

Drainage & Natural Features

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Concern regarding the flow directly into a wetland that goes offsite due to RZO 507.2.

RZO Section 507 Storm Water Management

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Seiner, Menard/Chaput, and Lots 28-30

Consistent with the aforementioned concerns regarding the existing characteristics of South Road and abutter properties, LDR 606.1 requires suitable steps to afford the protection and enhancement of natural features. Tree buffers are essential to preserving this rural environment.

LDR 606 Standards for the Preservation of Natural Features and the Environment

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Rye Bedrock Wells

11
5

Assessment of Ground-Water Resources in the Seacoast Region of New Hampshire

Table 4-1. Reported characteristics of selected bedrock wells, or well fields, in the Seacoast model area, southeastern New Hampshire.

[Wells shown on figure 4-2 unless otherwise indicated; gal/min, gallons per minute; ft/d, feet per day; gal/min/ft, gallons per minute per foot; *, not shown on figure 4-2; —, not available]

Town	Well site	Local well name	Average total yield or discharge (gal/min)	Depth (ft)	Draw-down (ft)	Storage coefficient	Hydraulic conductivity (ft/d)	Specific capacity (gal/min/ft)	Porosity or gravity drainage yield	Geologic unit	Reference
Seabrook	SGW-89	Wells 1-4	1,300	500	—	4 × 10 ⁻⁴	3.3	—	0.02	Kittery/Eliot	Earth Tech, Inc., 1998.
Seabrook	SGW-93	Well 5	560	492	—	4 × 10 ⁻⁴	3.3	5	.02	Rye	Geosphere, Inc., 2003.
North Hampton	NSW-76	Well 20	175	600	175	—	—	1.32	.02	Rye	Geosphere, Inc., 2003.
North Hampton	NSW-77	Well 21	200	600	440	—	—	.47	—	Rye	D.L. Maher, Inc., 1982.
North Hampton	RYW-45	Bailey Brook	335	551	40	—	—	5.8	—	Rye	D.L. Maher, Inc., 1997b.
Rye	RYW-51	Cedar Run	320	437	50	—	—	6	—	Kittery	D.L. Maher, Inc., 1997a.
Rye	*	Well 16	242	57	27	—	—	—	—	Kittery	D.L. Maher, Inc., 1996.
Stratham	NSW-78	Well 17	120	456	111 (80) ¹	—	—	1.5	—	Kittery	D.L. Maher, Inc., 1996.
North Hampton	NSW-74	Well 18	150	600	109 (80) ¹	—	—	1.9	—	Kittery	D.L. Maher, Inc., 1996.
North Hampton	NSW-75	Well 19	220	435	133 (99) ¹	—	—	—	—	Kittery	D.L. Maher, Inc., 1996.
Greenland	*	Assett 1	207	53	25	—	—	2.1	—	Kittery	Hydroterra Environmental, 2001.
Greenland	*	Assett 2	300	52	29	—	—	1.8	—	Kittery	Hydroterra Environmental, 2001.
Greenland	*	Assett 2	300	52	29	—	—	.6	—	Kittery	Hydroterra Environmental, 2001.
Stratham	*	WM-1	42	400	69	—	—	.8	—	Kittery	Hydroterra Environmental, 2001.
Stratham	*	WM-2	43	400	54	—	—	—	—	Kittery	Hydroterra Environmental, 2001.

¹ Estimated based on reported information.
² Wells 1, 3, and 4 are adjacent to SGW-89 (Well 2).

9	44	47"		25"	37"	27"	N/A	47"	5/12/16	DP	
9	46	56"		36"	56"	39"	N/A	56"	5/12/16	DP	
9	45	44"		29"	44"	30"	N/A	57"	5/12/16	DP	
9	45AB	62"		33"	none	42"	40"	62"	9/12/16	DP	
9	45JN	49"		29"	41"			49"	2/2/17	JN	Newfields
9	46JN	56"		31"				56"	2/2/17	JN	Newfields
9	LP4JN	33"		None obs				33"	2/2/17	JN	Chatfield Variant
9	LP5JN	36"		~18"				36"	2/2/17	JN	Newfields
8 and 9	LP14JN	34+"									
10	10JN		32"	None obs				No 32"	1/20/17	JN	Chatfield
10	11JN		26"	None obs				No 26"	1/20/17	JN	Chatfield
10	12JN		27"	None obs				No 27"	1/20/17	JN	Chatfield
10	13JN		0"@ surfj	None obs				No 1"	1/20/17	JN	Micro-lithic/Hollis
10	14JN		38"	28"				Yes	1/20/17	JN	Chatfield Variant
10	15JN		0"@ surfj	15"				No	1/20/17	JN	Micro-lithic/Hollis
10	16JN		38"	32"				No	1/20/17	JN	Chatfield Variant
10	17JN		12"	None obs				No	1/20/17	JN	Hollis
10	DP11A	42"		28"	35"	30"	No	42"	2/21/17	JN	
10	DP11B	43"		29"	40"	27"	No	43"	2/21/17	JN	
10	DP11C	38"		28"	36"	29"	No	38"	2/21/17	JN	
10	DP11D	49"		26"	29"	27"	No	49"	2/21/17	JN	
10	DP11E	40"		26"	37"	22"	No	40"	2/21/17	JN	
10	DP12A	56"		33"	53"	35"	No	56"	2/21/17	JN	
10	DPLP13	33"							2/21/17	DP	
10	DPLP14	31"							2/21/17	DP	
10	48	53"		28"	50"	26"	N/A	53"	5/12/16	DP	
10	49	45"		30"	N/A	31"	N/A	45"	5/12/16	DP	
10	13ABC	45"		45"	N/A	34"	N/A	45"	6/30/16	DP	
10	13AB	46"		24"	N/A	25"	24"	46"	6/30/16	DP	
10	13ABCD	48"		24"	none	30"	none	48"	9/12/16	DP	
10	50	48"		33"	N/A	27"	N/A	48"	5/12/16	DP	
10	5QR	55"		32"	none	34"	none	55"	9/12/16	DP	
11	52	62"		50"	N/A	52"	N/A	N/A	5/12/16	DP	
11	51	56"		31"	N/A	34"	31"	56"	5/12/16	DP	
11	DP6	34"							2/21/17	DP	

8

12	JIN		65"	38"				Yes			1/20/17 JIN	Woodbridge
12	22	49"		37"	n/a	36"	none	49"		5/12/16 DP		
12	21	52"		37"	none	36"	none	52"		5/12/16 DP		
12	DP1P3	32"								2/17/17 DP		
12	DP1P4	32"								2/17/17 DP		
12	DP1P5	35"								2/17/17 DP		
12	DP1P6	34"								2/17/17 DP		
12 and 13	LP20JN	18"								4/20/17 JIN	Holls	
12 and 13	LP21JN	30"								4/20/17 JIN	Chatfield	
12 and 13	LP30DP	32"								4/28/17 DP		
12 and 13	LP32DP	32"								4/28/17 DP		
12 and 13	LP33DP	24"								4/28/17 DP		
12 and 13	LP35DP	26"								4/28/17 DP		

14	8JN		8"		None obs	none			No	8"	1/20/17 JN	Micro-lithic/Hollis
14	9JN		25"		None obs	none			No	25"	1/20/17 JN	Chatfield
14	19ABC	57"		30"	none	32"	none	32"	none	57"	6/30/16 DP	
14	19ABCD	37"		none	none	32"	none	37"	none	37"	9/12/16 DP	
14	25	54"		26"	none	30"	none	54"	54"	54"	5/12/16 DP	
14	25XY	67"		32"	35"	30"	none	0-67"	0-67"	0-67"	1/28/16 DP	
14	26	65"		29"	65"	30"	N/A	0-67"	0-67"	0-67"	5/12/16 DP	
14	LP16JN	34"									4/20/17 JN	
14	DP1P7	32"									2/21/17 DP	
LOT 15	DP1P18A	34"									2/21/17 DP	
14	DP1P18B	43"									2/21/17 DP	
14	DP1P18C	44"									2/21/17 DP	
14	LP20DP	38"									4/25/17 DP	
14	LP21DP	38"									4/25/17 DP	
14	LP22DP	32"									4/25/17 DP	
14	LP23DP	27"									4/25/17 DP	
14	LP24DP	38"									4/25/17 DP	
14	LP25DP	28"									4/25/17 DP	
14	LP28DP	36"									4/25/17 DP	
LOT 13	LP36DP	29"									4/28/17 DP	
14	LP39DP	24"									4/28/17 DP	
14	LP40DP	30"									4/28/17 DP	
14	LP41DP	25"									4/25/17 DP	

MATCH LINE SHEET 204
MATCH LINE SHEET 1705

EDGE OF WETLAND
(SEE NOTE #6)

LOT 25
49.7 Acres
(SEE NOTE #12)

LOT 32
37.5 Acres
(SEE NOTE #12)

LOT 31
167,795 Sq. Ft.
3.85 Acres

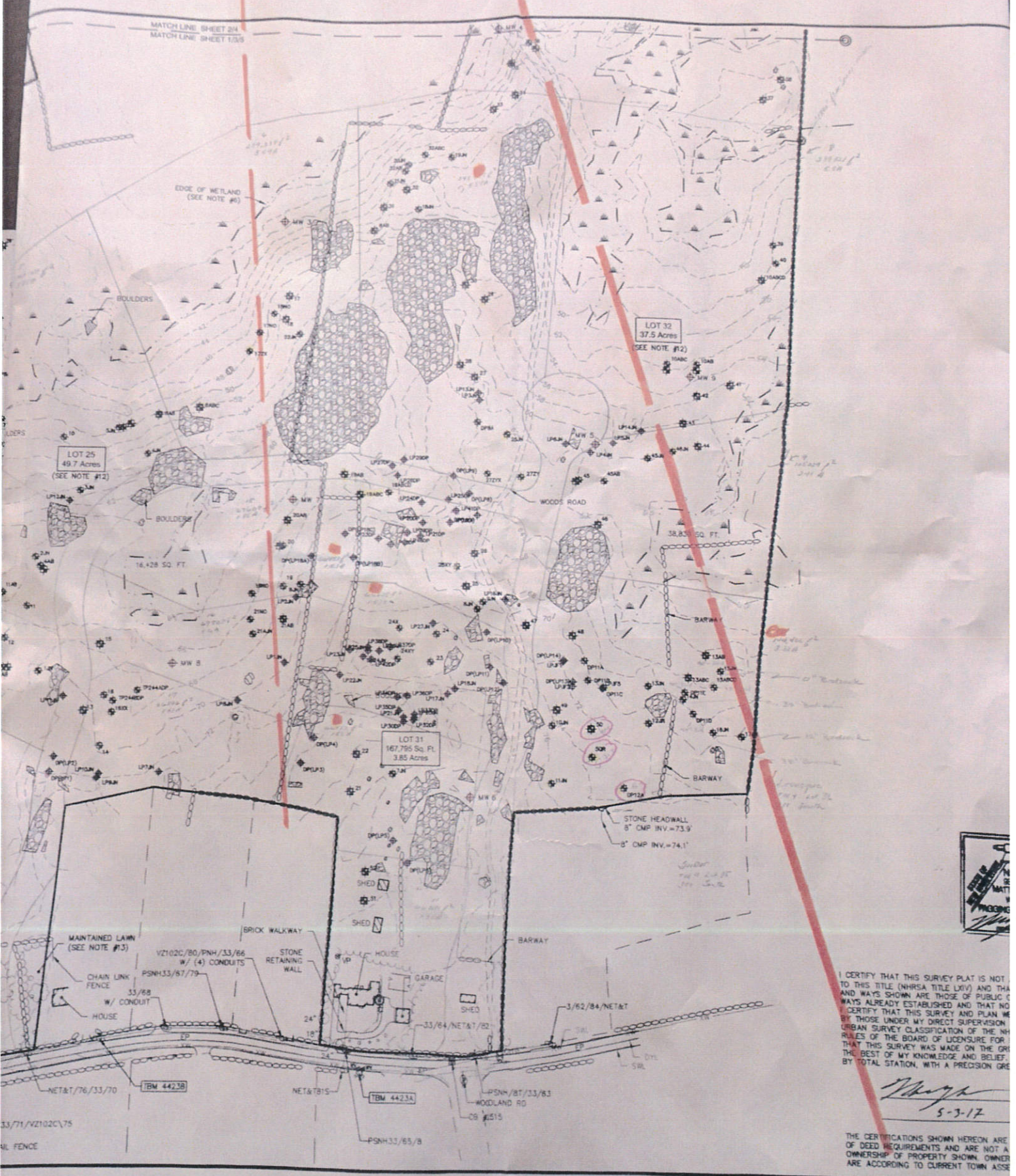
STONE HEADWALL
8" CMP INV. = 73.9'
8" CMP INV. = 74.1'

I CERTIFY THAT THIS SURVEY PLAT IS NOT TO THIS TITLE (NH RSA TITLE LXIV) AND THAT THE WAYS SHOWN ARE THOSE OF PUBLIC OWNERSHIP ALREADY ESTABLISHED AND THAT NO OTHER WAYS ARE SHOWN. I CERTIFY THAT THIS SURVEY AND PLAN WERE MADE UNDER MY DIRECT SUPERVISION AND IN ACCORDANCE WITH THE RULES OF THE BOARD OF LICENSURE FOR SURVEYORS. THAT THIS SURVEY WAS MADE ON THE BEST OF MY KNOWLEDGE AND BELIEF, BY TOTAL STATION, WITH A PRECISION GRADE

Thompson
5-3-17

THE CERTIFICATIONS SHOWN HEREON ARE OF DEED REQUIREMENTS AND ARE NOT A STATEMENT OF OWNERSHIP OF PROPERTY SHOWN. OWNERSHIP IS ACCORDING TO CURRENT TOWN ASSESSMENTS.

Part For the



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Jim Lovelace

This has been a long process and it taken some time to ferret out the details of the proposal. The plans have been ever changing based upon newly discovered information and site impacts, and it more than proves the challenging aspects of the site.

Over time this board has repeatedly asked for information be added to the plans and reluctantly some of it's been done, but has taken months to occur.

As late as the April 26th work session, , Vice Chair Pat Losik, Attorney Donovan, Steve Harding (Town's Consultant), and I all requested additional information be added to the plans and the developers Engineer agreed to do so.

Mr. Harding's response to the Chairman's question of whether he had any frustrations in reviewing the developers plans at that meeting, was "the flow arrows did not make sense, there are conflicting grading contours, it was difficult to see what was going on (from the plans), first floor elevations were not shown, one driveway was at 19%, and there needed to be some thought on how the houses are going to look in proportion to the proposed driveway elevations." Those comments clearly indicated that the developers' plans, after months of time, were still deficient to adequately make judgements on the development. And although the additional information might be more than what might usually be requested on some plan submittals, they are not unusual requests. But again, it demonstrates the challenging aspects of this site.

I am a Professional Engineer and Project Manager who has been working for developers for over 30 years and have permitted a lot of developments. I'm currently working for three different developers, I have about 12 projects currently in some stage of the permitting process and have five Engineering firms engaged for that work. I couldn't agree more with Mr. Harding's comments on the quality of the plans. At this stage of the process, when we are missing basic information such as legends, quality control is certainly missing as these plans leave the Engineer's office. I don't think we require legends on the plans in our Land Development Ordinances, but some things are just plain common sense. These plans are poor at best and still difficult to go through.

I also can't tell you how many times I've been asked by various Boards to supply information that was not in their regulations but was pertinent for any Board to make informed decisions on an application. Yes, it costs extra money for those things, but in my experience, I always assume that as given going into a project. If development was cheap and easy, everyone would do it, but it's not. And the thousands of dollars the developer has spent on this project, again demonstrates the challenging aspects of the site.

This development was presented to us as a site that had "some wetlands and some boulders." Through this process the due diligence showed expanded wetland areas and identified wetlands areas that were not flagged. The boulders, as most everyone but the development team would admit, were not boulders but in fact ledge, and it's nice to see the development team finally acknowledge, as Attorney Loughlin's did in his July 13, 2017 letter to the Board, that the "boulders" are indeed ledge outcroppings.

Some of these ledge outcroppings are huge and clearly 'special features' of the property. As such, I thought it was prudent for the developer to redesign the road as that was not faring well with the Board and probably would not have led to a favorable outcome.

Clearly the underlying ledge and ledge out cropping could have easily been dispensed with by blasting. We heard testimony from both Environmental Consultants regarding underlying ground formations, how the fractures are generally aligned in a northeast/southwest direction, but also how there are some that could be aligned in a northwest/southeast direction. We heard testimony of how people lost their wells less than a quarter mile away when a development 3000' to the southeast went under construction with extensive blasting.

In the Rye Zoning Regulations in the Aquifer and Wellhead Protection Zone where a Conditional Use Permit is required, one of the conditions states that any proposed use will not, and I emphasize will not, detrimentally affect the quality of the groundwater. Although the consultants felt that it probably would not affect the quality of the groundwater, nobody could definitely say that it will not affect the ground water or the Town well which is 2500' away. Without that guarantee, the developer had no alternative but to eliminate all blasting in the development.

The Atlantic White Cedar Swamp combined with the massive ledge outcroppings and underlying ledge were contributing factors to the developer downsizing the development from 21 lots to 17 lots. We have a June 7, 2017 letter from the developer's attorney stating they will provide a buffer along lots 4,5,6,7 & 8 as depicted on the development plan which would basically parallel the edge of the vernal buffer. This buffer would provide "additional protection to the Atlantic White Cedar Swamp" and identified detailed and specific restrictions. Those restrictions in part, restricted uses that result in soil compaction, construction of impervious surfaces, and tree thinning. In addition, Attorney Loughlin's 7/13/2017 letter to the Board stated the developer agreed to a permanent buffer for the Atlantic White Cedar Swamp of approximately 700' with detailed and specific restrictions. I'm assuming those detailed and specific restrictions are the same as those identified in the June 7, 2017 letter to the Board which I just mentioned. Since the letter was dated just 4 days ago, I'm assuming the agreement for the 700' buffer is still a valid agreement by the developer.

When you look at page 5/23 on the Subdivision Site Plans, the approximate 700' buffer from the Cedar Swamp will eliminate lot #8, the construction of the cul de sac, but more importantly, the storm water detention and treatment system for the entire northeast part of the development. Based on the information and agreements put forth by the developer and his attorney, they have effectively made this development non-constructible in its present form.

Some of the site information requested at the 4/26/2017 work session was added to the 5/2/2017 plan so I find it hard to understand why all the requested information was not added. There has been a lack of thoroughness on the Engineers behalf to follow up on information through the process as I noted before which has been frustrating for both the Towns Consultants and Board members.

My concerns surrounding this development have not changed since it was introduced to the Board and they focus on the Standards For The Preservation Of Natural Features And The Environment, Section 606 in the Rye Land Development Regulations’.

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Looking at the Lot #15 Development plan and the Plan and profile sheet P2, the 3/23/2017 development plans showed an invert of the 36” pipe at station 11+00 as 59.15. At the 4/26/2017 workshop meeting I asked for this to be reviewed because the invert was 3’ below the level of the 16,428 SF wetland. The 5/2/2017 revised plans removed the invert elevation and added a 24” orifice at elevation 60.15. This is still 2’ below the elevation of the wetland. We heard a lot about the transmissivity of soils from both the Towns and the developer’s Environmental Consultants and how it played a large role in moving leach field effluent down into the ground and allowing water to flow through the soils on this site. Applying that same information to this 16,428 SF wetland, the drainage pipe 2’ below the elevation of wetland would completely obliterate it.

The most obvious alternatives to eliminate the issue was to raise the roadway grade would that have raised the driveway grades making them more problematic than as presently shown.

Sections 606.1 General and 606.2 Character of The Land For Development.

At the 6/21/2017 ZBA meeting, the developer was reviewing alternative access to Lot #2.

On page 4 of the ZBA minutes, the developer’s Wetland Consultant, Jim Gove, talked about Option 3, which would access Lot #2 between lots #3 & #4. He said that “Option 3 is going up a slope” and that “creating a slope will cause people to use a lot of sand and salt on the driveway during the winter.” When asked about the steepness of the slope, he responded that “it is clearly downhill and is fairly significant.” On page 5 of the minutes the consultant explained that “this is basically 160’. In this area, it is an 8’ drop.”

That testimony parallels the information that Jim Grove submitted to the ZBA in a letter dated 6/21/2017. In that letter Mr. Gove stated that “a sloping driveway will require the homeowner to utilize excessive salt and sand to allow safe passage in icy conditions. The long-term impacts of such usage will have a detrimental impact on natural resources.”

The 8’ drop in 160’ equates to a 5% slope for the driveway which Mr. Gove was referring to. There are 8 proposed lots (#3 thru #10) that back up to the wetlands that have driveway slopes of 5% or greater. The PB in its prior discussions with the developer made it clear to the development team that within the Aquifer protection and wellhead overlay zone, this would be a no-salt zone and the Board would impose those restrictions on the individual lots.

I want to emphasize that the developer's consultant said the home owner will be required to use excessive salt to insure safe passage that will have a detrimental impact on the natural resources. In the development team's own words, even though they would agree to put the protective covenants on the lots, they are admitting the homeowners would ignore them for their own safety. This effectively eliminates those eight lots because of the detrimental impact it will have on the natural resources.

Attorney Laughlin in his 6/7/2017 letter referenced the protective buffer the developer would impose upon lots 4, 5, 6, 7 & 8. The restrictions, in part, prohibited such things as "leaf litter removal, alteration of the natural plant community and other activities that might reduce the function of the undisturbed buffer." However, in Mr. Gove's 6/20/2017 letter to the ZBA, in speaking to the no-build option on Lot #2 he said, "The wetlands ordinance allows forestry in wetland buffers and allows up to 50% of the basal area to be removed. It further allows for removal of all vegetation less 4 ½" in diameter. Long term, the areas of the buffer could become a virtual park with removal of the herbaceous and shrub layers, all allowed by ordinance. While this is not a certainty, homeowners typically find ways of expanding their outside living space. Removal of the herbaceous species and shrub layers below the tree canopy will virtually doom the species utilizing the vernal pool."

Again, this buffer that the developer would impose basically parallels the buffer for the large vernal pool to the north. Even though the buffer would be a deed restriction, we hear the development team saying, and I take it this is based on experience in their past residential developments, that homeowners will mostly ignore those restrictions. Ignoring the restrictions, as we learned from Mr Gove, will virtually doom the species utilizing the vernal pool. This effectively eliminates those 5 lots because it would doom the species utilizing the vernal pool area.

Section 606.1 General

On the plan and profile sheet P1, sheet 11/ 22 and the subdivision site plan sheet 6/23, shows a 3657 SF drainage easement impact on Lot #2 in the vernal pool buffer for a drainage way terminating at the edge of the vernal pool. On the plan and profile sheet P3, 13/23, and the subdivision site plan sheet 8/23 it shows another drainage easement terminating at a wetland. The drain line leading to the drainage way terminating at the wetland has a 550' pipe drain running to daylight and approximately 250' of that runs through topography running uphill and requires ledge removal. However, the impact to the vernal pool on Lot #2 could have easily been avoided with a 650' drain run down to the lot #5 drainage area which has the topography allowing it to run all downhill. Section 301.8B, Wetland Buffer Restrictions, Sections 1 of the Zoning Ordinance states that "no surface alteration by the addition of fill excavation or dredging is prohibited".

The drainage way on sheet 8/23 was necessary because they did not control the adjacent property but on sheet 6/23 they did control the property. This wetland impact could have easily been avoided altogether by simply adding drainage pipe but the developer chose not to. In my opinion, this was clearly a choice of monetary impact over environment and shows a complete disregard for the vernal pool.

I should also note that on both sheets 6/23 and 8/23 where the drainage easements were to be constructed, the plans do not show any tree cutting or clearing which has not been accounted for.

Sections 606.1 General and 606.2 Character Of The Land For Development.

In the 4/26/2017 work session the developer spoke about a problem regarding the last development they constructed at Brackett Road where trees came down in a wind storm. He said they were having to remove about 15 trees that were at risk of collapsing on the homes and five homes were affected.

The topography at this site is much worse than what we saw at Brackett Road because it has very shallow ledge. That limits the infiltration of groundwater, so the surface of the site gets easily saturated and, as can be seen, there are a lot of wetlands on the site. This shallow depth to ledge and the saturated surface makes the root structures of trees very vulnerable to toppling as the developer witnessed at the Brackett Road subdivision. It becomes more so when whole sections of woods are cleared as the trees as a group can withstand winds better. On both our site walks there were numerous trees that had already toppled because of this and major lot clearing had yet to occur.

Obviously, the developer had a concern or he would not have raised the issue, and driving over to the Brackett Road subdivision to see first-hand what the developer was talking about, I could see the toppled trees and the damage. In reviewing what height mature trees go to in this area and with a recent application where tree heights were identified as 75' to 80' in height, I'd say the 75' to 80' height is very common in this area. Attorney Donovan at the 4/26/2017 work session said to the developer if he had a concern he needs to show it on the plans. That, like other things, never made it to the plans.

To see what impacts it would make on the development, I assumed just a 60' tree buffer around the present house footprints. I found there would be about 17,720 SF of wetland buffer (lots 1,3,4,5 & 8), about 6250 SF of wetlands impacts (lots 9 & 15) and would require clearing another 1 acre of woods (every lot but 7 & 10) not currently shown. The impacts clearly show why this never made it to plans both from an environmental and visual impact.

Section 301.6 of the Zoning Ordinance allows for tree cutting in a buffer, but it was not intended as a need to develop new house lots. This effectively eliminates 7 lots because their impacts to the environment.

Sections 404.5 D7 Visual Impacts & 602.2 A4 curvilinear design

It was brought up a number of times to the developer that their curvilinear roadway didn't meet the intent of the Land Development Regulations and was told of nearby developments within a mile or so as the crow flies to view for comparison. (ie; Pond path/Boulders/Mill Place/Boutlier/White Horse) In those developments, driving by the entrances you would not notice the subdivision and generally could not see the first home. Although the developer made some small tweaks to the layout, they have fallen very far from the mark and the current layout serves to maximize lot development without thought to the visual impact it would have.

On sheet 6/23 if you lay a straight edge along the Stoneleigh roadway and the woodland clearing needed for the roadway, you have a straight line visual distance of 950' to 1000'. On Francis Path roadway, sheet 7/23, that comes directly opposite Woodland Road, if you do the same thing you have a visual distance of about 1100'.

In the vicinity of this development, about a mile as the crow flies, if one looks at all the current through roads, most are curvilinear by nature and just a section on Love lane, a section on Woodland, and a section on South Road have sight distances greater than these. Subdivisions should be designed to look like neighborhoods and not look like through roads and I understand that to be the intent of the ordinance. Again, it came to maximizing lots at the expense of the visual impact it would make in the area.

Sections 606.2 Character of land for Development & 611.2 Natural Features

Section 611.2 of the Land Development Regulations state that the design of site developments shall fit into the natural and man-made environments with the least possible disturbances and that grading and filling shall be minimized. As the 200 or so ledge probes and test pits show, ledge sits below the surface on many of the 17 proposed lots. That limits the infiltration of groundwater so the surfaces get easily saturated and, as can be seen, there are a lot of wetlands on the site. This requires that a majority of the septic field and homes will need to be elevated. In review of the plans I found that 10 of the proposed sites will require sump pumps (Lot #'s 1,3,7,8,10,12,13,15,16,17), 13 of the proposed sites will require mounded up septic fields (Lots # 1,2,3,4,7,8,9,10,11,12,13,14,15,16) and 6 of the sites will require mounded up home sites. Excessive filling and grading will be required for the construction of the homes and septic fields. This effectively eliminates 13 lots because these actions will not maintain the character of the land, will not fit into natural environment and have dramatic disturbance on the environment.

Sections 606.2 Character of land for Development & 611.2 Natural Features

Because there will be no blasting on the site due to the potential impacts on the aquifer and public well supply, the developer had to raise the profile of the roadway to minimize their ledge removal by rock hammering. The developer estimates that about 3000 cubic yards of ledge would need to be removed on the house lots alone, not including the roadway. The plans call for underdrains and although shown on the profile plans where they were required, the plans are still deficient as they show only half of those required by their own cross sections on sheet 22/23. Because of the roadway, the waterline and underdrain installation, the roadway will probably require another 3000- 4000 cubic yards of ledge removed.

I see two issues with this:

1. The excessive filling for the road will not maintain the character of the land, will not fit into natural environment and have dramatic disturbance on the environment. It also raises the ground elevation creating steeper driveways which the developer stated, will have a dramatic impact on the natural resources
2. When the construction of the 561 subdivision took place just up the street, there was an 8 CY boulder at the subdivision entrance that needed to be removed. The developer spent a week and a half rock hammering the boulder to the point where it was small enough to move out of the way. This is a great example of how hard the boulders and ledge are in this area. The noise from this rock hammering was a huge noise disturbance to the neighborhood that

everyone was subjected to from about 7:30 in the morning till 4:00 in the afternoon. I lived 1000' from where the rock hammering took place and it sounded like it was in my back yard. This subdivision will require 6000-7000 CY of rock hammering, and this could go on for 3-4 months at the least. This will easily be audible for a half mile away. This does not fit the 'least possible disturbance' per Section 611.2 of the Land Use Ordinance and speaks to the character of the land that is not well suited to development.

Sections 606.2 Character of land for Development & 611.2 Natural Features

From my review of the plans most of the lots have issues that are not fully vetted. But for the sake brevity I'll comment only on Lot #1.

The house on Lot #1 will be mounded up 6' above the elevation of South Road less than 100' away. The septic field will be mounded up 4' from present grade. The ground water flows to the north on this lot and the septic field is on the south side of the house. The elevation of the ground where the foundation drains is about 10' from the house and is about 3' higher than where the foundation drain would be located. This is a lot that would require a sump pump that could theoretically be operating half the year. We know from our Environmental Consultants that the transmissivity of the soil will direct the septic effluent down into the soil and head north. That being the case, the foundation drain will readily pick up the effluent and discharge it directly into the buffer of the vernal pool with limited treatment.

The house sits 5' from the no-disturb buffer for the vernal pool which we know is impracticable without ground or root disturbance. Adding a clear zone for trees as the developer said was needed of 60' would eliminate 8825 SF of the vernal pool buffer and 1800 SF of additional woodland. And as the developer's Consultant stated, people find a way to enlarge their outdoor spaces so this would be lost forever. In reducing the buffer for the vernal pool and turning this into a better outdoor space, it increases the chances that improper chemical use of lawn materials will find their way into the vernal pool.

The grading of the elevated roadway does not allow for surface drainage from the lot to run into the drainage ditch. It will be required to run south to north across the site and the driveway. In the winter, this will be a constant battle with icing and, as we heard from the developers consultant, homeowners will be using salt for their own safety, and this salt will be flowing directly into the vernal pool buffer.

The plans shows there is 115 – 120 linear feet of exposed foundation 7'-9' in height around this home. What person paying \$450,000 - \$475,000 for a lot would ever have house lot like that? The grading does not even start to compare to what a home owner in that price range would accept so the plans are far from presenting what a final lot grading plan would look like. There would need to be a lot more grading and fill required to make this look presentable.

If there was a single issue of little consequence, it might be able to be overlooked, but this lot has multiple issues that include impact to the vernal pool, , poor drainage, significant loss of vernal pool buffer, increased risk of septic effluent and chemicals getting into the environment and a lot grading that does not work. These issues effectively eliminate this lot because these actions will not maintain the character of the land, will not fit into natural environment, and have dramatic disturbance on the environment.

These are typical examples that can be found on each lot so most of these lots have development issues.

Section 701. Required Site Development Improvements

Portions of the site design are not easily constructible and information is still missing such as the second underdrain not shown on the plans. There is also the question of the intersection of South and Woodland Roads, the drainage in that location, and the final location of utilities there. The present plan design would create a on-going liability for the Town of Rye such as an underdrain located 6' deeper in the ground than required, down to a depth of 10' with an underground cable laying on top of that. Engineers can design anything but sometimes it makes no sense, is not easily constructible, and is not practical. If this project gets approved tonight, I'd recommend as one of the conditions of approval be that the plans need further review by the TRC, the Roadway Superintendent, and the Town Engineering Consultant.

To summarize:

- Based on the need for no blasting on this site and the need to elevate the roadway, the current design creates visual issues and requires 8 driveways equal to or greater than a 5% slope. We know from the Developers' consultant that those driveways will require excessive salt and sand to make them safe and that it will have a detrimental impact on the environment and doom the species utilizing the vernal pool even if we added protections to each lot. This would require the elimination of 5 lots;
- We know the shallow distance to ledge on this site coupled with the highwater tables requires the mounding of 13 septic systems, 8 house lots, and the need for 10 of these homes to have sump pumps. In a small instance a few of these situations might be tolerated but the majority of the septic fields, half the houses and nearly 2/3 of the homes needing sump pumps indicates to me that the land is unsuitable for development;
- We know from experience on the Developer's Brackett Road subdivision and by the Developer stating they needed to have a clear tree line around the homes, and the plans do not show that. Lot #1 shows a 3' set back from the vernal pool buffer as noted above. Overlaying just a 60' buffer around the houses, we'd be eliminating the no disturb buffer by 17,720 SF, eliminating 6,240 SF of wetlands and impacting close to an acre of woodlands that has not been shown. The buffer impact and wetland impact would require the elimination of seven lots.
- We know the elevation of the 36" drain at station 11+00 on Stoneleigh Way will eliminate 16,428 SF of wetlands and this alone should be reason to deny this permit;
- We know the 700' buffer from the Atlantic White Cedar Swamp agreed to will probably be recanted since it would eliminate Lot #8, the cul-de-sac and the storm water management pond for the northeast portion of this project;
- We know that the Atlantic White Cedar buffer that the developer would impose, even though it would be a deed restriction, would be basically useless when we hear the development team state based on experience in their past residential developments, that homeowners will mostly ignore those restrictions.
- With all the impacts to the buffers for drainage and home protection and with the draining of the 16,428 SF wetland we'll have a combined impact of close to ½ acre of buffer disturbance and close to ½ acre of wetland elimination. The loss of these will have a dramatic impact on the environment and the natural species that habitat and move between these valuable resources.

This site from the onset of early settlement was not farmable and mainly used for woodlots or grazing of long snouted ruminants that could eat between the rocks. I do not think it's viable for development and for all these reasons noted above, I don't think this is a reasonable development or use of the land, nor does it meet the requirements of the Land Use Development Code or the Rye Zoning Ordinance. I would vote against its approval.

Jim Lord

Over the past year the Planning Board has been in the process of hearing from authorities from both sides of the so called Stoneleigh Reserve application located at 421 South Road in Rye New Hampshire. The development sits on roughly 100 acres of land of which at least is 50% is wetland. This application has dragged on for far too long in part from incomplete, inaccurate and at time demonstrably false information. The developer has spent thousands of dollars to correct errors and to attempt to satisfy all regulation associated with the land use regulations and zoning ordinances of Rye. In turn, the Planning Board has spent hundreds of hours trying to reconcile what the developer has submitted. Sadly, on nearly every occasion one redrafting of the development has leads to still more questions. As this goes on the project gets more and more complicated as to be over engineered.

The record will show that this development resides in Rye's aquifer and wellhead protection district and adjacent to the most productive and rare white cedar forest on the east coast as well as the Cedar run Swamp. Contained in the aquifer protection zone lay two of the town's three producing drinking water wells; cedar run and Baileys brook. The initial plan was for a 22-lot subdivision which seeming had no regard for the natural environment as every possible location was allocated for development. Over the past several months the board in an effort to verify information submitted, has found and verified by both the board and the applicants experts that conditions in area were not developable due to bed rock and or the lack suitable septic location as well as wetland setbacks. This has resulted in the loss of several lots. Additionally, the ZBA recently denied relief that would have allowed the crossing of endangered wet land and an existing vernal pool resulting in a further reduction of one lot.

To be clear, this Board has never declined an application for housing including for this developer who has recently completed a development here in Rye. So, we are not anti-development nor is there a hostility or arrogance to growth. The opposition is not to the development nor the developer or his experts, some of which are familiar to the town and respected. Rather it is the location. How can we as a board reconcile a decision to go forward with this application knowing that it is in direct opposition to a number of our own ordinances? Rye water was once a local issue. We enjoy safe pure and abundant drinking water however what was once a local issue has become of regional importance. We know now that there is growing pressure on this endangered resource. It's now obvious that at least one of our surrounding neighbors, Greenland (Portsmouth Herald 12/22/16) will require sufficient water to service a new 72 home off Breakfast Hill road. At the regularly scheduled Planning Board meeting (12/13/16) the Rye water district commissioner stated publicly that Rye had sufficient water to supply the development mentioned above. However, he also stated that with the additional of irrigation systems the wells would be stressed. The questioned now becomes if the Rye wells can supply these new Greenland homes and the 22 homes proposed for Rye? In total, there could be as many as 130 new hookups in Rye and Greenland in the coming months.

Ground water in the Sea Coast region is under attack. We have lost great volumes of water as a result of neglected waste which has been deposited in the ground and subsequently in the water from past land fill and the former Pease Air Force Base.

We are aware of the cancer cluster the former Governor Hassan and her commission has been studying around the Coakley land fill in adjacent North Hampton. The toxic plume from this closed land fill is widening. While not yet threatened, our Garland well from which we acquire 60% of our water is a mere 1.2 miles away. And what is more alarming is that it is a short ½ mile from our own recycle center which is suspected of having various pollutants deposited therein.

The planning board is charged with the responsibility to "protect the public health and general welfare of the citizens of Rye" (306.2: A RZO) and to "To prevent development and land use practices that would contaminate or reduce the recharge to the identified aquifers" (306.2B ZO). "To assure the availability of public and private water supplies for *future growth* of the town in accordance with the master plan (306.2C RZO). Further in our requirements for a conditional use permit the developer has the burden of the proposed "will not" detrimentally affect the quality of the ground water contained in the aquifer directly contributing to pollution of by increasing the long term susceptibility of the aquifer to potential pollutants. To that end a few short weeks ago, the Rye water district stated that they were now ready to explore new areas for additional fresh water wells. A report supplied to the Rye Water district by Wright Pierce Engineering firm has laid out what some of the possibilities are.

If this land is allowed to be fully developed is gone and once gone, gone forever. Sadly, based on this plan we cannot give such assurances. Coupled with the news that the entire area surrounding the land fill will be required to have town water and the closing of the Haven wells on Pease Trade port, the availability of clean drinking water is crucial and now threatened in Rye and the surrounding area.

Additionally, Thomas J. Mack, US Geological Survey Groundwater Specialist from the New England Water Science Center and worldwide authority on ground water has completed an assessment of the sea coast and the threats to our water. His study is part of the record submitted in December of 2016. From the summary.

We are reminded from a 2005 Rye report the importance of the Cedar Swamp Run.

I for one will not apologize for trying to protect and preserve the assets of our Town and the surrounding area. In the end Stoneleigh Preserve essentially preserves nothing. At some point the rights, expectations and well-being of the citizens trump the profits of builders. For these reasons, I respectfully vote no to the 421 south Road project AKA Stoneleigh Preserve.

I fully understand and expect that this could and probably will end up in court in a timely manner. If the applicant and his legal team are successful in overturning or modifying our decision we will have done our duty to the Town.