



ARBORICULTURAL ASSESSMENT

Site Address: State Avenue, Waitangi Road,
Edmonton Avenue, Rockfield Road,
Oranga Avenue, Onehunga

Prepared for: HLC (Homes, Land, Community)
Candor³

Purpose of Report: Arboricultural assessment of Oranga
Development – Stage 1 (Sites for Private
Development)

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1.0 Introduction

Peers Brown Miller Ltd (PBM) has been commissioned by *Candor*³, on behalf of *Homes, Land, Community* (HLC), to contribute information relevant to the proposal to construct a new residential housing development situated over thirty-seven properties located on State Avenue, Waitangi Road, Edmonton Avenue, Rockfield Road and Oranga Avenue in Onehunga, Auckland.

These properties contain existing dwellings and assets owned by Housing New Zealand (HNZ).

The existing dwellings would be removed before the construction of the new development is commenced. As part of the proposal, the Stage 1 re-development would require the installation of new services, roading networks and utilities for residents.

This tree survey report is to serve as an assessment of those private trees growing within HNZ properties inside the bounds of the proposed development area, which are worthy of retention as part of any future development scheme.

2.0 Scope of the Report

The purpose of this report is to identify which specimens within HNZ sites are considered worthy or appropriate to retain for a housing development. This will be achieved by:

- Provide a tree survey for all private trees within the boundaries of the sites and any trees of importance on neighbouring sections. General comments will be recorded on their condition.
- Identify the protective status of those trees growing within the scope of project in terms of those rules outlined in the Auckland Unitary Plan.
- Provide advice for protecting those trees proposed for retention as part of the proposal.

3.0 Plan References

A development plan has been provided by Candor³. This plan is referenced as *Option N: State/ Market Distribution – Built form Stage 1*. This plan indicated which properties are to be included in Stage 1 of the Oranga development. The subject trees are outlined on a marked up version of this plan illustrated in Appendix 2.

Specific information pertaining to each tree has been provided in the Tree Schedule included as Appendix 1 of this report.

4.0 Arboricultural Assessment

The project area is located in a residential housing area under Housing New Zealand ownership. The existing land and dwellings are largely devoid of trees or vegetation, with the majority of trees located on the lots adjacent to State Avenue and Oranga Avenue.

The purpose of this proposal is to demolish and re-develop the existing housing stock and locality. As such, the majority of trees or vegetation would be removed to facilitate the construction of proposed multi lot housing developments.

A summary of those trees surveyed within the Stage 1 of the Oranga development are outlined below:

- 8 trees are recommended for retention, being Trees 7, 40, 52, 53, 55, 56, 77 and 82.

5.0 Summary of Tree Survey

5.1 General comments

Most of the surveyed trees in the project area do not possess significant characteristics that would deem them worthy of retention for a large scale development.

Listed below is a collection of the more prominent trees and reasons as to why they should be considered for the design scheme. If a tree has not been mentioned, then it has not been assessed as worthy of retention or appropriate to retain.

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Any tree to be retained as part of the proposed development will need to be assessed in terms of its function in the newly created environment. It is recommended that future growth and suitable site surrounds be considered when selecting any tree for retention as part of the new site layout. Further information regarding these matters can be provided as this project progresses.

5.2 Review of prominent trees for a future subdivision

This section outlines some of the more prominent trees growing within the existing site bounds and discusses their suitability for inclusion as part of the detailed design:

Tree 7

Tree 7 is a Kauri tree growing within 8 Edmonton Ave. It is a young tree and is in good health without any significant defects. It is recommended that this tree can be considered for retention in the final proposal. However, this species is susceptible to a soil-borne plant pathogen *Phytophthora agathidicida* (Kauri Dieback). In addition to common tree protection measures, extensive management is required in accordance with those rules relating to earthworks outlined in Section 6.0 of this report during the design and construction phases. All equipment and machinery would need to be cleaned with Sterigene before entering and leaving the site. More information regarding these protection measures around the Kauri tree can be provided if the tree is to be retained.



Figure 1 - Tree 7 Kauri

Tree 40

- Tree 40 is a Pohutukawa tree growing within 127 Rockfield Road. It is a young tree and is in fair health, without any significant defects. Therefore, it is recommended for retention as part of the development.



Figure 2 - Tree 40 Pohutukawa

Tree 52 and 53

- Tree 52 is a group of native trees, including Karaka, Cabbage tree and Nikau Palm, and Tree 53 is a mature Lawson Cypress. They are in fair health, without any significant defects. These trees are located in the front yard of 62 State Ave. It is recommended to retain these trees. However, care must be taken during demolition of the existing building on the site, and during the removal of hard surfaces within close proximity of the trees.



Figure 3 - Tree 52 native trees



Figure 4 - Tree 53 Lawson Cypress

Tree 55 & 56

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- Tree 55 is a Totara and Tree 56 is a Southern Magnolia, growing within the front yard of 64 State Avenue. They are both semi-mature specimens in fair health, without any significant defects. It is recommended to retain these trees. However, care will need to be taken during the removal of existing hard surfaces within proximity of the trees.



Figure 5 - Tree 55 Totara



Figure 6 - Tree 56 Southern Magnolia

Tree 77

- Tree 77 is a Puriri tree growing within 63 Oranga Avenue. It is the largest native tree on the site and is in good condition, with an attractive canopy and good structural form. This tree has high amenity value for the site, as it is growing near the front boundary, which borders Oranga Avenue. Puriri, as a tree species provides a year-round food source for native birds - so is also considered an asset from an ecological perspective. It is recommended to retain this tree in an area of greenspace within the Stage 1 development. Pruning (Canopy raise and a deadwood) could be undertaken if the tree is retained.



Figure 7 – Tree 77 Puriri

Tree 82

- Tree 82 is a mature specimen of Eucalyptus species growing within 63 Oranga Avenue. It is the largest exotic tree on this site, and has an impressive stature. It is recommended to retain this tree in an area of greenspace within the Stage 1 Oranga development. If this tree is retained, a climbing inspection of the tree should be conducted to remove any existing deadwood or structural defects. Any proposed excavations, buildings or hard surfaces should also be distanced 10m from the base of the tree.



Figure 8 – Tree 82 Eucalyptus

6.0 Tree Protection Methodology

This section outlines a set of appropriate works methods and tree protection measures that should be adopted and put in place to ensure that adverse effects on the trees those being retained within the project area are minimised and/or avoided.

- a) Prior to any works commencing on the site in the vicinity of any of the retained trees, a meeting should be held at the site to discuss all issues pertaining to the protection of the trees and to gain a common understanding of the relevant conditions of consent in that regard. Present at the meeting should be;
 - The consent holder
 - The site foreman or project manager
 - The worksite supervisory arborist
 - Any other relevant personnel
- b) The worksite arborist should be present during any excavations through the dripline of any tree to be retained.
- c) All removal of hard surfaces to be removed from within the vicinity of all trees proposed for retention is to be undertaken under the supervision of the works arborist. Care must be taken to not unnecessarily excavate within the dripline of any tree - with material to be removed by hand if necessary.
- d) No significant root severance should be required. However, if this is not the case, any root pruning must be assessed and approved by the appointed works arborist.

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- e) If any significant roots are encountered during excavation in the dripline of any retained tree, that root should be accommodated, unless the arborist is satisfied that severance of such a root would not cause a deterioration of the health of the tree. No roots beyond the approved thresholds are to be removed.
- f) No heavy machinery or equipment or materials should be stored or deposited within the dripline area of any tree within the site. If any materials do need to be deposited within the dripline of any tree a sheet of plastic or a tarpaulin should be laid down first.
- g) When machinery is to be used beneath the dripline of any retained tree, track movement must be kept to a minimum - with materials preferably installed progressively from the previously metaled/hard surface.
- h) Any pruning of retained trees is to be undertaken by a suitably qualified and experienced arborist in accordance with modern arboricultural practice. All pruning is to be undertaken in consultation with the client's appointed works arborist.
- i) Protective fencing should be installed wherever practicable at the dripline edge of trees being retained. This fencing shall remain in place for the duration of the project in order to best protect the subject trees. The fencing is to be rent-o-style 1.8 metre steel mesh sections or plastic 1.2-1.5 metre rigid barriers, or water filled barriers where no other option is available. The location of this fencing is to be confirmed and approved prior to any works being undertaken with the vicinity of the tree.
- j) Temporary relocation of the fencing can be undertaken (under supervision of the works arborist) at the point when specific works are to be carried out within the driplines of the subject trees - with the fencing to be re-erected following that specific activity.
- k) Compliance with all conditions of consent relating to tree protection would be monitored by the appointed works arborist - with the detail of each visit and communication being logged. The completed log would be provided to the consent holder at the completion of the project to serve as a compliance report.

7.0 Conclusion

This report has been prepared to provide an arboricultural overview for the private trees within the bounds of the project area included in the Oranga Development Stage 1, recommended for retention.

The report provides a survey of those private trees contained within the site - in which information pertaining to their species, height, age, protected status, health, form and structure is detailed.

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The majority of trees growing throughout the private properties are noted as being non-exemplary in terms of their species. This is often due to a lack of formative pruning, or poor pruning practices, or as a result of a poor or dangerous form. Also, many of the tree species have been identified as weed species.

8 trees growing within HNZ land have been suggested as appropriate to retain. Arboricultural input regarding proposed construction around these trees is recommended, as well as ongoing arborist supervision of any proposed works around the trees (As detailed in Section 6.0 above).

Please feel free to contact Peers Brown Miller Ltd if any further arboricultural input is required.



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Reviewed By



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Appendix 1

Tree Details

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Categories

The following categories have been used within the tree survey tables and, where appropriate, the criterion used to define each category is defined.

- **ID#.**: Refers to the number assigned to each tree (also identified as such on the accompanying tree survey plan).
- **Botanical name**: The genus and species, and cultivar or variety where known, is given. Where the species is unknown the tree is identified as: (Genus) sp.
- **Common name**: The generally accepted common, or Maori, name of the tree is given.
- **Location**: Closest property number and street name that a tree resides on.
- **Protected status**: This refers to the protective status of the tree as defined by the Auckland Unitary Plan.

NP = No Protection. Trees recommended to be retained are noted in **Blue**.

- **Height**: refers to the height of the tree in metres (approximate).
- **Girth** : refers to the diameter of the tree stem in millimetres, as measured at 1.4 metres and the aggregate girth of stems greater than 250mm in diameter for multi-stemmed trees.
- **Crown Spread radius**: refers to the radius of crown spread of the tree in metres (approximate).
- **Condition**: Refers to the overall physical appearance of the tree compared to that typical for the species.

The condition is described as:

Good – Good branch structure, full healthy canopy but possibly including some suppressed or damaged branches.

Fair – Average branch structure, slightly reduced leaf cover, minor dead wood or isolated major dead wood.

Poor – Poor structure, overall sparse leafing and/or extensive dieback. In decline.

- **Comments**: Any comments relating to condition of each specific tree.

Survey Results

Tree No.	Botanical Name	Common Name	Location	Protection status	Height (m)	Girth (mm)	Crown Spread radius (m)	Condition (P,F,G)	Comments
7	<i>Agathis australis</i>	Kauri	8 Edmonton Avenue	NP	8	650	1.5	G	This species is susceptible to plant pathogen <i>Phytophthora agathidicida</i>
40	<i>Metrosideros excelsa</i>	Pohutukawa	127 Rockfield Road	NP	8	820	2	F	
52	<i>Corynocarpus laevigatus</i> <i>Cordyline australis</i> <i>Rhopalostylis sapida</i>	Karaka, Cabbage tree, Nikau Palm	62 State Avenue	NP	5-6	NA	3	F	Close to existing building and hard surface, soil level has been raised up in the planter of Cabbage tree
53	<i>Chamaecyparis lawsoniana</i>	Lawson Cypress	62 State Avenue	NP	9	NA	3	F	
55	<i>Podocarpus totara</i>	Totara	64 State Avenue	NP	7	1500	3	F	Close to existing hard surface
56	<i>Magnolia grandiflora</i>	Southern Magnolia	64 State Avenue	NP	6	NA	3	F	Surface roots lift pavement up
77	<i>Vitex lucens</i>	Puriri	63 Oranga Avenue Development Area	NP	9	2000	4.5	G	
82	<i>Eucalyptus sp.</i>	Gum	63 Oranga Avenue Development Area	NP	20	3500	10	G	Some deadwood

Appendix 2

Site Plans

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LEGEND

- Existing HNZ
- New State Housing
- HNZ to be Market Housing

Map labels include: Orange Avenue, Waiata Road, Nisshin Place, Santos Place, Torokina Place, Mount Smart Road, and various housing unit numbers (77, 82, 40, 52, 55, 56, 7, 40).

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