

# Tree Assessment and Protection

## for Jake and Val Heusinkveld

### At 3675 Gramarcy Lane

## Introduction

On May 28<sup>th</sup>, I met with Jake and Val Heusinkveld at their home at 3675 Gramarcy Lane in Boise. They had contacted me the week before as they were concerned about a new development next to their property. Three new homes are proposed in the open space southeast of their home. Of particular concern is the impact this development may have on three trees owned by the Heusinkvelds. Below is an aerial image of their residence with the three trees identified.

**Update:** On June 24<sup>th</sup>, the Land Group staked the property lines around the Heusinkveld property. The following day, I examined the layout and the proximity to tree crowns and roots. Findings are discussed and photographs are presented in the Recommendations section of this report.



Figure 1 - Heusinkveld Trees and area of proposed development

## The Trees

As stated above, three trees are potentially impacted by the proposed development. Below, I identify and describe each tree. From north to south, they are:



*Figure 2 - Flowering Pear on north side of home.*

### **Flowering Pear**

On the north side of the home, a 13-inch diameter flowering pear is growing. The tree is in good health, having no obvious dieback in the canopy and no outward sign or symptom of insect or disease infestation. There are notable bark inclusions on a couple of larger branches, but these are fairly common for this variety of Flowering Pear, which is likely 'Chanticleer' or possibly 'Capitol'. Both are varieties selected for upright or columnar growth. At left is a photograph of the Heusinkvelds pear tree. To the north of this tree, a new pathway easement is proposed, with a 10-foot planter adjacent to the property line.

### **Red Maples**

On the southeast side of the property, two red maples are growing side by side, approximately 35 feet apart from each other. These trees were planted in 1981 and are a vital component of the Heusinkveld's landscape as they provide privacy and protection from the adjacent golf course. They will continue to serve this function if the proposed homes are constructed.

## Red Maple (1)

The northernmost tree is a 25-inch diameter tree in good health. There is minor branch dieback, mostly interior to the canopy. I saw no dead branches in excess of 2 inches in diameter. There are no obvious signs of insect or disease infestation at present. The structure of the tree appears to be sound, with no outward indication of interior decay. No recent pruning cuts are present on the tree, nevertheless, the branch structure and attachments appear to be quite good, in my opinion. The canopy of this tree extends approximately 30 feet from the trunk to the shared property line with the proposed development. Several smaller branches are growing quite low from the trunk and lower scaffold (main) branches. Figure 3 shows this maple, looking from the east, toward the house.



Figure 3 – 25-inch diameter red maple

## Red Maple (2)

About 35 feet south of the trunk of the maple described above is another red maple. Though it measures 22 inches in diameter, this tree is almost identical in other aspects to the first. There is only minor branch dieback, with no outward indication of insect, disease or decay presence. Here again, branch structure appears quite sound. The reach of the canopy extends approximately 25 feet toward the property line shared with the proposed development, and smaller branches are growing low, as on the first tree. This tree is pictured at right.

All three of these trees are very valuable to the Heusinkveld home landscape. The two maples stand out especially for their size, appearance, health and proximity to the outdoor patio at the residence. Jake and Val Heusinkveld are concerned the trees will be damaged in appearance and health due to the proximity of the home proposed on the adjacent lot.

## Concerns

### Red Maples

Currently, it is my understanding there is to be a 5' construction setback from the shared property line. The true property line had not been marked at the time of



Figure 4 - 22-inch Red Maple

my assessment, but from the drawings submitted to Garden City Planning Department, it seems clear if a home is to be built as proposed, it will likely have significant impact to both red maples, above and below ground.

#### Above Ground

Depending on the size and layout of the proposed building, each tree may have to be pruned significantly to allow construction. This will certainly significantly alter the appearance of the trees, potentially removing 40% of the canopy. Pruning this much canopy can significantly reduce the health of the tree, as it removes up to 40% of the photosynthesis (food making) capability. In addition, siting a 2-story home in this proximity, and on this aspect of the trees can block a significant amount of sunlight, which trees are dependent upon for photosynthesis.

#### Below Ground

The roots of a tree often grow far beyond the spread of its canopy. While these roots are likely not structurally significant to the tree, they are important to the ability of the tree to take up water and nutrients from the soil. The vast majority of roots exist in the top 18 to 24 inches of soil, spreading outward from the trunk in all directions possible. These facts are important when considering construction near existing trees.

There are two main ways which construction impacts tree roots: cutting and compaction. Constructing a building requires digging, leveling and compacting land prior to setting a foundation. Digging and leveling permanently removes roots from the tree, often damaging remaining roots while doing so. Levelling land can bury roots, making it air and water exchange impossible in the soil. Compaction can crush roots, but more importantly, removes spaces within the soil structure where the water and air which are vital to root growth exist. Finally, traffic from the heavy vehicles required during construction significantly compacts soil almost everywhere else on the site property.

For the reasons above, careful consideration must be given to where construction and where construction traffic is allowed to preserve trees on a property or, as in this case, on adjacent property.

### **Flowering Pear**

Concerns around the health of the flowering pear tree center around the construction of the proposed pathway and planters. The 10-foot planter should be placed and constructed with recognition of the presence of tree roots from this tree.

## **Recommendations**

The following recommendations are given to preserve and support the health, viability and appearance of the Heusinkveld's trees.

### **Recommendation 1**

Mark the true property lines around the Heusinkveld property adjacent to the proposed new development. This will give a much clearer indication of the potential effect of construction on all three trees. The extent of all subsequent recommendations rest on this one. Once completed, a better picture of potential impacts, damage and tree protection will become clearer.

**Update:** Property lines stakes and proximity to tree are pictured below. The location of the property line comes is approximately 10 – 12 feet from major scaffold roots and the trunk of red maple (2). With a 5-foot setback, significant loss of roots is likely, particularly where a building is proposed. In addition, significant crown pruning will be needed to allow equipment to operate and to create room for a 2-level residence. With the property line at this location, Recommendation #2 continues to be strongly emphasized as is.



### **Recommendation 2**

To best preserve the canopy and root structure of the two red maple trees, I strongly recommend a setback of at least 15 feet from the shared property line. This should reduce required crown pruning and root damage/removal.

### **Recommendation 3**

Create a tree protection plan consisting of the following:

1. Hire a tree service approved by the Heusinkvelds to perform any necessary pruning of their trees prior to start of construction. Under no circumstances should the construction contractor or sub-contractors be allowed to prune the trees.
2. Install a temporary chain-link fence separating the construction one from the protected areas around the trees. No construction traffic should be allowed outside the fence and the fence should not be moved once installed without the agreement with the Heusinkvelds.
3. To protect the root system of the trees, a trench should be cut to separate roots inside the construction zone from the tree. They must be cut prior to any demolition or construction of the site. The best way to accomplish this is to hire a tree service to use a stump grinder to cut an 18-inch trench just inside the construction zone boundary of the fence. Once cut, the trench can be backfilled.
4. Signage should be placed on the fence alerting contractors and sub-contractors not to move or expand their operations beyond the fence.
5. The Heusinkvelds are responsible for irrigation of the trees during construction.

### **Recommendation 4**

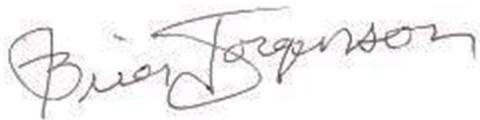
Eliminate proposed planting of trees or tall shrubs adjacent to the flowering pear tree and red maple (1). The presence of the existing trees and the Heusinkveld's vegetable gardens should take precedence over any new plantings.

**Update:** The plantings adjacent to the flowering pear should not cause significant harm to the root system of this tree (is excavation/tilling or addition of soil is very limited). However, limiting of planting near the canopy of red maple (1) is still advised.

## **Conclusion**

Jake and Val Heusinkveld have invested time, money and care into their landscaping, their maple trees most of all. To protect these trees, the recommendations above should be implemented, emphasizing Recommendation #2. We await a positive outcome to these recommendations.

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