



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 (for Council
Submission)

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Reviewed by:	Matthew Paul
Date of Report:	29 October 2018

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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-two 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 involves preparatory site works to facilitate future housing developments undertaken either by HNZ or private building partner.

This tree survey report is to serve as an assessment of all protected trees growing within the bounds of the proposed development area. All public trees are growing on Road Reserve and Open space zones which are under the ownership of Auckland Transport and Auckland Council respectively.

All protected trees are to be retained as part of this preparatory site works proposal.

2.0 Scope of the Report

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

- Provide a tree survey for all protected trees adjacent to the boundaries of the sites. 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 Relevant Statutory Framework - Tree Protection

There is no Significant Ecological Area (SEA) or other relevant overlay that applies to the sites involved with the new development.

There are no Notable (scheduled) trees within the entire project area of the proposed Oranga development (for both Stage 1 and 2), with reference to the Auckland Unitary Plan Overlay nor contained within Schedule 10 of the Auckland Unitary Plan text. The vegetation growing within the HNZ sites is therefore considered non-protected.

A number of protected trees are identified as growing on open space zones and road reserve within the bounds of the project. These trees are subject to the rules outlined in Chapter E16, (Trees in Open Space Zones) and Chapter E17, (Trees in Roads) as outlined the Auckland Unitary Plan.

4.0 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. Tree locations are illustrated on this particular plan, as outlined in Appendix 2 of this assessment.

5.0 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. Those trees growing on road reserve are typically of poor-fair condition.

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 housing development.

A total of 19 trees are identified as growing on Road Reserve and Open Space Zoned land proximate to the Stage 1 development.

6.0 Summary of Tree Survey

6.1 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 protected trees and reasons as to why they should be taken into consideration for the design scheme.

Several trees growing on road reserve parallel to Waitangi Road are lifting the pavement (particularly under tree 2, but also under tree 3.). These trees are predominantly Southern Magnolia (*Magnolia grandiflora*) and are in good health.

Those trees growing on Open Space Zones and Road Reserve are protected under the rules in Chapter E16 – Trees in Open Space Zones and Chapter E17 – Trees in Roads, outlined in the Auckland Unitary Plan respectively.

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.

6.2 Review of prominent trees for a future subdivision

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

Tree 2 & 3

- Tree 2 & 3 are located on road reserve adjacent to 60 Waitangi Road and are protected under Chapter E17 of the Auckland Unitary Plan. They are both mature Southern Magnolia that are in good health. Care will need to be taken within proximity of these protected trees during the development stage of the project. It is recommended to isolate them from potential adverse effects with protective fencing, installed at the edge of the root zone (dripline radius) and encompassing the grassed berm area.



Figure 1 - Tree 2, Southern Magnolia Figure 2 - Tree 3, Southern Magnolia

Trees 4

- Trees 4 are identified as three Tarata trees located behind 60 Waitangi Road and are protected under Chapter E16 of the Auckland Unitary Plan. (Open Space zoned Land). These trees are in moderate condition. Proposed works should be distanced from these trees to prevent adverse effects on their health.



Figure 3 - Trees 4, Tarata trees

Tree 5 and 13

- Tree 5 and 13 are identified as Puriri trees located on road reserve adjacent to 8 Edmonton Ave. These trees are protected under Chapter E17 of the Auckland Unitary Plan. The trees are in fair to good health/condition and are relatively young. Tree 5 has minor wounds on the trunk and evidence of surface rooting. Protective fencing should be utilised to protect these trees during the development period.



Figure 4 - Tree 5, Puriri tree



Figure 5 - Tree 13, Puriri tree

Tree 17

- Tree 17 is a Puriri tree located on road reserve adjacent to 14 Edmonton Ave and is protected under Chapter E17 of the Auckland Unitary Plan. It is a young tree in fair health, due to a large wound on its trunk. Protective fencing is recommended to protect the tree for the duration the development works.



Figure 6 - Tree 17 Puriri tree



Figure 7 – Wound on trunk

Tree 20, 21 and 22

- Trees 20, 21 and 22 are located on road reserve adjacent to 40, 38 and 34 Waitangi Road respectively, and are protected under Chapter E17 of the Auckland Unitary Plan. They are mature specimens of Southern Magnolia that are in good health. These trees would be retained as part of the development.



Figure 8 - Tree 20, 21 and 22 Southern Magnolia trees

Tree 23 and 29

- Tree 23 (Titoki) and 29 (Sweetgum) are located on road reserve adjacent to 48 and 50 State Ave respectively, and are protected under Chapter E17 of the Auckland Unitary Plan. The trees are in fair to good health and are relatively young. The surface roots of Tree 23 have been damaged from lawn maintenance. Protective fencing should be utilised to protect these trees during the development.



Figure 9 - Tree 23 Titoki tree



Figure 10 - Tree 29 Sweetgum tree

Tree 42, 47 & 48

- Tree 42, 47 and 48 are located on road reserve adjacent to 54, 58 and 60 State Ave respectively, and are protected under Chapter E17 of the Auckland Unitary Plan. They are juvenile to semi-mature Titoki trees that are in poor to fair health. Tree 42 has a large wound on its trunk - likely caused by previous branch failure. Tree 47 has cavities on its main stem

and root flare. Protective fencing should be used to protect this tree during the development.



Figure 11 - Tree 42 Titoki



Figure 12 – Wound on trunk



Figure 13 - Tree 47 Titoki



Figure 14 – Wound on trunk



Figure 15 – Cavity on root flare



Figure 16 - Tree 48 Titoki

Tree 60

- Tree 60 is a Titoki tree located on Road Reserve adjacent to 66 State Avenue and is protected under Chapter E17 of the Auckland Unitary Plan. It is a young tree in fair health, without any significant defects. It would be retained as part of the development.



Figure 17 - Tree 60 Titoki tree

Tree 61

- Tree 61 is a Titoki tree located on road reserve adjacent to 53 State Avenue and is protected under Chapter E17 of the Auckland Unitary Plan. It is a young tree that is in fair health, without any significant

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defects. Protective fencing should be utilised to protect this tree during the development.



Figure 18 - Tree 61 Titoki tree



Figure 19 – Wounds on trunk

Tree 65, 66 & 67

- Tree 65, 66 and 67 are located on road reserve adjacent to 63 Oranga Ave and are protected under Chapter E17 of the Auckland Unitary Plan. They are young to semi-mature specimens of *Melia* that are in poor to fair health. Tree 65 leans towards Oranga Avenue and its surface roots are damaged from lawn maintenance. Tree 66 has decay on its surface roots and lower trunk. Both Tree 66 and 67 are suffering from canker disease. Protective fencing should be utilised to protect these trees during the development.



Figure 20 - Tree 65 Melia



Figure 21 – Wound on surface root



Figure 22 - Tree 66 Melia



Figure 23 – Wound on lower trunk and canker disease



Figure 24 - Tree 67 Melia



Figure 25 – Canker disease

7.0 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 protected trees standing on Road Reserve are minimised and/or avoided.

- a) Prior to any works commencing on the site in the vicinity of any of the protected 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
 - Council Arborist (If deemed appropriate)
 - Council Compliance Officer
 - Any other relevant personnel
- b) The worksite arborist should be present during any excavations through the dripline of any protected tree.
- c) All removal of hard surfaces to be removed from within the vicinity of all street trees 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.
- e) If any significant roots are encountered during excavation in the dripline of any protected 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 (roots up to 80mm for protected trees, under the supervision of a suitably qualified arborist).
- f) No heavy machinery or equipment or materials should be stored or deposited within the dripline area of any protected tree.
- g) When machinery is to be used beneath the dripline of any protected tree, track movement must be kept to a minimum - with materials preferably installed progressively from the previously metaled/hard surface.
- h) Any pruning of protected 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 protected tree. 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.

8.0 Conclusion

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

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

An overall total of 84 trees or groups of trees were identified as part of this assessment.

A total of 19 protected trees have been identified as growing on Council owned land, namely Road Reserve and Open Space Zones.

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



Chiu Hang Lui
Consultant Arborist
Peers Brown Miller Ltd

Reviewed By

A handwritten signature in black ink, appearing to read 'M Paul', written in a cursive style.

Matthew Paul
Director
Peers Brown Miller Ltd

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.

The property boundaries and tree locations have been identified by Aerial photographs on the Auckland council Geo Maps portal.

PA = Public Asset - trees that are public assets by virtue of being on Council-owned property, whether it is on road reserve or the esplanade reserve. Protected trees are noted in **Red**.

NP = No Protection. Surveyed non-protected trees are noted in **Black**.

- **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.

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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
1	<i>Musa acuminata</i>	A group of Banana palm	41 State Avenue	NP	4	NA	1	F/G	Some of them grow inside HNZ site, and some grow on neighbouring property
2	<i>Magnolia grandiflora</i>	Southern Magnolia	Street tree, outside 60 Waitangi Road	PA	9.5	1220	5	G	Surface roots are damaged from lawn maintenance, and are lifting the footpath and are evident within the site
3	<i>Magnolia grandiflora</i>	Southern Magnolia	Street tree, outside 62 Waitangi Road	PA	11	1350	5	G	Surface roots are damaged from lawn maintenance, and are lifting an adjacent footpath
4	<i>Pittosporum eugenioides</i>	3x Tarata	Fergusson Domain, behind 60 Waitangi Road	PA	4-6	NA	3-4	F	Growing on neighbouring property, no overhanging into the site
5	<i>Vitex lucens</i>	Puriri	Street tree, outside 8 Edmonton Avenue	PA	6	700	3	G	Minor damage on trunk and surface roots
6	<i>Melicytus ramiflorus</i> <i>Camelia sp.</i> <i>Hoheria populnea</i> <i>Pittosporum tenuifolium</i>	Row of trees, Mahoe, Camelia, Lacebark, Kohuhu	8 Edmonton Avenue	NP	3-5	NA	1	F	
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>
8	<i>Sophora</i>	Kowhai	8 Edmonton	NP	6	1500	3	P	Large cavities extending along branches

Tree No.	Botanical Name	Common Name	Location	Protection status	Height (m)	Girth (mm)	Crown Spread radius (m)	Condition (P,F,G)	Comments
	<i>microphylla</i>		Avenue						
9	<i>Lagunaria patersonii</i>	Norfolk Island Hibiscus	8 Edmonton Avenue	NP	12	3000	7	G	Weed species, trunk and crown are covering by ivy
10	<i>Citrus reticulata</i>	2x Mandarin	10 Edmonton Avenue	NP	4	NA	2	F	
11	<i>Knightia excelsa</i> <i>Camelia sp.</i> <i>Dysoxylum spectabile</i>	Rewarewa, Camelia, Kohekohe	8 Edmonton Avenue	NP	3-5	NA	1-2	F	
12	<i>Leptospermum scoparium</i>	Manuka	10 Edmonton Avenue	NP	6	550	3	F	Poorly pruned
13	<i>Vitex lucens</i>	Puriri	Street tree, outside 12 Edmonton Avenue	PA	4.3	370	1.5	F	
14	<i>Syzygium smithii</i>	Monkey Apple	14 Edmonton Avenue	NP	11	NA	3.5	F	Weed species, Multi stemmed
15	<i>Pittosporum crassifolium</i>	Karo	12 Edmonton Avenue	NP	7	NA	1	F	Elongated growth
16	<i>Pittosporum crassifolium</i>	Karo	12 Edmonton Avenue	NP	4	NA	1	F	
17	<i>Vitex lucens</i>	Puriri	Street tree, outside 14 Edmonton Avenue	PA	3.8	430	1	F	Exposed wound on trunk
18	<i>Trachycarpus</i>	Chinese Windmill	18A Edmonton	NP	7	NA	1	F	Weed species, neighbouring palm

Tree No.	Botanical Name	Common Name	Location	Protection status	Height (m)	Girth (mm)	Crown Spread radius (m)	Condition (P,F,G)	Comments
	<i>fortunei</i>	Palm	Avenue						
19	<i>Prunus persica</i>	Peach	16 Edmonton Avenue	NP	7	1500 over 2 leaders	4	F	Neighbour pruned the tree and lead to unbalanced crown, and it pushes the fence
20	<i>Magnolia grandiflora</i>	Southern Magnolia	Street tree, outside 40 Waitangi Road	PA	11	1500	5	G	Surface roots are damaged from lawn maintenance
21	<i>Magnolia grandiflora</i>	Southern Magnolia	Street tree, outside 38 Waitangi Road	PA	7	1200	5	G	
22	<i>Magnolia grandiflora</i>	Southern Magnolia	Street tree, outside 34 Waitangi Road	PA	8	1500	5	G	Surface roots are damaged from lawn maintenance
23	<i>Alectryon excelsus</i>	Titoki	Street tree, outside 48C State Avenue	PA	7	750	2	F	Surface roots are damaged from lawn maintenance
24	<i>Prunus sp.</i> <i>Citrus reticulata</i> <i>Persea Americana</i> <i>Macadamia sp.</i>	Cherry Mandarin Avocado Macadamia	48C State Avenue	NP	3-4	NA	2	F	Lots of small resident planted species
25	<i>Persea americana</i>	Avocado	48C State Avenue	NP	6	400	2	F	Double leaders
26	<i>Sophora microphylla</i>	Kowhai	50 State Avenue	NP	3	NA	1	F	
27	<i>Melia azedarach</i>	Melia	48B State Avenue	NP	6	NA	2	F	Grow on neighbouring property, no overhanging into the site

Tree No.	Botanical Name	Common Name	Location	Protection status	Height (m)	Girth (mm)	Crown Spread radius (m)	Condition (P,F,G)	Comments
28	<i>Cordyline australis</i>	Cabbage tree	50 State Avenue	NP	3	250	1	F	
29	<i>Liquidambar styraciflua</i>	Sweetgum	Street tree, outside 50 State Avenue	PA	5	350	1.5	G	Well-formed tree
30	<i>Solanum mauritianum</i>	Woolly Nightshade	52 State Avenue	NP	5	300	2	F	Wounds on trunk, cross with Tree 5-9
31	<i>Alectryon excelsus</i>	Titoki	52 State Avenue	NP	4	300	1	F	cross with Tree 5-8
32	<i>Ligustrum lucidum</i> <i>Tecoma sp.</i> <i>Pittosporum crassifolium</i>	Hedge of shrubs, Tree Private Trumpetbush Karo	52 State Avenue	NP	3	NA	1.5 wide	F	Hedge along the boundary, should be surveyed for ownership before removal
33	<i>Griselinia littoralis</i>	Broadleaf	121A Rockfield Road	NP	3	NA	1	F	Should be surveyed for ownership or boundary
34	<i>Pittosporum crassifolium</i> <i>Prunus sp.</i>	Hedge of shrubs, Karo, Cherry	121B Rockfield Road	NP	2-5	NA	1-4	F	Neighbouring trees
35	<i>Prunus sp.</i>	Cherry	119 Rockfield Road	NP	5	NA	3	F	Neighbouring tree overhanging into the site
36	<i>Persea americana</i>	Avocado	111 Rockfield Road	NP	7	900	3	F	Close to fence
37		Hedge of exotic species	111 Rockfield Road	NP	3	NA	1	F	Close to boundary
38	<i>Solanum</i>	Woolly Nightshade	111 Rockfield	NP	4-5	NA	3	F/P	Weed species, self-seeded

Tree No.	Botanical Name	Common Name	Location	Protection status	Height (m)	Girth (mm)	Crown Spread radius (m)	Condition (P,F,G)	Comments
	<i>mauritianum</i> <i>Musa acuminata</i> <i>Ricinus communis</i> <i>Ligustrum sinense</i>	Banana Palm Castor Oil Plant Chinese Privet	Road						
39	<i>Callistemon sp.</i>	Bottlebrush	111 Rockfield Road	NP	6	NA	3	F	Neighbouring tree overhanging into the site
40	<i>Metrosideros excelsa</i>	Pohutukawa	127 Rockfield Road	NP	8	820	2	F	
41	<i>Eriobotrya japonica</i> <i>Solanum mauritianum</i> <i>Musa acuminata</i> <i>Ligustrum vulgare</i>	Loquat, Woolly Nightshade, Banana Palm, English privet	127-129 Rockfield Road	NP	4	NA	3	F	Weed species
42	<i>Alectryon excelsus</i>	Titoki	Street tree, outside 54	PA	6	500	1.5	F	Large wound on trunk from torn branch
43	<i>Syzygium smithii</i> <i>Ligustrum lucidum</i> <i>Eriobotrya japonica</i>	Monkey Apple Tree Privet Loquat	54 State Avenue	NP	5-8	NA	2	F	Weed species
44	<i>Solanum mauritianum</i>	Woolly Nightshade	56 State Avenue	NP	3-4	NA	1	F	Weed species
45	<i>Prunus sp.</i>	Cherry	58 State Avenue	NP	5	NA	1	F	
46	<i>Dicksonia squarrosa</i>	Wheki	58 State Avenue	NP	4	300	1	F	
47	<i>Alectryon excelsus</i>	Titoki	Street tree, outside 58	PA	3.8	350	1	P	Cavity on branches and trunk flare. Trunk base is damaged from lawn maintenance

Tree No.	Botanical Name	Common Name	Location	Protection status	Height (m)	Girth (mm)	Crown Spread radius (m)	Condition (P,F,G)	Comments
			State Avenue						
48	<i>Alectryon excelsus</i>	Titoki	Street tree, outside 60 State Avenue	PA	7	1800	3	F	Concrete washing evidence near trunk base, surface roots lift pavement up
49	<i>Prunus sp.</i>	Cherry	60 State Avenue	NP	5	NA	3	F	Epicormic growth
50	<i>Solanum mauritianum</i> <i>Musa acuminata</i>	Woolly Nightshade, Banana Palm	60 State Avenue	NP	5	NA	4	F	Need to be surveyed to determine growing location
51	<i>Archontophoenix alexandrae</i>	2x King Palm	62 State Avenue	NP	5-7	NA	2	F	Damage on trunks
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	
54	<i>Salix fragilis</i>	Crack Willow	62 State Avenue	NP	6	NA	2	F	Weed species
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
57	<i>Trachycarpus fortunei</i>	Chinese Windmill Palm,	64 State Avenue	NP	4-7	NA	2	F	Weed species (Chinese Windmill Palm and Phoenix Palm), poor branch structure (Totara)

Tree No.	Botanical Name	Common Name	Location	Protection status	Height (m)	Girth (mm)	Crown Spread radius (m)	Condition (P,F,G)	Comments
	<i>Magnolia grandiflora</i> <i>Pittosporum tenuifolium</i> <i>Phoenix canariensis</i> <i>Cordyline australis</i>	Southern Magnolia, Kohuhu, Phoenix Palm, Cabbage tree							
58	<i>Persea americana</i>	2x Avocado	64 State Avenue	NP	5	NA	2	F	Resident planted
59	<i>Persea Americana</i> <i>Prunus sp.</i> <i>Trachycarpus fortunei</i>	Avocado, Cherry, Chinese Windmill Palm	135 Rockfield Road	NP	6	NA	3	F	Weed species (Chinese Windmill Palm), Neighbouring trees overhanging into the site
60	<i>Alectryon excelsus</i>	Titoki	Street tree, outside 66 State Avenue	PA	4.1	340	1	F	
61	<i>Alectryon excelsus</i>	Titoki	Street tree, outside 53 State Avenue	PA	6	1080	2	F	Wounds on trunk
62	<i>Pittosporum tenuifolium</i>	Hedge of Kohuhu	55B State Avenue	NP	3	NA	2m wide	F	Neighbouring shrubs overhanging into the site
63	<i>Pittosporum tenuifolium</i> <i>Pittosporum crassifolium</i> <i>Metrosideros excelsa</i>	Row of trees, Kohuhu, Karo, Pohutukawa, Tarata	51 State Avenue	NP	4	NA	1	F	Neighbouring trees overhanging into the site

Tree No.	Botanical Name	Common Name	Location	Protection status	Height (m)	Girth (mm)	Crown Spread radius (m)	Condition (P,F,G)	Comments
	<i>Pittosporum eugenioides</i>								
64		Tree has been removed	outside 63 Oranga Avenue	NA	NA	NA	NA	NA	It is likely snapped out in storm
65	<i>Melia azedarach</i>	Melia	Street tree, outside 63 Oranga Avenue	PA	7	1150	3	F	The tree leans towards the street, surface roots damage
66	<i>Melia azedarach</i>	Melia	Street tree, outside 63 Oranga Avenue	PA	7	1250	3.5	P	Surface roots damage, canker disease
67	<i>Melia azedarach</i>	Melia	Street tree, outside 59 Oranga Avenue	PA	5	800	3	P	Canker disease
68	<i>Callistemon sp.</i>	Bottlebrush	63 Oranga Avenue Development Area	NP	3	400	2	F	
69	<i>Prunus sp.</i>	Cherry	63 Oranga Avenue Development Area	NP	4	300	3	F	Wisteria vine in canopy
70	<i>Archontophoenix</i>	Bangalow Palm	63 Oranga	NP	4.5	300	1.5	G	

Tree No.	Botanical Name	Common Name	Location	Protection status	Height (m)	Girth (mm)	Crown Spread radius (m)	Condition (P,F,G)	Comments
	<i>cunninghamiana</i>		Avenue Development Area						
71	<i>Pittosporum tenuifolium</i> <i>Pittosporum crassifolium</i>	Kohuhu Karo	63 Oranga Avenue Development Area	NP	3-5	NA	1	F	Neighbouring trees overhanging into the site
72	<i>Callistemon sp.</i>	Bottlebrush	63 Oranga Avenue Development Area	NP	8	NA	3	G	Neighbouring tree overhanging into the site
73	<i>Musa acuminata</i>	Banana Palm	63 Oranga Avenue Development Area	NP	4-5	NA	2	F	Growing on both sides of boundary
74	<i>Musa acuminata</i> <i>Citrus reticulata</i> <i>Prunus campanulata</i> <i>Pittosporum crassifolium</i> <i>Jacaranda sp.</i> <i>Phoenix canariensis</i>	Banana palm, Mandarin, Taiwan Cherry, Karo, Jacaranda, Phoenix Palm	63 Oranga Avenue Development Area	NP	3-7	NA	1-3	P/F	
75	<i>Tecoma sp.</i>	Hedge of Trumpetbush	63 Oranga Avenue	NP	4	NA	1m wide	F	

Tree No.	Botanical Name	Common Name	Location	Protection status	Height (m)	Girth (mm)	Crown Spread radius (m)	Condition (P,F,G)	Comments
			Development Area						
76	<i>Sophora microphylla</i>	2x Kowhai	63 Oranga Avenue Development Area	NP	3-4	NA	2-4	P	Extensive cavity on trunks
77	<i>Vitex lucens</i>	Puriri	63 Oranga Avenue Development Area	NP	9	2000	4.5	G	
78	<i>Prunus campanulata</i>	2x Taiwan Cherry	63 Oranga Avenue Development Area	NP	9	1500	7	G	Weed species
79	<i>Betula sp.</i>	Birch	63 Oranga Avenue Development Area	NP	8	1100	3	F	Suppressed from neighbouring trees. Ivy covers its trunk
80	<i>Pittosporum sp.</i> <i>Syzygium smithii</i> <i>Citrus reticulata</i> <i>Liquidambar styraciflua</i> <i>Corynocarpus laevigatus</i> <i>Viburnum sp.</i>	Pittosporum Monkey Apple Mandarin Sweetgum Karaka Viburnum	63 Oranga Avenue Development Area	NP	3-8	NA	1-4	F	Neighbouring trees overhanging into the site

Tree No.	Botanical Name	Common Name	Location	Protection status	Height (m)	Girth (mm)	Crown Spread radius (m)	Condition (P,F,G)	Comments
81	<i>Lagunaria patersonii</i>	Norfolk Island Hibiscus	63 Oranga Avenue Development Area	NP	11	NA	5	G	Weed species
82	<i>Eucalyptus sp.</i>	Gum	63 Oranga Avenue Development Area	NP	20	3500	10	G	Some deadwood
83	<i>Banksia integrifolia</i>	Coast Banksia	63 Oranga Avenue Development Area	NP	12	NA	5	G	Weed species, 6 main leaders, moderate branch unions
84	<i>Psidium cattleianum</i>	Purple Guava	63 Oranga Avenue Development Area	NP	4	NA	2.5	F	Weed species

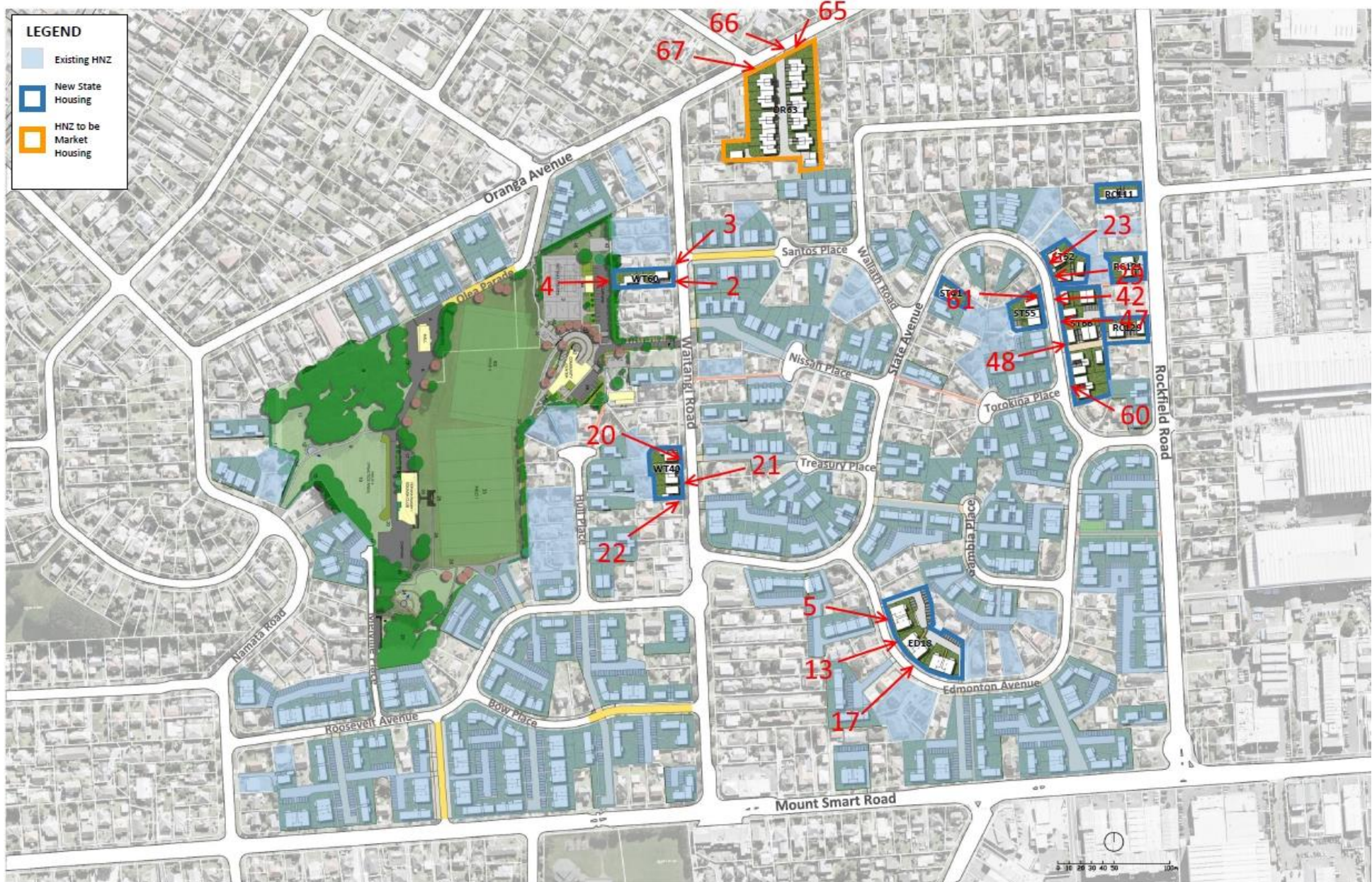
Appendix 2

Site Plan

OPTION N: State / Market Distribution – Built form Stage 1

24 Aug 2018

HLC Homes. Land. Community.



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