Norse Environmental Services, Inc.
2100 Lakeview Avenue, Unit 3A
Dracut, MA 01826
Ph: (978) 649-9932
Website: www.norseenvironmental.com

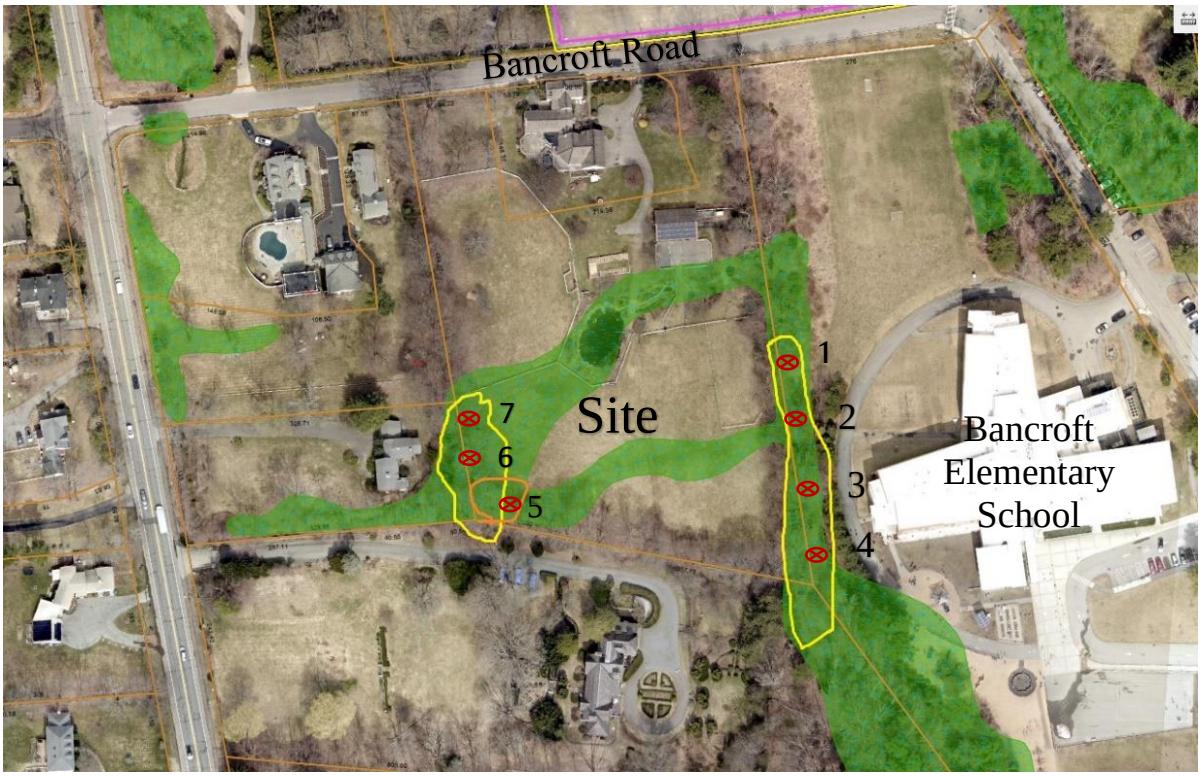
September 21, 2024

Director of Conservation Commission
Mr. Robert Douglas
36 Bartlet Street
Andover, MA 01810

Re: 9 Bancroft Road
Andover, MA 01810

Mr. Douglas,

Per your 9-17-24 email request, Norse Environmental Services, Inc., performed a third site visit at the above property on 9-21-24. I inspected the area along the property line of the Bancroft Elementary School where you noted, "leaf staining, trees with buttressed roots and at least two drains." You provided the yellow circled areas on the aerial image below which are the locations I field investigated. I refer to these areas as the "areas of concern".



I walked the entire yellow circled area, along the school property line and investigated (4) different locations (numbered as red dots ⊗) on the aerial image. I augured in (3) of these locations to a minimum of 20". Please see my findings on the following pages.

1. At the first location I observed upland vegetation and upland (non-hydric) soils. The overstory is dominated by Norway maple (Acer platanoides) with a few black cherry (Prunus serotina) trees. The understory consists of burning bush (Euonymus occidentalis) and multiflora rose (Rosa multiflora). The herbaceous layer was lacking vegetation, and the vine layer consists of oriental bittersweet (Celastrus orbiculatus). The vegetation is categorized as upland plants per the U.S. Army Corps of Engineers 2020, Northcentral and Northeast Region, National Wetland Plant List, version 3.5.

   I augured to 20" and observed the following upland (non-hydric) soil profile.

Depth (in)	Soil Horizon/Layer	Soils Texture (USDA)	Soil Matrix	Redoximorphic Features
0-10"	Ap	FSL	10YR 2/2	None
10-20"	Bw	FSL	10 YR 6/6	None

2. The second area is located approximately 25 ft. from the school's stone retaining wall. The upland vegetation is consistent with the first location. I augered to a depth of 20" and observed a fill, gravelly topsoil.

Depth (in)	Soil Horizon/Layer	Soils Texture (USDA)	Soil Matrix	Redoximorphic Features
0-20"	Fill	Gravelly SL	10YR 2/2	None

The area is disturbed or altered most likely from the installation of the drain manhole

nearby. In addition, I observed a pile of fill near the drain manhole. Please see the photographs on the following page.

Pile of fill and drain manhole on the Bancroft School property.

3. At the third location, I observed a man-made ditch or swale, located on the property, which directs surface water into the series of catch basins near the property line. I did not observe any wetland or hydric vegetation within or around the swale.

Man-made swale that directs stormwater into the catch basins on the Bancroft School Property. Please note the stone retaining wall in the background.

4. The fourth location is near the property line or near the “buttressed”/shallow rooted Norway maple. The overstory is dominated by Norway maple and understory consists of burning bush. The herbaceous layer is lacking except for some garlic mustard (Alliaria petiolata). These plants are characterized as upland plants.

   I augured to a depth of 20” and observed the following soil profile.

Depth (in)	Soil Horizon/Layer	Soils Texture (USDA)	Soil Matrix	Redoximorphic Features
0-20”	Fill	Gravelly SL	10YR 2/2	None

The area is disturbed or altered, most likely from the installation of the nearby catch basin.

Norway maple with “buttressed”/shallow roots and catch basin.

Conclusion

Mr. Douglas, you note the observation of leaf staining, I did not observe any leaf staining. I did observe a man-made ditch or swale that directs water into the series of catch basins on the property. Regarding trees with buttressed or shallow root system, this can be an indicator of wetland hydrology and is common in forested wetlands. However, shallow root systems can also form in upland areas where bedrock is close to the surface or within stony soils. It is my opinion that the shallow roots are a result of the stony soils exhibited throughout the site. This would explain the field stone walls along the property line.

The area has upland vegetation and non-hydric soil. It is not a resource area under Massachusetts General Laws Chapter 131, Section 40: The Wetland Protection Act, 310 CMR 10.00 Wetland Protection Act Regulations, Town of Andover Wetland Protection Bylaw and Regulations.

Second Area of Concern

The second area of concern is located on the property, near the southwesterly corner or low area between the "D" shaped paddock and southerly property line. I walked the entire yellow circled area and investigated (3) different locations (numbered as 5-7, red dots ⊗) on the first page aerial. I augured in (2) of these locations to a minimum of 20".

5. The fifth location is a low area, which collects and holds water, due to the existing sloping topography and surrounding stone walls. Please see the photograph below:

The overstory consists of crabapple (Malus sylvestris) and Norway maple. The nearby understory consists of burning bush and honeysuckle (Lonicera sp.). Most of the herbaceous layer is lacking, due to the standing water, but I did note some garlic mustard and woodbine (Parthenocissus vitacea). The vegetation is classified as upland plants.

I augur to 22" and observed upland (non-hydric) soils. Please see the soil profile below.

Depth (in)	Soil Horizon/Layer	Soils Texture (USDA)	Soil Matrix	Redoximorphic Features
0-12"	Ap	FSL	10YR 2/2	None
12-22"	Bw	FSL	2.5Y 4/4	7.5YR 6/6

Although I noted some redoximorphic features within the Bw horizon the matrix color is too bright to be considered a wetland or hydric soil. Please see the photograph below:

6. The sixth location is approximately 48 ft. from the southerly property line and 6 ft. from the fence. I noted a dominance of Norway maple and some crabapple trees in the overstory. The understory consists of honeysuckle and the herbaceous layer consists of garlic mustard and nightshade (Solanium sp.). The vegetation is classified as upland plants.

I augured to 20” and observed the following upland (non-hydric) soil profile.

Depth (in)	Soil Horizon/Layer	Soils Texture (USDA)	Soil Matrix	Redoximorphic Features
0-12”	Ap	FSL	10YR 2/2	None
12-20”	Bw	FSL	2.5Y 4/4	None

7. The last location I observed has similar vegetation as noted throughout this report. Due to the rocky soils, I was unable to auger down to 20". I observed the topsoil color as 10YR 2/2 with no redoximorphic features. I did not observe wetland or hydric plants. Please see the photograph below:

Conclusion

Mr. Douglas you note in your 9-17-24 email the soil located within the low area are "very dark organic" and "suspect it is a sapric soil". I disagree with your findings of a "very dark organic" soil or "sapric (muck) soil" located on the property. Organic soil is rich in organic matter that comes from recently decomposed plants and has at least 20-30% carbon or organic matter by dry weight. An example of an organic soil is a Histosol soil. This soil is typically found in a deep cattail marsh. The soil I observed throughout my investigation is mineral not organic.

The Town of Andover GIS and MassMapper wetland maps are tools to identify potential resource areas. As you are aware, sometimes the maps are correct and other times they are wrong. I have performed multiple site visits, walked, and investigated the onsite and offsite areas. There are no resource areas under Massachusetts General Laws Chapter 131, Section 40: The Wetland Protection Act, 310 CMR 10.00 Wetland Protection Act Regulations, Town of Andover Wetland Protection Bylaw and Regulations.

If you have any questions or concerns regarding the above information, please do not hesitate to contact me.

Sincerely,

Maureen Herald

Maureen Herald, PWS, CWS

Cc: Mr. Greg Alexandris
Mr. Mark Johnson, Esq.