

VERMONT ENVIRONMENTAL BOARD
10 V.S.A., Chapter 151

RE: Houston Farm Associates by Findings of Fact and
George Stearns, Esq. Conclusions of Law
Stearns & Thorndike and Order
P.O. 1228 Land Use Permit
Stowe, VT 05672 #5L0775-EB

This decision pertains to an appeal filed with the Environmental Board (Board) on May 29, 1985 by Landmark Meadow, Inc., Dorothy Nelson, Anton and Pamela Flory, and Victor and Mary Coty (Appellants) from the District #5 Environmental Commission's Land Use Permit #5L0775 dated April 30, 1985, issued to Lawrence Rossi. Land Use Permit #5L0775 authorized the Permittee to construct a 12 unit condominium project, with on-site water and waste disposal systems, on a 7.3 acre tract of land adjacent to Route 108 in Stowe, Vermont. An initial prehearing conference was held on June 17, and a Prehearing Conference Order was issued on June 18. By agreement of the parties, the Board stayed the appeal proceedings.

On September 2, 1986, the Board was advised that Mr. Rossi had sold the property to Houston Farm Associates (Applicant), and that the new owners wished to reactivate the proceedings. A second prehearing conference was convened by Chairman Darby Bradley on October 3 in Montpelier and a Prehearing Conference Report and Order covering only the issue of party status of the Appellants under specific criteria was issued on October 8. After the Appellants notified the Board that they were withdrawing their appeal under Criteria 1(D), 2, and 3, Chairman Bradley issued a Supplementary Prehearing Conference Report and Order on November 13.

On January 7, 1987, the Board convened a public hearing in this matter. At the hearing the Stowe Planning Commission requested a 30 day continuance in order to determine the feasibility of conducting a study of whether an aquifer in the area of the proposed project exists. On January 14, the Board issued a Memorandum of Decision in which it denied the Planning Commission's request. At the January 7 hearing the Appellants produced evidence that raised a doubt about the existence of a continuous silt-clay layer underlying the area of the proposed leachfields. In its January 14 Memorandum of Decision the Board ruled that the Appellants had rebutted the Rule 19 presumption that the Certificate of Compliance satisfied Criterion 1 and provided an opportunity for the Applicant to do additional testing.

On January 21, the Board reconvened the public hearing and also took a site visit. During that hearing the Appellants filed a motion to exclude the new evidence gained from the Applicant's site drilling on January 14-16. On January 26 the Board issued a Memorandum of Decision and Order in which it

denied the Appellants' motion and provided an opportunity to the Appellants to do independent testing at the Applicant's site. The proceedings were reconvened again on February 10. After hearing the remaining evidence, the Board recessed the hearing pending the filing of proposed findings of fact and conclusions of law and a review of the record and deliberation by the Board.

The following parties participated in the hearings:

Applicant by George Stearns, Esq.
Appellants by Harold Stevens, Esq.
Stowe Town and Village Planning Commission by Dea
Brickner-Wood
Lamoille County Development Council by Anthony Ciaraldi

On February 25, the Appellants filed their Request for Findings of Fact and Conclusions of Law, and on February 27, the Applicant filed its proposed Findings of Fact and Conclusions of Law.

Following Board deliberations on March 18 and April 8 and 22, the Board determined the record complete and adjourned the hearing. This matter is now ready for decision. The following findings of fact and conclusions of law are based upon the record developed at the hearing. To the extent that the Board agreed with and found necessary any findings proposed by the parties, those findings have been incorporated herein; otherwise, said requests to find are hereby denied.

I. ISSUES IN THE APPEAL

The Appellants brought this appeal under Criteria 1(B) (waste disposal), 1(E) (streams), 8 (aesthetics), 9(B) (primary agricultural soils), and 10 (town plan). The Appellants asserted that the septic system for the project may contaminate an aquifer underlying the area, neighboring wells, and the West Branch River, and that a brook bordering the project on the east side will overflow and flood the leachfield; that the project would have an undue adverse effect upon the aesthetics and scenic and natural beauty of the area; that the project site contains primary agricultural soils and that the project does not comply with the subcriteria of this criterion; and that the project does not conform with the 1972 Stowe Town Plan, as revised and readopted in August, 1985.

II. FINDINGS OF FACT

A. The Project

1. The site of the proposed project is a 7.3 acre meadow bounded on the west by Route 108 and the West Branch River across the road; on the north by the Houston Farm Road; on the east by the Sugar House Road and a row of pine trees in front of a wooded hillside; and on the south by a meadow owned by Ramsey Associates. A row of pine trees runs along a portion of the northern boundary at Houston Farm Road. A small stream runs along the southeasterly boundary of the property. A white farmhouse and a red barn-like structure are located on the southwest corner of the property. The mean height of the existing pine trees along the eastern boundary is 30'.
2. The Town of Stowe has zoned the property "Highway-Tourist," which permits multi-family dwellings at a maximum density of three units per acre.
3. The Applicant proposes to build 12 three-bedroom, two-story condominium units in three separate buildings clustered at the southeast portion of the property. Building A will consist of four units, Building B of five units, and Building C of three units. The buildings will be 28' from the slab to the highest peak point. The heights of the rooflines of the buildings will vary. The buildings will be light beige with darker beige trim and pilgrim red sashes, with cedar shingle roofs.
4. An L-shaped swimming pool and cabana will be located in the southeast corner of the property. The front of the units will face northwest to the meadow and far views of Mt. Mansfield. A pond has been proposed to be located in the meadow in front of the buildings.
5. Access to the buildings will be from Route 108 on a new gravel driveway beginning close to the southwest corner and continuing easterly to parking areas at the backs of the buildings. The driveway will be lined with sugar maples. The existing entrance onto Route 108 currently used by the house and barn will be eliminated and these buildings will be served by the new driveway. The Applicant has proposed to plant a row of white pine trees along the Sugar House Road to connect the existing lines of trees, and another row of white pine trees on the boundary with the Ramsey property south of units 1-9 and the pool.
6. Propane gas tanks will be buried and the utilities will be located underground. The outdoor light fixtures will all be directed downward.

B. Criteria 1(B) (Waste Disposal) and 1(E) (Streams)

7. The groundwater in the vicinity of the proposed leachfield flows in a westerly and southwesterly direction to the West Branch River.
8. The project will be served by a drilled well in the northeast corner of the property. Vermont Department of Health approval for the well has not yet been issued.
9. The proposed sewage disposal system will consist of subsurface leachfields designed to accommodate 4800 gallons per day (gpd) of septic tank effluent. The leachfield will consist of two 56' x 90' seepage fields, referred to as field A and field B, located in the northwest corner of the property. Each field is adequate to handle the full 4800 gpd due to the State requirement for a dual, alternating system, each of which is capable of handling the full sewage flow. The leachfields will be alternated yearly.
10. Five tanks are planned to be located in front of the buildings. Two of these will serve as pump stations. The tanks will be made of reinforced concrete with watertight construction, and the land above the tanks will be graded to enable surface runoff to flow away from the area.
11. The sewerlines between the buildings, the septic tanks, and the pump stations will all be made of watertight PVC and it is unlikely that there will be any infiltration of ground water.
12. The occasional flooding of portions of the property in the spring does not occur in the area of the leachfield.
13. During the spring of 1984, four test pits were dug and monitored. The separation distance between the bottom of the leachfield and the water table meets the State standard of a minimum of 3 feet, except that approximately 5% of field B will rest upon the top of the underlying gravel layer. The septic system was designed to take into account the level of the water table.
14. The Department of Water Resources issued a Certificate of Compliance for the project on February 6, 1985. Approval of the sewage disposal system was contingent upon additional monitoring in the spring to determine whether a perched water table existed in the upper sand layer. Six shallow groundwater monitors installed and checked weekly from March 1 through May 31 revealed no water in the upper sand layer.

15. Issuance of the Certification was based upon the assumption that a continuous silt-clay layer underlies the area of the leachfield that would direct the flow of effluent horizontally and prevent the effluent from percolating downward into the deeper gravels and the groundwater.
16. To confirm the presence and thickness of the silt-clay layer underlying the area of the proposed leachfield, the Applicant undertook additional subsurface investigation on January 14, 1987. Eight test pits in the vicinity of the proposed disposal fields were excavated to depths of 19 to 21.5 feet below ground surface, and a bore hole was drilled to a depth of 65 feet.
17. Based upon the Applicant's original data plus additional excavation in the area of the proposed leachfield, the Board finds that a layer of silt-clay or silty-sand exists, at depths ranging from 11.3' to 14.2' below ground surface; that the thickness of this layer is at least 6.3' to 9.1' and is probably greater than 50' thick, based upon the 65' bore hole. The material has low permeability, and this layer of low permeability material is continuous beneath the project site.
18. Because the underlying layers have low permeability, any downward migrating effluent will be well renovated before it reaches any aquifer that may exist below the silt-clay layer. The estimated travel time through the known 50' of material would be approximately 0.3 years per vertical foot of thickness or at least 15 years. Any effluent that may leach through the layer would not result in pollution of any aquifer underlying the area.
19. The effluent will move horizontally in a westerly and southwesterly direction to the West Branch River.
20. The existing in-stream concentration of nitrate in the West Branch River is .42 mg/1 and the concentration of phosphorus is .006 mg/1 (based on a phosphorus removal rate of 99%). Any effluent entering the river will be well mixed both by the mixing that occurs in the groundwater and the effect of the moving water in the river. Calculations on the expected nitrate and phosphorus loading to the river from the effluent to be generated by this project, based upon a 7Q10 flow, which assumes severe drought conditions, indicate that the nitrate concentration would increase to .512 mg/1 and the phosphorus concentration would increase to .0063 to .0086 mg/1.

21. The West Branch River is phosphorus-limited, so the addition of nitrate at this concentration is unlikely to result in any change in water quality.
22. The in-stream phosphorus concentration is significantly below the State in-stream standard of **.015 mg/l** and is unlikely to cause increased algae growth.
- c. Criterion 8 (Aesthetics)
 23. The Applicant proposes to locate additional plantings along the northern and eastern property lines to replace any damaged eastern white pines, to provide screening along Sugar House Road and the boundary of the Ramsey property, and to plant red maples and apple serviceberries adjacent to the buildings. The planting plan calls for all pines to be in the 8' to 10' range when planted, maples to be in the 2½" to 4" caliper range, the apple serviceberries to be in the 2½" to 3" caliper range, and two American Beech trees in the 3½" to 4" caliper range.
 24. The meadow is relatively flat, with elevations ranging from 493' to 505'.
 25. The meadow is part of a sweeping panorama that consists of the meadow, a knoll, and wooded foothills leading up to the Mt. Mansfield range in the distance. With the white farmhouse and red barn, it presents a view of a typical Vermont farm scene. This property, coupled with the **16-acre** adjoining land owned by Ramsey Associates, is the last remaining open meadow on the Mountain road. The scenic qualities of the site are unique to this area because of the great amount of development all along Route 108 from Stowe Village to Mt. Mansfield.
 26. The meadow is visible when approaching from both the north and the south. From the north, the condominiums will not be in a direct line of sight until passing the property. From the south, the backs of units #1-4 would be hidden behind a row of white pines proposed to be planted. The buildings will not be in a direct line of sight from the south: therefore, the panoramic view of the meadow, the foothills and the mountains will not be spoiled by the condominiums.
 27. The design of the buildings is of a different character from any other structures visible in that area of Route 108.

D. Criterion 9(B) - Primary Agricultural Soils

28. Approximately five of the seven acres on the property are classified as Adams soils which are considered primary agricultural soils.
29. The parcel was at one time a part of a large farming operation. For many years hay and corn were grown on the site. This parcel, however, has not been used for agricultural production for at least five years.
30. The nearest farming operation is approximately one mile away. Another farm lies across the river but the farmer would have to travel some distance to get to the property.
31. Access to the site with farm machinery would be difficult because there is a high volume of traffic on Route 108.

E. Criterion 10 - Conformance with the Town Plan

32. The main theme of the Municipal Plan for the Town and Village of Stowe is to encourage diversity in land use and types of dwellings in all parts of Stowe, while maintaining scenic qualities and open space as much as possible. The Plan suggests group housing projects or clustered housing as the optimal means of achieving those goals. The Plan designates Route 108 (the Mountain Road) as Highway-Tourist and proposes to continue the development of this area for the highway-tourist businesses, with **100-foot** setbacks from the road, adequate road frontage, and ample size lots to discourage a "strip development" appearance.

III. CONCLUSIONS OF LAW

A. Criteria 1(B) and 1(E)

Pursuant to Environmental Board Rule 19, the Applicant submitted a Certification of Compliance, issued on February 6, 1985 by the Department of Water Resources, as a presumption that the waste disposal system would not cause undue water pollution. The Appellants challenged the presumption, and at the hearing on January 7, the Appellants' expert witness presented evidence that cast doubt upon the Applicant's assertion that a continuous silt-clay layer underlies the area of the proposed leachfield that would direct the flow of effluent horizontally and prevent the effluent from percolating downward into the deeper gravels and the groundwater. The burden therefore shifted to the Applicant to prove that the project will not result in undue water pollution. The Board

ruled that the burden would be met if the Applicant could prove that there is a continuous silt-clay layer underlying the leachfield sufficient to provide adequate protection from vertical migration of effluent or, in the absence of such layer, that other factors exist that will prevent contamination of the groundwater.

On January 14 the Applicant conducted further site testing to determine the presence of a continuous silt-clay layer underlying the area of the leachfield. The Applicant presented the results of the testing, as well as other evidence of compliance with Criteria 1(B) and 1(E), at subsequent hearings.

We conclude that the Applicant has met its burden under Criteria 1(B) and 1(E) and that the project will not result in undue water pollution. The Board accepts the Applicant's evidence that a continuous impermeable silt-clay layer underlies the area of the proposed leachfield, that the effluent will move horizontally in a westerly and southwesterly direction toward the West Branch River, and that the vertical transit time is approximately 0.3 years per foot. The Board therefore concludes that the effluent will not contaminate any aquifer that may underlie the area. The Appellants submitted no evidence to support its assertion that the project's waste disposal system will contaminate Mrs. Nelson's well. Based upon the depth of the impermeable layer underneath the area of the proposed leachfields, it is unlikely that any insufficiently renovated effluent will reach that well.

The Board also concludes that the concentration of nitrate and phosphorus discharging into the West Branch River will not cause any degradation of the river. The mix of the effluent with the water in the river will further dilute any nitrate or phosphorus concentration. Consequently, the Board concludes that the outbreak of an algae bloom in the river due to the effluent generated by this project is unlikely.

The Appellants claim that the site, particularly the areas of the proposed leachfield and septic tanks, is frequently flooded in the spring by the overflow of the brook on the property and by other surface runoff and underground springs. Based upon observations of the Applicant's witnesses and the photographs submitted by the Appellants, the Board concludes that any overflow of the brook and surface runoff does not create standing water in the area of the leachfields. Since the septic tanks and sewer lines are watertight and therefore not susceptible to infiltration, the Board concludes that any periodic flooding that may occur in these areas will not have an adverse effect upon the sewage disposal system.

The Board is concerned about the 5% exposure to gravel on septic field B because the gravel's high permeability can result in insufficient treatment of effluent. The Applicant has agreed to construct field B with a level base, with a variance of not more than two inches, in order to ensure uniform disbursement of effluent through that field. Therefore, the Board will condition the permit to require submission of an engineer's certification that the leachfield was built according to that standard.

The Board is also concerned that the proposed pond will increase the hydraulic loading on the leachfield and that the seepage from the pond will migrate under the leachfield toward the river. The Board will therefore prohibit the development of a pond on this property at this time.

B. Criterion 8 - Aesthetics and Scenic and Natural Beauty

In Re: Quechee Lakes Corporation, Land Use Permits #3W0411-EB and #3W0439-EB, issued November 4, 1985, the Board described the analysis that should be applied when Criterion 8 (aesthetics) is at issue. The first step in this analysis is the determination of whether the aesthetic impact of a proposed project is adverse. This requires the identification of the context surrounding a proposed project and a determination of whether the project would fit into that context. Included in the meaning of "context" are such factors as whether the site has particular scenic values, whether the project's design is compatible with its surroundings and other buildings in the area, whether the colors and materials of the buildings are suitable for the context within which the project will be located, where the project can be seen from, and what is the project's impact on open space in the area.

Based upon an analysis of these factors, the Board concludes that the project has an adverse effect upon the aesthetics and scenic and natural beauty of the area. Although the character of the area is somewhat diverse, the site itself and the adjacent meadow, with the farmhouse and barn-type structure, present a pastoral Vermont scene. A modern condominium development is out of context with such a scene. Moreover, as described above, this site, coupled with the adjacent Ramsey property, is the last remaining open meadow on the Mountain Road; development of the property, even if the buildings are clustered, will contribute to the loss of scarce open space in the area. Although the scenic panoramic view will not be ruined, it clearly will be altered by the construction of buildings and planting of trees on the property.

The second step of the "Quechee analysis" consists of a determination of whether the adverse impact is undue. It will be found undue if any of the following questions can be answered affirmatively:

- 1) Does the project violate a clear, written community standard intended to preserve the aesthetics or scenic, natural beauty of the area? Such standards may, for example, be set forth in the local or regional plan, or be adopted in the creation of an historic design district, or be incorporated into a municipal or State scenic road designation. If the Board or Commissions find that such standards do exist, and that the project as designed would violate those standards, the adverse impact would be undue.
- 2) Does the project offend the sensibilities of the average person? The Legislature has directed the Commissions and this Board, composed of lay people from many different communities within Vermont, to determine what is acceptable in terms of new developments' impact on aesthetics and scenic and natural beauty. If our sensibilities are, collectively, offended by a project, its impact under Criterion 8 is undue. It is not enough that we might prefer to see a different design or style of building, or that we might prefer a different type of land use, but that the project, when viewed as a whole, is offensive or shocking, because it is out of character with its surroundings, or significantly diminishes the scenic qualities of the area.
- 3) Has the Applicant failed to take generally available mitigating steps which a reasonable person would take to improve the harmony of the proposed project with its surroundings? Such steps may include selection of less obtrusive colors and building materials, implementation of a landscaping plan, selection of a less obtrusive building site within the project area, or reduction of the mass or density of a project. If there are reasonable alternatives available to the Applicant that would mitigate the adverse impact of the project, failure to take advantage of those alternatives may, in some circumstances, render undue an otherwise acceptable aesthetic impact.

Although the Stowe Town Plan speaks in general terms of making wise use and conserving as much of scenic open space as possible, it does not contain aesthetic standards specifically applicable to the area immediately around the project or even to the Mountain Road. The Board therefore concludes that there is no clear, written community standard applicable to this project. The Board also does not find the project shocking or offensive to the sensibilities of the average person. While the architecture **of** the project differs substantially from those buildings in the immediate vicinity of the project, buildings of similar character can be found in many parts of Stowe, including a few miles south on Route 108.

The Board finds that the Applicant has generally taken reasonable steps to mitigate the visual impact of the project on the motorists, bicyclists, and pedestrians passing by the project. However, the Applicant has proposed to plant a row of white pine trees along the southern boundary to screen the buildings from anyone travelling north on Route 108. This solid block of pines would create a fence-like effect which would result in as much of a visual intrusion as the buildings themselves. In order to soften this barrier effect, the Board will require the Applicant to plant 4" caliper maples, 20' on center, along the southern boundary instead of the white pines. In addition, more plantings will be required on the northern sides of the units to provide a visual break in the mass of the buildings.

C. Criterion 9(B) - Primary Agricultural Soils

In evaluating a project under Criterion 9(B), the Board must first determine whether the site contains primary agricultural soils as defined in 10 V.S.A. § 6001(15):

"Primary agricultural **soils**" means soils which have a potential for growing food and forage crops, are sufficiently well drained to allow sowing and harvesting with mechanized equipment, are well supplied with plant nutrients or highly responsive to the use of fertilizer, and have few limitations for cultivation or 'limitations which may be easily overcome. In order to qualify as primary agricultural soils, the average slope of the land containing such soils does not exceed 15 percent, and such land is of a size capable of supporting or contributing to an economic agricultural operation. If a tract of land includes other than primary agricultural soils, only the primary agricultural soils shall be affected by criteria relating specifically to such soils.

The definition contains two parts, both of which address the physical characteristics of the land. The first part defines the characteristics of the soils, while the second part addresses the characteristics of the land. According to **testimony of the parties, this property meets the first part of the definition**, as evidenced by its historical use for growing hay and corn. The first clause of the second part of the definition also applies to the property, as the average slope

of the land is well under 15%. All of these factors are relatively simple to evaluate, based upon clear factual evidence of soil type and land slope. The meaning of the final part of the definition, that "such land is capable of supporting or contributing to an economic agricultural operation," is less clear.

Depending upon a number of factors, including proximity to roads, particular soil type, and the nature of a farmer's operation, even quite small parcels of land can and do contribute to an economic agricultural operation. Therefore, a five-acre parcel containing soils which meet the other characteristics in the definition should not automatically be excluded from consideration as primary agricultural soils.

The limiting factor with this property, however, is that a parcel of land is not capable of contributing to or supporting an economic agricultural operation if, due to the particular location of the site, it is highly unlikely that the parcel will ever be used for agricultural production. Given all the circumstances of this case--the small parcel size, its irregular shape, the difficult access, and the lack of a farmer--the Board concludes that the site is not capable of contributing to or supporting an economic agricultural operation. Because the property does not meet the definition of primary agricultural soils, there is no need to address the issues raised in Criterion 9 (B).

D. Criterion 10 - Conformance with Town Plan

As we have found, Stowe's Municipal Plan consists of broad policy statements and goals but does not prohibit specific uses in specific areas. In fact, it encourages diversity in land uses and types of dwellings throughout Stowe, while maintaining as much open space as possible. This project is well designed to achieve the goals of the town plan because the buildings are clustered in one corner of the property and the rest of the meadow is maintained as open space. It also conforms with the set-back, road frontage, and lot size recommendations for development along the Mountain Road.

The Board must therefore conclude that the project conforms with the municipal plan.

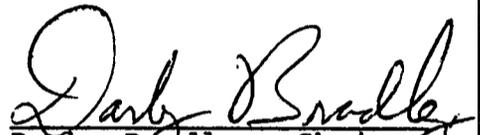
Based on the foregoing Findings of Fact, it is the Conclusion of the Board that the project, if constructed and maintained in accordance with the application and the terms and conditions of the permit, will not result in a detriment to public health, safety or general welfare under Criteria 1(B), 1(E), 8, 9(B) and 10 as described in 10 V.S.A. § 6086(a).

IV. ORDER

Land Use Permit #5L0775-EB is hereby issued in accordance with the findings of fact and conclusions of law herein. Jurisdiction over this matter is returned to the District #5 Environmental Commission.

Dated at Montpelier, Vermont this 27th day of April, 1987.

ENVIRONMENTAL BOARD



Darby Bradley, Chairman
Ferdinand Bongartz
Lawrence H. Bruce, Jr.
Elizabeth Courtney
Jan S. Eastman
Samuel Lloyd III
Donald B. Sargent