

Minutes of the East Lyme Zoning Commission February 15, 2024, Regular Meeting

Date and time: 2/15/2024 7:29PM to 9:41PM

Present: Members: Anne Thurlow, Chairman, Nancy Kalal, Secretary, Norman Peck, Michael Foley, Denise Markovitz, Gary Pivo. Alternates: Cathy Yuhas, Sarah Susco. Ex-Officio, Roseanne Hardy. Staff: William Mulholland. Recording Secretary: Jessca Laroco

Location: East Lyme Town Hall, Upper Conf. Room, 108 Pennsylvania Avenue

1. **Call Meeting to Order and Pledge**

Chairman Thurlow called the February 15, 2024, Regular Meeting of the East Lyme Zoning Commission to order at 7:29PM and led the Pledge of Allegiance.

2. **Attendance**

Ms. Thurlow called the roll and noted that Alternate Marc Peterson had resigned from the Commission and would therefore not be present.

3. **Public Delegation**

Ms. Thurlow noted that anyone wishing to speak on the Agenda Item regarding N. Bride Brook Rd, would have an opportunity to do so during the public hearing.

Lisa McGowan, 33 Spinnaker Dr, Niantic, stated that Ms. Thurlow had lost the election by 41 votes.

4. **Public Hearing**

Mr. Peck recused himself and Ms. Yuhas was seated in his place.

4-1. Continuation of the application of Bride Lake, LLC, for site plan approval for the modification of the December 3, 2020, approval of an eighty (80) unit affordable housing multi-family residential development pursuant to Connecticut General Statutes 8-30g increasing the total unit count to one hundred (100) multi-family units on the westerly side of N. Bride Brook Rd (20.24 acres) now bearing street number 94, Assessor Map 9.0 Lot 37-2.

Ms. Thurlow reminded the Board that this is a continuation of the Public Hearing of 2/1/2024 and the Board has received testimony from the Applicant, and comments from the public, Attorney Heller would address the Commission first and then the public would be invited to speak with any new comments. Additionally, she stated that all memos from staff were read into the record on 2/1/2024 and the Board had copies in their packets.

Ms. Kalal read the Chief Operating Officer of the East Lyme Water & Sewer Department (B. North) Memo into the record (Attachment 1).

RECEIVED RECORD
EAST LYME CT
2024 FEB 20 A 8:41
William Mulholland
TOWN CLERK

Ms. Kalal read the Deputy Director of Public Works and acting Town Engineer (W. Scheer) Memo into the record (Attachment 2).

Ms. Markovitz read a memo from Steven Trinkaus, of Trinkaus Engineering, LLC, into the record (Attachment 3).

It is noted that Attorney Heller, of 736 Norwich New London Turnpike, Uncasville, objected to the submission of the S. Trinkaus letter as Mr. Trinkaus was not present to be cross examined, and the letter was submitted anonymously as it stated that he was retained by an unnamed party.

Ms. Thurlow asked if the party was present.

A member of the public did rise and state that she had retained Mr. Trinkaus' services.

Attorney Heller noted that as long as the party was identified, Michelle Maitland, 6 Acorn Dr, he would withdraw his objection.

Attorney Heller reminded the Commission that at the 2/1/2024 meeting he asked that Mr. Pivo recuse himself, and Mr. Pivo refused.

Attorney Heller then introduced the weblink of Mr. Pivo's interview on The Renshaw Report (Attachment 4).

Additionally, Attorney Heller introduced a flyer which was circulated prior to the November (2023) election addressed to East Lyme Voters, noting Mr. Pivo's credentials, his request for input, and his feelings towards over development specifically referring to the "ugly apartments built on rural Bride Brook" (Attachment 5).

The Applicant submitted that this represented a predisposition and bias towards the Application and again requested that Mr. Pivo recuse himself from further consideration.

For the record, Mr. Pivo again refused to recuse himself.

Attorney Heller submitted the February 6, 2024, updated Site Modification Plan (Exhibit Item W).

Attorney Heller introduced the February 8, 2024, Update to the Operations and Maintenance Plan (Exhibit Item V).

Attorney Heller provided the original Traffic Report, prepared by Bubaris Traffic Associates which used calculations for a 250-unit project and that Attorney Heller referenced at the 2/1/2024 Hearing (Exhibit Item CC) and the 10/30/2020 update to that Traffic Report, also prepared by Bubaris Traffic Associates, which used calculations for an 80-unit project (Exhibit Item DD).

Attorney Heller noted that, using the Comment Response & Revision Summary of 2/8/2024, the Applicant had addressed the Zoning Commission's concerns regarding recreation amenities, screening, pollinators, a school bus stop, and detention basin fencing. This Summary also addressed the Water & Sewer Dept. and the Public Works Dept. concerns (Attachment 6).

Attorney Heller noted that, based off the letters read into the record at this meeting, both of the municipal consultant's concerns were addressed and satisfied.

Attorney Heller made three (3) points regarding the letter submitted by S. Trinkaus:

- A. He reminded the Commission that the Storm Water Management Plan was designed using the 2004 Storm Water Quality Manual for 108 units, and that system was not downsized, even though the number of units was downsized. He noted that during Covid supply chain issues arose and the original mechanical structures were not available, therefore, the design structure modification that included two (2) sediment forebays and a retainer basin which would accomplish the same purpose as the original mechanical structures. These changes were submitted to and approved by the Town Engineer.
- B. In 2019, this project was reviewed and approved, it has had two (2) Town Engineers look at and approve it. They have been integrally involved in the design and approval process. He reminded the Commission that just that evening a letter had been submitted by W. Scheer approving the design.
- C. Attorney Heller noted that even if everything in the letter was correct, which he submitted was not, it is not justification for denial on the basis of Storm Water Management. The CT Supreme Court had ruled on this issue in the case of Christian Activities Council Congregation v. Town Council (249 CT 566). He explained the case and noted that the Trinkaus letter does not state that harm will occur to the watershed or that there is anything more than a mere possibility of such harm.

Next, Attorney Heller reminded the Commission of the four (4) prongs of consideration of a Municipal Zoning Commission in an affordable housing application.

- A. Sufficient evidence exists in the record to support the reason for denial. He submitted that there is none.
- B. The decision is necessary to protect substantial public interest in public health, safety, or other matters. He submitted that under CGS 8-2 (legislation that enables municipal regulation of zoning in CT) groundwater protection is an enumerated consideration, however, wetlands and watercourses are not. Those are in the jurisdiction of the municipal wetlands agency. He reminded the Commission of the item of record from the 2/1/2024 meeting, the Stipulated Judgement that the EL Inland/Wetland Agency had entered into, approving the project design.
- C. Such public interest clearly outweighs the need for affordable housing.
- D. Such public interest cannot be protected by reasonable changes to the affordable housing development.

Attorney Heller submitted that the Application satisfied the permitting requirements contained in 8-30g. It is a modification; 80 units have been considered. Only the additional 20 units can be considered based on these parameters.

Mr. Brandon Handfield, professional engineer, licensed in CT with Yantic River Consultants LLC, 191 Norwich Ave, Lebanon CT. addressed the entire Trinkaus letter, point by point. He noted that the 2004 Stormwater Quality Manual is not a regulation which must be followed, but rather guidance documents that professionals use, and it augments the professional judgment. He designed the system using his professional judgement, in accordance with that manual, in addition to elements from over 25 years of projects he had seen be successful.

Mr. Handfield followed Mr. Trinkaus' letter and commented on several points including:

- A. Increase in impervious surfaces: the impervious surfaces were accounted for and treatment that is provided on the plans provides treatment for all surfaces within the development footprint.
- B. Hybrid system: He provides for the recommended treatment train requested in the letter. First into sediment forebays to take out the larger sediments and filter out floatables and debris (leaves, debris, trash etc.), second is filter barrier into a secondary containment system, which is another sediment forebay. This is larger and longer and intended to increase residence time and allow water to sit, where finer sediments and materials can fall out before it filters through to the filter bed, the last system. It encourages water to pool up and stand below any low-level orifice so that it can infiltrate through to the ground slowly, through vegetative matter, into the sand and gravels below the basin. Additionally, there is three (3) feet of separation between the bottom of the system and the seasonally high groundwater that was witnessed in the test pits. All of that combined is a complete treatment train.
- C. Forebays not effective at trapping and retention of sediments: He noted that it is misleading for Mr. Trinkaus to state that the depth of the forebays is "required by the 2004 Manual to be four to six feet". The manual recommends that the forebay be of adequate depth to prevent resuspension of collected sediments during design storm, often being four to six feet. He stated that the Manual does not require anything, but that it gives suggestions which should take professional experience and judgement into consideration during design. He noted that providing adequate depth was what his design had done. He addressed the comment regarding resuspended sediment by stating that his design is intended to work that way, in that the sediment should pass between the forebays slowly and to give larger sediments the ability to be removed. It is not intended to remove all suspended sediment (during this stage only). The finer material is called turbidity and that is not intended to be captured during this stage. He noted the four to six foot depth is harder to maintain.
- D. Retainer cell will contain 3,000 cubic feet of storage: This is the engineer's description of the secondary cell. He read from the 2004 manual which suggests herbaceous plants be used as filters in the retainer cell, which is what Mr. Handfield, the engineer, has in his design.
- E. The system will treat 250% of the WQF is untrue: Mr. Handfield stated that the calculations provided will support that it can treat 250% of WQF because once the runoff goes through the two (2) sediment forebays and gets through the filter berm it enters a blunt, large, flat filter bed. It is constructed of an engineered soil (topsoil and sand) and the outlet is depressed below the low-level orifice so any water that enters it cannot leave other than going down into the ground or into the grasses planted. Filtration through the media also provides treatment. There is a fine to medium layer of soil that contains carbon that will filter the stormwater runoff after it goes

through the plants and the filter beds. There is filter, separation, and plantings. All of the measures that were asked to incorporate into the stormwater management system have been incorporated according to the plan.

- F. The 2004 Manual requires the WQV be captured and treated: Mr. Handfield stated that the WQV is the volume of stormwater runoff from any given storm that should be captured and treated to remove a majority of stormwater pollutants on an average annual basis. It is not requiring anything but making recommendations that we capture the total pollutants on an average annual basis recognizing that there are periods of the year that the system will not perform as well.
- G. The design does not provide reduction of non-point source pollutant loads: Mr. Handfield referred to the previously given descriptions of operation of the forebays, berms, etc. He stated that the medium he designed for the system is intended to slow infiltration down so that it sits there longer, up to three (3) days so there is more time for the floatables to come out, the sediment to drop down, the turbidity to clear up, the plants to absorb the water, the sun to evaporate. He noted that the third point of the Manual is to extend the time that the water has to filtrate, and that is what he has seen succeed and that is what he has designed.
- H. No pollutant loading analysis has been provided: Mr. Handfield has used all of the standard measures, belts and suspenders, meets the 2004 Water Quality Manual, he has submitted the WQV and the WQF, he shows the retention. In his experience engineered methods do not last and are pricey, this site has the space and the good soil so the design he chose uses those.
- I. The filter bed/rain garden have an underdrain: Mr. Handfield submitted that the underdrain only applies to the rain gardens and nowhere else. They are not built on a good soil so an underdrain has been installed.
- J. Soil media: Mr. Handfield was unable to verify a 2% maximum allowed clay soil bioretention media, he could only find 5%. Mr. Handfield also explained that the engineered soil mix must be approved by himself, and he would never allow a topsoil which was too dense, but rather a sandy loamy topsoil that will be mixed with straight sand. It also must have enough organic matter to support the proposed seed mix. He would not approve of a topsoil that has a high clay content as stated in Mr. Trinkaus' letter.
- K. Mr. Handfield noted the typographical error on the submitted plan, and he could easily correct the typo for construction purposes. Additionally, there is no impact on the design of the system.
- L. The elevations of the stormwater within the basin: Mr. Handfield stated that what is being implied is that when the big storm comes, water can't pile up and inundate the treatment areas. In Section 11 of the 2004 Manual, it shows a section of the sediment forebay, another feature such as a filter berm or vegetation, a wet pool, extended wet pool or a dry pool, an outlet structure berm and it shows varying levels of water. In all of them, the flood control water elevation is above every element of that system. It is very common to have sediment forebays, retainer cells, or filter beds within the limits of a detention basin, and that also provides flood control. It would take an enormous amount of space to have all of those things separated and deal with elevation issues. He indicated that in a one (1) year storm there would be roughly 15" of water and would be present for 6-7 hours. He indicated in a two (2) year storm there would be about 2' of water for 7-8 hours. So on and so on. These are temporary situations

and occur on purpose as the water is filtered down. As the less frequent storms happen, for example a 25-year storm with 6.5" of rain in a 24-hour period would result in 3.6' of water on the filter bed. These are going to be inspected twice a year to be sure they are working properly; the vegetation is greater than 75%, the filter berms are staying open, so that the system is draining in the allowed amount of time. There is an operations and inspection manual for a reason. Compaction happens infrequently and it is highly unlikely that it will cause a premature failure of the system.

Mr. Handfield also wished to point out that the most important part of this stormwater management system that was not discussed was the Operations Manual. Most of the pollutants that occur within any development are a result of its usage and the Manual provides guidelines to the owner, whether current or future, that shows how the development should be operated and what should be looked for, which includes trash pickup, winter (snow plowing/salting), leaf pickup, landscaping, natural vegetation, which all contribute to the pollutants seen. A residential development is a moderate to low impact development. The report has a comprehensive inspection requirements page, which includes all of the facilities in and around the development and how and when they should be inspected. It will be provided to the Town each year by November 1.

Mr. Foley asked if Mr. Trinkaus had visited the site.

Ms. Maitland answered that she would address that at public comment.

Mr. Pivo asked for clarification as to why the number of units was changed.

Attorney Heller reminded the Commission of the original 108-unit design which was presented to the EL Inland/Wetland Agency because of the 100-foot upland review area and was denied. The case was appealed to the Superior Court. The Applicant came to the Zoning Commission with the smaller 80-unit project (which did not require approval of the EL Inland/Wetland Commission because it was not within the 100-foot upland review area) and that was approved. After the approval two (2) things occurred; first there was petition to the Water and Sewer Commission for a revision of the sewer shed and sewer avoidance line that cut through the project in the north-central portion of the property. It was approved to move the sewer avoidance line to the northerly property boundary line. Because of the approval, the project engineer was able to reposition the project to fit 100-units on the property and avoid the 100-foot upland review area. Second, the Stipulated Judgement was approved by the Superior Court.

Mr. Pivo asked about the berm in the front of the property and wondered if the berm is at the toe or the top of the slope.

Attorney Heller indicated that the white pines and the arborvitae specified to be planted there are fast growing. The visual from the vehicle would be shielded by these plantings. He thought that the plantings would be at the toe.

Mr. Pivo inquired about the effectiveness of pollution prevention and is there technology available to monitor the discharge.

Mr. Handfield responded that there are such monitoring capabilities and that several had been implemented by the Town engineer, and they are not very reliable as they have since stopped working. He stated that his low-impact design has a very similar approach and to be sure the site is properly used. The job of the Operations Manual inspection report is to make sure it is working properly and to fix and upgrade it if needed.

Mr. Pivo asked about the pet waste on the site. If pets are allowed on the site, can there be a pet waste and sanitation station such as at the Gateway Development Project.

Mr. Handfield noted that many large developments have a DNA testing system where if a pet stool sample is found on the grounds, it is tested against the known samples and the owner of the pet is identified and fined heavily to discourage such behavior.

Mr. Pivo asked if there would be a play structure on the pad.

Attorney Heller affirmed.

Mr. Handfield noted that the safety surface itself would be from certified Connecticut wood mulch.

Ms. Kalal thanked the Applicant for listening to the Commission's prior concerns. She wondered about the detention basin fencing. She asked if the detention basin would be 3.5'- 4' deep.

Attorney Heller confirmed.

Ms. Kalal asked who would be liable if a child fell in and drowned.

Attorney Heller noted the Town would not be liable and there are unfenced waterbodies all over town. The project is required to be in compliance with the stormwater quality manual recommendations. If the slope is steeper than 3:1 then it should be fenced but there is no portion of it that is greater than 3:1.

Mr. Handfield noted that the depth of water only under a 100-year event would be 4.6', not to the berm, would dissipate in less than 24 hours.

Public Comment

Michelle Maitland, 6 Acorn Dr, is the resident who hired Mr. Trinkaus to review the project materials. She noted her current administrative job in the town of Groton as a project manager in the Planning Department. She noted that she is not a scientist or an engineer, she was curious about East Lyme processes. She contracted Mr. Trinkaus to review the application with her own money. Though she meant no disrespect to the town employees, she felt the outside opinion would help the zoning members, and town employees, residents do better. Ms. Maitland stated that Bride Brook is an impaired waterway which is critical to native alewife. She noted the money CT DEEP has spent to help protect these fish and their importance to the ecosystem. She assumed that all would agree that quantifying the possible harm and the probability of that harm is an unreasonable standard. Ms. Maitland noted that Mr. Trinkaus did not visit the site but did review the documents in the record. She spoke about the MS4 form (which is a Public Works completed form) which is an annual stormwater management form.

Chris Hanning, 124 N. Bride Brook Rd, stated that there is a major water issue on N. Bride Brook Rd. He noted the brown water in the detention basin is often very full and spills into Bride Lake and often onto the roadway. He noted he is not an engineer but did not feel the system was working. He stated that there were engineers and CT DEEP looking at the water, and that three (3) times in the past year Bride Brook Rd has flooded and been closed. Mr. Hanning noted the lack of frost on the road because of the water. He is worried about the people on Chapman Rd. He would like communication with DEEP and asked that the Board visit Bride Brook Rd. Mr. Hanning noted he thought the earlier referenced traffic study was done in November and that a summer study would show heavier traffic. Mr. Hanning also stated that the Public Works Dept had been on Bride Brook Rd in the last two (2) weeks cleaning the road of muck and debris.

Kevin McGowan, 33 Spinnaker Dr, is concerned about pedestrians and the close proximity to the Bride Brook recreation area. He suggested a path with Jersey Barriers for safety. He also noted the walk to Rocky Neck Beach is not far from the site.

Attorney Heller noted that the stormwater system is not finished. It is under construction and has been designed by a professional engineer and if there is flooding on Bride Brook Rd it is not occurring as a result of this development because the stormwater design has been designed to attenuate the peak rate of runoff in every storm event, from the 1 to the 100-year storm event. It's likely coming from the brook itself as there is no interaction between the property and the brook. That is because the original formulation of the 80-unit project had design parameters of: no activity in the 100-foot upland review, but also no activity that is shedding direction of flow to Bride Brook.

Attorney Heller quoted Judge Berger, who was Chief Judge of the Land Use Court in Hartford that handled most of the affordable housing appeals in the State of CT, as saying "the Plaintiff is not required to demonstrate the need for these units the legislature has decided that when they adopted the affordable housing appeal. If need is to be demonstrated, it is to be done by the Commission under subsection C-3 in which it must prove that certain public interests outweigh the need for affordable housing. Providing affordable housing does not just benefit an applicant, it benefits a town, a region, a state". Attorney Heller stated that this is a good project, that 100-units will provide 30-units of good, decent, clean affordable housing, which require municipalities to satisfy a public need. The mandate of the legislature is clear, and the Applicant has complied with the requirements of the Act, that there are no matters within the permitting jurisdiction of this Commission on this affordable housing application of health, safety and other matters where there is any sufficient evidence in the record to indicate those concerns exist, nevermind that they outweigh the public interest in affordable housing. He submitted that the Commission should approve the application as it has been revised through this hearing process.

DECISION MOTION 1

Ms. Kalal moved to close the public hearing.

Mr. Foley seconded the motion.

Mr. Pivo abstained.

Motion passed 5-0-1.

The Commission took a five (5) minute break before the Regular Meeting began.

5. Regular Meeting

Ms. Yuhas stepped down and Mr. Peck rejoined the Board.

5-1 Approval of Minutes of February 1, 2024, Regular Meeting

Ms. Kalal asked for a correction to page 11 regarding the subcommittees, she noted that both subcommittees would be made up of Ms. Kalal and Mr. Peck.

DECISION MOTION 2

Ms. Markovitz moved to approve the Minutes of February 1, 2024, with the above noted correction.

Ms. Kalal seconded the motion.

Motion passed 6-0-0.

Mr. Peck stepped down and Ms. Yuhas rejoined the Board.

5-2 Continuation of the application of Bride Lake, LLC, for site plan approval for the modification of the December 3, 2020, approval of an eighty (80) unit affordable housing multi-family residential development pursuant to Connecticut General Statutes 8-30g increasing the total unit count to one hundred (100) multi-family units on the westerly side of N. Bride Brook Rd (20.24 acres) now bearing street number 94, Assessor Map 9.0 Lot 37-2.

Ms. Thurlow noted that the Board has 65 days to make a decision.

Mr. Foley noted that he would not be able to vote as there was a lot of information to consider.

Mr. Pivo asked that Mr. Mulholland have Mr. Scheer (acting Town Engineer) review the Trinkaus letter for accuracy.

TASK Mr. Mulholland to ask Mr. Scheer to review the letter.

The Commission will continue discussions at the next Regular Meeting.

Ms. Yuhas stepped down and Mr. Peck rejoined the Board.

6. Old Business

6-1 Subcommittee-Outdoor Lighting

Have not met yet.

6-2 Subcommittee- Text Amendment CA Zone

Have not met yet.

6-3 Affordable Housing

Attorney Bleasdale has the information and is hoping to discuss with the Board in March.

7. New Business

7-1 Application of Eric S. Parker Esq. for proposed Text Amendment to Section 20.26 of the East Lyme Zoning Regulations.

TASK Mr. Mulholland to schedule the Public Hearing and send out necessary referrals.

7-2 Any business on the floor, if any, by the majority vote of the Commission.

DECISION MOTION 3

Mr. Pivo moved to schedule a Special Meeting to discuss a possible ordinance to present to the Board of Selectmen regarding the hiring and charging of outside consultants and site planning standards for multi-family housing.

Ms. Markovitz seconded the motion.

Motion passed 6-0-0.

7-3 Zoning Official

Mr. Mulholland stated that he had emailed with his contact at the CT DEEP, Kim Czaplá, Senior Analyst, whether there was any provision in the enabling statutes on aquifer to allow for referral of land use projects such as special permit developments etc.

The response he received indicated that the Zoning Commission is the Aquifer Protection Agency and, as such, the applications automatically come to the Zoning Commission for review if the proposed activity is a regulated activity (if it were a prohibited activity, it would not make it to a Zoning Commission meeting for approval).

Additionally, Mr. Mulholland posed the question as to whether the Town could request to have the aquifer boundaries expanded.

The response from Ms. Czaplá was that application would be made to the state but “not one (1) of the 80 municipalities have requested to extend the boundary in the 20 years of the Aquifer Protection Area Program with limitation, the line is drawn in the sand and approved as such”. Mr. Mulholland took this to mean that if the desire to expand existed, the Town would have to do some drilling to prove the need for the expansion and it would be a very difficult thing to do, and it has not been accomplished thus far. He offered the email communication to the Board for review, for anyone interested.

Ms. Hardy asked if it would be possible to go back to the Town’s original boundary lines.

Mr. Mulholland explained that when the state took over the aquifer program in the 1970’s the Towns were required to drill to scientifically define the aquifer mapping levels A and B. The state

approved those levels. He explained the state and local authorities and the prohibited and regulated activities within the aquifer boundaries.

Mr. Peck noted that the Zoning Commission had spent a significant amount of time discussing the boundary lines at the time the state wished to change them. The Board wanted to keep the lines, getting the Town Attorney's opinion which was that if the Town adhered to the old lines the Town would have been setting itself up for lawsuits.

Mr. Pivo asked if there had been a voiced concern about the aquifer protection area.

Mr. Mulholland noted that the Town is required to follow the state guidelines. Additionally, he noted that no person has come to the office to speak with him about it, but that the Town is always concerned with the water, and that any application that is presented to the Zoning Commission has already had a lot of scrutiny from the Town.

7-4 Comments from the Ex-Officio

Ms. Hardy noted that budget hearings are under way and that the Zoning Commission meeting will be coming up.

7-5 Comments from the Zoning Board Liaison to the Planning Commission

Ms. Susco did not attend the 2/13/24 meeting as it had been cancelled.

Ms. Susco agreed to attend the 3/12/24 meeting.

7-6 Correspondence

None

7-8 Comments from the Chairman

Ms. Thurlow reminded that there is now an opening for the Alternate position and to have interested parties should email Jessica Laroco jlaroco@eltownhall.com.

8. Adjournment

DECISION MOTION 4

Mr. Foley moved to adjourn the February 1, 2024, Regular Meeting at 9:41PM.

Ms. Kalal seconded the motion.

Motion passed 6-0-0.

Respectfully submitted,
Jessica Laroco

Attachment 1

Jessica Laroco

From: Ben North
Sent: Tuesday, February 13, 2024 3:10 PM
To: Bill Mulholland; Jessica Laroco
Cc: Bill Scheer
Subject: Water and Sewer Review of Brookside Apartments, 94 North Brook Rd, East Lyme CT

Mr. Mulholland,
I have reviewed the updated application of Bride Lake LLC, located at 94 North Bride Brook Rd in East Lyme. The site plan drawings revised on 2/6/2024 have addressed my previous comments concerning the utilities site design. All of my recommendations have been incorporated into this latest revision and I have no further comments to add.

Thank You



Ben North
Chief Operating Officer
East Lyme Water and Sewer
Phone 860-691-4108
Web eltownhall.com
Email bnorth@eltownhall.com
108 Pennsylvania Ave, Niantic CT
06357

Attachment 2
Town of East Lyme

P.O. DRAWER 519

NIANTIC, CONNECTICUT 06357



Deputy Director of Public Works
William A. Scheer Jr. P.E. L.S.

860-691-4101
FAX 860-739-6930

Received

FEB 12 2024

Town of East Lyme
Land Use

February 13, 2024

RE: Revised Application of Bride Lake LLC, North Bride Brook Road, Drawings revised to 2/6/2024 and Operations and Maintenance plan Revised to 2/8/24

Mr. Mulholland,

I met with the design engineer Branden Handfield on 2/8/24 to review the stormwater design for the project and associated revisions to date. After a lengthy discussion, I am satisfied that the application, as revised, meets the design requirements of the 2004 Stormwater Quality Manual and the requirements of the Town of East Lyme. This manual is the current standard of design and is the most appropriate design reference to be used for revisions to a previously approved project.

The majority of the issues that arise with stormwater treatment structures occur during construction. Due to the sensitivity of this watershed, the Engineering department recommends to the Zoning Commission, that during construction, the design engineer perform quarterly inspections of the site erosion and sedimentation controls, and stormwater treatment basins. Following these inspections the engineer should submit a report to the Zoning Commission describing the current conditions and any repairs, maintenance, or modifications that need to be made.

From a long-term maintenance perspective (post construction), the Engineering department recommends that the Zoning Commission require an annual stormwater maintenance system (SMS) inspection by the design engineer. This report should be submitted to the Town detailing current conditions and any action items that need follow up.

The revised plans and Operations and Maintenance plan submitted appear to have incorporated these recommendations.

Respectfully,

William A. Scheer

William A. Scheer PE., LS.
Deputy Director of Public Works
(acting Town Engineer)

Attachment 3



Trinkaus Engineering, LLC
114 Hunters Ridge Road
Southbury, Connecticut 06488
203-264-4558 (office)
+1-203-525-5153 (mobile)
E-mail: strinkaus@earthlink.net
<http://www.trinkausengineering.com>

February 14, 2024

Ms. Deborah Jett-Harris, Chairman
East Lyme Zoning Commission
108 Pennsylvania Avenue
Niantic, Connecticut 06357-1510

Re: **Bride Lake, LLC**
N. Bride Brook Road
East Lyme, Connecticut

Dear Ms. Jett-Harris and Members of the Zoning Commission,

At the request of a resident of East Lyme, I have reviewed the current plans and report for the Bride Lake project.

Executive Summary:

- A. It is not appropriate from a design point of view to combine different types of stormwater practices in the same location as their functions are very different and the combination will cause premature failure of the system.
- B. The stormwater system as designed does not reduce non-point source pollutant loads which will be discharged into the groundwater under this site or to Bride Lake via the Town of East Lyme drainage system on North Bride Brook Road.
- C. No pollutant loading analysis has been provided which would show the reductions in non-point source pollutant loads being discharged from the site, which is critical because of the high quality aquatic resource when the runoff is being directed.
- D. Many aspects of the stormwater management basin are not in compliance with sound engineering practices and the CT DEP 2004 Storm Water Quality Manual and the updated CT DEEP 2023 Storm Water Quality Manual.

Review Comments

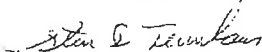
1. The current proposal proposes an additional twenty units with associated driveways and parking to be added to the original plan. This will be a significant increase in the impervious area on the site. The original stormwater management system consisting of underground units has been eliminated and is to be replaced by the current proposal. It is imperative that the runoff from all impervious areas be treated by an appropriate stormwater management system especially to reduce non-point source pollutant loads.

2. This stormwater basin is a hybrid type of system. It contains aspects of a Bioretention system as well as a standard detention basin. However, the combination of these two approaches to stormwater management will cause pre-mature functionality issues with the Bioretention aspect of the basin. The use of multiple treatment systems in series is an acceptable approach to stormwater treatment and is commonly known as a "Treatment Train."
3. According to the video of the February 1, 2024 meeting of the Zoning Commission, the applicant stated that the forebays provide three times the required percentage of the WQV, however the volume is only one aspect of the design of the forebays. As noted below the forebays will not be effective at trapping and retention of sediments.
4. Two forebays are shown at the two inlet pipes. Although the length to width ratio of each forebay appears to meet or slightly exceed, the 2:1 ratio called for in the CT DEP 2004 Storm Water Quality Manual "2004 Manual", the depth of the forebays are only two (2) feet, not the four to six feet required by the 2004 Manual. Each sediment forebay is separated from the "water quality retainer cell" by a gravel filter berm. A gravel filter berm is very permeable and will allow turbid runoff to pass through from the forebay which defeats the purpose of a forebay. Additionally, due to the shallow depth of the forebay, any sediment which might settle out in the forebay will easily be resuspended by subsequent storm events and carried into other parts of the stormwater basin. Again, this defeats the purpose of a forebay, which is to trap and prevent the resuspension of settled sediments.
5. The applicant stated at the February 1, 2024 meeting that the retainer cell will contain 3,000 cubic feet of storage and be planted. There is no such component found in the 2004 Manual and it has not been shown by the applicant how pollutants will be reduced in the retainer cell.
6. It was also stated by the applicant at the February 1, 2024 meeting, it was stated that the remainder of the WQV was provided in the filter bed. No calculations have been provided to demonstrate this statement. Furthermore, the applicant stated that the system will treat 250% of the Water Quality Flow (WQF). This is not a valid statement. The WQF is a flow rate based upon the WQV and only used to size conventional pre-treatment devices such as Isolator Rows or Hydrodynamic Separators.
7. The 2004 Manual requires that the WQV be "captured and treated" and this requirement has not been met by the applicant.
8. According to the test pits in the basin, sand and gravel are encountered at depths between 27" and 36" below original grade. As the bottom of the basin is approximately five (5) feet below existing grade, the bottom will be in the observed sand and gravel layer. This means that some infiltration will likely occur through the bottom of each forebay (until the sediment builds up and clogs the gravel surface) and the retainer cell, however, the design does not provide reduction of non-point source pollutant loads, including total suspended solids (TSS), total phosphorous (TP), total nitrogen (TN), metals (Zn as indicator metal) and total petroleum hydrocarbons (TPH). The underlying sand and gravel do not provide reduction of pollutant loads.
9. No pollutant loading analysis has been provided which would demonstrate by calculations how much the above pollutants will be reduced by the stormwater management system. Simply providing the required Water Quality Volume (WQV) as storage in a basin does not equate to reducing the pollutant loads in the runoff.

10. According to the cross section of the filter bed/rain garden, the bottom of the basin is sloped from the edges to the center of the filter portion of the basin to an underdrain. As the underdrain is located at a defined low point which will minimize or eliminate potential infiltration, runoff will follow the path of least resistance in the gravel to the underdrain and not move vertically down into the underlying soil.
11. The soil media specified contains 30% topsoil which will cause clogging of the soil media because the percentage of clay particles in the topsoil will be significantly higher than 2% which is the maximum allowed in bioretention soil media. It was clearly demonstrated by research at the University of New Hampshire Stormwater Center that bioretention media topsoil percentages of 20% caused failure of Bioretention system due to clogging.
12. The elevations called out in the detail conflict with the information shown on the grading/drainage plan. An example of this conflict is that the top of the soil media (bottom of basin) is called out as 70.25' in the detail and elevation 35' on the plan.
13. According to the stormwater management report, the bottom of the main component of the basin will be set at an elevation of 35'. Below is a listing of the proposed water surface elevations within the main component of the basin. The significance of this will be explained in the next comment.
 - a. Water surface of 1-year storm = 36.44'
 - b. Water surface of 2-year storm = 36.99'
 - c. Water surface of 5-year storm = 37.55'
 - d. Water surface of 10-year storm = 38.06'
 - e. Water surface of 25-year storm = 38.60'
 - f. Water surface of 50-year storm = 39.10'
 - g. Water surface of 100-year storm = 39.60'
14. When infiltration practices such as bioretention are used for stormwater detention, ponding depths greater than 12" above the soil media will have the following impacts to the media:
 - a. Compaction of the soil media surface due to the weight of water above it. 2.5' of water above a 12" x 12" area of soil media surface applies a pressure of 156 pounds to the soil media surface and with the high clay content in the soil media will cause compaction.
 - b. A pool of water over the soil media will also cause fine sediments to settle out on top of the soil media, further increasing the clogging of the media surface.

A copy of my professional CV is attached for the record. Please feel free to contact my office if you have any questions concerning this information.

Respectfully submitted,
Trinkaus Engineering, LLC


Steven D. Trinkaus, PE

Attachment 4

AA

WEB LINK

<https://www.youtube.com/watch?v=B7DRKYSYNEY>

Attachment 5

BE

Dear East Lyme Voters,

Last month I told you I'm running for the Zoning Commission, a bit about my 35 years as a town planning professor and consultant, and I asked you to send me your ideas. From your thoughts and mine, I've compiled these priorities.

1. Stop Overdevelopment. People know moderate growth happens, and when planned well it can make the town better. They just don't want big, ugly, misplaced developments. Unfortunately, you've seen overdevelopment approved downtown, rural land lost to condos on Lake Pattagansett, historic homes lost to dollar stores, and ugly apartments built on rural Bridebrook. We should limit growth to attractive projects in smarter locations.
2. Make our town a bike and pedestrian success story. It's time to start creating a connected system of safe bike paths and sidewalks on Routes 1, 161, and 156. We should also build recreational loops, like from Rte. 1 to Powers Lake along Upper Pattagansett Road and back to Rte. 1 via Scott.
3. Share Decision Making. People say it's hard to know what's being proposed and too much happens behind closed doors. People want better information on signs and online, surveys that measure public opinion, and workshops where we work together to shape big decisions.
4. Take Back Control Over Affordable Housing. We need more affordable housing for the retail, restaurant, and office workers who care for us every day. But we don't need judges telling us where and how to do it. I'll work for the moratorium we're entitled to under state law, which we earned by building Deerfield, Seaside, and Rocky Neck Villages. Then I'll work with socially responsible developers to build sustainable, affordable homes for local workers that we can all be proud of.
5. Support our Local Farmers. People love our farms. They're good for our health, environment, and economy. Let's do more to support them and get their products into our school lunches, restaurants, and pantries.
6. Support Local Business. Our small local retailers and restaurants are really very special. Let's help them by beautifying Routes 1 and 161, and adding to the Main Street experience we already love. I'd think twice before permitting more competition from chain, big box, and dollar stores.
7. Sustainability. The planet we depend on can't take much more. From our fisheries to our weather, we see the strain. There are lots of ways to make town more sustainable, like installing EV charging stations and redirecting urban runoff into rain gardens and channels filled with pollinator plants that can filter pollution and boost butterfly populations.

Please vote on November 7th!

Gary Pivo, Candidate for East Lyme Zoning Commission



Received

FEB 9 2024

Town of East Lyme
Land Use

COMMENT RESPONSE & REVISION SUMMARY

FROM: East Lyme Zoning Commission
DATE: February 8, 2024
RE: Brookside Apartments Site Modification Plans

ZONING COMMISSION COMMENTS & REVISIONS

The following items have been incorporated into the revised plan set in response to questions and comments received during the public hearing on February 1, 2024.

1. Recreation Amenities:
 - a. A playground pad has been added to the south of Building I with direct pedestrian access to the adjacent parking bay as shown on Sheets 2 and 3. A detail has been added to Sheet 8 depicting the typical section with a 6" – 12" depth of certified playground mulch.
 - b. A natural surface trail connecting the playground and adjacent parking with the Passive and Active Recreation Area has been delineated to the west of Building I as shown on Sheets 2 and 3. The trail will follow existing terrain.
2. Screening:
 - a. A raised berm with additional Green Giant arborvitae screening trees has been added along the frontage. The selected evergreen screening trees are fast growing and less palatable to deer than occidentalis types.
3. Pollinators:
 - a. Native trees, shrubs, and plants listed in the Pollinator Plants in the Northeast Region, published by the Xerces Society (with links through the DEEP website) have been added around the proposed treatment and detention basin at the southwest corner of the site. 150+ plantings have been added including Serviceberry, Red Columbine, Butterfly Milkweed, Black Eyed Susan, and Sweet Goldenrod.
 - b. The selected Conservation and Wildlife Mix from New England Wetland Plants, which will be planted in the detention areas and rain gardens also contains perennial listed on the Pollinator Plants in the Northeast list, including Patridge Pea, Butterfly Milkweed, Joe Pye Weed, Black Eyed Susan, Aster, and Goldenrod.
4. School Bus Stop:
 - a. A concrete walk and pad has been added to the southwest curb of the main entrance driveway to provide an area for students to wait for the school bus away from the road.
5. Detention Basin Fencing:
 - a. The 2004 DEEP Stormwater Quality Manual does not encourage fencing around detention ponds, in particular if embankments are graded with slopes at 3:1 or less. The proposed detention basin has been graded with 3:1 max slopes and 4:1 slopes to the west and north. Rather than add fencing, additional pollinator trees, shrubs, and plants will create a visible and natural perimeter along the west and north slopes. The larger plantings in combination with the tall grasses within the conservation seed mix will discourage entry.



EAST LYME WATER & SEWER COMMENTS & REVISIONS

The following items have been incorporated into the revised plan set in response to comments received from Ben North, Chief Operating Officer with East Lyme Water and Sewer dated 1/26/24.

1. Please place the unit count with sewer capacity tabulations from Sheet 2 of 10 onto Sheet 5 of 10, Utility Plan.

Response. The table has been copied to Sheet 5 as requested.

2. Please adjust water main, valving, and hydrant configuration to conform to the approved plan revision date of 3/21/22 in the Southern portion of the project, especially in the areas between buildings G and H, and Building D, E, and F. The design was approved in this way to allow for isolation within the private system to allow for the maximum number of residents to continue to enjoy utilities in the event of a main break or water service disruption. The proposed new configuration has no valving isolation, and a main break in most part of the development would cause water to be shut off for the total development, an unsatisfactory condition that could easily be avoided with proper valve isolation design.

Response. Isolation valves are shown at the southeast corner, near Buildings D, E, and F, at the southwest corner between Buildings H and E, and at the northwest corner between Buildings I and G. Each location coincides with a 4" service main, which will also have a gate valve.

EAST LYME PUBLIC WORKS DEPARTMENT

The following items have been provided in response to comments received from Bill Scheer, PE, Deputy Public Works Director with East Lyme Public Works in a meeting held on 2/8/24.

1. Design Engineer to provide quarterly erosion and sedimentation control and stormwater management system inspection reports to Engineering Department during construction to verify that the system is performing in accordance with the design.

Response. Inspection and Maintenance Note #1 on Sheet 6 has been added to the plan set requiring quarterly inspections be performed by the design engineer.

2. Provide an updated Operations & Maintenance Plan to include the proposed site plan modifications.

Response. A revised Operations & Maintenance Plan is enclosed. Inspection and maintenance items have been updated based on the proposed site modification plan. In addition, SMS inspection and maintenance checklists have been added as Appendix A with a requirement that the completed forms be transmitted to the Engineering Department by November 1st of each calendar year.