

## 5. MIRFIELD PLACE – LIQUIDAMBAR TREE REPLACEMENT

<b>Officer responsible</b> Parks Manager	<b>Author</b> Rod Whearty
Corporate Plan Output: Street Trees Maintenance and Felling Citywide	

The purpose of this report is to provide information and seek comment on the replacement of eight Liquidambar trees in Mirfield Place with a more suitable species. The matter will then be referred to the City Services Committee for a decision.

### BACKGROUND

Board members will recall that the matter was deferred at the 23 November 1999 meeting, pending costs for the various options for addressing the issue. The Board also visited the site as part of an inspection bus tour of its area on 9 December 1999.

### RESIDENTS VIEWS

The Council wrote to all Mirfield Place residents after receiving a letter from residents suggesting that the majority of residents wanted the trees replaced because of the problems they were causing.

The Parks Unit wrote to Mirfield Place residents and received a response from all 13 residents indicating their preferred option, with the following results.

- 10 Favoured replacing the existing trees with a more suitable species
- 3 Favoured retaining the existing trees.

### OPTIONS

At the 23 November 1999 meeting, the Board requested that further information outlining options for retaining the trees and any associated costs be provided.

The following options are not in any order of priority.

#### **Option 1.**

#### **Remove the existing trees and replace with a more suitable species**

With this option the Parks Unit would use semi-mature trees as replacements similar to the Poynder Avenue situation so as to lessen the impact on the street.

<u>Cost</u>	
Felling and stump removal	1700
8 trees @ \$350 per tree	<u>2,800</u>
	<u>\$4,500</u>

## **Option 2.**

### **Kerb buildouts and reducing cul-de-sac radius.**

This option will allow the trees to grow for potentially another twenty-five years before the roots would start to lift the kerb and channel again. To keep the costs as low as possible the kerb would only be diverted as required around each tree to be retained, and a cut-off channel would be constructed to avoid bubble up sumps, as shown on the appended plan. Parking would need to be stopped at each kerb buildout reducing parking opportunities in the street from eighteen to nine. It does not however address the effect the tree roots will have on the underground services (e.g. the 100mm asbestos watermain).

The estimated cost of this work is \$83,000 if all the existing trees are retained.

## **Option 3.**

### **Narrowing full length of carriageway and reducing cul-de-sac radius**

As in the previous option this will also allow the trees to grow for potentially another twenty five years before the roots would start to lift the kerb and channel again. It also offers the opportunity for all residents in Mirfield Place to have a liquidambar tree outside their property by reducing the width of the carriageway to five metres for the full length of the cul-de-sac and banning the parking on one side of the road. The number of parking opportunities in the street would be reduced from eighteen to eight. It is believed that this option would involve full reconstruction of the whole of the Mirfield Place footpaths, carriageway, and kerb and channel as shown on the appended plan.

The estimated cost of this work is \$95,000.

## **Option 4**

### **Retaining the existing trees in their present location and repairing channel as required.**

There are a number of implications, which limit the practicality of continuing with this option for anything other than a very short period of time.

As the existing trees grow the buttress, size of roots and their proximity to the surface increases. The channel has already been repaired/replaced on at least two previous occasions in a number of locations and more maintenance will be required in the near future.

In some cases it will not be possible to replace the channel on its existing line and grade without cutting major roots. The difficulty is that as the trees grow the roots end up being higher than the bottom of the channel. In time, this problem will apply to all the remaining trees given their current position.

Interfering and severing major roots on larger trees to restrict their root zones is not a good horticultural practice. There are some limited situations where we undertake this practice but generally the Parks Unit is not supportive of this type of treatment for two reasons.

1. Significant root loss or root damage is one of the most common causes of death in large trees (They cannot be guaranteed to survive this treatment).
2. This type of treatment significantly reduces the structural stability of the tree leaving them susceptible to falling over or being blown over in high winds and is a major concern in terms of the tree's safety.

In taking option 4 it is important to note that at some point in the near future it will be impossible to carry out further repairs and retain the tree. The time to arrive at this point will vary between trees, some are very close to that point now.

The end result is that ponding will occur at various points along the channel where repairs are unable to be done. The ponding will have seasonal variations from one or two days in summer to possibly weeks in winter depending on the frequency of rainfall. Ponding has already been raised by some residents as an issue.

### **COST**

It is difficult to give a definitive cost to this option as it will vary depending on the length of channel to be replaced. On average where trees are displacing the channel it usually requires about six metres of new kerb per tree (3 metres either side of the tree). There are also repairs required to the footpaths where the roots are pushing up the pavements.

City Streets have the following negotiated rates with Canroad for repairs to kerbs and pavements.

Kerb and channel	- \$90 per lineal metre
Pavements and tree roots	- \$38 per m <sup>2</sup>

The cost for this option does not take damage to private property into account. If these trees are to remain then the Council will also be faced with claims from residents for damage to driveways and fences. The cost for these repairs has not been identified.

### **CONCLUSION**

Given the cost and practicality of the various options the Parks and City Streets Units preferred option is to replace the existing trees with a more suitable species. Using semi-mature replacement trees will reduce the impact on the street. It will also be possible to install one or two additional trees to replace ones that have been removed in the past.

This is also the preferred option for the majority of the residents in Mirfield Place.

**Recommendation:** That Option 1 involving the removal of the existing trees and their replacement with a more suitable species be recommended to the City Services Committee.

### **Chairman's**

**Recommendation:** For discussion.