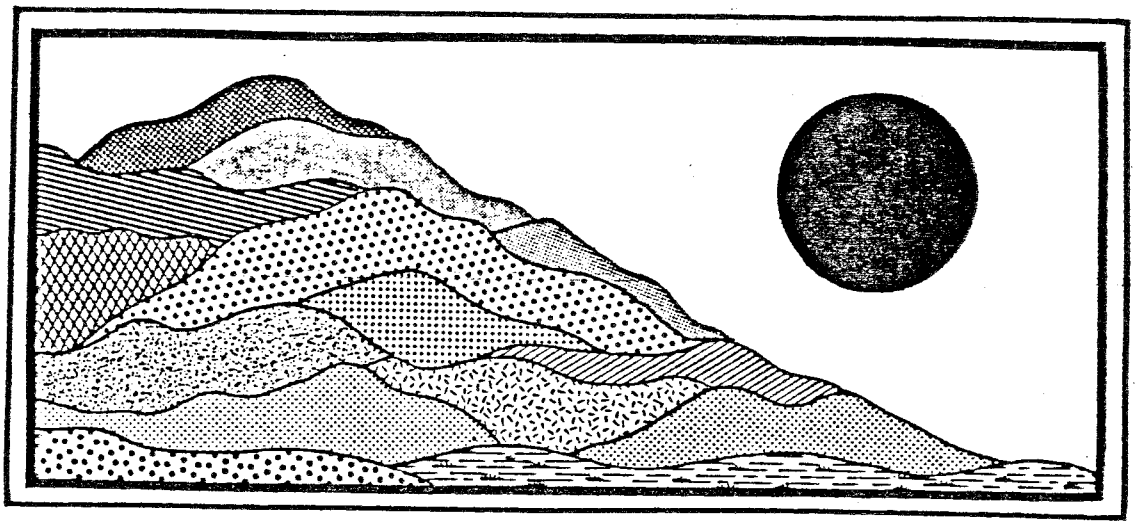
Blais Property

Canterbury, Connecticut

September 1987



ENVIRONMENTAL REVIEW TEAM REPORT

EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.

Blais Property

Canterbury, Connecticut

Review Date: AUGUST 11, 1987

Report Date: SEPTEMBER 1987

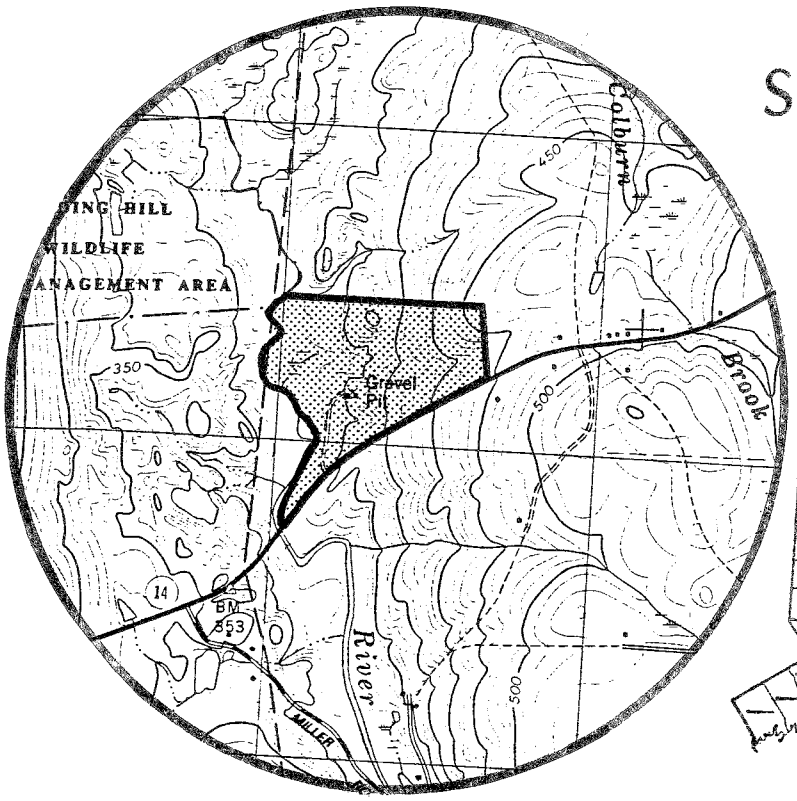
RC&D

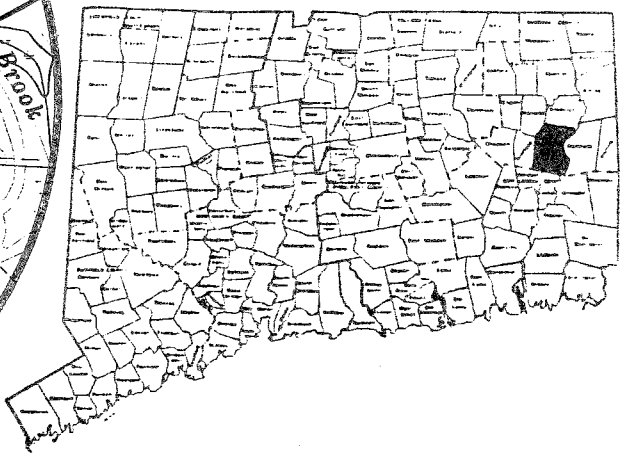
ENVIRONMENTAL REVIEW TEAM
PO BOX 198
BROOKLYN, CONNECTICUT 06234

Site Location

BLAIS PROPERTY

CANTERBURY, CONNECTICUT





EASTERN CONNECTICUT

RESOURCE CONSERVATION

& DEVELOPMENT AREA

ENVIRONMENTAL REVIEW TEAM REPORT
ON
THE BLAIS PROPERTY SUBDIVISION
CANTERBURY, CONNECTICUT

This report is an outgrowth of a request from the Canterbury Planning and Zoning Commission to the Windham County Soil and Water Conservation District (S&WCD). The S&WCD referred this request to the Eastern Connecticut Resource Conservation and Development (RC&D) Area Executive Committee for their consideration and approval. The request was approved and the measure reviewed by the Eastern Connecticut Environmental Review Team (ERT).

The ERT met and field checked the site on Tuesday, August 11, 1987. Team members participating on this review included:

Don Capellaro	--Sanitarian CT Department of Health
Howard Denslow	--District Conservationist U.S.D.A., Soil Conservation Service
Brian Murphy	--Fisheries Biologist DEP, Eastern District
Judy Bouse Pahl	--Regional Planner Northeastern Connecticut Regional Planning Agency
Elaine Sych	--ERT Coordinator Eastern CT RC&D Area
Bill Warzecha	--Geologist DEP, Natural Resources Center

Prior to the review day, each team member received a summary of the proposed project, a list of the Town's concerns, a location map, and a topographic map. During the field review the team members were given soils information and site plans. The Team met with, and were accompanied by the Zoning Enforcement Officer, a member of the Planning and Zoning Commission, the developer and his engineers. Following the review, reports from each team member were submitted to the ERT Coordinator for compilation and editing into this final report.

This report represents the Team's findings. It is not meant to compete with private consultants by providing site designs or detailed solutions to development problems. The Team does not recommend what final action should be taken on a proposed project -- all final decisions and conclusions rest with the Town and landowner. This report identifies the existing resource base and evaluates its significance to the proposed development, and also suggests considerations that should be of concern to the developer and the Town.

The results of this Team action are oriented toward the development of better environmental quality and the long-term economics of land use.

The Eastern Connecticut RC&D Executive Committee hopes you will find this report of value and assistance in making your decisions on this proposed subdivision.

If you require any additional information, please contact:

Elaine A. Sych
ERT Coordinator
Eastern Connecticut RC&D Area
P. O. Box 198
Brooklyn, CT 06234
(203) 774-1253

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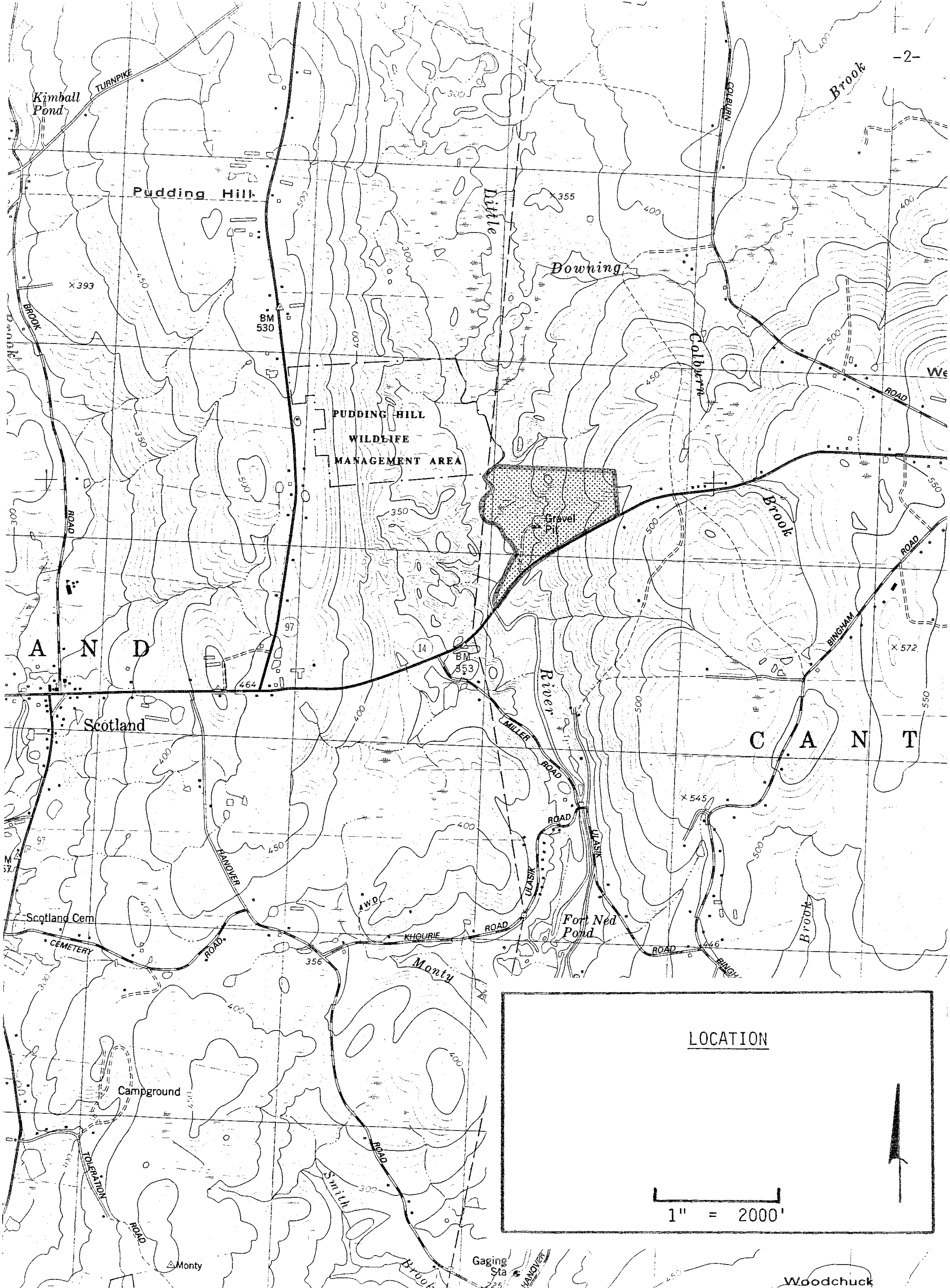
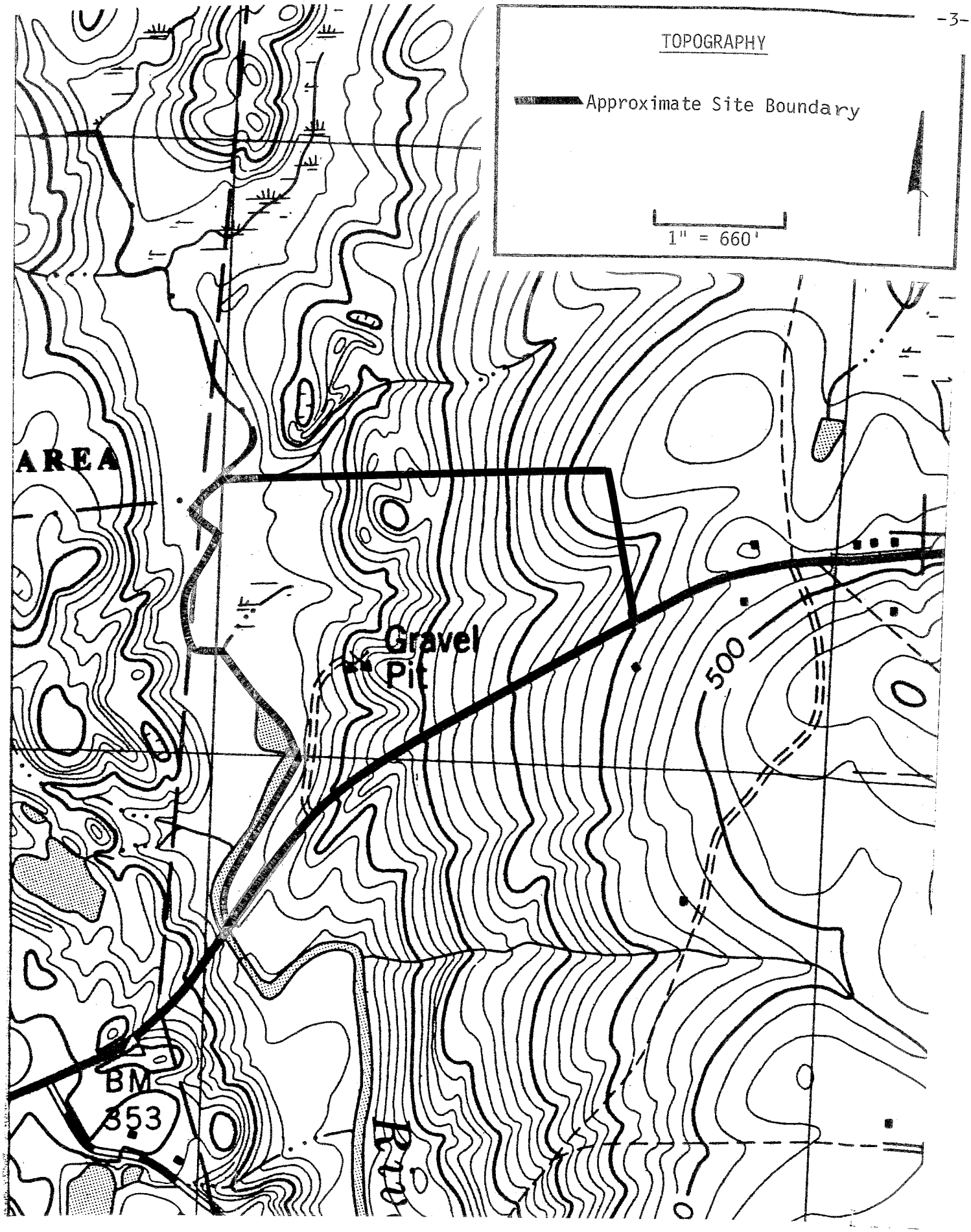

PUDDING HILL
WILDLIFE
MANAGEMENT AREA
Pudding Hill
Kimball Pond
TURNPIKE
Little
Downing
Colburn
COLBURN
Brook
ROAD
BROOK
BM 530
Gravel Pit
A N D
C A N T
Scotland
River
MILLER ROAD
BINGHAM ROAD
ULASIK ROAD
HANOVER
KHOURIE ROAD
CEMETERY ROAD
Scotland Cem
Fort Ned Pond
Monty
Campground
TOLERATION ROAD
Smith
Gaging Sta
Woodchuck
LOCATION
1" = 2000'


TOPOGRAPHY
Approximate Site Boundary
1" = 660'
AREA
Gravel Pit
500
BM 853

A. INTRODUCTION

The Eastern Connecticut Environmental Review Team has been asked to provide natural resource information and evaluate a site proposed for residential development. The following sections of this report provide basic information and also discuss concerns and recommendations to mitigate potential problems with the subdivision.

The approximately ± 50 acre parcel is located on the north side of Route 14, adjacent to the Little River (a major fishing/recreation stream) and the Town of Scotland at the west side. The parcel is wooded with the exception of a former sand/gravel borrow area located toward the lower western part of the property. The terrain, in general, is relatively steep sloping in an east to west direction.

A northwesterly flowing tributary to Little River, which is seasonal, traverses the northcentral part of the site. Regulated inland wetland soils parallel this tributary. Floodplains lie immediately along Little River. Pudding Hill Wildlife Management area is also located close by in the Town of Scotland.

Maximum and minimum elevations on the site are about 460 feet and 320 feet above mean sea level, respectively.

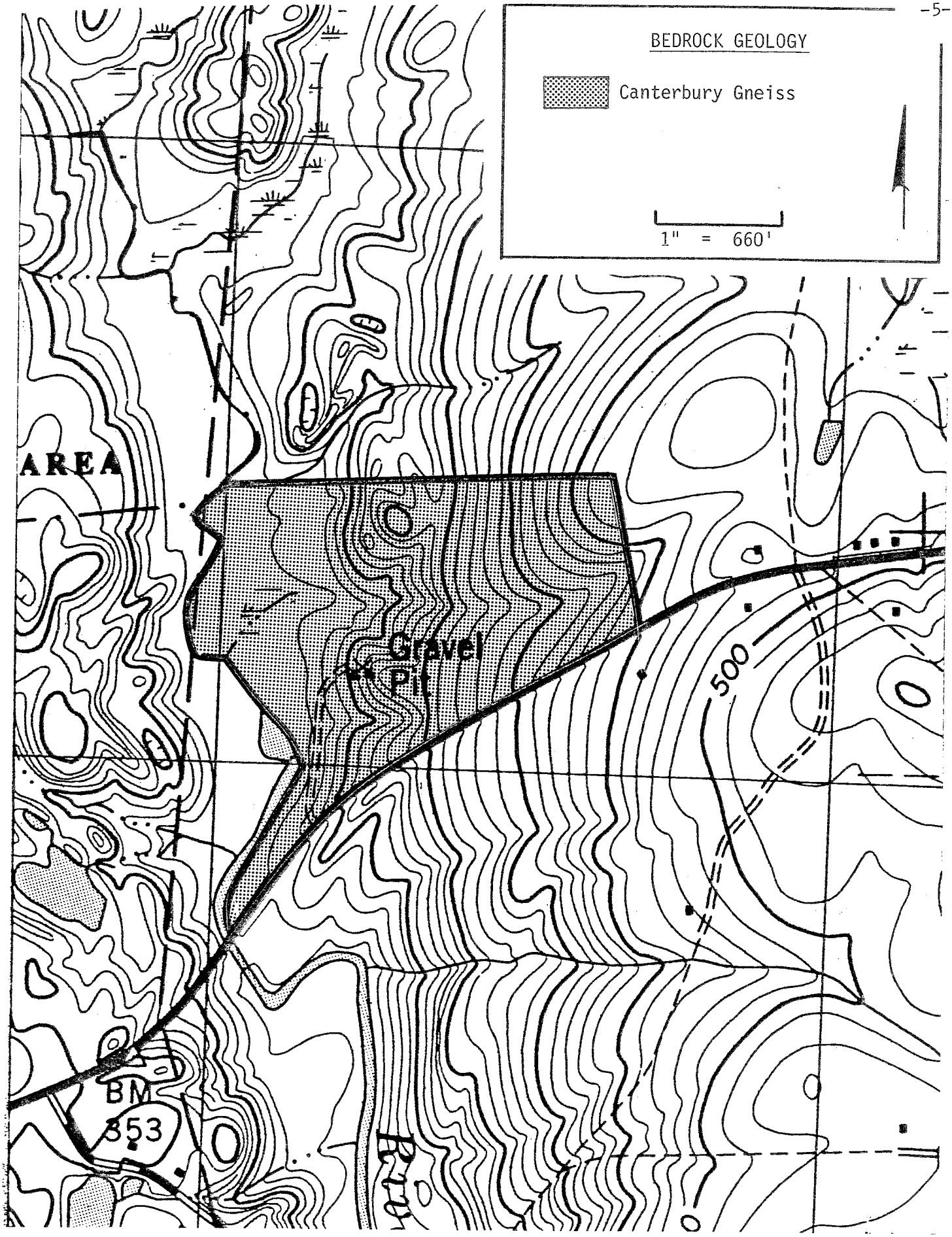
Fransen Consultants, engaged by the owner, have prepared a subdivision plan of 9 lots ranging in size from 2.3 acres to one rear lot of 20.5 acres. Zoning for this area requires minimum size lots of 2 acres.

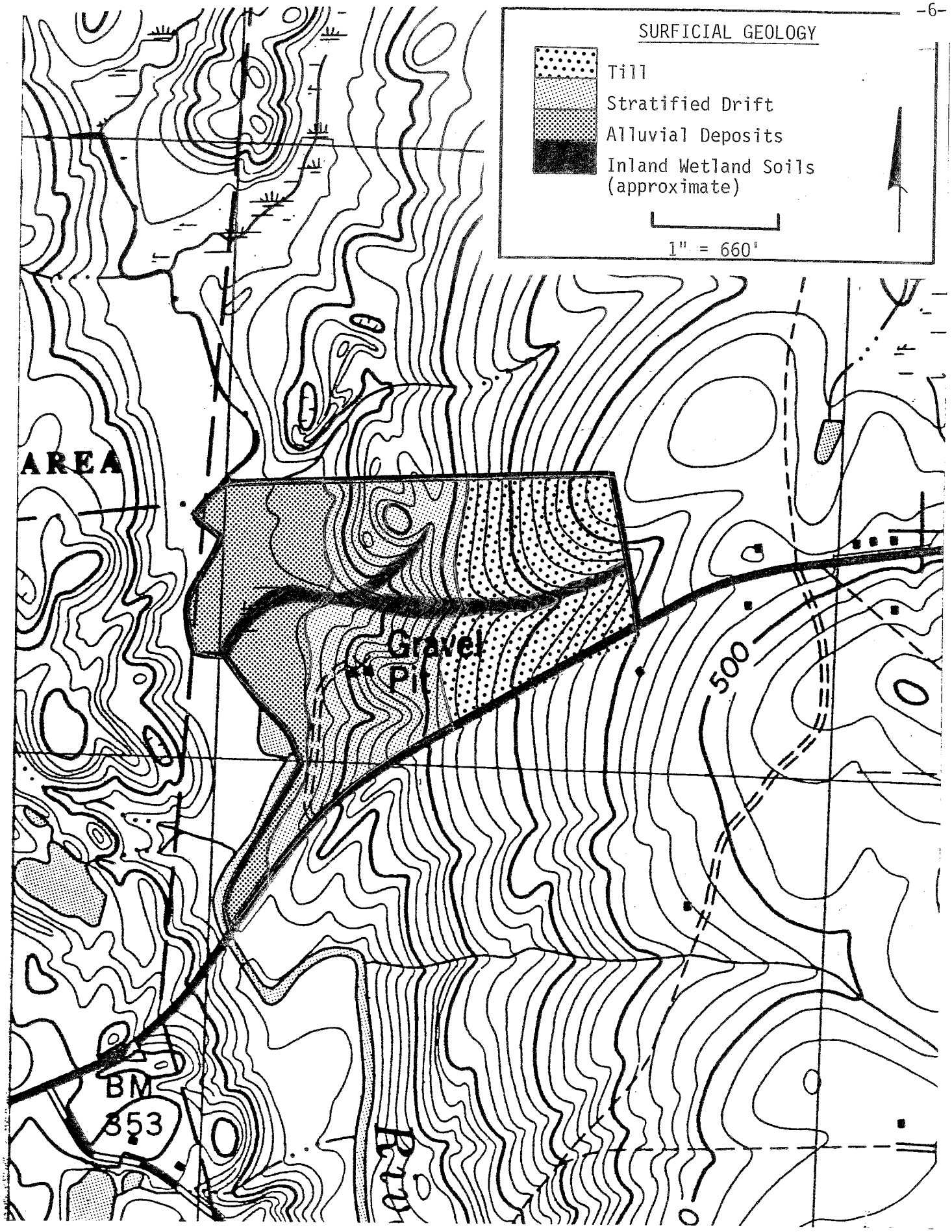
Lots are to be served by both on-site well water supplies and subsurface sewage disposal systems.

B. GEOLOGY

The site lies entirely within the Scotland topographic quadrangle. A combined surficial and bedrock geologic map (map GQ-392) for the quadrangle by H. Roberta Dixon and Charles E. Shaw, Jr. has been published by the U. S. Geological Survey.

The bedrock surface does not appear to break ground surface on the site. However, it was encountered at relatively shallow depths, (2-4 feet below ground surface) in the eastern part during subsurface sewage exploration work.


BEDROCK GEOLOGY
Canterbury Gneiss
1" = 660'
AREA
Gravel Pit
500
BM
353


SURFICIAL GEOLOGY
Till
Stratified Drift
Alluvial Deposits
Inland Wetland Soils
(approximate)
1" = 660'
AREA
Gravel
Pit
500
BM
853
Path

Map GQ-392 identifies the bedrock underlying the entire site as Canterbury Gneiss, a light-gray, medium grained gneiss composed primarily of the minerals biotite, feldspar, and quartz. Minor minerals in the rock include epidote and muscovite.

The underlying bedrock is the source of water to many drilled wells in the area and will likely be the source of water to the individual drilled wells serving each lot in the proposed subdivision (see Water Supply Section).

Most of the Blais property is covered by stratified sands containing minor amounts of gravel. These sediments were deposited in western and central parts by streams of glacial meltwater during deglaciation in the Little River Valley.

The remainder of the site is covered by till. Till is a glacial sediment that was deposited directly from glacier ice. The sediment consists of varying portions of sand, silt, gravel, clay and boulders. Particles of different sizes are generally mixed together in a complex fashion. Based on deep test hole information, the texture of the till on the site is sandy, stony and loose or moderately loose. Its thickness probably does not exceed ten (10) feet in most places.

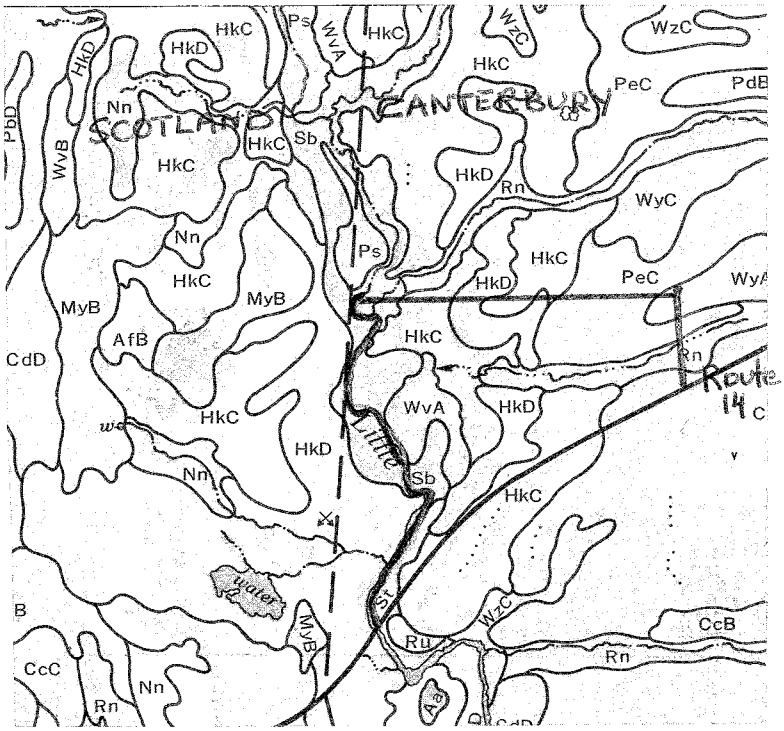
Post glacial sediments, such as alluvium and inland wetland soils parallel Little River and the seasonal streamcourse on the site, respectively. Both of these deposits are regulated under Chapter 440 of Connecticut's General Statutes. Because they are subject to seasonal flooding and/or are seasonally wet they hold low potential for development purposes and should be avoided.

Based on soil mapping data and deep test hole information, the major geologic limitations of the site is the presence of shallow bedrock in the eastern parts and rapidly permeable sandy soils in the western part. However, subsurface information supplied by the project engineer indicates that conditions on each lot are suitable for subsurface sewage disposal. However, engineered systems would be required to overcome the limitations (shallow and rapidly permeable soils) mentioned above. Since lot sizes are fairly large, there is a chance that a future buyer of a lot could change the present house location indicated on the plan. This may also lead to a change in the location of a septic system. In this situation, it may be necessary to do retesting at a later date. (See Sewage Disposal Section.)

C. SOILS AND RESOURCE CONCERNS

The soils are as presented on the Soils Map in this report, and are noted on the subdivision plan. They are basically well drained sandy loams, at least in areas where homes are proposed. A drainage draw with a wetland

ERT: Blais, Canterbury SOILS REPORT



N

	Sb	Saco Silt loam
	HkC	Hinckley gravelly sandy loam 3-15% slopes
	HkD	Hinckley gravelly sandy loam 15-40% "
*	WvA	Windsor loamy sand 0-3%
	PeC	Paxton extremely stony fine sandy loam 8-15%
**	Rn	Ridgebury, Leicester and Whitman extremely stony fine sandy loam
	CdC	Canton and Charlton extremely stony fine sandy loam 3-15% slopes

* designated wetlands soil

** designated additionally important agricultural soil

soil - Rn, is identified running across the rear of lots 1, 2, 3, and 7. An area has been excavated for gravel in the past approximately where the house is proposed on lot 7.

Engineers from a firm consulting for the town have noted strong concerns over the ability of the well drained sandy/gravelly soils to filter effluent from on-site septic systems. The question is whether or not effluent nutrients and bacteria might harm Little River. Perc test data indicates rates of between 1.8 minutes per inch (fastest on lot 7), and 8 minutes per inch (slowest on lots 1, 3, 4, 6). Understanding that the Department of Health notes "areas of special concern" when rates are faster than 1 minute per inch or slower than 30 minutes per inch they would not normally judge the rates on these lots to be of special concern. And when one looks at the low density of development, i.e. smallest lots 2.3 acres, and closest distance to wetlands and Little River of septic fields being 100 feet on lot 9, an SCS soil scientist and the District Conservationist do not anticipate a pollution threat to the river. The amount of soil through which effluent can move should be more than sufficient to adequately filter septic effluent. (See Sewage Disposal Section for further information.)

Surface runoff from driveways and areas disturbed for building homes and installing septic fields does need to be controlled, especially in the more sloping areas. Fransen Consultants have prepared an erosion and sediment control plan for typical lot development. This would have to be monitored carefully. As noted fabric silt fence or hay bales should be installed just below/downslope of disturbed and graded areas. Limits of clearing and ground disturbance could be white-flagged on a lot before a bulldozer and/or backhoe begins work.

The proposed location of a septic field on lot 4 has been questioned because it appears to be in a natural swale. On-site inspection reveals little to no swale in this area (plan map contours are misleading), and locating a field here should not be a problem.

Protection of Little River is important. Altbough Canterbury's Inland Wetland Commission should be consulted if a landowner near the River intended to work along the riverbank or in adjacent wetlands, it is suggested a restriction be written on the plan and in deeds for lots 7 and 9 that no disturbance of ground and healthy vegetation within 100 feet of the riverbank be allowed. The IWC members should be consulted on this buffer width. Have they already stated a required buffer width? To further assure protection a deed on these lots could state that no sandy beach areas be developed and no livestock be allowed within this buffer width. Alternate watering sources could be developed for livestock if necessary. (See Fish Resources Section)

A major value of wetlands is to slow, filter, and cleanse incoming pollutants, either from surface runoff or groundwater. Although one should normally never condone filling wetlands or intentionally using them for this

value, the fact they exist on this property does mean they "buffer" the river. This is especially true on lot 7. So if there was by chance soil wash or effluent leaching from development areas, the Rn wetland soil would normally cleanse water moving toward the river - hundreds of feet away from all lots except 9.

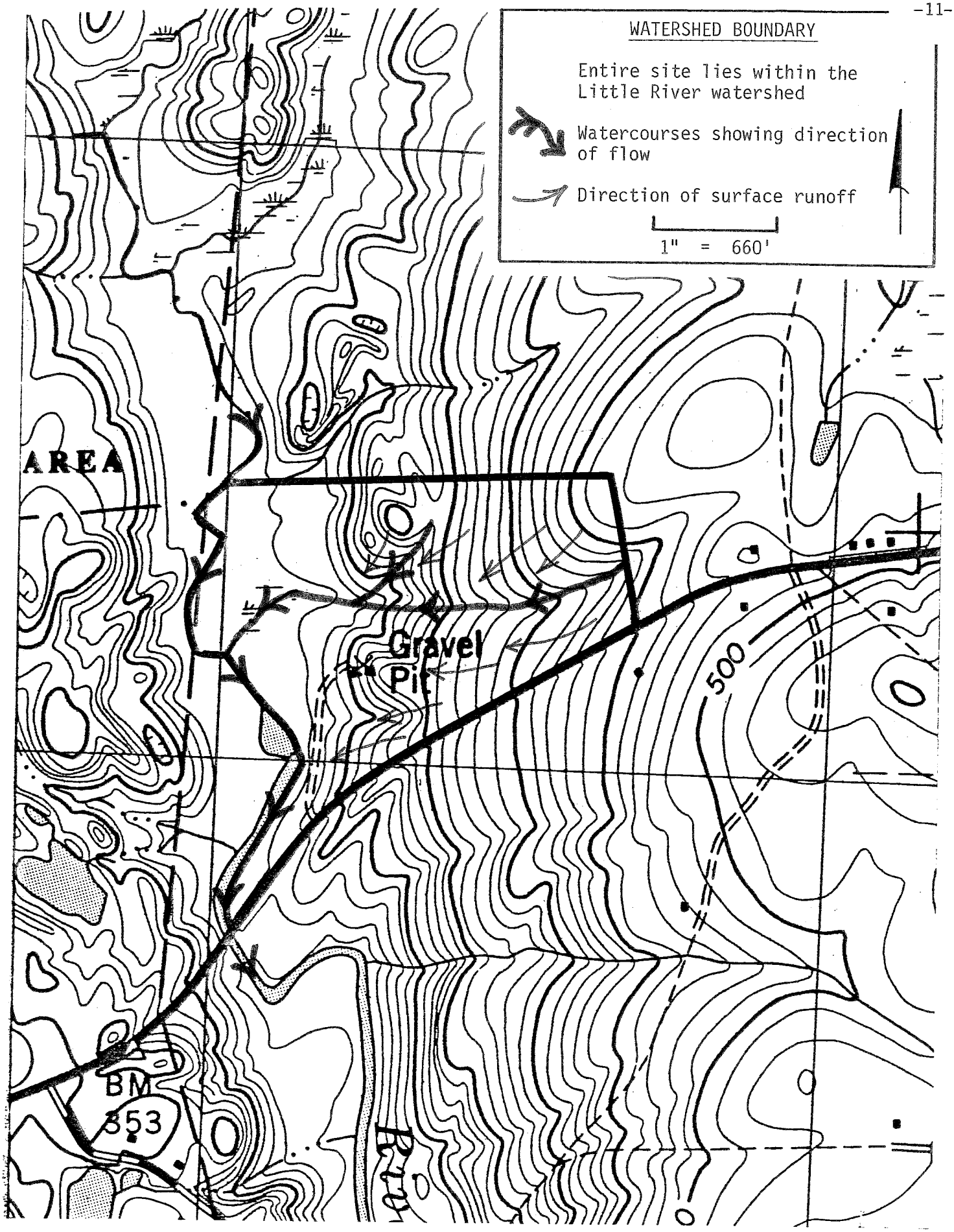
D. SEWAGE DISPOSAL

The majority of soils, with the exception of those composing wetlands, seem to be rather permeable to the point that some may have very rapid seepage. However, as sewage leach systems are to be located at least 100 feet from any wetlands and the relatively low number of systems, they should not have a detrimental affect on surface water. However, if there is any thought of combining any of the lots, probably 8 and 9 should be considered. Also, to lessen the possible affect on groundwater, leaching systems should be kept elevated as much as possible in the upper soil layers. Of course, systems should be located downslope from any potential well sites. Based on soil test pit information it appears the more restricted area is towards the upper east side where relatively shallow ledge rock was encountered. Where ledge is encountered at a depth of less than 5 feet it is designated as an area of special concern. These areas warrant more detailed site investigation and engineered design sewage systems. It is necessary to have the bottom areas of any sewage leach system at least 4 feet above ledge rock. For this reason it is often times necessary to elevate the system in suitable fill material. In addition to the rock, there is one or possibly two lots (5 and 6) where the terrain drops off rather sharply about midway back. Proposed houses on these lots should be properly located in order to keep sufficient area available, away from the steeply sloping terrain, for sewage disposal purposes. Lot 1, which is also large, has a sizable area to the rear of a relatively narrow strip of wetlands which crosses at approximately midway. This rear portion of the lot has not been tested. It may be more suitable to locate the house and sewage system in this area, providing testing was favorable and permission was obtained from the authorized agency for a roadway crossing of the wetlands.

While some of the proposed lots have been designated as needing engineered design systems, it would appear that all lots should have designed systems.

E. HYDROLOGY

The entire site lies within the Little River watershed area. Rainfall in the form of surface runoff within the site may flow overland to Little River or any of its seasonal tributaries on the parcel or it may percolate downwards through the soil until it reaches the groundwater table or the bedrock surface. Once it reaches the groundwater table or bedrock surface, it moves by the force of gravity towards springs, wetland or watercourses. The water may also be


WATERSHED BOUNDARY
Entire site lies within the Little River watershed
Watercourses showing direction of flow
Direction of surface runoff
1" = 660'
AREA
Gravel Pit
500
BM
353

returned to the atmosphere through evaporation or transpiration.

The subdivision of the property as planned followed by the construction of new homes and driveways will lead to some increases (probably in the order of 5 to 8 percent for a 25-year storm event) in runoff from the property. Ordinarily, the Team's Geologist might recommend that consideration be given to measures that would mitigate the effects of these increases (e.g., a stormwater detention basin). In this case, however, the overall density of the project is relatively low so that any peak flow increases would be expected to be small. Also, because of its close proximity to Little River, it would be ideal to have surface runoff from the site reach the river quickly rather than to delay it in a detention basin and release the stormwater during the height of a storm. This condition would further aggravate flooding problems.

Of more concern is the potential for erosion and siltation problems due to increased runoff, particularly because of moderate slopes. Increased runoff from concentrated areas can also cause streambank erosion and gullying. Also, every consideration should be given to protecting Little River from erosion and siltation problems. Therefore, it is strongly recommended that a comprehensive erosion and sediment control plan be developed covering construction on each lot. Disturbed areas should be kept to a minimum under such a plan.

DEP's Water Quality Classification Map indicates that the section of Little River passing by the site is classified as B/A. A B/A surface water classification means that it may not be meeting class A water quality criteria or one or more designated uses. The designated uses of an A classification includes; potential drinking water supply, fish and wildlife habitat, recreational use, agricultural use and industrial supply and other legitimate uses including navigation.

The presence of a tri-town (Scotland, Hampton and Chaplin) landfill site and a road salt storage facility upstream from the site has rendered the water unsuitable for potential drinking water supply. The other designated uses mentioned in the A classification would be suitable for the river. DEP's ultimate goal is to upgrade the classification to A.

F. WATER SUPPLY

As there are large lots there appears to be no particular reason why adequate on-site well supplies could not be constructed along the higher portion of the 8 lots having frontage on Route 14.

Wells located in that area would be upslope from any of the on-site sewage disposal systems. The remaining very large lot should present no problem for a satisfactory location. Due to the terrain and soil characteristics

it would be expected that wells would be of the drilled type which should also afford additional protection against possible sources of bacterial and/or chemical pollution.

It is noted that the soil service mapping information indicates some of the soil types consist of excessively drained soils (soils with very rapid seepage). However, percolation test data, while being fast at several of the lots would not necessarily be considered highly permeable. In cases where percolation rates are found to be faster than 1 inch per minute, the lateral separating distances between wells and sewage disposal systems must be increased to at least twice the required minimum distance of 75 feet. Also, a greater vertical separating distance must be maintained above ledge rock (4 feet to a minimum of 10 feet). If a 10 foot distance above ledge rock is not possible, then it is necessary to provide a 500 foot lateral distance from any well. In any case, where soils tend to be fast and particularly if ledge rock is present at relatively shallow depths, well sites should be carefully chosen and wells properly constructed. Providing an increase in the lateral separating distance from potential sources of pollution, if at all possible, is also recommended as a further safeguard.

The stratified drift along Little River in the western part, which may be as much as 39 feet deep may have potential for yielding moderate to very large amounts of water (50-2,000 gallons per minute). However, hydrogeologic data such as thickness of saturated zones, texture, etc., are presently not known and verification would require testing.

The other aquifer found on the site, which will probably be the source of water to the proposed homes is the underlying metamorphic rock. Wells drilled 100-200 feet into bedrock are generally capable of supplying small but reliable yields of groundwater. There is also at least a slight probability that drilling in any particular location will result in a dry hole. Dry holes and very low yielding wells ¼ to ½ gallon a minute have plagued some wells drilled into the Canterbury Gneiss in the region. In view of this potential problem, it might be wise to drill and develop the well on each lot before actual home construction begins.

If the underlying bedrock is a low producer, consideration should be given to investigating the potential of the stratified drift deposits in the western parts. Perhaps a community water supply could be developed in the stratified drift and made available to the homes in the proposed subdivision. This type of well would first require approval by the State Department of Health Services (Public Water Supply Section) and the Department of Public Utilities Control.

Information on projected needs of the subdivision in terms of water quantity, water quality testing and plans for pumpage, storage, treatment, if necessary, and the distribution system would also be necessary for a community water supply. If this turns out to be a viable alternative, consideration should be given in advance to providing for proper operation and maintenance

of a potential community water supply system (i.e., establishment of a homeowner's association).

According to DEP's Water Compliance Unit's Water Quality Classification Map for the Shetucket River, groundwater beneath the site is classified as GA, which means that it is suitable for private drinking water supplies without treatment. As a result the quality of the groundwater would be expected to be generally good.

It should be noted, however, that recent testing of bedrock wells by the State Departments of Environmental Protection (DEP) and Health Services (DOHS) showed that elevated levels of radon may occur in the Canterbury Gneiss formation, which underlies the site and the region. Radon is a naturally occurring radioactive gas which is odorless and colorless and which is emitted from earth materials.

The greatest health risk from radon occurs upon inhalation. Long term radon exposures in indoor air, especially in the presence of cigarette smoking, can significantly increase the risk of lung cancer.

On the other hand, the health risks from ingestion of radon in drinking water is not considered a significant health risk at this time unless the level of radon in the water is extremely high, e.g. (100,000 picocuries/liter or greater).* For comparison purposes the sampling survey conducted by DEP and DOHS for well water derived from the Canterbury Gneiss revealed radon levels which ranged from 10,010 to 64,510 picocuries per liter and the median 27,325 picocuries per liter. It is understood that more sampling in the Canterbury Gneiss will be conducted by DEP and DOHS this fall.

The problem with elevated levels of waterborne radon is the occurrence of off gasing of radon from water during usage, i.e., showers, washing machine, kitchen tap, etc., which in turn enters the household air.

Consequently, there is a relationship between waterborne radon and airborne radon. The U. S. Environmental Protection Agency (EPA) suggests a risk level of 4 picocuries per liter of radon for indoor exposure. The EPA suggests people should avoid living for a long period of time where radon concentrations are highter than 3-4 picocuries/liter. To show the affects of waterborne radon to airborne radon, it is estimated that average contribution of waterborne radon to household air radon is 10,000 picocuries/liter to 1 picocurie/liter. In other words, waterborne radon levels of greater than 40,000 picocuries/liter could cause household air levels to be above the (EPA) guideline of 4 picocuries/liter. However, it should be pointed out that the water supply is rarely the sole contributor to indoor radon and can sometimes be responsible for only a small percentage of the radon found in the home.

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*Radon is measured in units of picocuries per liter (pCi/l). A curi (Ci) is the rate at which atoms of radioactive sources disintegrate. One curie is defined as 37,000,000,000 (3.7 x 10) disintegrations per second. A picocurie (pCi) is a trillionth of a curie. The radioactivity of one gram of radium is approximately one curie.

The remainder commonly enters through cracks and other openings in the walls and floors that are in direct contact with the surrounding soil.

In conclusion, it is not possible to predict the levels of radon gas in a particular home. Within one geologic region, signigicant variations are to be expected in the concentrations of actually occurring radon. Nevertheless, the potential for greater or lesser concentrations may follow generally predicatable patterns. Granitic rocks, similar to the Canterbury Gneiss, of Connecticut's eastern and western uplands appear to have a greater potential for elevated radon gas levels. Efforts are continuing by the Departments of Health Services and Enviornmental Protection to examine the relationship between indoor air radon levels and the distribution of earth materials on a statewide basis.

Water from newly drilled wells can be tested for radon and treatment installed, if necessary. The test for radon in well water currently runs about $75.00. It is suggested that water testing for radon be conducted if indoor air radon levels are high. air testing for radon is less costly (about $12.00). It should be conducted during the winter months. Also, testing methods are being researched which will permit direct testing radon in soil gas. This will potentially lead to better evaluation of a site prior to construction.

Foundation and basement ventilation designs which effectively deal with elevated radon gas presence are fairly straight forward and are of modest cost when incorporated in the design phase of a project. For more information, persons should contact the Department of Health Services at 566-8167.

G. FISH RESOURCES

Site Description

The proposed Blais property subdivision borders approximately 2,880 feet of the Little River in Canterbury, Connecticut. A total of three (3) building lots (numbers 7-9) will either abut or lie within close proximity to the Little River.

Water flow is slow moving in this low gradient stretch of the Little River. River width ranges from 25 to 40 feet. Substrate is comprised of small cobble type rocks intermixed on a fine sand and gravel bottom. Streamside banks are very steep along the entire reach. Overhead vegetation provides sufficient shading and cooling of stream waters. No filamentous algae was observed on bottom substrates. Lack of filamentous algae indicates that stream waters are clean and free of excessive artificial sources of nutrients. The Little River is currently classified by the Department of Environmental Protection (DEP) as "Class B/A" surface water (swimmable-fishable water).

Two small intermittent brooks exist on this property flowing southwestly through wetland habitat and emptying into the Little River. Intermittent brooks range from 2 to 4 feet in width and are comprised of mud, silt bottoms. Both brooks contained flowing water at the time of the field review.

Fish Population

The Little River supports a healthy and diverse fish population. Fish which presently inhabit the river are: wild brook trout, blacknose dace, longnose dace, fallfish, white sucker, and common shiner.

The Little River is widely known as one of the best small trout streams in Connecticut. It is annually stocked by the Department of Environmental Protection in the towns of Canterbury, Hampton, and Scotland with over 5,100 adult (9-12") brook, brown and rainbow trout. Pools which are areas of deep, slow water comprise the dominant fish habitat in this reach. The Little River also supports a diverse group of aquatic insects which serve as the primary food source for fish. The two intermittent brooks do not support fish populations.

Impact

The following impacts on the Little River can be expected if development is constructed as proposed:

1. Construction site soil erosion and sedimentation of the Little River and intermittent watercourses through increased runoff from unvegetated areas -- erosion and sedimentation due to construction has long been regarded as a major cause of stream degradation. In particular, silt deposition will:

* Reduce aquatic insect production - sediment free water is also required for successful aquatic insect egg respiration and hatching. Aquatic insects are important food items in fish diets. Reduced insect levels will adversely effect fish growth and survival.

* Reduce stream pool depth - pools provide cover, shelter, and resting areas for fish.

* Encourage the growth of rooted aquatic plants and promote filamentous algae growth in streams -- eroded soils contain plant nutrients such as nitrates and phosphates. Although algae and aquatic plants require these nutrients for growth, most aquatic ecosystmes contain very limited amounts. Consequently, these nutrients act as fertilizers once they are introduced into aquatic habitats resulting in accelerated plant growth.

* Contribute to the depletion of oxygen - organic matter associated with soil particles is decomposed by micro organisms contributing to the depletion of oxygen in waters overlying sediments.

The Little River in this area has no capacity to move fine streambed materials due to its low gradient on this property. Consequently, any damage effected by silt deposition could be irreversible.

2. Transport of lawn fertilizer to the Little River - runoff and leaching of nutrients from fertilizers will stimulate nuisance aquatic weed growth.

3. Water quality degradation - any water quality problems that develop along this property will ultimately be passed onto downstream areas.

If realized, the aforementioned impacts would have a severe, adverse effect upon the Little River. Degradation of water quality and fish habitat could render this area undesirable for recreational activities.

Recommendations

The impact of residential development on aquatic resources can be minimized by implementing the following precautionary measures:

1. The Fisheries Biologist recommends discouraging riverfront development by removing building lots 7 through 9 from the subdivision plans. This will reduce aforementioned impacts and maintain river ecosystem integrity.

2. If riverfront development is allowed, the Fisheries Biologist recommends a minimum 150 foot open space buffer zone along the river edge - no construction or alteration of habitat shall take place in this zone.

3. Install and maintain proper erosion and sedimentation controls during construction such as silt fences, hay bales, and catch basins - direct all runoff away from aquatic habitats and regularly maintain catch basins.

4. Disallow liming and fertilization of subdivision lawns close to aquatic habitats - stress the use of low phosphate laundry detergents. These steps will partially mitigate the addition of nutrients to all waters.

5. Encourage subdivision residents to create a local environmental association in order to educate all landowners concerning responsible land management practices near sensitive aquatic habitats - technical assistance regarding these matters can be obtained from DEP professionals.

Summary

As proposed, this development has the potential to negatively impact sensitive aquatic habitats. Careful and conscientious planning must be exercised by the developer and the Town of Canterbury to mitigate a myriad of potential impacts. If implemented, proper mitigation measures will preserve existing water quality and fish habitat.

H. PLANNING COMMENTS

All of the lots in this 9 lot subidivision meet or exceed the 2 acre minimum lot size requirement of the Canterbury Zoning Regulations. All wetland soils have been flagged by a soil scientist. No development activity or building construction activity will occur within fifty (50) feet of the wetlands and flood plain areas. The developer should consider putting deed restrictions on lot numbers 7 and 9 -- the only lots which have acreage along the Little River. These deed restrictions would prohibit ground disturbance and the location of animals along the river's edge. Such restrictions would prevent negative impact to the Little River.

All driveways will be subject to approval and inspection by the Connecticut Department of Transportation because they enter onto a state highway. Per recommendations by the Connecticut Department of Transportation, several of these driveways have been resited: Driveways for lots 9 and 8, 5 and 4, 3 and 2, respectively, will now be sited adjacent to each other, next to their common boundary lines. Sight lines for these driveways appear adequate, despite the hill at the easterly section of the subdivision and the curve at the front lines of lots 8 and 9. Route 14, as a state highway, should be capable of accepting the traffic from this 9 lot subdivision.

It should be noted that several of these lots, through simple east--west orientation of the houses and, in some cases, resiting of the septic systems into the front yards rather than in the rear yards, (provided that suitable area is available) are potential solar access lots. This variation of house and septic system sitings would provide more variation in the lots and allow some of the homes to be placed further back from Route 14. Canterbury's Zoning and Subdivision Regulations do not, at present, require consideration of solar access; but, the more varied siting of the homes, with the possibility of passive solar energy use might make these lots more attractive and more profitable to the seller.

The Town of Canterbury's Subdivision Regulations (Section 4.17) stipulate that proposed subdivisions shall have an area of open space of not less than 5% of the total tract deeded to the Town. In the case of this 50 acre parcel, 2.5 acres would equal that 5% dedication area. Section 4.17(e) provides for a waiver of this requiremnt if all the lots in the subdivision are

three or more acres in size. Since lots 4, 5, and 6 are 2.3 acres each, the Blais subdivision is subject to the open space requirement. Canterbury's Plan of Development further states that the "banks of the Quinebaug River and the Little River should be preserved for open space, recreation and agriculture".

If the Town of Canterbury decides to require the dedication of an open space parcel and the subsequent reponsibility of that parcel, Lot 9, with its location next to the Route 14 bridge over the Little River and the shoreline along the Little River, would be the obvious choice for such dedication. The State of Connecticut presently stocks the river and fishermen and/or canoeists park along the roadway and walk along the bank of this privately owned property.

About The Team

The Eastern Connecticut Environmental Review Team (ERT) is a group of professionals in environmental fields drawn together from a variety of federal, state, and regional agencies. Specialists on the Team include geologists, biologists, foresters, climatologists, soil scientists, landscape architects, archeologists, recreation specialists, engineers and planners. The ERT operates with state funding under the supervision of the Eastern Connecticut Resource Conservation and Development (RC&D) Area--an 86 town area.

The Team is available as a public service at no cost to Connecticut towns.

PURPOSE OF THE TEAM

The Environmental Review Team is available to help towns and developers in the review of sites proposed for major land use activities. To date, the ERT has been involved in reviewing a wide range of projects including subdivisions, sanitary landfills, commercial and industrial developments, sand and gravel operations, elderly housing, recreation/open space projects, watershed studies and resource inventories.

Reviews are conducted in the interest of providing information and analysis that will assist towns and developers in environmentally sound decision-making. This is done through identifying the natural resource base of the project site and highlighting opportunities and limitations for the proposed land use.

REQUESTING A REVIEW

Environmental reviews may be requested by the chief elected officials of a municipality or the chairman of town commissions such as planning and zoning, conservation, inland wetlands, parks and recreation or economic development. Requests should be directed to the Chairman of your local Soil and Water Conservation District. This request letter should include a summary of the proposed project, a location map of the project site, written permission from the landowner allowing the Team to enter the property for purposes of review, a statement identifying the specific areas of concern the Team should address, and the time available for completion of the ERT study. When this request is approved by the local Soil and Water Conservation District and the Eastern Connecticut RC&D Executive Council, the Team will undertake the review on a priority basis.

For additional information regarding the Environmental Review Team, please contact Elaine A. Sych (774-1253), Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, P.O. Box 198, Brooklyn, Connecticut 06234.