Harbord Village Residents Association – Treeing the Village Committee
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Summer Inventory
October 2008

Completion of Inventory

During the summer of 2008 (June – August) an MFC student was hired to complete the tree inventory that volunteers had started in summer 2007. A systematic approach was adopted whereby all the remaining blocks identified in 2007 were inventoried, however some backyards (see list attached) were still unavailable and could not be included. This project was intended purely as an inventory completion task and as such should not detract emphasis away from the Strategic Urban Forest Plan that was developed in 2007, which still remains the management strategy for the urban forest in Harbord Village.

Figure 1 Map of Inventory Blocks

Data Analysis – 1. Species Composition
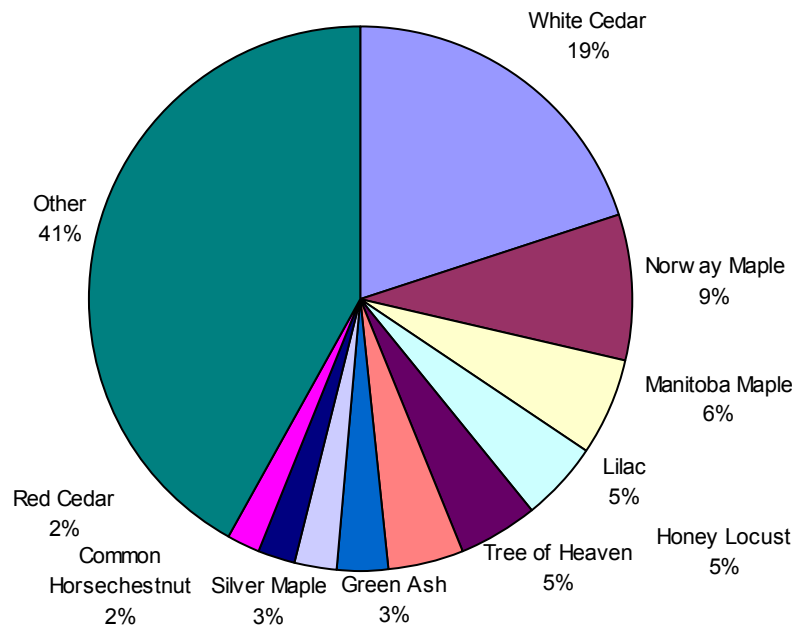
Figure 2 Relative frequency of species inventoried

Harbord Village is made up of 150 tree species, of which the most prominent are detailed above. White Cedar (*Thuja occidentalis*) and Norway Maple (*Acer plantinodes*) make 28% of the tree species in Harbord Village. Along with these two species, another 5 [Manitoba Maple (*Acer negundo);* Lilac (*Syringa spp.*); Honey Locust (*Gleditsia triacanthos*); Tree of Heaven (*Alianthus altissima*) and Green Ash (*Fraxinus pennsylvanica*)], make up 50% of the species composition in Harbord Village. Silver Maple (*Acer saccharinhum*), Red Cedar (*Juniperus virginiana*) and Common Horsechestnut (*Aesculus hippocastanum*) are also present in frequencies higher than 2%. The remaining 41% of the species inventoried cover over 140 difference species including fruit species, such as Plums and Cherries and also Oak and Elm species.

The city owns 43% of the tree's in Harbord Village, while private residents own 52% and the various schools throughout the neighborhood own the other 5%. The 2007 report suggested that city ownership would dramatically reduce (with the completion of the inventory) it is apparent that this has not been the case with Harbord Village. However this by no means restricts Harbord Village in the activities it undertakes. However it will mean that active stewardship will become more important. By approaching the City with the strategic vision identified Harbord Village can let the city know about work that needs to be done and when. The city may be more inclined to approach the community as a whole to work throughout the neighborhood instead of on an individual tree basis.
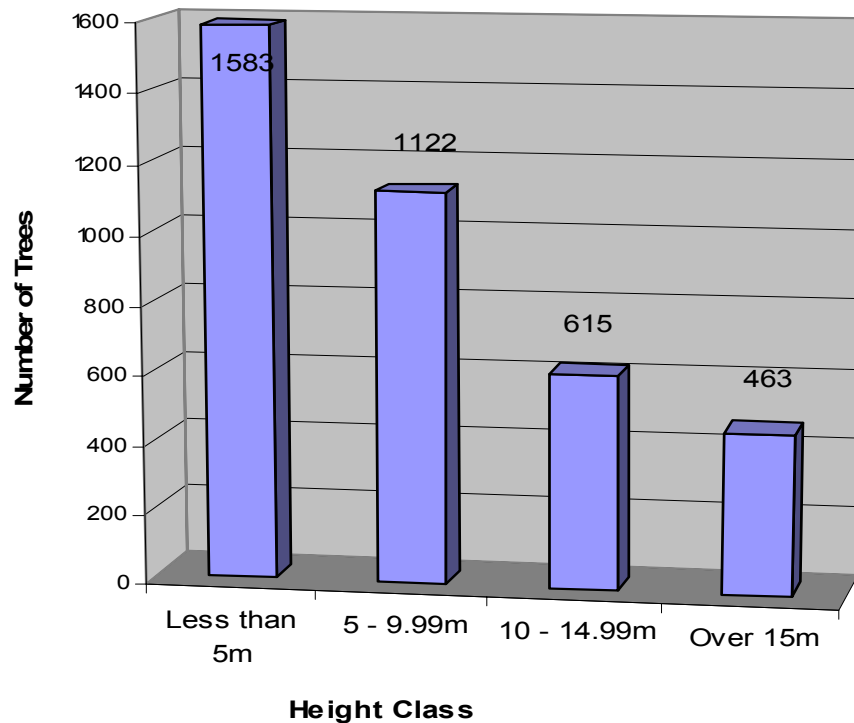
2. Height Class and Species

Figure 3 Distribution of height class

The height classes were again divided using the original method. Height Class 1 for trees 0 -4.99m tall (over 40% of the trees fall into this category); Height Class 2 for trees 5 – 9.99m tall (just under 30% of the trees are in this category); Height Class 3 for trees 10 – 14.99m tall (just over 16%) of trees are in this category) and finally Height Class 4 for trees 15m and over. This category accounts for just over 12% of the trees in Harbord Village.
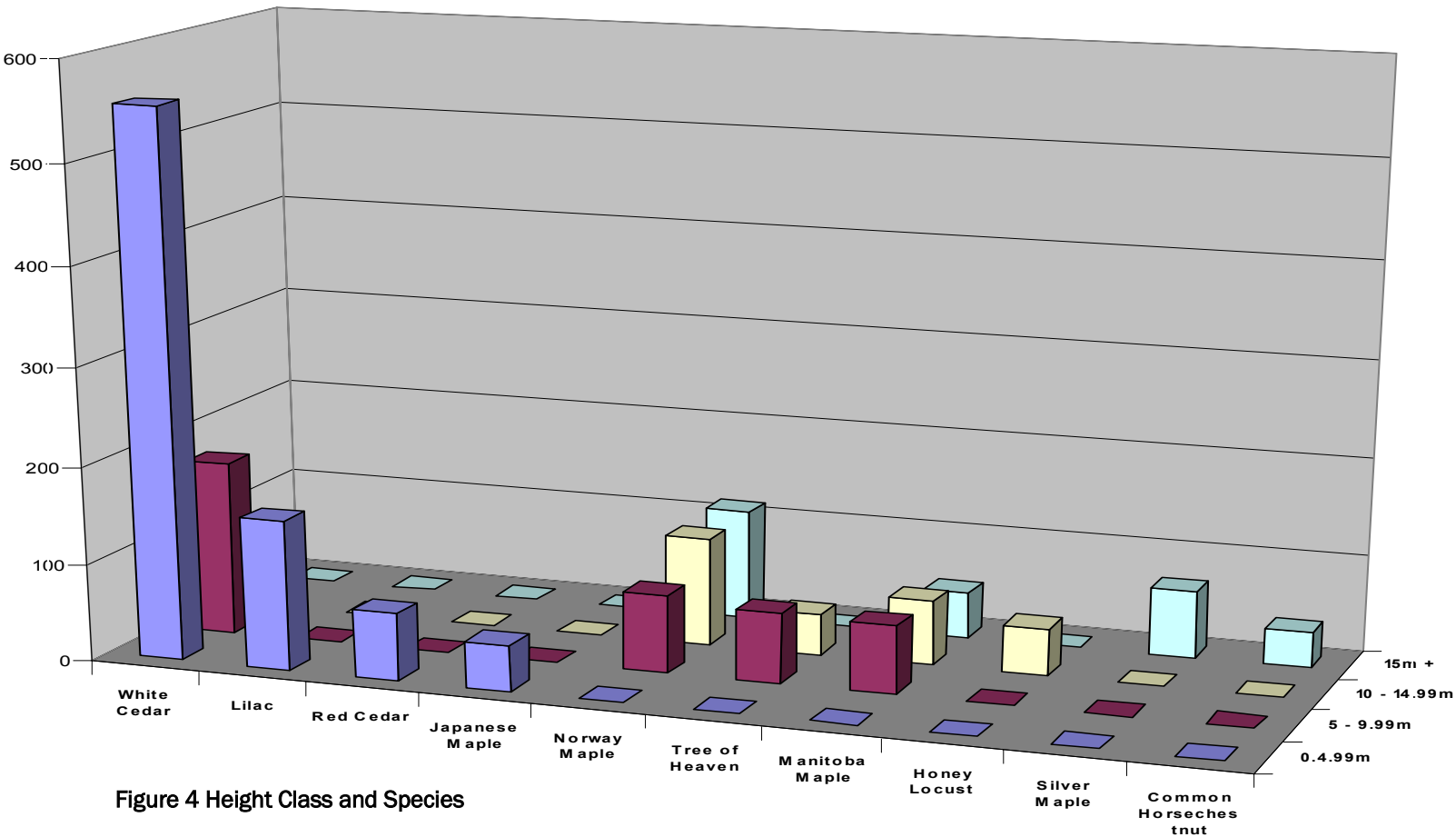

Figure 4 Height Class and Species

The most popular species in the lowest two height classes are the White Cedar (*Thuja occidentalis*) and Lilac (*Syringa spp*). This should be no surprise considering that

White Cedar is the most popular species in Harbord Village and the amount of Cedar hedges that are present in Harbord village. The relationship between the first three figures shown in this report is yet again highlighted in this figure. The urban forest of Harbord Village is dominated by White Cedar (*Thuja occidentalis*) and other species beneath 10m. This is reflected in this chart. While many of the dominant species (identified in figure 1) are a mixture of species capable of reaching a variety of different mature heights, at present the forest is dominated by smaller trees. Interesting to note here is that not all the trees in the first 2 height classes (highlighted in figure 2) are at their maturity. Therefore it would be unwise to speculate that the height class distribution will remain the same. While in the lower height classes White Cedar (*Thuja occidentalis*) and Lilac (*Syringa spp*) will more than likely always dominate, changes in the structure and composition of the other height classes might become apparent as younger trees mature in the coming years.

3. Tree Condition; Genus of Poor and Very Poor Trees and Tree condition with relation to Height Class
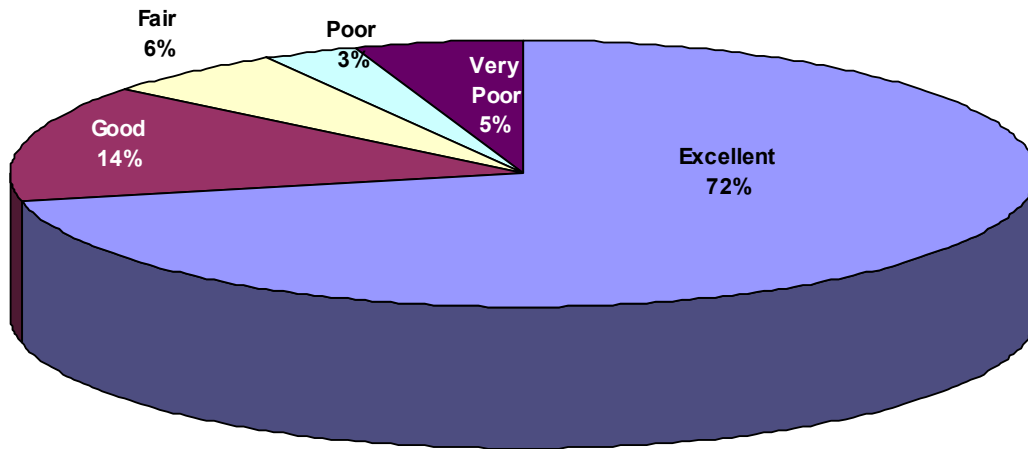
Figure 5 Condition of trees inventoried

Based on the 'conditioning' data gathered from the inventory the urban forest of Harbord Village does appear to be in excellent condition (over 80% is in good or excellent condition). Of those trees inventoried only 8% are in poor or very poor condition (this represents 325 trees). While this is not ideal strategies need to be put into place that address both the issue of these trees as well as looking to maintain the rest of the urban forest (through pruning activities; watering programmes; adopt a tree programme and other maintenance activities).
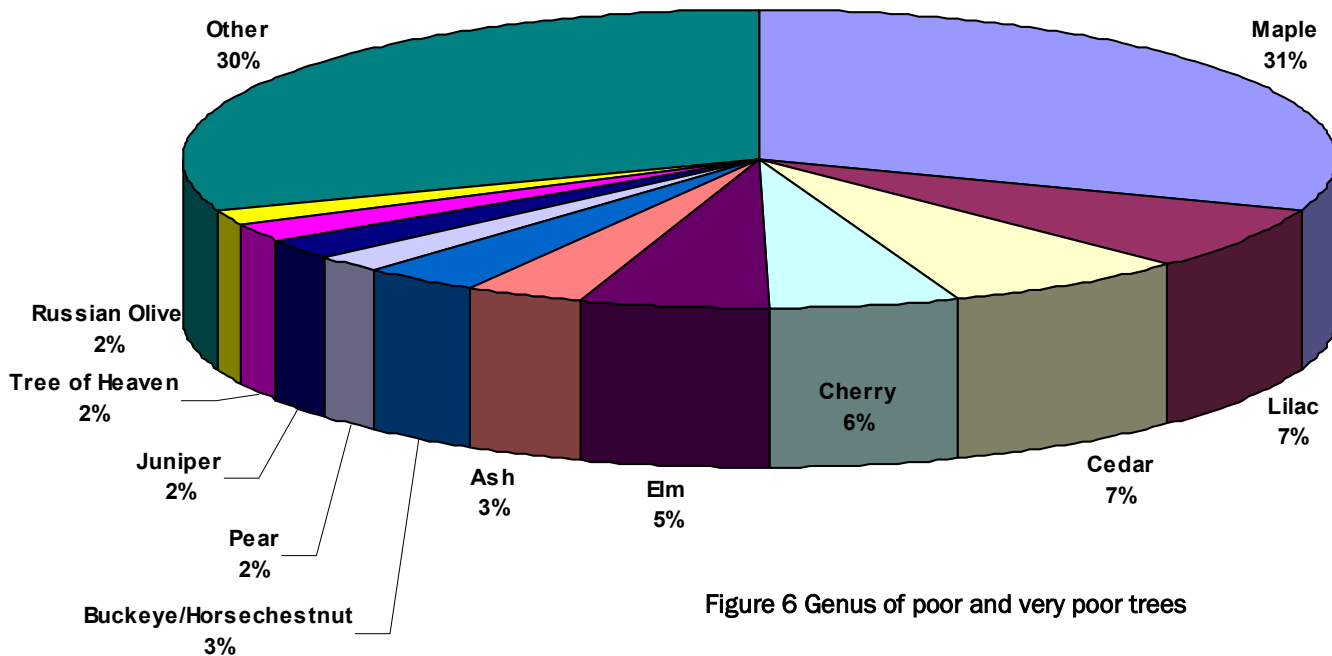
Figure 6 Genus of poor and very poor trees

The Maple genus makes up over 1/3 of the poor and very poor trees in Harbord Village. Three specific species of Maple (*Acer*) also make up a large proportion of the tallest trees in Harbord Village. These trees are more likely to have more structural defects than trees in smaller height classes (due to age issues). Lilac (*Vulgaris spp*) and Cedar (*Thuja spp*) make up the next largest component of poor and very poor trees (7% respectively) along with Cherry (*Prunus spp*) (6%) and Elm (*Ulnus* spp) (5%) being the next set of genera. Four genera make up over 50% of the poor and very poor trees. Attention should be paid to these trees in particular, are these problems related specifically to Harbord Village, to the genera in question or a combination of both. Many times in the urban forest emphasis is placed on the right tree in the right place. The point being made is that before a specific genera is written off in place of

another, questions should address the reasons that specific genera are experiencing problems.
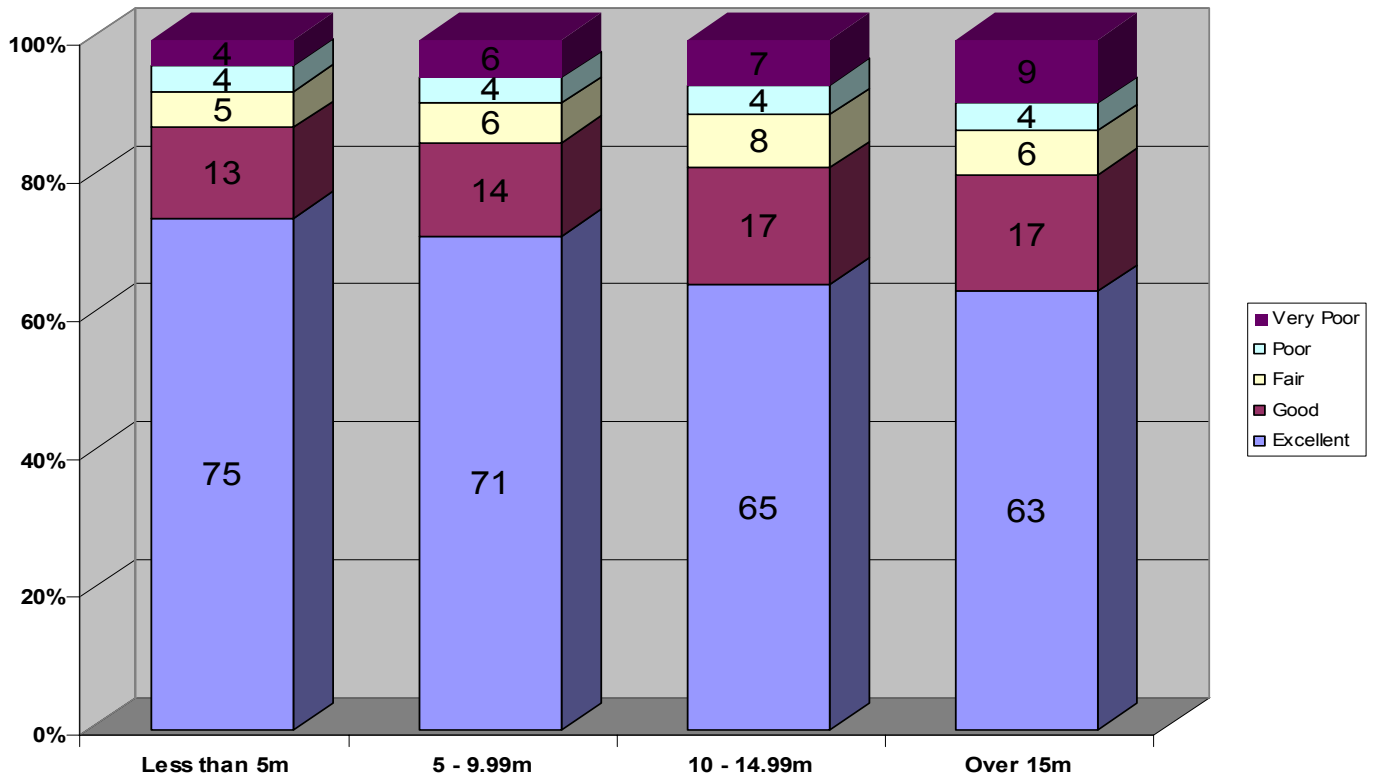

Figure 7 Condition of trees in relation to Height Class

Again this figure illustrates that the majority of the very poor and poor trees are in the upper height classes. As has already been mentioned this is more likely a result of the age structure of this class of trees. With age come more structural defects.

4. Crown Projection area by species; and condition in relation to crown projection area

Figure 8 Species distribution by Crown Projection Area
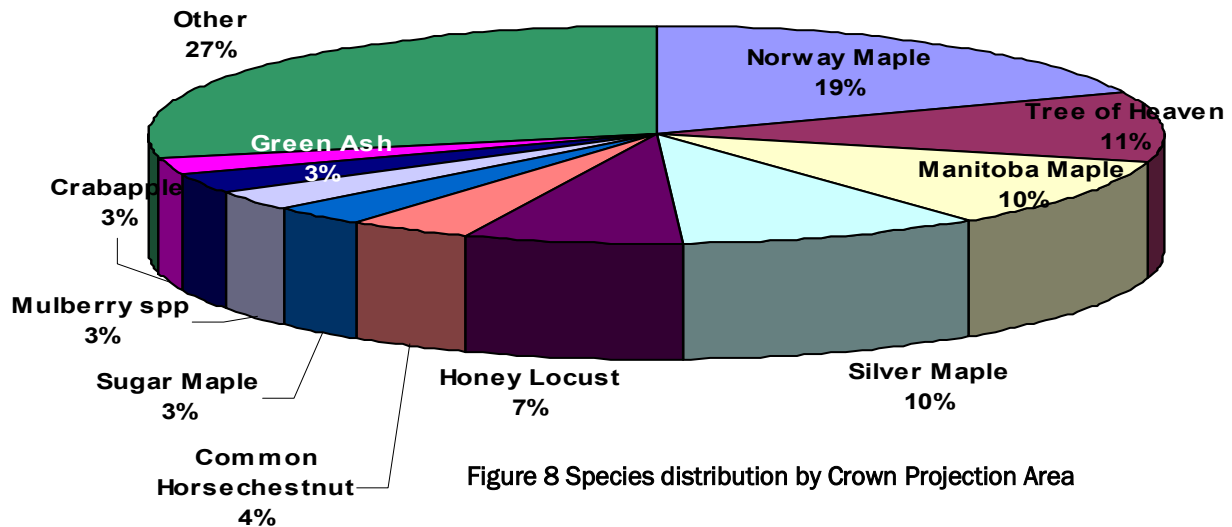
50% of the crown projection area is made up of just four species, Norway Maple (*Acer plantinodes*), Tree of Heaven (*Alianthus altissima*), Manitoba Maple (*Acer negundo*) and Silver Maple (*Acer saccharinum*). The next six species; Honey Locust (*Gleditsia triacanthos*), Common Horsechestnut (*Aesculus hippocastanum*), Sugar Maple (*Acer saccharum*), Mulberry spp (*Morus spp.*), Green Ash (*Fraxinus pennsylvanica*) and Crabapple (*Malus spp.);* make up another 22% and over 100 other species make up the remaining 27%.

What might be interesting to note is that some of the species which made up figure 2, highly frequent species, are not present in this chart. There are a number of reasons for this. Lilac (*Syringa spp.*) and White Cedar (*Thuja occidentalis*) do not

have large crowns and therefore their crown projection areas will be less. It is therefore conceivable that trees which while lower in frequency can be present in this chart. Four species of Maple are included in this chart, making up 42% of the crown projection area. Figure 6 indicated that the Maple genera make up the majority of trees in the poor and very poor condition rating categories. It is therefore not difficult to see that in the near future Harbord Village could be faced with a large reduction in its crown projection area. An objective of Harbord Village Residents Association is to maintain (or increase) its crown projection area by 2028. If this is indeed the case those trees that have been identified as in poor or very poor condition will require attention in an attempt to try and conserve them and try to maintain as much of the crown projection area while other trees are encouraged to take their place (through pruning and other maintenance activities). Planting of new trees, while an important part of the overall strategy, should not provide the sole solution to this issue.
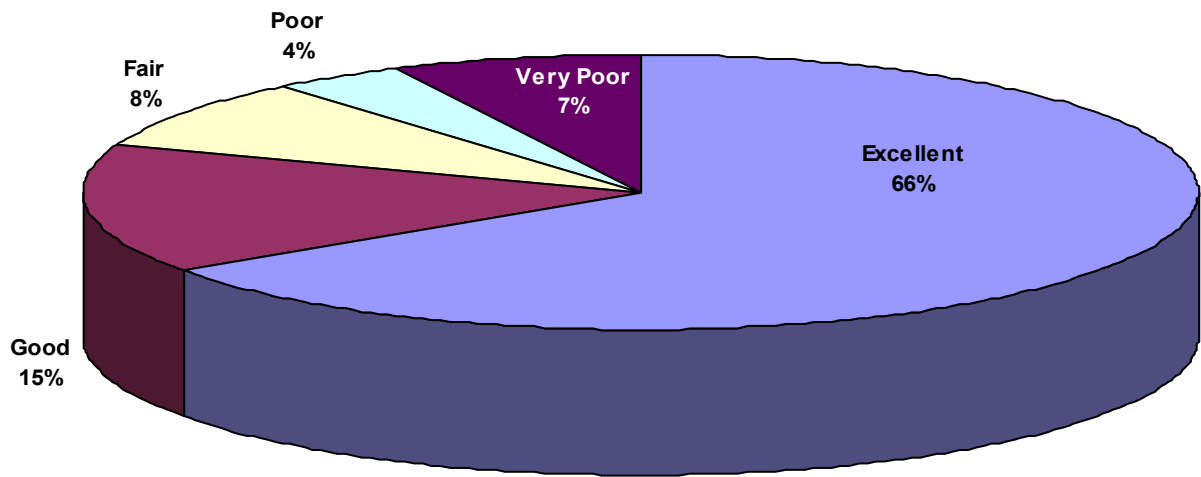

Figure 9 Condition of trees in relation to Crown Projection Area

This chart illustrates that over 80% of crown projection area in Harbord Village is in either excellent or good condition. This is encouraging and suggests that while a large

proportion of that crown projection area is made up of a genus that is identified as being in poor and very poor condition that this obviously only accounts for a small proportion of that genus. Of more concern is the amount of crown projection area that is in poor and very poor condition. Harbord Village face the very real possibility of losing 11% of their crown projection area and with it all the benefits that come with large trees full of leaves. Such a large proportion of the crown projection area is represented by a small number of species. Perhaps increasing and encouraging the development of existing tree resources could become another part of the overall strategy of maintaining the crown projection area. While no one particular species should be identified as either good or bad the overall composition of the urban forest will need to be balanced. Whether this is achievable by 2028 remains to be seen; however with the right maintenance activities there should be no reason why the loss of crown projection area could not be limited. In all reality trees take a long time to grow and the crown projection area of young trees is limited. Therefore instead of thinking of trees in poor or very poor condition as potential problems, perhaps they could be seen as potential projects for salvation (depending on the reason for such a low condition rating).

The crown projection area is split between private and city ownership as follows: 44% is privately owned and 49% is city owned. This more than likely reflects the structural nature of gardens and the type of trees that the city has planted over the past.
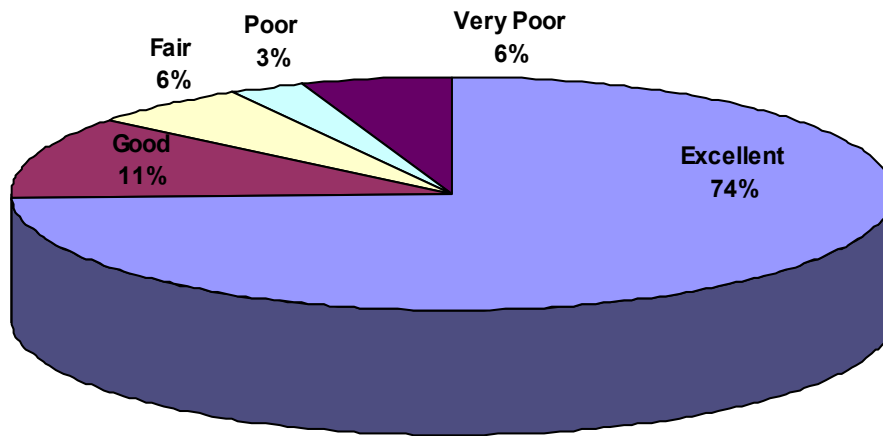
5. Condition of privately owned trees

Figure 10 Condition of private trees

Figure 10 provides a clearer picture of the privately owned trees in Harbord Village. Over 80% of the privately owned urban forest is in excellent or good condition, while 9% is in poor or very poor condition (which accounts for 166 trees throughout the urban forest). Whether or not the residents association will be able to tackle these trees remains to be seen. However every attempt should be made to make contact with the owners and see what action can be taken. In fact this problem highlights a challenge for any urban forest, management issues surround not only the forest resource but also the people who live in forest. These are the areas where engagement of the community becomes essential and this will need to become an essential focal point for future.

The condition of city owned trees is as follows; 69% are in excellent condition, 16.5% are in good condition, 5.75 are in fair condition with 3% being in poor condition and

5.75% being in very poor condition. The last three condition ratings are similar across both the publically and privately owned forest which suggests that both sets of owners need to carry out maintenance work. From the private perspective this should be helped by the fact that the residents association has hired a village arborist. While city trees are the proxy of the city perhaps the residents association could approach the city and suggest a plan of action be developed for the trees identified as being in poor or very poor condition.

6. Notes on an Urban Forest – Harbord Village

While completing the inventory this summer it became apparent that some issues kept arising.

Notification regarding treeing the village activities – this would help to keep trees a focal point in the community; might provide volunteers; will help the community know what is happening with their urban forest.

Fruit picking programme – as the inventory was completed many fruit trees were observed and seen to have rotting fruit all around them. Is there a way to contact any outreach groups which would provided fruit pickers? This might help ease some community tension regarding fruit trees and help residents see one of the wonderful benefits that their backyard trees can provide. The same could be applied to fall leaf sweeping: many residents who didn't have trees complained about the fact that the leaves were a nuisance. Perhaps this could be combated with fall sweeping teams.

Community education/engagement programme – as has already been mentioned the largest challenge in the urban forest is not really the trees but the people. Getting people engaged or even connected to their urban forest is essential if the objectives of the residents association are to be realized. Getting people outside and giving them the opportunity to see their tree as a part of something bigger, the Harbord Village Urban Forest, would be an amazing place to start. Give the residents something to get excited about.