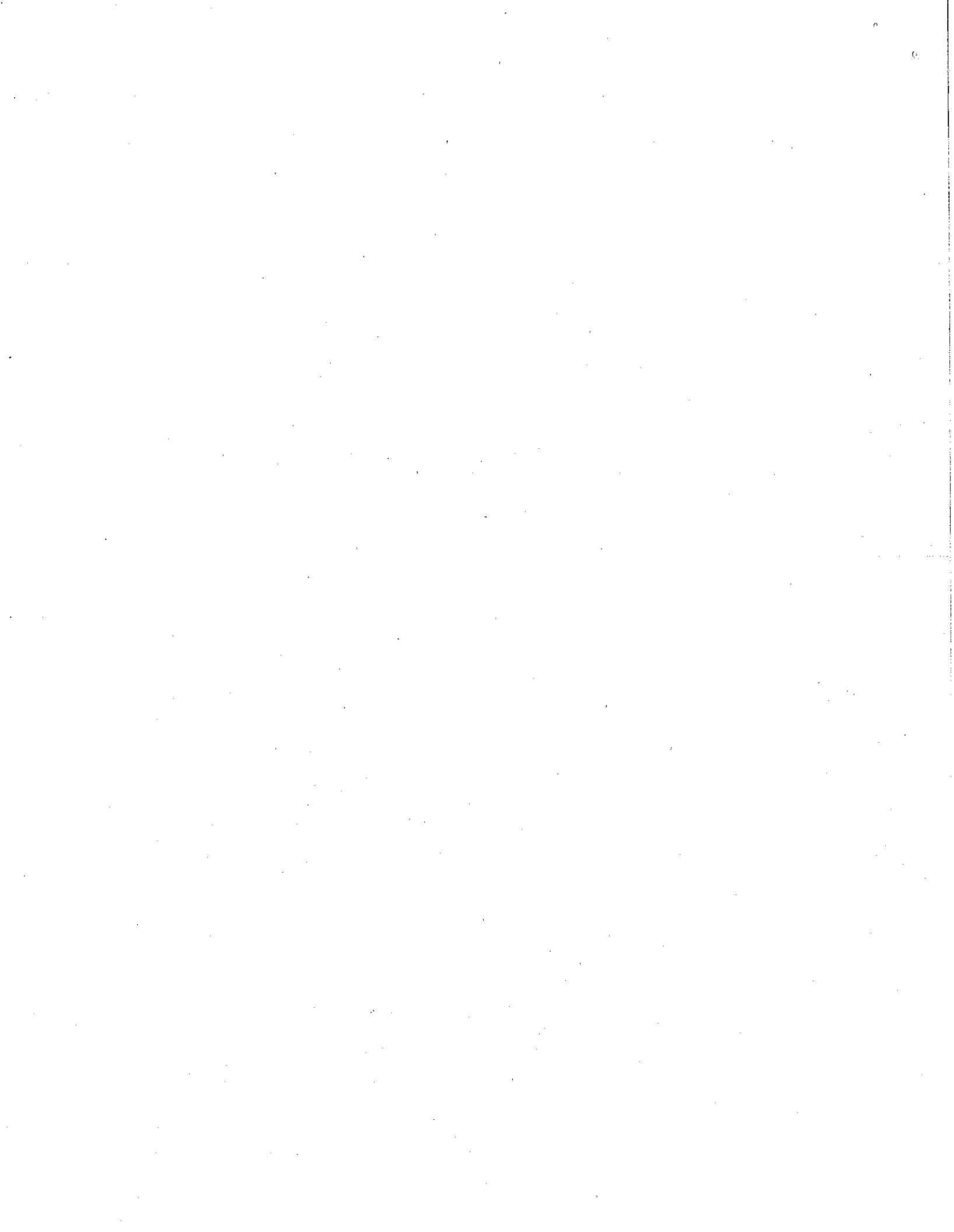


ENVIRONMENTAL REVIEW TEAM REPORT
ON THE
BOWIE PROPERTY
WESTBROOK, CONNECTICUT
JULY, 1975

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EASTERN CONNECTICUT RESOURCE CONSERVATION
AND DEVELOPMENT PROJECT
Environmental Review Team
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This report is an outgrowth of a request from the Westbrook Planning Commission, with the approval of the owner, to the Middlesex County Soil and Water Conservation District (S&WCD). The S&WCD referred this request to the Eastern Connecticut Resource Conservation and Development (RC&D) Executive Council for their consideration and approval as a project measure. The request has been approved and the measure reviewed by the Environmental Review Team.

Team members who participated on the first review of this property were sent copies of the preliminary plan and requested to make additional comments where desired. The persons who visited the site on June 12, 1975 included: Stanley House, Forester, Connecticut Department of Environmental Protection (DEP); Barbara A. Hermann, Team Coordinator, Eastern Connecticut RC&D Project. Other personnel providing input for this report included: Barry D. Cavanna, District Conservationist, Soil Conservation Service (SCS); Edwin L. Minnick, Engineering Specialist, SCS; Richard Hyde, Geologist, Natural Resource Center, DEP.

This report is not meant to compete with private consultants by supplying site designs or detailed solutions to development problems. This report evaluates the significance of the existing resource base to the proposed development and also suggests considerations that should be of concern to both the Town of Westbrook and the developer. 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 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: Miss Barbara A. Hermann (889-2324), Environmental Review Team Coordinator, Eastern Connecticut RC&D Project, 139 Boswell Avenue, Norwich, Connecticut 06360.

INTRODUCTION

The Environmental Review Team was requested to review a second proposal for the Bowie property in Westbrook. The new proposal would include 154 single-family homes, grouped in clusters of about five. The development would be concentrated in an area of about 20 acres, leaving the rest of the site undeveloped. Water and sewage disposal would both be provided on-site, utilizing community systems.

The original report on the Bowie property (February, 1974) dealt with a campground proposal. However, the site description, as well as many aspects of development, would also pertain to this proposal. It is therefore suggested the Town review the previous report for items which are relevant to the present proposal. Those items which seem to warrant additional consideration in this report are waste disposal, foundation development and graded conditions, roads and utilities, and forestry resources.

Comments or recommendations within this report are offered for consideration by the developer and the town in the preparation and review of development plans, but should not be construed as mandatory or regulatory in nature.

WASTE DISPOSAL

This is the most critical aspect of the present proposal and may determine its feasibility. Being proposed is a sewage treatment facility with subsurface disposal of the effluent. Westbrook does not anticipate constructing sewers in this part of town and therefore wants assurance that the proposed system will function properly on a long term basis.

The shallowness to bedrock and steep slopes of the soils which predominate on the site (17LC, 17LD) will present problems in developing a satisfactory leaching system for the effluent. The quantity of effluent to be disposed is estimated at 115,000 gallons per day (750 gallons per day per house). In comparison, Trout Brook is estimated to have a low flow of 16,000 gallons per day at the site.

The quantity of effluent which can properly be disposed may be restricted by the capacity of the shallow soil mantle. Also, if rock fractures are present, effluent may be transmitted directly to the ground water. Though prior treatment will reduce some of the potential hazards, dissolved minerals may adversely affect ground or surface water quality. Assuming the system is placed on the side of the hill towards Trout Brook (away from ponds and water supply wells), the effluent, in modified form, will eventually reach Trout Brook through surface or subsurface means. The impact of the large quantity of effluent on the brook, especially during periods of low flow, could be quite significant.

There are many questions yet to be answered regarding the proposed system. The State Departments of Environmental Protection and Health will have to issue their approval. In so doing, it should be insured that not only will the leaching system function properly, but also that the affect of the leachate will not be detrimental to the ground and/or surface waters.

FOUNDATION DEVELOPMENT AND GRADED CONDITIONS

Building foundations placed on shallow to bedrock soils with varying depths of earth cover are susceptible to differential settlement and possible failure. Investigation and construction costs can be expected to be higher than normal.

Since much more disturbance of the vegetation and soil is required to build a subdivision than a campground, the potential for erosion will be higher. The method of construction, the construction timetable, and erosion control practices are all effective means of controlling erosion potential, when used properly. An erosion control plan should be prepared prior to any construction activities. An Erosion and Sediment Control Handbook for Connecticut is available from the Soil and Water Conservation District.

ROADS

In regard to road layout and construction, the recommendations for the campground are still valid. Cuts and fills should not be steeper than one vertical to three horizontal. Culverts of adequate size should be placed where roads cross drainage ways. Roads should avoid wetland areas. Road grades should be kept as flat as possible. Again, erosion control measures should be incorporated into the construction plans.

It should be noted, however, that the new proposal will require hard surface road construction to insure year round access.

FORESTRY

About two thirds of the area of the Bowie property is now in forest. The entire area was cut over for saw logs about eight years ago. Trees eight inches in diameter and less were not cut; therefore, there is left a pole stand of trees with seedlings coming in. The stand is all mixed hardwoods and very thick with young trees. It would take from 30 to 40 years for the stand to develop into saw-timber again.

With housing concentrated on only 20 acres of the site, the remaining forest might eventually be productive for forest products again in the future. Though preservation and management of the remaining forest resource is recommended, it would not appear to be a determining factor in the approval or disapproval of the project.

GENERAL COMMENTS

From an environmental viewpoint, it would seem that resolving the questions pertaining to sewage disposal should receive priority. Other limitations of the site as they relate to roads, building construction, erosion, and utilities can be effectively dealt with, though the engineering and construction costs will be

higher. From a land use viewpoint, the local Planning and Zoning Commission will have to resolve the questions of permitting a higher density and using a cluster concept on this site.