



# **Environmental Impact Analysis Report**

September 9, 2019

Proposed Project Sconticut Neck Woods Residential Subdivision Hiller Avenue and Timothy Street Fairhaven, Massachusetts

> Applicant Robert Roderiques 15 Oliver Street Fairhaven, MA 02719

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#### Introduction

On behalf of the Applicant, Robert Roderiques, LEC Environmental Consultants, Inc. (LEC) is submitting this Environmental Impact Analysis Report to the Fairhaven Planning Board for *Sconticut Neck Woods*, a proposed 16-lot residential subdivision off Hiller Avenue and Timothy Street in Fairhaven, Massachusetts. The Environmental Impact Analysis is required as part of the Planning Board's site plan review process, in accordance with the Procedures for Submissions of Definitive Plans under the *Fairhaven Subdivision Regulations*.

Specifically, the Impact Analysis appears to be triggered by Fairhaven Code Section 322-14 (D)(1) which states: *Environmental impact analysis:* (2) required for all subdivisions over 10 acres and all subdivisions within the Nasketucket Overlay District (NRB). In order to insure the protection of the general public against any possible undesirable impact of the development on natural resources, the developer shall submit an analysis of any such matters of environmental concern, such as preservation of wetlands, surface and ground water quality and air quality. Said analysis shall be conducted by a qualified professional and include a summary table of the Impacts and proposed mitigation. Items to be addresses shall be wetlands, floodplains, open space and recreation, historical archeological features, fisheries and wildlife, water pollution, water supplies.

The project site exceeds 10 acres, though the footprint of disturbance is less than 10 acres, and the site is not within the Nasketucket River Basin Overlay District, according to the Town of Fairhaven Zoning Map.

Proposed project details are depicted on the *Sconticut Neck Woods Definitive Subdivision Plan*, prepared by Schneider, Davignon & Leone, Inc., dated May 17, 2019 (hereinafter referred to as the *Site Plan*).

In addition to the Planning Board Site Plan Review process, the project is under review by the Fairhaven Conservation Commission through a Notice of Intent (NOI) submittal under the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40), its implementing *Regulations* (310 CMR 10.00) and the Town of *Fairhaven Wetlands Bylaw*.

The following report contains a description of the Existing Conditions, Proposed Project, and Impact Analysis.

#### **Existing Conditions**

The 10.8-acre project site is referenced as Assessors Lots #71 and #71A on Map #28C and is located east of Paul Street and the terminus of Hiller Avenue, south of Timothy Street in Fairhaven (Attachment A, Figures 1 & 2). The site contains frontage along Hiller Avenue, Timothy Street and Paul Street, all three of which are public ways. The undeveloped, forested site is on the northernmost portion of Sconticut Neck, between a densely developed residential

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area located to the west, and the Fairhaven Wastewater Treatment Facility located to the east. Property to the south/southeast consists of undeveloped forested uplands and wetlands, while property to the north contains residential development and commercial development along Route 6 located further to the north.

The Nasketucket River and an associated Salt Marsh system are located approximately 1,500 feet to the east at its closest point. Further south, the Nasketucket River connects to and flows into Little Bay and Buzzards Bay east of Sconticut Neck. There are no other surface water bodies, streams, or ponds located on or within 200 feet of the site.

The site contains 7.8 acres of forested upland and 3.0 acres of wetlands. The proposed project is consolidated within undeveloped forested uplands on the western and central portion of the property. The centrally-located tupland area extends across the property from the Hiller Avenue right-of-way eastward to the easterly property line.

#### Forested Upland

Vegetation within the undeveloped forested upland includes a moderately dense overstory consisting of ash (*Fraxinus* spp.), red maple (*Acer rubrum*), sassafras (*Sassafras albidum*), red oak (*Quercus rubra*), white oak (*Quercus alba*), American holly (*Ilex opaca*), black cherry (*Prunus serotina*), eastern white pine (*Pinus strobus*), and tupelo (*Nyssa sylvatica*). The understory is variably dense, with sparse coverage of saplings from the canopy layer and scattered individuals and pockets of spicebush (*Lindera benzoin*), sweet pepperbush (*Clethra alnifolia*), tartarian honeysuckle (*Lonicera tatarica*), and witch hazel (*Hamamelis virginiana*). The moderately dense groundcover layer consists of New York fern (*Thelypteris noveboracensis*), wood anemone (*Anemone nemorosa*), raspberry (*Rubus spp.*), cinnamon fern (*Osmunda cinnamomea*), Virginia creeper (*Parthenocissus quinquefolia*), and seedlings from the canopy layer.

Topography on the property generally consists of moderate to gentle slopes from west to east toward the wetlands, or from the centrally-located upland north and south toward the wetlands.

#### Bordering Vegetated Wetland

The northeastern and southeastern portions of the property contain forested wetlands, regulated as Bordering Vegetated Wetlands (BVW) under the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40), its implementing *Regulations* (310 CMR 10.00), and the Town of Fairhaven *Wetlands Bylaw* (Chapter 192 of the Code of the Town of Fairhaven). The BVW boundary was delineated by LEC in 2016 and was peer-reviewed and approved by the Fairhaven Conservation Commission through an Order of Conditions (OOC) issued under DEP File No. 23-1230.

BVW is situated within the northeastern (wetland flag numbers 1 through 23) and southeastern portions of the site (wetland flag numbers 24 through 39). The wetland boundary continues off-

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site between wetland flag numbers 23 through 24, east of the property line. The terrestrial BVW is associated with off-site intermittent streams and are generally flat in topography, exhibiting pit and mound microtopography throughout. Evidence of standing water (i.e., leaf staining) is present within low topographic pockets throughout both BVW.

Vegetation within the BVW's is similar throughout, consisting of a moderately dense canopy layer dominated by red maple with scattered individuals of eastern white pine (*Pinus strobus*), white oak, tupelo, and American elm (*Ulmus americana*). The sapling layer is sparse within the understory, containing scattered individuals from the canopy layer. The shrub layer generally exhibits open areas lacking shrub coverage with dense patches of sweet pepperbush, spicebush, highbush blueberry (*Vaccinium corymbosum*), American holly, and arrowwood (*Viburnum dentatum*). The moderately dense groundcover layer consists of cinnamon fern, royal fern (*Onoclea regalis*), New York fern, raspberry, dewberry (*Rubus flagellaris*), and seedlings from the overstory.

#### Soil Survey Information

According to the Bristol County Soil Survey (NRCS Web Soil Survey), the project footprint is mapped as Paxton Fine Sandy Loam (Attachment A, Figure 3), a "well drained loamy soils formed in sandy loam eolian mantled material underlain by lodgement (dense) till derived mostly from schist, gneiss, and granite." Soils within the wetlands are mapped as Ridgebury Fine Sandy Loam. Ridgebury soils are "very deep, somewhat poorly and poorly drained soils formed in lodgment till derived mainly from granite, gneiss and/or schist".

Soil test pits conducted during our site evaluation confirmed the presence of these soil characteristics. Representative soil test pits in the upland were dug utilizing a hand-held Dutch style auger consisted of an A-Horizon measuring approximately four inches, consisting of fine sandy loam with a soil matrix color of 10 YR 2/2. The A-horizon is directly underlain by an AB-Horizon measuring approximately two inches with a matrix color of 10 YR 3/2. The AB-Horizon is directly underlain by a B1-Horizon measuring four inches with a soil matrix color of 10 YR 4/4, and is immediately followed by an approximately six-inch B2-Horizon with a soil matrix color of 10 YR 4/6. Resistance was generally met at 16 inches by the stony material.

Representative soil test pits in the BVW consisted of an A-Horizon measuring approximately 16 inches consisting of mucky modified fine sandy loam material with a soil matrix color of 10 YR 2/1. Redoximorphic features were observed between four (4) and 16 inches of the mineral soil surface.

#### Floodplain Designation

According to the July 16, 2014, Federal Emergency Management Agency Flood Insurance Rate Map for Plymouth County (25005C0394G), the entire project site is located within Zone X, *Areas determined to be outside the 0.2% annual chance flood* (Attachment A, Figure 4).

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#### Natural Heritage and Endangered Species Program Designation

According to the 14<sup>th</sup> edition of the *Massachusetts Natural Heritage Atlas* (effective August 1, 20017), the project site is not located within an *Estimated Habitat of Rare Species* or *Priority Habitat of Rare Species* (Attachment A, Figure 1). There are no mapped Certified Vernal Pools (CVP) or Potential Vernal Pools (PVP) on the property. As currently proposed, the project does not require NHESP review.

### **Proposed Project**

The project involves construction of a 16-lot residential subdivision with paved roadways, a stormwater management system, and utility installation, as depicted on the *Plans*. Clearing of vegetation and grading will be necessary to prepare the site for construction of the roadways, house lots, and drainage features. No disturbance to the protected wetlands on the property is proposed. All work is consolidated in the upland portions of the property. The proposed roadways consist of the following:

- Extending Hiller Avenue from its easterly terminus with a 32-foot wide roadway layout and hammerhead turn-around to provide frontage for 3-lots.
- Constructing a 40-foot-wide roadway layout extending south from the existing paved terminus of Hiller Avenue to provide frontage for 10 lots.
- Constructing a 32-foot-wide roadway layout extending south of from Timothy Street layout to provide frontage for three (3) lots.

Each building lot contains a minimum of 15,000 square feet of land and 100 feet of frontage along the proposed roadways. Municipal sewer, water, and telecom will be extended to the project from existing stubs in Hiller Avenue and Timothy Street. Erosion controls will be installed at the limit of work to contain work activities and protect areas beyond the Limit of Work from sedimentation/erosion.

Proposed stormwater management is described in more detail within the *Stormwater Report*, prepared by K. Williams, P.E., submitted with the NOI and Site Plan Review filings. In summary, the proposed system has been designed to handle the 2, 10, and 100-year storm events and avoid increases to peak rates and volumes of stormwater runoff post-construction. Grading will facilitate collection of stormwater within catch basins and a network of subsurface piping directing water to one of the two proposed detention ponds. An *Operation and Maintenance Program* (incorporated within the stormwater report) will be implemented for the stormwater management features. The stormwater management system is currently being peer-reviewed as part of the Planning Board and Conservation Commission review process.



#### **Impact Analysis**

Overall, the project has been designed in an environmentally-sensitive manner in compliance with the applicable environmental regulations, including the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40), its implementing *Regulations* (310 CMR 10.00) and the Town of Fairhaven *Wetlands Bylaw*. The project site does not contain any FEMA-mapped floodplains, NHESP-mapped rare species habitats, or other unique or important natural communities. The site is located at least 1,500 feet from the sensitive wetland resource areas associated with the Nasketucket River.

The project is designed to avoid any impacts to wetlands or surface water bodies and is limited to work within the 100-foot Buffer Zone to BVW. Since there are no direct wetland impacts, the project does not require any additional environmental review by the Army Corps of Engineers under the *Federal Clean Water Act* or by DEP under the *Water Quality Certification Regulations* (314 CMR 9.00) and does not exceed thresholds for review by the Executive Office of Energy and Environmental Affairs (EEA) under the *MEPA Regulations* (301 CMR 11.00).

There are no recreation facilities, protected open space, public water supplies or fisheries on or the property. Off-site recreation facilities, including the Phoenix bike path, will not be impacted as they are located several hundred feet from the project. Similarly, protected open space, including the Little Bay Conservation Area are located off-site and will not be impacted by the project. There are no public water supplies or fish bearing streams on or in the immediate vicinity of the property.

A desktop search of the Massachusetts Cultural Resource Information System (MACRIS) database found no records of registered historic sites on or in the immediate vicinity of the property.

Impacts to groundwater and/or water pollution are not anticipated as wastewater will be directed to the municipal sewer system and the project has been designed to achieve compliance with DEP's Stormwater Management Standards with a stormwater management system that will collect, treat, and infiltrate stormwater from the proposed roadways. While difficult to enforce, individual homeowners should be discouraged from using pesticides and inorganic fertilizers as an additional safeguard against impacts to groundwater/water pollution.

The proposed project footprint will result in a loss of approximately  $7.0\pm$  acres of forested upland habitat. The potential functions and values of the wildlife habitat within the project footprint are diminished by the dense surrounding development to the west, north and northeast. The project disturbances will impact forested upland habitat within the fringe to larger contiguous forested uplands and wetlands located to the east/southeast, extending to the Nasketucket River. It is anticipated that impacts to wildlife within the forested upland will be limited to relatively

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common habitat generalists adapted to thriving in developed landscapes such as white-tailed deer (*Odocoileus virginianus*), eastern coyote (*Canis latrans*), red fox (*Vulpes vulpes*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), Virginia opossum (*Didelphis virginiana*), fisher (*Martes pennanti*), gray squirrel (*Sciurus carolinensis*), eastern chipmunk (*Tamias striatus*), and deer mice (*Peromyscus spp.*), in addition to various avian species (songbirds, raptors, etc.) and reptiles such as garter snakes (*Thamnophis sirtalis*). These species may be displaced to available upland habitat to the southeast, containing similar forested habitat characteristics which is mostly protected as conservation land or open space, including the 70-acre Little Bay Conservation Area. No disruption to important migratory corridors linking habitat areas is anticipated.

#### Conclusion

LEC has prepared this Environmental Impact Analysis Report for *Sconticut Neck Woods*, a proposed 16-lot residential subdivision off Hiller Avenue and Timothy Street in Fairhaven. As demonstrated herein, the project has been designed to avoid direct impacts to wetlands, floodplains, protected open space and recreation, fisheries and wildlife, water pollution and water supplies. Based on our review of the project site, site plans, and other relevant documentation, we conclude that the project has been planned and designed to minimize environmental disturbances to the maximum extent practical and disturbances to natural resources on-site will be negligible.

If you should have any questions or require additional information, please do not hesitate to contact me at 508-746-9491 or mmanganello@lecenvironmental.com.

Sincerely,

#### LEC Environmental Consultants, Inc.

Mat L.May !!-

Mark L. Manganello Assistant Director of Ecological Services

Attachments

Figure 1: NHESP & Vernal Pool Map Figure 2: USGS Topographic Map Figure 3: Soil Map Figure 4: FEMA Flood Insurance Rate Map



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## Map Unit Legend

Bristol County, Massachusetts, Southern Part (MA603)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
71B	Ridgebury fine sandy loam, 3 to 8 percent slopes, extremely stony	7.2	30.9%
305B	Paxton fine sandy loam, 3 to 8 percent slopes	5.5	23.4%
306B	Paxton fine sandy loam, 0 to 8 percent slopes, very stony	8.7	37.2%
311B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	0.6	2.4%
312B	Woodbridge fine sandy loam, 0 to 8 percent slopes, extremely stony	1.3	5.4%
651	Udorthents, smoothed	0.1	0.6%
Totals for Area of Interest		23.4	100.0%



Figure 4: FEMA Flood Insurance Rate Map