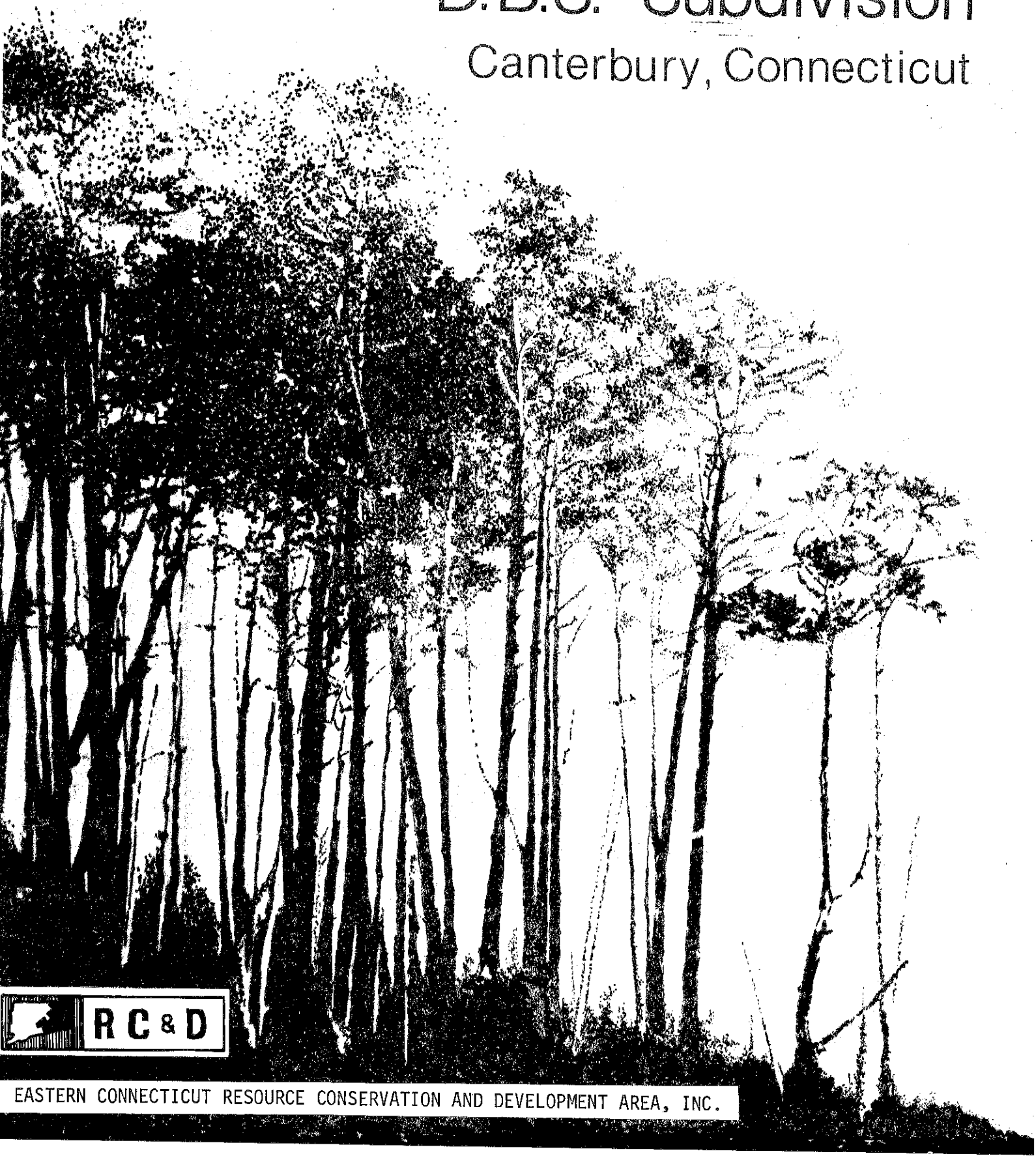
Environmental Review Team Report

D.B.S. Subdivision

Canterbury, Connecticut



R C & D

EASTERN CONNECTICUT RESOURCE CONSERVATION AND DEVELOPMENT AREA, INC.

Environmental Review Team Report

on

D.B.S. Subdivision

Canterbury, Connecticut

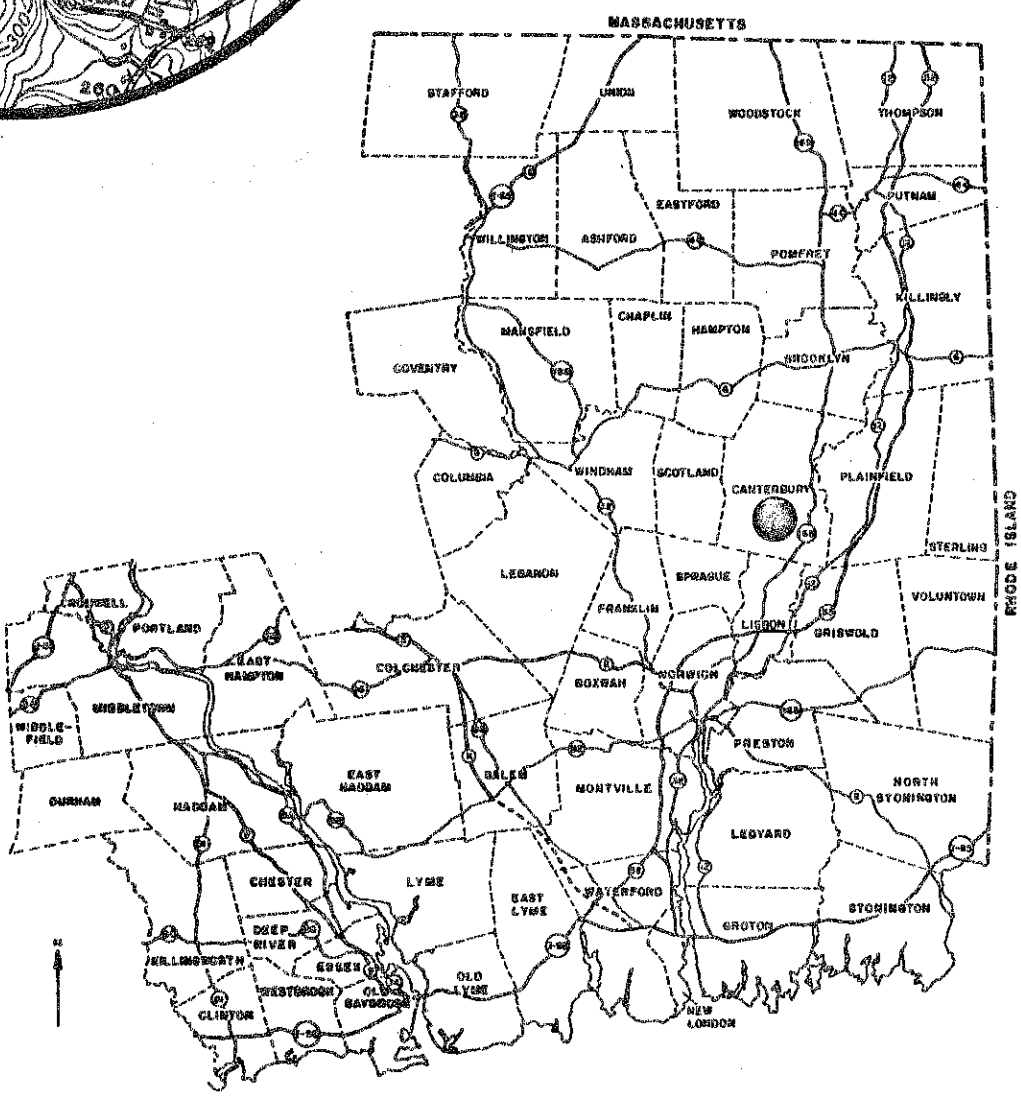
March 1979

eastern connecticut resource conservation & development area

environmental review team
139 boswell avenue
norwich, connecticut 06360

Location of Study Site

D.B.S. ASSOCIATES SUBDIVISION
CANTERBURY, CONNECTICUT



EASTERN CONNECTICUT
RESOURCE CONSERVATION AND DEVELOPMENT PROJECT

ENVIRONMENTAL REVIEW TEAM REPORT
ON
D.B.S. ASSOCIATES SUBDIVISION
CANTERBURY, CONNECTICUT

This report is an outgrowth of a request from the Canterbury Planning and Zoning Commission, and the Northeast District Department of Health, 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 as a project measure. The request was approved and the measure reviewed by the Eastern Connecticut Environmental Review Team (ERT).

The soils of the site were mapped by a soil scientist of the United States Department of Agriculture (USDA), Soil Conservation Service (SCS). Reproductions of the soil survey map as well as a topographic map of the site were distributed to all ERT participants prior to their field review of the site.

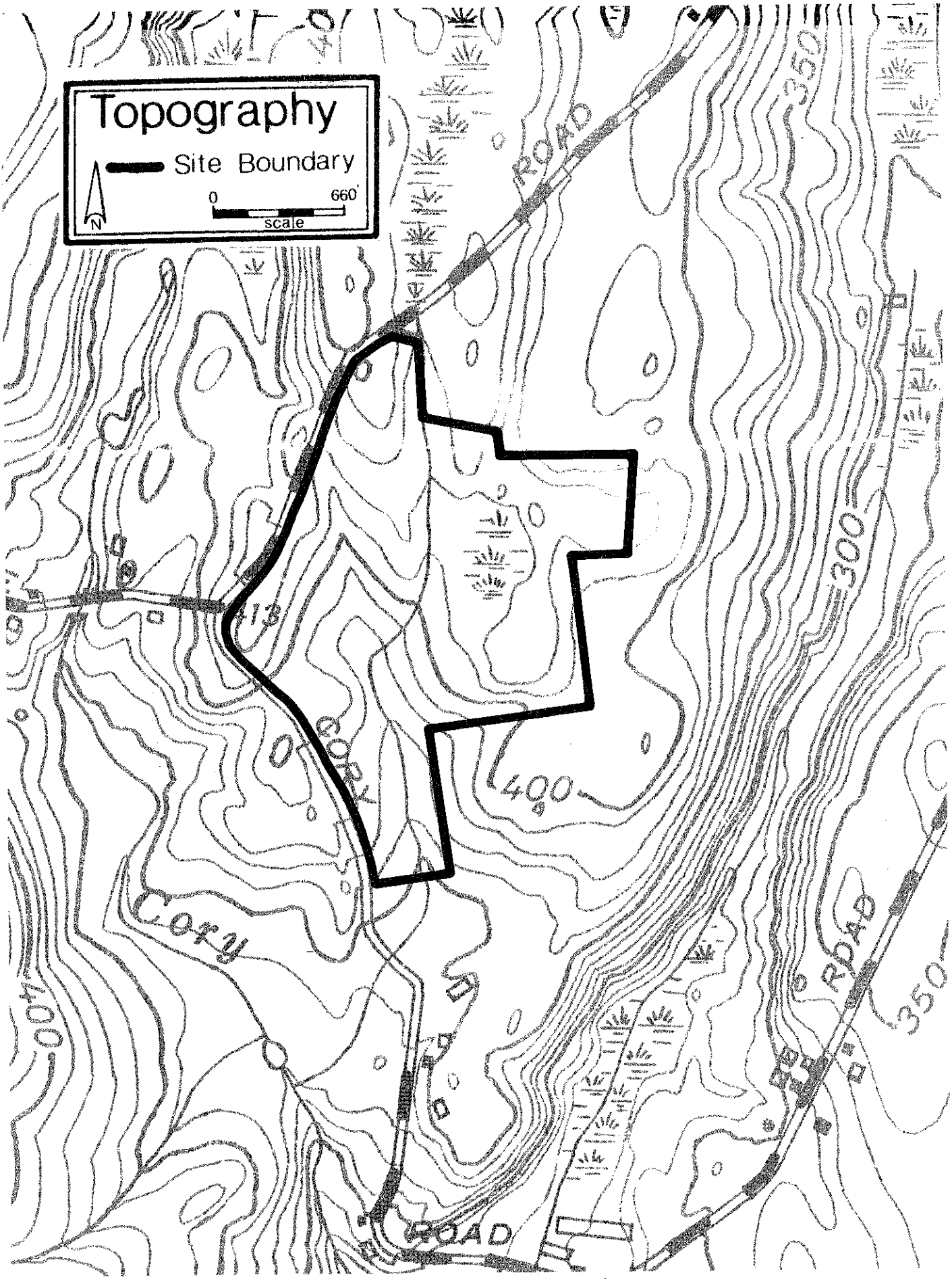
The ERT that field-checked the site consisted of the following personnel: Howard Denslow, District Conservationist, SCS; Michael Zizka, Geologist, Department of Environmental Protection (DEP); Rob Rocks, Forester, DEP; Geoffrey Havens, Sanitarian, State Department of Health; Peter Demallie, Regional Planner, Northeast Regional Planning Agency (NECRPA); and Jeanne Shelburn, ERT Coordinator, Eastern Connecticut RC&D Area.

The Team met and field-checked the site on Tuesday, February 6, 1979. Reports from each Team member were sent to the ERT Coordinator for review and summarization for the final report.

This report is not meant to compete with private consultants by supplying site designs or detailed solutions to development problems. 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 of Canterbury. The results of this Team action are oriented toward the development of a better environmental quality and the long-term economics of the land use.

The Eastern Connecticut RC&D Project Committee hopes you will find this report of value and assistance in making your decisions on this particular site.

If you require any additional information, please contact: Ms. Jeanne Shelburn, Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, 139 Boswell Avenue, Norwich, Connecticut 06360, 889-2324.


Topography
Site Boundary
0
660'
scale
N
ROAD
350
300
400
CORY
Cory
ROAD
ROAD
350
300

INTRODUCTION

The Eastern Connecticut Environmental Review Team was requested to provide an environmental assessment of the proposed DBS Associates subdivision, located on the eastern side of the intersection of Kinne and Corey Roads in Canterbury. Preliminary site plans have been developed by Albert Fitzback, R.L.S. of Putnam. Engineering for septic systems will be designed by Dimmock Associates. The total parcel for subdivision is approximately 73 acres. The initial proposal which was field reviewed by the Team and is discussed in detail consists of 7 lots fronting on Kinne Road on 38± acres. An additional 35± will be subdivided into lots 8 through 11 which are discussed in general terms in this report.

The proposed plan calls for single family dwellings to be established on 11 lots of 3± acres each. These lots will be serviced by on-site wells and on-site septic systems. A percentage of the total parcel will be designated as open space.

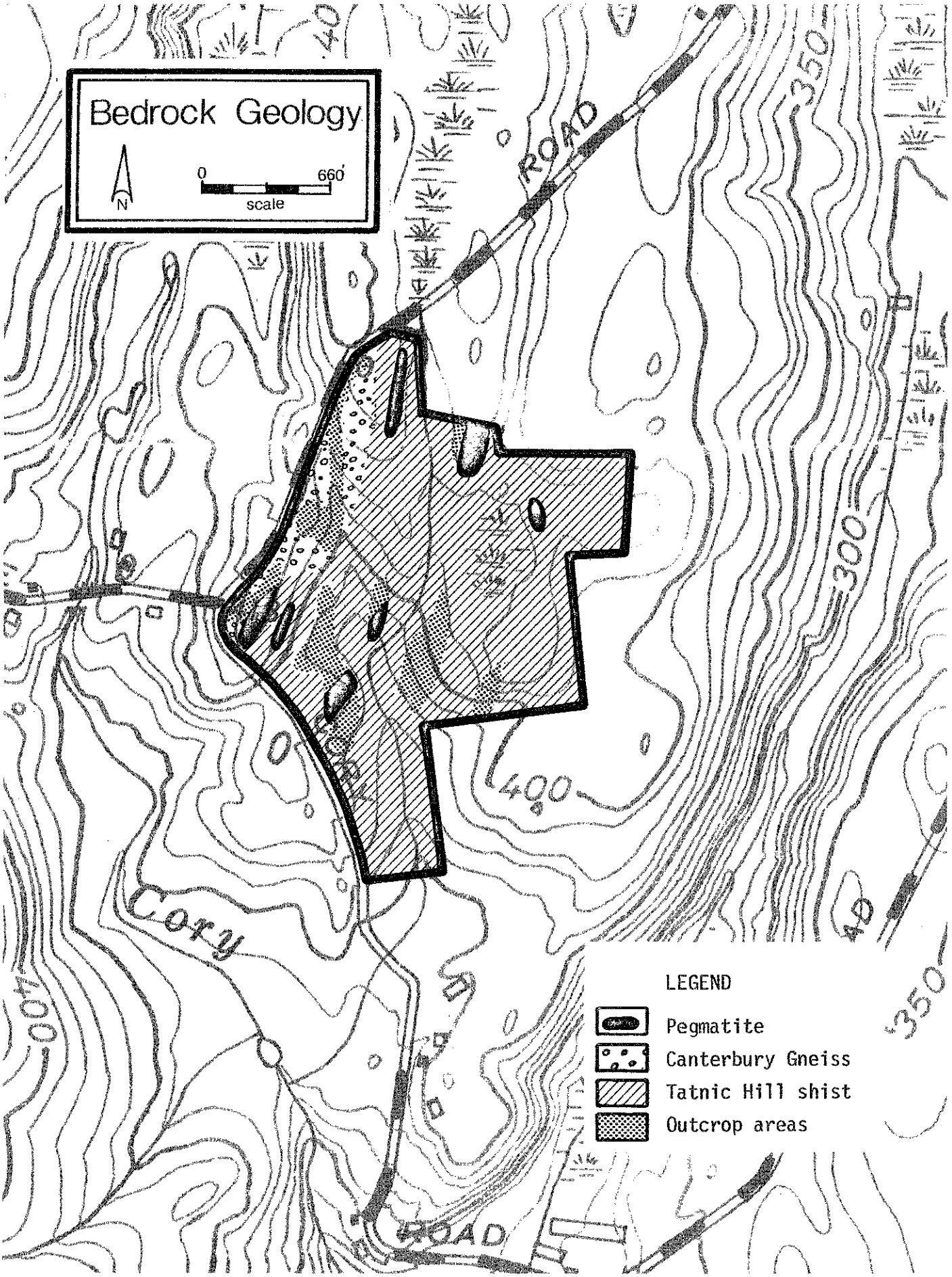
The site is characterized by a rolling and rocky topography which is sparsely vegetated on the uplands. A wetland area bisects the site and is thickly vegetated with sweet pepperbush and green briar. Driveway access to lot 3 will encroach on this wetland. Specific plans for this crossing have been reviewed for the Canterbury Inland Wetlands Commission by the Soil Conservation Service with regard to control of potential erosion and sedimentation. Soils on the site are extremely rocky and very shallow to bedrock in most areas.

The shallow-to-bedrock soils on this site cause the major limitation to residential development. Bedrock outcrops are intermittently present with pockets of deep soil among them. Judging from the number of test pits open on the site, finding suitable locations for septic leaching fields was obviously a difficult task. The potential for poorly renovated septic leachate reaching drilled wells is much greater here than in areas with deeper, more finely grained soils. Due to these potential health problems, building development approval should be conditional. Given the proximity of the former municipal sanitary landfill, the influence of landfill leachate on groundwater drinking supplies should be evaluated. The Commission may wish to consider establishment of wells on each site before lots are sold, to assure adequate water quality. Driveways should be located so as to assure safe vehicular ingress and egress. This subdivision generally conforms to both Canterbury's and the Northeast Region's development plans.

ENVIRONMENTAL ASSESSMENT

GEOLOGY

A geologic map of the Scotland quadrangle, U.S. Geological Survey Map GQ-392, by H.R. Dixon and C.E. Shaw, Jr., shows the general geologic setting of the proposed subdivision area. Field inspection of the site tended to confirm the validity of the map. The bedrock geology of the site, as adapted from GQ-392, is shown in an accompanying illustration. Essentially three rock types are present: pegmatite, Canterbury Gneiss, and Tatnic Hill schist. Pegmatite is a coarse-grained rock of granitic composition; that is, it is rich in the minerals quartz, feldspar, muscovite, and biotite. It is characteristically light-colored. Canterbury Gneiss


Bedrock Geology
N
0
660'
scale
ROAD
350
300
400
Cory
400
350
ROAD
LEGEND
Pegmatite
Canterbury Gneiss
Tatnic Hill shist
Outcrop areas

is similar in mineral composition to pegmatite, but is is medium-grained and foliated. The Tatnic Hill schist is a flaggy, well-layered rock composed primarily of the minerals quartz, calcic oligoclase, biotite, and muscovite. The latter two minerals form comspicuous planes along which slippage and parting may occur in the rock. The presence of biotite and of other, less abundant, iron-manganese-rich minerals gives the rock a light to dark gray color in many places. All three rock units dip westward at approximately 30 to 40 degrees.

Overlying bedrock on the site is a complex mixture of shattered, weathered rock and glacial till. Till, a direct deposit from glacier ice, is composed of rock particles of varied shapes and sizes. In general, the overburden on the site is coarse-grained, with sand being the principal component. Gravel and boulders are also common. The depth of the till varies from zero in becrock outcrop areas to about 7 feet in areas between the outcrops.

HYDROLOGY

The entire subdivision area is drained by a small stream that originates in a narrow wetland immediately to the north of the site. The overall watershed of the stream, to the point at which it passes under Cory Road, is approximately 128 acres. Development will cause runoff from the site for a given amount of rainfall to be increased from present levels. Because of the low intensity of the proposed development, it may be estimated that the resultant peak flow increases in the stream will be less than 10 percent. No harmful effects from these increases are anticipated.

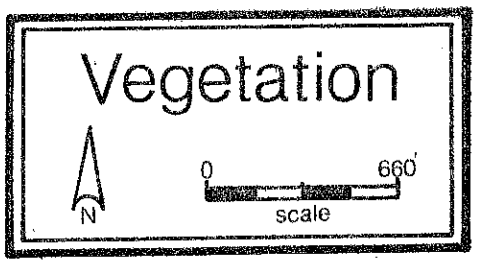
WILDLIFE

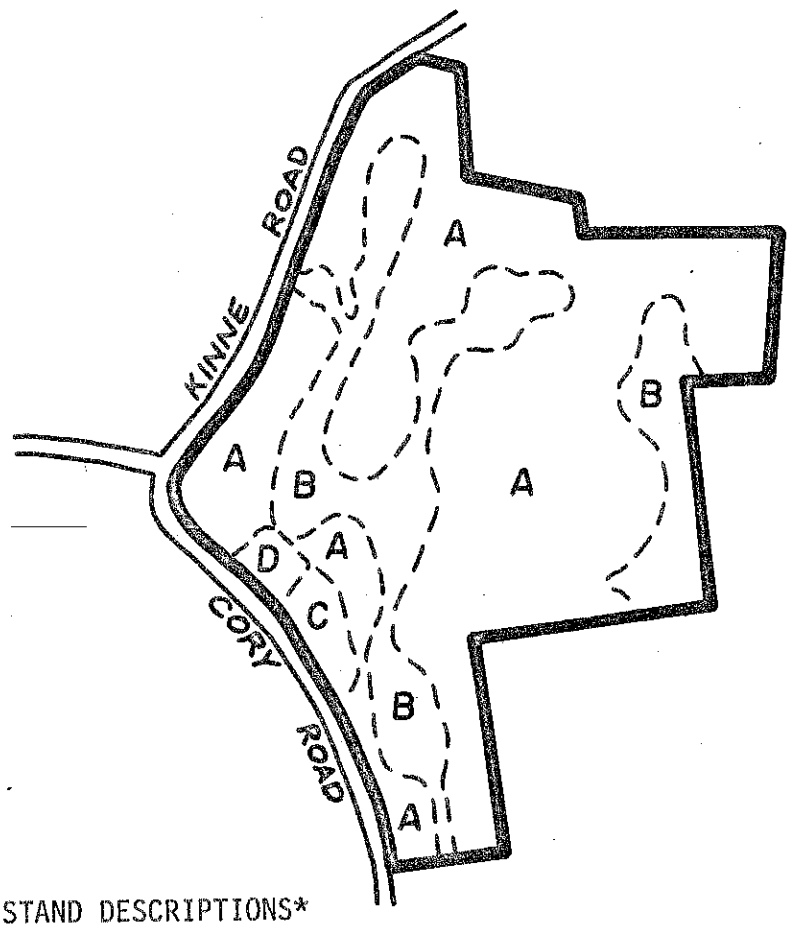
The wetland running through the area certainly provides wildlife habitat to a variety of species. The varying heights of vegetation provide some food and cover principally for wild birds, rabbits, and small mammals. Seasonally, some ducks probably use the area when water ponds in depressed locations. It is unlikely, considering the development density, that wildlife will be driven from the area. In fact, one or more wildlife ponds might eventually be built by homeowners and actually encourage some wetland wildlife species.

VEGETATION

The entire parcel is in woodland, except a one-acre grassy field in the vicinity of proposed lot #8. The major portion of the tract is covered by a mixed hardwood forest which had been selectively harvested approximately 13 years ago. A fuelwood thinning should be considered for this site. The hardwood swamp which runs through the parcel is a fragile eco-system and is not suited to development or forest management practices. Stand descriptions follow and can be located on the accompanying Vegetation Map.

Stand A: (Mixed hardwoods.) General age of trees in this stand range from 45 to 60 years. Poor quality sapling (1 to 5 inch diameter at breast height - DBH), pole-size (5 to 11 inch DBH) and sawlog size (11 inch and greater DHB) white oak, black oak, black birch, red maple and hickory are present in this 46 acre stand. The understory is made up of white oak and black oak seedlings, chestnut sprouts,





STAND DESCRIPTIONS*

Stand A	Mixed Hardwoods (Fully Stocked Sapling Pole Sawlog Size)
Stand B	Hardwood Swamp (Under to Fully Stocked Pole to Sawlog Size)
Stand C	Mixed Hardwoods (Fully Stocked Sapling Size)
Stand D	Open Field

LEGEND

Stand Boundaries

Paved Roads

* Sapling-size trees = 1 to 5 inches in diameter of breast height (d.b.h.)
Pole-size trees = 5 to 11 inches in d.b.h.
Sawlog-size trees = 11 inches and greater in d.b.h.

witch hazel, sweet pepperbush and highbush blueberry. Ground cover consists of huckleberry, sheep laurel, ferns, grasses, club mosses, mullein, wild raspberry, and Christmas fern.

Stand B: (Hardwood Swamp.) Pole size to sawlog size red maple and occasional black birch are present in this 17 acre stand. Highbush blueberry, sweet pepperbush, viburnum and greenbriar form a dense understory in this area. Mosses and ferns occupy the drier areas within this stand.

Stand C: (Mixed Hardwoods.) This 2 acre fully stocked stand is made up of sapling size bigtooth aspen, white oak, black oak, paper birch, gray birch with occasional hickory, white ash, black birch and apple trees. Other hardwood tree seedlings and highbush blueberry are also present. Grasses, goldenrod and club mosses were the ground cover species observed.

Stand D: (Open field.) This one acre field is vegetated by grasses, goldenrod and several annual weed species.

Efforts should be made during construction on this site to avoid damaging trees and their root systems. Trees which are injured or have their roots crushed through soil disturbances may die within three to five years of this disturbance. Those trees selected for aesthetic or shade purposes should be healthy, and full crowned. Consideration should be given to saving groups of trees and shrubs in order to minimize construction damage which may occur, as well as providing small areas of wildlife habitat.

Wetland soils are noted for their high water tables, poor drainage and poor soil aeration. These qualities usually limit vegetative growth to species undesirable for forest management. The trees present in the hardwood swamp on this site have shallow root systems and stunted growth rates. These trees are very susceptible to windthrow. Development openings may channel wind through rather than over these stands increasing these hazards. The size and number of clearings and laneways should be kept to a minimum in this area if windthrow hazards are not to be increased.

SOILS

A detailed soils map of this site is included in the Appendix to this report, accompanied by a chart which indicates soil limitations for various urban uses. As the soil map is an enlargement from the original 1,320'/inch scale to 660'/inch, the soil boundary lines should not be viewed as absolute boundaries, but as guidelines to the distribution of soil types on the site. The soil limitation chart indicates the probable limitations for each of the soils for on-site sewerage, buildings with basements, buildings without basements, streets and parking, and landscaping. However, limitations, even though severe, do not preclude the use of the land for development. If economics permit large expenditures for land development and the intended objective is consistent with the objectives of local and regional development, many soils and sites with difficult problems can be used. Know Your Land: Natural Soil Groups for Connecticut can also give insight to the development of the soils and their relationship to the surficial geology of the site.

Soil series on this site include the Charlton-Hollis series and the Ridgebury,

Leicester and Whitman series, a regulated wetland under Public Act 155. These soils limit development by their slope, stoniness, shallow depth to bedrock and high water table.

17LC Charlton-Hollis fine sandy loams, very rocky, 3 to 15% slopes. This gently sloping to sloping unit consists of two soils, Charlton and Hollis, which occur in patterns too intricate to separate in mapping. About 50% of the unit is similar to the soil described for the Charlton series. Charlton are well drained soils developed in upland till normally deeper than 5 feet. These soils are moderately permeable in the subsoil but slowly to very slowly permeable layers may be present below 60 inches. The water table normally is below 60 inches most of the year. The Charlton soils are naturally stony and contain few to many stones throughout the soil. Most use problems are related to slopes and stoniness. Hollis soils make up about 30% of this mapping unit and occurs when bedrock is a few to 20 inches deep. This mapping unit has rock outcrop covering 10-25% of the surface and few to many stones on the surface.

17LD Charlton-Hollis fine sandy loams, very rocky, 15 to 35% slopes. This moderately steep to steep unit consists of two soils, Charlton and Hollis, which occur in patterns too intricate to separate in mapping, as in the previously described 17LC series. About 50% of the unit is similar to the soil described for the Charlton series. Hollis soils make up about 30% of the mapping unit and occur when bedrock is a few to 20 inches deep. The remaining part of the mapping unit is an unnamed soil that ranges from 20 to 40 inches to bedrock.

43M Ridgebury, Leicester and Whitman* extremely stony fine sandy loams. This mapping unit is made up of poorly and very poorly drained soils. These soils occur in an intricate and complex pattern and separation of each individual soil was not practical on the scale surveyed. Each mapping unit may contain an individual soil or a percentage of each of the three soils. More than 3% of the surface is covered with stones. In general, these soils are normally deeper than 5 feet. They have a hardpan at a depth of 18-24 inches. They are found in low lying, nearly level upland areas. They are slowly to very slowly permeable in the subsoil, are naturally stony and contain few to many stones throughout. Most use problems are related to the slowly to very slowly permeable subsoils and long seasonal high water tables. The water table is at or near the surface from late fall through early spring.

The obvious limitation to residential development on the entire site is the proximity of bedrock to the soil surface. Small pockets of deep soils do exist for location of septic systems (17LC Charlton-Hollis mapping units), however, most of the soils on site are primarily rock by volume, not the fine soil particles which filter septic leachate best.

Approximately 24% of the total parcel is comprised of regulated wetland soils. Construction on these proposed lots is planned to take place at a suitable distance from these wet areas, so harmful encroachment will not be a concern. In lot #3 provisions have been made to cross the stream and wetlands without harming them (December 11, 1978 report). During the review there was discussion about using the wetland crossing/lot #3 driveway to service lot #10 with an access from Corey Road where the stream is narrowest. This may be where the lot #10 access now shows

* Regulated wetland soil by PA 155.

on the subdivision plan. An access drive could turn north above the stone wall and run roughly parallel with the contour of the slope. It is assumed a home on lot #11 would front Corey Road and the wetland to the rear would not be encroached upon. The Town should be aware that efforts should be made to preserve the wetland and the filtering forest litter adjacent to it. These wetlands aid in preventing downstream flooding by releasing runoff slowly and by filtering it. Clearing a minimum area on each lot is encouraged as well as stabilizing disturbed slopes with vegetation, especially those extending down to wet areas. A second driveway crossing of the stream will require a culvert pipe which must be sized property. Hay bales and other temporary control measures should be considered in the vicinity of such a crossing. This has been planned for on lot #3. Wetland crossings should be constructed during the dry summer months. Additional information and technical expertise for developing a sediment and erosion control plan for protection of these wetlands is available through the Soil Conservation Service field office in Windham County.

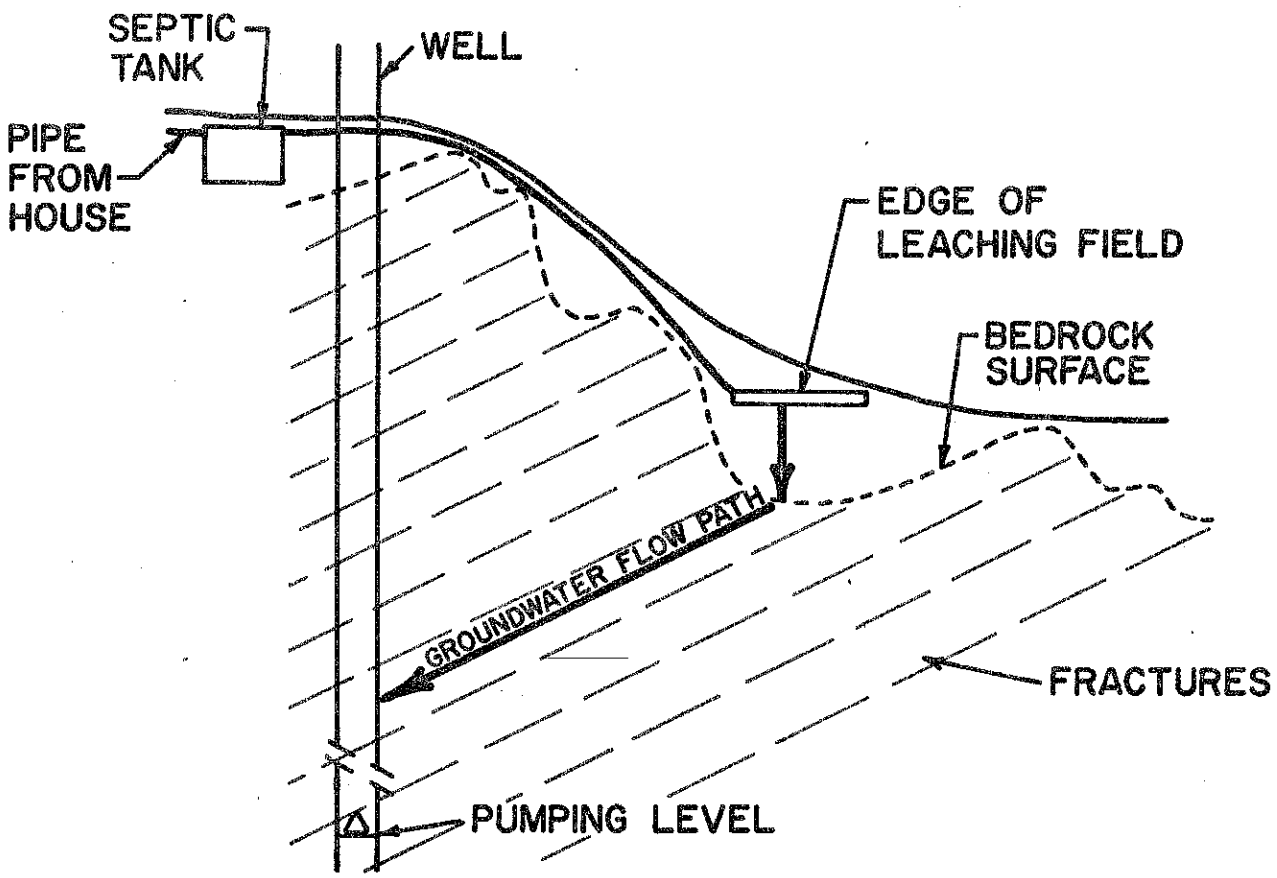
WATER SUPPLY

Water would be provided to the subdivision by individual on-site wells, which would tap the bedrock aquifer. Because of the structure of the bedrock units, the principal source of water would be the Tatnic Hill schist. Water flows through this unit primarily along fractures or parting planes. It is difficult to estimate the yield of a new well, as this depends upon such factors as the distribution of fractures within the bedrock and the total depth of the well. Nevertheless, it is possible to base a prediction of well yield on statistical studies of other bedrock-based wells in the area. Such a study was made for Connecticut Water Resources Bulletin No. 8. In that publication, it is estimated that at 85% of the sites in the Quinebaug River basin, a well penetrating 100 feet of bedrock could yield 3 gallons per minute or more, enough for an average home. Because of the particular type of bedrock found within the property itself, the chances for obtaining such yields on the site is probably only about 70%.

A well near the northern end of the site reported relatively high concentrations of iron and moderately high concentrations of manganese (source: Connecticut Water Resources Bulletin No. 9). It is likely that at least some wells in the subdivision would experience similar problems, since the wells would tap the Tatnic Hill schist, presumably the source of the metals. It is also possible that unpleasant levels of sulfate may be found because of the particular mineralogy of the bedrock. However, the well that is mentioned above reported very low levels of calcium, bicarbonate, dissolved solids, and hardness; these advantages may also accrue to water obtained from wells within the subdivision. The overall water quality, therefore, initially should be moderate, and it probably could be improved considerably by suitable filtration methods.

A more pressing concern is the operation of septic systems in the subdivision. Much of the property is shallow-to-bedrock, although deep pockets of till exist in several areas. Even if the wells are drilled uphill of the leaching fields, the dip of the most prominent fractures virtually assures that wastewater ultimately will be recycled to the wells. Hence, it is urgent to provide adequate filtration of the effluent in the overburden. Judicious site selection, coupled with appropriate engineering measures, is needed to assure suitable depths and areas of soil in order to avoid serious water-quality problems in the future.

ANTICIPATED PATH OF SEPTIC SYSTEM EFFLUENT



NO SCALE INDICATED

WASTE DISPOSAL

A sanitarian from the State Department of Health field checked this site on February 6, 1979, at which time all test pits on these proposed lots were still open. Subsequently, engineered plans for utilization of Lots 1 through 7 were reviewed. Following are specific comments on Lots 1 through 7 and general comments on the entire parcel.

Lot #1: Shallow depth-to-ledge soils on this lot severely limit the possibilities for proper utilization of this lot. A ridge of ledge running NE to SW isolates much of the rear portion of the lot from the front and only a small portion of the front is sufficiently deep to be considered for subsurface sewage disposal purposes. The designed system is separated by only 15 feet from test hole #152 in which ledge was reached in one part at a depth of only 12 inches. Large parts of the leaching system are located in areas for which the depth of bedrock has not been adequately determined. Because of the variable surface of the bedrock in this area, assumptions can be very misleading and are no substitute for definite information. If the available area is sufficient, it is just barely so, for the system presented, which is minimally sized. The area proposed for reserve area appears more clearly suitable.

The well for lot #1 has already been drilled, very close to the proposed location. The water has been tested and shown to be free of contamination from a nearby dump of domestic refuse.

Lot #2: The leaching system proposed for lot #2 appears generally satisfactory, but the northernmost corner is inadequately separated from observed bedrock and must be raised by 0.2 foot. This will necessitate raising the distribution box, septic tank, and house sewer, resulting in raising the house invert elevation of the sewer a minimum of 0.15 foot.

The reserve area for this lot is located only 15 feet away from test hole #142, in which ledge was found at 12 inches.

Lot #3: Because of groundwater encountered at a depth of 36 inches in the area of the primary leaching system, distribution pipe in the system may be laid no deeper than 6 inches below original grade. This depth is exceeded in the designed proposal. The elevation of the primary system must therefore be raised.

The curtain drain proposed to remove the perched water table in the proposed reserve area must be shown to be effective before permits are issued for usage of that area based on the effect of the drain. As much as 3 feet of fill would be needed to utilize the reserve area if the curtain drain were not effective.

Lot #4: The primary leaching system, although probably adequately separated from bedrock vertically, may be located 20 feet or less horizontally from a vertical face of the bedrock believed located along the charted 70-foot contour, approximately parallel to a line between test holes 134 and 135. Because cracks and fissures in this rock would open maximally on this sort of face, it would be advisable to increase the setback of the primary area by 60 feet or so, to minimize the possibility of sewage effluent entering the rock.

Lot #5: Appears suitable as proposed.

Lots #6 and 7: Considerable depth of broken rock overlies bedrock in these lots. Because a high percentage of the volume of the overburden in these cases consists of this broken bedrock, and because this rock provides little filtration action to effluent passing through, the net effect of this broken rock is to reduce the total vertical filtration of effluent passing through it. For this reason, the depth of broken rock must be considered in the placement of leaching systems. Under no circumstances should leaching systems be located less than 2 feet above broken rock of this sort. In cases where the thickness of the broken rock zone is less than 4 feet, this separation should be increased.

On these lots, effluent-carrying pipes from the septic tanks will be passing through bedrock. These pipes should be of tight construction to prevent leakage of effluent into the rock. They should be air-pressure tested to ensure tightness, and properly bedded to ensure a continued tight condition. Any blasting charge used to remove bedrock for laying these pipes should be minimally sized to reduce the opening of fresh fissures and cracks in the bedrock, and blasting should be done before any wells are drilled.

Lots #8-11: Information on these lots is very limited. It indicates that the problems of shallow bedrock may be further compounded by high groundwater levels. Proper engineering design (in the presence of more complete information) could probably compensate for most problems, but such compensatory measures could prove very expensive. In the absence of any well-defined compacted layer or hardpan, the ability of curtain drains to lower groundwater levels is questionable. For this reason, curtain drains could be installed as backup assistance, but the probability of success of septic systems should not be predicated on the installation of such drains.

More complete information is needed regarding this parcel.

The irregular nature of the bedrock surface underlying this land creates uncertainty as to the adequacy of separation between it and any sewage disposal system constructed over it. The extreme angle of bedding of the rock, along which cracks and fissures have formed, the degree to which these cracks and fissures exist, and the nature of the surface, which exposes large areas of ledge end-grain to the overlying soil, all enhance the movement of shallow-level groundwater into the rock. These conditions create a distinct possibility for contamination of deep wells by improperly filtered sewage effluent, if all precautions are not taken. Specifically, these include maintenance of conservatively large separation between sewage disposal systems and bedrock and overlying broken bedrock, and minimal disturbance of the bedrock.

Wherever possible, wells should be installed in a direction opposite to the bedding direction of the bedrock from sewage disposal systems: on this site, this means installed mainly to the east and southeast. Even though this might place wells downhill of sewage disposal systems at the surface, proper sealing of casings can provide protection of the wells at that depth. The uncased portions of the well would be much safer if any effluent entering rock were transported away along bedding planes. Wells should also be maximally separated from sewage disposal systems.

Wells should be periodically tested for 2 or 3 years to determine whether contamination of the groundwater is occurring.

Reference was made earlier to the bare adequacy of available space in lot #1. Some provision should be made to insure that a residence larger than 3 bedrooms would not be constructed on that site. This could be a requirement of the deed or subdivision approval, but should be made clear to any prospective land buyer. Another option would be to combine lots 1 and 2.

If lot #1 is to be used, the proposed primary leaching area should be more thoroughly explored. Existing test pits were dug to determine general locations of suitable soil depths. Their presence does not preclude the need for specific information in this uncertain situation.

ROADS/TRAFFIC

According to the proposed subdivision plan map, Kinne Road is an improved road approximately twenty (20) feet in width, while Corey Road is an unimproved road with a width less than fifteen (15) feet. Due to the composition of the soils under Corey Road, it is passable the year round. The relatively low average daily traffic flows (ADT) for both roads do not suggest the need for roadway width improvements at this time. The horizontal curves at the intersection of both roads, however, could require improvements in order to improve vehicular line-of-sights.

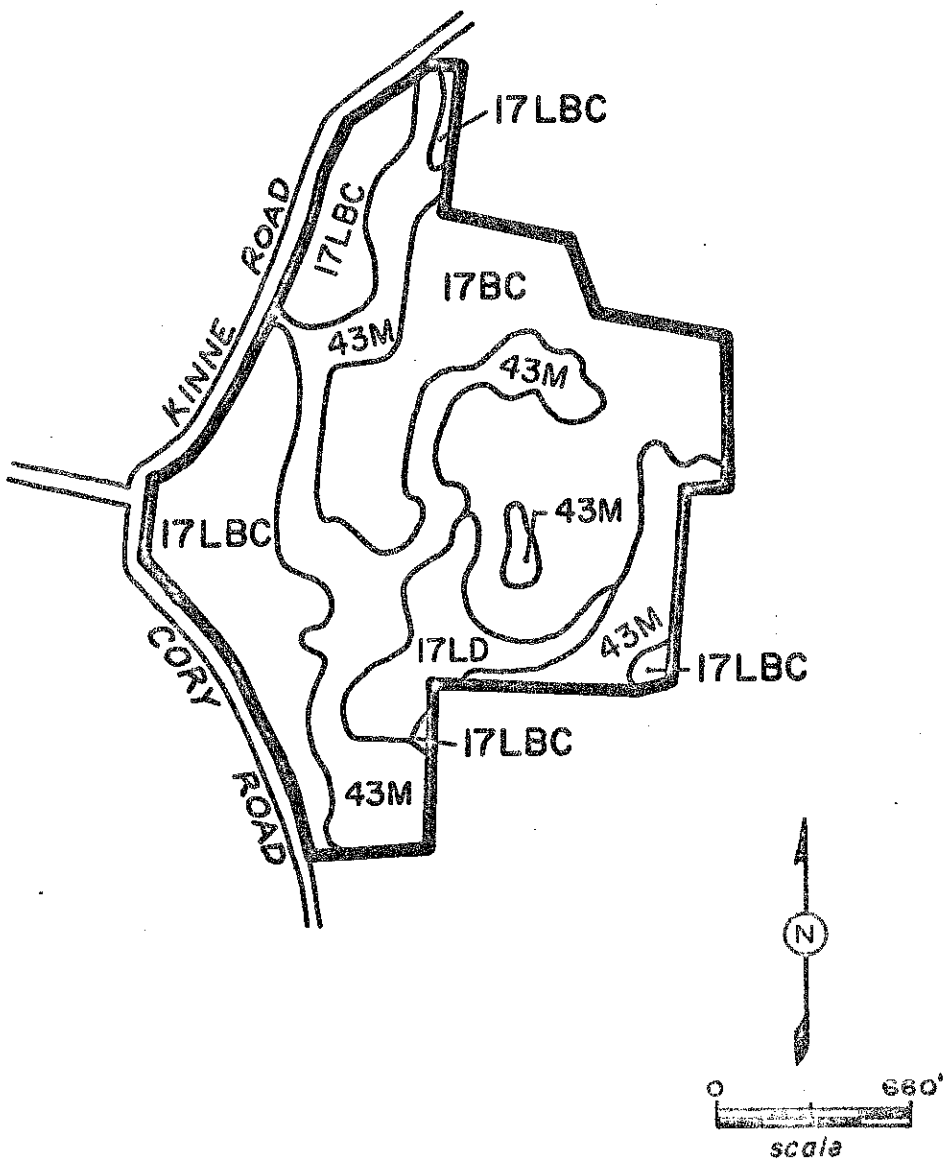
CONFORMITY TO REGIONAL DEVELOPMENT PLANS

Insofar as this subdivision's lot sizes exceed three (3) acres, and all lots fall within areas assigned for "residential" or "wetlands-residential" land uses on the map of the Town Plan of Development, this development generally conforms to the local plan. The Regional Plan of Development calls for very low residential development as well as open space uses in unsewered areas such as this, which are remote from the urban core and secondary centers.

Appendix

Soils

D.B.S. ASSOCIATES SUBDIVISION
CANTERBURY, CONNECTICUT



This is an enlargement from the original 1,320'/inch scale to 660'/inch.

Information taken from: Soil Interpretations, Windham County, Connecticut, 1975, soil survey sheet No. 992; prepared by United States Department of Agriculture, Soil Conservation Service. Advance copy, subject to change.

CN-CONS-7
3-73
(File Code CONS-14-5)

SOIL AND NATURAL SOIL GROUPS MAP
Prepared by
U. S. DEPARTMENT OF AGRICULTURE . SOIL CONSERVATION SERVICE
Cooperating with
CONNECTICUT AGRICULTUREAL EXPERIMENT STATION,
STORRS AGRICULTURAL EXPERIMENT STATION, AND
Windham County SOIL AND WATER CONSERVATION DISTRICT

COOPERATOR DBS Associates ,Kinne Road & Corey Road DATE 1/26/79
COUNTY Windham STATE Connecticut
APPROX. SCALE 1"=1320' SOIL MAP NUMBER 992

SYMBOLS
324-B-1 or CaB = DETAILED SOIL SURVEY
A-1a, B-2a, etc. = NATURAL SOIL GROUP

Soil Map Symbol	SOIL NAME	N.S. Group	Sheet No.
17LC	Charlton-Hollis fine sandy loams, very rocky, 3 to 15% slopes.		
17LD	Charlton-Hollis fine sandy loams, very rocky, 15 to 35% slopes.		
	WETLAND SOIL		
*43M	Ridgebury, Leicester & Whitman extremely stony fine sandy loams.		
*	Designated wetland soil by P.A. 155		

DBS ASSOCIATES

Kinne Road and Corey Road
Canterbury, Connecticut

PROPORTIONAL EXTENT OF SOILS AND THEIR LIMITATIONS FOR CERTAIN LAND USES

Soil Series	Soil Symbol	Approx. Acres	Percent of Acres	Principal Limiting Factor	Urban Use Limitations*			
					On-Site Sewage	Dwellings without Basements	Dwellings with Basements	Land-Scaping
Charlton-Hollis	17LC	47	64	Slope, large stones	3	3	3	3
Charlton-Hollis	17LD	8	11	Slope	3	3	3	3
*43M Ridgebury, Leicester and Whitman	43M	18	25	Percs slowly, wetness, frost action	3	3	3	3
Total:		73	100					

* Designated wetland soil by PA 155.

Use Limitations: 1 = slight, 2 = moderate, 3 = severe.

SOIL INTERPRETATIONS FOR URBAN USES

The ratings of the soils for elements of community and recreational development uses consist of three degrees of "limitations:" slight or no limitations; moderate limitations; and severe limitations. In the interpretive scheme various physical properties are weighed before judging their relative severity of limitations.

The user is cautioned that the suitability ratings, degree of limitations and other interpretations are based on the typical soil in each mapping unit. At any given point the actual conditions may differ from the information presented here because of the inclusion of other soils which were impractical to map separately at the scale of mapping used. On-site investigations are suggested where the proposed soil use involves heavy loads, deep excavations, or high cost. Limitations, even though severe, do not always preclude the use of land for development. If economics permit greater expenditures for land development and the intended land use is consistent with the objectives of local or regional development, many soils and sites with difficult problems can be used.

Slight Limitations

Areas rated as slight have relatively few limitations in terms of soil suitability for a particular use. The degree of suitability is such that a minimum of time or cost would be needed to overcome relatively minor soil limitations.

Moderate Limitations

In areas rated moderate, it is relatively more difficult and more costly to correct the natural limitations of the soil for certain uses than for soils rated as having slight limitations.

Severe Limitations

Areas designated as having severe limitations would require more extensive and more costly measures than soils rated with moderate limitations in order to overcome natural soil limitations. The soil may have more than one limiting characteristic causing it to be rated severe.

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.

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, and a statement identifying the specific areas of concern the Team should address. 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 Jeanne Shelburn (889-2324), Environmental Review Team Coordinator, Eastern Connecticut RC&D Area, 139 Boswell Avenue, Norwich, Connecticut 06360.