

APPENDIX G

ARBORICULTURAL IMPACT REPORT

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LINDFIELD VILLAGE LIVING
LINDFIELD NSW

30 NOVEMBER 2018

PREPARED FOR KU-RING-GAI COUNCIL



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1. BACKGROUND

Landscape Matrix Pty Ltd has been engaged by Ku-ring-gai Council to prepare an Arboricultural Impact Report in respect to trees on or adjacent to the Lindfield Village Living site at Lindfield. The trees are potentially impacted by a proposed redevelopment of the site.

This report has been prepared by Guy Paroissien a Director of Landscape Matrix Pty Ltd. The site was inspected on 12th and 15th January 2018.

The assessment of the trees was based upon a visual inspection of the trees from ground level using the Visual Tree Assessment (VTA) approach developed by Mattheck & Breloer (1994). The visual inspection included examination of the trees' dimensions, foliage density and foliage health, form, structure, structural condition, overall health and vigour and landscape significance.

The inspection was limited to visual inspection of the trees without dissection, probing or coring. No aerial inspection of the trees was carried out and the assessment did not include any woody tissue testing or root investigation.

The tree heights and canopy spreads were estimated and expressed in metres and the tree diameters at breast height (DBH) were measured with a standard metal tape at approximately 1.4 metres above ground level and expressed in millimetres.

2. TREES ON SITE

60 trees on the site have been assessed in preparing this report. A summary of these trees, their dimensions, condition, Useful Life Expectancy (ULE) and landscape significance is attached in Appendix B.

The tree numbering in this report commences at tree number 12 because tree numbers 1 to 11, originally dealt with in preliminary versions of this report, are now to be the subject of a separate, public domain report. These trees (1 to 11) are located within and adjacent to Tryon Lane and not within the actual site.

The tree numbers in Appendix B correspond with the tree numbers marked on the attached Survey Plan prepared by Degotardi Smith and Partners dated 16/4/18 and identified as Drawing number 34819A01.dwg, Sheet 2, Revision B. Tree numbers 41, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60 and 61 have been added to the plan by Landscape Matrix and are approximate locations only – not to survey.

The trees that have been assessed on the site and adjoining properties are summarised in table 1 as follows:

Table 1: Summary of species present, number and height range.

SPECIES	COMMON NAME	NUMBER PRESENT	HEIGHT RANGE (metres)
<i>Acer beurgerianum</i>	Trident Maple	2	6 to 12
<i>Agonis flexuosa</i>	Willow Myrtle	1	9
<i>Alnus glutinosa</i>	Common Alder, Black Alder)	1	4
<i>Auranticarpa rhombifolia</i> , syn. <i>Pittosporum rhombifolium</i>	Diamond Leaved Pittosporum	1	3.5
<i>Callistemon salignus</i>	Willow Bottlebrush, White Bottlebrush)	1	14
<i>Callistemon viminalis</i>	Weeping Bottlebrush	1	6
<i>Callitris columnaris</i>	Coastal Cypress Pine	1	17
<i>Camellia sasanqua</i>	Chinese Camellia	13	2,5 to 7
<i>Casuarina glauca</i>	Swamp Oak	9	11 to 16
<i>Celtis sinensis</i>	Chinese Hackberry	1	14
<i>Chamaecyparis obtusa</i> 'Tetragona Aurea'	Hinoki False Cypress	1	4.5
Dead tree	Dead tree	1	6
<i>Elaeocarpus reticulatus</i>	Blue Berry Ash	1	7
<i>Ficus coronata</i>	Sandpaper Fig	1	8
<i>Fraxinus Raywood</i>	Claret Ash	1	10
<i>Grevillea CV</i>	Grevillea cultivar)	2	3 to 4
<i>Jacaranda mimosifolia</i>	Jacaranda	1	11
<i>Lagunaria patersonia</i>	Norfolk Island Hibiscus	1	14
<i>Liquidambar styraciflua</i>	Liquidambar	1	19
<i>Liriodendron tulipifera</i>	Tulip Tree	1	16
<i>Lophostemon confertus</i>	Brushbox	1	10
<i>Magnolia x soulangiana</i>	Saucer Magnolia	1	3.5
<i>Nyssa sylvatica</i>	<i>Nyssa</i> , <i>Tupelo</i>	2	6.5 to 8
<i>Olea europaea subsp. cuspidata</i>	African Olive	3	9 to 13
<i>Omalanthus populifolius</i>	Bleeding Heart Tree	1	5.5
<i>Pistacia chinensis</i>	Chinese Pistacia, Pistacia	4	4.5 to 6
<i>Pittosporum undulatum</i>	Native Daphne, Sweet Pittosporum	3	7 to 9
<i>Thuja plicata</i>	Western Red Cedar	1	4
<i>Thuja spp CV</i>	Thuja cultivar - Golden Form	2	3.5 to 4
Total number of trees		60	2.5 to 26 metres

None of the trees assessed is listed individually as a threatened species under the NSW Biodiversity Conservation Act 2016 or the Commonwealth Environment Protection and Biodiversity Conservation Act 1999.

3. TREES IDENTIFIED AS A PRIORITY FOR RETENTION/PROTECTION.

The identification of trees as priorities for retention is based upon a number of factors including; species, dimensions, health, maturity, Useful Life Expectancy (ULE) and landscape significance.

Following assessment of the trees it is considered the following 3 trees are considered to be of high landscape significance and medium to long life expectancy and should be considered as a priority for retention/protection, if possible:

Table 2: Trees identified as priorities for retention/protection.

TREE NO.	SCIENTIFIC AND COMMON NAME	TPZ	SRZ	COMMENTS
24	<i>Liriodendron tulipifera</i> (Tulip Tree)	7.7 metres	2.8 metres	Possible decay/canker in pruning wound at 2 metres on south side. Slight kink in trunk at 2 metres - appears sound. At the time of inspection the tree was of fair vigour and exhibited low to moderate levels of dieback.
50	<i>Lophostemon confertus</i> (Brushbox)	9.6 metres	3.3 metres	Located in adjoining property to south and approx. 0.7 metres from boundary.
54	<i>Jacaranda mimosifolia</i> (Jacaranda)	8.9 metres	2.8 metres	The tree displays fair branch attachment with codominant leaders from ground level and multiple leaders from near ground level with evidence of poor attachment at the junction - the junctions are weak points in the tree's structure with increased risk of failure but are not considered at risk of failure in the short term - monitoring recommended. NB: Limited view of junctions. Located in adjoining property to south and approx. 0.5 metres from boundary.

TPZ = Tree Protection Zone under AS4970-2009, SRZ = Structural Root Zone under AS4970-2009.

TPZ and SRZ are radial offsets measured from the centre of trunk

A number of methods to determine the likely extent of root zones and appropriate setbacks for tree root protection zones for trees on development sites have been developed in the past. The key criteria used in determining setbacks is the tree's trunk diameter at breast height (DBH) in conjunction with other factors including the sensitivity of the species in question to environmental disturbance/change, the age of the tree and the tree's health and vigour at the time.

Harris et al (2004) provide formulae for calculating tree protection zones based on the above criteria and modified from the 1991 British Standard for protection of trees on construction sites (BS 5837:1991). The 2005 version of the British Standard (BS

5837:2005) recommends a radius of 12 times the tree's DBH. For multi trunked trees BS 5837:2005 recommends a setback of 10 times the basal trunk diameter.

The Australian Standard AS 4970-2009 Protection of Trees on Construction Sites also identifies a 'Tree Protection Zone' (TPZ) of 12 times the tree's DBH. AS 4970-2009 also provides a formula for calculating the "Structural Root Zone" of trees on development sites. This is the area required for stability. In regard to palms, other monocots, cycads and tree ferns the Standard identifies the Tree Protection Zone should not be less than 1 metre outside the crown projection. (Australian Standards Association 2009)

The tree protection zones identified above have been calculated using the Australian Standard 'AS 4970 Protection of trees on construction sites' and are the optimum setback from the trees where disturbance (e.g. soil level changes, compaction, excavation etc) should be minimised to reduce potential impacts on the long term health of the trees. Preferably, no more than 10% of the tree protection zone should be disturbed with compensation made by extension of other areas of the TPZ to compensate for the area(s) disturbed.

Where greater than 10% of the tree protection zone is potentially disturbed the tree's viability needs to be investigated and demonstrated by the project arborist. The structural root zone is the area required for stability and where disturbance of any sort should be avoided.

4. TREES THAT SHOULD BE CONSIDERED FOR RETENTION/PROTECTION

The identification of trees for consideration (but not as a priority) for retention is based upon the same factors as those for priority for retention (species, dimensions, health, maturity, Useful Life Expectancy (ULE) and landscape significance).

Following assessment of the trees it is considered the following 25 trees of moderate or moderate to high landscape significance and medium to long life expectancy should be considered for retention/protection, if possible:

Table 3: Trees identified for consideration for retention/protection.

TREE NO.	SCIENTIFIC AND COMMON NAME	TPZ	SRZ	COMMENTS
12	<i>Casuarina glauca</i> (Swamp Oak)	4.6 metres	2.5 metres	The tree's past canopy development has been suppressed. The tree displays fair branch attachment with multiple leaders from 4.5 metres - not considered at risk of failure in the short term.
13	<i>Casuarina glauca</i> (Swamp Oak)	3.4 metres	2.1 metres	
14	<i>Casuarina glauca</i> (Swamp Oak)	3.8 metres	2.2 metres	Slight canopy bias to the SW.
15	<i>Casuarina glauca</i> (Swamp Oak)	3.6 metres	2.1 metres	
16	<i>Casuarina glauca</i> (Swamp Oak)	3.5 metres	2.1 metres	The tree's past canopy development has been suppressed.
17	<i>Casuarina glauca</i> (Swamp Oak)	2.9 metres	2 metres	At the time of inspection the tree was of fair vigour and exhibited reduced foliage density and low levels of dieback.
18	<i>Casuarina glauca</i> (Swamp Oak)	2.2 metres	1.7 metres	Minor mechanical damage to basal trunk tissue (mower impact damage) - appears sound. At the time of inspection the tree was of fair vigour and exhibited reduced foliage density and low levels of dieback.
20	<i>Casuarina glauca</i> (Swamp Oak)	3.2	2 metres	Minor mechanical damage to basal trunk tissue (mower impact damage) - appears sound. At the time of inspection the tree was of fair vigour and exhibited reduced foliage density and low levels of dieback.
23	<i>Omalanthus populifolius</i> (Bleeding Heart Tree)	2* metres	1.6 metres	The tree's past canopy development has been suppressed by the adjacent building. Possible Ringtail Possum drey in upper crown. Semi mature Chinese Hackberry growing adjacent to the tree. Whilst a retention value 2 tree its retention is problematic given proximity to existing retaining wall and building.
25	<i>Camellia sasanqua</i> (Chinese Camellia)	4.6 metres	2.2 metres	Canopy development suppressed by adjacent building to north. The tree displays fair branch attachment with multiple leaders but is not considered at risk of failure. At the time of inspection the tree was of fair vigour and exhibited reduced foliage density.
26	<i>Camellia sasanqua</i> (Chinese Camellia)	4.3 metres	2.2 metres	Canopy development suppressed by adjacent building to north. The tree displays fair branch attachment with multiple leaders but is not considered at risk of failure.

28	<i>Camellia sasanqua</i> (Chinese Camellia)	5.2 metres	2.3 metres	Canopy development suppressed by adjacent building and trees. The tree displays fair branch attachment with multiple leaders but is not considered at risk of failure. At the time of inspection the tree was of fair vigour and exhibited reduced foliage density and low to moderate levels of dieback.
30	<i>Camellia sasanqua</i> (Chinese Camellia)	3.8 metres	2.1 metres	Canopy development suppressed by adjacent building to north. The tree displays fair branch attachment with multiple leaders but is not considered at risk of failure. Ringtail Possum drey in upper crown.
32	<i>Camellia sasanqua</i> (Chinese Camellia)	4.6 metres	2.2 metres	The tree displays fair branch attachment with multiple leaders from 0.5 metres but is not considered at risk of failure.
34	<i>Camellia sasanqua</i> (Chinese Camellia)	5.9 metres	2.5 metres	The tree displays fair branch attachment with multiple leaders but is not considered at risk of failure. Decay in lower leaders on west side following past tissue loss (past sunburn?). There is also low levels of dieback on the west side of the canopy.
35	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia)	4 metres	2.1 metres	Exposed woody root to south of trunk with evidence of past mechanical damage - monitoring for decay recommended.
36	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia)	4.8 metres	2.2 metres	
37	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia)	6.2 metres	2.4 metres	Low to moderate levels of internal dieback at the time of inspection.
39	<i>Nyssa sylvatica</i> (Nyssa, Tupelo)	2.6 metres	1.8 metres	At the time of inspection the tree exhibited foliage browning following recent high temperatures.
43	<i>Nyssa sylvatica</i> (Nyssa, Tupelo)	3.7 metres	2.1 metres	
55	<i>Acer beurgerianum</i> (Trident Maple)	2.8 metres	1.8 metres	Located in adjoining property to south and approx. 1.2 metres from boundary.
57	<i>Lagunaria patersonia</i> (Norfolk Island Hibiscus)	6.5 metres	2.8 metres	Located in adjoining property to south and approx. 0.7 metres from boundary.
58	<i>Pittosporum undulatum</i> (Native Daphne, Sweet Pittosporum)	3.4 metres	2.2 metres	Located in adjoining property to south and approx. 0.5 metres from boundary. The tree displays signs of instability with evidence of past failure at ground level (butt sweep exhibited with distinct trunk lean to west for 0.6 metres). At the time of inspection the tree was of moderate health and fair vigour and exhibited moderate to high levels of dieback.

69	<i>Camellia sasanqua</i> (Chinese Camellia)	3.6 metres	2.1 metres	Canopy bias to the east due to building to west and pruning for clearance to staircase.
70	<i>Elaeocarpus reticulatus</i> (Blue Berry Ash)	2.8 metres	1.8 metres	At the time of inspection the tree was of fair vigour and exhibited reduced foliage size and density in the upper canopy and low levels of dieback.

The tree protection zones identified above have been calculated using the Australian Standard 'AS 4970 Protection of trees on construction sites' and are the identified setback from the trees where disturbance (e.g. soil level changes, compaction, excavation etc) should be minimised to reduce potential impacts on the long-term health of the trees.

Preferably, no more than 10% of the tree protection zone should be disturbed with compensation made by extension of other areas of the TPZ to compensate for the area(s) disturbed. Where greater than 10% of the tree protection zone is potentially disturbed the tree's viability needs to be investigated and demonstrated by the project arborist. The structural root zone is the area required for stability and where disturbance of any sort should be avoided.

5. TREES THAT SHOULD BE CONSIDERED FOR REMOVAL

Following assessment of the trees on the site it is considered the following 8 trees should be considered for removal due to poor/declining health or condition and/or inappropriate species:

Table 4: Trees recommended for consideration for removal.

TREE NO.	SCIENTIFIC AND COMMON NAME	REASON
44	<i>Thuja spp</i> CV (Thuja cultivar - Golden Form)	The tree's past canopy development has been suppressed. At the time of inspection the tree was of poor health and poor vigour and exhibited very high levels of dieback and recent foliage browning during high temperatures.
49	Dead tree	Dead tree with very heavy growth of English Ivy that has been shaped by pruning. No live foliage from original tree observed.
51	<i>Olea europaea subsp. cuspidata</i> (African Olive)	Located in adjoining property to south and approx. 0.4 metres from boundary.
52	<i>Olea europaea subsp. cuspidata</i> (African Olive)	Located in adjoining property to south and approx. 0.3 metres from boundary.

60	<i>Olea europaea subsp. cuspidata</i> (African Olive)	Located in adjoining property to south and approx. 0.5 metres from boundary. At the time of inspection the tree exhibited low to moderate levels of dieback.
61	<i>Celtis sinensis</i> (Chinese Hackberry)	Located in adjoining property to south and approx. 1.1 metres from boundary. The tree's past canopy development has been suppressed by an immediately adjacent <i>Celtis</i> to the south. The tree displays poor branch attachment with codominant leaders from near ground level with evidence of poor attachment at the junction - the junction is a weak point in the tree's structure with increased risk of failure. Large diameter, partially exposed woody roots from the tree are growing into the site.
65	<i>Agonis flexuosa</i> (Willow Myrtle)	The tree exhibits poor branch attachment with multiple leaders with evidence of poor attachment and partial past failure and extensive decay at the junction. The tree is considered to be unstable with evidence of significant past decay and associated hollow in the basal trunk with hollow opening to east and associated loss of root function. The tree is considered to be structurally compromised and at risk of failure in the short term - immediate removal recommended.
68	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia)	Majority of canopy to the west due to recent failure of main leader. The tree displays poor branch attachment with a recent failure of the main leader at 2 metres - there is evidence the junction had partially failed in the past with complete failure subsequently occurring in the very recent past. The tree is considered to be structurally compromised following this failure with a poorly attached branch growing to the west considered to be at risk of failure in the short term. Removal recommended.

NB: Tree numbers 49, 51, 52, 60 and 61 are located on adjoining properties and the removal/future management of these trees is the responsibility of the owners of those trees.

6. TREES NOT IDENTIFIED FOR REMOVAL OR RETENTION

The following 24 trees have not been identified as being of high or moderate landscape value and worthy of enforced retention/protection, or as priorities for removal due to low landscape value, declining structural condition or suitability to the site (i.e. weed species):

- Tree numbers: 19, 21, 22, 27, 29, 31, 33, 38, 40, 41, 42, 45, 46, 47, 48, 53, 56, 59, 62, 63, 64, 66, 67 and 71.

Many of these trees are currently in fair to reasonable condition and do perform some landscape function of either low or moderate significance. However these trees individually are not considered significant enough to warrant specific design consideration.

7. POTENTIAL IMPACTS ON TREES

The potential impacts of the proposal have been considered using the following plans:

- Ground/Site Level Plan prepared by Fox Johnston & Olsson Associates in association, dated 18/11/18 and identified as Drawing Number A400-003;
- Stormwater General Arrangements Plan prepared by Jones Nicholson Consulting Engineers dated 27/11/2018 and identified as Drawing Number C100 2; and
- Landscape Plan – Ground and Lower Ground prepared by 360° dated 28/11/18 and identified as Drawing No. L-DA-05.

7.1 Trees requiring removal or proposed to be removed to facilitate the proposed redevelopment of the site

To facilitate construction of the proposed redevelopment of the site the following 45 trees are proposed to be removed.

Table 6: Trees requiring removal to facilitate construction of the proposed redevelopment of the site

TREE NO.	SCIENTIFIC AND COMMON NAME	COMMENTS
12	<i>Casuarina glauca</i> (Swamp Oak)	Within the footprint of the proposed road (Tryon Place).
13	<i>Casuarina glauca</i> (Swamp Oak)	Immediately adjacent to the footprint of the proposed road (Tryon Place).
14	<i>Casuarina glauca</i> (Swamp Oak)	Within the footprint of the proposed road (Tryon Place).
15	<i>Casuarina glauca</i> (Swamp Oak)	Immediately adjacent to the footprint of the proposed road (Tryon Place).
16	<i>Casuarina glauca</i> (Swamp Oak)	Immediately adjacent to the footprint of the proposed road (Tryon Place).
17	<i>Casuarina glauca</i> (Swamp Oak)	Immediately adjacent to the footprint of the proposed road (Tryon Place).
18	<i>Casuarina glauca</i> (Swamp Oak)	Immediately adjacent to the footprint of the proposed road (Tryon Place).
19	<i>Casuarina glauca</i> (Swamp Oak)	Within the footprint of the proposed road (Tryon Place).
20	<i>Casuarina glauca</i> (Swamp Oak)	Located at the edge of the proposed road (Tryon Place).
21	<i>Callitris columnaris</i> (Coastal Cypress Pine)	Adjacent to the footprint of the proposed road (Tryon Place).

22	<i>Callistemon salignus</i> (Willow Bottlebrush, White Bottlebrush)	Adjacent to the footprint of the proposed road (Tryon Place).
23	<i>Omalanthus populifolius</i> (Bleeding Heart Tree)	Within the footprint of the proposed road (Tryon Place).
24	<i>Liriodendron tulipifera</i> (Tulip Tree)	Within the footprint of the proposed development works.
25	<i>Camellia sasanqua</i> (Chinese Camellia)	Immediately adjacent to the footprint of the proposed road (Tryon Place).
26	<i>Camellia sasanqua</i> (Chinese Camellia)	Immediately adjacent to the footprint of the proposed road (Tryon Place).
27	<i>Camellia sasanqua</i> (Chinese Camellia)	Immediately adjacent to the footprint of the proposed road (Tryon Place).
28	<i>Camellia sasanqua</i> (Chinese Camellia)	Immediately adjacent to the footprint of the proposed road (Tryon Place).
29	<i>Camellia sasanqua</i> (Chinese Camellia)	Immediately adjacent to the footprint of the proposed road (Tryon Place).
30	<i>Camellia sasanqua</i> (Chinese Camellia)	Immediately adjacent to the footprint of the proposed road (Tryon Place).
31	<i>Camellia sasanqua</i> (Chinese Camellia)	Immediately adjacent to the footprint of the proposed road (Tryon Place).
32	<i>Camellia sasanqua</i> (Chinese Camellia)	Immediately adjacent to the footprint of the proposed road (Tryon Place).
33	<i>Camellia sasanqua</i> (Chinese Camellia)	Immediately adjacent to the footprint of the proposed road (Tryon Place).
34	<i>Camellia sasanqua</i> (Chinese Camellia)	Immediately adjacent to the footprint of the proposed road (Tryon Place).
35	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia)	Within the footprint of the proposed road (Tryon Place).
38	<i>Thuja plicata</i> (Western Red Cedar)	Within the footprint of the proposed development works in front setback.
39	<i>Nyssa sylvatica</i> (Nyssa, Tupelo)	
40	<i>Thuja spp</i> CV (Thuja cultivar - Golden Form)	Within the footprint of the proposed development works in front setback.

41	<i>Grevillea CV</i> (Grevillea cultivar - Moonglow)	Within the footprint of the proposed development works in front setback.
42	<i>Magnolia x soulangiana</i> (Saucer Magnolia)	Within the footprint of the proposed development works in front setback.
43	<i>Nyssa sylvatica</i> (Nyssa, Tupelo)	Within the footprint of the proposed development works in front setback.
44	<i>Thuja spp CV</i> (Thuja cultivar - Golden Form)	Within the footprint of the proposed development works in front setback.
45	<i>Chamaecyparis obtusa 'Tetragona Aurea'</i> (Hinoki False Cypress)	Within the footprint of the proposed development works in front setback.
46	<i>Grevillea CV</i> (Grevillea cultivar - Misty Pink)	Within the footprint of the proposed development works in the main body of the site.
47	<i>Camellia sasanqua</i> (Chinese Camellia)	Within the footprint of the proposed development works in the main body of the site.
48	<i>Camellia sasanqua</i> (Chinese Camellia)	Within the footprint of the proposed development works in the main body of the site.
62	<i>Acer beurgerianum</i> (Trident Maple)	Within the footprint of the proposed development works in the main body of the site.
63	<i>Liquidambar styraciflua</i> (Liquidambar)	Immediately adjacent to the footprint of the proposed development works in the site.
64	<i>Fraxinus Raywood</i> (Claret Ash)	Immediately adjacent to the footprint of the proposed development works in the site.
65	<i>Agonis flexuosa</i> (Willow Myrtle)	Immediately adjacent to the footprint of the proposed development works in the site.
66	<i>Ficus coronata</i> (Sandpaper Fig)	Immediately adjacent to the footprint of the proposed development works in the site.
67	<i>Alnus glutinosa</i> (Common Alder, Black Alder)	Within the footprint of the proposed development works in the main body of the site.
68	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia)	Within the footprint of the proposed development works in the main body of the site.
69	<i>Camellia sasanqua</i> (Chinese Camellia)	Within the footprint of the proposed development works in the main body of the site.
70	<i>Elaeocarpus reticulatus</i> (Blue Berry Ash)	Within the footprint of the proposed development works in the main body of the site.
71	<i>Auranticarpa rhombifolia</i> , syn. <i>Pittosporum rhombifolium</i> (Diamond Leaved Pittosporum)	Within the footprint of the proposed development works in front setback.

3 of the 45 trees proposed to be removed are already recommended for removal, regardless of the proposal, due to poor/declining health or condition and/or inappropriate species (tree numbers 44, 65 and 68).

7.2 Trees potentially impacted by the proposed redevelopment of the site

A total of 15 trees assessed for the report are in the vicinity of the proposed works and have the potential to be impacted by the proposal. Using the plans referred to in the preceding section of the report an analysis has been undertaken of the potential impacts to these trees.

The extent of impacts to the trees in table 3 has been rated using the following guideline:

0% of root zone impacted – no impact of significance

0 to 10% of TPZ impacted – low level of impact

10 to 15% of TPZ impacted – low to moderate level of impact

15 to 20% of TPZ impacted – moderate level of impact

20 to 25% of TPZ impacted – moderate to high level of impact

25 to 35% of TPZ impacted – high level of impact

>35% of TPZ impacted – significant level of impact

The root zone calculations referred to in this report were made using scale drawings of the trees' identified tree protection zones (TPZ) in a CAD program (TurboCAD®) with potentially affected areas added to the drawing. The area of potential impact was converted to a percentage of TPZ using a spreadsheet (Microsoft Excel®).

The potential impacts to these 15 trees are identified in table 6 as follows:

Table 7: Trees potentially affected by the proposed redevelopment of the site.

TREE NO.	SCIENTIFIC AND COMMON NAME	TPZ	SRZ	COMMENTS*
36	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia)	4.8 metres	2.2 metres	The proposed entrance pathway is located 9 metres from the tree at the closest point and is outside the tree's identified TPZ – no impact of substance.

37	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia)	6.2 metres	2.4 metres	The proposed entrance road is located 5 metres from the tree at the closest point and is calculated to encroach within 6.7m ² or 5.48% of the tree's identified TPZ – this is a low level of impact and within an acceptable threshold.
49	Dead tree	N/A	N/A	Dead tree on adjoining property – no impact.
50	<i>Lophostemon confertus</i> (Brushbox)	9.6 metres	3.3 metres	The proposed retaining walls for the building are located 5.9 metres from the tree at the closest point and are calculated to encroach within 46.84m ² or 16.19% of the tree's identified TPZ – this is a moderate level of impact and within an acceptable threshold. Continued next page... However, the impacts will be negligible as the proposed works are at a greater offset than the existing masonry building. Existing building within or adjacent to the tree's SRZ. Care will need to be exercised during demolition of the existing building to ensure roots growing into the site are protected.
51	<i>Olea europaea subsp. cuspidata</i> (African Olive)	2.6 metres	2.1 metres	The proposed works (retaining wall for building) are located 3.5 metres from the tree at the closest point and are outside the tree's identified TPZ – no impact of substance. The proposed works are at a greater offset than the existing masonry building. Existing building within or adjacent to the tree's SRZ. Care will need to be exercised during demolition of the existing building to ensure roots growing into the site are protected.
52	<i>Olea europaea subsp. cuspidata</i> (African Olive)	1.9 metres	1.8 metres	The proposed works (retaining wall for building) are located 3.66 metres from the tree at the closest point and are outside the tree's identified TPZ – no impact of substance. The proposed works are at a greater offset than the existing masonry building. Care will need to be exercised during demolition of the existing building to ensure roots growing into the site are protected.
53	<i>Pittosporum undulatum</i> (Native Daphne, Sweet Pittosporum)	2* metres	1.8 metres	The proposed works (retaining wall for building) are located 4.51 metres from the tree at the closest point and are outside the tree's identified TPZ – no impact of substance. The proposed works are at a greater offset than the existing masonry building. Care will need to be exercised during demolition of the existing building to ensure roots growing into the site are protected. *Minimum TPZ under AS4970-2009
54	<i>Jacaranda mimosifolia</i> (Jacaranda)	8.9 metres	2.8 metres	The proposed retaining walls for the building are located 3.76 metres from the tree at the closest point, the balcony 6.1 metres and the building 8.86 metres from the tree – these structures are calculated to encroach within 45.89m ² or 18.29% of the tree's identified TPZ – this is a moderate level of impact and within an acceptable threshold. However, the impacts will be negligible as the proposed works are at a greater offset than the existing masonry building. Existing building within or adjacent to the tree's SRZ. Care will

				need to be exercised during demolition of the existing building to ensure roots growing into the site are protected.
55	<i>Acer beurgerianum</i> (Trident Maple)	2.8 metres	1.8 metres	The proposed works (retaining wall for building) are located 3.15 metres from the tree at the closest point and are outside the tree's identified TPZ – no impact of substance. The proposed works are at a greater offset than the existing masonry building. Care will need to be exercised during demolition of the existing building to ensure roots growing into the site are protected.
56	<i>Callistemon viminalis</i> (Weeping Bottlebrush)	2.4 metres	1.9 metres	The proposed works (retaining wall for building) are located 4.39 metres from the tree at the closest point and are outside the tree's identified TPZ – no impact of substance. The proposed works are at a greater offset than the existing masonry building. Care will need to be exercised during demolition of the existing building to ensure roots growing into the site are protected.
57	<i>Lagunaria patersonia</i> (Norfolk Island Hibiscus)	6.5 metres	2.8 metres	The proposed retaining wall is located 2.53 and 3.39 metres from the tree at the closest points and is calculated to encroach within 28.97m ² or 21.97% of the tree's identified TPZ – this is a moderate to high level of encroachment with some potential to affect the tree's long term health and reduce its ULE. However, the actual impacts will be reduced as the existing masonry building is located at a similar offset and already encroaches within 28.45m ² or 21.58% of the tree's identified TPZ, albeit at a slightly different alignment. (see insert from survey below) This existing encroachment will significantly reduce the potential impacts as root growth in the area potentially impacted will have been limited by the existing building. A corner retaining wall is slightly within the tree's identified SRZ and outside the existing building footprint – it is recommended this area be excavated by hand under arborist supervision to check if any structural roots are impacted by the proposed excavation.
58	<i>Pittosporum undulatum</i> (Native Daphne, Sweet Pittosporum)	3.4 metres	2.2 metres	The proposed retaining wall is located 2.43 metres from the tree at the closest point and is calculated to encroach within 3.26m ² or 9.2% of the tree's identified TPZ – this is a low level of encroachment and within an acceptable threshold. In addition, the actual impacts will be reduced as the existing masonry building is located at a similar offset and already encroaches within 2.06m ² or 5.81% of the tree's identified TPZ in the area potentially impacted.
59	<i>Pittosporum undulatum</i> (Native	2.4 metres	1.8 metres	The proposed building is located 6.92 metres from the tree at the closest point and is outside the tree's identified TPZ – no impact of substance.

	<i>Daphne, Sweet Pittosporum</i>)			The proposed works are at a greater offset than the existing masonry building. Existing building within or adjacent to the tree's SRZ. Care will need to be exercised during demolition of the existing building to ensure roots growing into the site are protected.
60	<i>Olea europaea subsp. cuspidata</i> (African Olive)	5.2 metres	2.5 metres	The proposed building is located 6.37 metres from the tree at the closest point and is outside the tree's identified TPZ – no impact of substance. The proposed works are at a greater offset than the existing masonry building. Existing building within or adjacent to the tree's SRZ. Care will need to be exercised during demolition of the existing building to ensure roots growing into the site are protected.
61	<i>Celtis sinensis</i> (Chinese Hackberry)	5.5 metres	2.5 metres	The proposed building is located 6.92 metres from the tree at the closest point and is outside the tree's identified TPZ – no impact of substance. The proposed works are at a greater offset than the existing masonry building. Care will need to be exercised during demolition of the existing building to ensure roots growing into the site are protected.

The potential TPZ encroachments can be summarised as follows:

0% of root zone impacted – no impact of significance = 9 trees (tree #s 36, 51, 52, 53, 55, 56, 59, 60 and 61)

0 to 10% of TPZ impacted – low level of impact = 2 trees (tree #s 37 and 58)

10 to 15% of TPZ impacted – low to moderate level of impact = 0 trees

15 to 20% of root zone impacted – moderate level of impact = 2 trees (trees # 50 and 54)

20 to 25% of TPZ impacted – moderate to high level of impact = 1 tree (tree # 57)

25 to 35% of TPZ impacted – high level of impact = 0 trees

> 35% of TPZ impacted – significant level of impact = 0 trees

NB: Tree 49 is dead and is not impacted

In Summary:

- The proposed works are outside the identified tree protection zones (TPZ) for tree numbers 36, 51, 52, 53, 55, 56, 59, 60 and 61 and no impact of substance is anticipated for these trees.
- The proposed works will encroach on less than 10% of the TPZ of tree numbers 37 and 58 and is considered to be a low level of impact and within an acceptable threshold for these trees.
- The proposed works will encroach on 15 to 20% of the TPZ of tree numbers 50 and 54 and is considered to be a moderate level of impact and within an acceptable threshold for this tree.

- The proposed works will encroach on 21.97% of the TPZ of tree number 57 and is considered to be a moderate to high level of impact with potential to affect the long term health of the trees and reduce their ULE. However, the actual impacts to tree 57 will be reduced as the existing masonry building is located at a similar offset and already encroaches within 21.58% of the tree's identified TPZ.

Stormwater Plans

In addition to the impacts identified in table 7 it is noted the proposed stormwater works have the potential to impact on a number of trees as follows:

- The proposed stormwater pipeline to pick up flows from Pacific Highway is within the identified TPZ of tree number 36 with potential to impact that tree; and
- The proposed subsoil pipeline parallel and adjacent to the southern boundary has the potential to impact on tree numbers 50 to 61 inclusive.

To minimise any impacts on these trees (trees 36 and 50-61) it is recommended the Construction Certificate stormwater plans be amended to:

- Re-align the proposed stormwater pipeline from the Pacific Highway to avoid the TPZ of tree 36 or maintain impacts to less than 10% of the tree's TPZ; and
- Realign the proposed subsoil pipeline parallel to the southern boundary to run alongside the southern side of the proposed landscape retaining wall.

8. TREE PROTECTION MEASURES

The following generic tree protection measures are recommended to assist in minimising potential impacts that may arise during the works (including the implementation of landscape works on the site).

A. Measures to be implemented prior to the commencement of any works on the site.

1. Trees to be retained are to be clearly identified by signage as protected trees.
2. The tree protection zones (TPZ) of trees to be retained are to be protected by fencing during the entire construction period except for specific areas directly required to achieve construction works.
3. The tree protection fence shall be constructed of galvanised pipe at 2.4 metre spacing and connected by securely attached chain mesh fencing to a minimum height of 1.8 metres and shall be installed prior to work commencing.
4. The tree protection fencing shall be installed as closely as possible to the alignment of the identified TPZ and shall be approved and certified by the site arborist prior to commencement of any construction or demolition works on the site.

B. Measures to be implemented and maintained during the life of construction works on the site.

5. Any excavation within the identified TPZ of trees to be retained shall be carried out by hand to minimize disturbance to tree roots. Roots greater than 25mm are not to be damaged or severed without prior assessment by an arborist to determine likely level of impact and the restorative actions required to minimise the impacts of root damage.
6. Tree roots between 10mm and 25mm diameter, severed during excavation, shall be cleanly severed using sterilised hand tools (i.e. secateurs or a pruning saw)
7. The following activities/actions are prohibited from the tree protection zones:
 - Soil cut or fill including excavation and trenching
 - Soil cultivation, disturbance or compaction
 - Stockpiling storage or mixing of materials
 - The parking, storing, washing and repairing of tools, equipment and machinery
 - The disposal of liquids and refueling
 - The disposal of building materials
 - The sitting of offices or sheds
 - Any action leading to the impact on tree health or structure
8. Canopy pruning of trees identified for protection which is necessary to accommodate approved building works shall be undertaken in accordance with Australian Standard 4373-2007 'Pruning of Amenity Trees'.

9. USE OF TREES BY WILDLIFE

During the inspections on 12th and 15th January 2018 the trees on the site were checked for signs of use by wildlife during the inspection. A number of the trees showed signs of usage by wildlife such as scratch marks or the presence of scats consistent with usage by Common Brushtail Possum (*Trichosurus vulpecula*) or Common Ringtail Possum (*Pseudocheirus peregrinus*).

It is probable that a number of the trees would be used by native fauna at various times for food, shelter and roosting purposes and the retention and replacement of trees on and adjoining the site will retain this opportunity.

The following bird species were noted on site (or heard in the immediate vicinity of the site) during the inspection on 12th and 15th January 2018: Noisy Miner (*Manorina melanocephala*), Australian Raven (*Corvus coronoides*) and Rainbow Lorikeet (*Trichoglossus haematodus*).

In addition to the above, possible Ringtail Possum dreys were observed in the crowns of tree numbers 23 and 30 and a specimen of the pest species European Rabbit (*Oryctolagus cuniculus*) was observed within the adjoining property to the south and adjacent to the common boundary with the site.

10. CONCLUSIONS/RECOMMENDATIONS

Of the 60 trees at the Lindfield Living Village site that have been assessed there are 3 trees that have been identified as having high landscape significance and as priorities for retention. A further 25 trees have been identified as worthy of specific consideration for retention/protection if possible.

Eight of the trees assessed for this report were identified as recommended for removal regardless of any development proposal. The remaining 24 trees are identified in section 8 of the report as not requiring specific design consideration.

To facilitate construction of the proposed redevelopment of the site the following 45 trees will require removal or are proposed to be removed as part of the works:

- Tree # 12 *Casuarina glauca* (Swamp Oak)
- Tree # 13 *Casuarina glauca* (Swamp Oak)
- Tree # 14 *Casuarina glauca* (Swamp Oak)
- Tree # 15 *Casuarina glauca* (Swamp Oak)
- Tree # 16 *Casuarina glauca* (Swamp Oak)
- Tree # 17 *Casuarina glauca* (Swamp Oak)
- Tree # 18 *Casuarina glauca* (Swamp Oak)
- Tree # 19 *Casuarina glauca* (Swamp Oak)
- Tree # 20 *Casuarina glauca* (Swamp Oak)
- Tree # 21 *Callitris columnaris* (Coastal Cypress Pine)

Tree # 22 *Callistemon salignus* (Willow Bottlebrush, White Bottlebrush)
 Tree # 23 *Omalanthus populifolius* (Bleeding Heart Tree)
 Tree # 24 *Liriodendron tulipifera* (Tulip Tree)
 Tree # 25 *Camellia sasanqua* (Chinese Camellia)
 Tree # 26 *Camellia sasanqua* (Chinese Camellia)
 Tree # 27 *Camellia sasanqua* (Chinese Camellia)
 Tree # 28 *Camellia sasanqua* (Chinese Camellia)
 Tree # 29 *Camellia sasanqua* (Chinese Camellia)
 Tree # 30 *Camellia sasanqua* (Chinese Camellia)
 Tree # 31 *Camellia sasanqua* (Chinese Camellia)
 Tree # 32 *Camellia sasanqua* (Chinese Camellia)
 Tree # 33 *Camellia sasanqua* (Chinese Camellia)
 Tree # 34 *Camellia sasanqua* (Chinese Camellia)
 Tree # 35 *Pistacia chinensis* (Chinese Pistacia, Pistacia)
 Tree # 38 *Thuja plicata* (Western Red Cedar)
 Tree # 39 *Nyssa sylvatica* (Nyssa, Tupelo)
 Tree # 40 *Thuja spp* CV (Thuja cultivar - Golden Form)
 Tree # 41 *Grevillea CV* (Grevillea cultivar - Moonglow)
 Tree # 42 *Magnolia x soulangiana* (Saucer Magnolia)
 Tree # 43 *Nyssa sylvatica* (Nyssa, Tupelo)
 Tree # 44 *Thuja spp* CV (Thuja cultivar - Golden Form)
 Tree # 45 *Chamaecyparis obtusa 'Tetragona Aurea'* (Hinoki False Cypress)
 Tree # 46 *Grevillea CV* (Grevillea cultivar - Misty Pink)
 Tree # 47 *Camellia sasanqua* (Chinese Camellia)
 Tree # 48 *Camellia sasanqua* (Chinese Camellia)
 Tree # 62 *Acer beurgerianum* (Trident Maple)
 Tree # 63 *Liquidambar styraciflua* (Liquidambar)
 Tree # 64 *Fraxinus Raywood* (Claret Ash)
 Tree # 65 *Agonis flexuosa* (Willow Myrtle)
 Tree # 66 *Ficus coronata* (Sandpaper Fig)
 Tree # 67 *Alnus glutinosa* (Common Alder, Black Alder)
 Tree # 68 *Pistacia chinensis* (Chinese Pistacia, Pistacia)
 Tree # 69 *Camellia sasanqua* (Chinese Camellia)
 Tree # 70 *Elaeocarpus reticulatus* (Blue Berry Ash)
 Tree # 71 *Auranticarpa rhombifolia, syn. Pittosporum rhombifolium* (Diamond Leaved Pittosporum)

3 of the 45 trees proposed to be removed are already recommended for removal, regardless of the proposal, due to poor/declining health or condition and/or inappropriate species (tree numbers 44, 65 and 68).

To facilitate construction of the proposed redevelopment of the site the following 15 trees will be potentially affected:

Tree # 36 *Pistacia chinensis* (Chinese Pistacia, Pistacia)
 Tree # 37 *Pistacia chinensis* (Chinese Pistacia, Pistacia)
 Tree # 49 Dead tree
 Tree # 50 *Lophostemon confertus* (Brushbox)

Tree # 51 *Olea europaea subsp. cuspidata* (African Olive)
 Tree # 52 *Olea europaea subsp. cuspidata* (African Olive)
 Tree # 53 *Pittosporum undulatum* (Native Daphne, Sweet Pittosporum)
 Tree # 54 *Jacaranda mimosifolia* (Jacaranda)
 Tree # 55 *Acer beurgerianum* (Trident Maple)
 Tree # 56 *Callistemon viminalis* (Weeping Bottlebrush)
 Tree # 57 *Lagunaria patersonia* (Norfolk Island Hibiscus)
 Tree # 58 *Pittosporum undulatum* (Native Daphne, Sweet Pittosporum)
 Tree # 59 *Pittosporum undulatum* (Native Daphne, Sweet Pittosporum)
 Tree # 60 *Olea europaea subsp. cuspidata* (African Olive)
 Tree # 61 *Celtis sinensis* (Chinese Hackberry)

The potential TPZ encroachments can be summarised as follows:

0% of root zone impacted – no impact of significance = 9 trees (tree #s 36, 51, 52, 53, 55, 56, 59, 60 and 61)
 0 to 10% of TPZ impacted – low level of impact = 2 trees (tree #s 37 and 58)
 10 to 15% of TPZ impacted – low to moderate level of impact = 0 trees
 15 to 20% of root zone impacted – moderate level of impact = 2 trees (trees # 50 and 54)
 20 to 25% of TPZ impacted – moderate to high level of impact = 1 tree (tree # 57)
 25 to 35% of TPZ impacted – high level of impact = 0 trees
 > 35% of TPZ impacted – significant level of impact = 0 trees
 NB: Tree 49 is dead and is not impacted

In Summary:

- The proposed works are outside the identified tree protection zones (TPZ) for tree numbers 36, 51, 52, 53, 55, 56, 59, 60 and 61 and no impact of substance is anticipated for these trees.
- The proposed works will encroach on less than 10% of the TPZ of tree numbers 37 and 58 and is considered to be a low level of impact and within an acceptable threshold for these trees.
- The proposed works will encroach on 15 to 20% of the TPZ of tree numbers 50 and 54 and is considered to be a moderate level of impact and within an acceptable threshold for this tree.
- The proposed works will encroach on 21.97% of the TPZ of tree number 57 and is considered to be a moderate to high level of impact with potential to affect the long term health of the trees and reduce their ULE. However, the actual impacts to tree 57 will be reduced as the existing masonry building is located at a similar offset and already encroaches within 21.58% of the tree's identified TPZ.

In addition to the impacts identified above, it is noted the proposed stormwater works have the potential to impact on a number of trees as follows:

- The proposed stormwater pipeline to pick up flows from Pacific Highway is within the identified TPZ of tree number 36 with potential to impact that tree; and
- The proposed subsoil pipeline parallel and adjacent to the southern boundary has the potential to impact on tree numbers 50 to 61 inclusive.

To minimise any impacts on these trees (trees 36 and 50-61) it is recommended the Construction Certificate stormwater plans be amended to:

- Re-align the proposed stormwater pipeline from the Pacific Highway to avoid the TPZ of tree 36 or maintain impacts to less than 10% of the tree's TPZ; and
- Realign the proposed subsoil pipeline parallel to the southern boundary to run alongside the southern side of the proposed landscape retaining wall

Generic tree protection measures are identified in section 8 of this report to minimise potential impacts to the trees to be retained.

It is noted that, whilst 45 trees are proposed to be removed the greater majority of those trees are of low, low to moderate or moderate landscape significance and only one tree of high landscape significance (retention value 1) is proposed to be removed.

By comparison, the Landscape Plan identifies 90 small, medium and large (canopy) trees to be planted in addition to numerous palms, tree ferns and smaller trees. It is considered the proposal will result in a coordinated and significantly improved landscape setting compared to that which currently exists at the site.



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30th November 2018

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APPENDIX A



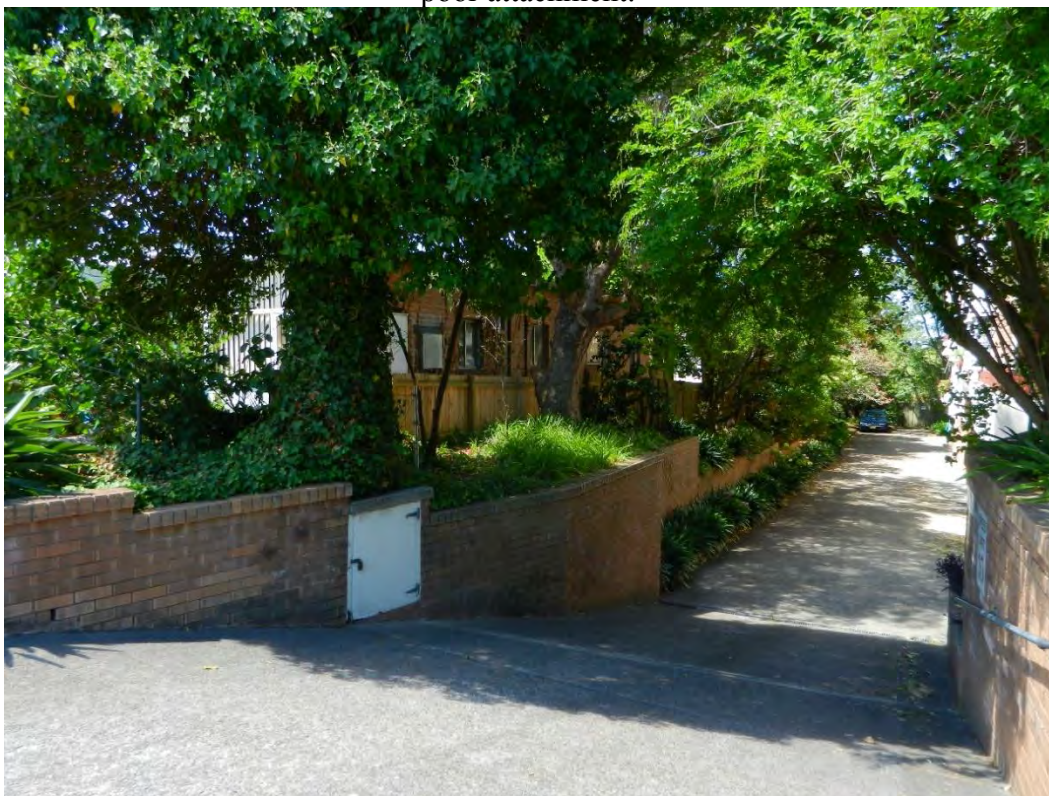
Photograph 1: Tree # 19 - Illustrating the fair to poor branch attachment with codominant leaders from 2.5 metres with poor attachment and the SE leader has failed at 5 metres.



Photograph 2: Tree # 21 - Illustrating the evidence of partial failure at a junction



Photograph 3: Tree # 22 - Illustrating the multiple leaders from 1 metre with evidence of poor attachment.



Photograph 4: Illustrating the trees on the adjoining property to the south (trees 49 to 61).



Photograph 5: Tree # 50 - Illustrating the location and context.



Photograph 6: Tree # 61 - Illustrating the roots from the tree growing into the site.



Photograph 7: Tree # 62 - Illustrating multiple regrowth following severe past pruning.



Photograph 8: Tree # 63 - Illustrating the multiple leaders from 1 metre.



Photograph 9: Tree # 63 - Illustrating a recent branch failure.



Photograph 10: Tree # 64 - Illustrating multiple leaders, poor attachment and extensive decay in the basal trunk.



Photograph 11: Tree # 66 - Illustrating moderate to high dieback.



Photograph 12: Tree # 66 - Illustrating the opening to extensive decay in the basal trunk.



Photograph 13: Tree # 67 - Illustrating the high dieback.



Photograph 14: Tree # 67 - Illustrating the extensive basal decay.



Photograph 15: Tree # 68 - Illustrating recent failure of the main leader.

APPENDIX B - TREE DATA SUMMARY - LINDFIELD VILLAGE LIVING

Tree No.	Genus, Species (Common Name)	Height (m)	Canopy (m)	DBH (mm)	DBH for TPZ	DGL for SRZ	Foliage Condition	Age Class	Trunk	Trunk Lean	Crown balance	Past Pruning	Stability	Branch Attachment	Health	Vigour	Dead Wood	Pest or disease	ULE	Landscape Significance	Retention Value*	Comments
12	<i>Casuarina glauca</i> (Swamp Oak)	14	6	380	380	490	Good foliage condition	Mature	Single trunk	Slight trunk lean south	Majority of canopy to the south	No evidence of significant past pruning	Appears stable	Fair branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	1 Long (> 40 years)	Moderate to high landscape significance	2	The tree's past canopy development has been suppressed. The tree displays fair branch attachment with multiple leaders form 4.5 metres - not considered at risk of failure in the short term.
13	<i>Casuarina glauca</i> (Swamp Oak)	15	4	280	280	340	Good foliage condition	Mature	Single trunk	Upright trunk	Balanced canopy area	No evidence of significant past pruning	Appears stable	Sound branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	1 Long (> 40 years)	Moderate landscape significance	2	
14	<i>Casuarina glauca</i> (Swamp Oak)	14	6	320	320	360	Good foliage condition	Mature	Single trunk	Upright trunk	Majority of canopy to the SW	No evidence of significant past pruning	Appears stable	Sound branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	1 Long (> 40 years)	Moderate landscape significance	2	Slight canopy bias to the SW.
15	<i>Casuarina glauca</i> (Swamp Oak)	16	8	300	300	330	Good foliage condition	Mature	Single trunk	Upright trunk	Balanced canopy area	No evidence of significant past pruning	Appears stable	Sound branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	1 Long (> 40 years)	Moderate to high landscape significance	2	
16	<i>Casuarina glauca</i> (Swamp Oak)	16	5 x 8	290	290	340	Good foliage condition	Mature	Single trunk	Upright trunk	Majority of canopy on a north x south axis	No evidence of significant past pruning	Appears stable	Sound branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	1 Long (> 40 years)	Moderate to high landscape significance	2	The tree's past canopy development has been suppressed.
17	<i>Casuarina glauca</i> (Swamp Oak)	15	4	240	240	290	Fair foliage condition	Mature	Single trunk	Upright trunk	Balanced canopy area	No evidence of significant past pruning	Appears stable	Sound branch attachment	Good health	Fair vigour	5 to 10%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Moderate landscape significance	2	At the time of inspection the tree was of fair vigour and exhibited reduced foliage density and low levels of dieback.
18	<i>Casuarina glauca</i> (Swamp Oak)	14	4	180	180	210	Good foliage condition	Mature	Single trunk	Upright trunk	Balanced canopy area	No evidence of significant past pruning	Appears stable	Sound branch attachment	Good health	Fair vigour	5%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Moderate landscape significance	2	Minor mechanical damage to basal trunk tissue (mower impact damage) - appears sound. At the time of inspection the tree was of fair vigour and exhibited reduced foliage density and low levels of dieback.
19	<i>Casuarina glauca</i> (Swamp Oak)	11	4 x 6	320	320	370	Good foliage condition	Mature	Single trunk	Slight trunk lean south	Majority of canopy to the south	No evidence of significant past pruning	Appears stable	Fair to poor branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	3 Short (5 to 15 years)	Moderate landscape significance	3	Minor mechanical damage to basal trunk tissue (mower impact damage) - appears sound. The tree displays fair to poor branch attachment with codominant leaders form 2.5 metres with evidence of poor attachment at the junction and the SE leader has failed in the past at 5 metres.
20	<i>Casuarina glauca</i> (Swamp Oak)	13	5	270	270	310	Good foliage condition	Mature	Single trunk	Upright trunk	Balanced canopy area	No evidence of significant past pruning	Appears stable	Sound branch attachment	Good health	Fair vigour	5%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Moderate landscape significance	2	Minor mechanical damage to basal trunk tissue (mower impact damage) - appears sound. At the time of inspection the tree was of fair vigour and exhibited reduced foliage density and low levels of dieback.
21	<i>Callitris columnaris</i> (Coastal Cypress Pine)	17	6	580 x 640	610	720	Good foliage condition	Mature	Single trunk	Upright trunk	Balanced canopy area	No evidence of significant past pruning	Appears stable	Poor branch attachment	Good health	Fair vigour	5 to 10%	No visual evidence of significant pest or disease	3 Short (5 to 15 years)	Moderate to high landscape significance	3	The tree displays poor branch attachment with codominant leaders form 2 metres with evidence of poor attachment at the junction and multiple leaders form 3 metres with poor attachment and evidence of partial failure at a junction (deep split at 3 to 4 metres). Large diameter exposed root with evidence of past mechanical damage. At the time of inspection the tree was of fair vigour and exhibited low levels of dieback (mostly internal).
22	<i>Callistemon salignus</i> (Willow Bottlebrush, White Bottlebrush)	14	12 x 13	Up to 450 (760 above root flare)	760	760	Good foliage condition	Mature	Multi trunked	Slight trunk lean south	Majority of canopy to the south	Lower limbs pruned in past to 3 metres, upper branches pruned for building on north	Appears stable	Fair to poor branch attachment	Good health	Good vigour	5%	No visual evidence of significant pest or disease	3 Short (5 to 15 years)	Moderate to high landscape significance	3	Slight canopy bias to the south. The tree displays fair to poor branch attachment with multiple leaders form 1 metre with evidence of poor attachment at the junction and evidence of past failure at a junction at 3 metres on the SW side.

Tree No.	Genus, Species (Common Name)	Height (m)	Canopy (m)	DBH (mm)	DBH for TPZ	DGL for SRZ	Foliage Condition	Age Class	Trunk	Trunk Lean	Crown balance	Past Pruning	Stability	Branch Attachment	Health	Vigour	Dead Wood	Pest or disease	ULE	Landscape Significance	Retention Value*	Comments
23	<i>Omalanthus populifolius</i> (Bleeding Heart Tree)	5.5	5 x 6	150	150	180	Good foliage condition	Mature	Single trunk	Upright trunk	Majority of canopy to the east	No evidence of significant past pruning	Appears stable	Sound branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Moderate landscape significance	2	The tree's past canopy development has been suppressed by the adjacent building. Possible Ringtail Possum drey in upper crown. Semi mature Chinese Hackberry growing adjacent to the tree. Whilst a retention value 2 tree its retention is problematic given proximity to existing retaining wall and building.
24	<i>Liriodendron tulipifera</i> (Tulip Tree)	16	9 x 12	640	640	680	Good foliage condition	Mature	Single trunk	Upright trunk	Balanced canopy area	Lower limbs pruned to 2.5 metres including large diameter branches	Appears stable	Sound branch attachment	Good health	Fair vigour	10%	Possible decay/canker in pruning wound at 2 metres on south side	2 Medium (15 to 40 years)	High landscape significance	1	Possible decay/canker in pruning wound at 2 metres on south side. Slight kink in trunk at 2 metres - appears sound. At the time of inspection the tree was of fair vigour and exhibited low to moderate levels of dieback.
25	<i>Camellia sasanqua</i> (Chinese Camellia)	6	5	Up to 210 (380 above root flare)	380	380	Good foliage condition	Mature	Multi trunked	Upright trunk	Majority of canopy to the SE	Upper branches pruned for building on north	Appears stable	Fair branch attachment	Good health	Fair vigour	5%	No visual evidence of significant pest or disease	1 Long (> 40 years)	Moderate landscape significance	2	Canopy development suppressed by adjacent building to north. The tree displays fair branch attachment with multiple leaders but is not considered at risk of failure. At the time of inspection the tree was of fair vigour and exhibited reduced foliage density.
26	<i>Camellia sasanqua</i> (Chinese Camellia)	7	6	Up to 220 (320 x 400 above root flare)	360	360	Good foliage condition	Mature	Multi trunked	Upright trunk	Majority of canopy to the south	Upper branches pruned for building on north	Appears stable	Fair branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	1 Long (> 40 years)	Moderate landscape significance	2	Canopy development suppressed by adjacent building to north. The tree displays fair branch attachment with multiple leaders but is not considered at risk of failure.
27	<i>Camellia sasanqua</i> (Chinese Camellia)	7	3 x 5	Up to 190 (310 above root flare)	310	310	Good foliage condition	Mature	Multi trunked	Upright trunk	Majority of canopy to the south	Upper branches pruned for building on north	Appears stable	Fair branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	1 Long (> 40 years)	Low to moderate landscape significance	3	Canopy development suppressed by adjacent building and trees. The tree displays fair branch attachment with multiple leaders but is not considered at risk of failure.
28	<i>Camellia sasanqua</i> (Chinese Camellia)	7	5	Up to 200 (430 above root flare)	430	430	Fair foliage condition	Mature	Multi trunked	Upright trunk	Majority of canopy to the SW	Lower branches pruned in past to 1.5 metres, upper branches pruned for building on north	Appears stable	Fair branch attachment	Good health	Fair vigour	10%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Moderate landscape significance	2	Canopy development suppressed by adjacent building and trees. The tree displays fair branch attachment with multiple leaders but is not considered at risk of failure. At the time of inspection the tree was of fair vigour and exhibited reduced foliage density and low to moderate levels of dieback.
29	<i>Camellia sasanqua</i> (Chinese Camellia)	5	1.5 x 4	100, 160	195	210	Fair foliage condition	Mature	Twin trunked	Distinct trunk lean to SW	Majority to SW	Lower branches pruned in past to 1.4 metres	Appears stable	Fair branch attachment	Moderate health	Fair vigour	5 to 10%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Low landscape significance	3	Canopy development significantly suppressed by adjacent trees. The tree displays fair branch attachment with codominant leaders but is not considered at risk of failure. At the time of inspection the tree was of moderate health and fair vigour and exhibited low to moderate levels of dieback.
30	<i>Camellia sasanqua</i> (Chinese Camellia)	6	5	Up to 200 (240 x 400 above root flare)	320	320	Good foliage condition	Mature	Multi trunked	Upright trunk	Majority of canopy to the south	Lower branches pruned in past to 1.5 metres	Appears stable	Fair branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	1 Long (> 40 years)	Moderate landscape significance	2	Canopy development suppressed by adjacent building to north. The tree displays fair branch attachment with multiple leaders but is not considered at risk of failure. Ringtail Possum drey in upper crown.
31	<i>Camellia sasanqua</i> (Chinese Camellia)	5	3	Up to 170 (260 above root flare)	260	260	Fair foliage condition	Mature	Multi trunked	Upright trunk	Majority to SW	Lower branches pruned in past to 2 metres	Appears stable	Fair branch attachment	Good health	Fair vigour	5 to 10%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Low landscape significance	3	Canopy development suppressed. The tree displays fair branch attachment with multiple leaders but is not considered at risk of failure. At the time of inspection the tree was of fair vigour and exhibited reduced foliage density and low levels of dieback.
32	<i>Camellia sasanqua</i> (Chinese Camellia)	6	4	Up to 220 (380 above root flare)	380	380	Good foliage condition	Mature	Multi trunked	Upright trunk	Balanced canopy area	Central leader removed at 0.5 metres in past	Appears stable	Fair branch attachment	Good health	Good vigour	5%	No visual evidence of significant pest or disease	1 Long (> 40 years)	Moderate landscape significance	2	The tree displays fair branch attachment with multiple leaders from 0.5 metres but is not considered at risk of failure.
33	<i>Camellia sasanqua</i> (Chinese Camellia)	2.5	2.5	Up to 60 (150 above root flare)	150	150	Fair foliage condition	Semi Mature	Multi trunked	Upright trunk	Balanced canopy area	No evidence of significant past pruning	Appears stable	Fair branch attachment	Good health	Fair vigour	5%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Low landscape significance	3	Canopy development suppressed. At the time of inspection the tree was of fair vigour and exhibited reduced foliage density and low levels of dieback.

Tree No.	Genus, Species (Common Name)	Height (m)	Canopy (m)	DBH (mm)	DBH for TPZ	DGL for SRZ	Foliage Condition	Age Class	Trunk	Trunk Lean	Crown balance	Past Pruning	Stability	Branch Attachment	Health	Vigour	Dead Wood	Pest or disease	ULE	Landscape Significance	Retention Value*	Comments
34	<i>Camellia sasanqua</i> (Chinese Camellia)	5	4.5	Up to 220 (490 above root flare)	490	490	Good foliage condition	Mature	Multi trunked	Upright trunk	Balanced canopy area	No evidence of significant past pruning	Appears stable	Fair branch attachment	Good health	Fair vigour	5%	Decay in lower leaders on west side following past tissue loss (past sunburn?).	2 Medium (15 to 40 years)	Moderate landscape significance	2	The tree displays fair branch attachment with multiple leaders but is not considered at risk of failure. Decay in lower leaders on west side following past tissue loss (past sunburn?). There is also low levels of dieback on the west side of the canopy.
35	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia)	4.5	7	Up to 170 (330 above root flare)	330	330	Good foliage condition	Mature	Multi trunked	Upright trunk	Majority to east	Lower branches pruned in past to 2 metres	Appears stable	Fair branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Moderate landscape significance	2	Exposed woody root to south of trunk with evidence of past mechanical damage - monitoring for decay recommended.
36	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia)	6	8 x 10	220, 290 x 330	400	390	Good foliage condition	Mature	Twin trunked	Upright trunk	Balanced canopy area	Lower branches pruned in past to 3 metres	Appears stable	Sound branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Moderate landscape significance	2	
37	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia)	6	8 x 10	320, 370	520	460	Good foliage condition	Mature	Twin trunked	Upright trunk	Balanced canopy area	Lower branches pruned in past to 3 metres	Appears stable	Sound branch attachment	Good health	Good vigour	5 to 10%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Moderate landscape significance	2	Low to moderate levels of internal dieback at the time of inspection.
38	<i>Thuja plicata</i> (Western Red Cedar)	4	6	Up to 240 (340 above root flare)	340	340	Fair foliage condition	Mature	Multi trunked	Upright trunk	Balanced canopy area	Lower branches pruned in past to 1.7 metres	Appears stable	Sound branch attachment	Moderate health	Poor vigour	15 to 20%	Minor decay in exposed heartwood following past tissue loss	3 Short (5 to 15 years)	Low to moderate landscape significance	3	Minor decay in exposed heartwood following past tissue loss. At the time of inspection the tree was of moderate health and poor vigour and exhibited moderate to high levels of dieback and recent foliage browning following high temperatures.
39	<i>Nyssa sylvatica</i> (Nyssa, Tupelo)	6.5	5	220	220	250	Good foliage condition	Semi Mature	Single trunk	Upright trunk	Balanced canopy area	Lower branches pruned in past to 1.8 metres	Appears stable	Sound branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	1 Long (> 40 years)	Moderate landscape significance	2	At the time of inspection the tree exhibited foliage browning following recent high temperatures.
40	<i>Thuja spp CV</i> (Thuja cultivar - Golden Form)	3.5	3	Up to 100 (220 x 300 above root flare)	260	260	Poor foliage condition	Mature	Multi trunked	Upright trunk	Majority to west	Lower branches pruned in past to 1.5 metres, central leader removed in past at 1.1 metres	Appears stable	Sound branch attachment	Moderate health	Fair vigour	15%	No visual evidence of significant pest or disease	3 Short (5 to 15 years)	Low landscape significance	3	At the time of inspection the tree was of moderate health and fair vigour and exhibited high levels of dieback and recent foliage browning following high temperatures.
41	<i>Grevillea CV</i> (Grevillea cultivar - Moonglow)	3	3	Up to 70 (130 above root flare)	130	130	Good foliage condition	Mature	Multi trunked	Slight trunk lean to the west	Majority to west	Lower branches pruned in past to 1.8 metres, upper branches pruned for building on east	Appears stable	Sound branch attachment	Good health	Fair vigour	10%	No visual evidence of significant pest or disease	3 Short (5 to 15 years)	Low landscape significance	3	Low to moderate levels of dieback at the time of inspection.
42	<i>Magnolia x soulangiana</i> (Saucer Magnolia)	3.5	3 x 4.5	120, 230	265	350	Fair foliage condition	Mature	Twin trunked	Upright trunk	Majority to west	Lower branches pruned in past to 2.2 metres	Appears stable	Sound branch attachment	Moderate health	Fair vigour	5%	Decay in pruning wounds	2 Medium (15 to 40 years)	Low to moderate landscape significance	3	At the time of inspection the tree was of moderate health and fair vigour and exhibited significantly reduced foliage size and density.
43	<i>Nyssa sylvatica</i> (Nyssa, Tupelo)	8	8	310	310	340	Good foliage condition	Mature	Single trunk	Upright trunk	Balanced canopy area	Lower branches pruned in past to 2 metres	Appears stable	Sound branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	1 Long (> 40 years)	Moderate landscape significance	2	
44	<i>Thuja spp CV</i> (Thuja cultivar - Golden Form)	4	2	100, 120	165	220	Poor foliage condition	Mature	Twin trunked	Slight trunk lean to the west	Majority to west	Lower branches pruned in past to 1.6 metres	Appears stable	Sound branch attachment	Poor health	Poor vigour	50%	Decay in pruning wounds	4 (< 5 years)	Low landscape significance	4	The tree's past canopy development has been suppressed. At the time of inspection the tree was of poor health and poor vigour and exhibited very high levels of dieback and recent foliage browning during high temperatures.
45	<i>Chamaecyparis obtusa</i> 'Tetragona Aurea' (Hinoki False Cypress)	4.5	4	100, 170	205	230	Fair foliage condition	Mature	Twin trunked	Distinct trunk lean to the west	All canopy to the WEST	Lower branches pruned in past to 2.5 metres	Stability is suspect	Fair branch attachment	Good health	Fair vigour	10 to 15%	No visual evidence of significant pest or disease	3 Short (5 to 15 years)	Low landscape significance	3	The tree is considered to be at increased risk of failure following partial past failure (windthrow). At the time of inspection the tree was of fair vigour and exhibited low to moderate levels of dieback.

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46	<i>Grevillea CV</i> (Grevillea cultivar - Misty Pink)	4	4	Up to 120 (230 above root flare)	230	230	Good foliage condition	Mature	Multi trunked	Upright trunk	Balanced canopy area	Lower branches pruned in past to 1.7 metres	Appears stable	Sound branch attachment	Good health	Fair vigour	10%	No visual evidence of significant pest or disease	3 Short (5 to 15 years)	Low to moderate landscape significance	3	At the time of inspection the tree was of fair vigour and exhibited low levels of dieback.
47	<i>Camellia sasanqua</i> (Chinese Camellia)	3.5	3	Up to 20 (ca. 220 above root flare)	220	220	Good foliage condition	Mature	Multi trunked	Upright trunk	Balanced canopy area	Crown has been hedged for shape in the past	Appears stable	Sound branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	1 Long (> 40 years)	Low to moderate landscape significance	3	
48	<i>Camellia sasanqua</i> (Chinese Camellia)	3	3	Up to 60 (ca. 250 above root flare)	250	250	Good foliage condition	Mature	Multi trunked	Upright trunk	Balanced canopy area	Crown has been hedged for shape in the past	Appears stable	Sound branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	1 Long (> 40 years)	Low to moderate landscape significance	3	
49	Dead tree	6	6	ca. 700	N/A	900	Dead tree														4	Dead tree with very heavy growth of English Ivy that has been shaped by pruning. No live foliage from original tree observed.
50	<i>Lophostemon confertus</i> (Brushbox)	10	10	ca. 800	800	1000	Good foliage condition	Mature	Single trunk	Upright trunk	Balanced canopy area	Lower branches pruned in past to 4 metres	Appears stable	Sound branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	High landscape significance	1	Located in adjoining property to south and approx. 0.7 metres from boundary.
51	<i>Olea europaea subsp. cuspidata</i> (African Olive)	10	6	ca. 220, 280	220	320	Good foliage condition	Semi Mature	Single trunk	Upright trunk	Balanced canopy area	No evidence of significant past pruning	Appears stable	Sound branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Environmental pest species of moderate visual significance	4	Located in adjoining property to south and approx. 0.4 metres from boundary.
52	<i>Olea europaea subsp. cuspidata</i> (African Olive)	9	3	ca. 160	160	230	Good foliage condition	Semi Mature	Single trunk	Upright trunk	Majority of canopy to the north	Lower branches pruned for building on north	Appears stable	Sound branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Environmental pest species of low to moderate visual significance	4	Located in adjoining property to south and approx. 0.3 metres from boundary.
53	<i>Pittosporum undulatum</i> (Native Daphne, Sweet Pittosporum)	9	2 x 4	ca. 140	140	240	Fair foliage condition	Semi Mature	Single trunk	Upright trunk	Majority of canopy on a N x S axis	Lower branches pruned in past to 1.1 metres	Appears stable	Sound branch attachment	Moderate health	Fair vigour	10%	Leaf Miner present	3 Short (5 to 15 years)	Low to moderate landscape significance	3	The tree's past canopy development has been suppressed. At the time of inspection the tree was of moderate health and fair vigour and exhibited reduced foliage size and density and low to moderate leaves of dieback. Located in adjoining property to south and approx. 1 metre from boundary.
54	<i>Jacaranda mimosifolia</i> (Jacaranda)	11	11	ca. 250, 340, 400	745	675	Good foliage condition	Mature	Multi trunked	Upright trunk	Balanced canopy area	Lower limbs pruned in past to 3 metres, upper branches pruned for building on north	Appears stable	Fair branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	High landscape significance	1	The tree displays fair branch attachment with codominant leaders from ground level and multiple leaders form near ground level with evidence of poor attachment at the junction - the junctions are weak points in the tree's structure with increased risk of failure but are not considered at risk of failure in the short term - monitoring recommended. NB: Limited view of junctions. Located in adjoining property to south and approx. 0.5 metres from boundary.
55	<i>Acer buergerianum</i> (Trident Maple)	6	5	Up to ca. 100 (ca 230 above root flare)	230	230	Good foliage condition	Semi Mature	Multi trunked	Upright trunk	Balanced canopy area	No evidence of significant past pruning	Appears stable	Fair branch attachment	Good health	Good vigour		No visual evidence of significant pest or disease	1 Long (> 40 years)	Moderate landscape significance	2	Located in adjoining property to south and approx. 1.2 metres from boundary.
56	<i>Callistemon viminalis</i> (Weeping Bottlebrush)	6	4 x 6	ca. 200	200	270	Fair foliage condition	Mature	Single trunk	Slight trunk lean to the east	Majority of canopy to east	Lower branches pruned in past to 1.6 metres	Appears stable	Sound branch attachment	Moderate health	Fair vigour	10 to 15%	No visual evidence of significant pest or disease	3 Short (5 to 15 years)	Low to moderate landscape significance	3	Located in adjoining property to south and approx. 1.2 metres from boundary. At the time of inspection the tree was of moderate health and fair vigour and exhibited reduced foliage size and density and moderate levels of dieback.
57	<i>Lagunaria patersonia</i> (Norfolk Island Hibiscus)	14	7	540	540	650	Good foliage condition	Mature	Single trunk	Upright trunk	Balanced canopy area	No evidence of significant past pruning	Appears stable	Sound branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Moderate to high landscape significance	2	Located in adjoining property to south and approx. 0.7 metres from boundary.

Tree No.	Genus, Species (Common Name)	Height (m)	Canopy (m)	DBH (mm)	DBH for TPZ	DGL for SRZ	Foliage Condition	Age Class	Trunk	Trunk Lean	Crown balance	Past Pruning	Stability	Branch Attachment	Health	Vigour	Dead Wood	Pest or disease	ULE	Landscape Significance	Retention Value*	Comments
58	<i>Pittosporum undulatum</i> (Native Daphne, Sweet Pittosporum)	7	8	280	280	390	Good foliage condition	Mature	Single trunk	Distinct trunk lean to west for 0.6 metres	Balanced canopy area	Lower branches pruned in past to 1.6 metres	Displays signs of instability	Fair branch attachment	Moderate health	Fair vigour	10 to 15%	Leaf Miner present	2 Medium (15 to 40 years)	Moderate landscape significance	2	Located in adjoining property to south and approx. 0.5 metres from boundary. The tree displays signs of instability with evidence of past failure at ground level (butt sweep exhibited with distinct trunk lean to west for 0.6 metres). At the time of inspection the tree was of moderate health and fair vigour and exhibited moderate to high levels of dieback.
59	<i>Pittosporum undulatum</i> (Native Daphne, Sweet Pittosporum)	8	4 x 8	200	200	230	Good foliage condition	Mature	Single trunk	Upright trunk	Majority of canopy on a N x S axis	No evidence of significant past pruning	Appears stable	Fair branch attachment	Moderate health	Fair vigour	10 to 15%	Leaf Miner present	3 Short (5 to 15 years)	Moderate landscape significance	3	Located in adjoining property to south and approx. 0.5 metres from boundary. The tree's past canopy development has been suppressed. At the time of inspection the tree was of moderate health and fair vigour and exhibited low to moderate levels of dieback.
60	<i>Olea europaea subsp. cuspidata</i> (African Olive)	13	12	400 x 460	430	510	Good foliage condition	Mature	Single trunk	Upright trunk	Balanced canopy area	Lower branches pruned in past to 3.5 metres including large diameter branches	Appears stable	Sound branch attachment	Good health	Good vigour	5 to 10%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Environmental pest species of moderate to high visual significance	4	Located in adjoining property to south and approx. 0.5 metres from boundary. At the time of inspection the tree exhibited low to moderate levels of dieback.
61	<i>Celtis sinensis</i> (Chinese Hackberry)	14	12	300, 310	460	490	Good foliage condition	Mature	Twin trunked	Slight trunk lean to NE	Majority of canopy to NE	Lower branches pruned in past to 4 metres	Appears stable	Poor branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	3 Short (5 to 15 years)	Environmental pest species of moderate visual significance	4	Located in adjoining property to south and approx. 1.1 metres from boundary. The tree's past canopy development has been suppressed by an immediately adjacent Celtis to the south. The tree displays poor branch attachment with codominant leaders form near ground level with evidence of poor attachment at the junction - the junction is a weak point in the tree's structure with increased risk of failure. Large diameter, partially exposed woody roots from the tree are growing into the site.
62	<i>Acer buergerianum</i> (Trident Maple)	12	10	430	430	520	Good foliage condition	Mature	Single trunk	Upright trunk	Balanced canopy area	Lower branches pruned in past to 3 metres, leaders severely reduction pruned at 3 to 4 metres in past	Appears stable	Poor branch attachment	Good health	Good vigour	<5%	Decay in pruning wounds	3 Short (5 to 15 years)	Moderate to high landscape significance	3	The tree displays poor branch attachment with multiple poorly attached regrowth following severe past reduction pruning ('topped' at 3 to 4 metres). The tree's structural integrity has been compromised.
63	<i>Liquidambar styraciflua</i> (Liquidambar)	19	24	Up to 540 (1000 x 1360 above root flare)	1180	1180	Good foliage condition	Mature	Multi trunked	Upright trunk	Balanced canopy area	Lower branches pruned in past to 4 metres	Appears stable	Fair to poor branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	3 Short (5 to 15 years)	High landscape significance	3	The tree displays fair to poor branch attachment with multiple leaders from 1 metre with evidence of poor attachment and multiple past branch failures including a very recent failure (e.g. at 5 metres on south and 6 metres on east).
64	<i>Fraxinus Raywood</i> (Claret Ash)	10	6 x 10	680	680	710	Fair foliage condition	Mature	Single trunk	Upright trunk	Balanced canopy area	Lower branches pruned in past to 2.5 metres	Appears stable	Poor branch attachment	Moderate health	Poor vigour	15 to 20%	No visual evidence of significant pest or disease	3 Short (5 to 15 years)	Moderate landscape significance	3	The tree displays poor branch attachment with evidence of multiple pasty branch failure including large diameter branches at 2 metres on south. At the time of inspection the tree was of moderate health and poor vigour and exhibited high levels of dieback.
65	<i>Agonis flexuosa</i> (Willow Myrtle)	9	7 x 12	Up to 520 (860 above root flare)	860	860	Fair foliage condition	Mature	Multi trunked	Upright trunk	Majority of canopy on an east x west axis	Lower branches pruned in past to 3.5 metres	Stability is suspect	Poor branch attachment	Good health	Fair vigour	5 to 10%	Extensive decay in basal trunk	Structurally compromised - immediate removal recommended	Moderate landscape significance	4	The tree exhibits poor branch attachment with multiple leaders with evidence of poor attachment and partial past failure and extensive decay at the junction. Th tree is considered to be unstable with evidence of significant past decay and associated hollow in the basal trunk with hollow opening to east and associated loss of root function. The tree is considered to be structurally compromised and at risk of failure in the short term - immediate removal recommended.
66	<i>Ficus coronata</i> (Sandpaper Fig)	8	8	320, 330	490	490	Good foliage condition	Mature	Twin trunked	Upright trunk	Balanced canopy area	Lower branches pruned in past to 3 metres	Appears stable	Fair branch attachment	Moderate health	Fair vigour	20%	Sawfly larvae damage to foliage, evidence of extensive past decay in basal trunk with hollow opening to NE side	3 Short (5 to 15 years)	Moderate landscape significance	3	The tree exhibits evidence of extensive past decay in the basal trunk with a large hollow in the basal trunk opening to the NE side at ground level. There is evidence of extensive past tissue loss in the lower/basal trunk on the west side. At the time of inspection the tree was of moderate health and fair vigour and exhibited high levels of dieback and epicormic growth.

Tree No.	Genus, Species (Common Name)	Height (m)	Canopy (m)	DBH (mm)	DBH for TPZ	DCL for SRZ	Foliage Condition	Age Class	Trunk	Trunk Lean	Crown balance	Past Pruning	Stability	Branch Attachment	Health	Vigour	Dead Wood	Pest or disease	ULE	Landscape Significance	Retention Value*	Comments
67	<i>Alnus glutinosa</i> (Common Alder, Black Alder)	4	5	260	260	380	Fair foliage condition	Mature	Single trunk	Upright trunk	Balanced canopy area	Lower branches pruned in past to 1.7 metres	Displays signs of instability	Fair branch attachment	Poor health	Poor vigour	30%	Extensive decay in basal trunk	3 Short (5 to 15 years)	Low to moderate landscape significance	3	The tree displays signs of instability with evidence of extensive decay in the basal trunk - not considered at risk of failure in the short term. At the time of inspection the tree was of poor health and poor vigour and exhibited very high levels of dieback (main leader dead from 3 metres).
68	<i>Pistacia chinensis</i> (Chinese Pistacia, Pistacia)	5	6	240	240	280	Good foliage condition	Semi Mature	Single trunk	Upright trunk	Majority of canopy to the west due to recent failure of leader	No evidence of significant past pruning	Appears stable	Poor branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	4 (<5 years)	Low landscape significance	4	Majority of canopy to the west due to recent failure of main leader. The tree displays poor branch attachment with a recent failure of the main leader at 2 metres - there is evidence the junction had partially failed in the past with complete failure subsequently occurring in the very recent past. The tree is considered to be structurally compromised following this failure with a poorly attached branch growing to the west considered to be at risk of failure in the short term. Removal recommended.
69	<i>Camellia sasanqua</i> (Chinese Camellia)	5	6	180, 220	300	340	Good foliage condition	Mature	Twin trunked	Upright trunk	Majority of canopy to the east	Lower limbs pruned to 2.5 metres, upper branches pruned for stairs on west side.	Appears stable	Sound branch attachment	Good health	Good vigour	<5%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Moderate landscape significance	2	Canopy bias to the east due to building to west and pruning for clearance to staircase.
70	<i>Elaeocarpus reticulatus</i> (Blue Berry Ash)	7	4 x 6	120, 190	235	250	Good foliage condition	Mature	Twin trunked	Upright trunk	Balanced canopy area	Lower branches pruned in past to 1.6 metres	Appears stable	Fair branch attachment	Good health	Fair vigour	5 to 10%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Moderate landscape significance	2	At the time of inspection the tree was of fair vigour and exhibited reduced foliage size and density in the upper canopy and low levels of dieback.
71	<i>Aurantiarca rhombifolia</i> , syn. <i>Pittosporum rhombifolium</i> (Diamond Leaved Pittosporum)	3.5	3	Up to 75 (180 above root flare)	180	180	Good foliage condition	Mature	Multi trunked	Upright trunk	Balanced canopy area	Lower branches pruned in past to 1.8 metres	Appears stable	Fair branch attachment	Good health	Fair vigour	5%	No visual evidence of significant pest or disease	2 Medium (15 to 40 years)	Low landscape significance	3	The tree displays fair branch attachment with multiple leaders form 0.7 metres - not considered at risk of failure in the short term.

ca = approximate diameter at breast height (DBH) estimated from nearest property boundary or fence where trees were located on adjoining properties

* Retention Values: 1 - High (Priority for retention); 2 - Moderate (Consider for retention); 3 - Low or short ULE (Not warranting specific design consideration) and 4 - Remove (very short ULE, structurally unsound, weed species etc.)

