

2019

Tree Risk Assessment: Soule Park Town of Freeport

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Arbor & Land Management

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Report Prepared For:

Peter Joseph, Town Manager, Town of Freeport

RE: Soule Park and French School area trees.

Date: 7-28-19

Date of Field Visit(s): 7-18-19 and 7-22-19

Assignment: Provide a Level 2 Basic Tree Risk Assessment of trees which may pose a risk to the park and the school playground area. Note: It was determined to conduct a Level 3 Advanced Tree Risk Assessment of several trees of concern.

Scope: Limited to area outlined by white flagging tape on site. The time frame for the tree risk assessment is over the next 6 months. Regardless, should any major weather event occur, the trees should be inspected as-soon-as possible shortly afterward.

Limiting Conditions: A Basic Assessment involves visual assessment, some minor probing of wound areas, and is otherwise non-invasive. No drilling or other methods such as sonic imagery or resistance testing was used except in the case of three trees of concern (#'s 11, 12, and 13) which received a Level 3 assessment which involved the use of a Tree Check sonic sounding device (see Fig. 1). The tool provides a rudimentary foundation for determining the decay within the stem of the tree. Conditions reported are as they occurred on the date of the field visit (see above).



Special Observations: There exists a dead birch directly over a seating area at the park. The tree has significant fungal activity (indicating decay) in the main stem (trunk). The tree has been identified with RED flagging tape, and should be REMOVED as soon as possible. The area has been cordoned off with yellow CAUTION tape.

General Observations: The (15) assessed trees, hereafter referred to as the Subject trees, range in size from 45' to 80' in height (as measured with a clinometer). Many of the trees examined displayed a strong lean (10-15 degrees) in the direction of areas of greatest activity (park seating areas, school playground), as well as an unbalanced crown (heavy on one side-of-center) in the same direction as the lean. Aside from some low limb raising, the Subject trees have not received any notable attention in the form of pruning (thinning, removal of dead wood) in recent years, and many have significant over-extended limbs, and dead limbs. Some trees had indications of girdling roots, whereby a root from the tree itself, or a neighboring tree has wrapped itself around part of the root crown (base of trunk). Mushrooms were noted growing out of the ground near a Subject tree (#1). Conk were noted growing out of the trunk of a Subject tree (#11).

Fig. 1: Tree Check sonic sounding device attached to Subject tree #11 (red oak).

Discussion: All Subjects were evaluated on independent assessment forms (not included here). The ISA form runs the information provided through a Likelihood matrix comprised of Likelihood of Failure intersecting with the Likelihood of Impact. The form then runs the information provided through a Risk rating matrix comprised of Likelihood of Failure and Impact intersecting with the Consequences of Failure. The result is an Overall risk rating which appears on the enclosed form in an abbreviated format.

The prevailing winds in the area are from the NE and NW. Most trees displaying a lean are from NW to SE. Some can be seen, however (those alongside the playground), from almost SW to NE. This may be on account to grow out from under the shade of the larger trees which have formed a dense canopy overhead. Regardless, the lean is of concern as it pertains to the targets both in the park and the school playground. Lean combined with an unbalanced crown, whereby the weight of the foliage is mostly to the side of the lean, can exasperate the stress on the tree. Should the tree suffer from trunk damage or decay, or the root system be compromised by decay or girdling roots (conditions which cannot be readily addressed in the Basic Tree Risk Assessment). There exists a potential for whole tree failure under even normal weather conditions. Mushroom growth within the root area of a tree can indicate decay in the root zone. Such decay indicators (the mushroom is the fruiting body of the fungus) are generally only readily visible in summer or early autumn. The conk is a fruiting structure of decay causing fungi, which is visible year-round, and indicates a potential for significant decay within the trunk or limbs.

Basic Terms Used in Tree Risk Assessment

Risk is the combination of the likelihood of an event and the severity of the potential consequences. In the context of trees, risk combines the likelihood of a conflict or tree failure occurring and affecting a target with the severity of the associated consequences—personal injury, property damage, or disruption of activities.

Tree risk assessment is the systematic process used to identify, analyze, and evaluate tree risk. Risk is assessed by categorizing or quantifying both the *likelihood* of occurrence and the *severity* of the consequences.

The two extremely mature Subject trees (#11 and #12), pose a significant problem for the site. There are indications (fungal conk) of internal decay and advanced sonic wave testing indicate there is a potential for significant internal decay (all testing took place within 6' of the ground).

The understory (growing well beneath the canopy of mature trees) trees which lean over the playground area will likely continue to grow at an angle and eventually pose similar problems for the site as those currently discussed. Discussion about these understory trees will be covered in the 10-Year Plan (to be submitted at a later date).

Conclusion: The Basic Tree Risk Assessment identifies the Subject trees as *Low*, *Moderate*, or *High* risk under normal weather conditions. As stated above, the Subject should be inspected quickly should any abnormal weather condition occur, or should any further damage happen to the tree.

Under normal circumstances, weather, and conditions, the attached risk ratings could be deemed reasonable for the next 6 months if no Mitigation steps are taken. Be aware, however, the

Subject trees are under constant stress and load and should be monitored regularly, and re-inspected after major storm events. The tree should be inspected yearly otherwise.

Pruning of the canopy, especially over the street to alleviate weight, should be considered.

Should the aforementioned rating and care suggestions seem out-of-line with the Town's goals, it is not unreasonable to reduce the risk to Zero, by removing the tree.

Signature of Consultant,



Michael R. Hughes, BCMA, RCA, TRAQ



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Tree #	Tree Species	Target(s)	Highest Risk		Date
			Rating	Mitigation Option(s) Which May Reduce Risk	
1	Red oak	Park seating, School playground	Moderate	Remove tree	7/18/2019
2	Red oak	Park seating, School playground	High	Remove tree. Prune to reduce crown spread and deadwood	7/18/2019
3	White ash	Park seating, School playground	Moderate	Prune to reduce crown spread and weight	7/18/2019
4	Black Cherry	Park seating, School playground	High	Move bench. Remove tree. Remove broken limbs	7/18/2019
5	Black Cherry	Park seating, School playground	High	Move picnic tables and BB hoop. Remove tree. Remove dead limbs	7/18/2019
6	Red oak	School playground	Moderate	Move picnic tables. Erect small fence to restrict park area	7/18/2019
7	Sugar maple	School playground	Low	None	7/18/2019
8	Red oak	School playground	Low	Prune to reduce crown spread. Remove poorly attached limb	7/18/2019
9	Black Cherry	School playground	High	Move picnic tables and BB hoop. Remove tree. Remove dead limbs	7/22/2019
10	White ash	School playground	Moderate	Remove low 4" limb back to main trunk	7/22/2019
11*	Red oak	Park trail, School playground	Moderate	Erect fence. Remove tree. Prune to reduce spread and large deadwood	7/22/2019
12*	Red oak	School playground	Moderate	Move swingset. Remove tree. Remove large deadwood	7/22/2019
13*	White pine	School playground	High	Remove tree	7/22/2019
14	White pine	Park trail, School playground	Moderate	Prune to remove hanging limbs and deadwood	7/22/2019
15	White ash	School playground	Low	Prune lower deadwood	7/22/2019

*Adv. Assessment