

# Arboricultural Impact Assessment

10-16 Birdwood Avenue Cabramatta West

Proposed Seniors Housing Development

Prepared for Homes NSW

Prepared 14 February 2025

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# **Executive Summary**

This Arboricultural Impact Assessment (AIA) report has been prepared for Homes NSW, to assist in the assessment of a Development Application to be submitted to Fairfield Council in relation to a seniors housing development at 10 Birdwood Avenue, Cabramatta West.

The proposed development consists of demolition of the existing dwellings and site features, construction of a multi unit seniors housing with associated carparking, communal open space, paths, and gardens), installation of underground services, landscaping, ancillary structures and infrastructure installation as shown on the plans by McGregor Westlake Architecture and Sprout Studio.

This report assesses nineteen (19) trees within the property. Details of the species, dimensions, health, and condition of the assessed trees are contained in the **Tree Survey Information Table** (page 11).

In the context of the proposed development, seventeen (17) trees or rows of trees/hedges on site will be removed, two (2) trees on site can be retained and protected as shown on the **Tree**Protection Plan (page 13) and specified in the **Recommendations** (page 9).

The following are the outcomes of the arboricultural impact assessment regarding the trees in the context of the currently proposed works.

- Twelve (12) prescribed trees will be removed, and five (5) exempt trees will be removed.
- One (1) native prescribed tree will be retained and protection, and one (1) small tree can be retained but should be considered for removal and replacement with suitable trees.
- The retained tree/s will require tree protection fencing, ground protection if works are not
  excluded from the TPZ, and tree sensitive excavation methods with an AQF Level 5 qualified
  Project Arborist present if any works are within the TPZ.
- Install at least seventeen (17) small replacement trees from minimum 45L containers, thirty-nine (39) medium replacement trees from minimum 75L containers and three (3) large replacement trees from minimum 100L containers to offset the loss of tree canopy, as shown on the Landscape Concept Plan.

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### 1. Introduction

#### 1.1 Summary

This Arboricultural Impact Assessment (AIA) report has been prepared for Homes NSW, to assist in the assessment of a Development Application to be submitted to Fairfield Council in relation to proposed seniors housing development works at 10 Birdwood Avenue, Cabramatta West. The report is prepared in accordance with Australian Standard *AS4970-2009 – Protection of trees on development sites*.

#### 1.2 Purpose

The purpose of this report is to assess the potential impacts of the proposed works on the trees on and adjacent the site, and detail tree protection measures required for retained trees including tree sensitive design and construction measures.

#### 1.3 The Site

The site is four residential (R2 Low Density Residential) lots located on the southern side of Birdwood Avenue, and is surrounded by low density residential properties. Each property contains a single detached residence with associated outbuildings, driveways, paths and landscaping.

#### 1.4 The Trees

This report assesses nineteen (19) trees within the property. Details of the species, dimensions, health, and condition of the assessed trees are contained in **Tree Survey Information Table** (p.11).

#### 1.5 The Proposed Development

The proposed development consists of demolition of the existing dwellings and site features, construction of a multi unit seniors housing with associated carparking, communal open space, paths, and gardens), installation of underground services, landscaping, ancillary structures and infrastructure installation as shown on plans by McGregor Westlake Architecture and Sprout Studio.

## 2. Background

#### 2.1 Tree Management Controls

Fairfield Development Control Plan 2024 *3A.2 Preservation of Trees or Vegetation* applies to trees with a height of more than 4m, spread of more than 3m, or a trunk diameter over 75mm measured 1m above ground (other definitions apply if the tree is located on the Fairfield LEP Riparian Land and Waterways map). Exemptions include undesirable species listed in the Schedule at the end of chapter 3A of the DCP, minor pruning (as defined in the DCP), and removal of trees within 3m of an existing approved main residence building on the same property. The trees assessed in this report are subject to the DCP, except where stated otherwise.

#### 2.2 Reference Documents

The following documents were referred to in the preparation of this report:

- Survey plan, DS & P, Plan Showing Detail, Levels & Boundaries, 15/08/23
- Architectural plan set, McGregor Westlake Architecture, Proj no. BH2AQ, Dwg nos A00-A19, 30-Jan-25
- Landscape Concept Plan Report: Sprout Studio, Rev D, 24.01.2025
- Australian Standard AS4373-2007 Pruning of amenity trees.
- Australian Standard AS4970-2009 Protection of trees on development sites.
- Fairfield Development Control Plan 2024 3A.2 Preservation of Trees or Vegetation
- Fairfield Local Environmental Plan (LEP) 2013
- *IACA Significance of a Tree, Assessment Rating System (STARS),* Institute of Australian Consulting Arboriculturists, <u>www.iaca.org.au</u>, 2010.
- State Environmental Planning Policy (Biodiversity and Conservation) 2021.

# 3. Tree Assessment Methodology

#### 3.1 Limitations and Assumptions

The recommendations in this report rely on the provided information, including architectural plans and documents, limited to those listed in section 2.2 (**Reference Documents**).

Care has been taken to obtain all information from reliable sources; however, the author makes no representations, guarantees or warranties as to the accuracy of information provided by others. Similarly, no warranties are made as to the accuracy or completeness of any reproduction of this report. This report is only valid in its entirety and for the purpose for which it was prepared.

Conditions on the site may change after the tree assessment. Liability will not be accepted for damage or injury as a result of unforeseeable events or natural processes.

This report does not constitute or include a tree risk assessment. Where defects are noted, these are recommended for further investigation where warranted. Other tree defects may be present which have not been noted.

#### 3.2 Tree Assessment

Visual tree assessment or "tree survey" was carried out by Jacki Brown, Arboricultural Consultant, in July 2023. The tree inspection was limited to a visual assessment from ground level, without excavation, coring, drilling, climbing or other testing. Trunk diameters were measured at "breast height" (1.4m above ground) and above the root buttress, to the nearest 10mm, using a standard tape measure, crown spreads were paced out on site and recorded in metre diameters or cardinal radii (N, S, E & W) where relevant, and tree heights were estimated by eye and recorded in metres.

The Arboricultural Impact Assessment utilises the Australian Standard *AS4970-2009 Protection of trees on development sites*.

#### 3.3 Tree Survey Data Definitions

Refer to the Tree Survey Information Table (page 11).

**Retention Values** are assigned using the IACA STARS (2010) method and matrix. The method combines the factors of Significance and Estimated or Useful Life Expectancy to provide a value of High, Medium, Low or Remove/Very Low which should form the main metric to inform decision making and prioritising of tree retention.

*Useful Life Expectancy (ULE)* ranges are estimated for each tree, as either Long (40+ years), Medium (15-40 years), Short (5-15 years) or Remove (less than 5 years). The ratings are based on the assessed health, condition and structure of each tree at the time of assessment, in its specific location and growing context. The ULE does not imply a risk or "safety" measure, or a statement of a tree's retention value. The ratings are not static, and may be revised during future assessments if conditions change.

Significance ratings are given for each tree, based on their Amenity Value, Ecological Value, size and location, and are broadly based on the Tree Significance Assessment Criteria in the IACA STARS (2010) method. While High significance trees provide substantial values to their surroundings, Low and Medium significance trees also contribute to the Urban Forest and in many cases may grow to become High significance trees, given the opportunity.

An *Amenity Value* rating of High, Medium or Low has been assigned to each tree, based on the visual, aesthetic, scenic, cultural, heritage, social, and health benefits provided by the tree in its context.

An *Ecological Value* rating of High, Medium or Low has been assigned to each tree, based on the species and potential habitat or native animal browsing values, however this should not be taken as ecological advice.

### 4. Observations and Discussion

#### 4.1 Preliminary Arboricultural Advice

Homes NSW engaged New Leaf Arboriculture to provide tree assessment advice at the preliminary stage, to allow for the prioritisation of trees that are worthy of retention within the expected lifespan of future development in line with best practice arboriculture and urban forestry.

After attending the site and assessing and categorising the trees, the Arborist provided advice regarding the trees and the design of the site, as detailed below.

Trees to prioritise retaining (as many as possible): **Trees 2, 10, 12, 16** (4 trees). However, none of these trees are excellent specimens and will not grow much more than their existing sizes, so these trees may be better replaced by young vigorous healthy tree planting which will achieve a greater canopy in a short time.

The above listed trees are spaced out across the site, and would constrain the layout of the site.

All other trees on the site are species or specimens not suitable for retention and recommended for removal even if the layout doesn't impact them, or small trees which could be retained but are not high priorities.

Preliminary advice to the design team also suggested to allow for new trees in strategic locations (e.g. to the west and north of the building to provide summer cooling) - by focusing the deep soil areas to those setbacks. The end result of the proposed development will include tree planting to the north and south of the buildings, some small screening trees to the east and west boundaries, and a large internal courtyard with potential for tree planting.

#### 4.2 Canopy Coverage Comparison

The resulting canopy cover following the proposed development will be at least 21% of the site as per the Landscape Concept Plan Report, including a contribution of six public street trees in the verge. This compares to a current canopy coverage of approximately 22% of the overall site (half of which is from **Tree 4**, the large *Ficus elastica*). The existing trees are unlikely to increase in size very much, while the proposed trees could grow to larger spreads than shown on the Landscape Plan, and the landscaped area of approximately 38% of the site will be entirely made up of garden planting with no lawns, which is an improved urban greening outcome.

#### 4.3 Trees within the Proposed Development Footprint

Nine (9) trees (**Trees 2, 3, 4, 5, 8, 9, 10, 11, and 12**) are located within the footprint of the proposed development, and in the context of the current proposal, these trees will be required to be removed.

#### 4.3.1 High Retention Value Tree Proposed to be Removed

One (1) small *Tristaniopsis laurina* (Water Gum) tree (**Tree 10**) located within the footprint of the proposed carpark will require removal in the context of the current development proposal.

While this tree is of High Retention Value due to being a native species is good to average health and good condition, it can be replaced with a similar native tree within the short term. Supplemental tree planting is included on the Landscape Concept Plan for the development, and includes a greater number of trees than are being removed.

#### 4.3.2 Medium Retention Value Trees Proposed to be Removed

One (1) large native tree (**Tree 2**) in good health and condition is located in the footprint of the proposed building. While this tree provides a high level of amenity, it is exempt due to being less than 3 metres from the existing main residence on the property.

Preliminary arboricultural advice was given prior to the design development process, including that the tree is not of High Retention Value to due its likely short lifespan and low resilience to impacts. As this tree is not a Prescribed tree, it should not be considered a constraint on the development.

One (1) tree (**Tree 9**) is a row of three small hedge shrubs and is located in the footprint of the proposed building. While this tree provides amenity within the current land use, this group of trees should not be considered a constraint on the proposed development.

Two (2) trees (**Trees 11 and 12**) are located within the footprint of the proposed carpark and will require removal in the context of the current development proposal. These trees are of Medium Retention Value due to being in good to average health and condition and providing a moderate amount of amenity within the current land use. However, **Tree 11** is a row of *Duranta* hedge shrubs, and **Tree 12** is a small *Fraxinus grifithii*. Both of these can be replaced with suitable tree and hedge planting in the short term.

#### 4.3.3 Low Retention Value Trees Proposed to be Removed

Two (2) trees (**Trees 3 and 8**) are located within the footprint of the proposed building and will require removal in the context of the current development proposal. These trees are of Low Retention Value, with **Tree 3** being a small *Callistemon viminalis* in average to poor condition, and **Tree 8** an exempt tree due to its small size, and also an unsuitable tree for retention in the proposed development (*Ficus benjamina*).

One (1) large planted *Ficus elastica* (Rubber Tree) tree (**Tree 4**) is located within the footprint of the proposed communal open space including paths, gardens, ramps and planter beds. This tree was assessed as being Low Retention Value due to its poor form, problematic species, and extensive damage to surface roots and adventitious roots. This tree's canopy currently covers approximately 10% of the overall site, but its retention would be problematic within the proposed site use due to surface roots (trip hazards), past damage (potential for branch failures), and reduction of useable space on the site.

Given the number of trees proposed to be planted on site, this tree should not be considered a constraint on the proposed development. Replacement tree species should be selected for their resilience in the locality over the medium to long term, including clay soils, native species where appropriate, and likely heat and drought conditions. Species suggestions are provided in the Recommendations.

One (1) tree (**Tree 5**) is located within the footprint of the proposed main access driveway and OSD and will require removal in the context of the current development proposal. This tree is of Low Retention Value as it is a small *Callistemon viminalis* with a short to medium useful life expectancy.

#### 4.4 Trees with Major Encroachment from the Proposed Development

Eight (8) trees (**Trees 1, 6, 7, 13, 15, 16, 17 and 19**) will have major encroachments from the proposed development and are proposed for removal.

#### 4.4.1 High Retention Value Tree Proposed to be Retained

One (1) tree (**Tree 16**) will have a major encroachment from the proposed carpark. This tree is of High Retention Value due to being a native tree in good to average health and good condition. It is expected to be fairly resilient to the 12% encroachment and associated development works, provided that tree protection is in place prior to demolition or earthworks, and all excavation is outside the SRZ, with any excavations or soil changes in the TPZ to be in coordination with the Project Arborist.

#### 4.4.2 Medium Retention Value Trees Proposed to be Removed

One (1) tree (**Tree 1**) is located 0.5m from the proposed stormwater pit and pipe trench, and 1.9m from the proposed entry path, which is a combined 54% (major) TPZ encroachment, and within the SRZ. Considering the structure of this tree with lopped branches, suckers from the base and multistem form, this tree should not be considered a constraint on the proposed development, provided that suitable replacement trees are installed on site.

One (1) tree (**Tree 7**) is a small hedged *Syzygium* (Lilly Pilly) located at the edge of the proposed driveway and OSD. Given the small size of this tree, it can be replaced in the short term with suitable planting as part of the development.

Three (3) trees (**Trees 13, 15, and 17**) are located in close proximity to the carpark, which is a 14%, 17%, and 16% (major) encroachment, respectively.**Tree 13** is a small *Callistemon* with a short to medium useful life expectancy, and **Trees 15 and 17** are small Ficus trees unsuitable for retention due to their very large eventual mature size. Removal and replacement of these trees would provide a better long term outcome for the amenity and canopy coverage of the site.

#### 4.4.3 Low Retention Value Trees Proposed to be Removed

Two (2) trees (**Trees 6 and 19**) will have major encroachments from the proposed development and will require removal in the context of the current development proposal. These trees are of Low Retention Value, as small hedge plants. In the context of the development, these trees should not be considered a constraint on the proposed development.

#### 4.5 Trees with Minor Encroachment from the Proposed Development

Two (2) trees (**Trees 14 and 18**) will have minor encroachments from the proposed development, and will require tree protection throughout works.

#### 4.5.1 Medium Retention Value Tree Proposed to be Retained

One (1) small hedged *Callistemon citrinus* tree or shrub (**Tree 18**) will have minor encroachments from the proposed development, and can be retained in the context of the proposed development. However, this tree is under the height and width of prescribed trees (although one stem is slightly larger than the minimum for prescribed trees of 75mm at 1m) and may be considered for removal to allow for tree planting.

#### 4.5.2 Medium Retention Value Tree Proposed to be Removed

One (1) small *Ficus elastica* tree (**Tree 14**) will have minor encroachments from the proposed development. This tree is not a suitable species for the location and should be removed and replaced with a suitable native tree.

#### 4.6 Trees Proposed for Removal for Landscape Purposes

Three (3) trees (**Trees 14, 15, and 17**) are proposed for removal within the development, as they are unsuitable tree for the proposed site use, given their likely mature size. These trees have been recommended for removal and replacement with more suitable species while they are still small.

Two (2) small trees (**Trees 13 and 18**) are proposed for removal within the development to allow for suitable new planting to provide longer term healthy canopy cover.

#### 4.7 Summary

	Tree No.'s	Trees Retained	Trees Removed
Trees within the proposed development footprint	2*, 3, 4, 5, 8*, 9, 10, 11, 12 (9)	-	2*, 3, 4, 5, 8*, 9, 10, 11, 12 (9)
Trees with major encroachments	1, 6*, 7*, 13, 15, 16, 17, 19* (8)	16 (1)	1, 6*, 7*, 13, 15, 17, 19* (7)
Trees with minor encroachments	14, 18 (2)	18 (1)	14 (1)
Trees proposed for removal for landscaping purposes	13, 14, 15, 17, 18 (5)	-	13, 14, 15, 17, 18 (5)
	19 trees in total	2 trees retained	17 trees removed (5 exempt)

<sup>\*</sup> Exempt trees

### 5. Recommendations

#### 5.1 Tree Removal

- Remove nine (9) trees (Tree 2, 3, 4, 5, 8, 9, 10, 11 and 12) as they are within the proposed development footprint.
  - Trees 2 and 8 could be removed irrespective of the proposed development, as they are exempt (within 3m of the existing dwellings).
- Remove seven (7) trees (**Trees 1, 6, 7, 13, 15, 17 and 19**) as they have major encroachments from the proposed development.
  - Trees 6, 7 and 19 could be removed irrespective of the proposed development, due to being under the size of prescribed trees, and Tree 7 could be removed irrespective of the proposed development, as it is exempt (within 3m of the existing dwellings).
- Remove four (4) trees (**Trees 8, 14, 15, and 17**) which are currently small but have the potential to become very large trees and problematic in the location/s.
- Consider removal and replacement of one (1) small tree or shurb (Tree 18) to allow space for tree planting.

#### 5.2 Tree Retention

- Retain and protect **Tree 16** which has major encroachments from the proposed development.
- Retain and protect Tree 18 if preferred, which has minor encroachments from the proposed development.

#### 5.3 Tree Protection Devices

- Install tree protection fencing (1.8m high temporary site fencing with concrete feet, or equivalent, not star pickets) around the TPZ areas as shown on the Tree
  Protection Plan, prior to demolition commencing, to exclude demolition and construction access from tree protection areas. Maintain the fencing in situ throughout all works.
- Install ground protection (100mm depth of mulch overlaid with steel plates, rumbleboards, trackmats or similar to areas requiring ongoing or vehicular access, or materials or waste storage) to any area of TPZ which can't be surrounded by fencing and as shown on the Tree Protection Plan. Ground protection can be excluded where existing hard surfaces (concrete, paving etc) remain in place over the soil.
- Install mulch, soil remediation, and temporary irrigation to the fenced TPZ areas, and TPZ signage on the outside faces of the fencing.

#### 5.4 Tree Sensitive Construction Measures

- Avoid damage to roots of 40mm diameter or greater. If roots greater or equal to 40mm are encountered, maintain the root/s in situ and contact the Project Arborist to assess and advise on root management.
- Utilise tree sensitive excavation methods where within a TPZ area. The excavation must be done by non-destructive (to tree roots) excavation method (hand excavation, Air spade, water laser with pressure of less than 1000PSI or directional boring at a depth of >0.8m). Any trenches need to be minimal width and located as far from trees as possible.

#### 5.5 Construction Tree Management

 Storage of materials, location of site sheds and work areas, and vehicle movement around the site must be placed to avoid and reduce impacts on trees to be retained.

#### 5.6 Pruning

 No pruning is required for clearance of the proposed buildings. Any proposed pruning will require a separate tree management permit from Fairfield Council.

#### 5.7 Replacement Tree Planting

• Install seventeen (17) small (5m min. mature height) replacement trees from minimum 45L containers, thirty-nine (39) medium (8m min. mature height) replacement trees from minimum 75L containers and three (3) large (15m min. mature height) replacement trees from minimum 100L containers, in suitably prepared and improved site soil within the property to offset the loss of tree canopy, as shown on the landscape plans. Trees should be high quality nursery grown plant stock and planted by persons with horticultural qualifications. The trees should be maintained to maturity.

#### 5.8 Project Arborist Hold Points

No.	Hold Point	Timing
1	Review final design plans (landscape design, architectural plans, services plans, construction drawings)	Prior to works commencing
2	Pre start meeting - Project Arborist & Site Supervisor	Prior to works commencing
3	Installation of tree protection - inspection	Prior to works commencing
4	Demolition of existing ground surfaces and structures in TPZ areas - attend during works in TPZ	At commencement of demolition in TPZ
5	Prior to any tree pruning - inspection	Prior to pruning
6	Prior to installation of any underground services, paving, subbase or structures within Tree Protection Zones - inspection	Prior to works in TPZ
7	Relocation or removal of any tree protection measures	Prior to modifying the TPZ
8	Removal of tree protection - inspection	At completion

The recommendations of this report do not constitute consent to carry out works. Approval is required in the form of Development Application to prune or remove trees. Further information and clarification can be obtained from the author.

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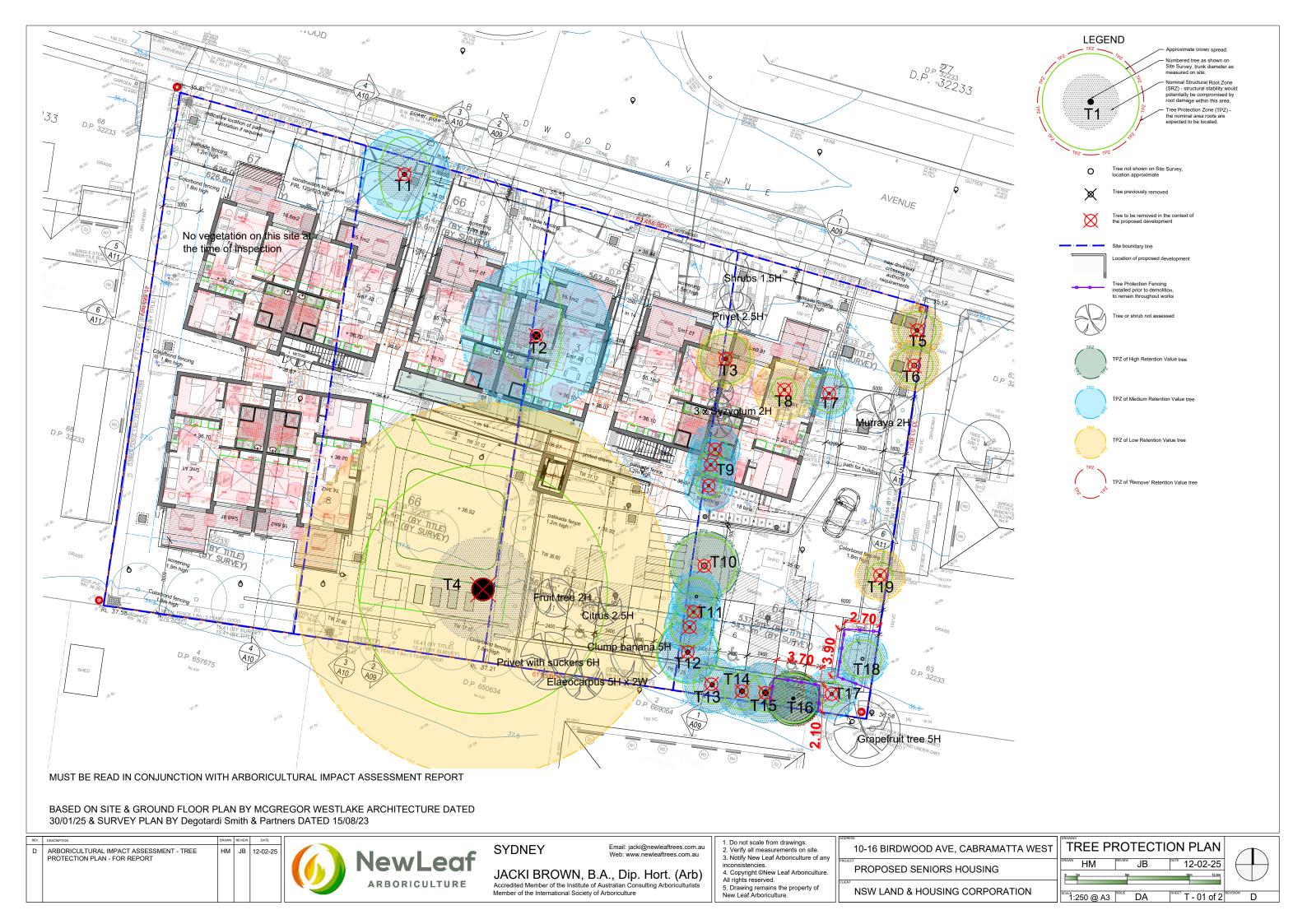


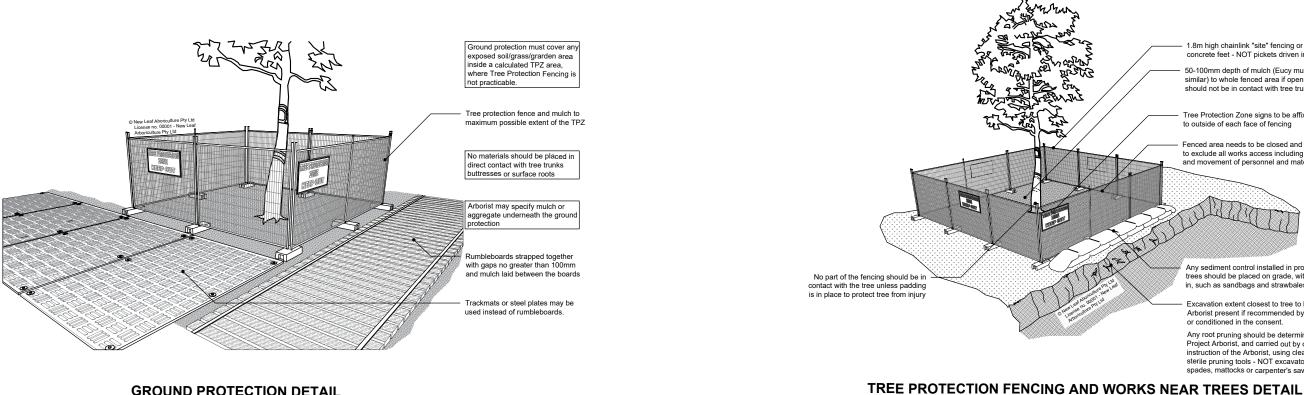
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Tree No.	Botanical & Common Name	Height	Spread	Calc- ulated Multi Stem DBH (mm)	DBH (mm)	DRB (mm)	Age	Health	Condition	ULE	Significance	Amenity Value	Ecological Value	SRZ	TPZ	Retention Value (STARS)	Site Notes	Development Encroachment	Development Impact	Outcome
1	<i>Liquidambar formosana</i> Chinese Sweet Gum	8	3N 3S 2E 2W		300	350	М	Av	Av	М	М	М	L	2.1	3.6	Med	Multistem from 2.5m. Lopped and broken branches. Suckers from base. House powerlines through both sides of crown.	20%	0.5m from proposed stormwater pit (3% encroachment), 1.9m from proposed entry path (17% encroachment). Major encroachment in TPZ & SRZ. Pipes likely greater encroachment.	Rem
2	<i>Grevillea robusta</i> Silky Oak	11	5N 4S 2E 3W		500	600	М	G	G	М	М-Н	Н	М	2.7	6.0	Med	Low branches lopped with suckers/epicormics. 0.75m from house wall at #12 @ 1m height. Exempt due to location.	100%	Within proposed building footprint.	Rem
3	<i>Callistemon viminalis</i> Weeping Bottlebrush	4	4	190	100/ 100/ 80/ 80	300	М	Av	Av-P	S-M	L-M	L-M	М	2.0	2.3	Low	In narrow garden between 2 driveways- lopped & broken small branches. Other shrubs either side.	100%	Within proposed building footprint.	Rem
4	<i>Ficus elastica</i> Rubber Tree	12	20		1500 est.	1800 est.	М	G	Av	M-L	L	М	L	4.2	15.0	Low	Located on #14 property near #12 boundary. Branches lopped & aerial roots cut. Multistem. Poor form & problematic species. Lots of large surface roots damaged in both backyards.	100%	Within proposed communal open space including regrading.	Rem
5	Callistemon viminalis Weeping Bottlebrush	3	3	150	100/ 80/ 50/ 50	300	M-O M	Av	G-Av	S-M	L-M	L-M	М	2.0	2.0	Low	On boundary between #10 & #8.	100%	Within proposed OSD & driveway.	Rem
6	Leptospermum petersonii Lemon Scented Tea Tree	3	3	100	50/ 50/ 40/ 40	400	M-O M	Av	G-Av	S	L-M	L-M	М	2.3	2.0	Low	On boundary between #10 & #8. Mallee form, sparse, lots of dead twigs. Exempt due to small size.	36%	At edge of OSD & driveway - remove tree.	Rem
7	<i>Syzygium smithii</i> Lilly Pilly	4	3	100	50/ 50/ 50/ 50	200	М	G-Av	G	М	М	М	М	1.7	2.0	Med	Hedged Lilly Pilly. Exempt due to small size.	72%	At edge of OSD & driveway & 0.5m from proposed building - remove tree.	Rem
8	Ficus benjamina Weeping Fig	3	2		100	200	SM	Av	G-Av	M-L	L	L	L	1.7	2.0	Low	Hedged into rounded shape. Exempt due to small size. Unsuitable species in location.	100%	Within proposed building footprint.	Rem
9	Duranta sp. Pigeonberry (3 in hedge)	4-5	2-3		10-100	200	М	G	Av	М	М	М	L	1.7	2.0	Med	In narrow garden beside driveway at #10.	100%	Within proposed building footprint.	Rem
10	<i>Tristaniopsis laurina</i> Water Gum	5	5	230	100/ 150/ 100/ 100	450	М	G-Av	G	M-L	М	М	М	2.4	2.8	High	Between hedges.	100%	Within proposed carpark.	Rem
11	<i>Duranta sp.</i> Pigeonberry (3 in hedge)	3-4	2-3		10-100	200	М	G-Av	Av	М	М	М	L	1.7	2.0	Med	3 plants in row.	100%	Within proposed carpark.	Rem

Tree No.	Botanical & Common Name	Height	Spread	Calc- ulated Multi Stem DBH (mm)	DBH (mm)	DRB (mm)	Age	Health	Condition	ULE	Significance	Amenity Value	Ecological Value	SRZ	TPZ	Retention Value (STARS)	Site Notes	Development Encroachment	Development Impact	Outcome
12	<i>Fraxinus griffithii</i> Evergreen Ash	6	5	200	100/ 100/ 100/ 80	350	М	G	G-Av	М	М	М	L	2.1	2.4	Med	Multistem from base. Small branches pruned. Corner of backyard.	100%	Within proposed carpark.	Rem
13	Callistemon viminalis Weeping Bottlebrush	5	3	180	120/ 80/ 70/ 60	350	М	Av	Av	S-M	М	М	М	2.1	2.2	Med	Near rear boundary.	14%	1.2m from proposed carpark. Remove & replace due to limited life expectancy.	Rem
14	Ficus elastica Red Variety Rubber Tree	5	3	170	100/ 100/ 50/ 80	400	SM	G	Av	M-L	L-M	L-M	L	2.3	2.0	Med	Cluster of stems from base.	8%	1.4m from proposed carpark. Minor encroachment but species not suitable for retention in the context of the proposal.	Rem
15	Ficus elastica Red Variety Rubber Tree	5	3	200	100/ 100/ 100/ 100	450	SM	G	Av	M-L	L-M	L-M	L	2.4	2.4	Med	Cluster of stems from base.	17%	Major encroachment from proposed carpark Species not suitable for retention in the context of the proposal.	c. Rem
16	<i>Banksia integrifolia</i> Coast Banksia	6	4	180	150/ 80/ 50	250	SM	G-Av	G	M-L	M-H	М	М-Н	1.8	2.2	High	Near rear boundary. Stormwater drain 1.5m to E.	12%	1.4m from proposed carpark.	Ret
17	Ficus benjamina 'Variegata' Variagated Weeping Fig	4	2	80	60/ 30/ 30/ 30	250	SM	G-Av	Av	M-L	L-M	L-M	L	1.8	2.0	Med	Some tip dieback. Many stems from base.	16%	Major encroachment from proposed carpark Species not suitable for retention in the context of the proposal.	c. Rem
18	Callistemon citrinus Crimson Bottle Brush	3	3	110	80/ 50/ 30/ 30	250	М	G-Av	G-Av	М	L-M	L-M	М	1.8	2.0	Med	Pruned to hedge shape.	1%	1.8m from proposed carpark. Small tree - consider removal & replacement with medium tree.	t Ret
19	<i>Duranta sp.</i> Pigeonberry (hedge)	2-3	1-2	80	40/ 40/ 30/ 30	250	М	Av-P	Av	S	L-M	L-M	L	1.8	2.0	Low	Hedge along #8 boundary within #10 - sparse. Exempt due to small size.	18%	Major encroachment from proposed carpark Remove trees & replace with suitable planting.	Rem

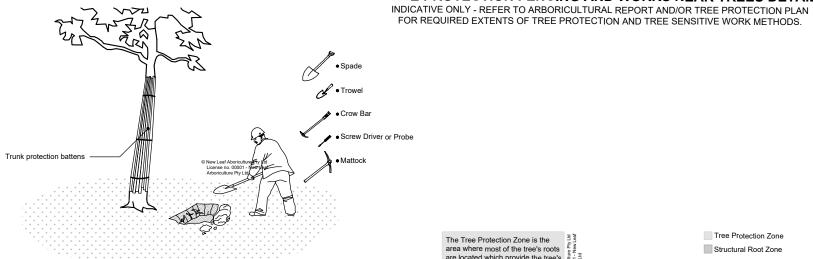
Key: Height (in metres); Spread (crown spread diameter in metres); DBH (Diameter at Breast Height / 1.4m) in millimetres; DRB (Diameter above Root Buttress) in millimetres; Age (Semi-mature, Mature, Overmature, or Senescent); Health (Good, Average or Poor); Condition (Good, Average or Poor); Useful Life Expectancy (ULE) (Short, Medium or Long); Significance (High, Medium or Low); Amenity Value (High, Medium or Low); Ecological Value (High, Medium or Low); SRZ (Structural Root Zone) radius in metres; TPZ (Tree Protection Zone) radius in metres





#### **GROUND PROTECTION DETAIL**

INDICATIVE ONLY - REFER TO ARBORICULTURAL REPORT AND/OR TREE PROTECTION PLAN FOR REQUIRED EXTENTS OF TREE PROTECTION AND TREE SENSITIVE WORK METHODS.



### HAND TOOL EXCAVATION

#### The tree should comply with AS For mature pruning should be carried out by or guided by an arborist or horticulturist at the time of planting Hessian ties looped around the Stakes or semi-permanent tree guards driver into the ground and original soil profile, outside the tree's root ball. stem and fixed to stake - must not be tight around stem. Root buttress must not be covered Water the root ball not the surrounding backfill and should be level with or slightly Container or wrap and any wires or ties removed above original soil leve completely from root ball Root prune with sharp blade before planting 50-80mm depth of mulch dished around tree's rootball, but not covering the rootball, to allow water Lightly compact the backfill soil in layers to firm the tree in place. Do not overcompact or use machinery to compact the soil Backfill with improved site soil, slightly mounded to allow for setting of soil Original soil undisturbed Dig hole 2-3 times the diameter of - Cut or untangle any circling roots to prevent root the root ball and cultivate the sides of the hole to avoid smooth sides which resist root penetration Depth of hole only to the height of the root ball

TREE PLANTING DETAIL

(AUSTRALIA)

#### area where most of the tree's roots Structural Root Zone are located which provide the tree's water, oxygen and nutrient requirements. Loss of roots on this area will affect tree health. The Structural Root Zone is the area where the roots are located which provide the tree's structural stability. Loss of roots in this area may affect immediate and/or long TP7 must be increased where branches extend beyond the nominal/calculated TPZ Stem & Branches Measure from centre line of NOTE: Sample measurements nm DBH (Diameter at n in grey) have been used for breast height/1.4m) 500mm DARB (Diameter above roo buttress)

#### **EXAMPLE TREE PROTECTION ZONE**

ARBORICULTURAL IMPACT ASSESSMENT - TREE HM JB 12-02-25 PROTECTION PLAN - FOR REPORT



**SYDNEY** 

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 Do not scale from drawings.
 Verify all measurements on site 3. Notify New Leaf Arboriculture of any

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5. Drawing remains the property of New Leaf Arboriculture

10-16 BIRDWOOD AVE, CABRAMATTA WEST PROPOSED SENIORS HOUSING **NSW LAND & HOUSING CORPORATION** 

The Tree Protection Zone is the

	TREE PR	OTECTIC	N DETAILS
	DRAWN HM	JB	12-02-25
-	0 1m	5m	10m 12.5m

1:250 @ A3 SSUE DA

1.8m high chainlink "site" fencing or hoarding with

concrete feet - NOT pickets driven into the ground 50-100mm depth of mulch (Eucy mulch or

similar) to whole fenced area if open soil. Mulch

should not be in contact with tree trunk.

Tree Protection Zone signs to be affixed

Fenced area needs to be closed and secured to exclude all works access including storage,

Any sediment control installed in proximity to

trees should be placed on grade, with no digging in, such as sandbags and strawbales.

Excavation extent closest to tree to have Project

Arborist present if recommended by the arborist Any root pruning should be determined by the Project Arborist, and carried out by or under instruction of the Arborist, using clean, sharp and sterile pruning tools - NOT excavator buckets,

Tree Protection Zone

and movement of personnel and materials

to outside of each face of fencing

