1.c. Also, the West Report indicates that these outcroppings may be smaller than shown on the plans.

TP 6AB dug 6/30/16 is located 60 ft. from the DLA. It has a restrictive layer at 28" and refusal at 62". The DLA is 100 ft. from exposed bedrock to the east. I believe I believe further subsurface investigation is required at a point 75 ft. from the DLA.

There is exposed bedrock south of the DLA as well. This is 80 ft. from the DLA. There is no test pit between the DLA and this outcropping. I believe I believe further subsurface investigation is required at a point 75 ft. from the DLA.

Lots 17, 18. There is a rock outcropping at the southeast corner of Lot 17. The DLA's on these two lots are within 75 ft. of it. Additional investigation is required to determine if this outcropping is bedrock. If so, neither lot appears viable. Also, for Lot 18 a large part of a large part of the new DLA is within 80 to 100 ft. of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required in order to determine compliance with LDR § 603.3, A.1.c.

As noted in my January 6 memorandum, the outcropping at the southeast corner is exposed bedrock. Thus, neither DLA complies with the regulation.

Sheet 8 of 23.

<u>Lot 6</u> appears not viable. The DLA has been "gerrymandered" with 800 sf of it appearing to consist of a 10 ft. x 80 ft. finger likely too narrow for a leachfield. Also virtually all of the new DLA is within 85 to 100 ft. of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required in order to determine compliance with LDR § 603.3, A.1.c.

There is no test pit between this DLA and the massive bedrock outcropping to the east. Additional investigation required.

 $\underline{\text{Lot 7.}}$ A large part of the new DLA is within 80 to 100 ft. of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required in order to determine compliance with LDR \S 603.3, A.1.c.

There are 2 test pits between the DLA and the large bedrock outcropping to the south. Both dug on 5/12/16. TP 32 is 20 ft. from the DLA and indicates refusal at 47". TP 31 is 50 ft. from the DLA and indicates 62" to refusal. I believe I believe further subsurface investigation is required at a point 75 ft. from the DLA as measured from the center of southerly boundary of the DLA.

<u>Lot 10</u>. A large part of the new DLA is within 80 to 100 ft. of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required in order to determine compliance with LDR § 603.3, A.1.c.

Based on TP # 46, which is 75 ft. from the DLA, it appears this lot complies.

Sheet 7 of 23.

<u>Lot 11</u>. A large part of the new DLA is within 80 to 100 ft. of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required in order to determine compliance with LDR § 603.3, A.1.c. Also, the DLA is irregularly shaped. Applicant should demonstrate its suitability for a leachfield.

TP 13ABC is 30 ft. from the DLA. It has refusal at 45". The bedrock outcropping to the SW is 75 ft. from the DLA. I believe further subsurface investigation is required about 5 ft. from the exposed bedrock.

<u>Lot 12</u>. Parts of the new DLA are within 80 to 100 ft. of three different areas of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required in order to determine compliance with LDR § 603.3, A.1.c.

There are 3 bedrock outcroppings with ± 80 ft of DLA. TP 49 located 55 ft. from the DLA shows refusal at 45". There are no test pits between the DLA and the other two outcroppings.

<u>Lot 14.</u> A large part of the new DLA is within 80 to 100 ft. of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required LDR § 603.3, A.1.c.

There are no test pits between the DLA and the ledge outcropping located 75' to the east.

<u>Lot 15</u>. Part of the new DLA is within 100 ft. of exposed bedrock. Additional investigation of soils between the DLA and exposed bedrock is required LDR § 603.3, A.1.c. in order to determine compliance with LDR § 603.3, A.1.c.

There is a bedrock outcropping 70 ft. to the east. TP 23 is located between this exposed bedrock and the DLA. It has 47" to refusal. I believe further subsurface investigation is required about 5 ft. from the exposed bedrock.

<u>Lot 16</u>. There is exposed bedrock about 80 to 100 ft. to the south of the DLA. TP 25 which is located 30 ft. from the DLA shows refusal at 45". I believe further investigation is warranted 75 ft. from the DLA.

Summary: 19 lots are proposed.

Not viable due to new wetlands mapping = 1 (Lot 2).

Possibly not viable due to shape of DLA = 1 (Lot 6).

Possibly not viable due to noncompliance with LDR \S 603.3, A.1.c. = 2 (Lots 17, 18). Further review indicates these two lots do not comply with the requirement.

Further subsurface investigation required = 11 (Lots 3, 4, 5, 6, 7, 10, 11, 12, 14, 15, 18, *16*)

Prepared January 5, 2017 Michael L. Donovan, Esq.

Updated January 10, 2017

Peter J. Loughlin

ATTORNEY AT LAW

LEONARD COTTON HOUSE • STRAWBERY BANKE
144 WASHINGTON STREET
P.O. BOX 1111
PORTSMOUTH, NH 03802-1111

TELEPHONE 603-431-6466 FAX 603-436-4079

E-MAIL peter.loughlin@pjllaw.com

January 10, 2017

VIA EMAIL:

Michael L. Donovan, Esq. 72 North Main Street PO Box 2169 Concord, NH 03302-2169

Re:

Stonleigh Preserve Subdivision

Dear Mike:

Thank you for your Saturday afternoon, January 7th, email and your January 5th and 6th Memoranda to the Planning Board concerning the Stonleigh Preserve Subdivision. I appreciate that you have taken the time to identify issues in a framework that gives Harbor Street an opportunity to weigh in on various issues prior to the January 11th Planning Board meeting.

Test Pits

There has been some confusion concerning the test pits that you referenced in your January 7^{th} email. In fact, I was not aware of the history of those pits.

As part of the subdivision process, Joe Falzone had test pits performed on what I will refer to as the front 50 acres of the property on several occasions during this past summer and fall. Each time a piece of equipment was brought to the site to excavate the pits in the presence of Beals Associates and the Town's designated representative, Dennis W. Plante. After each series of test pits was completed, a log of the pits was prepared, certified by Beals Associates, and submitted to the Town's representative, Dennis W. Plante (who witnessed each pit), for confirmation. In addition to logging the test pit information, the location of the pits was shown on a plan.

In accordance with the Town's Regulations, two test pits were performed in each DLA location on each lot. Under the Town's Regulations, these test pits were required to be observed only by Dennis Laplante

The extensive test pitting for the initial 22 lot subdivision identified over 40 pits that met the Town's requirements regarding seasonal high water mark and soil depths for DLA's. While more than 40 of the test pits ended up being actually in DLA areas, more than 40 other test pits (originally performed to locate DLA areas), were conducted in and around the areas that were ultimately selected as DLA sites.

As a result of this testing, there exists a very extensive record of the existence of (and in most instances the lack of existence of) any restrictive layer within two feet of the surface of the various parts of the proposed subdivision. Not only do we have a record of the examination of the first 24 inches of the land, but because they were done as septic test pits, we have detailed information going considerably deeper than the Regulations require be explored for restrictive layers. These were all witnessed by the Town's agent, Dennis W. Plante.

January 6th Memorandum

Preservation of Natural Features and the Environment.

a. Rock Outcroppings.

- 1) Suitable Steps: A comparison of the initial 22 lot Subdivision Plan submitted to the Board and the revised 19 lot Subdivision Plan clearly shows that the land developer has taken "significant" and "suitable steps" to "protect" ... "rock outcroppings" existing on the site. While we may disagree as to whether the rock outcroppings are a "significant existing feature" entitled to protection, there can be no doubt that the developer has gone to significant lengths to reduce impacts to rock outcroppings on the site.
- 2) Building, Grading and Drainage Plans: At the February meeting, Building, Grading and Drainage Plans will be submitted.
- 3) Drainage Study Assumptions: As a result of the test pits conducted throughout this site, the engineers have detailed knowledge on the depths of soils existing on the site and will

explain the drainage study assumptions about build out and drainage calculations in the February filing.

- 4) Blasting Impacts: On January 5, 2017, StoneHill Environmental submitted a detailed report responding to questions raised by Truslow Resource Consulting and Wright Pierce Engineering. StoneHill will continue to respond to any and all questions raised by the consultants of the Town and the Rye Water District, as well as members of the Planning Board.
- 5) Hydrological Study Revision: The Hydrological Study has been revised to reflect the 19 lot subdivision proposal and to address the Truslow and Rye Water District engineers' comments. The project developer on the 19 lot design has agreed to use advance design septic systems as noted in the StoneHill materials.
- 6) Board's Final Decision: It is understood that the Board's final decision on the impact of blasting on the wells will be based upon the expert/technical information presented to the Board. With the 19 lot design, most all blasting is shallow.

b. Wetlands.

- 1) Post Development Watershed Plan: Post development plans have been, or will be, submitted which will be readily understandable and Beals Engineering, Gove Environmental and StoneHill Environmental will continue to address impacts and respond to any inquiries from the Board or from West Environmental or Truslow Resource Consulting.
- 2) Roadway Construction between STA. 3+50 and 4+50: The roadway will not alter the natural terrain within 100' of the wetlands buffer of the vernal pool and if a retaining wall or slope easement is required, it will be provided.
- c. <u>Woodlands</u>. The preservation of the wooded nature of the site (especially the easterly half of the site on which the timber has not been heavily harvested in the last several years) is a critical aspect of the nature of the development that is proposed for this site. Every reasonable effort will be made to preserve wooded aspects of this site. It is expected that within the proposed street rights of way, existing woodlands will not be disturbed behind a line 3' from the back edge of the ditch line

paralleling the street. Road profiles will be submitted and documentation concerning the preservation of woodlands will be submitted to the Town.

3. <u>Designated Leach Field Areas DLA's.</u>

- Subsurface Bedrock: Harbor Street recognizes that 603.3, A.1.c prohibits soils where bedrock or impervious substrata are within 24" of the surface within 75' of a DLA. As was pointed out at the beginning of this letter, in most all of the areas where there are outcroppings on the surface, there are multiple test pits around or between the DLA and the subsurface bedrock which demonstrate extensive areas without subsurface or impervious bedrock within 24" of the surface or, in most instances, well below 24". Although these test pits were done to find septic locations and not solely for the purpose of identifying subsurface conditions down to a depth of 2', they have accomplished that purpose in the same manner as the extra test pits that you required on the Brackett Road Subdivision. Ensuring that there is no impermeable substrata within 75' of the DLAs requires striking a balance between reasonable subsurface exploration and excavation of large areas of every lot. Harbor Street feels it has struck that balance with the test pits that have been done and submitted to the Town.
- b. Outcropping on Lot 17: Harbor Street believes that Lot 17 and 18 are in compliance with LDR Section 603.3, A.1.c, however, this will be reexamined and re-measured to make sure that it is in compliance.
- c. Building Code Section 7.9.4.1: Based on your letter, it is my understanding that the proposed subdivision is in compliance with this section of the Building Code.
- 4. <u>Street Design</u>: It is further my understanding that the street design as proposed is in compliance with the street design requirements of the Land Use Regulations.

Legal Documents

Whatever legal documents are required will be submitted by Harbor Street as part of the subdivision process.

Miscellaneous

(1) Frontage Plan: Doucet Plans will be revised to show frontage;

- (2) Francis Path: The ownership of the area east of Francis Path will be clarified;
- (3) Detention Pond: The detention pond at Station 1+00 on Stonleigh Way will be located within the right of way;
- (4) Site Distances: The applicant will document that site distances for all driveways are appropriate;
- (5) Traffic: Based on the independent review by Stephen Pernaw Associates, it appears that the only traffic related issues to be addressed at this time are (a) the four way stop at Woodland Avenue, and (b) the status of the island on Woodland and/or channelization.

Respectfully submitted,

Peter J. Loughlin

PJL/dea

Cc: Harbor Street Limited Partnership



Water Wastewater Infrastructure

December 22, 2016 W-P Project No. 13651

Mr. Ken Aspen, Superintendent Rye Water District 60 Sagamore Road Rye, NH 03870

Re: Document Review for the Proposed Subdivision, Tax Map 4, Lot 25, 27, 31 & 32, Rye, New Hampshire.

Dear Ken,

Wright-Pierce has completed our review of the documents provided by the Rye Water District regarding the development of proposed subdivision (Tax Map 4, Lots 25, 27, 31, and 32) in Rye New Hampshire with regards to potential impacts to the Bailey Brook wellfield. The proposed subdivision is located along South Road in Rye, New Hampshire. Documents included two reports documenting hydrogeologic conditions at the proposed subdivision.

Based on the documents reviewed, it appears a total of 22 lots are to be developed with single family housing. As part of the approval, the developer was required to gather additional data including hydraulic conductivity, water level data, depth to bedrock, and provide a more complete groundwater model regarding loading and chemical fate and transport from the proposed septic systems. The October 2016 report by Stone Hill assesses the nitrate loading from septic systems from the proposed subdivision. Generally, the conclusion of the report indicated that groundwater flow in the vicinity of the proposed subdivision is to the north to a wetlands area that drains east away from the wellfield. Furthermore, the model suggests that nitrate/nitrite concentrations would not exceed regulatory standards at the property boundary indicating minimal potential for impacts to the wellfield with the exception of two lots that would need to be redesigned with advanced treatment systems to meet the compliance boundary. It is likely that contaminants associated with subsurface discharge will be intercepted by the wetlands to the north of that site and flow into Bailey Brook.

An assessment was completed by Dana Truslow dated December 1, 2016 on behalf of the Rye Zoning and Planning Board. This report is an assessment of the Stone Hill Report with regards to potential impacts to the Bailey Brook wellfield. Wright-Pierce generally agrees with the assessment with the following comments:

Shallow bedrock may result in an easterly deflection of shallow groundwater flow. Generally, this
has no bearing on the overall impacts of the project as groundwater flow in the Stone Hill report



shows immediate groundwater flow in the vicinity of the proposed septic systems to be northerly, while the assessment of the groundwater flow in the drainage is depicted as generally to the east.

- Agree that the nitrate loading model should be calibrated to higher background rates to represent a more conservative assessment of transport as well as the inclusion of adjacent properties. Generally, the upper limits of background nitrate are on the order of 2-3 milligrams per liter (mg/l) according to the New Hampshire Department of Environmental Services. However, it is very unlikely that this modeling will show any increase in contaminants mobilizing toward the wellfield based on topography and estimated overburden flow paths discharging to wetlands and surface water and eventually to Baily Brook flowing away from the wells.
- The report indicates that blasting is likely required to complete the project. A recent study funded by The New Hampshire Department of Transportation and completed by the United States Geological Survey (Identification of groundwater nitrate contamination from explosives used in road construction: Isotopic, chemical, and hydrologic evidence Degnan et.al. 2015) shows that spikes in nitrate concentrations of up to five times the contaminant limit in nearby wells in Pelham NH were impacted as a result of blasting due to residual chemicals from explosives. Blasting bedrock allows for these contaminants to directly infiltrate a fractured bedrock aquifer. The containment spikes were short lived (months) and water quality in the wells returned to background within a few months. Contamination as a result of blasting is a concern given the orientation of the lineaments mapped by the USGS (Furgeson 1997) passing directly through this area. Given the current data, it is impossible to predict whether blasting at the site would have an impact on the Bailey Brook wellfield since the area of influence (drawdown cone) resulting from pumping the wells has not been defined. This area of influence is certainly preferentially extended along major fracture zones that may be represented by the USGS lineaments. It is recommended that the total volume of blasted rock proposed and the type of explosives used, be reviewed to make a preliminary assessment of the potential additional nitrate loading potential associated with the project. There is potential that perchlorate may be generated as a result of basting as well. In addition, recharge to bedrock wells have been known to cross hydraulic divides under certain geologic conditions. It is recommended that deep bedrock wells be drilled in association with the lineaments to assess the fractured bedrock aquifer flow relative to the established overburden flow regime.
- Blasting associated with fractured bedrock aquifers has shown mobilization of turbidity in bedrock wells. This is likely a short term issue, but may cause spikes in dissolved minerals in the water system depending on chemical treatment. Destabilization of the well bore is unlikely given the distance to the wellfield, however this is impossible to predict.

Generally, it appears that the septic systems would have a de minimis effect on water quality at the Bailybrook wellfield if water quality at the compliance boundary is met. Additional modeling of nitrate loading utilizing higher background loading should be completed to provide a conservative assessment of transport at the subdivision. Careful consideration should be taken given blasting associated with the subdivision project and a review of any proposed blasting should be completed.

Given that the lineaments pass through the property, it may be in Rye's best interest to evaluate the property for the potential development of a new bedrock groundwater source. The development of

December 22, 2016 Page 3 of 3



additional source capacity may not currently be a priority, but will likely become an issue in the future as additional build out occurs in the community. Purchasing and securing property for future development may be a prudent course for Rye. An assessment of the potential for bedrock well development at this site has not been completed. The site would be undevelopable as a new source once the subdivision is completed.

If you have any questions or comments, please feel free to contact me at 603-748-6390.

Very truly yours,

WRIGHT-PIERCE

Gregory J. Smith, PG, CG.

They Smith

Hydrogeologist



January 9, 2017

Ms. Kimberly Reed, Planning and Zoning Administrator Town of Rye 10 Central Road Rye, NH 03870

Re:

Harbor Street LP, 421 South Road Subdivision Hydrogeologic Review – January 2017

Dear Ms. Reed,

This letter summarizes my review of the StoneHill Environmental, Inc. hydrogeologic study update letter report prepared for the proposed project dated 01-05-17 and other relevant project and background documents. Some impacts could not be evaluated fully as plans and other documentation were not yet available.

The following reports and resources were included in this review:

- Wright-Pierce (W-P) document review prepared for the Rye Water District dated 12-22-16;
- Updated development progress prints by Beal's Associates received 1-03-17;
- Project review letters prepared by Michael Donovan dated January 5 and January 6, 2017;
- Telephone conversations with Tim Stone of StoneHill Environmental, Mark West of West Environmental and Greg Smith of Wright Pierce to gather additional background;
- Email correspondence with Joe Falzone regarding the revised extent of blasting;
- Background publications on Atlantic White Cedar characteristics and specific information regarding the Browns Pond community; and
- Background publications on septic system and non point source water quality

This project site is fully within the Town of Rye Aquifer and Wellhead Protection District boundary. The area is not within the mapped Stratified Drift deposit but is within the wellhead protection district boundary, which provides recharge to overburden and bedrock ground water within the District boundary. In order to assist in my review, a map showing the project site

evaluating and resolving land & water resource issues www.truslowRC.com

1



Atlantic White Cedar Community Impacts

A community of Atlantic white cedar is present on the area adjacent to the development that is currently being proposed for conservation by the developer (approximately shown on Figure 1). The Nature Conservancy permanently protects a portion of this community on the adjacent Brown's Mill Pond property.

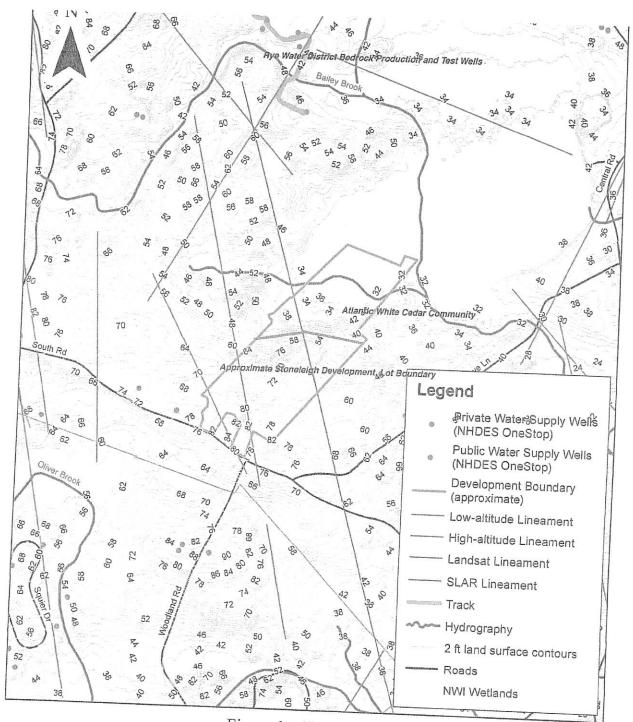
Atlantic White Cedar is considered rare and in decline in New Hampshire partially due to pressures from development. Excess sedimentation, nutrients, and chloride (NHDES 2005, NH Heritage Bureau, 2002) can negatively impact these communities. The hydrologic environment that supports these cedars requires generally wet conditions, and is sensitive to changes in water level and scour. Cedar trees grow on peat that has accumulated over thousands of years. These areas require somewhat acidic and nutrient poor water and substrate.

Gengarelly (2003) closely studied new cedar growth and found that the flooded area surrounding the southern perimeter of Brown Mill Pond helped to keep the forest canopy open to allow light to penetrate and offered the hydrologic conditions suitable for new growth of AWC in this community. Nitrate and phosphorus from increased septic loading could impact water quality conditions in the AWC if nutrient concentrations exceed the capacity of wetland system uptake. Little information is available on the magnitude of water quality changes that will impact these systems.

In summary, additional evaluation of hydrologic and water quality impacts on groundwater and surface water will be completed after additional lot layout and septic layout information is provided.

Sincerely,

Danna B. Truslow, PG, CG Principal Hydrologist



DRAFT

Figure 1 - Site Locations with Fracture Lineaments and Well Locations



Source: GRANIT LIDAR



GOVE ENVIRONMENTAL SERVICES, INC.

Memorandum

Date:

Tuesday, January 10, 2017

To:

Mark West, CWS Company: West Environmental

From:

Jim Gove

Re:

Residential Development, South Road, Rye, NH

Subject:

Vernal Pool Impacts Lot 2

The driveway will permanently impact the vernal pool 100-foot envelope by 2,416 square feet.

The entire vernal pool 100-foot envelope on Lot 1 and Lot 2 (a portion of the envelope is on the abutting property to the west) is approximately 100,000 square feet.

The loss of vegetated cover due to the driveway in the 100-foot vernal pool envelop will be 2.4% of the total vernal pool buffer.

It in my opinion that this is a negligible loss to the 100-foot vernal pool buffer.

Restoration Plan:

- 1- Identify the extent of the two areas in the field to be restored. A certified wetland scientist may be required to flag the extent of the restoration areas.
- 2- Remove the stones, logs, gravel and other debris from the two areas.
- 3- Removal is complete when the original hydric soils are exposed. A certified wetland scientist may be required to identify the original hydric soils.
- 4- Stockpile the removed debris outside of any wetlands and any wetland buffer. Place erosion control barriers around the stockpile.
- 5- Seed the two areas with a wetland restoration mix. New England Wetmix (New England Wetland Plants, Inc., 820 West Street, Amherst, MA 01002) or equivalent to be seeded at a rate of 1LB/2500 SF.
- 6- Mulch with straw.
- 7- Optimum time for seeding would be spring, after mud season.
- 8- Removed debris to be either processed on site or removed from the site.
- 9- Monitor the restoration areas to determine if seed mix has germinated. Reseed as needed to establish 90% coverage of the restored areas.

MICHAEL L. DONOVAN

Attorney and Counselor at Law

52 Church Street PO Box 2169 Concord, NH 03302-2169

Tel. (603) 731-6148 Fax: send a pdf mdonovanlaw62@gmail.com

December 29, 2016

Peter J. Loughlin, Esq. P.O. Box 1111 Portsmouth, NH 03802-1111

Re: Proposed Stoneleigh Preserve Subdivision

Dear Peter:

Thank you for your December 12, 2016 letter responding to my November 30 and December 8 memoranda. I hope you and your family had a pleasant holiday season and that you got to spend some "quality time" with your grandchildren.

It appears that your client will be substantially revising the subdivision proposal. Thus, it is not necessary for me to respond to most of the content of your December 12 letter since there will undoubtedly be another round of review memos from me based on the revised proposal.

It is important, however, that I respond to the following assertion by you with which I disagree. In responding to my comments concerning LDR § 601.1 "Standards for the Preservation of Natural Features and the Environment", you state: "While the landscape is attractive, I am not sure that there are any 'significant' features that call for special protections in light of the fact this land is not dissimilar from large portions of the surrounding areas in Rye."

As I believe you know, I began advising the Rye Planning Board as a planning consultant in 1984 while in law school when I was hired to assist preparing Rye's first Master Plan. At the time my professional background included Master of City Planning and Master of Civil Engineering degrees from Georgia Tech and about 15 years of experience in planning, engineering and municipal administration.

Since 1984 I have provided technical planning review of every major land development that has come before the Rye Planning Board and scores of minor development proposals as well. I have walked the site of many of the subdivisions reviewed by the board in the past 32 years.

Peter J. Loughlin, Esq. December 29, 2016 Page 2

Reference is made to the first two paragraphs on Page 2 of my November 30 memorandum. No land in Rye which has been subdivided over the past 32 years exhibits the amount of natural exposed bedrock which will require removal for street and utility construction (let alone lot development) as the land at 421 South Road. I am not aware of any similar land requiring this nearly this much rock removal having been subdivided in Rye in the 32 years I have been advising the planning board.

I also note the presence of the White Cedar Forest within ± 250 ft. of the subdivision and down gradient of groundwater flow. This is a unique natural feature of this land warranting protection.

I look forward to our continued discussions of this development proposal.

Warmest regards for a Happy New Year in 2017.

Very truly yours,

MCD. Michael L. Donovan

Cc: Rye Planning Board

January 6, 2017

Rye Planning Board Rye Conservation Commission Rye Town Attorney Town of Rye, New Hampshire 10 Central Road Rye, NH 03870

Re. Proposed Major Subdivision at 421 South Road, Rye, New Hampshire

Dear Ladies and Gentlemen,

A forest management cut on the Chisholm property was completed in the mid 1990's shortly after we moved to South Road. The temporary woods road evident to residents of Rye on the Site Walk of 421 South Road on Nov. 19, 2016 was not in existence in the 1990's. The operation consisted of a single logger cutting individual marked trees, skidding one tree at a time out of the woods to a pile east of the barn near South Road. When enough logs were hauled the logger called for a trailer for loading and transport. There was no chipping.

The expansive clear cut timber harvest to access the backlands for the proposed 421 South Road Major Subdivision commenced in 2013 as indicated on the permit dated for the tax year 4/1/13 through 3/31/14. Subsequently the woods road traversed by residents on the above noted Site Walk was constructed. Many residents and abutters noted and commented on the aggressive clearing of the forest as it occurred concurrently with deliberation of the Subdivision Proposal by DD Cook to the west on 561 South Road. The logger's equipment got stuck off the Northeast corner of the present barn at the start of the existing temporary logging road. The logger filled the present landing near South Road to the east and north of the barn with crushed stone and gravel (where residents parked for the Site Walk). The logger filled the historic wetland and present logging road that traverses along the back of the barn in a northwest direction with logs, crushed stone, woodchips, asphalt and gravel as evident on the Site Walk, as well as a second landing in the backlands with the same materials. Both landings allowed operating room for the logger's vehicles, chipper, skidder and two log trucks loaded simultaneously with logs and chips, with requisite room for both trucks to turn around and leave the property forward.

The contrast between the forestry cut of the 1990's and the clear cut timber harvest in 2013 through 2015 could not be more stark.

Prior to the building of the road, the pond was frequented by neighborhood boys for bull frogging and exploration for snakes, turtles and smaller reptiles. The land to the west of the existing barn is a historic wildlife corridor across South Road for many species including deer, opossum, fox, turkey, coyote, weasel and snapping turtle that annually cross South Road toward the pond to lay eggs. Residents stop traffic to assist snapping turtles to cross safely, 2016 no exception.

Respectfully submitted as residents of Rye at 495 South Road for 24 years.

Carl H. Chaput

and Illingst

Carol L. Menard

January 9, 2017

Rye Planning Board Rye Conservation Commission Rye Town Attorney Rye Water District Town of Rye, New Hampshire 10 Central Road Rye, NH 03870

Re. Proposed Major Subdivision at 421 South Road, Rye, New Hampshire

Dear Ladies and Gentlemen,

Please find attached an incomplete list of several types of wells located along the polygon of town roads surrounding the Rye Public Water Wells as requested by the Planning Board Chairman at the December 13, 2016 meeting. Many of the wells are in use for primary drinking water and/or outside use. Many are in place as back up water supply if needed. The depths of wells are included if known.

Sincerely,

Carol Menard

WELL PROXIMATE TO 421 SOUTH ROAD

				,					
437 South RI			130 Drilled	K	391 Central R	21		1/10 Reduck	
580 South Rd	Dug				39 9 Central P			Ha Drilled	
316 West Rd			-		181 Control		**************************************	300 Drilled	
307 West Rd	Zo'Dug	-						Pod mod	
269 Westrd	a oug	-	2001 Bedrock		57 Central F			180 Dalled	
505 Sa. ft. ps	36/12	***************************************	COU PHILED		194 Central R			240 Dulled	
525 South Rd	270	Ishared	151 Dug		F30 Central /			60 Divilled	
Joe Ellist 1-0	15 1/49			<u> 1</u>	13H South R	Dug			
100 Garland Rd	.,	***************************************			410 Sorith R		2 Dug	Wells 70-30 cm	
560 South Rd	Dug				388 South R		_65	Artesian Circo	_
	Pug		Rol. (433 South Ro	ſ	x	500 Bellock	•
495 South Rd			460 Driller	4	716 South Rd	Dug		Befrock	
34 South Rd			300t Drilled	1	HZ Gove Rd			Drilled	
363 South Rd	20 Dug		- N		85 Gove Pl	Dug			
310 West Rd			150' Bedrock		60 Grove	Duck			
154 Farland RI			125 Drilled		42 Gove	Dug	-		
121 Garland Rd			180 Drilled	N	& Grove	Die			
181 West Rd			220' Bedrock		240 Garland	Dug		Bedrock	
333 West Rd	430 dopth &		-0	-	333 West	***************************************		DAIRE	
38 Gove Rd	A	rı /	40' Bedrock		290 West	7)	·	- Willed	
38 Grove Pd.	7 Dow	ells	Call and	<i>Ç</i>	710 coest	Dug			
18+Gove RI	8.		Geoffernial						
496 Central Rd	Aquaria.	(20 C/	Drilled in	-		S		-	
11 s	it ar	17	Erwe (
493 Central R		Purip	Testing for	Dru-C	<u>e</u>	***************************************			
			So prilled						
410 Certral Rd.		/	801 DHILLER					-	
400 Central RS	***		10 Drilled	-			<u> </u>		
420 Central Rd			801 Bedrock						
# Central Rd		36	to prined						
				** <u>***********************************</u>					
	20480000	77							
3									
	-			-					
_	-							98-77-77	

1/2/2017

Water Well Report

1 of 1

Welf Id (WRB#): 207.0031

Well Completion Report

Date Completed: 09/28/1993

Total Depth: 460 ft

Name and Location: C MENARD 495 SOUTH RD Mapit RYE

Depth to Bedrock: 35 ft

Tax Map No: 4

Casing: 51 ft

Lot No: 19

Tested Yield: 75 gal/min

Type: DRILLED IN BEDROCK

Static Water Level:

Use: DOMESTIC;

Measured Yield After Development:

Well Driller

Driller License No: 177

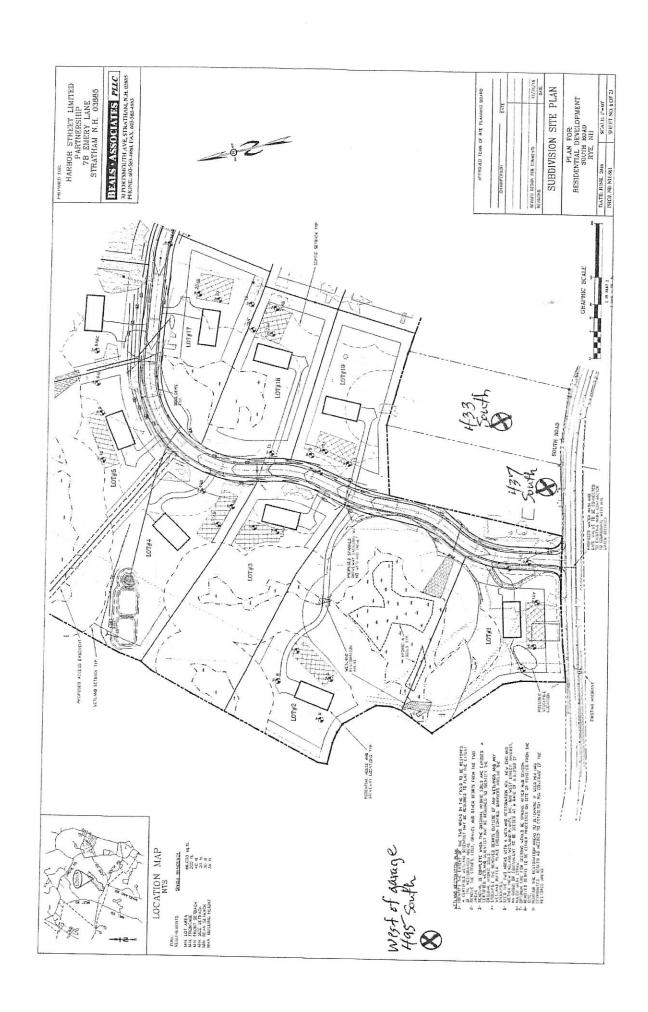
Driller Well Id: 446

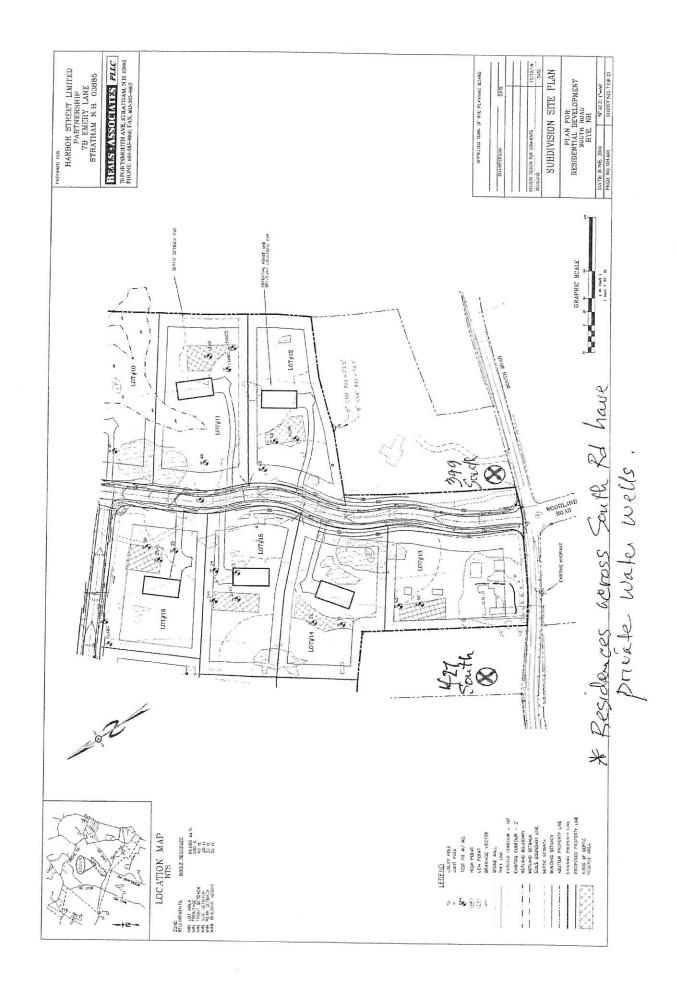
Name and Address: LA HANNA & SONS INC 313 PORTSMOUTH AVE STRATHAM NH 03885

Current License Status: Inactive

Email: MENTER83@METROCAST.NET

Phone Number: 603-436-5776





January 6, 2017

Rye Planning Board Rye Conservation Commission Rye Town Attorney Town of Rye, New Hampshire 10 Central Road Rye, NH 03870

Re. Proposed Major Subdivision at 421 South Road, Rye, New Hampshire

Dear Ladies and Gentlemen,

1. Quantify Flood Storage Before Extensive Clearcut Logging of Forest

The Site Walk on Nov. 19, 2016 revealed the natural beauty and sensitive nature of the land and forest of 421 South Road and the shocking destruction of this forest during recent logging. The abutters are concerned that the extensive clearcut logging of the forest land on 421 South Road prior to approval of the proposed major development has diminished or eliminated the resources that provide protection from natural hazards, such as flooding and drought and that allow for water recharge.

RZO Section 301.4 Purpose: In the interest of public health, convenience, safety and welfare, the regulations of this District are intended to guide the use of areas of land with extended periods of high water tables. (Renumbered 1995 and 2012)

- B. To prevent the destruction of natural wetlands which provide flood protection, recharge the ground water supply, and the augmentation of stream flow during dry periods.
- C. To prevent unnecessary or excessive expenses to the Town to provide and maintain essential services and utilities which arise because of unwise use of wetlands.
- F. To preserve and enhance those aesthetic values associated with the wetlands of this Town.

The abutters believe the above ordinances important to the discussion of 421 South Road as it stands now and going forward as a proposed Major Subdivision.

- ---What is the damage to this verdant forest caused by clearcutting and what impacts are appropriate to be assessed? It appeared to laypersons that logging took place in unmarked wetlands. The abutters are respectfully requesting an assessment by a Wetlands/Soils Specialist to determine the following:
- ---Was a Land Use change brought about by extensive clearcutting of the forest?
- ---How much water storage by the forest was lost and what impact does that have to properties downstream of the site? Did the extensive cutting increase surface and storm runoff downstream of the site?
- ---What species of forest trees and wildlife have been damaged or impacted?
- 2. Impact of Woods Road on Wetlands and Vernal Pool Designations

- ---Has the bifurcation of the wetlands on the west side of the proposed development through the construction of a temporary woods road and leaving it in place for 2 years, impacted the wetland delineations by changing water flow through soils and on the surface?
- ---How has the road changed the natural progression of life in the ecosystem over 2 seasons and impacted species survival?
- ---How has the Severe Drought coupled with the above over 2 spring seasons impacted the vernal pool designation on the west side of the proposed development?

To avoid apparent conflict of interest, the abutters respectfully request that the town of Rye engage a contractor to remove the temporary woods road and landings in their entirety and restore the wetlands to their natural state under the direction of Mark West.

3. Wetlands and Bedrock Boundaries

Both peer reviewers for the Town of Rye, Mark West and Joe Noel noted in their discussion before the Planning Board on 12/13/16 that their examination of the wetlands and bedrock was limited to areas as presented by the developer. Significant changes were made from their respective work that markedly reduced the proposed lots by 3, to 19 remaining proposed lots. As the proposed lots are influenced in most cases by more than 50% wetlands with buffers, due to the potential for delineation changes and additional wetland and bedrock information, the abutters urge the Planning Board to closely examine every proposed lot for additional clarification and omissions of wetlands and bedrock impacting construction of lots.

4. Staking the Delineation of the Wetlands Buffers along the Proposed West Road Centerline

The land at centerline station +/- 3+50 of the proposed West Road access has repeatedly been submerged after recent rainfalls. The abutters respectfully request the buffer delineations (Wetlands and Vernal Pools) be staked along the centerline to clearly identify where it intersects the road design.

5. Public Road Access Adjusted Proposal on West Side of 421 South Road Subdivision

Another area of concern to the abutters is that the adjusted design of the public road access off South Road on the west side of the proposed development appears to not fit between the buffer of the vernal pool and the Svihovec property (Lot 28) between station 3+00 to 4+00. The road grade appears to infringe on and drain into the wetlands buffer on Lot 2 and the East edge of the road grade appears to drain onto Lot 28. The proposed road appears to bisect the northeast drainage direction of the wetland system, possibly altering the function of its wetland properties and constricting and isolating the wetlands on Lots # 17-19. The elevated road bed, the elevated house locations, the raised septic systems and bedrock outcroppings encircle the wetland, thereby rendering it a detention pond for surface runoff, storm surge and septic effluent for these 3 lots, which is prohibited under S 301.4, A&B.

6. Possible omission of Wetlands Delineation on Lot 1.

It appears to laypersons that the wetlands and the buffers for wetlands on Lot 1 are not fully delineated?

This letter expresses our concerns as they relate to wetlands as that is the main focus of discussion for the upcoming Planning Board meeting.

Respectfully submitted – Abutters to 421 South Road, Rye, New Hampshire

Signature Page 421 South Road Proposed Development:

Shelly L-Patrick 410 South Rd, NyE, NH.	Beverly Rawders Leves an 381 South Roll Repent
Riscilla A Petrick Rige Box	281 SOUTH ROD RYENTH 281 SOUTH ROD RYENTH
388 Soah Rd 8 JE 10. H 03871	Constance E. Obell 434 South Rd. Reje UH
355 SOUTH NO RYE NN 03870	434500xx 123 RYE, NIX 03820
Phi 399 South Rd	
Rye, NH 03870	1995 South Rd, RyE, WIT
	- 495 South Road Rye, NH

Signature Page 421 South Road Proposed Development:

Kevin Besma : 416 South Road
Aburrer

Kimberly Basma: Hib South Rd.
Aburrer