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Arboricultural Inspection Advice for City of Melville

Date inspected: 9th January 2020

Location: 63 Ardross Street (Munro Road verge), Applecross.

Tree species: *Erythrina* x *sykesii* (Coral Tree)

Reason for assessment

In accordance with your instructions, I confirm that you have employed this consultant to carry out an inspection of the *Erythrina* x *sykesii* (Coral Tree) situated within the local authority verge adjacent the above property due to concerns regarding the structural condition and level of risk it represents to surrounding targets.

This consultant was also requested to undertake a Quantified Tree Risk Assessment (QTRA) and a valuation of the tree using the Helliwell Method.

This consultant confirms that an inspection of the tree was undertaken on the 9th of January 2020.

Observations

- This mature tree has a clinometer height reading of 16.2m with a canopy spread of approximately 14.0m and 104cm diameter measured at 1.0m above ground level due to the form (Figure 1).
- The tree was found to be in good health and poor structural condition and displays a full canopy of dense foliage.
- Previous lopping of the canopy at a height of 1.5m has encouraged a mature epicormic limb structure. A google Streetview image dated November 2007 displays the tree with a structure indicating that the reduction of limbs occurred prior to this date (Figure 2).
- The base of the tree appears root firm with no visible soil lifting or displacement consistent with root plate movement (Figure 3).
- Exposed root flare displays some mechanical damage consistent with turf maintenance machinery.
- Major limbs consisting of mature epicormic stems were found to be soundly attached at their point of emergence with no evidence of cracking, splitting or separation visible at this time (Figure 4).

- Pruning wounds throughout the canopy display healthy occlusion indicative of the tree's vitality.
- Clustered epicormic growth throughout the canopy with some crossing and conflicting limbs is a result of previous pruning. Sporadic limbs are held over the property boundary, crossover and verge displaying bending and arching consistent with excessive limb loading.
- A recent significant limb failure was evident over the footpath which has resulted in a longitudinal bark tear.
- Due to the dense foliage coverage much of the upper limb structure is obscured when viewed from ground level (Figure 5).
- The canopy extends approximately 2.0m over the adjacent property but does not overhang the residence (Figure 6).

Amenity Valuation (Helliwell)

- The **Helliwell System** is a method used worldwide for assessing the **Amenity Value** of a tree. This system assesses the contribution each tree makes to the urban forest by evaluating the size of tree, the health and structural condition, the species and the suitability of the tree to the location. This allows a monetary value to be attached to individual trees considered to be a valuable community asset.
- Seven standard factors are identified for the tree to be assessed (Appendix 1).The tree is given a score of up to 8 points for each of the factors and these are then multiplied together to give an assessment of the amenity value of the tree, which is then multiplied by the conversion rate to determine a monetary value.
- The value per point rate for the assessment has been assigned at **$71.13** which has been calculated using the appropriate conversion exchange rates and increased yearly with CPI. The value per point for Australia has been approved with the Author of the Helliwell System, Rodney Helliwell.
- This method does not attempt to value the tree for timber value, value to wildlife, replacement cost or the cost of growing and maintaining the tree.
- This tree has been assessed using the Helliwell Valuation as follows:

Helliwell Factor		Score
i. Size of the tree (Canopy height x average canopy spread)	14 x 14 = 196m^2	7
ii. Useful Life Expectancy	40 - 100 Years	3
iii. Importance of position in the landscape	Considerable Importance	3
iv. Presence of other trees	Some	2
v. Relation to the setting	Fairly suitable	2
vi. Form	Average	1
vii. Special Factors	None	1

Total score = 252 pts x $71.13 = $17,924.76

Helliwell valuation for this tree is calculated at $17,924.76

Notes

- The tree was assessed to be of considerable importance due to its prominent position in the streetscape.

- The presence of other trees was assessed as 'some' based upon more than 10% of the visual area (as defined by adjacent open space and streetscape) being covered by trees.
- The trees in relation to the setting were considered fairly suitable due to concerns that appear to be associated with the size and structural condition of the tree.

Quantified Tree Risk Assessment (QTRA)

(refer also to the assessment form accompanying this document)

- QTRA assessment is based upon the likelihood of failure within the next 12 months.
- For this tree the most significant limbs considered most likely to fail were mature epicormic limbs 110mm – 250mm in diameter.
- Probability of limb failure within the next 12 months was estimated at range 2 or 1 /10 - 1/100. This equates with a likelihood of failure up to 100 times greater than a sound and healthy limb of the same species.
- The target value of pedestrians was considered the most significant and within range 3, equating to 2 per hour to 7 per hour passing beneath the tree.

This tree passed QTRA with a Risk of Harm calculation of 1/50,000 and is considered to represent a tolerable risk. It is important to note that the QTRA Risk Assessment calculations are valid for one year from the inspection date of the 9th January 2020. It is recommended that this tree be inspected and assessed annually to ensure that it remains at an acceptable level of risk.

Recommendations

- Conduct a property boundary line clearance prune to sound growth points.
- Reduce end load of limbs bending and arching which are held over the verge and crossover.
- Selectively thin crossed and conflicting epicormic limbs from within the canopy without creating open spaces or lion tailing.
- Re-inspect in 12 months.

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Limitation of liability

Trees can be managed, but they cannot be controlled. To live or work near a tree involves a degree of risk.

This report only covers identifiable defects present at the time of inspection. Paperbark Technologies accepts no responsibility and cannot be held liable for any structural defect or unforseen event/situation or adverse weather conditions that may occur after the time of inspection. Paperbark Technologies cannot guarantee that the tree/s contained within this report will be structurally sound under all circumstances, and is not able to detect every condition that may possibly lead to the structural failure of a tree. Paperbark Technologies cannot guarantee that the recommendations made will categorically result in the tree being made safe. Unless specifically mentioned this report will only be concerned with above ground inspections, as such all observations have been visually assessed from ground level. Trees are living organisms and as such cannot be classified as safe under any circumstances. Trees fail in ways that the arboriculture industry does not fully understand. The recommendations are made on the basis of what can be reasonably identified at the time of inspection therefore Paperbark Technologies accepts no liability for any recommendations made. All care has been taken to obtain information from reliable sources, however Paperbark Technologies can neither guarantee nor be responsible for the accuracy of information provided by others. In the event that reinspection of the tree/s is recommended it is the client's responsibility to make arrangements with Paperbark Technologies.

Photos

Figure 1 Displaying the *Erythrina* x *sykesii* (Coral Tree) located within the verge adjacent no. 63 Ardross Street (Munro Road verge), Applecross.

Figure 2 Displays the Google Streetview image of the tree dated November 2007

Figure 3 Displaying the base of the tree and attachment of major limbs.

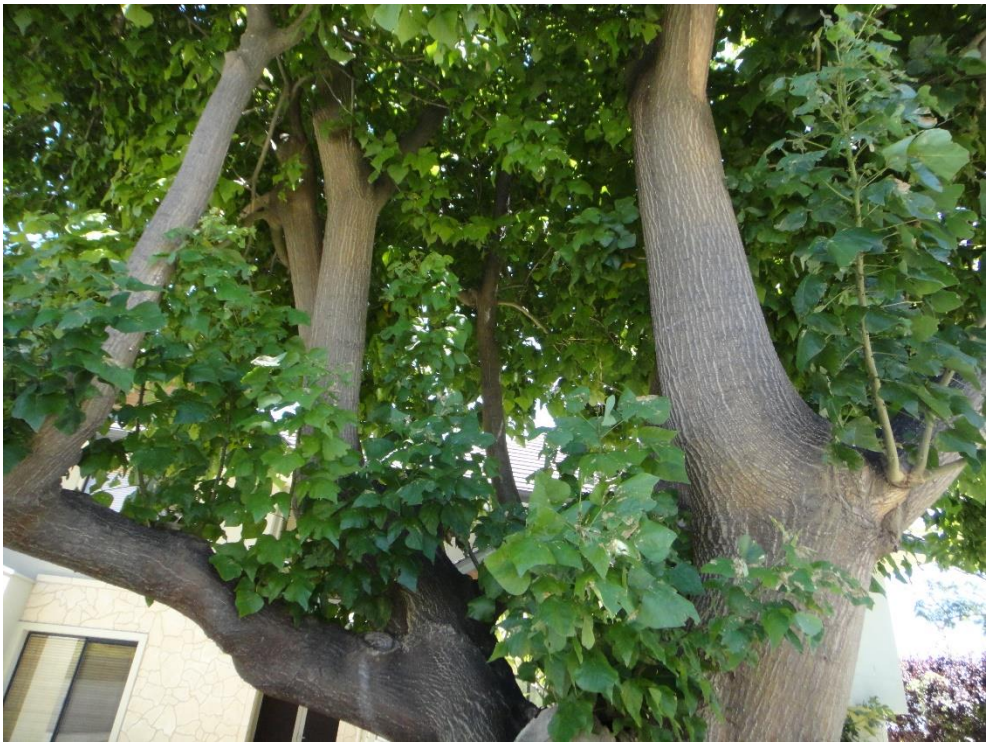

Figure 4 Displaying the extension of the main mature epicormic stems which form into the canopy structure and the attachment of lateral limbs with previous pruning & development of small epicormic growth evident.

Figure 5 Displays the congested limb structure and dense foliage. Arrow depicts the recent limb failure resulting in a tear.

Figure 6 Displaying the amount of foliage held over the property boundary.

Appendix 1 Helliwell Valuation Factors and Scores

Factor	Points									
	0	0.5	1	2	3	4	5	6	7	8
i. Size of tree (Canopy size)	Less than 2m2	2-5m2	5-10m2	10-20m2	20-30m2	30-50m2	50-100m^2	100-150m2	150-200m2	over 200m2
ii. Useful life expectancy	Less than 2 years		2-5 years	5-40 years	40-100 years	100+ years				
iii. Importance of position in the landscape	No importance	Very little importance	Little importance	Some importance	Considerable importance	Great importance				
iv. Presence of other trees		Woodland	Many	Some	Few	None				
v. Relation to the setting	Totally unsuitable	Moderately unsuitable	Just suitable	Fairly suitable	Very suitable	Particularly suitable				
vi. Form		Poor form	Average or indifferent	Good						
vii. Special factors			None	One	Two Three					