Arboricultural Impact Assessment Report

49 Blackbutts Road, Frenchs Forest, NSW, 2086

Prepared for
Sekisui House Pty Ltd
Prepared by
Tarek Hussein
AQF Level 5 Consulting Arborist
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Version 2.0

The Tree Guardian
Arboricultural Consultancy
2/53A Park Road, Carlton NSW 2218
E: info@thetreeguardian.com.au
M: 0404 524 526

1.0 CONTENTS

2.0 INTRODUCTION

This report was commissioned by Joseph Mourched of Sekisui House Services (NSW) Pty Ltd to accompany the Development Application for the Demolition of existing structures located at 49 Blackbutts Road, Frenches Forest, NSW, 2086. Revisions to version 2.0 include the amendment of tree numbering mistakes within *Section 5.0: Observations* and *Section 9.0 Recommendations.*

The purpose of this report is to assess the current health and condition of individual trees within the site and any tree outside the site (including trees in neighbouring properties, street trees, and park trees) that may be impacted by the proposed development.

The report has been prepared in accordance with the *State Environmental Planning Policy (Biodiversity and Conservation) 2021*, *Warringah Development Control Plan 2011 Part E The Natural Environment,* the Australian Standards *'AS4970:2009 - Protection of Trees on Development Sites'* and the Australian Standards *'AS4373:2007 – Pruning of Amenity Trees'*.

3.0 METHODOLOGY

An assessment of any tree contained within this report was limited to a visual assessment from ground level. A summary of the findings from the assessment are detailed in the Tree Assessment Schedule appended to this report. Information included in the table which will be relied upon throughout the report and form the basis of the discussions and recommendations includes:

- Species Name
- Height and Spread (metres)
- Diameter at Breast height (DBH)
- Age Class
- Health
- Structure
- Landscape Significance
- Remaining Life Expectancy
- Retention Value
- Tree Protection Zone (TPZ)
- Structural Root Zone (SRZ)

(See Appendix A - Definition and Criteria for further explanation)

The height and canopy spread of each tree was estimated. A metric diameter measuring tape was used to establish the trunk Diameter at Breast Height (DBH) and is recorded in millimetres.

A Smart Phone was used for the purpose of providing photographic evidence which may be cross referenced by persons who have obtained this report for the purpose of reading and analysing the information that has been discussed throughout.

Aerial inspection, root or soil analysis, exploratory root trenching and internal diagnostic testing has not been undertaken.

3.1 Tree Protection Zone and Structural Root Zone

The Tree Protection Zone (TPZ) and Structural Root Zone (SRZ) has been calculated in accordance with the *Australian Standard AS 4970-2009, 'Protection of Trees on Development Sites'.*

4.0 SITE DESCRIPTION

The subject site is known as 49 Blackbutts Road, Frenchs Forest, NSW, 2086. The subject site is irregular in shape and is approximately 9975m2 in land size. The site land is zoned category R2: Low Density Residential pursuant to the *Warringah Local Environmental Plan 2011 (pub. 14-2-2014)* and is legally defined as Lot 1 in Deposited Plan 1298188.

Soil of this area is typical of the Lambert Landscape Group (as classified in the Soil Landscapes of Sydney – Port Hacking 1:100,000 Sheet). Lambert soils consisting of shallow (<50cm) discontinuous Earthy Sands and Yellow Earths on crests and insides of benches, shallow (<20cm) Siliceous Sands/Lithosols on leading edges, shallow to moderately deep (<150cm) Leached Sands, Grey Earths and Gleyed Podzolic Soils in poorly drained areas, localised Yellow Podzolic Soils associated with shale lenses.

Figure 1 - Aerial view of subject site (source: SIX Maps)

4.1 Legislation and Planning Controls

Planning Control	Relevant	Not Relevant
Land Zoning	**R2**	
10/50 Vegetation Clearing Entitlement Area		✓
Acid Sulfate Soils		✓
Foreshore Building Line		✓
Flood Prone Land		✓
Heritage Conservation Area		✓
Heritage Listed Site		✓
Landslide Risk Land	✓	

5.0 OBSERVATIONS

5.1 Trees

A total of 149 trees were inspected between the 13th and 14th of June 2023. The general health of the trees has been assessed as ranging from good to very poor with their structural condition assessed as ranging from good to poor. Individual assessment findings are detailed in Appendix C - Tree Assessment Schedule.

5.2 Tree Significance

Determined by an assessment of the cultural, environmental and aesthetic value of individual trees - Appendix B, the following Landscape Significance findings were made for the 149 assessed trees.

Significance Scale:
1 – High
2 – Medium
3 – Low
4 - Insignificant

Significance	High	Medium	Low	Insignificant
Tree Number	4, 42, 55, 71, 83 & 119	1, 2, 3, 5, 7, 8, 9, 11, 12, 14, 16, 17, 19, 20, 22, 27, 31, 33, 36, 38, 39, 40, 41, 43, 44, 46, 47, 49, 51, 52, 54, 56, 57, 58, 59, 60, 65, 67, 75, 84, 86, 90, 91, 96, 98, 99, 103, 104, 105, 107, 108, 110, 111, 113, 114, 126, 127, 128, 131, 140, 141, 142, 145 & 147	6, 10, 13, 15, 18, 21, 23, 24, 25, 26, 28, 29, 30, 32, 34, 35, 37, 45, 48, 50, 53, 61, 62, 63, 64, 66, 68, 69, 70, 72, 73, 74, 76, 77, 78, 79, 80, 81, 82, 85, 87, 88, 89, 94, 95, 97, 100, 101, 102, 106, 109, 112, 115, 116, 117, 118, 120, 121, 122, 123, 124, 125, 129, 130, 132, 133, 134, 135, 136, 137, 138, 139, 143, 144, 146, 148 & 149	-

5.3 Tree Retention Values

Determined by combining the Useful Life Expectancy and Landscape Significance Rating into the Retention Value Matrix - Appendix B, the following Retention Values were given for the 149 assessed trees.

Retention Value
High – Priority for Retention
Medium – Consider for Retention
Low – Consider for Removal
Insignificant – Priority for Removal

Retention Value	High	Medium	Low
Tree Number	4, 42, 55, 71, 83 & 119	1, 2, 3, 5, 7, 8, 9, 11, 12, 14, 16, 17, 19, 20,	6, 10, 13, 15, 18, 21, 23, 24, 25, 26, 28, 29, 30,

		22, 27, 31, 33, 36, 38, 39, 40, 41, 43, 44, 46, 47, 49, 51, 52, 54, 56, 57, 58, 59, 60, 65, 67, 75, 84, 86, 90, 91, 92, 93, 96, 98, 99, 103, 104, 105, 107, 110, 111, 113, 126, 127, 128, 131, 140*, 141*, 142*, 145* & 147*	32, 34, 35, 37, 45, 48, 50, 53, 61, 62, 63, 64, 66, 68, 69, 70, 72, 73, 74, 76, 77, 78, 79, 80, 81, 82, 85, 87, 88, 89, 94, 95, 97, 100, 101, 102, 106, 108, 109, 112, 114, 115, 116, 117, 118, 120, 121, 122, 123, 124, 125, 129, 130, 132, 133, 134, 135, 136, 137, 138, 139, 143*, 144* 146*, 148* & 149*

*Trees within neighbouring property should be retained and protected regardless of retention value

6.0 THE PROPOSAL

The proposed development includes:

- Demolition of the existing dwellings and structures
- Cut & fill activity to level and prepare land.

The following plans have been reviewed:

Dwg No.	Revision	Plan Name	Date	Prepared by
1	-	Plan of Detail & Levels	20/04/2021	LTS
2	-	Plan of Detail & Levels	20/04/2021	LTS
1/4	D	Survey Plan	16/01/2024	CLD Studio
2/4	D	Overall Demolition Plan	16/01/2024	CLD Studio
3/4	D	Demolition Plan (1:200)	16/01/2024	CLD Studio
4/4	D	Demolition Plan (1:200)	16/01/2024	CLD Studio
C04.01	1	Earthworks Cut & Fill Plan	07/03/2024	Enspire Solutions Pty Ltd

7.0 TREE PROTECTION STANDARDS

This report adopts the Australian Standard *'AS4970-2009, Protection of Trees on Development Sites'* as a point of reference and guide for the recommended minimum setbacks from the centre of a tree's trunk to development works.

7.1 Tree Protection Zone (TPZ)

The Tree Protection Zone (TPZ) is a radial distance measured from the centre of the tree trunk at 1.4 metres in height and are specified for each tree in Appendix D – Tree Impact Schedule. These have been calculated in accordance with *'AS4970-2009 - Protection of Trees on Development Sites'*

The purpose of the TPZ is to ensure the tree's root area and crown area are protected during construction works. It is an area that is to be isolated from construction disturbances such as excavation, level changes, ripping of soil, trenching and movement of construction machinery, so that the tree remains viable into the future.

7.2 Structural Root Zone (SRZ)

The Structural Root Zone is an area which provides a trees structural stability. This is a radial distance calculated by formula (D x 50) 0.42 x 0.64. An SRZ should not be less than 1.5 metres.

This area should be completely restricted from construction activities unless clearly demonstrated that the works will not adversely impact on a trees stability or viability.

7.3 Incursion into TPZ

Encroachments into a TPZ may be possible where it is assessed by a suitable qualified AQF Level 5 Arborist and deemed to be acceptable without being detrimental to the ongoing vigour of a tree.

- Minor Encroachment of 10% or less of the TPZ area and outside of the Structural Root Zone (SRZ) is generally considered acceptable. However, the area lost should be compensated for elsewhere and only be restricted to one side of the tree. Other factor such as health, condition, age, species type and tolerance to disturbance, as well as lean and stability must also be considered when establishing if the encroachment is acceptable and won't adversely impact on the tree.

- Major Encroachment of more than 10% of the TPZ area will require detailed investigation to establish if the tree will remain viable. Such investigation should involve either root investigation or consideration of health, condition, age, species type and tolerance to disturbance, lean and stability.

8.0 IMPACT ASSESSMENT

8.1 Site Trees TPZ and SRZ Calculations

TPZ and SRZ calculations have been made for all trees captured within *Appendix C – Tree Assessment Schedule* and can be viewed within *Appendix D – Tree Impact Schedule*. The encroachment into the TPZ of each tree has been nominated as either 'No Incursion', 'Minor', 'Major' or 'Within Footprint' based on the criteria outline within *Section 7.0 Tree Protection Standards*.

8.2 Proposed Development Assessment Findings

Exempt Trees

A total of 56 trees within the site are listed as exempt due to their size, species or location and as per the *Northern Beaches Council Website 'What you can do without a Council permit'* Council consent is not required for their removal.

Tree's 6, 26, 32, 33, 40, 51, 56, 58, 61, 62, 63, 65, 66, 68, 69, 70, 73, 76, 78, 80, 87, 90, 92, 93, 94, 95, 102, 107, 108, 109, 110, 111, 112, 113, 115, 116, 117, 118, 119, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 138 & 139 are all listed as exempt trees which may be removed without a permit due to the following circumstances.
The tree is:

- Under 5 metres in height
- On the Exempt Tree Species List
- In an area in which the Council has authorised their removal as part of a hazard reduction program, where that removal is necessary in order to manage risk

- Required to be removed under other legislation (including the NSW Rural Fires Act 1997 and the Environmental Planning and Assessment Act 1979)
- Can be removed under the 10/50 Legislation. Some clearing of vegetation is allowed if your property is mapped in the 10/50 entitlement area. Development Application Approval conditions in some circumstances prevent the use of the RFS 10/50 entitlement area from being used.
- Removed by Rural Fire Services because they pose or will pose a significant threat to access along required fire trails or to human life, buildings or other property during a bush fire
- Located within two metres of an existing approved building (not including decks, pergolas, sheds, patios or the like, even if they are attached to a building). The measurement is made from the building to the base of the tree trunk.
- Is considered a high risk/imminent danger certified by a Level 5 qualified arborist. These trees can be removed without Council consent by the owner of the tree subject to the owner obtaining written confirmation from the arborist that clearly states:

a) The arborist qualifications: AQF Level 5 Arborist or equivalent
b) That the tree(s) is declared an imminent danger and high risk to life and property
c) That immediate removal of the tree(s) is recommended
d) A copy of the report must be sent to Council for record keeping purpose

- Any tree listed as a priority weed under the Bio Security Act 2015 and identified in the Greater Sydney Regional Weed Management Plan.
- Dead, and not required as the habitat of native animals - photographic evidence recommended
- Has fallen or partially fallen as a result of a storm and still present a danger (photos required)
- Part of the pruning or removal of hedges (unless hedge is conditioned to be retained in a development consent). “Hedge” means groups of two or more trees that:

(a) are planted (whether in the ground or otherwise) so as to form a hedge, and
(b) rise to a height of at least 2.5 metres (above existing ground level).

Trees within the Footprint

The proposed demolition will require the removal of 24 trees that have not already been listed as exempt, which are located within the footprint of the construction activity required to demolish and remove existing structures. They have been identified as Tree’s 62, 64, 83, 84, 85, 86, 88, 89, 91, 96, 97, 98, 99, 100, 101, 103, 104, 105, 106, 107, 108, 110, 114 & 137.

Out of the 24 trees 12 have been attributed with a ‘Low’ retention value, 11 with a ‘Medium’ retention value and 1 with a ‘High’ retention value. A breakdown of retention value by identification number is as follows:

Low: 62, 64, 85, 88, 89, 97, 100, 101, 106, 108, 114 & 137
Medium: 84, 86, 91, 96, 98, 99, 103, 104, 105, 107 & 110
High: 83

Tree 83: *Eucalyptus botryoides* – Remove

Tree 83 is located within the centre of the site with the supplied plans showing demolition of surrounding structures inclusive of buildings, retaining walls and an elevated concrete walkway required. The tree is situated within a grassed area that does not show demolition to occur within the demolition plan, however, the closest relative levels show RL +159.87 & +160.05, the area is significantly lower than its surrounds with a variance of change of 3.29m within 12m of the trunk when measured to the East.

The *Earthworks Cut & Fill Plan, drawing no. C04.01 revision 1, dated 7/3/2024, prepared by Enspire Solutions Pty Ltd* shows the area requires greater than 2.5m of fill within parts of the TPZ. The entirety of the TPZ area will be raised by at least 1.5m.

The tree exhibits 'High' retention values that warrants retention and major design consideration however, there are no practical options that exist to retain the tree should the proposed demolition be approved. Furthermore, the tree is within the work area of heavy plant and machinery required for the removal of structures and fill of land. Tree removal is required.

Trees with a Major Incursion

Tree 8: *Corymbia maculata* - Retain

The supplied plans indicate Tree 8 will be subject to a 20.7% Major encroachment from demolition and removal of the driveway. The tree was noted to be in good health, structure and form presenting 'Medium' retention values. Sensitive construction measures including demolition of the driveway by hand using hand powered tools within the TPZ and ensuring no level changes occur will allow for the tree to be retained.

Tree 10: *Corymbia gummifera* - Remove

The supplied plans indicate Tree 10 will be subject to a 38.07% Major encroachment from demolition and removal of the driveway. The tree was noted to be in fair to poor health, with a fair structure and form.

The tree was awarded a 'Short' ULE rating, is considered to be of 'Low' Landscape Significance resulting in 'Low' retention values. Demolition works are considered major with works occurring through the SRZ, the tree is not in a condition that would tolerate construction activity and is a poor candidate for retention. Tree removal is required.

Tree 11: *Eucalyptus resinifera* – Retain

Tree 11 will experience an 11.6% encroachment from the removal of the footpath running through its SRZ. The tree presents 'Medium' retention values and is a good candidate for retention. Provided sensitive construction measures including demolition of the driveway by hand using hand powered tools and ensuring no level changes occur within the TPZ/SRZ, the encroachment is deemed acceptable. The TPZ can be increased on the East side to offset encroachment and minimise impact on the tree.

Tree 23: *Corymbia gummifera* – Remove

This 'Low' retention value tree will experience a 39.9% TPZ encroachment from the demolition and removal of the driveway. The tree should not be a construction constraint, removal is required.

Tree 28: *Eucalyptus botryoides* – Remove

This 'Low' retention value tree will experience a 33.1% TPZ encroachment from the demolition and removal of the driveway. The tree should not be a construction constraint, removal is required.

Tree 55: *Eucalyptus microcorys* – Retain

Standing at 25m tall with a 25m canopy spread this mature Tallow wood was observed to be in good health, structural condition and form at the time of inspection. This asset was awarded a 'Long' ULE rating, is considered to be of 'High' Landscape Significance resulting in 'High' retention values. Effort should be made to retain the tree.

The supplied plans indicate a 37.4% major encroachment from the demolition and removal of the existing driveway. Using sensitive construction measures, the driveway within the TPZ of Tree 55 and leading to the Blackbutts Road entrance is to remain in-situ until demolition works have been completed for the rest of the site. Leaving the driveway will allow access for truck and machinery thoroughfare without damaging and compacting exposed roots.

The driveway is then to be removed by hand using hand powered tools within Tree 55's TPZ. Upon completion of work within the TPZ, the exposed subgrade is to be protected by installation of rumble boards for the duration of construction and development of the site or until permitted to remove by either Council or the AQF Level 5 Project Arborist.

The tree is to be retained and protected in accordance with *AS4970:2009 – Protection of Trees on Development Sites.*

Tree 59: *Eucalyptus botryoides* – Remove

Tree 59 will experience a 42.1% encroachment from the removal of the footpath and site levelling with works occurring through its SRZ. The tree presents 'Medium' retention values and should be considered for retention however, there are no mitigation options that exist that will reduce encroachment to an acceptable level. Tree removal is required.

Tree 60: *Magnolia x soulangeana* – Remove

Tree 60 will experience a 42.1% encroachment from the removal of the footpath and site levelling with works occurring through its SRZ. The tree presents 'Medium' retention values and should be considered for retention however, there are no mitigation options that exist that will reduce encroachment to an acceptable level. Tree removal is required.

Tree 71: *Corymbia maculata* - Retain

The supplied plans indicate Tree 71 will be subject to an 18.5% Major encroachment from demolition of the stonewall and elevated concrete walkway. The tree was awarded a 'Long' ULE rating, is considered to be of 'High' Landscape Significance resulting in 'High' Retention Values.

Site specific protection measures include removal of the stonewall by hand or using hand powered tools. As the elevated walkway is an above ground structure it is unlikely to impact the tree if removed working towards the East and away from the asset.

The relative level of the land surrounding the trunk was noted to be +162.83 with the base of the stone wall recorded at +160.41. A root investigation to a depth of 600mm is to be undertaken after removing the sandstone wall and hard paved surfaces, should there be a heavy presence of roots,

the area is to have geo grids installed prior to back filling and site levelling to ensure limited soil compaction occurs.

Tree 72: *Corymbia maculata* - Remove

This 'Low' retention value tree will experience a 32.8% TPZ encroachment from the demolition of the stonewall and elevated concrete walkway. The tree should not be a construction constraint, removal is required.

Tree 74: *Corymbia maculata* - Remove

This 'Low' retention value tree will experience a 15.5% TPZ encroachment from the demolition of the stonewall and elevated concrete walkway. The tree should not be a construction constraint, removal is required.

Tree 75: *Livistona australis* - Remove

The supplied plans indicate Tree 75 will be subject to a 32.8% Major encroachment from demolition of the stonewall and elevated concrete walkway. The tree was awarded a 'Long' ULE rating, is considered to be of 'Medium' Landscape Significance resulting in 'Medium' Retention Values.

As removal of the stonewall will occur close to the trees rootball, it is expected soil structural integrity will be altered with the potential for some soil failure occurring prior to the backfill. The associated hazards and risk of tree failure resulting from soil disturbance through the rootball outweighs the benefits for retention. Tree removal is required.

Tree 140: *Eucalyptus botryoides* – Retain

Located on a neighbouring property, Tree 140 will be subject to a 19.0% TPZ encroachment from the demolition of the main building. Sensitive construction is to include removal of the building to ground level by working backwards (East) and away from the tree if using machinery. Once at ground level, the remaining structure is to be removed by hand or using hand powered tools when working within the TPZ.

Tree 142: *Melaleuca quinquenervia* – Retain

Located on a neighbouring property, Tree 142 will be subject to a 29.9% TPZ encroachment from the demolition of the driveway. Sensitive construction to include retention of driveway for as long as reasonable possible before removing by hand using hand powered tools when working within the TPZ. Rumble boards are then to be installed over the exposed subgrade for the duration of construction and development of the site or until permitted to remove by either Council or the AQF Level 5 Project Arborist.

Tree 144: *Grevillea robusta* – Remove

Located on a neighbouring property, Tree 144 will be subject to a 15.2% TPZ encroachment from the demolition of the driveway. Sensitive construction to include retention of driveway for as long as reasonable possible before removing by hand using hand powered tools when working within the TPZ. Rumble boards are then to be installed over the exposed subgrade for the duration of construction and development of the site or until permitted to remove by either Council or the AQF Level 5 Project Arborist.

Tree 145: *Jacaranda mimosifolia* – Retain

Located on a neighbouring property, Tree 145 will be subject to a 14.3% TPZ encroachment from the demolition of the driveway. Sensitive construction to include retention of driveway for as long as reasonable possible before removing by hand using hand powered tools when working within the TPZ. Rumble boards are then to be installed over the exposed subgrade for the duration of construction and development of the site or until permitted to remove by either Council or the AQF Level 5 Project Arborist.

Tree 147: *Livistona australis* – Retain

Located on a neighbouring property, Tree 147 will be subject to a percieved 15.3% TPZ encroachment from the demolition of an outbuilding. The tree has at least a 1m setback from the boundary and exhibits a fibrous root system. No actual encroachment is anticipated other than the potential of site runoff. Sediment control traps are to be installed at the base of site / temporary fencing.

Trees with a Minor Incursion

All encroachments of the following trees are deemed to be within the acceptable limits as defined by *AS4970:2009 – Protection of Trees on Development Sites;*

Tree 1, 3, 4, 5, 24, 146 & 148 all have TPZ encroachments less than 10.0% and are all proposed for retention. Tree protection in accordance with *AS4970:2009 – Protection of Trees on Development Sites, Section 8.3 – Site Specific Protection Measures & Appendix B: Tree Protection (Generic)* of this report are to be adhered to ensure their long-term retention.

Tree 148 may require minor pruning of small diameter branches back to the fence line. Tree 148 consists of several fruit bearing trees, all pruning work is to be undertaken in accordance with *AS4373:2007 – Pruning of Amenity Trees.*

Trees with No Incursion

Tree's 2, 6, 7, 9, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 25, 27, 29, 30, 31, 32, 34, 35, 36, 37, 38, 39, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 52, 53, 54, 57, 67, 77, 79, 81, 82, 120, 121, 141, 143 & 149 are not expected to have their TPZ encroached upon.

Tree's 2, 9, 12, 13, 14, 17, 18, 19, 20, 21, 22, 25, 27, 30, 31, 32, 34, 35, 36, 37, 38, 39, 41, 42, 43, 44, 46, 47, 48, 49, 50, 52, 53, 54, 57, 67, 79, 81, 82, 120, 141, 143 &149 are still to be retained and protected in accordance with *AS4970:2009 – Protection of Trees on Development Sites* to avoid accidental damage.

Tree's 6, 7, 15, 16, 29, 45, 77 & 121 are recommended for removal due to Arboricultural reasons. All trees with the exception of Tree 7 were awarded a 'Low' Retention Value, Tree 7 was attributed a 'Medium' Retention Value however, it is suppressed in its grouping and of semi-mature age classification, its removal would allow more space for maturity of neighbouring trees.

Refer to *Appendix C: Tree Assessment Schedule* for further detail regarding the Arboricultural condition of trees proposed for removal with no impact from construction.

8.3 Site Specific Protection Measures

All trees to be retained are to be protected in accordance with "*Australian Standard 4970 – 2009 Protection of Trees on Development Sites (AS4970-2009)"* and specific recommendations detailed within this report.

Prohibited Activities

The following activities are to be prohibited within the TPZ;

- Excavation, trenching (with the exception of approved localised pier footings and/or unless approved by and under the direct supervision of the Project Arborist)
- Ripping and cultivation
- Mechanical removal of vegetation
- Soil disturbance or movement of natural rock
- Soil changes including placement of fill (unless approved by and under the supervision of the Project Arborist)
- Movement and storage of plant, equipment and vehicles including machinery washing, repairs and refuelling
- Erection of site offices or sheds including portable toilets
- Affixing of signage or hoardings to trees
- Stockpiling, storage and mixing of materials including storage of waste materials, disposal of waste materials and chemicals including paint, solvents, cement slurry, fuel, oil and any other toxic liquids
- Physical damage to canopies, trunk or root systems
- Any activity likely to cause damage to any tree

Tree Protection Fencing (TPF)

Prior to the commencement of any construction activities, install a Tree Protection Fence around individual trees or group of trees at the nominated TPZ distances specified on the Tree Protection Plan. Where TPZ merge together a single fence encompassing a group of trees is suitable. The fencing shall define and restrict entry into the TPZ. The fencing shall conform to the following:

- Fencing shall be a minimum of 1.8m steel galvanised chain wire fencing with lockable gates to AS 1725 and clad with shade cloth to prevent wind-blown debris entering the TPZ;
- The fencing shall be set / fixed into concrete blocks. The fencing must not be secured with posts driven into the ground;
- The area within the TPZ fencing shall be kept free of weeds and grass for the duration of project;
- Mulch shall be installed and maintained to a depth of 75mm for the duration of project
- Site fencing to act as TPF for **Trees 140, 141, 142, 143, 144, 145, 146, 147, 148 & 149.**
- Tree Protection Fencing to be erected around **Trees 3, 4, 8, 9, 11, 12, 13, 14, 17, 18, 19, 20, 21, 22, 24, 25, 27, 30, 31, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 46, 47, 48, 49, 50, 52, 53, 54, 55 & 57.**

The TPZ fencing shall be erected by the Contractor and approved by the Project Arborist before any machinery or materials are brought onto the site and before the commencement of any works including demolition.

Excavation within the TPZ

- Excavation to occur within the TPZ of **Trees 1, 3, 4, 5, 8, 11, 24, 55, 71, 140, 142, 144, 145, 146, 147 & 148** for the demolition and removal of existing structures, buildings and driveways.

- Any excavations undertaken within the TPZ of **Trees 1, 3, 4, 5, 8, 11, 24, 55, 71, 140, 142, 144, 145, 146, 147 & 148** are to be done so by hand or by using hand powered tools only. Machinery is strictly prohibited.
- No tree roots greater than 50mm in diameter are to be damaged, pruned or removed.
- In the event that any roots greater than 50mm diameter are located during excavation, further advice shall be obtained by the Project Arborist before further works continues where the root has been identified.
- Root pruning must not be undertaken without prior approval from the Project Arborist.

9.0 RECOMMENDATIONS

As a result of inspection and assessment of the subject trees, the following recommendations are made;

9.1 Tree Removal

Tree's 26, 32, 33, 40, 51, 56, 58, 61, 62, 63, 65, 66, 68, 69, 70, 73, 76, 78, 80, 87, 90, 92, 93, 94, 95, 102, 107, 108, 109, 110, 111, 112, 113, 115, 116, 117, 118, 119, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 138 & 139 are all listed as exempt trees which may be removed without Council consent.

Tree's 64, 83, 84, 85, 86, 88, 89, 91, 96, 97, 98, 99, 100, 101, 103, 104, 105, 106, 114 & 137 are located within the demolition footprint and will require removal to facilitate the works.

Tree's 10, 23, 28, 59, 60, 72, 74 & 75 are all subject to major TPZ encroachments that cannot be reduced to an acceptable level as per *AS4970* and therefore are required to be removed.

Tree's 6, 7, 15, 16, 29, 45, 77 & 121 will not be impacted by the development however, they are in a health or condition that warrants their removal based upon Arboricultural reasons.

9.2 Tree Retention

Tree's 1, 2, 3, 4, 5, 8, 9, 11, 12, 13, 14, 17, 18, 19, 20, 21, 22, 24, 25, 27, 30, 31, 34, 35, 36, 37, 38, 39, 41, 42, 43, 44, 46, 47, 48, 49, 50, 52, 53, 54, 55, 57, 67, 71, 79, 81, 82, 120, 140, 141, 142, 143, 144, 145, 146, 147, 148 & 149 are recommended for retention and are to be protected in accordance with the Australian Standards *AS4970:2009 – Protection of Trees on Development Sites, Section 8.3 Site Specific Protection Measures* & *Appendix B: Tree Protection (Generic)* of this report.

Should you require any further information in relation to this report, please contact our office on:
P) 0404 524 526
E) info@thetreeguardian.com.au
M) 2/53a Park Rd, Carlton, NSW, 2218
Regards,

Tarek Hussein
Consulting Arborist
Diploma Horticulture (Arboriculture) - AQF Level 5
ISA Tree Risk Assessment Qualification (TRAQ)
AQF Certificate III in Arboriculture
AQF Certificate II in Arboriculture
Operations Manager for City of Sydney Major Tree Services Contract 2018-2021

10.0 LIMITATION OF LIABILITY

The Tree Guardian Arboricultural Consultants are tree specialists who use their qualifications, education, knowledge, training, diagnostic tools and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of this assessment and report.

The Tree Guardian cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways the arboriculture industry does not fully understand. Conditions are often hidden within trees and below ground. Unless otherwise stated, observations have been visually assessed from ground level. The Tree Guardian cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments cannot be guaranteed.

Treatment, pruning and removal of trees may involve considerations beyond the scope of The Tree Guardian's services, such as property boundaries and ownership, disputes between neighbours, sight lines, landlord-tenant matters, and related incidents. The Tree Guardian cannot take such issues into account unless complete and accurate information is given prior or at the time of the site inspection. Likewise The Tree Guardian cannot accept responsibility for the authorisation or non-authorisation of any recommended treatment or remedial measures undertaken.

In the event that The Tree Guardian recommends retesting or inspection of trees at stated intervals these works must be carried out within the designated time frame. It is the client's responsibility to make arrangements with The Tree Guardian to conduct the re-inspection. Trees can be managed, but they cannot be controlled. To live or work near a tree involves a degree of risk. There is no warranty or guarantee, either expressed or implied by The Tree Guardian, that problems or deficiencies of the subject trees may not arise at a future time.

Trees are living entities. As such, their health may alter, they will grow and their environmental circumstances may change from the time of the site inspection upon which this report is based. For this reason, this report has a maximum validity time of 1 year from the date of being written. Should there be any alteration to the site, the tree or the trees immediate environment from those current at the time of the site inspection, upon which this report is based, the report will become invalid immediately.

All written reports must be read in their entirety, at no time shall part of the written assessment be referred to unless taken in full context of the whole written report. This report remains the intellectual property of The Tree Guardian. It has been issued to the identified client for the specified and agreed purpose only. Use of this report for any other purpose or by any other individual or company must have the written consent of The Tree Guardian PRIOR to that use. Failure to obtain such consent is deemed a breach of copyright and will result in legal action being undertaken against all parties involved. If this written report is to be used in a court of law or any legal situation The Tree Guardian must be advised in writing prior to the written assessment being presented in any form to any other party.

Care has been taken to obtain information from reliable sources. All data has been verified wherever possible however, The Tree Guardian can neither guarantee nor be responsible for the accuracy of information provided by others.

References and Bibliography

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- 'Eucalypts of the Sydney Region' Van Klaphake, Third edition 2012
- Code of Practice - Amenity Tree Industry, 1998.
- J. Dunster ISA, 2017, Tree Risk Assessment Manual, 2nd ed, Illinois.
- *State Environmental Planning Policy (Biodiversity and Conservation) 2021*
- *AS 4970:2009 - Protection of Trees on Development Sites*
- *AS 4373:2007 - Pruning of Amenity Trees,*
- *AS 2303:2018 - Tree Stock for Landscape Use*

APPENDIX A – DEFINITIONS AND CRITERIA

Tree ID No A unique identification number assigned to a particular tree and used to identify it throughout the report.

Common Name The name in common use and accepted by most persons for that particular species.

Botanical Name The taxonomic name, expressed in binomial nomenclature, derived from visual identification features and visible from ground level or specimen collection.

Height (m) The visually estimated height of the tree in metres.

Width N/S = North to South; **E/W** = East to West. The visually estimated maximum width of the canopy in that direction in metres.

Ø (m) Diameter at Breast Height (DBH) measured at 1.4m above ground, unless otherwise noted, as outlined in AS 4970 – 2009.

Ø @ Base (m) Diameter at Base measured above the root flares and below the DBH as outlined in AS4970-2009.

Health Good (G) – In good, health with no significant health issues visible. Fair (F) – Some health issues which could be addressed by intervention. Poor (P) – Significant health issues that could be addressed by intervention. Very Poor (VP)- Significant health issues which are unlikely to be addressed by intervention. Senescent (S) – Tree has entered a cycle of decline from where it is unlikely to recover regardless of intervention.

Structure Good (G)– No visible defects within the structure of the tree. Fair (F) – Minor visible defects within the structure of the tree relative to the species. Poor (P) - Major visible defects within the structure of the tree relative to the species. Very Poor (VP) - Significant visible defects within the structure of the tree relative to the species.

Form Good (G) – A specimen that has attained its full genetic potential and with no physical or environmental impediments to growth. Fair (F) – A specimen that has generally attained its genetic potential and with some minor physical or environmental impediments to growth. Poor (P) – A specimen that has attained some of its genetic potential and with significant physical or environmental impediments to growth. Very Poor (VP) - A specimen that has not attained any of its full genetic potential due to major physical or environmental impediments to growth.

Age Y = Young – young tree that is yet to establish. SM = Semi-mature – an established tree but one that has not attained its full genetic potential for size and/or form. M = Mature – a tree that has attained its full genetic potential in size and/or form. OM= Over Mature – a tree that is no longer capable of further growth and/or has entered a cycle of decline.

Canopy Cover A visual estimation, expressed as a percentage, of the canopy present as compared to a specimen which has attained its full genetic potential and with no physical or environmental impediments to growth.

Foliage Density A visual estimation, and expressed as a percentage, of the level of foliage density present as compared to a specimen which has attained its full genetic potential and with no physical or environmental impediments to growth.

Tree Protection Zone (TPZ) A defined, radial area within which certain activities are prohibited or restricted to prevent or minimise potential injury to designated trees. Calculated using the formula outlined in AS4970-2009.

Encroachments into a TPZ may be possible where it is assessed by a suitable qualified Arborist and deemed to be acceptable without being detrimental to the ongoing vigour of a tree.

A Minor Encroachment of 10% or less of the TPZ area and outside of the Structural Root Zone (SRZ) is generally considered acceptable. However the area lost should be compensated for elsewhere and only be restricted to one side of the tree. Other factor such as health, condition, age, species type and tolerance to disturbance, lean and stability must also be considered when establishing if the encroachment is acceptable and won't adversely impact on the tree.

A Major Encroachment of more than 10% of the TPZ area will require detailed investigation to establish if the tree will remain viable. Such investigation should involve root investigation and consideration of health, condition, age, species type and tolerance to disturbance, lean and stability.

Structural Root Zone (SRZ) A radial area of soil around a tree where the majority of the structural roots are located and in which encroachment or activity is prohibited to prevent or minimise the potential for destabalisation of designated trees. Calculated using the formula outlined in AS4970-2009.

Useful Life Expectancy (ULE): A useful life expectancy has been determined for individual trees based on an assessment of current estimated age, species characteristics and potential life span, any known impacts, level of impact that the proposed development will have on the tree, species tolerance to development impacts. The ratings are:

Long – 40 years +
Medium – 15-40 years
Short – 5-15 years
Transient – less than 5 years
Dead or hazardous (defective or unstable)

This rating has been determined based an assessment of the tree at the time of inspection and any information made available during the assessment. Unknown impacts or adverse actions following initial inspection of individual trees do not form part of the final ratings.

Landscape Significance Rating: The Landscape Significance has been determined by an assessment of the cultural, environmental and aesthetic value of individual trees. This location, amenity, visual prominence, habitat value and species type are also considered when determining the landscape significance of individual trees.

The following criteria is used when determining the Landscape Significance Rating. This rating aids with determining the Retention Value.

Landscape Significance	Description
Very High	The subject tree is listed or forms part of the description of an item listed in the NSW Heritage Act
	The subject tree is listed as or forms part of the description of a Heritage Item under the Council's Local Environmental Plan
	The subject tree is listed in Council's Register of Significant Trees
	The subject tree is remnant
High	The subject tree is considered a land mark
	The subject tree is considered to be of local, cultural or historical importance
	The subject tree forms part of an Ecological Community associated with the site as defined by the provisions of the Threatened Species Conservation Act 1995 (NSW) or the Environmental Protection and Biodiversity Conservation Act 1999.
	The subject tree has been identified as providing habitat value to a threatened or protected species.
	The subject tree is visually prominent and provides a positive contribution to the amenity and aesthetics of the area.
	The subject tree is an excellent representative of the species in terms of health, structure and form
	The subject tree is of large /dominate dimensions (height and canopy spread) and provides a positive contribution to the canopy cover of the area.
Medium	The subject tree provides a positive contribution to the amenity and biodiversity of the immediate area
	The subject tree provides a positive contribution to the visual appearance of the area
	The subject tree is a screening element, visual and/or noise buffer
	The subject tree provides present habitat value
	The subject tree represents the species in a positive manner in term of health, structure and form.
Low	The subject tree is not protected by the provisions of Council's Development Control Plan as it is less than the proscribed height or is a species listed as exempt
	The subject tree is a species considered as being an environmental weed
	The subject tree provides little to no value to the amenity or aesthetics of the area
	The subject tree is structurally unsound or poor health which cannot be improved.
Insignificant	The tree is declared a Noxious Weeds under the Noxious Weeds Act 1993
	The tree is dead

*The above has been modified from the Tree iQ Criteria for Landscape Significance

Tree Retention Rating: The Retention Value has been allocated to individual trees by combining the Useful Life Expectancy and Landscape Significance Rating into the Matrix below to give a Retention Value of High, Medium or Low.

Useful Life Expectancy	LANDSCAPE SIGNIFICANCE				
	Very High	High	Medium	Low	Insignificant
Long					
Medium					
Short					
Transient					
Dead/Hazard					

High: Warrants retention and major design consideration (modification of footings, building alignment etc)

Medium: Warrants retention and minor design consideration (effort should be made to retain these trees wherever possible).

Low: These trees should not be considered to be a constraint to design layout. These trees should be removed irrespective of any proposed development.

APPENDIX B – TREE PROTECTION (GENERIC)

TREE PROTECTION

All trees, other than those indicated on the drawings to be removed, shall be protected at all times during construction in accordance with the Australian Standard 4970 - 2009 *Protection of Trees on Development Sites.*

All works shall be undertaken in accordance with the Tree Protection Plan and the following tree protection specifications, unless otherwise directed by the Principal's representative or the appointed Project Arborist.

PROJECT ARBORIST

A Project Arborist, with minimum AQF Level 5 qualifications, shall be appointed prior to the commencement of any construction activities. The Project Arborist will be responsible for specifying, monitoring and certification of all tree protection measures for any activities proposed around existing trees located within the limit of the construction.

The Contractor shall provide site access to the Project Arborist at all times. The Project Arborist may provide advice on the existing trees, however all communications will be formalised between the Contractor and the Principal's representative.

SITE INDUCTION

The Principal's Representative, Project Arborist, Contractor and any other persons required to work within the Tree Protection Zone (TPZ) of any trees shall attend a site induction meeting before any machinery or materials are brought onto the site and before the commencement of any site works including demolition, earthworks or site clearing.

The Tree Protection Measures, including the location of tree protection fencing, site sheds, stockpile areas, temporary access roads, sediment control devices and any drainage works shall be confirmed during the site induction meeting.

The site induction will highlight the requirements to protect the trees within the site, the type of actions that could lead to potential damage and the penalties imposed by Council for breach of the tree protection measures.

TREE PROTECTION FENCING

Prior to the commencement of any construction activities, install a Tree Protection Fence around individual trees or group of trees at the nominated TPZ distances specified on the Tree Protection Plan. Where TPZ merge together a single fence encompassing a group of trees is suitable. The fencing shall define and restrict entry into the TPZ. The fencing shall conform to the following:

- Fencing shall be a minimum of 1.8m steel galvanised chain wire fencing with lockable gates to AS 1725 and clad with shade cloth to prevent wind-blown debris entering the TPZ;
- The fencing shall be set / fixed into concrete blocks. The fencing must not be secured with posts driven into the ground;
- The area within the TPZ fencing shall be kept free of weeds and grass for the duration of project;
- Mulch shall be installed and maintained to a depth of 75mm for the duration of project

The TPZ fencing shall be erected by the Contractor and approved by the Project Arborist before any machinery or materials are brought onto the site and before the commencement of any works including demolition.

TPZ SIGNAGE

A sign (600mm x 400mm) identifying the name and contact details of the Project Arborist shall be attached to the protective fencing of each TPZ. Below is a sample signage for use:

PROHIBITED ACTIVITIES

The following activities are prohibited within the TPZ;

- Excavation, trenching (unless approved by and under the direct supervision of the Project Arborist)
- Ripping and cultivation
- Mechanical removal of vegetation
- Soil disturbance or movement of natural rock
- Soil changes including placement of fill (unless approved by and under the supervision of the Project Arborist)
- Movement and storage of plant, equipment and vehicles including machinery washing, repairs and refuelling
- Erection of site offices or sheds including portable toilets
- Affixing of signage or hoardings to trees
- Stockpiling, storage and mixing of materials including storage of waste materials, disposal of waste materials and chemicals including paint, solvents, cement slurry, fuel, oil and any other toxic liquids
- Physical damage to canopies, trunk or root systems
- Any activity likely to cause damage to any tree

TREE TRUNK PROTECTION

Trunk protection will be required where works have been approved within the TPZ. As a minimum, the trunk protection shall consist of wrapping of trunks with hessian and two-metre lengths of hardwood timber planks (100 x 50mm) spaced at 100-150mm intervals strapped around the trunk and secured with 2mm galvanised wire. The hessian and timber planks must not be fixed to the tree in any fashion or in any instance.

GROUND PROTECTION

Ground protection must be installed within the TPZ in the event that temporary access for machinery is required and has been approved by the Project Arborist. The ground protection is required to prevent root damage and soil compaction from occurring within the TPZ.

The ground protection shall include a permeable membrane such as geotextile fabric beneath a 100mm layer of mulch below rumble boards of a suitable thickness to prevent soil compaction and root damage from occurring during the movement of any machinery within the TPZ.

EXCAVATIONS WITHIN TPZ

Any excavations undertaken within the TPZ which have been approved by the Project Arborist shall be undertaken using non-destructive methods (such as by hand or with an Airspade) to ensure no tree roots greater than 40mm diameter are damaged, pruned or removed.

In the event that any roots greater than 40mm diameter are located during excavation, further advice shall be obtained by the Project Arborist before further works continues where the root has been identified.

Root pruning must not be undertaken without prior approval from the Project Arborist.

CANOPY AND/OR ROOT PRUNING

Care shall be taken when operating heavy machinery near trees to avoid damage to tree canopies

(foliage and branches). The Project Arborist shall be contacted if there is potential conflict between tree canopies and construction activities (including machinery).

Any canopy or root pruning required shall be undertaken in accordance with AS 4373-2007 *Pruning of Amenity Trees,* under the direct supervision of the Project Arborist.

Where root pruning is required, roots shall be severed at the face of the excavation by hand using clean, sharp pruning implements. All excavations within the TPZ of any tree/s shall be undertaken under the supervision of the Project Arborist.

TREE ROOT PROTECTION

Temporary root protection, including hessian or similar biodegradable material, shall be installed under the supervision of the Project Arborist to prevent roots from drying out, where roots are exposed during demolition or construction works.

SERVICES

Where trenching works are required for any services / hydraulics / drainage etc. this shall not be undertaken within any TPZ. The Project Arborist shall be contacted if any works are required within the TPZ.

Alternative installation methods for services, such as directional boring/drilling, or redirection of services shall be employed where large woody roots greater than 50mm diameter are encountered during the installation of any services adjacent to the specified TPZ.

TREE DAMAGE

In the event that any tree is damaged during construction, the Project Arborist shall be notified as soon as possible to inspect and provide advice for remedial action that may minimise any adverse impact.

EXAMPLE FENCING, PROTECTION AND SIGNAGE:

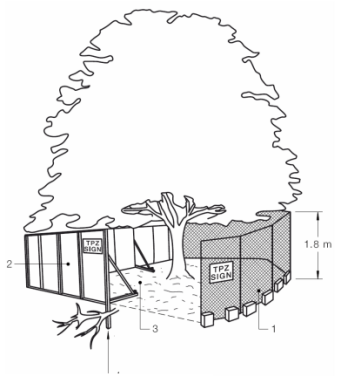


Figure 2 – Protective Fencing

Figure 3 - Tree Protection Zone Signage

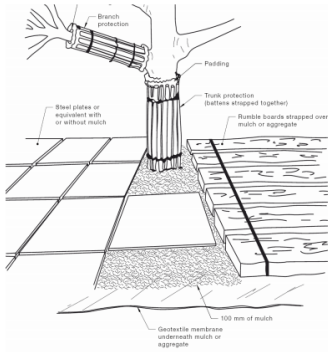


Figure 4 - Trunk, Branch & Ground Protection

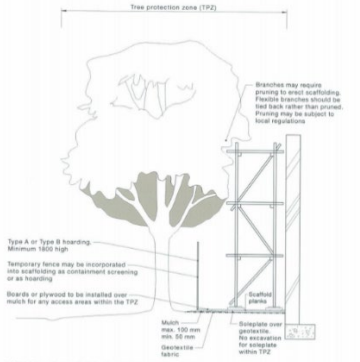


Figure 5 - Indicative Scaffolding within a TPZ

APPENDIX C – TREE ASSESSMENT SCHEDULE

Tree No.	Species Name	Height (m)	Spread (m)	DBH (mm)	DARB (mm)	Age	Health	Structure	Form	Comments
1	*Liquidambar styraciflua*	15	10	580	700	M	Good	Good	Good	Council street tree, service wire through centre.
2	*Eucalyptus resinifera*	15	7	390	480	M	Fair	Good	Fair	Moderate deadwood, asymmetrical to North.
3	*Liquidambar styraciflua*	12	15	650	800	M	Good	Fair	Good	Council street tree. Parallel structural root damage to West.
4	*Corymbia maculata*	22	8	400	470	M	Good	Good	Good	Can be retained.
5	*Corymbia maculata*	18	6	340	380	M	Good	Good	Good	Can be retained.
6	*Corymbia maculata*	4	2	100	130	SM	Good	Fair	Fair	Suppressed, slender. Short ULE, likely a sucker.
7	*Corymbia maculata*	9	4	220	250	SM	Good	Good	Fair	Suppressed in group.
8	*Corymbia maculata*	14	5	270	300	SM	Good	Good	Fair	Asymmetrical canopy lean to West. Mildly suppressed by group.
9	*Corymbia maculata*	17	7	320	360	M	Good	Good	Good	-
10	*Corymbia gummifera*	18	9	550	650	M	Fair - Poor	Fair	Fair	Should be removed, bark delamination, wound at base, moderate deadwood and epi.

Tree No.	Species Name	Height (m)	Spread (m)	DBH (mm)	DARB (mm)	Age	Health	Structure	Form	Comments
11	*Eucalyptus resinifera*	18	6	390	460	M	Good	Good	Good	-
12	*Corymbia maculata*	17	8	370	450	M	Good	Good	Good	Harp branch formation from main junction, consider for removal.
13	*Eucalyptus pilulairs*	18	9	530	710	M	Good	?	Good	Suspected basal decay on East and West side. Lvl 3 TRAQ recommended.
14	*Eucalyptus haemastoma*	17	8	440	480	M	Good	Good	Good	Can be retained.
15	*Angophora costata*	5	3	150	160	SM	Good	Fair	Good	Epicormic shoot from old removal. Remove.
16	*Angophora costata*	12	8	350	400	M	Good	Good	Fair	Mildly suppressed, close to existing gate, consider for removal.
17	*Corymbia gummifera*	18	10	500	580	M	Good	Good	Good	-
18	*Corymbia maculata x3*	10	3	220	270	SM	Good	Poor	Poor	Slender, suppressed grouping.
19	*Corymbia maculata*	17	5	360	410	SM	Good	Good	Good	Dominant tree within group.
20	*Corymbia maculata*	14	5	290	330	SM	Good	Fair	Fair	Asymmetrical to South. Trunk wound at 3m.

Tree No.	Species Name	Height (m)	Spread (m)	DBH (mm)	DARB (mm)	Age	Health	Structure	Form	Comments
21	*Corymbia maculata x 6*	5 – 10	1 – 2	100 – 180	120 – 200	SM	Fair	Poor	Poor	Suppressed and slender grouping.
22	*Corymbia maculata*	13	5	290	350	SM	Good	Good	Fair	-
23	*Corymbia gummifera*	5	2	160	200	SM	Good	Fair	Fair	Suppressed, remove for design.
24	*Corymbia gummifera*	9	5	290	390	M	Good	Fair	Fair	Basal decay + borer on South. Lean to North, Epicormic growth, deadwood.
25	*Corymbia gummifera*	5	3	150	170	SM	Good	Fair	Fair	-
26	*Jacaranda mimosifolia*	6	4	300 approx.	300 approx.	SM	Good	Poor	Poor	Exempt species. Sucker, just epicormic growth from damaged tree root. Multitrunked.
27	*Banksia spinulosa*	6	4	260	360	M	Good	Fair	Fair	J root @ base, asymmetrical to East.
28	*Eucalyptus botryoides*	16	11	490	570	OM	Very Poor	Fair	N/A	70% dead. Only Northern first order branch remains.
29	*Corymbia maculata*	9	2	180	210	SM	Good	Fair	Poor	Slender, grouped, suppressed.
30	*Corymbia maculata*	9	2	180	200	SM	Good	Fair	Fair	Slender, grouped, suppressed.

Tree No.	Species Name	Height (m)	Spread (m)	DBH (mm)	DARB (mm)	Age	Health	Structure	Form	Comments
31	*Corymbia maculata*	13	5	270	280	SM	Good	Fair	fair	Cross rubbing branch in head West side.
32	*Eucalyptus sp. x 3*	4 – 5	2	110	130	SM	Good	Poor	Poor	Self-sown.
33	*Araucaria bidwillii*	13	9	420	500	SM	Fair	Good	Fair	Exempt species.
34	*Eucalyptus saligna*	6	4	150	160	SM	Good	Fair	Poor	Suppressed, slender, asymmetrical lean to West.
35	*Eucalyptus resinifera*	9	3	140	150	SM	Good	Fair	Fair	Suppressed, slender.
36	*Unidentified species*	6	5	150 180	250	SM	Good	Fair	Fair	Codominant.
37	*Unidentified species*	5	2	140	190	SM	Good	Fair	Fair	-
38	*Cyathea australis*	5	2	110 140	N/A	M	Good	Fair	Good	Codominant.
39	*Glochidion ferdinandi*	5	3	110 170	220	SM	Good	Fair	Fair	Epicormic growth.
40	*Jacaranda mimosifolia*	7	8	430	400	M	Good	Good	Good	Exempt species.

Tree No.	Species Name	Height (m)	Spread (m)	DBH (mm)	DARB (mm)	Age	Health	Structure	Form	Comments
41	*Grouping of 18 Trees*	5 – 18	2 – 7	100 – 360	120 – 390	SM – M	Good – Fair	Good – Fair	Good – Fair	3 x *E. resinifera* 15 x *C. maculata*
42	*Eucalyptus botryoides*	25	22	990	1060	M	Fair	Fair	Good	Consider for removal, deadwood, epicormic growth, bark delamination of South side, history of failure – high significance due to size.
43	*Glochidion ferdinandi*	5	3	150 170	230	M	Good	Good	Good	-
44	*Eucalyptus botryoides*	17	14	480	520	M	Good	Good	Good	-
45	*Eucalyptus botryoides*	6	2	120	N/A	SM	Good	Poor	Fair	Epicormic shoot from removed tree stump.
46	*Eucalyptus botryoides*	18	8	490	560	M	Good	Good	Good	Minor deadwood.
47	*Eucalyptus microcorys*	9	5	230	310	SM	Good	Good	Fair	Suppressed.
48	*Eucalyptus botryoides*	9	3	200	240	SM	Good	Poor	Poor	Slender, suppressed.
49	*Eucalyptus botryoides*	16	4	330	410	M	Fair	Poor	Poor	High epicormic growth, slender.
50	*Eucalyptus botryoides*	7	3	220	240	SM	Good	Poor	Poor	Self-sown sucker.

Tree No.	Species Name	Height (m)	Spread (m)	DBH (mm)	DARB (mm)	Age	Health	Structure	Form	Comments
51	*Dicksonia squarrosa group x 5*	1.5 – 3	1 – 2	270	N/A	M	Good	Good	Good	-
52	*Corymbia maculata grouping x 7*	2 – 12	1 – 4	60 – 240	80 – 320	SM	Good	Fair	Fair	Slender.
53	*Eucalyptus saligna*	10	5	290	370	M	Fair	Fair – Poor	Fair – Poor	Asymmetrical to South, basal decay and borer.
54	*Banksia integrifolia*	5	3	200	230	M	Good	Good	Good	-
55	*Eucalyptus microcorys*	25	25	920	1050	M	Good	Good	Good	Codominant leaders from main junction @ 10m.
56	*Jacaranda mimosifolia*	10	8	300 250	570	M	Good	Fair	Fair	Exempt species.
57	*Auracaria heterophylla*	5	3	200	250	SM	Good	Good	Good	-
58	*Cyathea sp.*	3	2	130	N/A	M	Good	Good	Good	-
59	*Eucalyptus botryoides*	15	14	550	600	M	Good	Good	Good	Moderate epicormic growth.
60	*Magnolia x soulangeana*	5	7	190 320	400	M	Good	Good	Good	Ornamental.

Tree No.	Species Name	Height (m)	Spread (m)	DBH (mm)	DARB (mm)	Age	Health	Structure	Form	Comments
61	*Archontophoenix cunninghamiana*	3	3	130 140 170	N/A	SM	Good	Good	Good	Exempt species. Multitrunked from base.
62	*Buxus sempervirens*	3	3	Min	Min	M	Good	Good	Good	-
63	*Olea europaea subsp. cuspidata*	3	2	Min	Min	M	Good	Good	Good	Exempt species.
64	*Callistemon viminalis*	5	3	170	190	M	Good	Fair	Fair	Codominant leaders, asymmetrical canopy lean to West.
65	*Archontophoenix cunninghamiana*	6	4	260	N/A	M	Good	Good	Good	Exempt species.
66	*Archontophoenix cunninghamiana*	4	2	210	N/A	SM	Good	Good	Good	Exempt species.
67	*Corymbia maculata*	14	7	400	480	M	Fair	Good	Fair	Mildly suppressed by Tree 71. Asymmetrical canopy lean to West.
68	*Citrus x limon*	3	2	130	130	M	Good	Good	Good	Exempt species – fruit bearing.
69	*Persea americana*	3	2	70	80	SM	Good	Good	Good	Exempt species – fruit bearing.
70	*Callistemon viminalis x 2*	2 – 3	2	70 – 80	90 – 100	M	Good	Fair	Poo	Suppressed, shrub like form.

Tree No.	Species Name	Height (m)	Spread (m)	DBH (mm)	DARB (mm)	Age	Health	Structure	Form	Comments
71	*Corymbia maculata*	18	9	540	610	M	Good	Good	Good	Good example of species.
72	*Corymbia maculata*	7	2	170	190	SM	Fair	Fair	Poor	Suppressed, codominant leaders.
73	*Ailanthus altissima*	5	5	150 approx.	160 approx.	M	Fair	Poor	Poor	Exempt species.
74	*Corymbia maculata*	11	4	190 210	300	SM	Good	Fair	Poor	Suppressed, codominant leaders.
75	*Livistona australis*	11	4	570	N/A	M	Good	Good	Fair	Suppressed.
76	*Syagrus romanzoffiana*	11	4	300 approx.	N/A	M	Good	Good	Good	Exempt species.
77	*Banksia integrifolia*	7	3	130	150	M	Good	Good	Fair	Mildly suppressed, slender.
78	*Olea europaea subsp. cuspidata*	9	8	350 approx.	350 approx.	M	Good	Fair	Fair	Exempt species.
79	*Backhousia citriodora*	5	2	110	140	SM	Good	Fair	Fair	Codominant leaders, slender, suppressed.
80	*Archontophoenix cunninghamiana*	7	5	210	N/A	SM	Good	Good	Good	Exempt species.

Tree No.	Species Name	Height (m)	Spread (m)	DBH (mm)	DARB (mm)	Age	Health	Structure	Form	Comments
81	*Callistemon viminalis*	5	3	140	160	SM	Good	Good	Fair	Mildly suppressed.
82	*Yucca sp.*	5	3	170	N/A	M	Good	Good	Fair	Hard up against fence.
83	*Eucalyptus botryoides*	25	25	940	1070	M	Good	Fair	Fair	Lions tailed branches, high epicormic growth.
84	*Eucalyptus botryoides*	15	12	400	440	M	Fair	Fair	Fair	Asymmetrical canopy lean to SE.
85	*Callicoma serratifolia*	7	4	200 approx.	220 approx.	SM	Fair	Fair	Fair	-
86	*Eucalyptus botryoides*	12	10	650 approx.	680 approx.	M	Good	Poor	Poor	Lopped, predominantly epicormic growth.
87	*Syagrus romanzoffiana*	5	3	200 approx.	N/A	SM	Good	Good	Good	Exempt species.
88	*Callicoma serratifolia*	6	6	200 approx.	220 approx.	M	Good	Fair	Fair	-
89	*Callistemon viminalis*	5	4	200 approx.	220 approx.	M	Good	Fair	Fair	Multitrunked from base.
90	*Cyathea australis x 2*	2	2	100	N/A	M	Good	Good	Good	-

Tree No.	Species Name	Height (m)	Spread (m)	DBH (mm)	DARB (mm)	Age	Health	Structure	Form	Comments
91	*Callistemon viminalis*	5	4	180 190	220	M	Good	Fair	Good	Codominant from base.
92	*Washingtonia robusta*	10	3	510	N/A	M	Good	Good	Good	Exempt species.
93	*Washingtonia robusta*	6	3	650 approx.	N/A	M	Good	Good	Good	Exempt species.
94	*Callistemon viminalis x 2*	3	2	80	100	SM	Good	Fair	Good	-
95	*Yucca sp.*	3	1	110	N/A	M	Good	Good	Good	-
96	*Eucalyptus pilularis*	18	11	740	800	M	Good	Fair	Fair	Previous NE 1st order branch failure at main junction.
97	*Acacia sp.*	5	3	200	220	M	Fair	Fair	Poor	Suppressed.
98	*Callicoma serratifolia*	6	3	140	150	SM	Good	Fair	Fair	Codominant leaders.
99	*Livistona australis*	5	3	550	N/A	SM	Good	Good	Good	-
100	*Eucalyptus botryoides*	16	7	850	830	OM	Fair	Poor	Poor	In decline, tri leaders all lions tailed, high epicormic growth.

Tree No.	Species Name	Height (m)	Spread (m)	DBH (mm)	DARB (mm)	Age	Health	Structure	Form	Comments
101	*Callicoma serratifolia*	5	3	130	180	M	Fair	Fair	Fair	Mildly suppressed.
102	*Backhousia myrtifolia*	4	3	120	150	SM	Good	Fair	Poor	Suppressed.
103	*Syzygium smithii*	10	5	380	380	M	Good	Good	Fair	True to type inclusions, multitrunked.
104	*Syzygium smithii*	9	4	160	180	M	Good	Good	Fair	True to type inclusions, multitrunked.
105	*Syzygium smithii*	10	5	450 @ base	450	M	Good	Good	Fair	True to type inclusions, multitrunked.
106	*Syzygium smithii*	8	4	1860 190	200	SM	Good	Good	Fair	True to type inclusions, multitrunked.
107	*Eucalyptus sp.*	7	4	190	220	SM	Good	Good	Good	Exempt due to location - 1.3m away from existing building.
108	*Eucalyptus pilularis*	15	18	720	790	M	Fair – Poor	Fair	Fair	In decline, 1 x 1st or + 1 x 2nd order branches dead. High deadwood. Exempt: 1.5m to bld.
109	*Leptospermum petersonii*	4	3	90	100	SM	Fair	Fair	Fair	Multitrunked. Exempt due to height.
110	*Eucalyptus pilularis*	12	10	400	530	SM	Good	Good	Fair	Minor deadwood. Exempt due to location - 1.3m away from existing building

Tree No.	Species Name	Height (m)	Spread (m)	DBH (mm)	DARB (mm)	Age	Health	Structure	Form	Comments
111	*Jacaranda mimosifolia*	5	5	330	410	M	Good	Good	Good	Exempt species.
112	*Persea americana*	5	2	150	160	M	Good	Good	Good	Exempt – fruit bearing.
113	*Jacaranda mimosifolia*	5	6	420	490	M	Good	Good	Good	Exempt species.
114	*Syzygium australe*	5	3	120	140	M	Fair	Fair	Fair	Screening hedge.
115	*Jacaranda mimosifolia*	5	4	410	470	M	Good	Fair	Fair	Exempt species. Lopped, epicormic growth.
116	*Syzygium australe*	3	2	120 130	250	M	Fair	Fair	Fair	Codominant from base.
117	*Jacaranda mimosifolia*	4	5	400	440	M	Fair	Fair	Poor	Exempt species. Previous failure, suppressed, deadwood.
118	*Strelitzia nicolai*	4	5	350	N/A	M	Good	Fair	Good	-
119	*Eucalyptus sp.*	15	15	940	1000	M	Good	Good	Good	Exempt due to location - 1.5m away from existing building. High significance, minor deadwood.
120	*Callistemon viminalis group x 8*	3 – 5	2 – 4	90 – 180	100 – 260	M	Fair	Fair	Fair - Poor	Screening group.

Tree No.	Species Name	Height (m)	Spread (m)	DBH (mm)	DARB (mm)	Age	Health	Structure	Form	Comments
121	*Acacia decurrens*	5	3	290	340	M	Fair	Poor	Poor	In decline, against fence.
122	*Olea europaea subsp. cuspidata*	5	8	550 @ base	550	M	Good	Fair	Fair	Exempt species.
123	*Syzygium hedge*	4	7	200 x 3	220 x 3	M	Fair	Fair	Fair	Exempt due to location - 1m away from existing building. Hedge.
124	*Jacaranda mimosifolia*	5	7	190 240 310	600	M	Good	Fair	Fair	Exempt species.
125	*Jacaranda mimosifolia*	5	6	200 400	510	M	Good	Fair	Fair	Exempt species.
126	*Jacaranda mimosifolia*	7	5	310	350	M	Good	Good	Fair	Exempt species.
127	*Jacaranda mimosifolia*	7	6	330	390	M	Good	Good	Fair	Exempt species.
128	*Jacaranda mimosifolia*	5	7	220 approx.	250	M	Good	Fair	Fair	Exempt species. Multitrunked, raised garden bed.
129	*Jacaranda mimosifolia*	5	5	340	390	M	Good	Fair	Fair	Exempt species.
130	*Jacaranda mimosifolia*	5	5	X 5	-	SM	Good	Poor	Poor	Exempt species. Multitrunked from base.

Tree No.	Species Name	Height (m)	Spread (m)	DBH (mm)	DARB (mm)	Age	Health	Structure	Form	Comments
131	*Jacaranda mimosifolia*	8	7	360	410	M	Good	Good	Fair	Exempt species.
132	*Jacaranda mimosifolia*	8	8	410	490	M	Fair	Poor	Fair	Exempt species. Decline, structural defects.
133	*Jacaranda mimosifolia*	7	7	360	380	M	Good	Fair	Fair	Exempt species. Snapped out in head, high epi.
134	*Jacaranda mimosifolia*	4	3	Min	Min	SM	Good	Poor	Poor	Exempt species. Self-sown multitrunked.
135	*Jacaranda mimosifolia*	5	6	250	260	M	Good	Good	Fair	Exempt species.
136	*Jacaranda mimosifolia*	4	3	170	180	SM	Fair	Fair	Poor	Exempt species. Poor example.
137	*Strelitzia nicolai*	6	5	TPZ	N/A	M	Fair	Fair	Fair	-
138	*Jacaranda mimosifolia*	7	9	210 260	570	M	Good	Poor	Fair	Exempt species. Included leaders @ base.
139	*Jacaranda mimosifolia*	6	4	N/A	N/A	SM	Good	Poor	Poor	Exempt species. Epicormic shoot from previous removal.
140	*Eucalyptus botryoides*	16	15	750 approx.	800 approx.	M	Fair	Fair	Fair	Limited VTA neighbouring property. In decline west side, lean to north

Tree No.	Species Name	Height (m)	Spread (m)	DBH (mm)	DARB (mm)	Age	Health	Structure	Form	Comments
141	*Cupressus x leylandii x 7*	8	10	400 approx.	400 approx.	M	Good	Good	Fair	Located on neighbouring property. Limited VTA.
142	*Melaleuca quinquenervia*	8	7	650 approx.	650 approx.	M	Fair	Fair	Fair	Located on neighbouring property. Limited VTA. 1m setback.
143	*Leptospermum petersonii*	7	4	250 approx.	250 approx.	OM	Fair	Poor	Poor	Located on neighbouring property. Limited VTA. Overhanging into site, previous failure.
144	*Grevillea robusta*	11	7	500 approx.	500 approx.	OM	Poor	Fair	Good	Located on neighbouring property. Limited VTA. 1m setback. In decline, included bark.
145	*Jacaranda mimosifolia*	6	6	250 approx.	300 approx.	SM	Good	Fair	Fair	Located on neighbouring property. Limited VTA. 0.5m setback. Pruning required.
146	*Cupressus sempervirens x 3*	4	1	100	120	SM	Good	Good	Good	Located on neighbouring property. Limited VTA. 0.4m setback.
147	*Livistona australis*	8	3	250 approx.	N/A	M	Good	Good	Good	Located on neighbouring property. Limited VTA. 1m setback.
148	*Citrus sp. row (Hedge)*	3 – 4	5 x 2	150 approx.	150 approx.	M	Good	Good	Good	Located on neighbouring property. Limited VTA. All fruit bearing trees, pruning back to fence line required.
149	*Syzygium sp. (Hedge)*	3 – 5	7 x 2	150 approx.	150 approx.	SM	Good	Fair	Fair	Located on neighbouring property. Limited VTA. 1m setback.

APPENDIX D – TREE IMPACT SCHEDULE

Tree No.	Species Name	TPZ (m)	SRZ (m)	ULE	Landscape Significance	Retention Value	Proposed Action	Development Impacts
1	*Liquidambar styraciflua*	6.96	2.85	Medium	Medium	Medium	Retain	0.6% Minor encroachment from removal of driveway.
2	*Eucalyptus resinifera*	4.68	2.43	Medium	Medium	Medium	Retain	No incursion.
3	*Liquidambar styraciflua*	7.8	3.01	Medium	Medium	Medium	Retain	10.0% Minor encroachment from removal of driveway.
4	*Corymbia maculata*	4.8	2.41	Long	High	High	Retain	9.2% Minor encroachment from removal of driveway.
5	*Corymbia maculata*	4.08	2.2	Long	Medium	Medium	Retain	8.1% Minor encroachment from removal of driveway.
6	*Corymbia maculata*	2.0	1.5	Short	Low	Low	Remove	No incursion – Exempt due to height.
7	*Corymbia maculata*	3.24	1.85	Medium	Medium	Medium	Remove	No incursion – remove irrespective of development.
8	*Corymbia maculata*	3.24	2.0	Medium	Medium	Medium	Retain	20.7% Major encroachment from removal of driveway.
9	*Corymbia maculata*	3.84	2.15	Medium	Medium	Medium	Retain	No incursion.
10	*Corymbia gummifera*	6.6	2.76	Short	Low	Low	Remove	38.0% Major encroachment from removal of driveway.

Tree No.	Species Name	TPZ (m)	SRZ (m)	ULE	Landscape Significance	Retention Value	Proposed Action	Development Impacts
11	*Eucalyptus resinifera*	4.08	2.39	Medium	Medium	Medium	Retain	11.6% Major encroachment from removal of footpath. Works to be conducted through SRZ.
12	*Corymbia maculata*	4.44	2.37	Medium	Medium	Medium	Retain	No incursion.
13	*Eucalyptus pilulairs*	6.36	2.87	Medium	Low	Low	Retain	No incursion.
14	*Eucalyptus haemastoma*	5.28	2.43	Medium	Medium	Medium	Retain	No incursion.
15	*Angophora costata*	2.0	1.53	Short	Low	Low	Remove	No incursion. Remove irrespective of development.
16	*Angophora costata*	4.2	2.25	Medium	Medium	Medium	Remove	No incursion. Remove irrespective of development.
17	*Corymbia gummifera*	6.0	2.63	Long	Medium	Medium	Retain	No incursion.
18	*Corymbia maculata x 3*	2.64	1.91	Short	Low	Low	Retain	No incursion.
19	*Corymbia maculata*	4.32	2.28	Long	Medium	Medium	Retain	No incursion.
20	*Corymbia maculata*	3.48	2.08	Medium	Medium	Medium	Retain	No incursion.

Tree No.	Species Name	TPZ (m)	SRZ (m)	ULE	Landscape Significance	Retention Value	Proposed Action	Development Impacts
21	*Corymbia maculata*	2.16	1.68	Medium	Low	Low	Retain	No incursion.
22	*Corymbia maculata*	3.48	2.13	Medium	Medium	Medium	Retain	No incursion.
23	*Corymbia gummifera*	2.0	1.68	Medium	Low	Low	Remove	39.9% Major encroachment from removal of driveway.
24	*Corymbia gummifera*	3.48	2.23	Medium	Low	Low	Retain	9.9% Minor encroachment from removal of driveway.
25	*Corymbia gummifera*	2.0	1.57	Medium	Low	Low	Retain	No incursion.
26	*Jacaranda mimosifolia*	3.6	2.0	Medium	Low	Low	Remove	No incursion. Exempt species.
27	*Banksia spinulosa*	3.12	2.15	Medium	Medium	Medium	Retain	No incursion.
28	*Eucalyptus botryoides*	5.88	2.61	Transient	Low	Low	Remove	33.1% Major encroachment from removal of driveway.
29	*Corymbia maculata*	2.16	1.72	Medium	Low	Low	Remove	No incursion. Remove irrespective of development.
30	*Corymbia maculata*	2.16	1.68	Medium	Low	Low	Retain	No incursion.

Tree No.	Species Name	TPZ (m)	SRZ (m)	ULE	Landscape Significance	Retention Value	Proposed Action	Development Impacts
31	*Corymbia maculata*	3.24	1.94	Medium	Medium	Medium	Retain	No incursion.
32	*Eucalyptus sp. x 3*	2.0	1.5	Short	Low	Low	Remove	No incursion. Exempt due to height.
33	*Araucaria bidwillii*	5.04	2.47	Long	Medium	Medium	Remove	Exempt species. No incursion.
34	*Eucalyptus saligna*	2.0	1.53	Medium	Low	Low	Retain	No incursion.
35	*Eucalyptus resinifera*	2.0	1.5	Medium	Low	Low	Retain	No incursion.
36	*Unidentified species*	2.76	1.85	Medium	Medium	Medium	Retain	No incursion.
37	*Unidentified species*	2.0	1.65	Medium	Low	Low	Retain	No incursion.
38	*Cyathea australis*	2.16	N/A	Medium	Medium	Medium	Retain	No incursion.
39	*Glochidion ferdinandi*	2.4	1.75	Medium	Medium	Medium	Retain	No incursion.
40	*Jacaranda mimosifolia*	5.16	2.25	Medium	Medium	Medium	Remove	Exempt species. 37.4% Major encroachment from removal of driveway. Works occurring through SRZ.

Tree No.	Species Name	TPZ (m)	SRZ (m)	ULE	Landscape Significance	Retention Value	Proposed Action	Development Impacts
41	*Grouping of 18 Trees*	4.32	2.23	Long	Medium	Medium	Retain	No incursion.
42	*Eucalyptus botryoides*	11.88	3.39	Medium	High	High	Retain	No incursion.
43	*Glochidion ferdinandi*	2.76	1.79	Medium	Medium	Medium	Retain	No incursion.
44	*Eucalyptus botryoides*	5.76	2.51	Long	Medium	Medium	Retain	No incursion.
45	*Eucalyptus botryoides*	2.0	N/A	Medium	Low	Low	Remove	No incursion. Remove irrespective of development.
46	*Eucalyptus botryoides*	5.88	2.59	Medium	Medium	Medium	Retain	No incursion.
47	*Eucalyptus microcorys*	2.76	2.02	Medium	Medium	Medium	Retain	No incursion.
48	*Eucalyptus botryoides*	2.4	1.82	Medium	Low	Low	Retain	No incursion.
49	*Eucalyptus botryoides*	3.96	2.88	Medium	Medium	Medium	Retain	No incursion.
50	*Eucalyptus botryoides*	2.64	1.82	Medium	Low	Low	Retain	No incursion.

Tree No.	Species Name	TPZ (m)	SRZ (m)	ULE	Landscape Significance	Retention Value	Proposed Action	Development Impacts
51	*Dicksonia squarrosa group x 5*	3.24	N/A	Medium	Medium	Medium	Remove	No incursion. Exempt due to height.
52	*Corymbia maculata grouping x 7*	2.88	2.05	Long	Medium	Medium	Retain	No incursion.
53	*Eucalyptus saligna*	3.48	2.18	Medium	Low	Low	Retain	No incursion.
54	*Banksia integrifolia*	2.4	1.79	Medium	Medium	Medium	Retain	No incursion.
55	*Eucalyptus microcorys*	11.04	3.38	Long	High	High	Retain	37.4% Major encroachment from removal of driveway. Tree of High Significance, ensure its protection, sensitive construction required.
56	*Jacaranda mimosifolia*	4.68	2.61	Medium	Medium	Medium	Remove	Exempt species. 42.4% Major encroachment from removal of driveway. Works occurring through SRZ.
57	*Auracaria heterophylla*	2.4	1.85	Long	Medium	Medium	Retain	No incursion.
58	*Cyathea sp.*	2.0	N/A	Medium	Medium	Medium	Remove	No incursion. Exempt due to height.
59	*Eucalyptus botryoides*	6.6	2.67	Long	Medium	Medium	Retain	42.1% Major encroachment from removal of concrete footpath and site levelling. Works occurring through SRZ.
60	*Magnolia x soulangeana*	4.44	2.25	Medium	Medium	Medium	Remove	42.1% Major encroachment from removal of concrete footpath and site levelling. Works occurring through SRZ.

Tree No.	Species Name	TPZ (m)	SRZ (m)	ULE	Landscape Significance	Retention Value	Proposed Action	Development Impacts
61	*Archontophoenix cunninghamiana*	3.12	N/A	Medium	Low	Low	Remove	Exempt species. Within footprint.
62	*Buxus sempervirens*	2.0	1.5	Medium	Low	Low	Remove	Within footprint. Exempt due to height.
63	*Olea europaea subsp. cuspidata*	2.0	1.5	Long	Low	Low	Remove	Exempt species. Within footprint.
64	*Callistemon viminalis*	2.04	1.65	Medium	Low	Low	Remove	Within footprint.
65	*Archontophoenix cunninghamiana*	3.12	N/A	Medium	Medium	Medium	Remove	Exempt species. Within footprint.
66	*Archontophoenix cunninghamiana*	2.52	N/A	Medium	Low	Low	Remove	Exempt species. Within footprint.
67	*Corymbia maculata*	4.8	2.43	Long	Medium	Medium	Retain	No incursion.
68	*Citrus x limon*	2.0	1.5	Medium	Low	Low	Remove	Exempt species.
69	*Persea americana*	2.0	1.5	Medium	Low	Low	Remove	Exempt species.
70	*Callistemon viminalis x 2*	2.0	1.5	Medium	Low	Low	Remove	No incursion. Exempt due to height.

Tree No.	Species Name	TPZ (m)	SRZ (m)	ULE	Landscape Significance	Retention Value	Proposed Action	Development Impacts
71	*Corymbia maculata*	6.48	2.69	Long	High	High	Retain	18.5% from demolition of stonewall and elevated concrete walkway. Elevated walkway accounts for 2.9% TPZ encroachment.
72	*Corymbia maculata*	2.04	1.65	Medium	Low	Low	Remove	32.8% from demolition of stonewall and elevated concrete walkway.
73	*Ailanthus altissima*	2.0	1.53	Long	Low	Low	Remove	Exempt species.
74	*Corymbia maculata*	3.36	2.0	Medium	Low	Low	Remove	15.5% from demolition of stonewall and elevated concrete walkway.
75	*Livistona australis*	6.84	N/A	Long	Medium	Medium	Remove	32.8% from demolition of stonewall and elevated concrete walkway. Significant soil disturbance and de-stability to occur close to rootball.
76	*Syagrus romanzoffiana*	3.6	N/A	Long	Low	Low	Remove	Exempt species.
77	*Banksia integrifolia*	2.0	1.5	Medium	Low	Low	Remove	No incursion. Remove irrespective of development.
78	*Olea europaea subsp. cuspidata*	4.2	2.13	Long	Low	Low	Remove	Exempt species.
79	*Backhousia citriodora*	2.0	1.5	Medium	Low	Low	Retain	No incursion.
80	*Archontophoenix cunninghamiana*	2.52	N/A	Medium	Low	Low	Remove	Exempt species. No incursion.

Tree No.	Species Name	TPZ (m)	SRZ (m)	ULE	Landscape Significance	Retention Value	Proposed Action	Development Impacts
81	*Callistemon viminalis*	2.0	1.53	Medium	Low	Low	Retain	No incursion.
82	*Yucca sp.*	2.04	N/A	Medium	Low	Low	Retain	No incursion.
83	*Eucalyptus botryoides*	11.28	3.4	Long	High	High	Remove	Within footprint.
84	*Eucalyptus botryoides*	4.8	2.34	Medium	Medium	Medium	Remove	Within footprint.
85	*Callicoma serratifolia*	2.4	1.75	Medium	Low	Low	Remove	Within footprint.
86	*Eucalyptus botryoides*	7.8	2.81	Medium	Medium	Medium	Remove	Within footprint.
87	*Syagrus romanzoffiana*	3.6	N/A	Medium	Low	Low	Remove	Exempt species. Within footprint.
88	*Callicoma serratifolia*	2.4	1.75	Medium	Low	Low	Remove	Within footprint.
89	*Callistemon viminalis*	2.4	1.75	Medium	Low	Low	Remove	Within footprint.
90	*Cyathea australis x 2*	2.0	N/A	Medium	Medium	Medium	Remove	Within footprint. Exempt due to height.

Tree No.	Species Name	TPZ (m)	SRZ (m)	ULE	Landscape Significance	Retention Value	Proposed Action	Development Impacts
91	*Callistemon viminalis*	3.12	1.75	Medium	Medium	Medium	Remove	Within footprint.
92	*Washingtonia robusta*	6.12	N/A	Long	Medium	Medium	Remove	Exempt species. Within footprint.
93	*Washingtonia robusta*	7.8	N/A	Long	Medium	Medium	Remove	Exempt species. Within footprint.
94	*Callistemon viminalis x 2*	2.0	1.5	Medium	Low	Low	Remove	Within footprint. Exempt due to height.
95	*Yucca sp.*	2.0	N/A	Medium	Low	Low	Remove	Within footprint. Exempt due to height.
96	*Eucalyptus pilularis*	8.88	3.01	Long	Medium	Medium	Remove	Within footprint.
97	*Acacia sp.*	2.4	1.75	Short	Low	Low	Remove	Within footprint.
98	*Callicoma serratifolia*	2.0	1.5	Medium	Medium	Medium	Remove	Within footprint.
99	*Livistona australis*	6.6	N/A	Long	Medium	Medium	Remove	Within footprint.
100	*Eucalyptus botryoides*	10.2	3.06	Medium	Low	Low	Remove	Within footprint.

Tree No.	Species Name	TPZ (m)	SRZ (m)	ULE	Landscape Significance	Retention Value	Proposed Action	Development Impacts
101	*Callicoma serratifolia*	2.0	1.61	Medium	Low	Low	Remove	Within footprint.
102	*Backhousia myrtifolia*	2.0	1.5	Medium	Low	Low	Remove	Within footprint.
103	*Syzygium smithii*	4.56	2.2	Long	Medium	Medium	Remove	Within footprint.
104	*Syzygium smithii*	2.0	1.61	Long	Medium	Medium	Remove	Within footprint.
105	*Syzygium smithii*	5.4	2.37	Long	Medium	Medium	Remove	Within footprint.
106	*Syzygium smithii*	3.12	1.68	Long	Low	Low	Remove	Within footprint.
107	*Eucalyptus sp.*	2.28	1.75	Long	Medium	Medium	Remove	Exempt: 1.3m to existing building. Within footprint.
108	*Eucalyptus pilularis*	8.64	3.0	Short	Medium	Low	Remove	Exempt: 1.5m to existing building. Within footprint.
109	*Leptospermum petersonii*	2.0	1.5	Short	Low	Low	Remove	Within footprint. Exempt due to height.
110	*Eucalyptus pilularis*	4.8	2.53	Long	Medium	Medium	Remove	Exempt: 1.3m to existing building. Within footprint.

Tree No.	Species Name	TPZ (m)	SRZ (m)	ULE	Landscape Significance	Retention Value	Proposed Action	Development Impacts
111	*Jacaranda mimosifolia*	3.96	2.28	Medium	Medium	Medium	Remove	Exempt species. Within footprint.
112	*Persea americana*	2.0	1.53	Medium	Low	Low	Remove	Exempt species. Within footprint.
113	*Jacaranda mimosifolia*	5.04	2.45	Medium	Medium	Medium	Remove	Exempt species. Within footprint.
114	*Syzygium australe*	2.0	1.5	Short	Medium	Low	Remove	Within footprint.
115	*Jacaranda mimosifolia*	4.92	2.41	Medium	Low	Low	Remove	Exempt species. Within footprint.
116	*Syzygium australe*	2.16	1.85	Short	Low	Low	Remove	Within footprint. Exempt due to height.
117	*Jacaranda mimosifolia*	4.8	2.34	Short	Low	Low	Remove	Exempt species. Within footprint.
118	*Strelitzia nicolai*	4.2	N/A	Medium	Low	Low	Remove	Within footprint. Exempt due to height.
119	*Eucalyptus sp.*	11.28	3.31	Long	High	High	Remove	Exempt due to location: within 1.5m of existing building. 46.1% Major encroachment from demolition of existing building and removal of bitumen. Works through SRZ.
120	*Callistemon viminalis group x 8*	2.16	1.88	Short	Low	Low	Retain	No incursion.

Tree No.	Species Name	TPZ (m)	SRZ (m)	ULE	Landscape Significance	Retention Value	Proposed Action	Development Impacts
121	*Acacia decurrens*	3.48	2.1	Short	Low	Low	Remove	No incursion. Remove irrespective of development.
122	*Olea europaea subsp. cuspidata*	6.6	2.57	Long	Low	Low	Remove	Exempt species.
123	*Syzygium hedge*	2.4	1.75	Short	Low	Low	Remove	Exempt due to height. Within footprint.
124	*Jacaranda mimosifolia*	5.28	2.67	Medium	Low	Low	Remove	Exempt species. 47.0% Major encroachment from demolition of driveway. Works through SRZ.
125	*Jacaranda mimosifolia*	5.4	2.49	Medium	Low	Low	Remove	Exempt species. 46.6% Major encroachment from demolition of driveway. Works through SRZ.
126	*Jacaranda mimosifolia*	3.72	2.13	Medium	Medium	Medium	Remove	Exempt species. 41.0% Major encroachment from demolition of driveway. Works through SRZ.
127	*Jacaranda mimosifolia*	3.96	2.23	Medium	Medium	Medium	Remove	Exempt species. 21.0% Major encroachment from demolition of driveway. Works through SRZ.
128	*Jacaranda mimosifolia*	2.64	1.85	Medium	Medium	Medium	Remove	Exempt species. Within footprint.
129	*Jacaranda mimosifolia*	4.08	2.23	Medium	Low	Low	Remove	Exempt species. 42.6% Major encroachment from demolition of driveway. Works through SRZ.
130	*Jacaranda mimosifolia*	3.6	2.0	Medium	Low	Low	Remove	Exempt species. 30.7% Major encroachment from demolition of driveway. Works through SRZ.

Tree No.	Species Name	TPZ (m)	SRZ (m)	ULE	Landscape Significance	Retention Value	Proposed Action	Development Impacts
131	*Jacaranda mimosifolia*	4.32	2.28	Medium	Medium	Medium	Remove	Exempt species. 34.8% Major encroachment from demolition of driveway. Works through SRZ.
132	*Jacaranda mimosifolia*	4.92	2.45	Medium	Low	Low	Remove	Exempt species. 35.6% Major encroachment from demolition of driveway. Works through SRZ.
133	*Jacaranda mimosifolia*	4.32	2.2	Medium	Low	Low	Remove	Exempt species. 29.1% Major encroachment from demolition of driveway. Works through SRZ.
134	*Jacaranda mimosifolia*	2.0	1.5	Short	Low	Low	Remove	Exempt species. 21.0% Major encroachment from demolition of driveway. Works through SRZ. Remove irrespective of development.
135	*Jacaranda mimosifolia*	3.0	1.88	Medium	Low	Low	Remove	Exempt species. Within footprint.
136	*Jacaranda mimosifolia*	2.04	1.61	Short	Low	Low	Remove	Exempt species. Within footprint.
137	*Strelitzia nicolai*	3.6	N/A	Medium	Low	Low	Remove	Within footprint.
138	*Jacaranda mimosifolia*	3.96	2.61	Medium	Low	Low	Remove	Exempt species. Within footprint.
139	*Jacaranda mimosifolia*	N/A	N/A	Short	Low	Low	Remove	Exempt species. Within footprint.
140	*Eucalyptus botryoides*	9.0	3.01	Medium	Medium	Medium	Retain	19.0% from demolition of building, sensitive construction measures required.

Tree No.	Species Name	TPZ (m)	SRZ (m)	ULE	Landscape Significance	Retention Value	Proposed Action	Development Impacts
141	*Cupressus x leylandii x 7*	4.8	2.25	Long	Medium	Medium	Retain	No incursion.
142	*Melaleuca quinquenervia*	7.8	2.76	Medium	Medium	Medium	Retain	29.9% Major encroachment from demolition of driveway, sensitive construction measures required.
143	*Leptospermum petersonii*	3.0	1.85	Short	Low	Low	Retain	No incursion.
144	*Grevillea robusta*	6.0	2.47	Short	Low	Low	Retain	15.2% Major encroachment from demolition of driveway, sensitive construction measures required.
145	*Jacaranda mimosifolia*	3.0	2.0	Medium	Medium	Medium	Retain	14.3% Major encroachment from demolition of driveway, sensitive construction measures required.
146	*Cupressus sempervirens x 3*	2.0	1.5	Long	Low	Low	Retain	1.4% Minor encroachment from demolition of driveway.
147	*Livistona australis*	3.0	N/A	Medium	Medium	Medium	Retain	15.3% Perceived Major encroachment from demolition of structure. Tree has fibrous root system and is sufficiently situated away from demolition.
148	*Citrus sp. row (Hedge)*	2.0	1.5	Short	Low	Low	Retain	2.5% Minor encroachment from demolition of driveway. Canopy pruning back to fence line required.
149	*Syzygium sp. (Hedge)*	2.0	1.5	Medium	Low	Low	Retain	No incursion.

APPENDIX E – PHOTOS

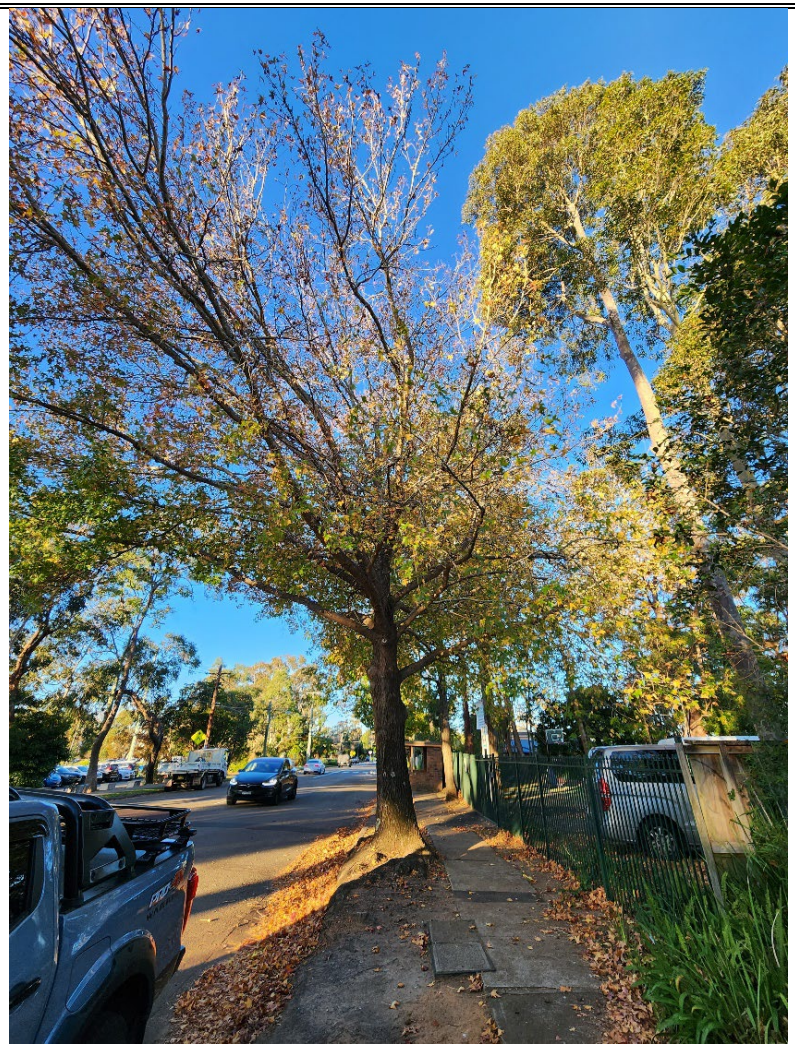


Photo 1: Tree 1 – Council street tree, taken facing East to be retained

Photo 2: Trees 2, 3, 11 & 12 taken facing South.

Photo 3: Showing Trees 4 – 10 facing West

Photo 4: Trees 40 & 56 listed as exempt species. Taken facing South.

Photo 5: Tree 28 in poor health proposed for removal. Tree subject to major encroachment. Taken facing North.

Photo 6: Trees 17 & 33 taken facing Northeast. Tree 33 Exempt species.

Photo 6: Tree 55 High retention value, priority for retention. Taken facing Southeast.

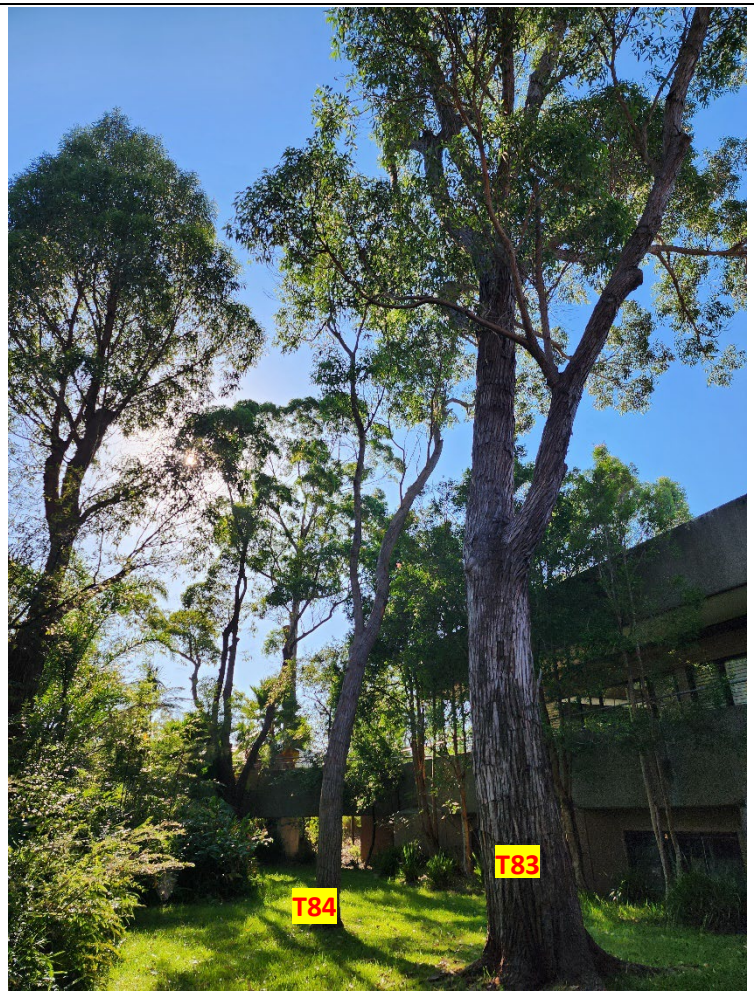


Photo 7: Trees 83 & 84 taken facing East. Tree 83 High retention value unable to retain due to fill in excess of 2.5m

Photo 8: Trunk of 83 showing perspective of fill requirement when compared to red arrow.

Photo 9: Stonewall to be removed.

Photo 10: Trunk of 83 showing perspective of fill requirement when compared to red arrow.

Photo 11: Stonewall to be removed.

Photo 12: Trees 107 – 110 within 2m of existing building and are exempt under the DCP.

Photo 13: T119 within 2m of existing building (1.5m) and therefore exempt under the DCP.

Photo 14: Minor pruning back to fence line of Citrus sp. Tree 140 maybe required.

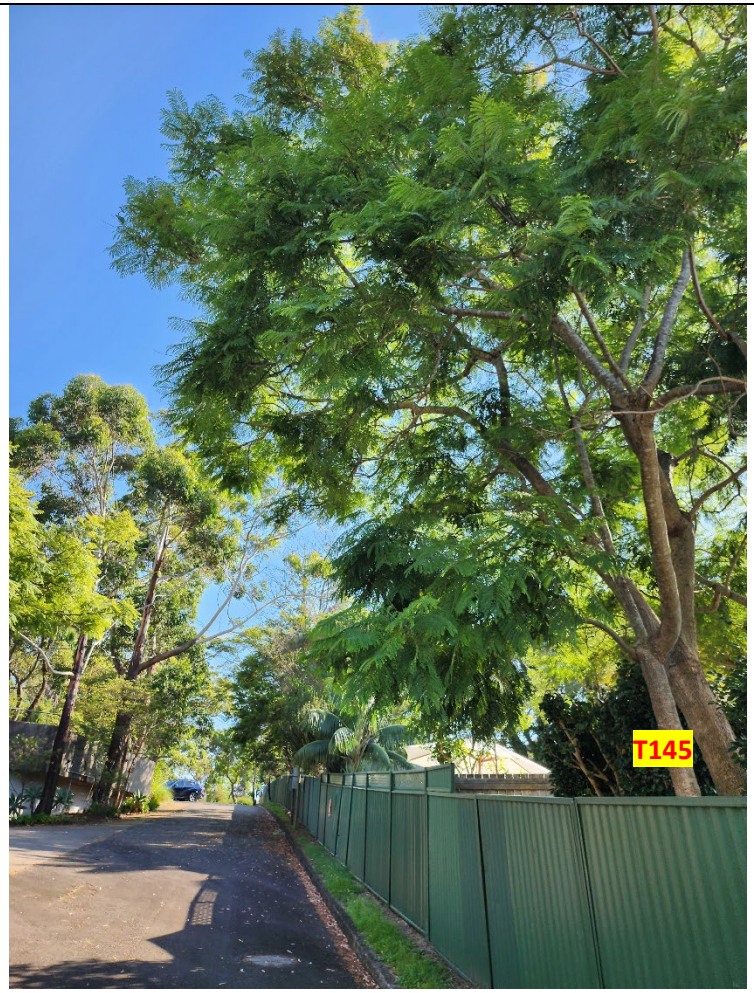


Photo 15: T145 located on neighbouring property subject to major encroachment. Tree sensitive construction measures apply.

APPENDIX F – PLANS

Plan 1 - Tree Location & Protection: Sheet 1 of 7 (Overview), Revision A

Plan 2 - Tree Location & Protection: Sheet 2 of 7, Revision A

Plan 3 - Tree Location & Protection: Sheet 3 of 7, Revision A

Plan 4 - Tree Location & Protection: Sheet 4 of 7, Revision A

Plan 5 - Tree Location & Protection: Sheet 5 of 7, Revision A

Plan 6 - Tree Location & Protection: Sheet 6 of 7, Revision A

Plan 7 - Tree Location & Protection: Sheet 7 of 7, Revision A

Legend

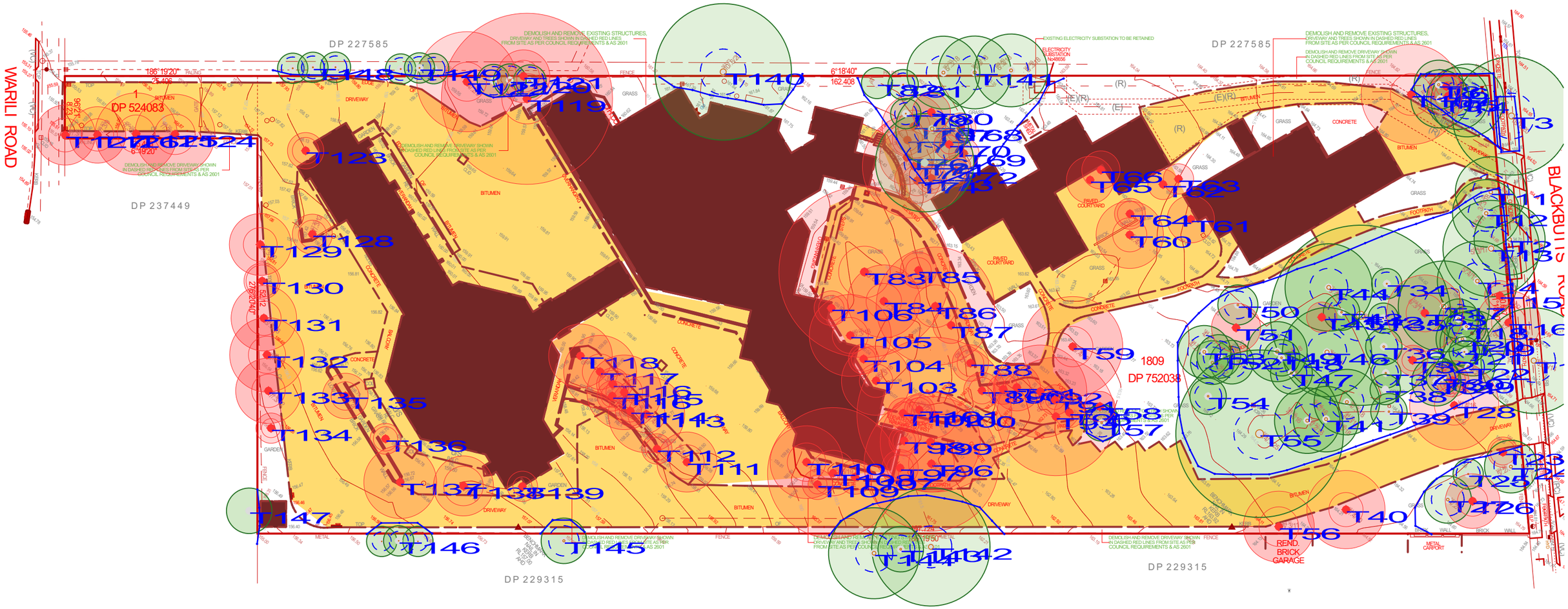
T1 = Tree Identification Number

= Structural Root Zone

= Tree Protection Zone (Retained Tree)

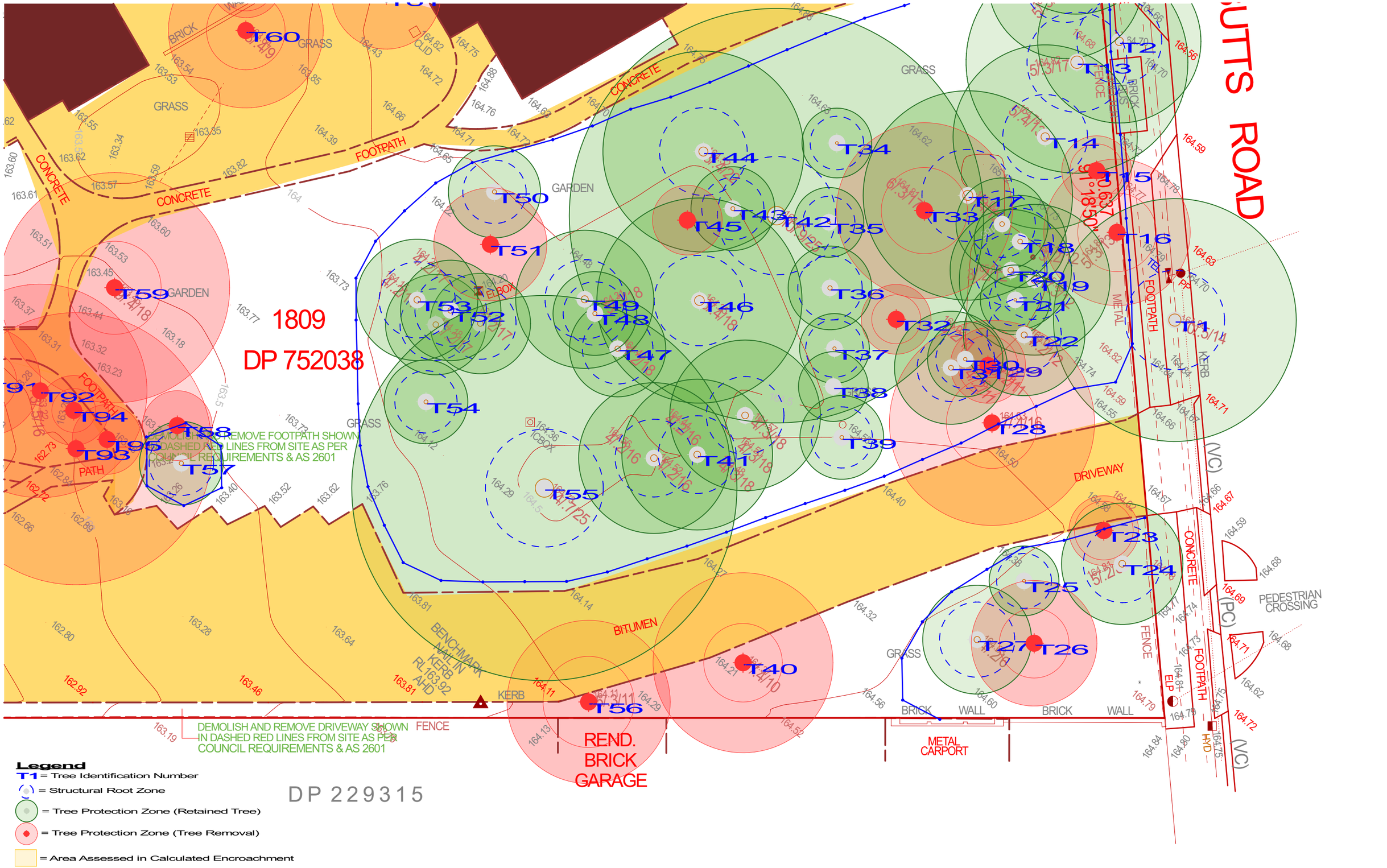
= Tree Protection Zone (Tree Removal)

= Area Assessed in Calculated Encroachment



THE TREE GUARDIAN
EXPERT ARBORICULTURE

The Tree Guardian Group Pty Ltd 2/53A Park Rd, Carlton, NSW, 2218 E: info@thetreeguardian.com.au M: 0404 524 526	CLIENT: SEKISUI HOUSE PTY LTD	DRAWN: T.H DATE: 14.03.2024 SCALE: A3	TITLE/DWG NO. TREE LOCATION & PROTECTION PLAN SHEET 1 OF 7 (OVERVIEW) 49 BLACKBUTTS ROAD, FRENCHS FOREST, NSW, 2086 REVISION: A	A3



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2/53A Park Rd,
Carlton, NSW, 2218
E: info@thetreeguardian.com.au
M: 0404 524 526

CLIENT:
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DRAWN: T.H
DATE: 14.03.2024
SCALE: 1:200 A3

TITLE/DWG NO.
TREE LOCATION & PROTECTION PLAN
SHEET 2 OF 7
49 BLACKBUTTS ROAD, FRENCHS FOREST, NSW, 2086
REVISION: A

A3

Legend

T1 = Tree Identification Number

= Structural Root Zone

= Tree Protection Zone (Retained Tree)

= Tree Protection Zone (Tree Removal)

= Area Assessed in Calculated Encroachment

EXISTING ELECTRICITY SUBSTATION TO BE RETAINED

ELECTRICITY SUBSTATION No48656

DP 227585

DEMOLISH AND REMOVE EXISTING STRUCTURES, DRIVEWAY AND TREES SHOWN IN DASHED RED LINES FROM SITE AS PER COUNCIL REQUIREMENTS & AS 2601

DEMOLISH AND REMOVE DRIVEWAY SHOWN IN DASHED RED LINES FROM SITE AS PER COUNCIL REQUIREMENTS & AS 2601

BLACKBUTTS ROAD

BITUMEN

CONCRETE

GRASS

FENCE

METAL SHED

PAVED COURTYARD

BRICK WALL

FOOTPATH

DRIVEWAY

GARDEN

T1 T2 T3 T4 T5 T6 T10 T11 T12 T13 T14 T15 T16 T17 T18 T19 T20 T33 T34 T35 T36 T41 T42 T43 T44 T45 T50 T51 T59 T60 T61 T62 T63 T64 T65 T66

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2/53A Park Rd,
Carlton, NSW, 2218
E: info@thetreeguardian.com.au
M: 0404 524 526

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DATE: 14.03.2024
SCALE: 1:200 A3

TITLE/DWG NO.
TREE LOCATION & PROTECTION PLAN
SHEET 3 OF 7
49 BLACKBUTTS ROAD, FRENCHS FOREST, NSW, 2086

REVISION: A

A3

Legend

T1 = Tree Identification Number

= Structural Root Zone

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= Tree Protection Zone (Tree Removal)

= Area Assessed in Calculated Encroachment

EXISTING ELECTRICITY SUBSTATION TO BE RETAINED

ELECTRICITY SUBSTATION No48656

6°18'40"

162.408

T140 T141 T82 T81 T79 T80 T78 T67 T68 T77 T70 T69 T76 T71 T75 T72 T74 T73 T66 T65 T63 T62 T64 T61 T60 T83 T85 T84 T86 T106 T87 T105

GRASS PAVED COURTYARD CONCRETE BRICK WALL FOOTPATH ELEVATED STEPS OVERHANGING GARDEN METAL SHED STONE WALL

(E) (R) (E)(R)

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Carlton, NSW, 2218

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M: 0404 524 526

CLIENT:
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DRAWN: T.H

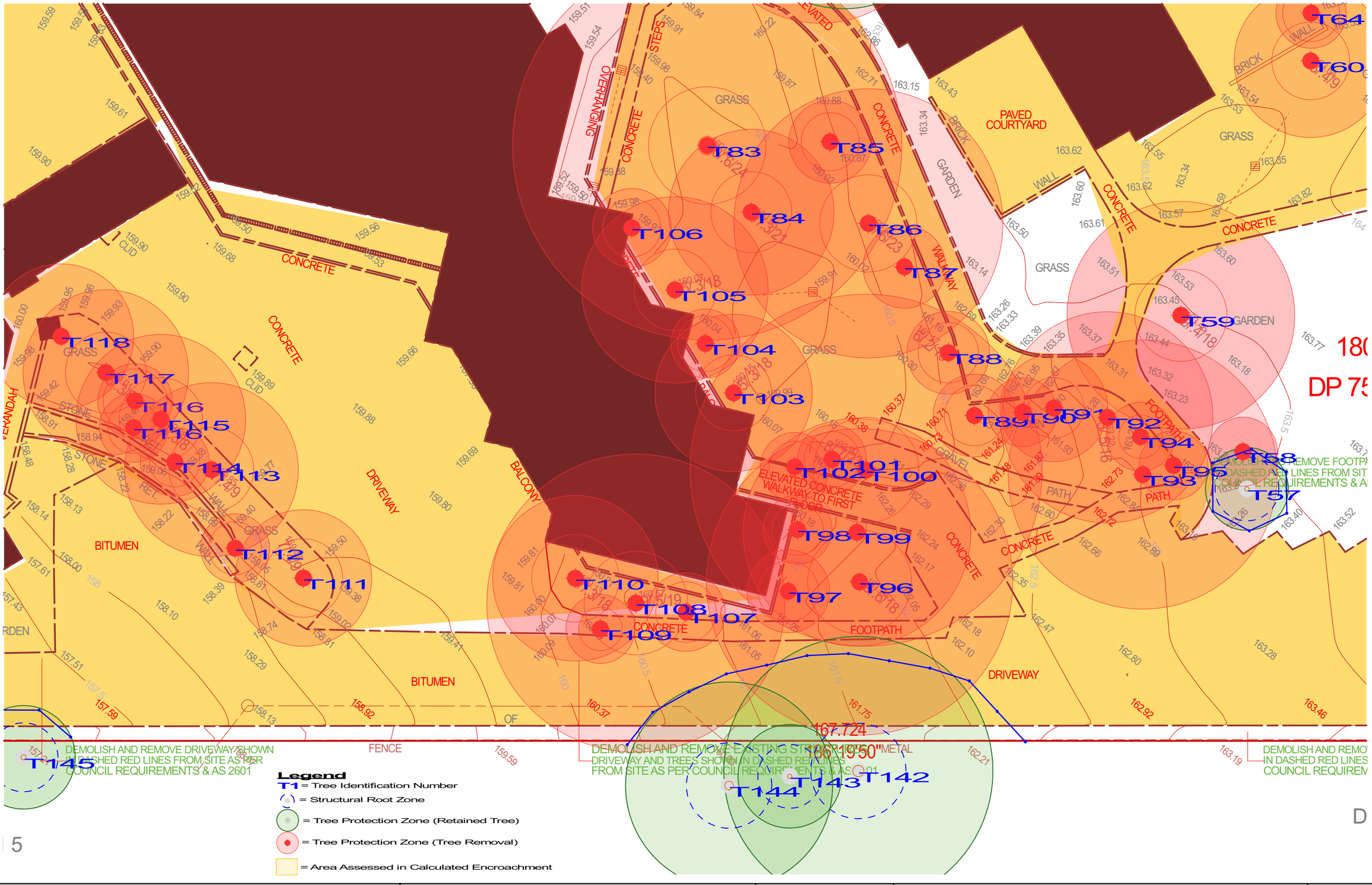
DATE: 14.03.2024

SCALE: 1:200 A3

TITLE/DWG NO.
TREE LOCATION & PROTECTION PLAN
SHEET 4 OF 7
49 BLACKBUTTS ROAD, FRENCHS FOREST, NSW, 2086

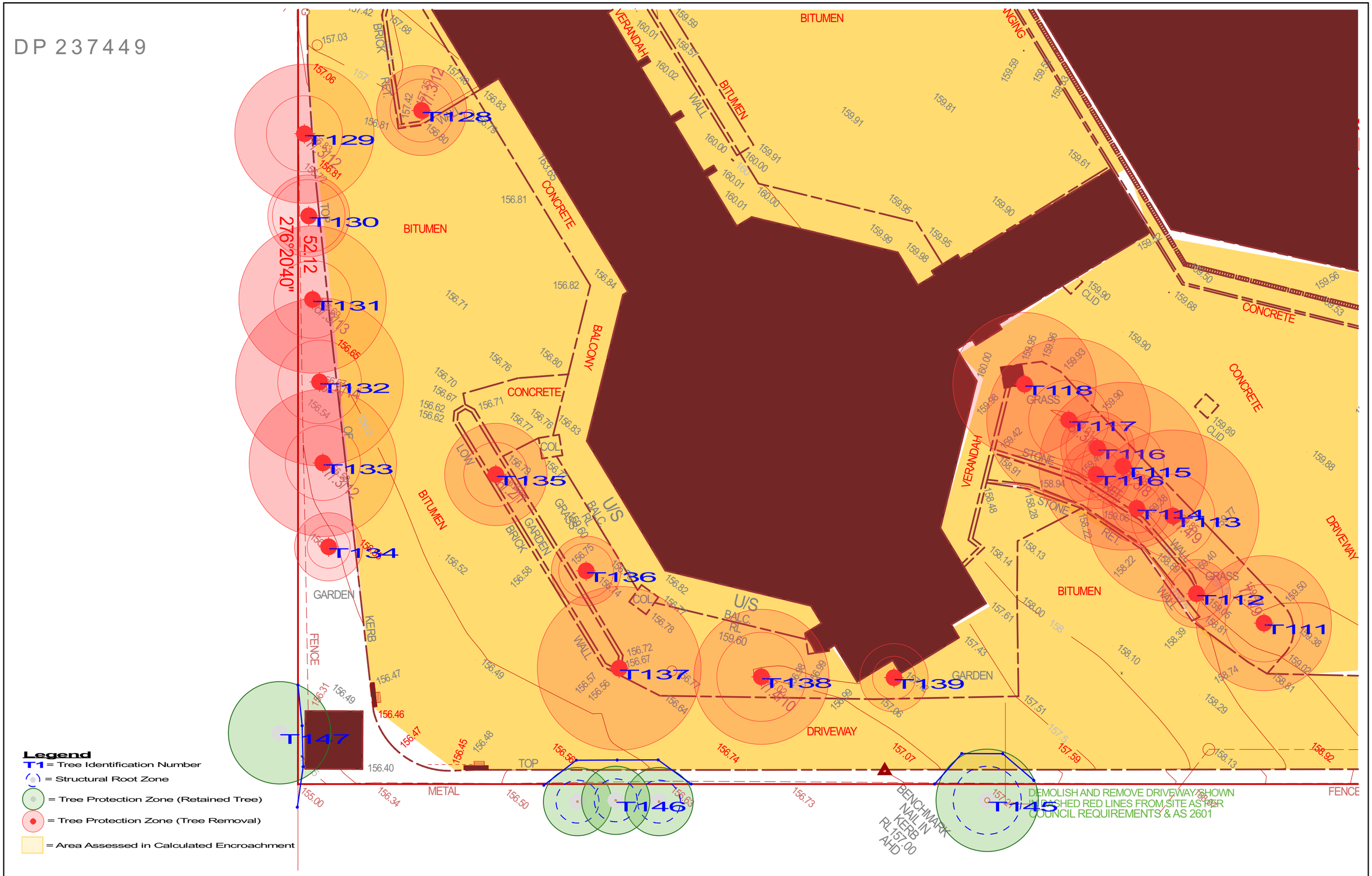
REVISION: A

A3



The Tree Guardian Group Pty Ltd 2/53A Park Rd, Carlton, NSW, 2218 E: info@thetreeguardian.com.au M: 0404 524 526	CLIENT: SEKISUI HOUSE PTY LTD	DRAWN: T.H DATE: 14.03.2024 SCALE: 1:200 A3	TITLE/DWG NO. TREE LOCATION & PROTECTION PLAN SHEET 5 OF 7 49 BLACKBUTTS ROAD, FRENCHS FOREST, NSW, 2086 REVISION: A	A3

DP 237449



Legend

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= Tree Protection Zone (Tree Removal)

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Carlton, NSW, 2218

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DATE: 14.03.2024

SCALE: 1:200 A3

TITLE/DWG NO.
TREE LOCATION & PROTECTION PLAN
SHEET 6 OF 7
49 BLACKBUTTS ROAD, FRENCHS FOREST, NSW, 2086

REVISION: A

A3

DP 227585

DP 237449

DEMOLISH AND REMOVE EXISTING STRUCTURES,
DRIVEWAY AND TREES SHOWN IN DASHED RED LINES
FROM SITE AS PER COUNCIL REQUIREMENTS & AS 2601

DEMOLISH AND REMOVE DRIVEWAY SHOWN
IN DASHED RED LINES FROM SITE AS PER
COUNCIL REQUIREMENTS & AS 2601

DEMOLISH AND REMOVE DRIVEWAY SHOWN
IN DASHED RED LINES FROM SITE AS PER
COUNCIL REQUIREMENTS & AS 2601

1
DP 524083

186°19'20"
25.406
96°21'
8.23

25.406
6°19'20"

276°20'40"
52.12

T118 T119 T120 T121 T122 T123 T124 T125 T126 T127 T128 T129 T130 T131 T132 T148 T149

Legend
T1 = Tree Identification Number
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TITLE/DWG NO.
TREE LOCATION & PROTECTION PLAN
SHEET 7 OF 7
49 BLACKBUTTS ROAD, FRENCHS FOREST, NSW, 2086

REVISION: A

A3