Ecotone
FORESTS • WETLANDS • RIVERS • WILDLIFE Inc.

January 23, 2017

Phyllis Grover
City of Aberdeen – Office of Planning and Community Development
60 N. Parke Street
Aberdeen, Maryland 21001

RE: Beards Hill Road Property, Aberdeen, MD
Environmental and Wetland Feasibility

Dear Ms. Grover:

Ecotone, Inc. completed a site investigation of the subject property on January 18, 2017 to determine if environmental resources are located on the site. The subject property is comprised of one parcel totaling approximately 34.19 acres, identified on Tax Map 0201, Parcel 55. The parcel is located north of Beards Hill Road and south of Interstate 95. Included with this letter is a sketch plan showing appropriate locations of environmental features and other significant features on-site. No resources were delineated or surveyed as part of this feasibility.

General Site Description:

At the time of the visit, no buildings were located on the parcel. The parcel is bordered to the north by Interstate 95, on the east by residential properties, on the south by commercial properties including one currently under construction and a parcel occupied by 84 Lumber, and on the west by a forested, commercially-zoned parcel. Surrounding land use is predominantly commercial and residential including single family homes and retail space. Generally, the surrounding properties to the south of the subject site were found to be urbanized, with streets, buildings, and sidewalks covering most of the land surfaces. Properties to the east and west contain areas of forest contiguous with those of the subject property.

On-Site cover consists of forest and a narrow mowed area running north-south near the center of the parcel where a sewer line is located. Regulated resources located include two streams (Carsins Run and unnamed tributary), numerous wetlands, and 100-year floodplain. Adjacent to Carsins Run there are encampments that appear to be occupied. There are various small piles of dumped tires and other miscellaneous trash around the property. A larger dumping area consisting of abandoned cars, tires, and other trash is located near the confluence of Carsins Run and the tributary.

Wetlands Regulations and Jurisdictions:

The term "wetlands" is used loosely in the development industry to include all vegetated wetlands and un-vegetated stream systems that together are included within the definition of "Waters of the United States" in the Federal Clean Water Act. Un-vegetated channels are often referred to as

"just Waters" or "Waters only", to differentiate them from vegetated wetlands. Because of important differences in current State and Federal regulations between vegetated wetlands and "Waters only", it is necessary to differentiate these areas.

The identification of vegetated wetlands was based upon methodologies in the now-mandatory 1987 Corps of Engineers Wetlands Delineation Manual (Corps Manual) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Regional Supplement). According to the Corps Manual and Regional Supplement, an area is identified as a wetland only if it meets all three wetlands parameters: hydric soils, hydrophytic vegetation, and wetlands hydrology. If one of the parameters has been disturbed, the delineation must be made on the basis of the other two parameters, using best professional judgment.

Although the manual referred to above is required to be used to identify vegetated waters, the Federal agencies do not have a comparable manual that provides guidance for determining whether un-vegetated stream or drainage channels qualify as "streams" that are regulated as "Waters only" under the Clean Water Act. However, there is guidance contained within the Corps of Engineers regulations that indicates that the criteria for determining whether a channel qualifies as a regulated stream requires at least one of the following: clear presence within the channel of an "ordinary high water mark" as defined in the Clean Water Act; designation of the channel as a stream on official maps, such as USGS, SCS, and county topographic maps; sediments within the channel that exhibit hydric soil characteristics; and/or evidence within the channel of aquatic life, such as insects, bivalves, crustaceans, etc. Under these criteria, even defined channels that only exhibit flow in direct response to run-off from precipitation events may be determined to be regulated as "Waters only".

A general investigation for wetland and waterways were conducted on the parcels. Two streams are located on site: Carsins Run traverses the property north to south, and an unnamed tributary of Carsins Run traverses the property from west to east to its confluence with Carsins Run. The tributary has eroded around dual culverts meant to convey the tributary beneath the mowed sewer access path. The 100-year floodplain associated with Carsins Run and the downstream portion of the tributary are located on-site; the on-site 100-year FEMA floodplain totals approximately 12 acres.

While an official wetland delineation was not conducted, the feasibility investigation found the potential for numerous non-tidal wetlands on the property. Most of these wetland areas are adjacent to or in close proximity to the onsite streams, with a few small wetland pockets located in upland areas. The portion of the property east of Carsins Run contains an extensive network of mature forested wetland totaling approximately 7 acres. There may be an additional half acre to acre of non-tidal wetlands across the remainder of the site for a grand total of approximately 8 acres of wetland on-site. Also, be advised that the State of Maryland enforces a 25-foot wetland buffer around all non-tidal wetlands.

The locations of these streams and possible wetlands are approximated on the attached Exhibit. Any proposed impacts to streams, non-tidal wetlnads, wetland buffers, or 100-year floodplain will require a permit from MDE and/or the Corps of Engineers.

Rare, Threatened, or Endangered Species:

Based upon the site conditions observed and the aerial photographic evidence reviewed, the likelihood of the subject site providing habitat for any rare, threatened, or endangered species is *de minimus*. A letter has been sent to the Maryland Department of Natural Resources requesting information on rare, threatened, or endangered species. Their response will be forwarded when received. Research conducted on the U.S. Fish and Wildlife Service website concluded that no record exists of the occurrence of rare, threatened, or endangered species within subject properties.

Forest Resources:

There are approximately 33.3 acres of forest on site, including three distinct forest stands:

Stand 1 is approximately 9.9 acres on the western portion of the site and contains dominant trees of 8-20 inches in diameter at breast height (DBH). Its dominant species are white oak, tulip poplar, and red maple, with American beech in the understory. This stand is estimated to contain 5 to 10 specimen trees (trees greater than 30 inches DBH).

Stand 2 is approximately 10.0 acres located on the central portion of the site. This stand has early successional species including sweet gum and eastern red cedar and has trees averaging 2-6 inches DBH. There are likely no specimen trees in Stand 2.

Stand 3 is approximately 13.4 acres located on the eastern portion of the site. This stand is a late successional forest with dominant trees of 15-28 inches DBH. Dominant species include red maple, white oak, and red oak. This stand is estimated to contain 10-20 specimen trees.

Currently this site does not appear to have an approved Forest Conservation Plan. Site development will likely require preparation of a Natural Resource Inventory/ Forest Stand Delineation followed by a Forest Conservation Plan. A preliminary Forest Conservation Worksheet has been prepared in order to provide approximate calculations for forest clearing. The Forest Conservation Worksheet uses a Conservation Threshold of 20% of the entire parcel. The break-even point for this parcel (amount of forest to be retained so that no forest mitigation is required) is 12.1 acres.

Historical Resources:

A letter has been sent to the Maryland Historical Trust requesting information on historical and cultural resources located on-site or in close proximity to the property. Their response will be forwarded when received.

Conclusions:

Based on a site investigation and research of available online resources, Ecotone can ***estimate*** the amount of useable/buildable acreage on the Beards Hill Road property as 21 acres. The overall property totals 34.19 acres, and we estimate that approximately 12 acres of forest should be retained to eliminate forest mitigation planting. As the eastern portion of the site is approximately

12 acres of floodplain and this largely coincides with the location of mature forest and extensive on-site wetlands, we recommend not developing this portion of the property. When wetlands or waterways are disturbed a wetland/waterway construction permit is required from Maryland Department of the Environment and the U.S. Army Corps of Engineers. In addition, wetland mitigation would be a permit requirement if wetlands are permanently disturbed. Clearing or otherwise disturbing the floodplain/wetland areas on the eastern portion of the site would be difficult from a wetland permitting standpoint and very likely economically nonviable because of the cost of required mitigation.

Because of the location of the stream on the southern portion of the site, site access will likely require a stream crossing, and therefore a wetland/waterway construction permit.

If you have any questions or require any further information, please contact me at 410 420-2600.

Best regards,

Ecotone, Inc.
Sean McDonough
Environmental Scientist

Attachments:
Forest Conservation Worksheet
Site Sketch

Beards Hill Road - Aberdeen
Feasibilty Report
Numbers are for estimating purposes only

Forest Conservation Worksheet

*Note:Use 0 for all negative numbers that result from the calculations

Net Tract Area			
A.	*Total Tract Area*		A = 34.2
B.	*Deductions*		B = 0.0
C.	*Net Tract Area*		C = 34.2
Land Use Category			
D.	*Afforestation Threshold* (Net Tract Area x [C]	15%)	D = 5.1
E.	*Conservation Threshold* (Net Tract Area x [C]	20%)	E = 6.8
Existing Forest Cover			
F.	*Existing Forest Cover within the Net Tract Area*		F = 33.3
G.	*Area of Forest Above Conservation Threshold*		G = 26.5
	If existing Forest Cover (F) is greater than the Conservation Threshold (E), then G = F - E; Otherwise G = 0		
Break Even Point			
H.	*Break Even Point* (Amount of forest that must be retained so that no mitigation is required.) (1) If the Area of Forest Above the Conservation Threshold (G) is greater than 0, then H = 0.2 x the Area of Forest Above Conservation Threshold (G) + the Conservation Threshold (E); (2) If the Area of Forest Above the Conservation Threshold (G) is equal to 0, then H = The Existing Forest Cover (F)		H = 12.1
I.	*Forest Clearing Permitted Without Mitigation* I = Existing Forest Cover (F) - Breakeven point (H)		I = 21.2
Proposed Forest Clearing			
J.	Total Area of Forest to be Cleared		J = 21.2
K.	*Total Area of Forest to be Retained* K= Existing Forest Cover (F) - Forest to be Cleared (J)		K = 12.1
Planting Requirements			
	If the Total Area of Forest To be Retained (K) is at or above the Break Even Point (H), no planting is required and no further calculations are necessary (L=0, M=0, N=0, P=0); Otherwise calculate the planting requirement(s) as follows:		**NO PLANTING REQUIRED**
L.	*Reforestation for Clearing Above the Conservation Threshold* (1) If the Total Area of Forest to be Retained (K) is greater than the ConservationThreshold (E), then L = the Area of Forest to be Cleared (J) x 0.25; (2) If the Forest to be Retained (K) is less than or equal to the Conservation Threshold (E), then L = the Area of Forest Above Conservation Threshold (G) x 0.25.		L = 0.0
M.	*Reforestation for Clearing Below the Conservation Threshold* (1) If Existing Forest Cover (F) is greater than the Conservation Threshold (E) and the Forest to be Retained (K) is less than or equal to the Conservation Threshold (E) then M = 2.0 x (the Conservation Threshold (E) - Forest to be Retained (K) (2) If Existing Forest Cover (F) is less than or equal to the Conservation Threshold (E), then M = 2.0 x Forest to be Cleared (J).		M = 0.0
N.	*Credit for Retention above the Conservation Threshold* If the area of the Forest to be Retained (K) is greater than the Conservation Threshold (E), then N = K - E		N = 5.3
P.	*Total Reforestation Required* P = L + M - N		P = 0.0
Q.	*Total Afforestation Required* If Existing Forest Cover (F) is less than the Afforestation Threshold (D), then Q = Afforestation Threshold (D) - Existing Forest Cover (F)		Q = 0.0
R.	*Total Planting Requirement* R = P + Q		R = 0.0 Sq. Ft. 0.0