

To: Jonathan Cully, Redfern Properties

From: Rene D. Noel, Jr. ACF

Date: November 12, 2013

RE: Munjoy Heights Forest

Dear Jonathan,

I have examined and inventoried the trees on the Munjoy Heights property.

The site is a hillside with fairly steep slopes. A large part of the area has soil which is fill dumped from above. From my observations there is little of the property where soils are not fill or have not been disturbed in the past. In other words there are no natural soil types on the property.

The understory plant community is composed almost entirely of invasive species. I did not spend time trying to identify all the species present and the following is not meant to be a complete listing. Only what I saw, identified and noted during the field work. Invasive species seen; Barberry, Bittersweet, Japanese Knotweed, Multiflora rose, and Honeysuckle. These undesirable plants occupy most or all or most of the growing space in the understory.

The dense plant community of invasive shrubs allows little light to reach the soil surface for the growth of low vegetation, such as grasses and forbs. Nor has a natural litter layer and humus developed under these conditions. This has left areas of the surface of the soil exposed. This combined with steep slope and unstable fill soils allows for a constant low level of soil erosion.

The community of overstory trees is composed mostly of stems of an undesirable specie, Norway Maple. Norway Maple is an imported invasive tree species. By simple count it comprises 74% of the stems. However, foresters use basal area, the cross sectional area of trees as a better measure how trees occupy a forest. By this measure, basal area, Norway Maple is 96% of this forest.

A total of 162 tree stems were tallied on the property. Of these 39 were 10 inches or larger at Diameter Breast Height, 4.5 feet, from the ground. Of these 39, 30 were Norway Maple. The few larger stems of other species that were found are mostly located within the proposed building envelopes. There may be a few desirable stems at the north end of the property that can be preserved. However, I advise caution. On this steep land any root disturbance or stem damage during construction will destabilize these stems making for high risk trees in a dense residential area.

This property is slated for dense residential development. From a forest and ecological perspective there is not a lot to be lost in this development. The forest and understory is composed primarily of invasive undesirable species. Soils are also unstable and eroding.

Removal of this forest and replacement with more suitable species in the landscaping and buffer areas could improve urban forest and plant community of this area.

Below is a table showing trees by species and diameter that are found on the property as well as a map prepared from GPS data showing location of the larger stems of species other than Norway Maple.

Rene D. Noel, Jr. ACF

Maine Licensed Forester #325

Table 1. Tree Count by Species and Diameter Breast Height (4.5 feet)

DBH	Species									
	N Maple	Red Maple	Sugar Maple	Apple Spc.	Pin Cherry	Black Cherry	Elm	Red oak	White oak	Willow
2	20							2		
3	8	1					3	3	1	
4	22	1			1	1	2	1		
5	11	2			1	1	1	2		
6	5			2						
7	7	2					1	1		
8	9	1					1			
9	7	2		1						
10	4	1		2						
11	5			1						
12	5						1	1		
13	6									
14	3									
15	1									
16										1
17	2									
18								1		
19	1									
20	1									
21										
22	2									
23										
24										
25			1							
26										
27										
Total < 10	89	9	0	3	2	2	8	9	1	0
Total >10	30	1	1	3	0	0	1	2	0	1
Total	119	10	1	6	2	2	9	11	1	1



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