

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

Re: **Dorset-McNamara Associates**
Application #8B0458-EB

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER

This decision, dated January 22, 1993, pertains to an appeal of a decision of the District #8 Environmental Commission concerning an application for approval under 10 V.S.A. § 6086(a)(10) (Criterion 10) for the creation of a 25-lot subdivision and approximately 10,350 feet of new roadway on a 572-acre parcel of land in Dorset. The District Commission concluded that the project does not conform with either the Dorset Town Plan or the Bennington County Regional Plan. For the reasons explained below, the Board also concludes that the project does not conform with either of those plans.

I. BACKGROUND

On February 5, 1991, an application was filed with the District #8 Environmental Commission for approval of a project consisting of the creation of a 26-lot subdivision and approximately 10,600 feet of road with access to the project from West Road and McNamara Road on a 572-acre parcel of land in Dorset. Modifications to the proposal resulted in a final site plan of 25 single-family residential lots, one undeveloped lot, and 11,500 feet of roadway. The Applicant requested a determination of compliance with Criterion 10 before proceeding to a review under the rest of the criteria of 10 V.S.A. § 6086(a), pursuant to 10 V.S.A. § 6086(b).

On January 2, 1992, the District Commission issued a decision that the project does not conform with either the Dorset Town Plan or the Bennington County Regional Plan. On January 23, 1992, Dorset-McNamara Associates filed an appeal with the Environmental Board.

A prehearing conference was held on February 20, 1992 and a prehearing conference report was issued on March 9. On July 23, the parties filed a stipulation with the Board that included the parties' agreement that the applicable plans in this appeal are the Dorset Town Plan adopted June 16, 1992 and the Bennington County Regional Plan adopted February 20, 1992.

The Board held hearings in this matter on September 23 and 24, 1992, with the following parties participating:

Dorset-McNamara Associates (the Applicant) by John R. Ponsetto, Esq.
Dorset Planning Commission (DPC) by Henry Chandler and Helen Whyte
Bennington County Regional Planning Commission (BCRC) by Seth Bongarts, Esq.
Dorset Citizens for Responsible Growth (DCRG) by Seth Bongartz, Esq.
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The hearing was recessed pending the filing of proposed findings and deliberation and decision by the Board. Proposed findings were filed by the DPC on October 9 and by the Applicant and DCRG on October 14. The Board deliberated concerning this matter on October 21 and November 4, 1992 and January 13, 1993. On January 13, following a review of the proposed decision and the evidence and arguments presented in the case, the Board declared the record complete and adjourned the hearing. This matter is now ready for decision. To the extent any proposed findings of fact and conclusions of law are included below, they are granted; otherwise, they are denied.

II. ISSUES

The only issue in this appeal is whether the project conforms with the Dorset Town Plan and the Bennington County Regional Plan. The specific provisions that the parties identified for the Board's review are as follows:

1. Whether the type of settlement pattern proposed for the site conforms to relevant policies in both the Town Plan and the Regional Plan concerning steep slopes and efficient use of land.
2. Whether, given the presence of the **McNamara** Spring near the proposed roadway and house lots, the project conforms with the spring protection and water-related provisions of the Town Plan and the Regional Plan.
3. Whether the project conforms with wildlife related policies in the Town Plan.

III. FINDINGS OF FACT

1. The Applicant proposes to construct a 26-lot subdivision that includes 25 lots for construction of single-family residences and one undeveloped lot, and 10,350 feet of roadway, on a 560-acre tract of land in

Dorset. The site is wooded and is located on the easterly slope of Mother Myrick Mountain. The site is within the Rural and Upland Forest areas of the Regional Plan. The Upland Forest area consists of lands identified as "forest" in the Town Plan and which lie above the elevation of 1,600 feet within the Town of Dorset.

2. The 25 lots are grouped in three clusters on the 560-acre parcel. Cluster 1 has four lots ranging in size from 3.6 acres to 6.5 acres. Cluster 2 has six lots ranging in size from 1.8 to 10.2 acres. Cluster 3 has fifteen lots ranging in size from 2.7 acres to 12.4 acres.
 3. Access to Clusters 1 and 3 will be by way of a road constructed off the Dorset West Road. Access to Cluster 2 will be by way of a road constructed off the McNamara Road. These roads will be constructed in compliance with Dorset Town road construction specifications. A town trail currently runs from McNamara Road through what will be Cluster 2, and connects with other public trails. The town trail will remain a public way.
 4. Dorset West Road is a paved town road that has good sight distances. McNamara Road has a gravel surface and is narrow, winding, and steep. The Town prefers that access to the majority of the project be from Dorset West Road rather than from McNamara Road.
 5. The 26th lot is a 326-acre tract of forested land consisting primarily of steep slopes. This area has been designatedda Forest Management Area: development within the area will be prohibited.
 6. The topography of the site ranges from gentle slopes to slopes greater than 20 percent. The elevation of land in Cluster 1 is below 1,100 feet and in Clusters 2 and 3 it ranges from 1,100 to 1,375 feet.
 7. McNamara Spring, a major bedrock aquifer discharge point with high quality water, is located just outside of Cluster 2. There are also four streams which flow from groundwater seeps on the site.
 8. Fifty-six acres of the tract are designated as Common Lands. The Common Lands, which will be owned by the Applicant and a homeowners' association, contain
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wetlands, a proposed fire Pond, the development roads, all common wastewater disposal areas, the northerly deer corridor, deer yards, the honeysuckle hedge, and a 200-foot greenbelt buffer zone along Dorset West Road at the entrance to Cluster 2.

9. The total acreage dedicated to the building lots is 178. Ninety of these acres will be used for designated building envelopes and the development roads. The remaining 88 acres is designated as Lot Conservation Area. The Lot Conservation Area includes lands which are mostly above 20 percent in grade, deeryards, a **deeryard** buffer honeysuckle hedge, and a portion of the McNamara Spring recharge area.
10. There are two deer yards in a softwood shelter in a corner of the West Road and McNamara Road and within a hardwood stand on southfacing slopes above the McNamara Spring. The subdivision has been designed to keep all houses out of the deer yards, and two 1,000-foot wide deer corridors will be provided to insure that deer have a continuous travel path between the two deer yards. To create a natural buffer between the houses and the deer yards, a honeysuckle hedge will be established and maintained within lots #13 through #16 and #20 through #23.
11. The Forest Management Area contains the deeryards and deer corridors, and the McNamara Spring and a portion of its recharge area. A major portion of the Forest Management Area consists of slopes greater than 20 percent. The Applicant and its successors and assigns will own the Forest Management Area. The Applicant proposes that the **development** rights will be given to an entity that will be responsible for protecting and managing **the** area. There is no evidence in the record that any entity is willing to accept the land in the Forest Management Area.
12. The Applicant intends that the existing trail network within the Forest Management Area will remain open and accessible to the public for recreation purposes over a 50-foot right-of-way which will be created for the benefit of the public. Permitted uses within the Forest Management Area will be logging, horse riding, snowmobiling, and hiking on the trails. The trail network will be extended to connect to the existing VAST system of snowmobile trails.

13. The site contains deer yards in a softwood shelter in a corner of the West Road and McNamara Road, and within a hardwood stand located on south facing slopes above the McNamara Spring. No houses will be built within the deer yards. Two 1,000-foot wide deer travel corridors have been established to ensure that the deer have access to the habitat. A honeysuckle hedge will be established within Lots 13 through 16 and Lots 20 through 23 to create a buffer between houses and the deer yards.
 14. Four wetland areas have been identified on the tract. One of these is designated as a Class 2 wetland.
 15. The building envelopes, Lot Conservation Area, and the Common Land will be subject to a Declaration of Covenants, Conditions, Easements, Obligations, Liens, Rights and Restrictions (the Declaration) (Exhibit 17).
 16. The Declaration will prohibit construction of houses and other buildings outside of the building envelopes; will require that the Lot Conservation Area be maintained in its natural state and that no structure or improvement of any type or nature be permitted, except construction of wastewater disposal systems on Lots 14 and 20; will require that the Common Land be undisturbed except for installation of wastewater disposal facilities, construction of a fire pond, and construction of the development roads; and will allow the Common Land to be used for passive recreation purposes by lot owners.
 17. The Applicant proposes that portions of the Declaration may be amended only with the written approval of the Dorset Planning Commission and the District Environmental Commission.
 18. A total of 830 feet of the new road that will be constructed between Cluster 1 and Cluster 2 will cross a steep hillside with 20 to 40 percent slopes in order to serve fifteen lots. Of the 830 feet of road crossing steep slopes, 470 feet will cross slopes of 20 to 25 percent. 260 feet will cross slopes of 25 to 30 percent, 50 feet will cross slopes of 30 to 40 percent, and 50 feet will cross slopes of 40 percent or more.
 19. Construction of the development road across the steeper slopes will require blasting of bedrock.
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20. The development roads would be privately owned and maintained.
21. The length of the roads in this subdivision is excessive for the number of lots that is proposed. The average frontage for lots on the northern road is about 1,030 feet. House lots of one or two acres in a rural cluster typically have 100 to 250 feet of road frontage.
22. The 25 building lots will be served by 16 on-site wastewater disposal systems. Eight systems will serve **one lot each**; the remaining eight systems will serve either two or three lots each. The wastewater systems will be privately owned and maintained.
23. The 25 **building lots** will be served by wells drilled on each site, or by shared wells serving two or more lots. The wells will be privately owned and maintained. The proposed well sites meet the minimum isolation distances between water sources and potential sources of contamination required by Department of Environmental Conservation regulations.
24. One hundred ninety-eight backhoe test pits were dug on the site to a depth of eight to nine feet. At least three backhoe test pits were dug in every area where wastewater disposal systems will be installed.
25. Eighty-four monitoring wells were installed and monitored in March, April, and May of 1990 and 1991. Groundwater monitoring, and backhoe test pits indicate that soils in the area of wastewater facilities are moderately well-drained with the seasonal high water table generally at least five feet below ground surface, and that the soils become siltier, denser, and lower in permeability with depth.
26. Soils and seasonal high water table information indicates that groundwater flow in the glacial till is primarily lateral, although some limited degree of slow vertical downward infiltration potentially occurs. The lateral groundwater flow direction is downslope and generally eastward, to discharge into swales and groundwater seeps identified on the site just downhill from where Clusters 2 and 3 development will be located. Effluent from the subdivision will be treated and renovated as it flows through the soils toward the identified discharge swales and groundwater seeps and

then will discharge with the existing groundwater into the seeps and swales.

27. McNamara Spring produces flows ranging from 900 to 3400 gallons per minute. The spring water comes from groundwater in the fractured bedrock which underlies the site. There is no stream channel upgradient of the spring.
 28. Fourteen building envelopes and sewage disposal systems for 17 units will be located at elevations higher than the McNamara Spring. The wastewater disposal systems will be located at least 1,100 feet from the McNamara Spring.
 29. The Applicant delineated the recharge area of the McNamara Spring based upon groundwater monitoring. According to the Applicant's expert, all buildings, wastewater disposal facilities, roads, and other improvements will be located outside of the Applicant's delineation of the McNamara Spring recharge area.
 30. DCRG's expert witness believes that it is likely that the entire recharge area for McNamara Spring is on the east side of Mother Myrick Mountain and that 14 of the building envelopes and the septic systems for 17 units are in the aquifer recharge area for McNamara Spring.
 31. The project is located in a headwater karst drainage basin. A karst drainage basin is a type of topography that is formed over limestone, dolomite, or gypsum and is characterized by closed depressions or sinkholes, caves, and underground drainage.
 32. Bedrock in a well developed karst system is more soluble in natural water than in non-karst systems and is therefore difficult to characterize. Groundwater in a well developed karst bedrock system tends to follow the planes of the bedrock formations, fracture zones, structural planes, faults, and underground channels and will not necessarily run straight downhill as it would in a porous non-karst system. Water entering a well developed karst bedrock system has the potential to travel very quickly with little attenuation; groundwater flow rates may be magnitudes faster than in a normal system.
 33. The Applicant's hydrogeology expert and DCRG's hydrogeology expert disagree about whether the karst is
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poorly developed or well developed. The Applicant's expert believes that the karst system is poorly developed and that flow patterns are therefore not difficult to predict, and that sufficient testing has been done. The Applicant's expert also believes that there is a trough in the bedrock aquifer surface that acts as a significant hydrogeologic barrier preventing bedrock groundwater beneath the development area from flowing toward McNamara Spring, and that there is no hydrologic possibility that effluent from the wastewater disposal systems could discharge into the McNamara Spring.

34. DCRG's expert believes the topography shows signs of a well developed karst system. DCRG argues that if the karst bedrock system is well developed, that means that the groundwater does not flow in normally predictable directions, and that without further information concerning actual groundwater flow in the bedrock, it is not known what the direction of flow actually is. DCRG believes that the Applicant has done insufficient testing to conclude that the McNamara Spring and its recharge area will not become contaminated from the subdivision's wastewater systems.
35. Additional testing could determine whether the karst bedrock system is poorly developed or well developed. With additional information, a conclusion concerning the nature of the karst system, and actual ground water flow, would be better informed.
36. The McNamara Spring is a potential source of public water supply of unusually high quantity and quality. The Applicant intends for the Town to have access to McNamara Spring and for the Town to use the spring as a source for a public community water system.
37. Relevant provisions of the Town Plan concerning land use and roads state the following:

Land Use and **Economy** Objective 3.1.3. Work towards a low level of tax burden on homeowners by creating a **community** which is efficient and economical to serve. (p. 8)

Land Use and Economy Objective 3.1.6. Limit development to areas along or near existing roads, thus avoiding unnecessary new road mileage and costly servicing. This applies equally to second homes which

may, in the future, be occupied by year-round residents. Access roads will remain private with recorded maintenance agreements as part of the issued permit. Every effort should be made to provide for access to possible landlocked lots. (p. 8)

Land Use and Economy Objective 3.1.7. Provide for review of subdivisions of land to ensure proper design of roads, proper site development, and protection of agricultural and forestry lands, natural resource and natural hazard areas, and water resources. (p. 8)

Rural Residential Policy 4.2.2.1.1. Allow a limited amount of rural residential development in a fashion which will protect the Town's natural and scenic resources. (p. 18)

Rural Residential Policy 4.2.2.1.4. Encourage, and where warranted, require, new residential subdivisions to be of a cluster form, designed to preserve open space, natural resources, and natural hazard lands. ..
(p- 18)

Rural Residential Policy 4.2.2.1.5. Count as developable land, whether for a cluster or a traditional subdivision, only the net developable area after removing wetlands, floodplains, steep slopes, public water aquifers, important spring recharge areas, and other similar resource lands. Land not included in building lots in a residential subdivision should remain permanent open space. (p. 18)

Rural Residential Policy 4.2.2.1.8. Require that new development be served by existing public or private roads, or by new private roads. Require that all new roads be constructed to proper standards to allow easy access by emergency and other service vehicles; and maintenance by private means to allow safe transportation for residents and service vehicles.
(p. 19)

Rural Residential Policy 4.2.2.1.9. Require that access roads will remain private, with recorded maintenance agreements as part of the permit process.
(p.19)

Rural Residential Policy 4.2.2.1.14. Favor compact forms of development, using short lengths of roadway, over more extensive development scattered along long

distances of roadway. Encourage infilling of development in existing development clusters along existing roadways. (p. 19)

Transportation Policy 7.5.4. Favor compact forms of development which do not require long lengths of roadway. Require that new development roadways be private, and that maintenance agreements be provided to ensure that new private roadways are adequately maintained without burden to the Town. (p. 41)

Energy Policy 9.2.2. Compact forms of development will be encouraged-to minimize travel needs. (p. 52)

Natural, Scenic, Historic Resources Objective 3.4.6. Retain as much permanent open space as possible through cluster development, preservation of natural resource lands and natural hazard areas, and encouragement of agricultural and forest practices. (p. 9)

Natural Hazard Lands Policy 5.4.3.4. New development, including the construction of new buildings, public or private roads, or driveways, may not be permitted in Natural Hazard Areas ... except for unusual cases which may be considered by the Planning Commission where it is satisfied that all other policies of this Plan have been met, and that the proposed development in or across the Natural Hazard Area is desirable to further the objectives of this Plan. (p. 28)

38. Relevant provisions of the Regional Plan concerning land use and roads state the following:

Development in Rural Areas 7.3. ... Subdivisions must be carefully planned to provide a desirable living environment for residents, and to ensure that the rural character and natural resources of the area are protected.

. . . Scattered development in remote areas with poor access to town centers should be avoided. New subdivisions should incorporate the positive characteristics of earlier rural settlements: a community identity, public open spaces, preservation of economically important resources (such as agricultural soils) and so on. Many of these objectives can be realized by clustering lots to create a hamlet-type character around the homes, while setting a significant

percentage of the project area aside as open space reserved for agriculture, forestry, or public recreation. Such developments are also economically efficient because roads and other infrastructure need not be as extensive or costly to construct and maintain. ... (p. 41-42)

Land Use Policies and Actions 7.6.1. New development should be concentrated in and around established growth centers; scattered development which is remote and has little relationship to existing settlement patterns should be avoided. (p. 46)

Land Use Policies and Actions 7.6.4. In rural areas, emphasis should be placed on the conservation and use of natural resources and the avoidance of costly scattered development that is disruptive of the region's rural character. Low density residential, commercial ... , and recreational uses are also appropriate in rural areas. Development should reflect historical settlement patterns (e.g. clustered homes surrounded by open space) and preserve important resources, such as productive agricultural soils. (p. 47)

Land Use Policies and Actions 7.6.5. ... The development of permanent improvements and structures for year-round use is inappropriate in upland forest areas The conservation and wise use of natural resources in upland forest should be emphasized; forestry and outdoor recreation are appropriate activities in these areas. (p. 47)

Land Use Policies and Actions 7.6.7. Residential development must be carefully planned in areas where predominant natural slopes exceed fifteen percent; residential development should not be permitted where slopes exceed 20 percent. (p. 47)

39. Relevant policies and objectives in the Town Plan concerning protection of springs and water include the following:

Natural, Scenic, Historic Resources Objective 3.4.2. protect our important aquifers and recharge areas, and our Class A and B streams, so that the Town may have a continuing supply of pure water for domestic and recreational use (p. 9)

Public Facilities and Services objective 3.10.2. Allow for the expansion of public and/or private community water supply where practical, and protect future water supply sources. (p. 11)

Village Residential Land Use Policy 4.2.1.1.(d)6. Encourage the expansion of the Dorset Village water supply in the short term, and in the longer term consider the construction of a public or community water supply system to serve South Dorset. (p. 15)

Rural Residential Land Use Policy 4.2.2.1.(d)7. Ensure that new residential development will not adversely impact existing residential development with respect to the provision of a safe and adequate water supply. (p. 19).

Natural Resource Areas Policy 5.3.7.2. Development proposals will be reviewed with the intent of protecting the natural resources identified. (p. 27).

Water Supply Service Policy 8.2. Potential water sources, if known, must be protected when surrounding land is developed to insure future water supplies for the Town and its residents. ... (pp. 44-45)

Water Supply Policy 8.2.1.2. Important Spring Recharge Areas as identified on the Natural resources Map will be protected from pollution, and access to and the availability of these important springs will be protected for possible future water supply use. (p. 45)

40. Relevant goals and policies in the Regional Plan concerning protection of springs and water include the following:

Protect important natural and historic resources: .
. . . Important natural and historic resources should be identified, the adequacy of existing protection measures evaluated, and new means of protecting these resources evaluated. Particular attention should be given to: significant natural and ecological areas; important features of the landscape; scenic roads, waterways, and views; water resources, including lakes, aquifers, rivers and streams, and wetlands; (PP. 3-4)

Physiography Policies and Actions #2. Growth should be

restricted in areas of high elevation, steep slopes, or poor soils where environmental damage is likely to occur as a result of development. Special attention must be given to the need to prevent soil erosion, contamination of surface and ground water, and degradation of natural ecological communities in these areas. (p. 13)

Natural Resources, Water Resources Policy 6.1. Ground Water: A large amount of the water consumed by domestic, commercial, and industrial users in Bennington County is derived from ground water sources. Moreover, surface waters that are used for public water supplies are fed by ground water. Consequently, a sufficient supply of cleanground water is crucial to existing homes and businesses in the region, and to any future development. ... Protection of these public water supplies is obviously of great importance. ... (pp. 28-29)

Natural Resources Policies and Actions 6.7.4. Aquifers and ground water recharge areas (including all designated protection areas) must be protected from activities or development that would adversely affect the quantity or quality of available ground water. .. .(p. 34)

41. The Regional Plan states the following concerning wildlife habitats:

The diverse natural environments in the region provide habitat for a wide range of wildlife species. ... These areas are crucial to the survival 'of deer herds in the region-as they provide shelter and browse for deer during the winter months. ... [S]ites proposed for develoment should be examined to determine if important wildlife habitat is present, and measures taken to minimize adverse impacts on the habitat. Examples of such measures include: the maintenance or provision of natural buffers between developed areas and wildlife habitat, the maintenance of vegetated corridors along streams, shorelines, and between otherwise separate habitat areas, and utilization of construction practices that minimize environmental disturbances. (p.33)

IV. CONCLUSIONS OF LAW

- A. Steep Slopes and Efficient Use of Land
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The Town and Regional Plans reflect concern with efficient development and the consequences of inefficient development on services. The Town Plan in particular contains goals for efficient and economic development, including clustering and avoiding unnecessary mileage.

Road length is a factor in the economics of land development, since the greater the road length the higher the cost of development and maintenance.

This subdivision is not designed efficiently or economically. The design of this subdivision, with building lots of 1.8 to 12.4 acres and 10,350 feet of roadway, does not meet a number of the policies of the Town Plan that encourage the efficient and economical design of subdivisions. In particular, the Town Plan encourages limiting development to areas along or near existing roads and favoring compact forms of development, using short lengths of roadway, over more extensive development scattered along long distances of roadway. The length of the roads proposed for this subdivision, 10,350 feet, is excessive for the number of lots proposed, and the Board is not persuaded that a viable subdivision could not be designed for this site that minimizes infrastructure to a greater extent.

The design of this subdivision also does not comply with policies of the Regional Plan. The Regional Plan discourages scattered development in remote areas, particularly in upland areas, and encourages new development in established growth centers. This project will be constructed in an upland area rather than in an established growth center.

Both the Town and Regional Plans are violated by the development road that crosses the steep slopes between Clusters 1 and 3. Eight hundred thirty feet of the proposed road from Cluster 1 to Cluster 3 will cross slopes of between 20 and 40 percent. The Town Plan identifies areas with slopes greater than 20 percent as Natural Hazard Areas, and specifically prohibits new development, including buildings, roads, and driveways, in Natural Hazard Areas, "except for unusual cases ... where ... all other policies of this Plan have been met, and ... the proposed development in or across the Natural Hazard Area is necessary to further the objectives of this Plan." The Regional Plan states that "residential development must be carefully planned in areas where predominant natural slopes exceed fifteen percent; residential development should not

be permitted where slopes exceed 20 percent."

The Board has denied several permit applications that sought approval to construct on slopes of more than 20 percent in Bennington County because they violated the restrictions in the Bennington County Regional Plan. Re: Stoneworks Group, #8B0832-EB, Findings of Fact, Conclusions of Law, and Order (Sept. 8, 1987); Re: Green Peak Estates, Inc., #8B0314-2-EB, Findings of Fact, Conclusions of Law, and Order (July 22, 1986). In In re Green Peak Estates, 154 Vt. 363 (1990), the Vermont Supreme Court upheld the Board's determination that a proposed subdivision on land in Dorset that included slopes of more than 20 percent violated the Bennington County Regional Plan. The Court rejected the applicant's argument that the project does not violate the Regional Plan because only portions of each lot have grades that exceed 20 percent. Id. at 369.

The Town Plan would allow development in Natural Hazard areas when three criteria are met: 1) it is an "unusual case"; 2) all other policies of the Plan have been met; and 3) the development in or across the Natural Hazard Area is necessary to further the objectives of the Plan.

The Applicant argues that this is an "unusual" case because a portion of the subdivision as designed is accessible only by building a road that crosses 20 to 40 percent slopes for 830 feet, and that it is therefore "unavoidable" because of the topography of the site and the limitation by the Town on the use of McNamara Road as access to the site. The Applicant also argues that all other policies of the Town Plan are met, and that by protecting the significant natural resources on the site, the project furthers the objectives of the Plan.

The Board must disagree with the Applicant's arguments. With respect to whether this is an "unusual" case, the Applicant's reasoning is circuitous. If a project is designed that requires crossing slopes of greater than 20 percent, then crossing steep slopes is "unavoidable." Thus, as long as Cluster 3 is part of the project, and the Applicant decides that access to Cluster 3 must be from Cluster 1, then developing in the Natural Hazard area is unavoidable. But this is precisely the type of land the Town Plan seeks to protect from development. The Board is not persuaded that no other viable designs for a subdivision on this site exist that would avoid the Natural Hazard Area. Thus the Board cannot conclude that this is an "unusual" case.

The second test is also not met, because, as explained above, the Board has concluded that this project violates a number of policies of the Town Plan. The Board also believes that the third test is not met, because we cannot conclude that developing in the Natural Hazard Area "is necessary to further the objectives of this Plan. The primary objectives of the Plan with regard to residential subdivisions involve the need to protect natural resources and economi-ze on land use by locating new development near existing development or at least minimizing the infrastructure by creating efficient designs. As discussed above, this project as proposed, Located in an upland area, is not efficient or compact, and it does not conserve natural resources; Almost all of the land that the Applicant proposes as Protected Area is already protected because the steep slopes, aquifer recharge areas, and wetland areas cannot be developed anyway.

Thus the Board concludes that developing in the Natural Hazard Area would violate the Town Plan's prohibition against developing in that area.

B. Spring Protection and Water-Related Policies

Both the Town and Regional Plans require the protection of important aquifers and recharge areas from activities or development that would adversely affect the quality of ground water.

The Board notes that the standard for the Board's decision concerning the McNamara Spring is not whether the project will create undue water pollution under 10 V.S.A. § .6086(a)(1)(B) (waste disposal), but whether the project complies with the Town Plan and Regional Plans' policies on protecting springs and other water. The Applicant has the burden of proof on Criterion 10. 10 V.S.A. § 6088.

The Town and Regional Plans contain a number of policies that encourage protection of important aquifers and recharge areas so that contamination will not preclude their use as water supplies.

The experts who testified for the Applicant and DCRG disagree about whether the McNamara Spring will become contaminated by effluent from the proposed waste disposal systems.

The Applicant contends that the spring will not become contaminated because the recharge area is outside the

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majority of house locations and above all of the proposed septic disposal fields. However, if the karst bedrock system is well developed, as DCRG's hydrogeologist claims, groundwater flow would not be predictable, and water entering the karst bedrock system has the potential to travel very quickly with little attenuation. Should contamination enter such a system, rapid transport could create the risk of contamination of springs and streams connected to the system. Without more specific testing to delineate the actual flow patterns of the groundwater, the Board is not persuaded that the McNamara Spring will not become contaminated by the septic systems proposed for the lots upgradient of or lateral to the spring.

The Board is also concerned about surface contamination of the McNamara Spring from activities associated with the presence of people living in the subdivision. Although a public trail now leads near the spring, a new subdivision close to the spring would result in an increase in activity in the area of the spring and an increase in the risk of contamination of the spring.

Without more conclusive information concerning the groundwater flow, and more specific means of ensuring protection of the McNamara Spring, the Board cannot conclude that this subdivision complies with the policies and objectives in the Town and Regional Plans that provide for the protection of springs and other water supplies.

C. Wildlife Policies

The Regional Plan requires that when important wildlife habitat is present on a site proposed for development, measures be taken to minimize adverse effects on the habitat.

Two deeryards have been identified on the site. The subdivision has been designed to keep all houses out of the deeryards, and two 1,000-foot wide deer corridors will be provided to ensure that deer have a continuous travel path between the two deer yards. A natural buffer between houses and the deer yard will be provided by the planting of a honeysuckle hedge within Lots 13 through 16 and 20 through 23.

The Board believes that the measures taken by the Applicant to protect the existing deer yards on the site comply with the Regional Plan.

V. ORDER

Land Use Permit Application #8B0458 does not comply with 10 V.S.A. § 6086(a)(10).

Dated at Montpelier, Vermont this 22nd day of January, 1993.

ENVIRONMENTAL BOARD


Elizabeth Courtney, Chair
Terry Ehrich
Lixi Fortna
Arthur Gibb
Samuel Lloyd
William Martinez
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