

March 7, 2022

Ms. Sue Brown, Town Planner
Zoning Board of Appeals
Manchester-by-the-Sea Town Hall
10 Central Street
Manchester-by-the-Sea, MA 01944

Via: Email to Sue Brown, Town Planner (browns@manchester.ma.us);
smellish11@comcast.net; eglenn@mit.edu; gpucci@k-plaw.com; and
federspielg@manchester.ma.us

Reference: Initial Environmental Peer Review Letter
Chapter 40B Comprehensive Permit Application
0 School Street
Manchester-by-the-Sea, Massachusetts
B+T Project No. 3344.00

Dear Ms. Brown:

Beals and Thomas, Inc. (B+T) is pleased to provide this correspondence documenting our Environmental Peer Review of the Chapter 40B Comprehensive Permit Application Filing for 0 School Street ('the Property') in Manchester-by-the-Sea, Massachusetts. We understand that SLV School Street, LLC (the Applicant), proposes to develop a 40B housing project consisting of 136 apartment units, 34 of which are designated to be affordable, with associated site improvements (the Project).

We received the following documentation, which served as the basis of our review:

- *Site Development Plans for The Sanctuary, School Street, Manchester-by-the-Sea, MA*, dated July 16, 2021, prepared by Allen & Major Associates, Inc. (32 sheets)
- *Drainage Report, Site Development, The Sanctuary at Manchester-by-the-Sea, Manchester-by-the-Sea, MA*, dated July 16, 2021, prepared by Allen & Major Associates, Inc. (258 pages)
- *Waiver Requests as of July 16, 2021*, dated July 16, 2021, prepared by Allen & Major Associates, Inc. (2 pages)
- *Wetlands Bylaw Waiver Requests* (undated; submitted September 2021), prepared by Strategic Land Ventures (2 pages)
- *0 School Street, Manchester-by-the-Sea, MA, Existing Condition Narrative*, dated April 13, 2021, prepared by Allen & Major Associates, Inc. (2 pages)
- *Order of Resource Area Delineation for 0 School Street* (MassDEP File No. 039-0834), June 7, 2021.

Civil Engineering ▪ Land Surveying ▪ Landscape Architecture ▪ Land Use Permitting ▪ Environmental Planning ▪ Wetland Science

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We have reviewed the documentation above with respect to the requirements of the Massachusetts Wetlands Protection Act (M.G.L. Ch. 131, S. 40) and its implementing Regulations at 310 CMR 10.00 (collectively referred to as the 'Act'), and *Article XVII of the Manchester-by-the-Sea General Bylaws: General Wetlands Bylaw* (Rev. April 2015) and the *Manchester-by-the-Sea Wetlands Regulations for Administering General By-Law Article XVII* (2021; collectively 'the Bylaw').

Please note that our separate Civil, Landscape/Site Design & Geotechnical Peer Review Letter dated March 4, 2022 provides a project summary and addresses stormwater and engineering design related review matters.

Existing Conditions and Site Visit Summary

Mr. Andrew Gorman, CESSWI and Mr. Matthew Cote, PE of B+T conducted a site visit to the Property on February 9, 2022 with the Applicant's representative, Ryan Roseen of Goddard Consulting, LLC. Also present for this site visit was a representative from the Manchester-by-the-Sea Conservation Commission (MCC) and two representatives from the Zoning Board of Appeals. We note for the record that remnant snow cover was present on-site during this site visit.

The Property encompasses approximately 23.3-acres and maintains frontage on School Street to the northeast. The Property is undeveloped and forested with mixed vegetative conditions which vary depending on adjacency to wetland resource areas and general landscape position. Notable topographic relief and ledge outcrops are prevalent landscape features within the Property. Ledge outcrops are particularly notable proximate to the proposed site entrance off of School Street. Some invasive species such as Japanese knotweed (*Fallopia japonica*) are present on-site, most notably abutting an existing gravel path.



Google Earth Aerial Image with Approximate Property Boundary Highlighted.



*Right Photograph: Sample upland conditions in the northerly portion of the Property.
Photographs dated February 9, 2022.*



Both Photographs: Japanese knotweed (Fallopia japonica) and ledge south of WF-D Series facing east. Photographs dated February 9, 2022.

Multiple wetland resource areas occupy and bound the Property. These features include a Bordering Vegetated Wetland (BVW) in the northerly portion of the Property (D-Series) associated with the Mean Annual High Water (MAHW) of Sawmill Brook (R-Series). A large BVW in a topographic valley (A-Series) divides the northerly and southerly upland areas of the Property. An isolated wetland (labeled on the plans as both Isolated Land Subject to Flooding (ILSF) and a Vernal Pool (B-Series)) is situated in the southerly portion of the Property.

Specifically, wetland delineations reviewed while on-site included the A-Series BVW, B-Series ILSF/Vernal Pool, the footprint of the former C-Series (found not to be an isolated wetland under the ORAD), the D-Series BVW, and a portion of the R-Series Mean Annual High Water (MAHW) which passed through the Property (R103 though R121). Where practicable, off-site delineations were reviewed from public vantage points (i.e., School Street and Old School Street) to visually assess the accuracy of the projected Buffer Zones and Riverfront Area.

With the exception of the comments provided below (Comment Nos. 12 and 15) regarding the B-Series stream and C-Series Isolated Land Subject to Storm Flowage (ILSF) documentation, B+T agrees with the wetland boundaries as depicted on the Site Development Plans and confirmed under the ORAD (MassDEP File No. 039-0834).

A number of Potential and Certified Vernal Pools ('PVPs' and 'CVPs') constrain the Property. Under the Act, CVPs and certain PVPs where evidence has been provided supportive of certification are afforded Vernal Pool Habitat as defined in 310 CMR 10.04. Vernal Pools are a resource area and are separately defined in Section 2.9 of the Bylaw, which extends the Vernal Pool boundary *100 feet perpendicular to the mean annual high-water line defining the depression*.

Not all of the PVPs or CVPs constraining the Property have been delineated (see later comments herein). For example, CVP No. 8197 is not delineated in relation to its boundary within the D-Series BVW. In other instances, certain PVPs are mapped as approximate within the delineated BVWs (for example 'Vernal Pool A North' on Sheet V-101).

In addition to our review of wetland resource areas, B+T examined low-lying areas such as well-pronounced swales, depressions, and concave slopes which oftentimes result in hydric soil formation. Specific attention was provided to the topographic depression in the southeast corner of the Property (abutting Yankee Division Highway) and a swale to the southeast of WF-A40 through WF-A42. Although some wetland indicator species were present in these areas (e.g., *Tsuga canadensis* in the southeast depression and *Acer rubrum* in the easterly swale), both of these landscape features were predominantly comprised of upland plant communities and were underlain by non-hydric soils.



*Left Photograph: Upland auger pull from low-lying area in southeast portion of the Property.
Right Photograph: Red maple (Acer rubrum) stand in upland swale east of WF-A Series.
Photographs dated February 9, 2022.*

Bylaw Waiver Requests

1. B+T performed a review of the Applicant's Wetland Bylaw Waiver Requests prepared by Strategic Land Ventures (Section 10.2) in the context of the Site Development Plans and the findings of our February 9, 2022 site visit.

Our comments are noted in **bold** text below and in table format to maintain consistency with the Applicant's structuring of the waiver requests and readability. Our comments have been structured to address a) the necessity of the relief requested; b) potential alternate methods of compliance; c) adverse impact of approval.

<i>By-Law or Regulations Section</i>	<i>Requirement</i>	<i>Explanation</i>
Wetlands Bylaw Section 1.2.2: Use of Home Rule Authority	<i>Protect vernal pools as an additional resource are recognized by the Town as significant, but not included in the Act;</i>	DEP does not regulate vernal pools, only vernal pool habitat. Vernal Pool habitat does not extend into uplands under DEP regulations which is in contrast to the local bylaw. The Applicant cannot adhere to this local bylaw. This would effectively make a 130' no disturb area around any vernal pool, which would require a major redesign and a substantial loss of units.
<p>B+T Comment:</p> <p>a) Necessity of relief: Granting the Applicant relief from the Bylaw's regulation over Vernal Pools would be necessary if such is the case that the 100-foot extension of the vernal pool boundary (and subsequent 30' No Disturb Zone) and such waivers are Consistent with Local Needs and are required to permit the construction and operation of the Project. As not all of the PVPs and CVPs constraining the Property have been delineated (see Comment No. 11), there is not enough information to determine whether or not what is described as a major redesign or a substantial loss of units would occur.</p> <p>b) Alternate methods of compliance: More information from the Applicant, including the delineation of MAHW of the PVPs and CVPs, is necessary to confirm the necessity of the requested waiver, and to ascertain if alternate design strategies (e.g., retaining walls to minimize off-grading, but with consideration of vernal pool species movement corridors) would be applicable/appropriate.</p> <p>c) Adverse impact of approval: B+T recommends that an exhibit be prepared or linework added to the site plan showing the extent of the locally jurisdictional Vernal Pool Habitat and associated No Disturb Zone with respect to the Project to help determine the necessity of the waiver. Not enough information appears to be presented in this application package to render a decision.</p>		

Wetlands Bylaw Section 2.2.13: Definitions	<i>Any incremental activities, changes or work which have, or may have, a cumulative adverse impact on the Resource Areas protected by this By-Law.</i>	This local requirement goes beyond what is required in the Wetlands Protection Act. The terms “cumulative” and “incremental” are not defined. Thus, it is open to subjective interpretation and could require a major redesign and a substantial loss of units depending on the local Commission’s interpretation.
<p>B+T Comment:</p> <p>a) Necessity of relief: The noted language above relates to the definition of “Alter”; the definitions section of the Bylaw does not itself impose any requirements. Therefore, it appears that the waiver being requested is actually from Section 4, which regulates alteration of resource areas and buffer zones. We request that the Applicant confirm the intended waiver.</p> <p>Resource area impacts in the form of potential BVW impact and Riverfront Area impact will be required for this design. Additionally, potential impact to the additional jurisdictional boundaries applied to PVPs and CVPs under the Bylaw may also be necessary. The Applicant has specifically framed this waiver request around the language of the Bylaw which allows the MCC to consider cumulative and incremental adverse impacts as alterations.</p> <p>While we acknowledge that the terms ‘cumulative’ and ‘incremental’ are not provided standalone definitions in these local rules, the Bylaw’s Regulations do provide a definition for interpreting ‘Significant Immediate or Cumulative Adverse Effect’ (Section 2.28) to guide the MCC’s decision-making process:</p> <p><i>2.28 “Significant Immediate or Cumulative Adverse Effect” means an impact that would under reasonable assumptions result in a measurable decrease in the function of a Resource Area protected by the By-Law at the site or proximal to the site, taking into consideration past losses, current conditions and the projected impacts of reasonably foreseeable future work resulting in similar, comparable, or other discernible impact and disturbance, as determined by the Commission.</i></p>		

When an activity that may not be significant in and of itself, or incremental activities that may not be significant in isolation, but cumulatively have an adverse impact, that activity may have a Significant Immediate or Cumulative Adverse Effect. Determination of Significant Immediate or Cumulative Adverse Effect shall be made on case-by-case basis, considering all relevant evidence presented and which shall include but not be limited to attritional loss and history of activities within Resource Areas.

We recommend that the Applicant provide a written statement as to whether or not the Project can satisfactorily meet the Regulation's test for *Significant Immediate or Cumulative Adverse Effect* as defined in Section 2.28. If the Project can not meet the standard, we recommend that the Applicant detail which Project components would not comply.

- b) Alternate methods of compliance:** Alternative methods of compliance can be evaluated once the Applicant confirms/identifies which Project aspects would be in non-compliance.
- c) Adverse impact of approval:** The potential for adverse impact of waiver approval can be evaluated once the Applicant confirms/identifies which Project aspects would be in non-compliance.

Wetlands Bylaw Section 2.9.5: Definitions	<i>The boundary of the Resource Area for vernal pool shall be the 100 feet perpendicular to the mean annual high-water line defining the depression.</i>	This bylaw would extend the resource area boundary 100 feet into the uplands, which greatly exceeds the Wetlands Protection Act definition which has the boundary ending at the edge of the resource area. Adherence to this bylaw would effectively create a 130-foot no disturbance zone around any vernal pools which would require a major redesign and a substantial loss of units.
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B+T Comment:

- a) Necessity of relief:** The Applicant notes that the 100-foot extension of the Vernal Pool Boundary and associated No Disturb Zone would result in a major redesign or a substantial loss of units. Please refer to B+T's response to the Section 1.2.2 Waiver Request above with respect to all PVPs and CVPs being portrayed on the Plan.

<p>b) Alternate methods of compliance: Full delineation of the PVPs and CVPs constraining the Site would be required to render a complete evaluation as to whether or not alternate methods of compliance are available. B+T recognizes that alternate means of site access appear to be even more impactful in terms of requiring a crossing of the A-Series BVW or use of Old School Street, if it were available.</p> <p>c) Adverse impact of approval: Potential loss of vernal pool habitat under local jurisdiction which extends into the uplands may occur from this design. However, as not all of the vernal pool boundaries have been delineated at this time, it is unclear the extent to which relief would be necessary for this Project, and the associated potential adverse impact from waiver approval.</p>		
<p>Wetlands Bylaw Section 4.1.1: Jurisdiction</p>	<p><i>any freshwater or coastal wetland; salt marsh; wetmeadow; bog; swamp; vernal pool; spring; bank; reservoir; lake; pond; river or stream; beach; dune; estuary; coastal bank; lands under any water body; land subject to flooding or inundation by groundwater or surface water; land subject to tidal action; coastal storm flowage or flooding; and</i></p>	<p>The Applicant is requesting a waiver from this section as the Department of Environmental Protection shall have jurisdiction over vernal pool habitat areas. Wetlands Protection Act also does not protect Isolated wetlands.</p>
<p>B+T Comment:</p> <p>a) Necessity of relief: The Applicant will require some level of relief as the Project will require Riverfront Area impacts and potential BVW impacts. However, this specific waiver request is structured to request from relief from almost all resource areas recognized by the Bylaw, including those which are not applicable to the Site in question (e.g., land subject to tidal action, coastal bank, etc.). Rather than a blanket waiver to one of the critical operational components of the Bylaw, B+T recommends the Applicant refine this waiver request to specifically call out certain resource areas as noted in the commentary and why this waiver is required to permit the construction and operation of the Project.</p> <p>b) Alternate methods of compliance: The Applicant has the opportunity to refine the waiver request as it relates to isolated wetlands and vernal pools, and to demonstrate why these resource areas prevent construction and operation of the Project. Subsequently, alternate methods of compliance can be evaluated.</p> <p>c) Adverse impact of approval: The way in which this waiver request is structured is that the Applicant is seeking a waiver from all wetland resource areas subject to local jurisdiction as listed in Section 4.1.1 of the Bylaw—which includes <i>all</i> resource areas with the exception of Riverfront Area (Section 4.1.2). This would essentially render the Project subject only to review pursuant to the Act.</p>		

<p>Wetlands Bylaw Section 4.4: Jurisdiction and Presumption</p>	<p><i>Unless the applicant demonstrates by clear and convincing evidence that a significant adverse effect will not occur, it shall be presumed that significant adverse effects will result from any alteration within:</i></p> <p><i>4.4.1 - a Resource Area, other than land subject to flooding or inundation by groundwater, or surface water or coastal storm flowage or flooding;</i></p> <p><i>4.4.2 - 30 feet of the edge of any salt marsh, freshwater wetland or vernal pool; or</i></p> <p><i>4.4.3 - 30 feet of the top of any coastal or inland bank</i></p>	<p>4.4.1 – The Applicant requires this waiver to allow for a sewer pipe to cross the resource area to provide access to the rear leaching field. The Applicant will NOT need this waiver if the Town allows the Applicant to connect to municipal sewer.</p> <p>4.4.2 – The Applicant requires this waiver to allow for work to occur within 30 feet for sewer pipe crossing mentioned above. The Applicant will NOT need this waiver if the Town allows the Applicant to connect to municipal sewer.</p> <p>4.4.3 – only applicable if there is a section of intermittent stream flowing through the wetland to be altered, in which case the Bank would need to be delineated</p>
<p>B+T Comment:</p> <p>a) Necessity of relief: With respect to resource area impacts (Section 4.4.1), Riverfront area and potential (depending on availability of municipal sewers) BVW impacts appear to be required to achieve the Project design. Similarly, relief from the 30-foot No Disturb Zones (Sections 4.4.2 and 4.4.3) would also be required to perform the necessary crossings.</p> <p>b) Alternate methods of compliance: Unless an off-site upland route for the wastewater line is available to the Applicant, there does not appear to be another alternative for wastewater siting on-site given the configuration of the available uplands. Similarly, from a site access standpoint, it does not appear that the Applicant could shift the site entrance outside of the Riverfront Area without encroaching into the A-Series BVW.</p>		

<p>c) Adverse impact of approval: Given the snow cover at the time of the field review, it is unknown if relief from Section 4.4.3 would be necessary, and if so, Bank would need to be individually delineated as the Applicant notes. Collectively, waivers from Sections 4.4.1, 4.4.2, and 4.4.3 do not appear to signify adverse impact but will require conformance with the inland resource area performance standards of the Act when undergoing review before the MCC. Conformance with these performance standards will require additional documentation than what is included in the Comprehensive Permit Application (e.g., Riverfront Area Alternatives Analysis, Wildlife Habitat Assessment (depending on the context of Vernal Pool Habitat impacts), potentially stream crossing standards, etc.).</p>		
<p>Wetlands Bylaw Section 6.1: Applications and Fees</p>	<p><i>Except as provided in Section 5 hereof, a written NOI application shall be filed with the ConCom to prior to performing any activity affecting a Resource Area. The NOI shall include such information and plans as are deemed necessary by the ConCom to describe proposed activities and their effects on the Resource Area or Resource Area Buffer Zone. No activities shall commence without receiving and complying with a permit issued pursuant to this By-Law</i></p>	<p>This waiver relates to a procedural process. To the extent it requires additional burden beyond what is required in the Wetlands Protection Act, we would be asking for a waiver.</p>
<p>B+T Comment: The relief requested to Section 6.1 appears general in nature and regarding the permitting process. This section of the Bylaw is the regulatory mechanism which requires that an Order of Conditions (OOC) under the Bylaw be issued prior to work commencing within the MCC's jurisdiction.</p> <p>a) Necessity of relief: Regardless of whether this waiver is granted, an OOC issued by the Commission under the Act will be required for this Project. An OOC is a state permit issued by the Commission or, upon appeal, by MassDEP through a Superseding Order of Conditions (SOC) and is necessary for work within the 100-foot Buffer Zone, the potential BVW crossing, and for work within the 200-foot Riverfront Area. The Applicant is requesting a waiver from Bylaw requirements/standards that are in excess of those required by the Act, which seems to be in essence requesting a waiver from the full Bylaw. We recommend that the Applicant specify why such a broad waiver is necessary to construct and operate the Project.</p> <p>b) Alternate methods of compliance: Due to the fact that an OOC will be required under the Act, the Applicant has the opportunity to file concurrently for a state and local OOC. This concurrent filing is a common approach for wetland permitting in communities with a local wetland bylaw or ordinance. The most readily available alternative is to simply file concurrently and instead specify this waiver request to the standards of the Bylaw which specifically would prevent construction and operation of the Project.</p>		

- c) **Adverse impact of approval:** A wholesale waiver to Section 6.1 of the Bylaw could result in an inadvertent circumvention of the Bylaw itself as this addresses the requirement of a filing itself and the ability of the MCC to request information to perform a complete review. If the Proponent's concern is the discretionary language with regard to the information the MCC may request, then we note for the record that the Act mirrors this language throughout its implementing regulations. For example, the Commission has the ability to ask for materials:

(310 CMR 10.04) – Definition of 'Plans': *Plans means such data, maps, engineering drawings, calculations, specifications, schedules and other materials, if any, deemed necessary by the issuing authority to describe the site and/or the work, to determine the applicability of M.G.L. c. 131, § 40 or to determine the impact of the proposed work upon the interests identified in M.G.L. c. 131, § 40. (See also General Instructions for Completing Notice of Intent (Form 3) and Abbreviated Notice of Intent (Form 4).) Emphasis added.*

Wetlands Bylaw
 Section
 9: Permits and
 Conditions

This entire section grants the Commission authority to discretionarily deny the project.

This waiver relates to a procedural process. This section requires additional burden and higher a standard beyond what is required in the Wetlands Protection Act, we would be asking for a waiver. For example, an Alternative Analysis is required (among many other things) under the local bylaw and not required under the WPA

B+T Comment:

- a) **Necessity of relief:** Section 9 of the Bylaw is multifaceted and speaks to additional permitting requirements, the extent of the Commission's discretionary powers in permitting decisions, as well as several procedural/operational processes. B+T concurs that there are components of Section 9 which are suitable for a waiver request, although we caution against a blanket waiver to avoid a procedural misstep or inadvertent circumventing of the local permitting process. For example, while the Applicant may appropriately request a waiver to Section 9.10 which speaks to additional wildlife habitat studies beyond those required by the Act, it may not be appropriate to waive Section 9.12 *et seq* which relate to permitting procedures such as expiration dates.

<p>b) Alternate methods of compliance: B+T recommends that the Applicant specifically list which provisions of Section 9 of the Bylaw are requested to be waived in relation to allowing the construction and operation of the Project. We note for the record that additional documentation will be required for the Project by the Act, such as an Alternatives Analysis for Riverfront Area impacts.</p> <p>c) Adverse impact of approval: This can be evaluated once the waiver request is refined. At a minimum the Town may request the documents related to the appropriate resource area performance standards of the Act which are mirrored by the Bylaw. For example, an Alternatives Analysis for Riverfront Area impacts will need to be provided in conformance with the Riverfront Area performance standards (310 CMR 10.58(4)(c)).</p>		
<p>Wetlands Regulations Section 2.18: Definitions</p>	<p><i>“No Disturb Zone” means the thirty (30) feet horizontally landward of those Resource Areas included in Sections 2.18.1 and 2.18.2 in which there shall be no Alteration. The No Disturb Zone includes the area thirty (30) feet horizontally landward of: 2.18.1 - the edge of any salt marsh, freshwater wetland or vernal pool; or 2.18.2 - the top of coastal bank, or the top of the bank of any stream or river</i></p>	<p>The Applicant requires this waiver to allow for a sewer pipe to cross the resource area to provide access to the rear leaching field. The Applicant will NOT need this waiver if the Town allows the Applicant to connect to municipal sewer.</p>
<p>B+T Comment:</p> <p>a) Necessity of relief: If a tie-in to the municipal sewer system is not available, then at least temporary wetland impacts will be required to achieve the noted connection given the configuration of the available uplands. However, the requested waiver is from the definitions section, which does not in and of itself impose requirements. Therefore, we recommend that the Applicant evaluate whether the intended waiver request is instead from Sections 4.1 (which disallows certain alterations) and 4.4 (which specifies that adverse effect is presumed for alteration within 30 feet of certain resource areas).</p> <p>b) Alternate methods of compliance: If routing the pipe off-site or connecting with municipal sewer is not achievable, then an alternate method of compliance does not appear feasible given the anticipated size of the on-site treatment system to accommodate the number of proposed units.</p> <p>c) Adverse impact of approval: The Act provides the MCC with the ability to permit resource area disturbances subject to specific performance standards. Impacts will need to be quantified in terms of the temporality of impacts (permanent or temporary), and how they will be either replicated (if permanent) or restored (if temporary). We recommend that the Applicant clarify if and how they will restore the BVW and No Disturb Zones to pre-disturbance conditions.</p>		

Bylaw and Regulation Comments

2. The Applicant has not requested a waiver from the 50-foot No Build Zone as defined in Section 2.17 of the Bylaw's Regulations. B+T understands that the applicability of this No Build Zone may not be necessary if a waiver is granted to the 100-foot boundary extension to the MAHW of PVPs and CVPs. However, if this waiver request is needed, B+T recommends that the tabulated waiver requests be updated accordingly.
3. If BVW impacts associated with the directional drilling of the wastewater line are not temporary in nature, then wetland replication will be required under the Act and the Bylaw. If the design scenario envisions permanent impacts, we note that Section 9.4 of the Bylaw's Regulations requires a higher threshold of replication than what is required by the Act (unless a waiver is granted).
4. If a waiver to the 100-foot boundary extension of Vernal Pool boundary is not granted, the Applicant will be required to provide an Alternatives Analysis pursuant to the Vernal Pool Performance Standards in Section 9.7 of the Bylaw's Regulations.
5. The Applicant requests a waiver to Section 4.4.2 of the Bylaw as tabulated above. We note that this waiver request should also address Section 10 of the Bylaw's Regulations, which also provides language establishing the 30-foot No Disturb Zone and 50-foot No Build Zone.
6. It appears that the Site's hydrology as well as that of wetland resource areas may change due to increases in peak rates of runoff in the post-Project condition as compared to existing conditions. B+T notes that Section 2.2.2 of the Bylaw includes specific language for interpreting alterations with relation to drainage, flow patterns, flood retention, etc.

Wetland Resource Area Comments

7. Quantification of the proposed resource area impacts will be required prior to filing with the MCC. B+T recommends that these resource area impacts be quantified during this permitting stage to facilitate Project evaluation.
8. Quantification of the total on-site Riverfront Area and proposed impacts within the inner and outer 100 feet of Riverfront Area has not been provided at this time. Prior to submission to the MCC, these impact numbers will need to be itemized to assess compliance with the Riverfront Area performance Standards (310 CMR 10.58 *et seq*).

9. An Alternatives Analysis pursuant to 310 CMR 10.58(4)(c) will need to be included in supporting documentation when the Project is reviewed by the MCC, regardless of whether or not a waiver to the Alternatives Analysis required under the Bylaw is granted.
10. There are Critical Areas present on and proximate to the Site, including the watershed to a Coldwater Fishery and to the PVPs and CVPs. We recommend that the Applicant provide information as to how the Project will avoid impacts to these Critical Areas. Sawmill Brook, the designated Coldwater Fishery, according to the MA Division of Fisheries and Wildlife, is one of the few remaining waterways in northeastern Massachusetts with adequate water quality (namely temperature) to support a wild brook trout population. Such evaluation should include but not be limited to evaluation of potential water quality, including thermal, impacts to the brook from the stormwater and wastewater systems, for example, or avoidance thereof. If impacts are unavoidable, the Applicant should demonstrate why the need for this affordable housing Project outweighs such impacts.
11. Not all of the vernal pool boundaries constraining the development area are shown or delineated on the Plans. As much of the conversation surrounding the waiver request is based on the boundary of vernal pools as expanded by the Bylaw, these boundaries should be delineated to fully understand the necessity of the waiver request.

For planning purposes, B+T generally agrees with the approximation of Vernal Pool A North's southwest boundary (closest to the proposed wastewater line). Based on our field reconnaissance, there appears to be an elevated landform within the BVW between flags A27 and A50 that divides the vernal pool boundary from the southwest portion of the wetland system. This elevated landform is vegetated with mature eastern hemlock (*Tsuga canadensis*) and yellow birch (*Betula alleghaniensis*). B+T recommends that the unflagged vernal pool boundaries be delineated to the extent that they constrain the Project.



View from Flag A26 facing east of approximate vernal pool boundary defined by an elevated landform. Photograph dated February 9, 2022.

12. During the February 9, 2022 site visit, it was mentioned that the C-Series upland feature was determined to not qualify as ILSF. B+T recommends that the supporting ILSF calculations be provided to the Town to document that this feature does not qualify as a wetland resource area pursuant to 310 CMR 10.57 *et seq.* Based on the conditions of the soil and surrounding vegetation, B+T concurs that this topographic depression does not appear to qualify as an Isolated Vegetated Wetland.



*Left Photograph: View of C-Series upland feature facing north.
Right Photograph: Sample of B Horizon soil from auger pull.
Photographs dated February 9, 2022.*

13. The Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Maps (Panel Nos. 25009C0432G and 24009C0434G) depict a flood zone (Zone A; Base Flood Elevation Unknown) bounding the Property to the north. B+T recommends that the Applicant provide information evaluating whether a flood study is necessary to determine if the Zone A constrains the Property and reflect on the Plans.
14. A number of wetland flags are missing in the field or have fallen. We find that this is common for a wetland delineation that is a few years in age. As we are in general agreement with the wetland boundary where flags were missing (as referenced in the ORAD), B+T recommends that any absent flagging be re-hung prior to construction.
15. Based on our February 9, 2022 field review, it appears that an intermittent stream flows south from the B-Series wetland which is currently mapped as ILSF and a CVP. It appears that this intermittent stream feature was originally delineated as part of the ORAD process (Plan Date September 21, 2020 from Allen & Major Associates, Inc.) with flags B-14 through B-24, but does not appear to be explicitly indicated in the ORAD as confirmed. We recommend that the Bank of this intermittent stream exiting the wetland system be accounted for as part of the contemporary delineation. We further recommend that this B-Series wetland resource area be recognized on the plans as BVW given its association with this surface water feature (see 310 CMR 10.55(2)(a)).



*Left Photograph: View facing south of intermittent stream existing the B-Series Wetland.
Right Photograph: View facing northwest of intermittent stream proximate to B-23.
Photographs dated February 9, 2022.*

Development Plans and Additional Site Comments

16. Based on the plan notes (Sheet C-104), directional drilling appears to be the preferred option for crossing the A-Series BVW. Will this drilling require disturbance to the surface of the BVW? Will the potential for ledge or glacial erratics impact the viability of directional drilling? And if drilling is the confirmed strategy, will this impact the subsurface hydrology of the BVW with relation to the Vernal Pool Habitat?
17. Given the significant presence of PVPs and CVPs within and bounding the Property, we recommend the Applicant consider time-of-year restrictions for certain activities which may impact Vernal Pool Habitat, such as the directional drilling of the A-Series BVW.



*View facing northwest from Flag A-46 (proposed leaching connection).
Photograph dated February 9, 2022.*

18. B+T recommends that the Applicant include an invasive species management plan with respect to the Japanese knotweed (*Fallopia japonica*) on-site. Sheet C-101 (the Erosion Control Plan) denotes soil stockpiles to be centrally located on-site. If soil material from the proposed construction entrance (near the knotweed growth) is stored in these stockpile locations and handled elsewhere on-site, there is an opportunity for the knotweed to propagate in other portions of the Site that are undisturbed by this noxious species in pre-project conditions. These rhizomes are relatively disturbance tolerant and can spread vigorously when translocated.
19. We recommend that the Applicant evaluate whether snow storage areas can be maintained outside of areas subject to Conservation Commission jurisdiction, particularly the Riverfront Area and vernal pool areas.

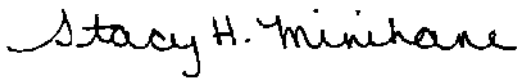
20. We recommend that the Applicant consider using native non-cultivars in the landscape design, but at a minimum that only native non-cultivars be planted within areas subject to Conservation Commission jurisdiction.
21. As noted in our Engineering peer review letter dated March 4, 2022, we understand that the wastewater treatment facility will be subject to review by the Board of Health. We recommend that the Applicant provide documentation or confirmation that the wastewater treatment facility will meet applicable regulatory requirements, particularly with regard to water quality.
22. We recommend that the Applicant provide documentation indicating that the hydrology of the vernal pools will not be altered by the Project.
23. We recommend that the Applicant document the need for both leaching areas, and if two are necessary, evaluate whether the southeasterly field can be relocated to the main limit of work. If not, the plans should be updated to reflect the impacts associated with the leaching field, which are not currently shown (e.g. tree clearing, grading).
24. We recommend that the viewport of Sheet L-200 be updated to depict the full limit of work, in order to ensure understanding of where lawn vs. meadow mix is proposed.
25. We recommend that the Applicant describe how wildlife corridors are being maintained, or if they are not, evaluate maintaining wildlife corridors across the Site, particularly between the southerly wetland system and northerly Sawmill Brook system.
26. We recommend that the Shadow Studies depicted on Sheet A800 also show existing conditions as well as sensitive environmental receptors (vernal pools, Sawmill Brook) to facilitate evaluation of potential impacts.

Ms. Sue Brown, Town Planner
Manchester-by-the-Sea
March 7, 2022
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We thank you for the opportunity to assist the Town of Manchester-by-the-Sea with the environmental review of this Chapter 40B Comprehensive Permit. We anticipate participating in the March 9, 2022 public hearing with the Manchester-by-the-Sea Zoning Board of Appeals based on the review schedule at the time of this letter's issuance. Should you have any questions, please do not hesitate to contact our office.

Very truly yours,

BEALS AND THOMAS, INC.



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