

PEERS BROWN MILLER LTD

Arboricultural & Environmental Consultants

VEGETATION SURVEY FOR COMPOUND HOUSES – ORANGA

PREPARED FOR: Kāinga Ora
BY: Peter Weir
DATE: December 2022

1.0 Introduction

Peers Brown Miller Ltd has been commissioned by Kāinga Ora to undertake an initial survey of the trees growing within two multi dwelling sites due to be incorporated into the main lay down area for the Neighbourhood project. The site is to be developed in the later stages of the project, so any trees that are considered worthy of retention as part of that development have been identified.

The sites were surveyed on 28th December 2022. The following memo is based upon the findings of the site visit and the conditions found. The extent of the survey area is defined on the Tree Location Plan – included as Appendix 2 of this assessment. In addition, any trees growing on adjacent land that have a canopy overhang into the site have been included. The sites that were surveyed are listed below

▪ 1/59 Oranga Ave	▪ 1/6B Wallath Rd
▪ 2/59 Oranga Ave	▪ 2/6B Wallath Rd
▪ 3/59 Oranga Ave	▪ 3/6B Wallath Rd
▪ 4/59 Oranga Ave	▪ 6A Wallath Rd
▪ 5/59 Oranga Ave	▪

The vegetation has been inspected from ground level only by a qualified arborist experienced in Visual Tree Assessment (VTA). The survey results provide information on tree size, species, and a brief description of health, condition, and recommendations. Please refer to the Tree Data Table in Appendix 1 for specific details pertaining to each surveyed tree.

The following colour code system has been used on the tree plan and schedule;

- **Green** Recommended for retention
- **Orange** Recommended to be considered for retention
- **Red** Recommended for removal

The purpose of this memo is to inform the project team of the species and condition of the trees growing within the site. It is not a representation of what trees will be retained at the site. It is anticipated that another arboricultural assessment may be required to support the consenting of the project.

2.0 Protected trees – Oranga Ave

There is One Melia tree growing on the Oranga Ave road reserve outside the site. These trees are Council owned assets that are protected via E17 'Trees in roads' of the AUP. With reference to the AUP, there are no protected trees within the site.

2.1 Description of Vegetation

The street trees adjacent to the site are to be retained due to their protection as Council owned assets. The root zones of these trees need to be taken into consideration for the site design and any works within the berm (e.g., vehicle crossings and underground service connection upgrades). These trees are to be considered as a site restraint and have been identified in **green** below;

	Status	Species	Height (m)	Spread (m)	Girth (mm)	Age	Protection	Health
1	Must Be Retained	Melia	5.5	4	1000	SM	Road Reserve	Moderate
16	Must Be Retained	Melia	8	5	1200	M	Road Reserve	Moderate

Eight neighbouring trees are recommended for retention. These tree has a level of canopy overhang into the site, which can be pruned back/reduced. Earthworks/alterations should be distanced 2m from site boundary within proximity of this tree to maintain a healthy structural root zone.

	Status	Species	Height (m)	Spread (m)	Girth (mm)	Age	Protection	Health
3	Must Be Retained	Pittosporum	8	6	50	M	Private	Moderate
4	Must Be Retained	Mixed species border (5 trees)	7	20	30	M	Private	Moderate
5	Must Be Retained	Banksia	15	8	75	M	Private	Good
9	Must Be Retained	Jacaranda	10	7	75	M	Private	Good
14	Must Be Retained	Bottlebrush	9	5	40	M	Private	Good
20	Must Be Retained	Tacoma hedge and cabbage tree	6	8	20	M	Private	Good
21	Must Be Retained	Cherry	4	3	20	M	Private	Good
23	Must Be Retained	Hedge	6	10	20	M	Private	Good

Four Trees located within the site have been identified for retention. These trees are not protected but are mature specimens which will improve the liveability of the space. These trees should be afforded the same protection as other retained trees and are detailed in the table below.

	Status	Species	Height (m)	Spread (m)	Girth (mm)	Age	Protection	Health
15	Must Be Retained	Norway spruce	12	4	75	M	Private	Good
17	Must Be Retained	Atlas cedar	14	4	75	M	Private	Good
18	Must Be Retained	Oak	16	10	100	M	Private	Good
19	Must Be Retained	Copper Beach	10	8	65	M	Private	Good

Four trees are recommended to be considered for retention should the proposed development allow for them to be retained. These trees should have the tree protection as any other retained tree on the site and are found in the table below.

	Status	Species	Height (m)	Spread (m)	Girth (mm)	Age	Protection	Health
10	Every Effort must be made to preserve	Laurel	18	7	75	M	Private	Good
12	Every Effort must be made to preserve	Lemon tree	4	3	25	M	Private	Good
13	Can be removed if compromises design	Grapefruit tree	5	3	25	M	Private	Good
22	Every Effort must be made to preserve	Citrus	5	4	30	M	Private	Good

All other vegetation within the site has been assessed as not worthy of retention for a housing intensification project – due to the condition, stature, and location of the subject trees in relation to the anticipated yield, and subsequent earthworks etc.

	Status	Species	Height (m)	Spread (m)	Girth (mm)	Age	Protection	Health
2	To be Removed	Mixed vegetation hedgerow	5	4	35	SM	Private	Moderate
6	To be Removed	Tacoma hedge	6	4	35	SM	Private	Moderate
7	To be Removed	Banana palm	6	4	35	SM	Private	Moderate
8	To be Removed	Banana palm	6	4	35	SM	Private	Moderate
11	To be Removed	Phoenix palm	7	4	35	SM	Private	Moderate

Please refer to Section 3.3 for the full Tree Schedule (Appendix 1) for more information on the subject trees.

3.1 Tree Protection

A sufficient buffer between any proposed earthworks/alterations and those trees proposed for retention should be provided, in order to prevent excessive root zone disturbance that may affect the subject tree's long-term health or stability.

The 'Tree Protection Zone' (TPZ) is the anticipated root zone area around a tree – measured as a radius from its centre. These measurements are calculated from the trunk diameter of the subject tree and have been listed in the Tree Schedule (Appendix 1). This is the standard required to be used in Tree Owner Approval applications (Council Community Facilities arborists).

Generally speaking, an encroachment of 10-15% into the TPZ can be supported, but the vast majority of this area should be left unaltered from surface/grade changes if the tree is to be successfully retained and approval from Council granted (for protected trees).

Further recommendations regarding appropriate offsets for any works in the vicinity of the subject trees can be provided as the design phase of the project progresses.

3.2 Tree Location Plan



Figure 1 – Tree location plan. These numbers correspond to the Tree schedule – Oranga Ave side



Figure 2 – Tree location plan. These numbers correspond to the Tree schedule – Wallath Road side

3.3 Tree Data Table

The following categories have been used within the Tree Schedule in Appendix 1. Where appropriate, the criterion used to define each category is defined.

Tree No/ID	Refers to the individual number assigned to a tree or group of trees/vegetation
Species	Refers to the common and scientific name given to the tree
Height	Refers to the total height of the tree estimated in metres
Spread	Refers to the canopy radius of the crown spread estimated in metres
Diameter @ 1.4m	Refers to the stem diameter or aggregate stem diameter of multi-stemmed trees, measured at 1.4m height
Tree Protection Zone (TPZ)	Anticipated root zone area around the subject tree (aligned with AS 4970-2009). This is measured as a radius from the centre of the tree
Condition/ comments	Refers to the condition, structure, and form of the tree in relation to its surrounds, and what is typical for the species

- **Green** text on the Tree schedule indicates trees that are Recommended for retention
- **Orange** = Recommended to be considered for retention
- **Red** = Recommended for removal

4.0 Assumptions and Limitations

This arboricultural assessment was conducted from ground level only. No aerial or destructive evaluation techniques were used.

Information contained within this report covers only those outlined in the brief and reflects the condition of the trees/vegetation noted at the time of the on-site assessments.

Peter Weir
Consultant Arborist
Peers Brown Miller Ltd

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2	To be Removed	Mixed vegetation hedgerow	5	4	35	SM	Private	Moderate
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	Status	Species	Height (m)	Spread (m)	Girth (m)	Age	Protection	Health
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23	Must Be Retained	Hedge	6	10	20	M	Private	Good

Note; the Tree Protection Zone (TPZ) and Structural Root Zone (SRZ) calculations are based on Australian Standard 4970-2009. Measurements are to be calculated from the centre of the subject tree (radius). Further recommendations as to acceptable levels of alterations within a tree's root zone can be provided during the design phase of this project.



Appendix 2 – Tree location plan. Tree locations overlaid by PBM



Appendix 2 – Tree location plan. Tree locations overlaid by PBM