



September 5, 2022

**BY ELECTRONIC MAIL: permitting@hamiltonma.gov
AND BY FIRST CLASS MAIL**

Hamilton Zoning Board of Appeals
Hamilton Town Hall
577 Bay Road
Hamilton, MA 01936

Re: Application for Comprehensive Permit – Off Asbury Street, Hamilton

Dear Members of the Board:

As you know, this firm represents residents of the Village at Canter Brook Farm (the “Neighbors”), which abuts the site of the above-referenced proposed housing development project. I am writing to follow up on my last letter of August 3, 2022, and to address the Project’s hydrology impacts in particular. In short, the Project as currently designed does not meet the Town’s Groundwater Protection Overlay District requirements, and does not appear to even meet state law performance standards governing septic systems. The Board should demand a thorough explanation from the Applicant as to how this Project will meet these standards, failing which the Board should deny the comprehensive permit.

I. The Project’s Septic System Does Not Comply with State and Local Legal Requirements.

The proposed Project Site is located in a Zone II wellhead protection area under the state Clean Water Act. A Zone II is a geographically-defined area that is tributary to a public water supply, in this case, a Town of Hamilton well field located off of Pine Tree Drive and within the Ipswich River Wildlife Sanctuary. Water that is recharged into the ground and that eventually mixes with existing groundwater within a Zone II, including natural precipitation and wastewater recharged through septic systems, eventually flows towards the wells that the Zone II protects. The Town of Hamilton has designated Zone II areas as being part of the Town’s Groundwater Protection Overlay District (“GPOD”) under the Zoning Bylaws (Section 9.1). Under Section 9.1.9(3), the Bylaw mandates that “any use that will render impervious more than fifteen (15) percent or twenty-five hundred (2,500) square feet of any Lot, whichever is greater” requires a special permit. The Bylaw further states that “a system for groundwater recharge must be provided which does not degrade groundwater quality.” (emphasis added).

A. The Project Violates the Town's GPOD Bylaw.

Under the Bylaw a property owner may obtain permission to exceed the 15% impervious coverage cap by demonstrating that the Bylaw's performance standard of no degradation of groundwater quality can be satisfied. Here, the Applicant is seeking a waiver from the GPOD Bylaw, to create 60,525 square feet of impervious area, amounting to 28.4% of the project site (4.89 acres). This is almost double the maximum amount of impervious coverage allowed under the Bylaw. We are not aware of any scientific analysis performed by the Applicant, such as a nitrogen loading model, that would support the Applicant's supposed contention that its Project will not degrade groundwater quality notwithstanding such an extreme divergence from the Town's standard.

Protection of groundwater was a major concern in the permitting of the Canter Brook senior housing development, abutting the Project Site, in 2015-2016. The Canter Brook project was approved by the Hamilton Planning Board for 23 units on 14 acres (density of 1.6 units per acre). By comparison, the Applicant is seeking an approval for 45 units on 4.89 acres (9.2 units per acre). Both projects are within the GPOD and are served by on-site septic systems.

B. The Project Violates the Nitrogen Loading Restrictions under Title 5.

The Project's septic system also requires a permit from the Hamilton Board of Health under Title 5 of the State Environmental Code. In recognition of the sensitivity of Zone II areas, Title 5 limits the amount of wastewater that can be discharged in Zone II areas to 440 gallons per day, per acre, or 550 gallons per day for enhanced Nitrogen removal septic systems.¹ According to the application, the Project's 45 housing units will have a total of 90 bedrooms, which equates to a septic system design flow of 9,900 gallons per day (110 gpd/bedroom). The Project Site contains 213,008.4 square feet, or 5.45 Title 5 acres. The resulting septic system flow for the Project is 1,816.51 gpd/acre (213,008/5.45).

Title 5 allows property developers to exceed the 440 gpd/acre limitation by restricting land it doesn't own ("non-facility credit land") that is within the same zone of contribution to the well protection area, and then aggregate the land area of this credit land with the land for the Project. The Applicant stated in its application filed with the Board that it intends to avail itself of the "facility aggregation plan" provisions of Title 5, which are Section 15.216(5) of the state regulations, and the "Guidelines for Aggregation of Flows and Nitrogen Loading under 310 CMR 15.216," published by the state Department of Environmental Protection ("DEP"). Under Title 5, a design flow of 9,900 gpd would need at least 22.5 acres of land to meet this standard. Thus, the Project would need at least 17.05 Title 5 acres of "credit land" if the Applicant wishes to avail itself of this provision.

There are many requirements and conditions associated with using credit land to meet an aggregate Nitrogen loading equivalency of 440 gpd/acre. Specifically, and as applicable to this Project:

¹ Under Title 5, an "acre" is defined as being 40,000 square feet.

- The Project's wastewater discharge cannot cause an exceedance of 10 mg/liter of Nitrogen at the downgradient boundary of the credit land, or at a tributary to a drinking water reservoir;
- The credit land must be in the same Nitrogen Sensitive Area (i.e., Zone II) as the septic system facility;
- The credit land must be "downgradient" from and adjacent to the facility containing the leaching fields;
- The restriction on the credit land must prohibit the use of nitrogen-based fertilizer and livestock husbandry.
- The credit land must be dry – it cannot be located undersurface water (wetlands do not provide any recharge for dilution); and
- The restriction on the credit land must be enforceable by the Town in perpetuity.

The Applicant has not provided any evidence that it can meeting any of these criteria. A proposed "Facility Aggregation Plan" was included in the application package filed with the Board on March 10, 2022, but the details are not legible - the resolution of the plan is too blurry. We have repeatedly attempted to obtain a legible copy of this plan from the Applicant, to no avail. It appears that the proposed credit land would be to the west of, but not abutting, the Project Site.² The area where the credit land is proposed is shown on the state's GIS maps as being predominantly wetland. Further, the plan does not demonstrate that the credit land is "downgradient" from the proposed leaching field; it may be, but the Applicant has provided no groundwater flow direction analysis. Nor has the Applicant provided a "mass balance analysis" under the Title 5 "Guidelines," demonstrating that the 10 mg/l Nitrogen loading standards can be met at the property boundary shared with the credit land.³ Presumably, the farmer who owns the Project Site and the land surrounding it did not offer to make the abutting land available for credit land, since doing so would limit the productive use of the remaining fields.

C. The Project Violates a Conservation Restriction Held by Essex County Greenbelt.

Significantly, the Applicant is proposing a primary and secondary leaching field in an area where no test pits have been dug (or at least no test pit data has been filed with the Board), and on a portion of the Project Site that is encumbered by a conservation restriction that specifically precludes such uses. The Applicant's site plan clearly delineates the boundaries of the "restricted area," and concedes that the leaching fields are within this restriction area. The total land area that is subject to the Conservation Restriction is 58.69 acres. The restriction (copy attached as Exhibit A) specifically prohibits:

- (c) excavation... in such a manner as to alter the surface topography of the Restriction Area;
- (d) Any development or other improvement for purposes of residential, commercial, industrial or institutional use;

² Your peer review engineer stated in his letter dated August 31, 2022 that the credit land is "adjacent to" the Project Site, but that is not reflected on the blurry plan provided by the Applicant.

³ As noted above, it does not appear that the Project Site shares a property boundary with the credit land.

(f) Activities detrimental to... water or soil conservation.

The discharge of 9,900 gallons of wastewater per day on the Restriction Area clearly violates the terms of the Conservation Restriction. The Restriction is held by the Essex County Greenbelt Association. The Applicant has provided no evidence that the Greenbelt has consented to the proposed use of the Restriction Area, even if it could.

II. Recommendations

We respectfully request that the Board demand a scientific justification from the Applicant for is requested waiver from the GPOD, and a thorough explanation for how the septic system will comply with Title 5. The Board should demand that a legible copy of the Facility Aggregation Plan be filed, and should solicit the Board of Health's comments on this proposal.

As I stated in my letter last month, there are a number of well-established methods to analyzing groundwater impacts from artificial recharge facilities such as these. For starters, the Applicant should conduct a groundwater mounding analysis to evaluate the overlapping and cumulative impacts of the wastewater and stormwater recharge systems on the site. The Applicant should also perform a Nitrogen and Phosphorus loading model to measure the pollutant loading impact from these systems on the groundwater. Such studies typically employ the MODLOW software modeling program, designed by engineers at the United States Geological Survey.

The Applicant should also address the material impervious area discrepancy between its latest waiver request (60,525 sf) and its original application filed in March (47,933 sf), which I raised in my last letter.

Finally, the Neighbors have retained a hydrologist, Scott Horsley, to review and comment on the Project's likely environmental impacts. Mr. Horsley is an expert at groundwater modeling and evaluating impacts from recharge systems, such as septic systems and stormwater infiltration facilities. Mr. Horsley will be providing a letter this week, commenting on the Project's nonconformities with Title 5 and the state Stormwater Management Handbook.

Thank you for your consideration.

Very truly yours,

/s/ Daniel C. Hill

Daniel C. Hill

Enc.

cc: Clients
Board of Health
Applicant

EXHIBIT A

PLAN

W:\MPO\TA\MT\05100001\CONSER.05\October 28, 1993

SE. PL 3. 285

PL 89

PLAN

CONSERVATION RESTRICTION

11/01/93 11:57 Inst 439

BK 12215 PG 189

B.12346
P. 489

The undersigned, RUTH ELLEN PATTON TOTTEN, of Hamilton, Essex County, Massachusetts, in consideration of One Dollar (\$1.00) and other good and valuable consideration, hereby grants, without covenants, to ESSEX COUNTY GREENBELT ASSOCIATION, INC., a Massachusetts not-for-profit corporation having its principal office at 82 Eastern Avenue, Essex, Essex County, Massachusetts 01929, a Conservation Restriction on a parcel of vacant land containing 58.5351± acres, more or less, located off Asbury Street and Highland Street in the Town of Hamilton, Essex County, Massachusetts (the "Restriction Area"), all as shown on a plan entitled "Plan of Land in Hamilton, Mass. -- Property of Ruth E.P. Totten", dated March 22, 1989, scale 1" = 100', drawn by Hancock Survey Associates, Inc. (the "Plan") recorded herewith.

Said Ruth Ellen Patton Totten and her successors in title to the Restriction Area are hereinafter called the "Grantor" and Essex County Greenbelt Association, Inc. and its successors and assigns are hereinafter called the "Grantee".

WHEREAS, the Plan and the Baseline Documentation for this Conservation Restriction entitled "Conservation Restriction (Baseline Documentation)", prepared by Grantee, dated May 1, 1992, as executed by Grantor and Grantee and all exhibits thereto including the aerial photographs taken in 1988, identified as "Col-East 8931-10.29 1988 Color Oblique #1, 1988 Color Oblique #2" (the "Baseline Inventory"), show that the Restriction Area is an open, natural and undeveloped parcel of land which is frequently used by others for hiking, horseback riding and bird watching;

WHEREAS, the Restriction Area directly abuts other land of the Grantor presently under conservation restriction and is proximate to several other large tracts of publicly and privately held open space including Bradley W. Palmer State Park to the north, Wenham Swamp to the south and Ipswich River to the west;

WHEREAS, the Restriction Area fronts on Asbury Street and Highland Street, each classified by the Town of Hamilton as a "scenic road" pursuant to Section 15C of Chapter 40 of the General Laws of Massachusetts;

WHEREAS, the Restriction Area and surrounding areas with views of and from the Restriction Area are classified as "distinctive" and "noteworthy" landscapes under the Massachusetts Landscape Inventory, a survey of the Commonwealth's most scenic areas prepared and published by the Massachusetts Department of Environmental Management;

WHEREAS, the Restriction Area has been selected by the Town of Hamilton for inclusion in the Massachusetts Bay Circuit, as established by the Massachusetts Department of Environmental Management pursuant to Chapter 631 of the Acts of 1956 and the study of which was funded pursuant to Chapter 233, Section 37 of the Acts of 1984;

WHEREAS, the Restriction Area is identified on the "Lands of Conservation Interest" map of the Hamilton Conservation Commission;

NOW, THEREFORE, in order to protect and preserve the Restriction Area in perpetuity for conservation purposes, and thereby provide significant scenic, aesthetic, scientific, educational and recreational values to the public generally, the Grantor has given to Grantee this Conservation Restriction within the meaning of Chapter 184, Sections 31 through 33 of the General Laws of Massachusetts.

The terms of this Conservation Restriction are as follows:

1. Prohibited Activities. Except as otherwise herein provided, or expressly permitted by Grantee in writing, the Grantor shall not conduct or carry out nor permit others to conduct or carry out any of the following activities on the Restriction Area:
 - (a) Construction or placing of any buildings, mobile homes, roads, signs, billboards or other advertising, utility poles and wires or other structures (temporary or permanent) on or above the ground;
 - (b) Dumping or placing of soil or other substances on the ground as landfill, or dumping or placing of vehicle bodies or parts, junk, trash, solid or chemical waste or unsightly or offensive materials;
 - (c) Excavation, dredging or removal of loam, peat, sand, gravel, soil, rock or other mineral substances or natural deposits in such manner as to alter the surface topography of the Restriction Area;
 - (d) Any development or other improvement for purposes of residential, commercial, industrial or institutional use;
 - (e) Use of motorized vehicles of any nature or kind (including but not limited to cars, trucks, motorcycles, all-terrain vehicles and skidobiles), except such as may be necessary in the exercise of the Grantor's reserved rights or for property maintenance, security patrol or to fight fire;

- (f) Activities detrimental to flood control, water or soil conservation or erosion control; or
- (g) Other acts or uses which in the reasonable opinion of the Grantee are detrimental to preservation of the Restriction Area in an open and undeveloped condition.

2. Reserved Rights. Notwithstanding anything contained in Paragraph 1 above, the Grantor shall have the right to conduct or permit the following activities in the Restriction Area, subject to all applicable laws then in effect:

- (a) All forms of agriculture, silviculture, horticulture, and floriculture, as commonly construed, on a commercial basis or otherwise, including but not limited to the following:
 - (i) the cultivation and harvesting of crops, flowers, berries, hay and other plant products and the production of compost materials in accordance with recognized natural resource conservation and farm management practices;
 - (ii) the cultivation and harvesting of timber, firewood and other wood products in accordance with recognized natural resource conservation and forest management practices;
 - (iii) the raising and grazing of livestock in accordance with recognized natural resource conservation and animal husbandry practices;
 - (iv) hunting and trapping of wildlife; and
 - (v) the making of non-structural improvements, including but not limited to the erection of fences and creation of open water ponds, in furtherance of the foregoing activities, provided, however, that any such fence shall not exceed four feet in height, shall be constructed only of wood, stone or other natural material, and shall, if more than two feet in height, be of a split rail or other sight pervious design such that the view of the Premises available to persons passing by foot or automobile on Asbury Street and Highland Street is preserved to the maximum extent possible.
- (b) The maintenance of the Restriction Area including, without limitation, the planting, selective cutting and pruning and periodic mulching with organic matter of trees, shrubs, brush or other vegetation to improve the

scenic view and to implement disease prevention measures, provided all such cut vegetation shall be removed promptly from the Restriction Area;

- (c) The installation, maintenance, replacement and use of underground utilities, for the transmission of water, sewage, gas, telephone, electricity and other such utilities, provided that the area served by such utilities shall be limited to adjoining land owned by the Grantor's, and provided further that the surface of the Restriction Area shall so far as practicable be restored to the same condition that it was in prior to the disturbance thereof;
- (d) Activities designed to enhance the ecological, scenic, or natural historical values of the Restriction Area, or to enhance the awareness of such values, including but not limited to the creation of footpaths, the placement of informative signs, benches, small shelters and the like; and
- (e) Such other activities as are consistent with the purposes of this Conservation Restriction.

3. Access by Grantee. Grantee through its duly designated officers, directors, members, employees or agents shall have the right to enter the Restriction Area at reasonable times and in a reasonable manner for the purpose of inspecting the Restriction Area, ensuring compliance with the terms of this Conservation Restriction and preventing, abating or remedying any violations thereof. Grantee shall save the Grantor harmless and indemnify her from all injury, loss, claims, and damage to any person or property arising from the exercise by Grantee, or any person acting by, through or under Grantee, of any rights granted by this instrument, unless arising from any omission, fault, negligence or other misconduct of the Grantor.

4. Use By Others. Except as provided in the foregoing paragraph, no rights to enter the Restriction Area are given hereby to Grantee, the public generally, or to any other person. Notwithstanding the above, the Grantor recognizes that certain trails located within the Restriction Area are presently used by other persons to pass and repass by foot, horseback, snowshoe and cross country ski for purposes of quiet outdoor recreational and educational activities, and the Grantor hereby directs that such activities be allowed to continue, provided: (a) that any such activity shall be limited to daylight hours only; (b) that all such activities shall be confined within the limits of established trails; (c) that no motor vehicles of any kind shall be permitted; (d) that no hunting, trapping or discharge of firearms shall be conducted; and (e) that no activity of a commercial nature shall be allowed. This devise is, however,

expressly subject to the right of the Grantor (i) to post periodically the Restriction Area against entry and take such other measures as are necessary and appropriate to prevent the ripening of prescriptive rights in the Restriction Area, and (ii) to alter the location of existing trails within the Restriction Area, provided that as so relocated, access to and passage through the Restriction Area is not substantially impaired. M.G.L. c. 21, §17C provides certain limitations on liability occasioned by the public's access to land which is the subject of a restriction of this nature. Neither the Grantor nor Grantee shall have any duty to maintain the Restriction Area or warn persons who may enter upon the same, unless otherwise required by law.

5. Assignment by Grantee. The benefits of this Conservation Restriction shall be deemed to be in gross and Grantee and its successors and assigns shall have the right to assign its right, title and interest hereunder to a "governmental unit" within the meaning of Section 170(c)(1) of the Internal Revenue Code or to a "qualified organization" as defined in Section 170 (h)(3) of the Internal Revenue Code provided that, as a condition of such assignment, the assignee is capable and committed to hold this Conservation Restriction and to enforce its terms for conservation purposes.

6. Representations of Grantor and Grantee. Grantor represents that she is the sole owner of the Restriction Area and that there are no prior easements, reservations, restrictions, mortgages or other encumbrances or record affecting the same. Grantee represents that it is a not-for-profit corporation, that it has a perpetual existence, that it is organized and operated for the purpose of preserving and conserving natural resources, natural habitats, environmentally sensitive areas and other charitable, scientific and educational purposes, that it has both the necessary funds and commitment to hold this Conservation Restriction exclusively for conservation purposes in perpetuity and to enforce its terms, and that it qualifies as a "Qualified Organization" as that term is defined in Section 170(h)(3) of the Internal Revenue Code of 1954, as amended.

7. Required Notifications. The Grantor shall notify Grantee in writing before conveying the Restriction Area, or any part thereof and before exercising any right reserved to her hereunder which may adversely affect the conservation interests associated with the grant of this Conservation Restriction. Grantee shall notify the Grantor in writing in the event that it assigns this Conservation Restriction.

8. Eminent Domain. In the event that all or any portion of the Restriction Area is taken by eminent domain or judicial proceedings in the nature of eminent domain so as to extinguish the restrictions imposed hereunder, the Grantor and Grantee shall

fully cooperate in such proceedings to recover the full value of the interests taken and all incidental or direct damages resulting from the taking. All expenses incurred by the Grantor and Grantee in such action shall be paid out of the recovered proceeds. The remaining recovered proceeds (including, for purposes hereof, proceeds from any lawful sale of the property unencumbered by the restrictions hereunder) shall be distributed to the Grantor and Grantee in shares proportional to the fair market value of their interests in the Restriction Area on the effective date of this Conservation Restriction. For this purpose, Grantee's interest shall be the amount, expressed as a percentage interest, by which the fair market value of the restricted land immediately prior to this devise is reduced by the restrictions imposed hereby. Grantee shall use its share of the proceeds in a manner consistent with the conservation purposes set forth herein.

9. Binding Effect; Enforcement. The burdens of this Conservation Restriction shall be deemed to run with the Restriction Area and shall be enforceable against the Grantor and her successors in title in perpetuity. This Conservation Restriction shall be in addition to and not in lieu of any other restrictions or easements of record affecting the Restriction Area. Nothing contained in this Conservation Restriction shall impose on Grantee any duty to maintain or require that the Restriction Area be maintained in any particular state or condition, notwithstanding its acceptance hereof.

In the event that a breach of this Conservation Restriction by the Grantor or by a third party comes to the attention of Grantee, it shall notify the Grantor in writing of such a breach. The Grantor shall, within 30 days after receipt of such notice, undertake actions reasonably calculated to cure the conditions constituting such a breach. If the Grantor fails to take such corrective action, Grantee may at its discretion undertake any and all actions reasonably necessary to cure said breach. In addition, Grantee shall have the right to enforce this Conservation Restriction by proceedings at law or in equity. In the event a court of competent jurisdiction decrees that the Grantor is responsible for a breach of this Conservation Restriction, the Grantor shall bear the cost of corrective action, including repair or restoration as appropriate, and shall reimburse Grantee for legal fees incurred in the enforcement of this Conservation Restriction.

10. Recording; Effective Date. This Conservation Restriction may be recorded prior to approval thereof by the Selectmen of the Town of Hamilton and by the Secretary of Environmental Affairs, or either of them and, if so recorded, shall be re-recorded when such approvals have been obtained. Such approvals shall be effective as of and shall relate back to the date of this instrument.

Inasmuch as there is no monetary or other consideration of substance for this Conservation Restriction, no Massachusetts documentary stamps are affixed hereto.

Executed under seal in triplicate this 29th day of October 1993.

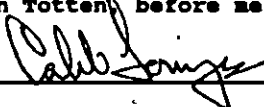
Ruth Ellen Patton Totten
Beatrice Totten Britton, Attorney in fact
 Ruth Ellen Patton Totten
 by Beatrice Totten Britton pursuant to a
 Durable Power of Attorney dated June 27,
 1991 to be recorded herewith

COMMONWEALTH OF MASSACHUSETTS

Essex, ss.

October 29, 1993

Then personally appeared the above-named Beatrice Totten Britton and acknowledged the foregoing instrument to be the free act and deed of Ruth Ellen Patton Totten before me



Notary Public

My commission expires: 10/10/1997

ACCEPTANCE

Essex County Greenbelt Association, Inc. hereby accepts this Conservation Restriction and agrees to be bound by its terms.

Essex County Greenbelt Association, Inc.

Date: 10/29/93 By: Elise Cunningham
 hereunto duly authorized

