

TOWN OF AMHERST
Zoning Board of Adjustment

September 21, 2021

APPROVED

In attendance: Doug Kirkwood – Chair, Tracy McInnis, Charlie Vars, Jamie Ramsay, and Danielle Pray.
Staff present: Natasha Kypfer, Town Planner, and Kristan Patenaude, Recording Secretary.

Doug Kirkwood called the meeting to order at 7:04 pm. Doug Kirkwood introduced the Board members and staff. He explained that applicants will have the chance to speak to their case. The ZBA will then carry out its business for each case, including asking questions, and hearing from the public and abutters. The Board will then enter into private deliberations, at which time no further comments are allowed from applicants or the public. He noted that, with one member to recuse herself, there will be four Board members voting tonight. This could lead to a tie vote; in which case the application will be denied. He asked if the applicant would like to continue; the applicant stated he would like to continue at this time.

PUBLIC HEARING:

1. **CASE #: PZ14693-083021 – VARIANCE - EIP Bon Terrain Drive LLC (Owner & Applicant); 1 Bon Terrain Drive, PIN #: 002-026-004** – Request for relief from Article 4, Section 13, Paragraph I.2.d to maintain a vertical separation between the bottom of the storm water management facility which infiltrates or filters of not less than one foot above seasonal high water table elevation where not less than four feet is required. *Zoned Industrial.*

Jamie Ramsay read the case.

Danielle Pray recused herself from the case.

Morgan Hollis Esq., Gottesman & Hollis, P.A., Doug Brodeur, PE, Meridian Land Services; and John Hennessey, applicant, joined the Board.

Morgan Hollis stated that this property was the former F.W. Webb property. After years of sitting unused, the owner now has tenants to fill the space. There is a proposed 30,000 s.f. addition as part of this plan, which also includes redesigning the parking and stormwater management designs. He noted that the variance being requested deals with a conflict with Article 4, Section 12, Paragraph I.2.d to maintain 4' of separation between the stormwater management features and the seasonal high water table. There are detention basins proposed on site that will hold runoff stormwater, slowly filter it in and provide for eventual eking out. He explained that there have been better systems created since this Zoning Article was put into place that now treat the water as well as infiltrate it. There is not any place on the site that would allow for 4' of separation from the seasonal highwater table. The only way to do this would be to elevate the entire site, bringing in thousands of yards of fill, and redesigning the whole site.

Doug Brodeur stated that the stormwater on site needs to be infiltrated because the property is located within the Aquifer Conservation and Wellhead Protection District.

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Morgan Hollis explained that the new Best Management Practices (BMPs) do not require 4' of separation. The proposed bioretention system evolved from both the UNH Stormwater Center and DES and allows for necessary BMPs. Allowing this type of system on site will avoid thousands of cubic yards of fill, an added retaining wall, and raising the elevation to 226'. The existing slab is at an elevation of 219.35'. Most of the site is within 1-2' of the seasonal highwater table. Per the ordinance, the elevation would need to be raised, but the same system would still be proposed to be installed. He noted that the Amherst Conservation Commission (ACC) reviewed this proposal on August 28, 2021, and recognized that the current regulations do not reflect the BMPs, such as the proposed biofiltration basin systems. The Planning Board also reviewed this item on September 8, 2021, and Planning Board member Bill Stoughton supported the proposal for a variance because each management layer of the new system has an impervious layer. Bill Stoughton also mentioned that the amended regulations should reference the BMPs.

Doug Kirkwood asked about the aquifer profile of the site. Doug Brodeur stated that there are dozens of test pits around the property, all of which show an elevation of 212'. Some of these pits show a separation of 1' from the seasonal highwater table, while others show 3-4' of separation. The site sits at the same elevation as the surrounding wetlands. There have not yet been borings completed on site, but a nearby site's borings showed approximately 50' of sand before hitting gravel. This is a good amount of filter material.

Morgan Hollis explained that there is no place on site to put the proposed stormwater management systems that would allow for 4' of separation.

Doug Brodeur explained that the standard in NH for stormwater requires treatment of 1" of total rainfall. After that, there is only a finite amount of pollutants that remain. The proposed biofiltration system, designed by UNH, has multiple chambers. One includes a mix of organic material and stones. The water is fed through it and there is a good rate of treatment for pollutants. There is also an impermeable membrane around the system, so that no water escapes the system before it is fully treated. Another layer has a stone layer for internal storage that remains constantly full of water. This forces the pool into an anaerobic condition, leading to the microorganisms going into a nitrogen fixing process, and thus removing it from the stormwater. The water eventually flows to Pennichuck Brook, which is a Class A watershed. There is an outlet pipe at the top of the stone layer.

Doug Brodeur explained that the removal rates of this system are 98% for TTS, 96% for zinc, 88% for phosphorus, and 95% for nitrogen. These rates are superior when compared to a regular infiltration system with a 4' separation from the highwater table. UNH research shows that the regular type of infiltration system may actually have an increase in nitrogen rates because of organic matter that may become trapped inside.

Doug Brodeur explained that the biofiltration system is approved by the Alteration of Terrain (AoT) Program to have only 1' of separation instead of 4'. This system will meet all State standards.

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Doug Kirkwood asked how often the system will require recharge. Doug Brodeur explained that the right organic materials will last for decades, if given the proper food of pollutants. These organics are mostly bacteria and fungi. The Town's stormwater regulations require an Operation & Maintenance (O&M) manual to be submitted. This typically states that owners should rake the system annually in order to redistribute the microbiology.

Morgan Hollis addressed the five tests:

1. The proposed infiltration system is a bioretention treatment system which provides far superior treatment to having just a detention basin and as a result is actually better than a standard infiltration basin in the minimum 4' depth to seasonal high water table. Having only a 1' vertical separation between the bottom of the stormwater management facility and the seasonal high water table will not materially alter the character of the neighborhood as this system is on a large parcel of land in the Industrial Zone and not visible to the public, and with this substitution the topography of the land will be able to remain the same, rather than impose multiple feet depth of fill to raise the system away from the seasonal high water table. The proposed stormwater management facility will not threaten public health, safety, or welfare as the specific design of the stormwater management facility utilizes treatment via a bioretention system, which is compliant with the current NH DES Alteration of Terrain Rules. The bioretention treatment of stormwater prior to infiltration allows 1' separation to be sufficient separation between the system and the seasonal high water table as the infiltration will be filtered and treated before entering the basin.
2. The proposed infiltration system treats the stormwater through bioretention before infiltration and is better for any ultimate water quality infiltrating to the aquifer, rendering the 4' of separation unnecessary. The system will not change the character of the neighborhood. This is an Industrial Zone on a large lot, with the system to be located at the rear of the building, partially underground and will not be visible to any abutters. There will be no threat to public health, safety, or welfare as the specific design of the bioretention system will treat the stormwater prior to infiltration and is a recommended system of the University of New Hampshire Stormwater Management Center. The alternative to the bioretention filtration is to import sufficient fill to significantly raise the site to allow the minimum of 4' of vertical separation between a stormwater infiltration basin and the seasonal high water table. The additional fill will alter the topography of the land causing steep grading and will be less effective than the proposed bioretention system. There will be sufficient maintenance and monitoring of the bioretention system to ensure proper treatment and filtration before infiltration to ensure the aquifer is protected.
3. The proposed stormwater management system is a reasonable use, as the system meets all other criteria in the ordinance and will provide better treatment and filtration of the stormwater prior to its infiltration in substitute of greater depth of soils. Allowing 1' vertical separation between the system and the seasonal high water table will not harm the public as the stormwater will be treated and filtered via a qualified and approved bioretention system prior to infiltration.

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4. Granting the variance will allow construction of the stormwater management system with bioretention infiltration and will not require additional fill to be imported onto the site which would create steep grades and provide lower quality of the stormwater infiltration. If there is 4' of vertical separation between the system and the seasonal high water table, the only filtration will be through the soil, not bioretention and soil filtration as proposed. Allowing the proposed system will provide greater filtration of the stormwater with less impact to abutting properties and the public's aquifer. There will be less visible impact to abutting properties. There will be no impact which would diminish the values of surrounding properties.

5. A) i) The special condition of the property is that it is a significantly large lot which has a previously developed building and parking areas. A minor addition and additional parking are allowed; however, the existing depth to the seasonal high water table is less than the required 4', preventing further improvements without significantly importing additional soils to create an improperly designed site.

The purpose of the ordinance is to ensure the protection of the groundwater and water table resources, specifically the aquifer in that area. There will be sufficient treatment and filtration method measures taken with the bioretention system design. Enforcement of this provision against this particular property bears no fair and substantial relationship to the purpose of protecting the water table given the nature of the proposed design and the bioretention filtration system before the infiltration yielding the same or better protection. There are adequate precautions taken to protect the water table to address the purpose of the ordinance.

ii) The proposed stormwater management facility with 1' vertical separation between the system and the seasonal high water table is designed to filter the stormwater before entering the infiltration basin to ensure sufficient filtration. The bioretention system before infiltration is a reasonable use, as there are sufficient measures taken to protect the aquifer. It is unreasonable to require significant fill to be imported onto the property. To meet the required drainage pitch will require the proposed additional building to be constructed underground and create steep ramps with 8% grade into the building which is difficult and unsafe for trucks.

5. B) The requirement will mandate significant soil importation, significant change to the building and parking areas of the property, and not necessarily a better result. The proposed design with less than 4' of vertical separation between the system and the high water table provides better filtration protection and is a reasonable use compared to importing additional fill to meet the ordinances requirements.

Doug Kirkwood asked about monitoring wells on site. Doug Brodeur explained that four monitoring wells were installed originally in 2004. He was only able to find two of these wells on site. The other two wells will be reinstalled and included in the site plan application.

Doug Kirkwood asked how the stormwater management system handles heavy metals. Doug Brodeur explained that he doesn't expect heavy metals to be an issue on site, as one tenant is

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175 Alene Candles and the other is a wood production company, but he is unclear as to if these
176 systems treat that kind of material, in general.

177

178 Charlie Vars noted that this is a large building and there are runoff areas surrounding it. This site,
179 and most of Bon Terrain, sit above the second largest underground lake in NH. He questioned
180 how adding thousands of yards of fill and raising the site could possibly be good for the
181 environment. Doug Brodeur noted that, in this case the 4' of separation is almost a moot point,
182 because the stormwater will have been previously treated through the biofiltration system.

183

184 John Hennessey explained that the trucks entering the site will be soft-sided lumber trucks.
185 These will not be stored on site. These will approach the site for side loading.

186

187 Charlie Vars asked about additional roofing and parking on site. Doug Brodeur explained that
188 the addition will increase the roofing on site. There is currently an access road around the site for
189 emergency access, approximately 15' wide. Proposed is a new access drive with a truck area in
190 the back for parking.

191

192 John Hennessey noted that an existing 13,000-gallon petrol tank was removed from the site and a
193 1,500 s.f. chemical storage area inside the building was also removed. Doug Brodeur noted that
194 there were potential environmental issues with leaving the fuel tank on site.

195

196 Charlie Vars asked about the leach fields on site. Doug Brodeur stated that there is one, double
197 field, system, and another for the office portion of the site.

198

199 Charlie Vars asked about the change to the number of employees on site. Doug Brodeur stated
200 that he believes approximately 75 people will be employed by Alene Candle and approximately
201 200 people will be employed by the other tenant. He is unclear how many employees worked at
202 F.W. Webb but noted that the building has sat vacant since 2009.

203

204 Charlie Vars asked about the function of the existing retention basin on site. Doug Brodeur stated
205 that the current basin essentially has no treatment for the stormwater. This basin will be
206 converted into a gravel wetland which will treat ¼ of the roof runoff and the front of the site. The
207 other three subsurface infiltration basins will remain. The roof is flat with internal roof drains.
208 The current runoff goes to the infiltration basins on site, is stored and then released. Doug
209 Brodeur noted that the 4' separation requirement in the regulations was not in place in 2004
210 when the existing system was installed. The existing system has 1-2' separation around the site.

211

212 Charlie Vars asked about wet areas shown on the plan. Doug Brodeur explained that there is
213 some standing water around the site. The main flow from the site is to the south. There is
214 approximately ½ mile from the site to Witches Brook. This feeds into Pennichuck Brook, which
215 eventually feeds into the Merrimack River.

216

217 Doug Brodeur noted that he spoke to Pennichuck Water regarding the proposed stormwater
218 management for this project during the CUP process and that there were no concerns raised. He

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is trying to get a formal letter that speaks to this. He noted that the Town's engineer, Keach-Nordstrom, is in favor of the proposal, along with the ACC.

Charlie Vars stated that he is unclear how denying this variance and requiring more fill to be brought in would be an aid to the community.

Tracy McInnis stated that she likes the percentage of pollutants proposed to be removed by the system and believes it will help the aquifer.

Jamie Ramsay noted that he believes there would not need to be any changes to the stormwater system as the new proposed use was the same as the previous use. Doug Brodeur explained that the stormwater management requirements have changed, both at the Town and State levels. If there were no proposed external changes to the site, the site could probably continue to be occupied without any changes. Jamie Ramsay stated that the proposed addition to the building and parking areas have driven these changes. Doug Brodeur noted that these also triggered an AoT permit process, which will be completed.

Jamie Ramsay asked if the current stormwater management system is going to be augmented. Doug Brodeur stated that some of the current system will be left as is and some will be upgraded to gravel wetlands.

Jamie Ramsay asked if there are similar systems to the proposed one currently being used. Doug Brodeur stated that there are areas around the State using these. He explained that gravel wetlands have been used for approximately 20 years. Bioretention systems have been around for approximately 3-4 years.

Jamie Ramsay asked for details on the monitoring wells on site. Doug Brodeur explained that the monitoring wells are at least 15-20' below the water table. Amherst site plan regulations require that a sample be taken from each before the site is operational and then for samples to be taken annually.

Doug Kirkwood asked about the direction of the bulk of the aquifer flow. Doug Brodeur stated that the site flows mainly east – southeast.

Tracy McInnis asked how the bioretention system is normally raked out. Doug Brodeur stated that this is normally done with a tractor. This is listed in the O&M manual. The AoT permit requires a report of the system every two years.

There was no public comment at this time.

**Charlie Vars moved to enter deliberations. Jamie Ramsay seconded.
Voting: 4-0-0; motion carried unanimously.**

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With regard to regional impact, Jamie Ramsay noted that the aquifer this site sits on is regional but that there was no issue raised by abutters. Charlie Vars stated that the towns of Merrimack, Nashua, and Hollis could potentially be impacted but he does not see the proposal as an increase in impact to the site that would cause a problem.

Charlie Vars moved no regional impact. Tracy McNinnis seconded.

Discussion:

Doug Kirkwood noted that, even if there is an increase in outflow from the proposed site, this is probably not in sizable enough levels to create a regional impact.

Tracy McNinnis stated that there might be more of an impact to bringing in yards of fill.

Voting: 4-0-0; motion carried unanimously.

Doug Kirkwood addressed the five variance tests.

1. The Variance will not be contrary to the public interest.

- C. Vars – true, the proposed bioretention system seems better for the outflow on the property than what is currently existing and seems to better manage stormwater. The proposal is not a threat to the public health, safety, or welfare.
- J. Ramsay – true, the proposal better manages stormwater on site than what is currently existing.
- T. McNinnis – true, the proposal removes more pollutants from the runoff than what currently exists or other types of systems.
- D. Kirkwood – true.

4 True

2. The Variance is consistent with the spirit and the intent of the Ordinance.

- J. Ramsay – true, the proposed system will cause no major changes to the area and will do a better job than what currently exists.
- T. McNinnis – true, the proposed system filters water and protects the aquifer better than what currently exists.
- C. Vars – true, the proposed system is recommended by the UNH Stormwater Management Center.
- D. Kirkwood – true.

4 True

3. Substantial justice is done.

- T. McNinnis – true, the proposal helps to protect the environment of the area.
- C. Vars – true.
- J. Ramsay – true, the proposal will allow the owner to change the use of the property to a better use.

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- D. Kirkwood – true.

4 True

4. The values of the surrounding properties will not be diminished.

- C. Vars– true, the proposal is an upgrade to the stormwater management system and bioretention filtration system, with a noted distance between this site and other properties.

- J. Ramsay – true, the proposal will not affect other properties; if anything, it will help the values of surrounding properties by making use of a vacant building.

- T. McInnis– true, the proposal cannot be seen from the road and the proposed building use will bring jobs to the area.

- D. Kirkwood – true, he noted that this test is a difficult one to prove.

4 True

5. Literal enforcement of the provisions of the Ordinance would result in an unnecessary hardship.

- J. Ramsay – true, the proposal allows the building to be used again with no major changes to the area. This site is unique due to its location on the aquifer and the large building size.

- T. McInnis – true, the proposal will allow for jobs to be brought into Town.

- C. Vars– true, denying the variance would create an unnecessary hardship for the owner because the BMPs are in conflict with the Town’s outdated regulations. It would not make things better on this site to require 4’ of separation from the seasonal high water table.

- D. Kirkwood – true, the proposal will allow for better water runoff than the current system. The required vertical separation is not needed on this site due to the proposed system that will allow for more effective water treatment.

4 True

The Chair stated that the application, as it passed all of the tests, is granted, as submitted.

Danielle Pray retook her seat.

Charlie Vars moved to exit deliberations. Jamie Ramsay seconded.

Voting: 5-0-0; motion carried unanimously.

OTHER BUSINESS:

1. Minutes: July 20, 2021

Jamie Ramsay moved to approve the meeting minutes of July 20, 2021, as presented.

Tracy McInnis seconded.

Voting: 5-0-0; motion carried unanimously.

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Doug Kirkwood noted some stylistic items that he would like changed in future minutes.

2. Reorganization

Natasha Kypfer noted that there have been no applications made for the October meeting and the deadline has passed for submittals.

Doug Kirkwood asked Natasha Kypfer to call for the motions for reorganization.

Natasha Kypfer asked for nominations for Chair, Vice Chair, and Secretary/Treasurer.

**Danielle Pray moved to nominate Doug Kirkwood as Chair. Charlie Vars seconded.
Charlie Vars moved to close nominations for Chair.**

Charlie Vars moved to nominate Danielle Pray as Vice Chair. Tracy McInnis seconded.

Charlie Vars moved to close nominations for Vice Chair.

Doug Kirkwood moved to nominate Jamie Ramsay as Secretary/Treasurer. Danielle Pray seconded.

Charlie Vars moved to close nominations for Secretary/Treasurer.

Natasha Kypfer called the vote for all nominations.

Voting: 5-0-0; motions carried unanimously.

3. Rules of Procedure & No-Show Policy

Doug Kirkwood stated that he will ask Staff to distribute copies of the proposed Rules of Procedure, including the No Show Policy, to all Board members for review before the November meeting.

Jamie Ramsay moved to adjourn the meeting at 8:43pm. Charlie Vars seconded.

Voting: 5-0-0; motion carried unanimously.

Respectfully submitted,
Kristan Patenaude

Minutes approved: April 19, 2022