

# Town of East Lyme

P.O. DRAWER 519

NIANTIC, CONNECTICUT 06357



Town Engineer  
Victor A. Benni, P.E.

860-691-4112  
FAX 860-739-6930

To: Gary A. Goeschel II, Director of Planning  
From: Victor Benni, P.E., Town Engineer *V. Benni*  
Date: March 30, 2020  
Re: 22 & 24 Upper Kensington Drive – Nottingham Hills  
Subdivision Application Review

Information submitted by the Applicant which was considered in this review:

- Topographic Survey of Lots 19 & 21, Nottingham Hills Subdivision, East Lyme, Connecticut, Sheet: 1 of 1, Date: 3/26/2019, by: Gesick & Associates, P.C.
- Subdivision Plan, Proposed CDD Re-Subdivision, Nottingham Hills Subdivision, Phase 3, 4 Lot Resubdivision of Lots 19 & 21, Conventional Plan, East Lyme, Connecticut, Sheet: 1, Date: None Listed, by: No Source Listed.
- “Draft” Conservation Design Development, Nottingham Hills Subdivision, 4 Lot Resubdivision of Lots 19 & 21, Sheet: 1 of 1, Date: 01/29/2020, by: Gesick & Associates, P.C.
- Design Report, 4 Lot Re-Subdivision, Upper Kensington Drive, East Lyme, Connecticut, Submitted with Application.

This office has reviewed the above referenced information and has the following general comments:

1. All plans (Topographic, Subdivision, Site Plan, & Etc.) shall be signed & sealed by the appropriate professional(s). The Conservation Design Development plan should be updated from “Draft” status. Additional review by the East Lyme Engineering Department will be necessary, based on signed & sealed drawing set.
2. The Design Report indicates that the fourth lot will be deeded to the East Lyme Land Trust. The “Draft” Conservation Design Development (CDD) plan conflicts with this scenario, depicting a full single-family residential buildout of Lot 4.
3. The Design Report indicates no activity being proposed in the wetlands or the 100’ upland review area. The “Draft” CDD plan conflicts with this scenario, depicting a septic tank and leaching area in the 100’ upland review area for Lot 2.
4. The Design Report indicates that roof drainage “gutters” will be tied into footing drains. This is not an accepted practice; roof drainage shall not tie into footing drain system.
5. Update the Subdivision Plan to include symbols and labels for existing and proposed property corners for Lots 1 thru 4.
6. Update the Subdivision Plan to include access/utility easement information over Lots 1 & 3, in favor of Lots 2 & 4.
7. Update the Subdivision Plan to include more accurate and clear information regarding the building setback lines for all four lots.
8. Update the Subdivision Plan to include labels for the proposed buildings, access drives, and Upper Kensington Drive.

9. Update the "Draft" CDD plan to include proposed grading, limit of disturbance, proposed driveway(s) extending to Upper Kensington Drive, proposed drive grades & widths, proposed underground utilities, and footing drain & roof drain outlets.

10. Update the drawing set to include erosion & sedimentation control measures, E&S Narrative, and E&S details. The following minimum control measures shall be taken into consideration: construction access, silt fence, haybales, temporary haybale check dams, permanent stone check dams, tree protection, stockpiles, and erosion control blankets.

11. While updating the drawing set, the Engineering Department recommends that the Applicant incorporate the requirements of the following sections of the Subdivision Regulations:

- Section 5-2-2(B)ii – Topography, indicate slopes between 15% & 25%, and exceeding 25%;
- Section 5-2-2(D) - Subdivision Improvement Plan/Construction Plan;
- Section 5-2-2(E) – Stormwater Management Plan;
- Section 5-2-2(F) – Grading Plan;
- Section 5-2-2(G) – Erosion and Sedimentation Control Plan;
- Section 6-1-2(G) – Stone Walls;
- Section 6-1-2(M) – Slopes;
- Section 6-2-5 – Lot Access:
  - (A) Incorporate drainage into driveway designs;
  - (B) Paved at appropriate slopes;
  - (C) 18' width for shared drives;
  - (D) Bituminous concrete from edge of street to right-of-way line; and
  - (F) Depict & label all access/utility easements.
- Section 6-8 – Stormwater Management; and
- Section 6-17 – Underground Utilities.

# Town of

P.O. Drawer 519

Inland Wetlands Agency

*Gary A. Goeschel II, Director of Planning /  
Wetlands Enforcement Officer*



# East Lyme

108 Pennsylvania Ave  
Niantic, Connecticut 06357

Phone: (860) 691-4114

Fax: (860) 860-691-0351

June 30, 2020

Kristen T. Clarke, PE  
20 Risingwood Dr  
Bow, NH 03304

**RE: East Lyme Inland Wetlands Determination of Permitted/Non-Regulated Activity  
East Lyme, Connecticut, Tax Assessor's Map# 40.0 Lot#22 & 23**

Dear Ms. Clarke,

The Inland Wetlands Agency reviewed your Application for Determination of Permitted/Non-Regulated Activity for a 4-lot re-subdivision of property at 22 and 24 Upper Kensington Dr at its June 8, 2020 meeting.

The Agency has determined that since no activity is occurring in the upland review, wetland or watercourse, no permit is required.

Please feel free to contact me if you should have any questions regarding this or any other Wetland matter.

Sincerely,

A handwritten signature in black ink that reads "Gary Goeschel, II". The signature is written in a cursive style with a large, stylized initial "G".

Gary Goeschel, II  
Inland Wetland Agent



**PLANNING COMMISSION APPLICATION  
FOR SUBDIVISION / RE-SUBDIVISION, SUBDIVISION  
MODIFICATION, POCD AND SUBDIVISION REGULATION  
AMENDMENT**

**APPLICATION TYPE:** Subdivision \_\_\_\_\_ Re-Subdivision X Subdivision Modification \_\_\_\_\_  
POCD Amendment \_\_\_\_\_ Subdivision Amendment \_\_\_\_\_

**NAME OF SUBDIVISION:** Nottingham Hills

**PROPOSED ROAD NAME(S):** N/A **LENGTH** N/A **l.f.**  
*(attach list if more than one)*

**PROPERTY LOCATION:** *(attach 8 1/2 x 11 location map)* 22 & 24 Upper Kensington Drive

**APPLICANT:** Kristen T. Clarke, PE

**Address:** 20 Risingwood Drive **Phone:** 434-409-9515  
Bow, NH 03304 **Fax:** \_\_\_\_\_  
**e-mail:** kristentclarke@gmail.com

**OWNER:** English Harbour Asset Management LLC

**Address:** 20 Risingwood Drive **Phone:** 434-409-9515  
Bow, NH 03304 **Fax:** \_\_\_\_\_  
**e-mail:** \_\_\_\_\_

**PRIMARY CONTACT /AGENT :** Paul Geraghty, Esq.

**Address:** 38 Granite Street **Phone:** 860-447-8077  
New London, CT 06320 **Fax:** 860-447-9833  
**e-mail:** pgeraghty@geraghtybonnono.com

**ASSESSOR'S MAP(S) & LOT(S)** 40. lots 23&22 **TOTAL ACRES** 3.8

**ZONING DISTRICT(S)** R-U40 **CONV./O.S.** (circle one) **CAM** n/a **# LOTS** 4

**FLOOD ZONE** n/a **AQUIFER** n/a **WIN 500' TOWN BOUNDARY** n/a **FARM LAND** n/a

**WATER SUPPLY** well **SEWAGE DISPOSAL** on-site septic  
*(attach letter from Water & Sewer Dept. if public and Ledge Light Health District if on-site)*

**CONSERVATION COMMISSION APPLICATION:** \_\_\_\_\_ **PERMIT#:** \_\_\_\_\_

**WAIVER(S) REQUESTED:** *(attach letter)* n/a

**ZONING VARIANCES:** *(attach copy from land records)* n/a

**PLANS PREPARED BY (Engineer/Surveyor):** Gesick & Associates P.C.

**Address:** 19 Cedar Island Avenue **Phone:** 860-575-2153  
Clinton, CT 06413 **Fax:** 860-669-5833  
**e-mail:** don@gesicksurveyors.com

ATTORNEY: \_\_\_\_\_  
 Address: \_\_\_\_\_ Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
 \_\_\_\_\_ e-mail: \_\_\_\_\_

**PREVIOUS SUBDIVISION(S) IF RE-SUBDIVISION OR LOT LINE REVISION:**

lot line revision lots 19,20,21&32	Map <u>88</u>	Dwr. <u>8</u>
Nottingham Hills S8bdivision Phase III	Map <u>242</u>	Dwr. <u>6</u>
_____	Map _____	Dwr. _____

CHECKLIST ATTACHED   x  

**CONSENTS AND PERMISSIONS:**

The undersigned owner, or legally authorized agent, hereby consents to necessary and proper inspections of the property that is the subject of this application by agents of the Commission at reasonable times both before and after approval is granted by the Commission.

The undersigned declares all information submitted with this application is accurate to the best of his/her knowledge and belief. If such information subsequently proves to be false, deceptive, incomplete or inaccurate, the approval may be modified, suspended, or revoked by the Commission.

English Harbour Asset Management LLC	<u>Kristen Clarke</u>	<u>3/2/2020</u>
Owner's Printed Name	Owner's Signature	Date
Kristen T. Clarke, P.E.	<u>Kristen Clarke</u>	<u>3/2/2020</u>
Applicant's Printed Name	Applicant's Signature	Date

**FOR INTERNAL USE ONLY:**

- SUBMITTED:
- APPLICATION FEE:
- PROCESSING FEE:
- DATE OF RECEIPT:
- SET P.H. BY:
- PUBLISH LEGAL NOTICE:
- HEARING HELD:
- DECISION BY:
- CONDITIONAL APPROVAL:
- LEGAL NOTICE
- FINAL APPROVAL:
- LEGAL NOTICE:
- LETTER OF DECISION:

- BOND SUBMITTED:
- OPEN SPACE CONVEYED:
- MYLARS FILED:
- ROAD ACCEPTED:
- DEEDS & EASEMENTS FILED:

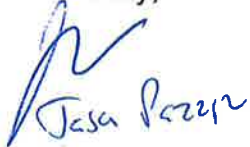
February 3, 2020

Kristen Clarke, P.E.  
20 Risingwood Drive  
Bow, NH 03304

Dear Kristen:

This shall authorize you, in my capacity as contract purchaser, to submit to the Town of East Lyme on my behalf, an application for a 4-lot re-subdivision of Nottingham Hills Subdivision Lot #'s 19 and 21. The lots in question are identified on the plan titled Proposed 4-lot "CDD" Re-subdivision, Nottingham Hills subdivision Lots 19 & 21, property owner English Harbour Asset Management, LLC c/o Kristen Clarke, P.E., 20 Risingwood Drive, Bow, NH 03304, prepared by Gesick & Associates, P.E. Surveyors, 19 Cedar Island Avenue, Clinton, CT.

Sincerely,

  
Jason Pazzaglia

*The Commission has the authority to determine whether a submission constitutes a complete application in accordance with the regulation requirements. If after reviewing a submission, the Commission finds the application to be incomplete in any material respects, it may vote to deny the application. Prior to taking this action, the applicant will be given the opportunity to withdraw the incomplete application. No fees shall be refunded upon withdrawal of an incomplete application.*

### APPLICATION FEE CALCULATION SHEET

**2.1 Subdivision Application Review.** For subdivisions and re-subdivisions, the following fees shall be paid at the time of application to the Planning Commission:

2.1.1	# Lots <u>2</u> X \$100.00	<u>200.00</u>
2.1.2	Base Fee	\$750.00
2.1.3	Public Hearing Fee, if applicable (\$1250.00)	<u>1,250.00</u>
2.1.4	Design Review Fee -LF new road _____ X \$1.00	<u>n/a</u>
2.1.5	Professional/Legal Consultations (actual cost)	<u>n/a</u>
2.1.6	State of Conn. Fee	\$60.00
<b>SUBTOTAL</b>		<b><u>\$2760.00</u></b>

**2.2 Subdivision Application Processing and Inspection.** Upon approval of a subdivision/ re-subdivision by the Planning Commission, the following fees shall be paid prior to the Chair's signing the approved subdivision plan:

2.2.1	# Lots _____ X \$100	_____
2.1.2	Base Fee	\$100.00
2.2.3	Road/Utility Document Review Fee (\$400.00)	<u>n/a</u>
2.2.4	Inspection Fee - LF of new road _____ X \$1.00	<u>n/a</u>
2.2.5	E & S Control Fee - # Lots _____ X \$50.00	<u>n/a</u>
<b>SUBTOTAL</b>		_____

**2.3 Coastal Area Management Review**

# Lots \_\_\_\_\_ X \$10.00 (\$25.00 min.) n/a

**2.4 Application for Revision of Lot Line**

~~\$150.00~~ n/a

**TOTAL FEES**

\_\_\_\_\_

Fees based on Section 2 of the Town Ordinance Establishing Schedule of Fees for Conservation Planning and Zoning Commissions as amended.

**ENGLISH HARBOUR ASSET MANAGEMENT LLC**

375 N BEND DR  
MANCHESTER, NH 03104-1855

1189

54-49/114 NH  
1587

Date 3/2/2020

Pay To The Order of Town of East Lyme \$ 2260.00

TWO THOUSAND TWO HUNDRED SIXTY Dollars

 Security Features Check's on Back

**Bank of America** 

ACH R/T 011400495

For Re Subdivision Nottingham <sup>Lots</sup> 19 & 21  
Pazza glia

Kristen Clarke

⑈001189⑈ ⑈011400495⑈ 388002118816⑈



**DESIGN REPORT  
4 LOT RE-SUBDIVISION  
UPPER KENSINGTON DRIVE  
EAST LYME, CONNECTICUT**

This re-subdivision will separate the subject properties from two (2) into four (4) lots.

The subject property is a part of the Nottingham Hills Subdivision land assemblage and represents the sixth re-subdivision of the Nottingham Hills Subdivision property.

More specifically, the plan separates current lots 19 and 21 into four lots. It should be noted that proposed lot 4 will be deeded to the East Lyme Land Trust, Inc for additional Open Space and will be subject to a Conservation Easement by the State of Connecticut Department of Energy and Environmental Protection upon the filing of the mylars of this re-subdivision

Accessible Road frontage to each of the lots will be from Upper Kensington Drive having a total of fifty (50) feet of frontage. Access to each of the lots will be from the two existing curb cuts. The applicant is open to discussing with the East Lyme Planning commission or it's staff the use of a singular driveway for the first One Hundred Fifty Feet (150') to further reduce impervious surface areas.

### **INLAND WETLANDS**

There are inland wetlands on the subject property lots 1 and 2. In both instances the inland wetlands are within already protected front, rear and side yard building setbacks. It is important to note though however that there is no activity proposed in either the inland wetlands or the 100' upland review area on any of the proposed lots. An Application for Determination of Non-Regulated Activity has been filed with the Town of East Lyme Inland Wetlands Agency. Ex. A.

### **OPEN SPACE**

Open space totaling 41.35 acres has already been provided by deed or conservation easement to the Town of East Lyme for the Nottingham Hills Subdivision totaling 38.35% of the total land in all phases of the subdivision vs. the required 30%. Ex. B.

### **SEWAGE DISPOSAL REPORT**

Proposed lots 2 and 4 have already been reviewed for septic feasibility. No changes have been made to require further review outside of a B-100, Ex. C, which has been filed with Ledge Light Health District. Both of lots 2 and 4 have system areas

located outside of the 15-foot buffer required by the State of Connecticut Health Code. Lots 1 and 3 utilize test hole data from the Nottingham Hills subdivision Phase 3 plans to demonstrate the septic feasibility required by the East Lyme Subdivision regulations. An Application For Subdivision Feasibility review has been filed with the ledge Light Health District for Lots 1 and 3. Ex. C.

### **WATER SUPPLY REPORT**

The existing and proposed new lots will all have wells.

### **STORM WATER MANAGEMENT PLAN**

Drainage from the properties will only increase minimally under the proposed re subdivision. Since lot 4 will be "Open Space it will remain in its current unimproved state with no new impervious surfaces. Lots 2 and 3 will share a common driveway for all but 80 feet of a proposed 10' wide driveway (800s.f.). The homes will have a roof surface area of no more than 2000 s.f. Gutter down spouts will tie into each proposed homes footing drains and utilizing the site topography will daylight to drain onto other lands of the landowner outside of the wetland or their upland review areas, pursuant to the original design of this subdivision, and will easily be disbursed and or absorbed into the provided for 12 acre (552,720 s.f.) drainage area.

### **ROAD CONSTRUCTION/PUBLIC IMPROVEMENTS**

There is no road construction or public improvements required. Utilities (Electric, Cable and Telephone) are stubbed to the entrance on Upper Kensington Drive.

### **NATURAL & CULTURAL RESOURCE MAP**

Provided to the East Lyme Planning Commission as part of the Nottingham Hills Subdivision Phase 1 and incorporated herein. See Ex. D

### **ARCHEOLOGICAL SURVEY**

Provided to the East Lyme Subdivision as part of Nottingham Hills Subdivision Phase 1 and 3 and incorporated herein. There are no Archeological issues to address that need to be addressed.

# EXHIBIT A



Office Use Only/Date of Receipt (Stamp)

# APPLICATION FOR DETERMINATION OF PERMITTED/NON-REGULATED ACTIVITY

1. SITE LOCATION (Street) and Description: Upper Kensington Drive  
Assessor's Map 40.0 Lot # 23&22

*Note: It is the applicant's responsibility to provide the correct site address, map/lot number for the legal notice. Provide a description of the land in sufficient detail to allow identification of the inland wetlands and watercourses, the area(s) (in acres or square feet) of wetlands and watercourses to be disturbed, soil type(s), and wetland vegetation.*

2. APPLICANT: Kristen T. Clarke P.E.  
Address: 20 Risingwood Drive Phone: 434-409-9515  
Bow, NH 03304 Fax: \_\_\_\_\_  
Business: \_\_\_\_\_ Cell: \_\_\_\_\_  
Email: kristentclarke@gmail.com  
Applicant's interest in the land: professional engineer

*\*\*If the applicant is a Limited Liability Corporation or a Corporation provide the managing member's or responsible corporate officer's name, address, and telephone number.*

3. OWNER: English Harbour Asset Management LLC  
Address: 20 Risingwood Drive Phone: 434-409-9515  
Bow, NH 03304 Fax: \_\_\_\_\_  
Email: \_\_\_\_\_ Cell: \_\_\_\_\_

*\*\*As the legal owner of the property listed on this application, I hereby consent to the proposed activities. And I hereby authorize the members and agents of the Agency to inspect the subject land, at reasonable times, during the pendency of the application and for the life of the permit.*

Owners Printed Name: Kristen T. Clarke P.E.  
Owners Signature: Kristen Clarke Date: 3/2/2020

4. Person Responsible for Compliance: \_\_\_\_\_  
Address: \_\_\_\_\_  
Phone Number: \_\_\_\_\_ Email: \_\_\_\_\_

5. Describe the Activity and Purpose: re-subdivision plan

6. Describe mitigation measures such as erosion controls, added wetlands plantings, infiltration and run off: n/a

7. Is the property within 500 ft of an adjoining town?  Yes  No

8. Inland Wetland/Watercourse Information:

Area of wetland to be disturbed 0 sq. ft.

Area of watercourse to be disturbed 0 sq. ft.

Upland Review Area to be disturbed 0 sq. ft. (area within 100' of wetland)

Will fill be needed on site?  Yes  No

If Yes, how much fill is needed? n/a cubic yards

Will material be removed from site?  Yes  No

If Yes, how much will be removed? n/a cubic yards

The property contains (circle one or more) WATERCOURSE WATERBODY WOODED-WETLAND SWAMP

Name of Soil Scientist and date of survey Don Fortunato-August 1, 2005

9. Site Plan Title, Date, Engineer/Surveyor Name: Conservation Design Development  
Nottingham Hills Subdivision  
4 lot re-subdivision of lots 19&21

**The undersigned owner hereby consents to necessary and proper inspections of the above mentioned property by the Commission or agent of the Commission, at reasonable times both before and after a final decision has been issued by the Commission. The undersigned also swears that the information supplied is accurate to the best of his/ her knowledge and belief.**

Krisler Clarke  
Signature of Owner (s)

3/2/2020  
Date

# EXHIBIT B

OPEN SPACE CALCULATIONS  
NOTTINGHAM HILLS SUBDIVISION

Phase I

<u>Lot #</u>	<u>Acreage</u>
1	1.71
2	.92
3	1.25
4	1.39
5	1.23
6	1.21

Phase II

6	1.34
8	2.21
9	3.09
10	1.95
11	1.71
30	1.29
31	1.34
48	2.96
49	2.11
197 Upper Patt	2.68

Phase III

12	1.06
13	1.34
14	1.17
15	1.27
16	1.35
17	1.0
18	.93
19 (rear)	2.45
20	Phase IV
21 (rear)	3.12
22	1.30
24	1.73
25	1.78
26	2.58
27	2.91

28 4.36

**Phase IV**

20 33.0

29 3.05

32 15.03

**Open Space**

Aunt Ruth Turnpike 23.2

Phase I .32 (south side Kensington Drive)

Phase II 4.24 (Conservation Easement)

Phase III N/A

Phase IV 10.63 (Conservation Easement)

2.96 (Conservation Easement)

**TOTAL ACRES**

LOTS: 107.82

OPEN SPACE: 41.35



# **EXHIBIT C**



App No. _____
Check No. _____
Receipt No. _____
<b>REVIEW FEE: see application</b> Make check to LLHD or pay online at <a href="http://www.LLHD.org">www.LLHD.org</a> rev 4/30/17

Promoting  
healthy  
communities

### Application for Septic Plan Review

**Notes:**

1. Please provide a scaled site plan of the property with an accurate parcel address – one copy, two copies if state review is required.
2. If requesting a septic design plan review, please submit building plans including floor plans of all levels and all structure.
3. If requesting subdivision plan review for a town commission approval, please provide the date of the commission meeting under "Additional Information" below.

Date: 3/2/2020 Property Address: builder lots 19&21 Upper Kensington Dr. East Lyme Town: \_\_\_\_\_

Applicant Name: Kristen T. Clarke, P.E. Phone: 434-409-9515

Email: kristentclarke@gmail.com Fax: \_\_\_\_\_

Applicant Address (if different from above): \_\_\_\_\_

Property Water Supply:  Well (s)  Public Water  Both

Type of Review Requested:

- Septic Design Plan - Single Lot (Fee: \$155 – includes 1 revision)
- Revision of Septic Design Plan (beyond one revision) (Fee: Half of Plan Review Fee)
- Subdivision Feasibility / commission review. Number of lots: 2 (Fee: \$150 per lot)
- State DPH review (e.g., septic systems >2000 gpd; request for State exception) (Fee: \$100)

Additional Information:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signed: Kristen Clarke

Assigned to: \_\_\_\_\_ Title: \_\_\_\_\_

Date Received: \_\_\_\_\_



App No. _____
Check No. _____
Receipt No. _____
<b>REVIEW FEE: \$25.00</b>
<b>w/site visit or soil test: \$50.00</b>
<i>Make check to LLHD or pay online</i>
<i>at <a href="http://www.LLHD.org">www.LLHD.org</a> rev 4/30/17</i>

Promoting  
healthy  
communities

**B100a: Application for Building Addition, Change in Use, Accessory Structure, or Lot Line Change**

**Note: Please include the following with your application:**

1. A scaled site plan of your property showing property lines, existing buildings, septic system (s), water line (s)/ well (s), and proposed building addition or accessory structure.
2. For additions of living space: existing and proposed floor plans.
3. Soil testing information, if available.

Date: \_\_\_\_\_ Property Address: builder lots 19&21 Upper Kensington Dr. Town: East Lyme  
 Applicant Name: Kristen T. Clarke, P.E. Phone: 434-409-9515  
 Email: Kristentclarke@gmail.com

Applicant Address (if different from above): 20 Risingwood Dr., Bow, NH 03304

Property Water Supply:  Well (s)  Public Water  Both

Type of Application:  
 Building Addition (e.g., adding rooms or 2nd floor, finishing attic or basement); additional bedrooms \_\_\_\_\_  
 Building Change in Use or Conversion (e.g., office or retail to food service; home winterization)  
 Accessory Structure (Garage, Shed, Deck, Pool, etc.)  
 Lot Line Change

Please provide a brief description of the proposed project: Lot line revisions of Nottingham Hills Subdivision lots 19&21 to accommodate 2 new lots one of which be dedicated for OpenSpace (Lot #

Signed: \_\_\_\_\_ \* Applicant attests that project information is the same as that supplied to the Building Department (if applicable).


Reviewed by: \_\_\_\_\_ Title: \_\_\_\_\_  Approved  Denied

Signed: Kristen Clarke Date: \_\_\_\_\_

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

# **EXHIBIT D**

# Memo

**To:** Wayne Fraser, First Selectman  
**From:** Meg Parulis, Director of Planning   
**CC:** Francine Schwartz, Planning Commission Chair  
**Date:** 9/15/2005  
**Re:** Acceptance of Open Space Lands associated with the Nottingham Hills and Darrow's Ridge Subdivisions

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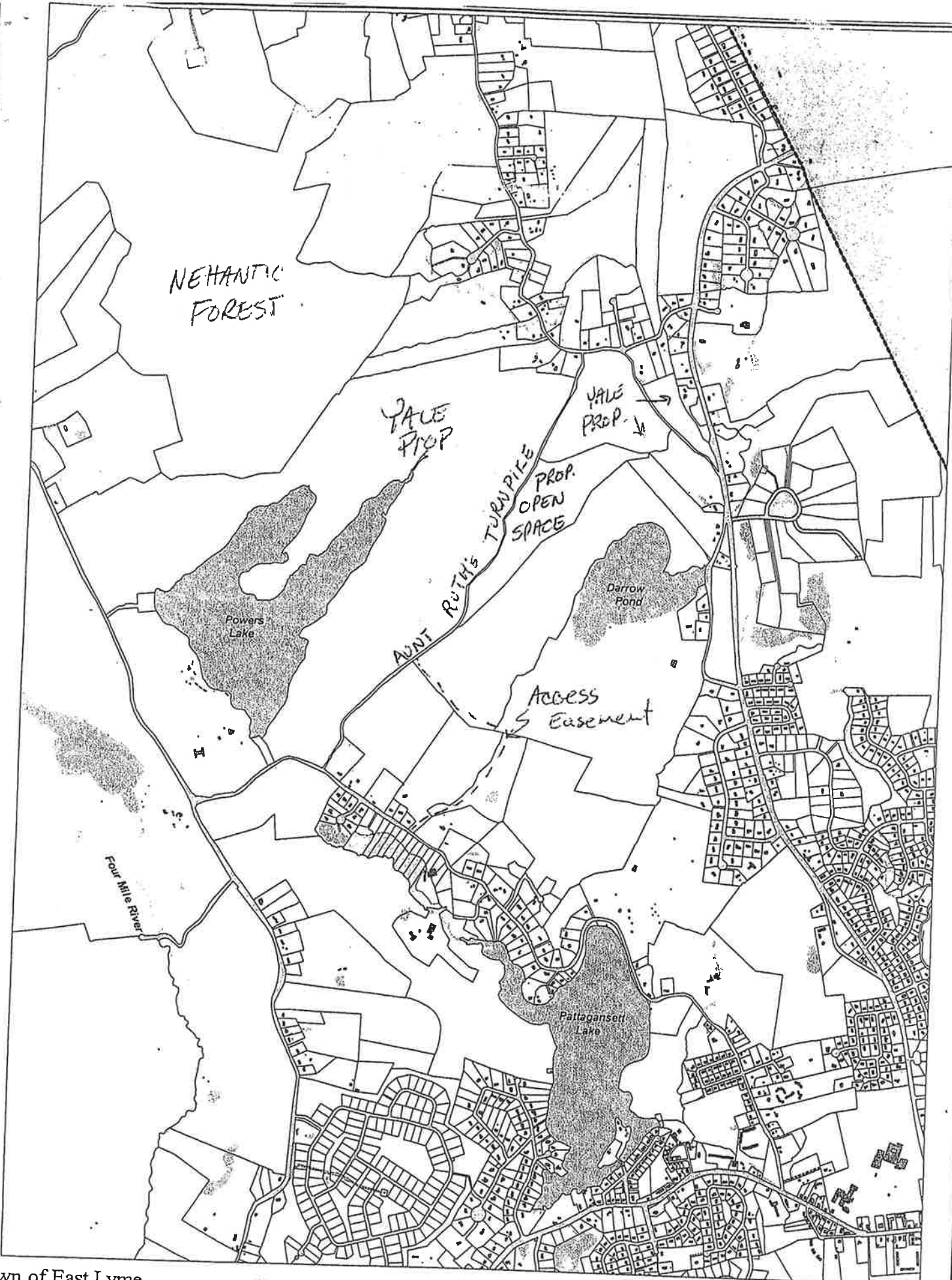
At its meeting on August 16, 2005, the Planning Commission agreed to forward two adjacent parcels totaling approx. 45 acres along Aunt Ruth's Turnpike for dedication to the Town of East Lyme as Open Space. These parcels were designated as Open Space through the approval of the Nottingham Hills Subdivision on 6/15/04 and Darrow's Ridge Subdivision on 4/19/05. In addition, this land is recommended for Open Space preservation in the 1999 Plan of Conservation and Development.

The property is separated from the housing sites by a steep ridge and offers a unique opportunity for development of public trails. Aunt Ruth's Turnpike is an abandoned road running approx. 1.5 miles between Upper Pattagansett Road and Walnut Hill Road. The property shares to the centerline of the road with Yale. Public access is initially proposed from Upper Pattangansett Road over property owned by the developer. It is anticipated that additional acreage will be added through future development projects. If rights of passage can be established over the entire length of Aunt Ruth's Turnpike with the cooperation of Yale and adjoining property owners, access may be relocated to the entrance of Aunt Ruth's Turnpike on Upper Pattagansett Road in the future. A second entrance is planned at Walnut Hill Road. Once the Town accepts the property, negotiations can begin with Yale and other property owners for access and grants can be sought for trail development.

Included with the legal documents conveying the property and access easements to the Town, is a Natural Resource Inventory and Passive Recreation Assessment Report prepared by the developer, Jeffrey Torrance. Reports of this nature will be a standard requirement of the Planning Commission in the future for parcels to be dedicated to the Town. The developer is to be commended for taking a pro-active approach to Open Space planning through voluntary preparation of the report.

The legal documents have been forwarded to Town Counsel for review. Acceptance of the property should be contingent on final approval by Town Counsel. Please place this item on the Board of Selectmen Agenda for Sept. 21, 2001.

If you have any questions, please do not hesitate to ask.



NEHANTIC FOREST

YALE PROP.

YALE PROP.

PROP. OPEN SPACE

AUNT RUTH'S TURNPIKE

Powers Lake

Darrow Pond

Access Easement

Four Mile River

Pattagansett Lake

Town of East Lyme



This map is for assessment purposes only. It is not to be used for conveyance or as a lot survey.



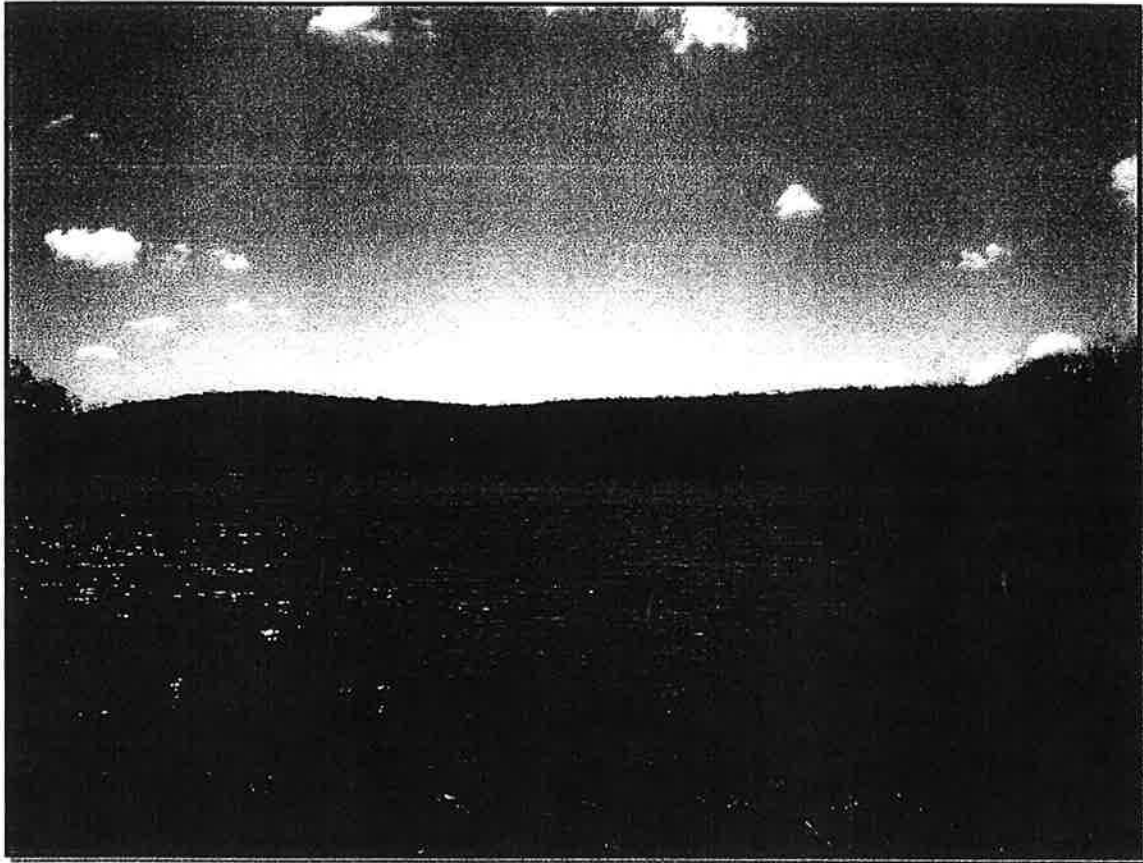
1:24536

005482

Date Printed: September 15, 2005



**Natural Resource Inventory and Passive Recreation Assessment  
Darrow's Ridge Open Space  
Mostowy Road, East Lyme**



Prepared By:  
Matthew and Eric Davison

Submitted To:  
Jeff Torrance

Date: May 15, 2005

004614

## INTRODUCTION

A natural resource inventory and recreation assessment was developed for a 45 acre parcel known as “Darrow’s Ridge Open Space”, land designated as open space as part of the Darrow’s Ridge subdivision. The site is located along the eastern side of Aunt Ruth’s Turnpike, an unimproved road which runs from Upper Pattagansett Road north to Walnut Hill Road. Adjacent to the site to the east lies Yale University’s Sheffield Scientific School (figure 1).

This plan describes the natural resources of the site including soils, geology, plant communities and habitats and discusses the potential for future use of the site for passive recreation. Field data was collected on the site during April 2005. The maps provided in this report are based on the Connecticut Department of Environmental Protection’s GIS data as well as cad data provided by J.Robert Pfanner and Associates of Niantic.

## SOILS

Seven soil types occur on the site, two wetland and five non-wetland<sup>1</sup>. Descriptions of the soil types are provided below. Figure 2 shows the location and distribution of these soil types.

### *Wetland Soils*

The wetland soils consist of the Adrian and Palms soil complex. The Adrian series consists of very deep, very poorly drained organic soils in depressions on outwash plains, lake plains and terraces, flood plains, moraines, and till plains. The soils formed in herbaceous organic material and in the underlying sandy deposits. The depth to the sandy mineral horizon ranges from 16 to 51 inches. The organic fibers are derived primarily from herbaceous plants, but some layers contain as much as 50 percent material of wood origin. The depth to the seasonal high water table ranges from 1 foot above the surface to 1 foot below the surface from November to May in most years. Some areas may be subject to frequent flooding.

The palms series consists of very poorly drained soils that formed in deposits of herbaceous organic material less than 50 inches thick. Palms soils are in depressions and along slow flowing streams in glacial till uplands.

### *Non-wetland soils*

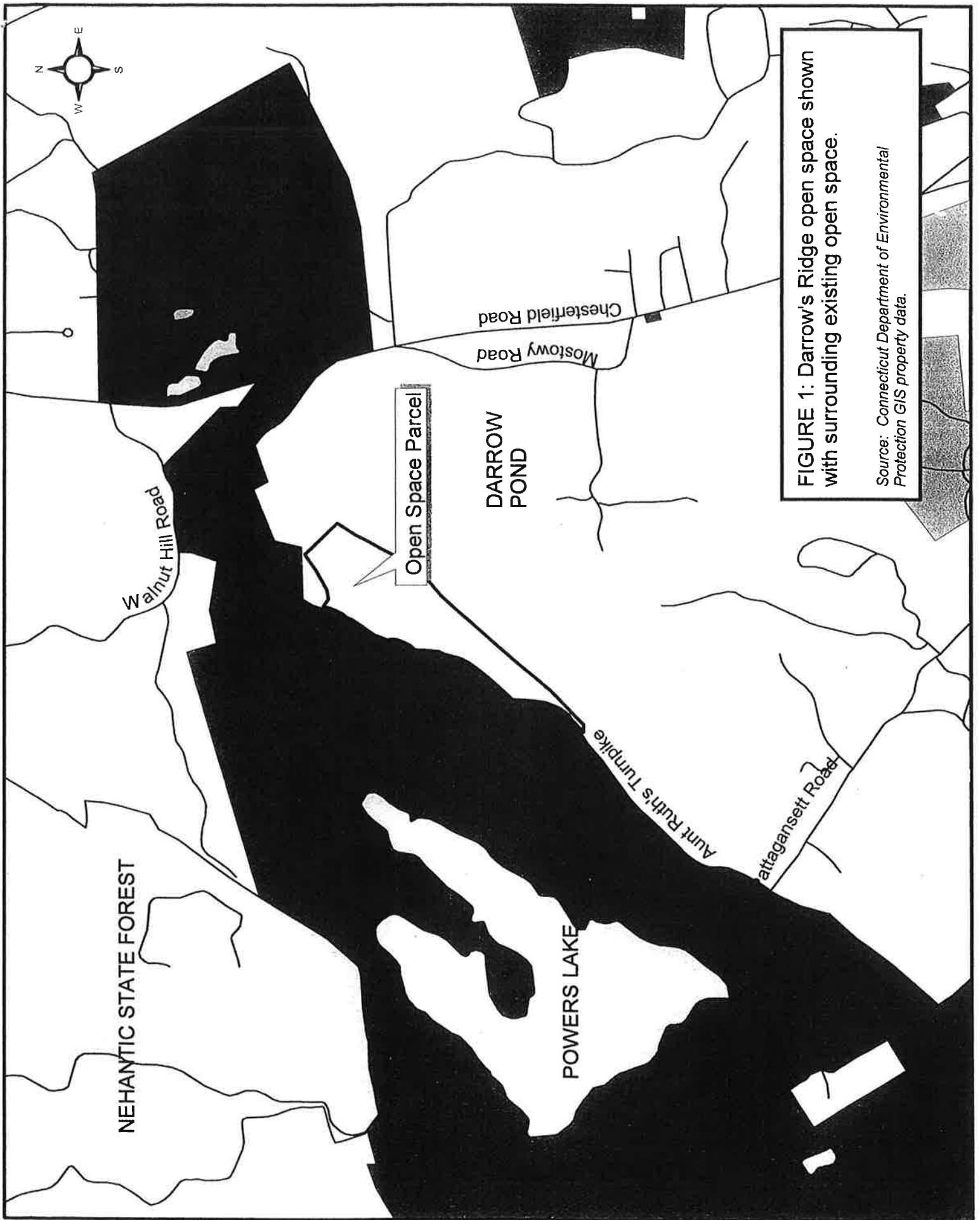
The non-wetland soils consist of the Hollis-Chatfield rock outcrop complex, the Canton and Charlton soil complex and Sutton soils. The Hollis series consists of shallow, well drained and somewhat excessively drained soils formed in a thin mantle of glacial till derived mainly from gneiss, schist, and granite. They are nearly level to very steep upland soils on bedrock controlled hills and ridges. Depth to hard bedrock ranges from 10 to 20 inches. Bedrock outcrops vary from few to many.

The Chatfield series consists of moderately deep, well drained, and somewhat excessively drained soils formed in till. They are nearly level to very steep soils on glaciated plains, hills, and ridges. Slope ranges from 0 to 70 percent. Crystalline bedrock is at depths of 20 to 40 inches. The soils formed in a

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<sup>1</sup> SOURCE: NRCS digital soil survey map

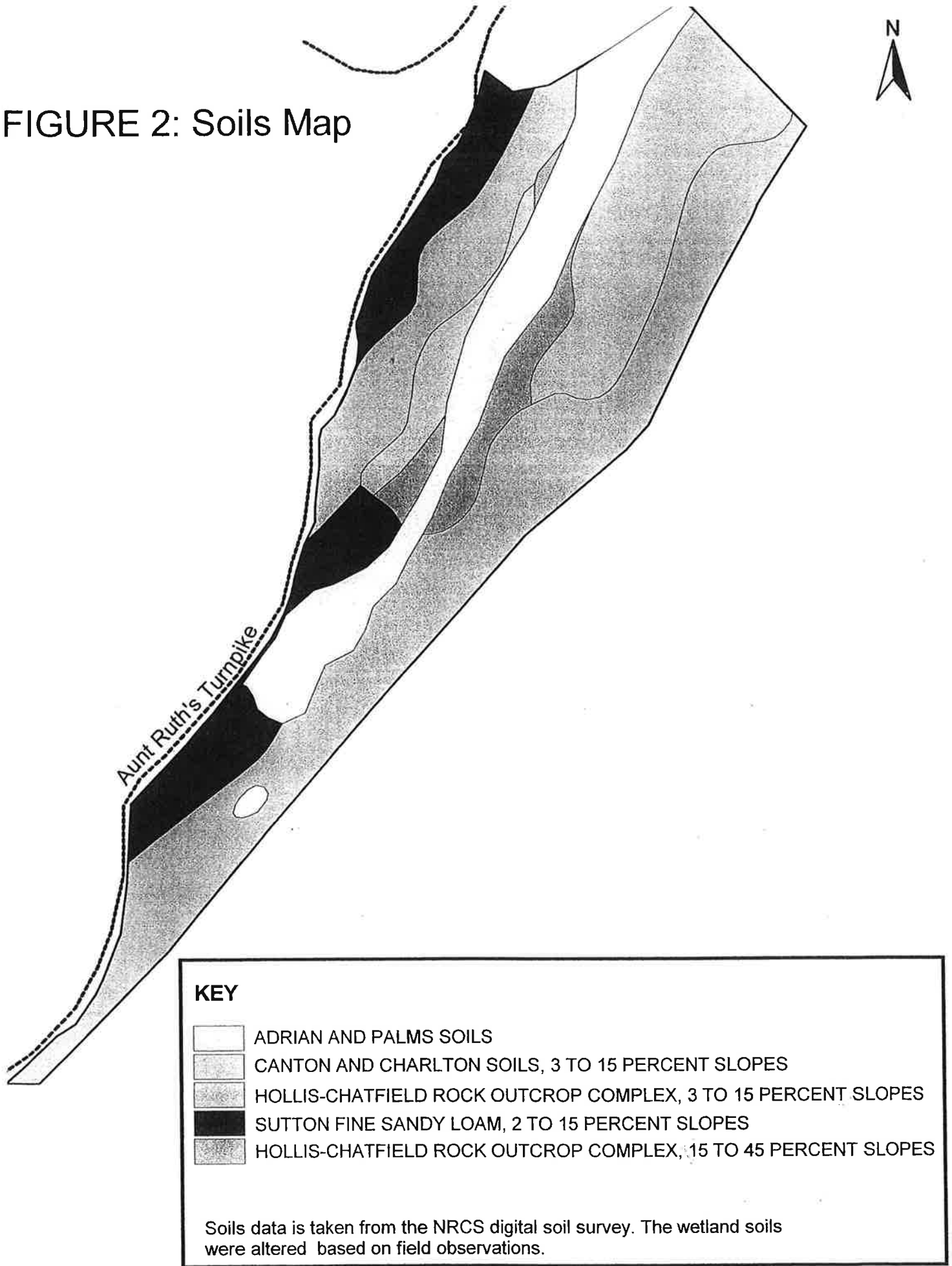




**FIGURE 1: Darrow's Ridge open space shown with surrounding existing open space.**

Source: Connecticut Department of Environmental Protection GIS property data.

FIGURE 2: Soils Map



moderately thick mantle of glacial till overlying granite, gneiss, or schist bedrock. Rock outcrops are rare to common and are limited to the more resistant bedrock.

The Canton series consists of very deep, well drained soils formed in a loamy mantle underlain by sandy glacial till. They are on nearly level to very steep glaciated plains, hills, and ridges. Slope ranges from 0 to 35 percent. Permeability is moderately rapid in the solum and rapid in the substratum. The soils developed in a fine sandy loam mantle over acid sandy glacial till of Wisconsin age derived mainly from granite and gneiss and some fine-grained sandstone.

The Charlton series is a very deep, well drained loamy soil formed in friable till. They are nearly level to very steep soils on till plains and hills. Depth to bedrock and the seasonal high water table is commonly more than 6 feet.

The Sutton series consists of very deep, moderately well drained loamy soils formed in friable till. They are nearly level to strongly sloping soils on till plains and low ridges, typically in mid to low slope positions. Sutton soils have a seasonal high water table at a depth of about 18-42" from mid-fall through mid-spring.

## GEOLOGY

Three bedrock formations occur on the site. These bedrock types consist of metamorphic rock, primarily Gneiss and are listed below in table 1. Gneiss is a light and dark, medium to course grained metamorphic rock characterized by compositional banding of light and dark minerals, typically composed of quartz, feldspar, and various amounts of dark minerals. It occurs with a variety of compositions and is a characteristic rock of the uplands. The site's surficial geology consists entirely of Till.

Table 1: Bedrock types<sup>2</sup>

FORMATION	DEFINITION
Potter Hill Granite Gneiss	Light pink to gray, tan weathering, fine to medium grained, well foliated granitic gneiss
Plainfield Formation	Interlayered thinly bedded quartzite, mica schist and dark-gray gneiss
Hope Valley Alaskite Gneiss	Light pink to gray medium to course grained granitic gneiss

<sup>2</sup> SOURCE: CT DEP GIS data, digitized bedrock geology map

## PLANT COMMUNITIES – HABITATS

The site contains both upland and wetland plant communities. The distribution of vegetation on any site is determined by several factors. Available soil moisture is the single most important factor in determining this distribution. Available soil moisture is affected by topography or position on the landscape (hilltop down to wetland), orientation of the slope (north vs. south), and texture of the soils. The site consists of a series of parallel ridges with associated lowland areas existing between the ridges. Tree distribution on this site is characteristic of hilltop, lowland and wetland forest types. Forest types associated with a midslope landscape are generally absent from this site. This property was logged approximately 15 years ago. As a result of removing larger trees the areas that were accessible are composed of mostly pole sized (4-11 inches diameter) trees. There was some damage done to the residual stand during this process as is evident by wounds to the lower portions of the trunks along old skid roads.

### ***Hilltop Forest***

The ridges of this site represent areas that are deficient in available soil moisture. While the forest type can be generally described as an oak or oak-hardwood forest type, its characteristics can be more accurately described as a hilltop forest community. Trees found on the ridges of this site are generally shorter and more widely spaced than on more fertile sites. Tree species associated with this community include Chestnut Oak (*Quercus Prinus*) Scarlet Oak (*Quercus coccinea*) Black Oak (*Quercus velutina*) White Oak (*Quercus alba*) and Red Maple (*Acer rubrum*). The shrub layer is dominated by Huckleberry, (*Gaylussacia baccata*) and in some areas dense thickets of Mountain Laurel (*Kalmia latifolia*). Herbaceous plants are virtually absent from this community.

These hilltop forest areas provide habitat for a variety of upland forest songbirds and mammals.



FIGURE 3: Hilltop forest community with pole timber sized oak and dense huckleberry shrub cover.

### ***Lowslope Forest - Forested Wetlands***

Between the ridges are areas of lowslope and wetland plant communities. The forest type in these areas is that of oak-hardwood and in some cases mixed hardwood. Tree species found in these areas include Red Maple, Yellow Birch (*Betula lutea*), Swamp White Oak (*Quercus bicolor*), Black Birch (*Betula lenta*), White Ash (*Fraxinus americana*) and Tulip Poplar (*Liriodendron tulipifera*). Shrub species consist mainly of Mountain Laurel, Pepperbush (*Clethra spp.*) and Highbush Blueberry (*Vaccinium corymbosum*). Sphagnum moss is common ground cover throughout the wetland area.

The central wetland system provides habitat for a variety of wetland dependant wildlife species, including Red-spotted Newt (*Notophthalmus viridescens*) and Two-lined Salamander (*Eurycea bislineata*) (figure 4) as well as several obligate vernal pool amphibians (see vernal pool 1, figure 5).

FIGURE 4: Central wetland system, northern portion of site. This wetland contains prolonged ponding typical of very poorly drained soils. Two-lined Salamanders were found inhabiting this moist groundwater seepage area, under rocks and logs.



## ***Vernal Pools***

Vernal pools are wetlands which provide breeding habitat for a variety of amphibian species. Two vernal pools were identified at the southern end of the property and are shown in figure 5. Vernal pool 1 occurs within an expansive wooded swamp in the south-central portion of the site. Vernal pool 2 is located at the southern end of the site and is an isolated pool surrounded on two sides by steep, shallow to bedrock ridges. Both pools were found to be productive breeding sites for two vernal pool obligate amphibian species, wood frogs and spotted salamanders.

The pools were surveyed in mid-April, and wood frog tadpoles were found in abundance in both vernal pools. Egg masses from spotted salamanders numbered over 100 in vernal pool 1 (see figure 7) and over 50 in vernal pool 2.

The water depth in both pools is significant and the pools sit on shallow to bedrock soils. Therefore, it is anticipated that these pools are productive amphibian breeding sites even during drier years.

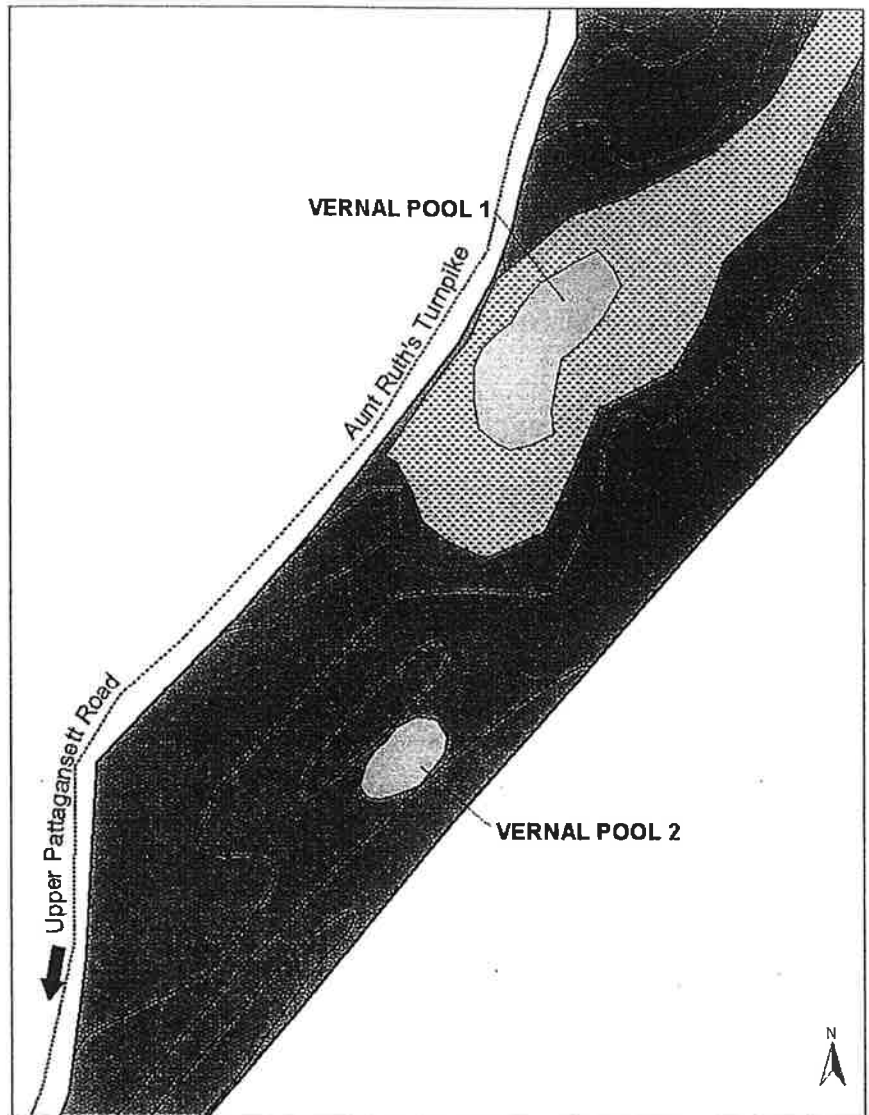


FIGURE 5: Vernal pool locations in the southern portion of the property, shown with topography. Vernal pool 1 is located within a larger wetland system which runs parallel to Aunt Ruth's Turnpike. Vernal pool 2 is isolated between two shallow to bedrock ridges.

FIGURE 6: April view of vernal pool 1. Note well developed hummocks of red maple, blueberry and sphagnum in this wetland.



FIGURE 7: Opaque spotted salamander egg masses attached to woody debris in vernal pool 1.

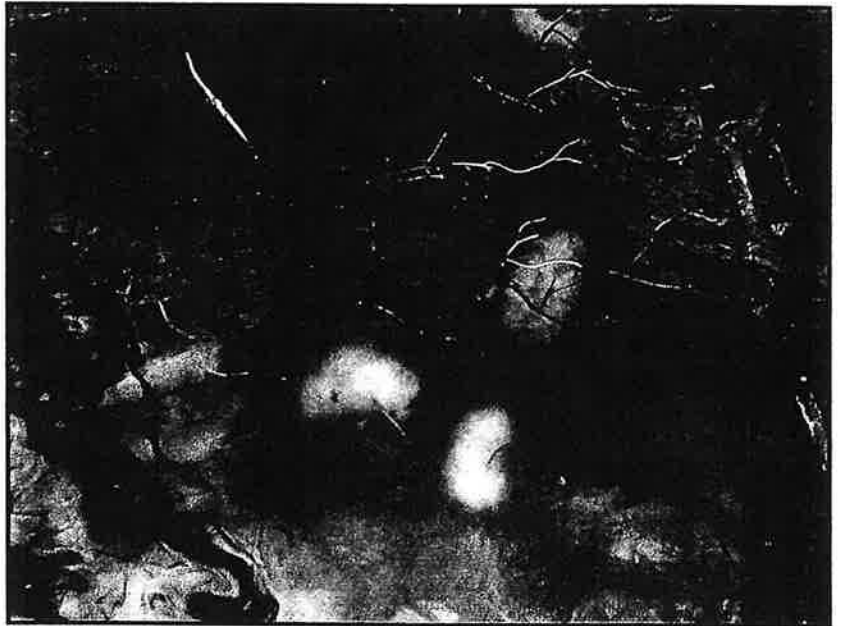


FIGURE 8: Vernal pool 2 looking west, downslope from ridgetop on eastern property boundary.



## WETLAND FUNCTIONS AND VALUES

Wetlands are typically evaluated based on the following nine functions and values: groundwater recharge/discharge, floodwater storage, fish habitat, sediment retention, nutrient removal/retention/transformation, wetland wildlife habitat, recreational value, educational/scientific value, and uniqueness<sup>3</sup>. These functions and values are defined in detail in Appendix A.

The wetlands on the site were evaluated in table 2 as two separate units, wetland 1 (labeled WL 1) and vernal pool 2 (labeled VP 2). Wetland 1 consists of the long, narrow wetland system which runs through the central portion of the site and contains vernal pool 1 (See figures 5 & 9). The second wetland area evaluated is vernal pool 2. Table 2 shows these two wetlands principle functions and values.

Table 2: Principle Wetland Functions and Values

WETLAND FUNCTIONS AND VALUES	WETLAND	
	WL 1	VP 2
Groundwater recharge/discharge	▼	
Floodwater Storage		
Fish Habitat		
Sediment Retention		
Nutrient Removal/Retention/Transformation		
Wetland Wildlife Habitat	▼	▼
Recreational Value		
Educational / Scientific Value	▼	▼
Uniqueness		
▼ - Principle Function / Value		

**Wetland 1:** The principle functions and values of wetland 1 are groundwater discharge, wetland wildlife habitat and educational/scientific value. The wetland occurs on a gradual slope and evidence of seeps and springs (groundwater breakout/discharge areas) are common. The presence of a cryptic vernal pool within this wetland system provides high quality wetland wildlife habitat.

**Vernal Pool 2:** Vernal pool 2 provides high quality wetland wildlife habitat as well as opportunities for scientific study and education.

<sup>3</sup> The above functions and values as well as their descriptions (Appendix A) are taken from the U.S. Army Corp of Engineers "The Highway Methodology Workbook Supplement – Wetland Functions and Values, a Descriptive Approach".



## RECREATION

The recreational opportunities available on this site were evaluated using a variety of criteria. Factors including location of the property, access, existing trail locations, potential for trail expansion, unique characteristics including flora and fauna and historically significant areas can be examined in order to make a determination. It is equally important to have foresight in determining the potential value of a parcel of land for open space. In areas that are prone to seeing near future increases in population density it is important to begin to set aside conservation areas earlier rather than later.

The site is located east of Powers Lake and west of Route 161. To the north and west lies Yale's Sheffield School, a 1,500 acre parcel of undeveloped land. This property is not available for public use. To the north of the Yale property lies Nehantic State Forest, a Department of Environmental Protection property encompassing 1,900 acres of protected open space. A number of larger acreage privately owned parcels of land exist to the South, some of which are currently proposed for development.

### *Site Access*

Access to the site exists from both the north and south. Residents of the Darrows Ridge subdivision will have access on the north side of the site via an existing trail (see Trail B, figure 9), while public access is from Upper Pattagansett Road to the south via Aunt Ruth's Turnpike. Aunt Ruth's Turnpike is an unimproved woods road traveling between Upper Pattagansett Road and Walnut Hill Road. Aunt Ruth's Turnpike is no longer a town road but is owned jointly between the landowners on each side of the road. A deeded easement allows for access to the site from upper Pattagansett Road. The site is located 3,000 feet from Upper Pattagansett Road. Parking space on Upper Pattagansett Road is limited to the side of the road.

**Recommendations:** Parking space on Upper Pattagansett is limited. While heavy use of this area is unlikely, establishing a few gravel parking spots could be explored. Aunt Ruth's Turnpike suffers from water drainage problems and subsequent erosion in some areas. Diverting the flow of water off of the old road would remedy this problem, however it is unlikely that this could be accomplished due to ownership restrictions. It is recommended that access via Aunt Ruth's turnpike be limited to foot traffic as mountain bikes and ATV'S will likely increase erosion problems.

### *Existing Trails*

Three existing trails occur on the site and are shown in figure 9: (1) Aunt Ruth's Turnpike; (2) Trail A and (3) Trail B. Aunt Ruth's Turnpike runs along the western property boundary for a distance of 3,500ft. Trail A runs from Aunt Ruth's Turnpike northeast across the property for a distance of 2,200ft. Trail B runs from Trail A north to the northern property boundary for a distance of 1,500ft. Trails A and B are suitable for hiking, biking, cross country skiing, horseback riding, and wildlife observation.

**Recommendations:** At the point that Trail A enters Aunt Ruth's Turnpike a channel has eroded which causes water to flow from Aunt Ruth's Turnpike into Trail A (see figure13). Water should be diverted into the wetland before it flows into the trail with a water bar or drainage dip. Directly to the south of the intersection of Aunt Ruth's Turnpike and Trail A lies vernal pool 1. Interpretive signs could be developed for this area that would allow for public recognition and understanding of the value of this unique habitat.

FIGURE 9: Trail Map

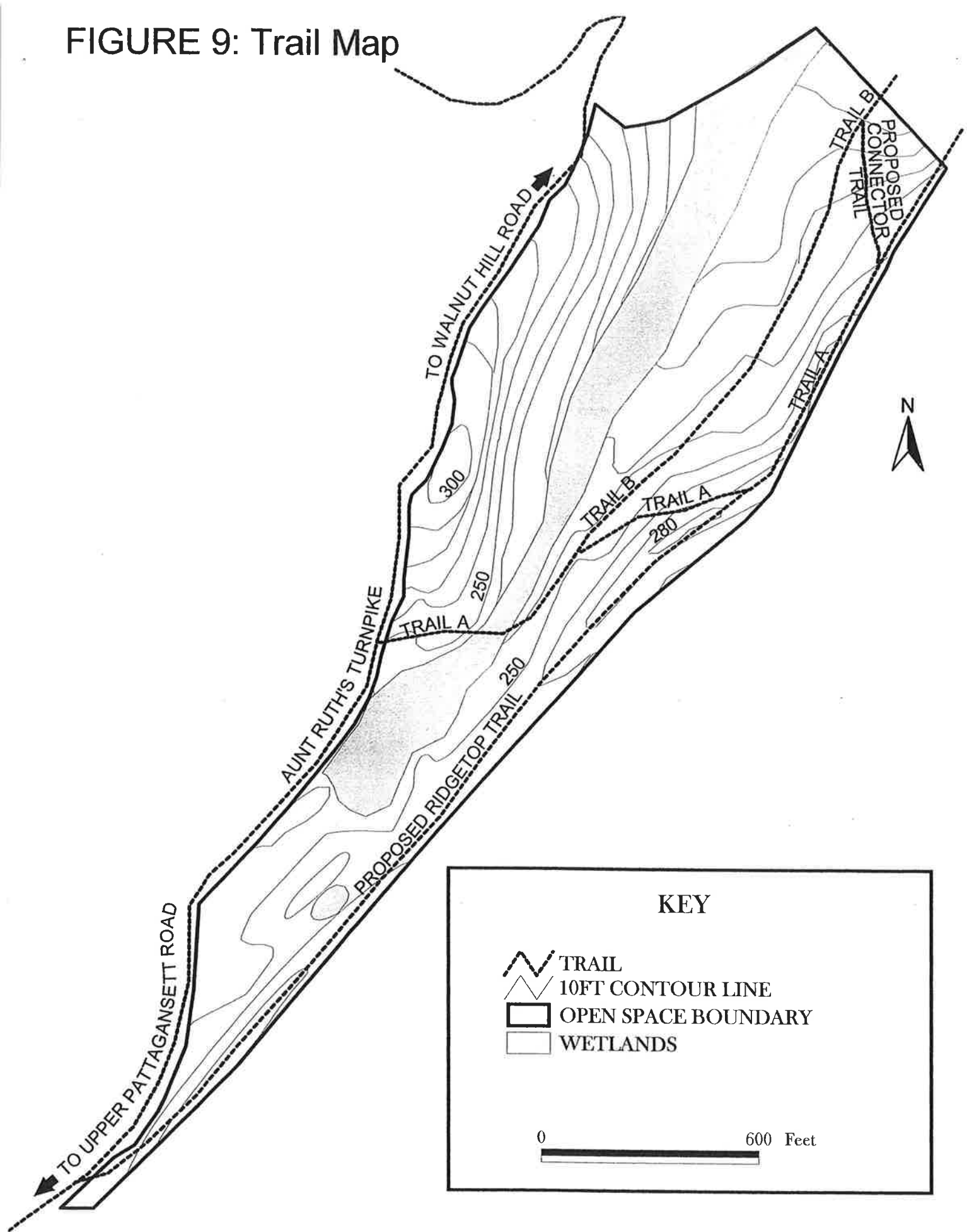




Figure 10: Map of New London County, 1854. Aunt Ruth's Turnpike is located in the center of the page.

FIGURE 11: Looking south along trail A. Trail travels through open hilltop forest in this area.



FIGURE 12: Trail B, looking north. Trail travels through pole sized mixed hardwoods and dense mountain laurel in this area.



FIGURE 13: Intersection of Aunt Ruth's Turnpike and Trail A. Aunt Ruth's travels downslope on the left side of the photo. Note water traveling down the center of Aunt Ruth's and settling in a low spot on Trail A on the right side of the photo.



### ***Proposed Trails***

Potential exists for expanding the existing trail system. Two proposed trail locations are shown in Figure 9. The first is the proposed Ridgetop Trail which would run parallel to the eastern site boundary, connecting between Aunt Ruth's Turnpike and Trail A. The Ridgetop Trail would traverse a pronounced, bedrock exposed ridgetop along the eastern site boundary, providing scenic vistas to the south and east (see figure 15). In traversing the ridgeline this trail would bring hikers directly above vernal pool 2 (see fig 14). This point on the trail would offer an excellent opportunity for an interpretive sign describing vernal pool habitats. Difficult terrain would make the Ridgetop Trail suitable for hiking and wildlife observation only. The second is the proposed Connector Trail which would connect between the existing Trails A and B. This connector trail would be necessary as the north side of Trail A will not be available as an access point to the site for people living in the Darrow's Ridge subdivision.

FIGURE 14: This photo was taken from the center of vernal pool 2, looking east. Note the small exposed bedrock ridge in the background. This is the location of the proposed ridgetop trail.



FIGURE 15: Proposed ridgetop trail, looking south at Smith Hill.





## SUMMARY

The site is a complex of wetland and upland habitats typical of Connecticut's coastal lowland forest. The site's wetlands provide breeding habitat for a variety of wetland dependant species, including several vernal pool obligates. The location of existing protected open space adjacent to this site greatly increases its overall suitability for a variety of bird, mammal, amphibian and reptile species. Darrow's Ridge open space offers present and future opportunities for recreation. Access is best for residents living in close proximity to the site. Limited public parking and distance to Upper Pattagansett Road (3,000ft) makes access for residents of surrounding areas difficult. While limitations currently exist, future potential development in areas south of this site could designate open space in a manner that forms a contiguous tract of land available for recreation to local residents. Public restriction to Yale's Sheffield School property increases the importance of publicly accessible open space in this area. This site offers recreational opportunities for hiking, biking, cross-country skiing, horse back riding and wildlife observation. The site also offers the opportunity for the creation of an interpretive trail, where educational signs could describe the site's natural features. The site's existing trails occur in a logical fashion, joining areas proposed for subdivision to Aunt Ruth's Turnpike, an unimproved woods road connecting Upper Pattagansett Road to Walnut Hill Road. Potential for trail expansion exists with the addition of a ridgetop trail along the eastern property boundary that offers eastern vistas as well as views of a high quality vernal pool.

**APPENDIX A**

## WETLAND FUNCTIONS AND VALUES

- (1) **Groundwater Recharge/Discharge** – This function considers the potential for a wetland to serve as a groundwater recharge and/or discharge area. It refers to the fundamental interaction between wetlands and aquifers (not necessarily public water supply aquifers), regardless of the size or importance of either.
- (2) **Floodwater Storage** – This function considers the effectiveness of the wetland in reducing flood damage by water retention for long periods following precipitation events and the gradual release of floodwaters. It adds to the stability of the wetland ecological system or its buffering characteristics and provides social or economic value relative to erosion and/or flood prone areas.
- (3) **Fish Habitat** – This function considers the effectiveness of seasonal or permanent watercourses associated with the wetland in question for fish habitat.
- (4) **Sediment Retention** – This function reduces or prevents degradation of downstream water quality. It relates to the effectiveness of the wetland as a trap for sediments, toxicants or pathogens in runoff from surrounding uplands, or eroding upstream wetlands and/or watercourses.
- (5) **Nutrient Removal/Retention/Transformation** – This function considers the effectiveness of the wetland as a trap for nutrients in runoff water from surrounding uplands or contiguous wetlands, and the ability of the wetland to process these nutrients into other forms or trophic levels. One aspect of this function is to prevent ill effects of nutrients entering aquifers or surface waters such as ponds, lakes, streams, rivers or estuaries.
- (6) **Wetland Wildlife Habitat** – This function considers the effectiveness of the wetland to provide habitat for various types and populations of animals typically associated with wetlands and the wetland edge. Both resident and/or migrating species must be considered.
- (7) **Recreation** – This value considers the suitability of the wetland and associated watercourses to provide recreational opportunities such as hiking, canoeing, boating, fishing, hunting and other active or passive recreational activities.
- (8) **Educational/Scientific Value** – This value considers the suitability of the wetland as a site for an “outdoor classroom” or as a location for scientific study or research.
- (9) **Uniqueness** – This value considers the effectiveness of the wetland or its associated waterbody to provide certain special values. These may include archeological sites, critical habitat for endangered species, its overall health and appearance, its role in the ecological system of the area, its relative importance as a typical wetland class for this geographic location.