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# *ARBORICULTURAL ASSESSMENT*

OF TREES WITHIN A PROPOSED ZONING PLAN CHANGE AT

*PUHINUI PRECINCT, WIRI*

FOR

*CAMPANA LANDOWNERS  
CONSORTIUM*

REPORT PREPARED BY: CRAIG WEBB

DATE: 8 NOVEMBER 2024

## 1 INTRODUCTION

- 1.1 I have been commissioned by *Campana Landowners Consortium* to undertake an arboricultural survey and prepare this arboricultural report relating to a proposed zoning change at 467 – 485 Puhinui Road, Wiri. Specifically, this assessment relates to areas of the Puhinui Precinct labelled as sub-precincts C, C1 and E.
- 1.2 The purpose of this report is to provide findings of my arboricultural site survey and an assessment of whether there are individual trees within the extent of the plan change that warrant consideration of inclusion in the Auckland Unitary Plan schedule of notable trees.

## 2 BRIEF/BACKGROUND/PLANS PROVIDED

- 2.1 My brief was to survey the site and assess individual trees against the Auckland Unitary Plan criteria for inclusion in the schedule of notable trees. The AUP 'Guidelines for Nominating a Notable Tree for Evaluation' has been referred to in the compilation of this report.
- 2.2 This report has been compiled with reference to the precinct description found in chapter I432 Puhinui Precinct of the Auckland Unitary Plan (AUP). More specifically, I reference a version of the Puhinui Precinct description that has been updated to include the Campana Road Structure Plan area, comprised of sub-precincts C, C1 and E. Figure 1 on the following page shows the location of the site and the sub-precincts.

## 3 SITE VISIT

- 3.1 I carried out a site visit to undertake an assessment of trees on 24 October 2024. My arboricultural site survey involved traversing the site on foot to carry out a visual assessment and data logging of trees. I looked for trees with outstanding arboricultural merit and trees that stand out due to their size and visibility.

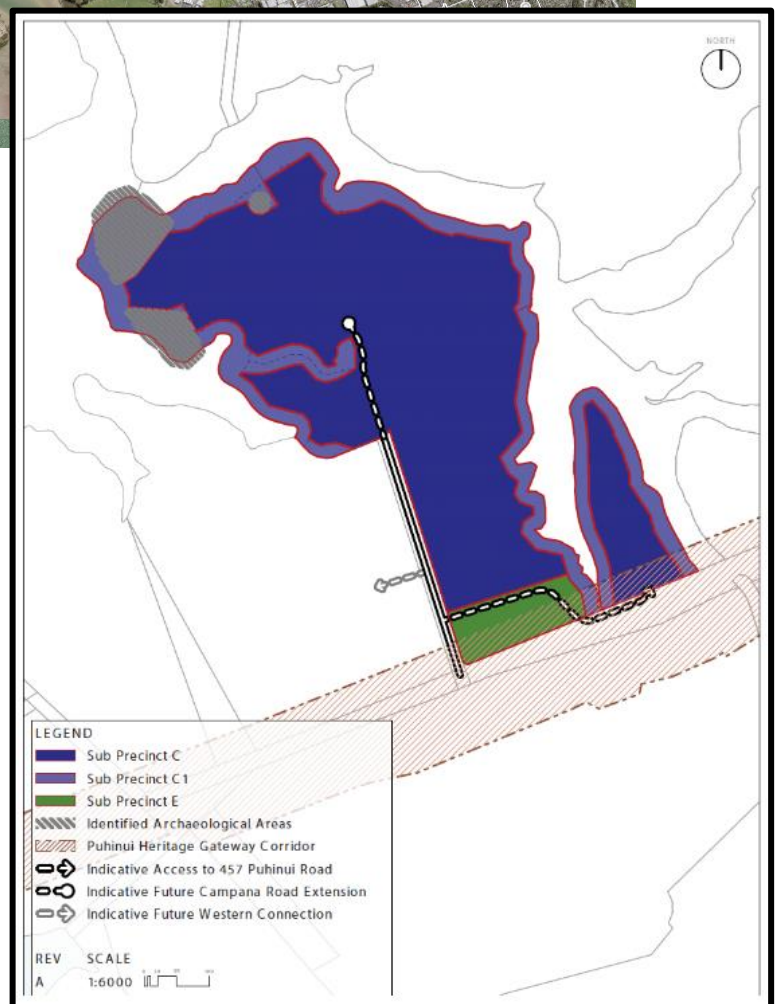
## 4 SITE DESCRIPTION

- 4.1 The site is comprised of six individual parcels of land between the northern side of Puhinui Road and the Waokauri Creek, in the eastern Manukau Harbour. The land is on two peninsulas and contains farmland and industrial activities. Trees are predominantly located around the coastal margin of the land, or internally within agricultural shelterbelts, or as part of ornamental plantings around dwellings and commercial activities across the site.





Figure 1 – Aerial photograph (above) from Auckland Council Geomaps with the site location shown by the black box. The plan (right) shows the sub-precincts for the Campana Structure Plan area.



## 5 ASSESSMENT METHODOLOGY

### 5.1 The methodology for this assessment was as follows:

- An assessment of aerial photos was used to inform the assessment of the areas of the site that contain trees of interest.
- A walk-by visual assessment was used to scope the entire site and to pick out trees of significant stature or rare type.
- A tree survey app developed for similar surveys was used with a view to locating, identifying and ranking trees and their environmental qualities.
- Trees were 'collected' in groups, where logical groups could be made according to species, location and/or function.
- The trees were categorised according to type and values.
- Data collected from the site visits was uploaded to QGIS for mapping purposes. The data was ordered and filtered to allow the characteristics of the tree resource on site to be classified and presented in various ways. Polygons were created to show the approximate extent of each group.

## 6 ARBORICULTURAL ASSESSMENT - GENERAL

- 6.1 My assessment identified 45 groups of trees within the site. The tree groups have been categorised into four main types, shelter systems (SS), ornamental planting (O), fruit orchard (FP) and wilderness (W). The values that were assigned to these groups included Amenity, Fruit, Habitat, Riparian, Screening, Shelter and Woodlot.
- 6.2 Shelter systems include remnants of old shelterbelt trees, principally Monterey cypress (*Cupressus macrocarpa*), and more recently planted lineal groups of Japanese cedar (*Cryptomeria japonica*) and kāpuka (*Griselinia littoralis*). Fifteen (15) out of 45 tree groups were identified as shelter systems.
- 6.3 A wide range of common native and exotic species were identified as ornamental plantings, with some less common species also present in these groups. These include mixed groups that function as part of the shelterbelt systems and groves of trees planted around the site's coastal edge and around existing buildings. Twenty-two (22) out of 45 tree groups were identified as ornamental plantings.
- 6.4 Fruit orchards, comprised of a wide range of mixed productive species, were located in northeastern areas on the site. Three (3) out of 45 tree groups were identified as orchard groups.
- 6.5 Wilderness groups are areas containing dense woodland of mixed origin. These principally contained exotic pest tree species, such as privet (*Ligustrum lucidum*), but also contained natives such as māhoe (*Melicytus ramiflorus*) and tī kōuka (*Cordyline australis*). Five (5) out of 45 tree groups were identified as wilderness groups.





## 7 ARBORICULTURAL ASSESSMENT – SPECIFIC

- 7.1 The shelterbelt systems on the site include remnants of older Monterey cypress trees, principally along the western and northern margin of the site. Typically, old trees of this species exhibit frequent limb and stem failure and large parts of the tree crowns are dead or sparse. Such trees may pose a risk to future land use where intensification of occupation occurs, so removal of the old macrocarpa trees is expected to occur before any change to land use patterns. Despite their age and size, none of the macrocarpa trees are worthy of consideration for scheduling due to their poor condition.
- 7.2 More recent lineal plantings provide some shelter from wind for current agricultural production purposes. None of these trees are individually outstanding, but their collective contribution to shelter and amenity could warrant consideration for retention if the land use pattern accommodates the tree groups.
- 7.3 The best quality trees within the site are within the 'ornamental' classification. A diverse mix of common and infrequent species was recorded. None of these trees are individually outstanding, but their collective contribution to shelter and amenity could warrant consideration for retention if the land use pattern accommodates the tree groups.
- 7.4 Tree groups 6, 9, 10, 14, 16, 18, 21 and 22 are located on the northern and eastern periphery of 11 Campana Road. These trees include a diverse range of exotic and native species that contribute significantly to the amenity and environmental values of the location. Those trees that fall within the C1 sub-precinct should be considered for preservation, given the importance of riparian protection and the future open space zoning. Retention of mature trees will continue to provide positive benefits in terms of ecosystem services benefits and amenity.
- 7.5 Twin rows of London plane and poplar trees have been planted parallel to the road along the frontage at 467 Puhinui Road. Beneath and between these trees are native trees that appear to have been planted as part of a revegetation scheme. The poplar trees are generally lower value, including many with large decay features in their trunks. The London plane trees and much of the native understory appear to be in the road reserve and would therefore be protected trees according to *E17 Trees in roads* of the Auckland Unitary Plan. The location of the poplar trees relative to the property boundary must be confirmed to verify their status as privately-owned (not protected) or Council-owned and therefore protected trees.
- 7.6 Trees that are in the road reserve along the frontage of 485 Puhinui Road were not surveyed. Any development work affecting these trees will require further arboricultural input.
- 7.7 Mixed orchard plantings are of no great arboricultural value but could be retained where they exist within the C1 sub-precinct.
- 7.8 Wilderness area group 22 is comprised of māhoe canopy that extends from near the top of the embankment to the foreshore in the north-eastern aspect of the site. Māhoe also frequently naturally occurs elsewhere around the coastal margin and provides a good example of natural native regeneration, along with the pohuehue and tī kōuka that grow amongst the copious pest plant population. Woolly nightshade (*Solanum mauritanum*) and privet predominate over large



areas of the site and these invasive exotic species should be targeted for control as part of restoration efforts in riparian and coastal margins. Tree groups 5, 31, 34 and 36 are examples of large areas of the site that are degraded by pest plants, where native restoration efforts will have positive outcomes.

## 8 DISCUSSION

- 8.1 According to my assessment of trees within the site, none were worthy of applying the AUP 'Guidelines for Nominating a Notable Tree for Evaluation', because no trees were exceptional examples of their species in terms of size, form or other values.
- 8.2 A number of groups contained trees of moderate to high arboricultural merit that warrant consideration of retention. In particular, many groups within the C1 precinct are in a riparian margin and contribute positively to the environmental and amenity qualities of the site. Retention of trees in the proposed open space zone around the periphery of the site will have significant benefits in terms of mature tree canopy cover and the associated provision of ecosystem service benefits.

## 9 RECOMMENDATIONS

- 9.1 Certain groups of trees within the site contain trees of good quality that warrant retention for the benefits that they provide.
- 9.2 Where trees are to be retained and protected, sufficient space must be provided for them during any earthworks to ensure viable root zones are preserved for safe, healthy tree retention.
- 9.3 Arboricultural input should be sought to assist any decisions made in relation to land-use and development activities in the vicinity of trees that are retained in the riparian zones, on road reserve, or elsewhere on the site.



Group No.	Species		approx. number of trees	approx. area of group (m <sup>2</sup> )	Category	Sub-precinct	Values
	common names	botanical names					
1	Monterey cypress	<i>Cupressus macrocarpa</i>	12	2779	SS	C1	Riparian, Shelter
2	Phoenix palm, black poplar	<i>Phoenix canariensis</i> , <i>Populus nigra</i>	40	620	O	C1	Riparian
3	Monterey cypress	<i>Cupressus macrocarpa</i>	10	1431	SS	C1	Riparian, Shelter
4	Monterey cypress	<i>Cupressus macrocarpa</i>	6	1525	SS	C1	Riparian
5	māhoe	<i>Melicytus ramiflorus</i>	100	1648	W	C1	Habitat, Riparian
6	bull bay, māhoe, pōhutukawa, houpāra, swamp cypress, puriri	<i>Magnolia grandiflora</i> , <i>Melicytus ramiflorus</i> , <i>Metrosideros excelsa</i> , <i>Pseudopanax lessonii</i> , <i>Taxodium distichum</i> , <i>Vitex lucens</i>	35	1047	O	C1	Amenity, Riparian
7	kauri, taraire, lily magnolia	<i>Agathis australis</i> , <i>Beilschmiedia tarairi</i> , <i>Magnolia lilliflora</i>	19	356	O	C / C1	Amenity
8	Monterey cypress	<i>Cupressus macrocarpa</i>	1	370	SS	C1	Riparian
9	crepe myrtle, māhoe, pōhutukawa	<i>Lagerstromia sp.</i> , <i>Melicytus ramiflorus</i> , <i>Metrosideros excelsa</i>	18	509	O	C1	Amenity, Riparian
10	Italian alder, copper beech, crepe myrtle, American sweet gum, pōhutukawa, coast redwood	<i>Alnus cordata</i> , <i>Fagus sylvatica</i> var. <i>purpurea</i> , <i>Lagerstromia sp.</i> , <i>Liquidambar styraciflua</i> , <i>Metrosideros excelsa</i> , <i>Sequoia sempervirens</i>	20	1300	O	C1	Amenity, Riparian
11	common alder, kapuka, tarata	<i>Alnus glutinosa</i> , <i>Griselinia littoralis</i> , <i>Pittosporum eugenioides</i>	40	750	SS	C	Shelter
12	kauri, titoki, bottlebrush, edible fig, rewarewa, pōhutukawa, stone pine, tarata, Chinese windmill palm, puriri, Mexican fan palm	<i>Agathis australis</i> , <i>Alectryon excelsus</i> , <i>Callistemon viminalis</i> , <i>Ficus carica</i> , <i>Knightia excelsa</i> , <i>Metrosideros excelsa</i> , <i>Pinus pinea</i> , <i>Pittosporum eugenioides</i> , <i>Trachycarpus fortunei</i> , <i>Vitex lucens</i> , <i>Washingtonia robusta</i>	36	973	O	C	Amenity
13	ti kouka, kapuka, mahoe, tarata	<i>Cordyline australis</i> , <i>Griselinia littoralis</i> , <i>Melicytus ramiflorus</i> , <i>Pittosporum eugenioides</i>	30	755	SS	C	Shelter



Group No.	Species		approx. number of trees	approx. area of group (m <sup>2</sup> )	Category	Sub-precinct	Values
	common names	botanical names					
14	Japanese cedar, claret ash, American sweet gum, māhoe, stone pine	<i>Cryptomeria japonica</i> , <i>Fraxinus angustifolia</i> subsp. <i>oxycarpa</i> 'Raywood', <i>Liquidambar styraciflua</i> , <i>Melicytus ramiflorus</i> , <i>Pinus pinea</i>	20	1569	O	C1	Amenity, Riparian
15	Japanese cedar	<i>Cryptomeria japonica</i>	35	639	SS	C	Shelter
16	box elder, Italian alder, ginkgo, American sweet gum, māhoe, tupelo, pin oak, swamp cypress	<i>Acer negundo</i> , <i>Alnus cordata</i> , <i>Ginkgo biloba</i> , <i>Liquidambar styraciflua</i> , <i>Melicytus ramiflorus</i> , <i>Nyssa sylvatica</i> , <i>Quercus palustris</i> , <i>Taxodium distichum</i>	35	1847	O	C1	Amenity, Riparian
17	lemon, grapefruit, various citrus, kapuka, macadamia, avocado, kowhai	<i>Citrus x limon</i> , <i>Citrus x paradisi</i> , <i>Citrus spp.</i> , <i>Griselinia littoralis</i> , <i>Macadamia integrifolia</i> , <i>Persea americana</i> , <i>Sophora tetraptera</i>	40	1588	FP	C / C1	Fruit
18	karamu, claret ash, ginkgo, mahoe, tanekaha, almond, firewheel tree, Mexican fan palm	<i>Coprosma robusta</i> , <i>Fraxinus angustifolia</i> subsp. <i>oxycarpa</i> 'Raywood', <i>Ginkgo biloba</i> , <i>Melicytus ramiflorus</i> , <i>Phyllocladus trichomanoides</i> , <i>Prunus armeniaca</i> , <i>Stenocarpus sinuatus</i> , <i>Washingtonia robusta</i>	30	1183	O	C1	Amenity, Riparian
19	persimmon, apple, plum, peach, various stone fruits, pear	<i>Diospyros kaki</i> , <i>Malus domestica</i> , <i>Prunus domestica</i> , <i>Prunus persica</i> , <i>Prunus sp.</i> , <i>Pyrus communis</i>	25	673	FP	C / C1	Fruit
20	kauri, tītoki, taraire, dawn redwood, stone pine, matai	<i>Agathis australis</i> , <i>Alectryon excelsus</i> , <i>Beilschmiedia tarairi</i> , <i>Metasequoia glyptostroboides</i> , <i>Pinus pinea</i> , <i>Prumnopitys taxifolia</i>	20	663	O	C / C1	Amenity
21	Japanese cedar, stone pine, coast redwood	<i>Cryptomeria japonica</i> , <i>Pinus pinea</i> , <i>Sequoia sempervirens</i>	32	690	O	C1	Amenity, Woodlot
22	māhoe	<i>Melicytus ramiflorus</i>	30	370	W	C1	Habitat, Riparian
23	karakā, edible fig, rewarewa, crepe myrtle, apple, tarata, kōhūhū, pear	<i>Corynocarpus laevigatus</i> , <i>Ficus carica</i> , <i>Knightia excelsa</i> , <i>Lagerstromia sp.</i> , <i>Malus domestica</i> , <i>Pittosporum eugenioides</i> , <i>Pittosporum tenuifolium</i> , <i>Pyrus communis</i>	22	270	FP	C	Amenity, Fruit



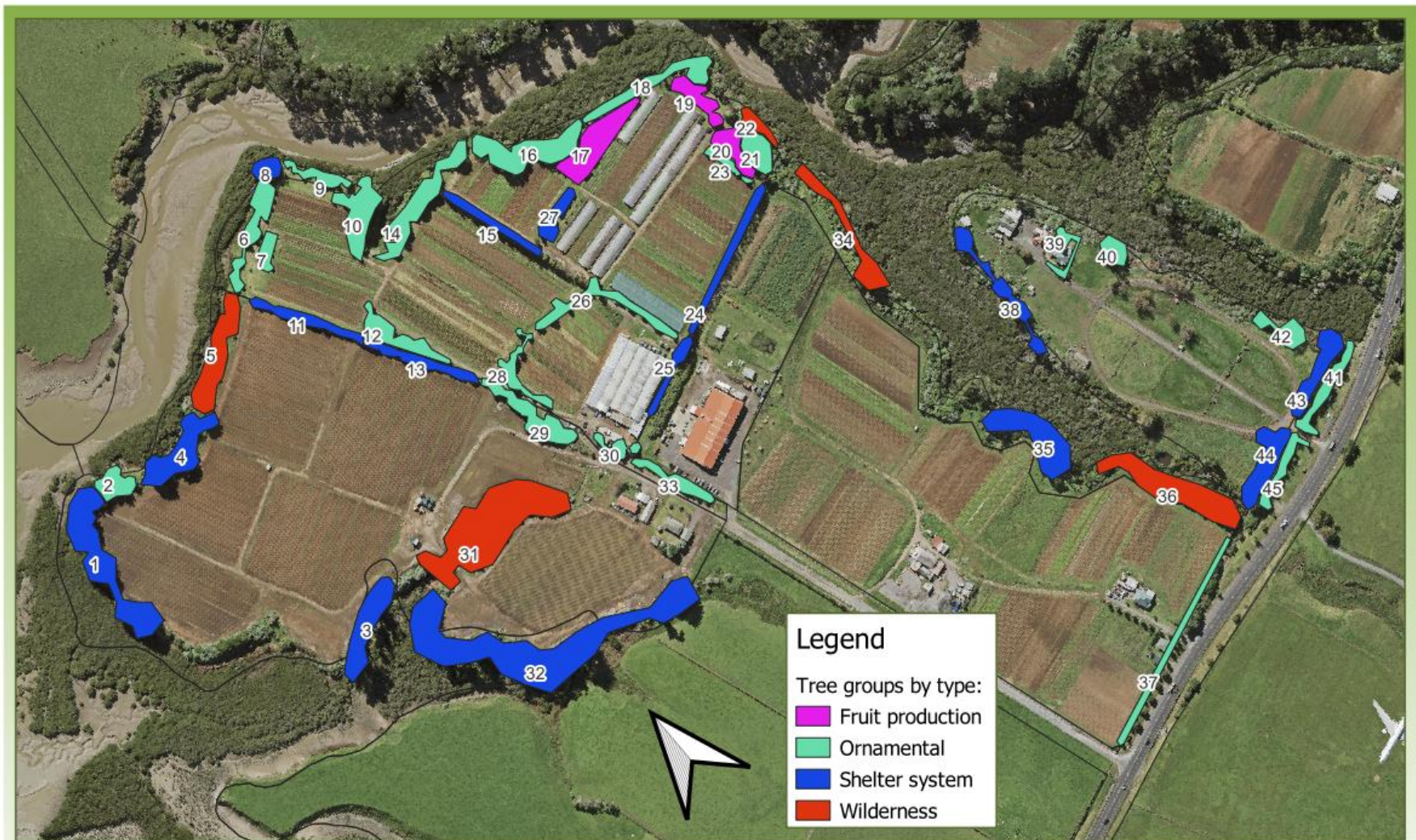


Group No.	Species		approx. number of trees	approx. area of group (m <sup>2</sup> )	Category	Sub-precinct	Values
	common names	botanical names					
24	Japanese cedar	<i>Cryptomeria japonica</i>	70	905	SS	C	Shelter
25	Italian alder, kāpuka	<i>Alnus cordata</i> , <i>Griselinia littoralis</i>	25	474	SS	C	Shelter
26	Italian alder, taraire, pōhutukawa, olive, tanekaha	<i>Alnus cordata</i> , <i>Beilschmiedia tarairi</i> , <i>Metrosideros excelsa</i> , <i>Olea europaea</i> , <i>Phyllocladus trichomanoides</i>	12	1056	O	C	Amenity
27	kapuka, white mulberry, kowhai	<i>Griselinia littoralis</i> , <i>Morus alba</i> , <i>Sophora tetraptera</i>	15	525	O	C	Amenity, Shelter
28	taraire, karaka, bay leaf, Pacific rata, pōhutukawa, kōhūhū	<i>Beilschmiedia tarairi</i> , <i>Corynocarpus laevigatus</i> , <i>Laurus nobilis</i> , <i>Metrosideros collina</i> 'Spring Fire', <i>Metrosideros excelsa</i> , <i>Pittosporum tenuifolium</i>	10	643	O	C	Amenity
29	titoki, coast banksia, bottlebrush, kapuka, privet, American sweet gum, mahoe, Pacific rata, stone pine, puriri	<i>Alectryon excelsus</i> , <i>Banksia integrifolia</i> , <i>Callistemon citrinus</i> , <i>Griselinia littoralis</i> , <i>Ligustrum lucidum</i> , <i>Liquidambar styraciflua</i> , <i>Melicytus ramiflorus</i> , <i>Metrosideros collina</i> 'Spring Fire', <i>Pinus pinea</i> , <i>Vitex lucens</i>	25	1180	O	C / C1	Amenity
30	taupata, privet, kōhūhū, pin oak	<i>Coprosma repens</i> , <i>Ligustrum lucidum</i> , <i>Pittosporum tenuifolium</i> , <i>Quercus palustris</i>	6	352	O	C	Amenity
31	privet	<i>Ligustrum lucidum</i>	100	4692	W	C1	Riparian
32	Monterey cypress, māhoe, Monterey pine	<i>Cupressus macrocarpa</i> , <i>Melicytus ramiflorus</i> , <i>Pinus radiata</i>	20	6412	SS	C1	Riparian, Shelter
33	coast banksia, karaka, akeake, kapuka, kanuka, totara, swamp cypress	<i>Banksia integrifolia</i> , <i>Corynocarpus laevigatus</i> , <i>Dodonaea viscosa</i> , <i>Griselinia littoralis</i> , <i>Kunzea robusta</i> , <i>Podocarpus totara</i> , <i>Taxodium distichum</i>	15	617	O	C	Amenity
34	stone pine, Monterey pine	<i>Pinus pinea</i> , <i>Pinus radiata</i>	5	1172	W	C1	Riparian
35	bangalay	<i>Eucalyptus botryoides</i>	20	1835	W	C1	Riparian
36	privet	<i>Ligustrum lucidum</i>	100	2391	W	C1	Habitat, Riparian
37	Mexican fan palm	<i>Washingtonia robusta</i>	15	992	O	E	Amenity
38	Monterey pine, black poplar, crack willow	<i>Pinus radiata</i> , <i>Populus nigra</i> , <i>Salix fragilis</i>	15	1043	W	C1	Riparian



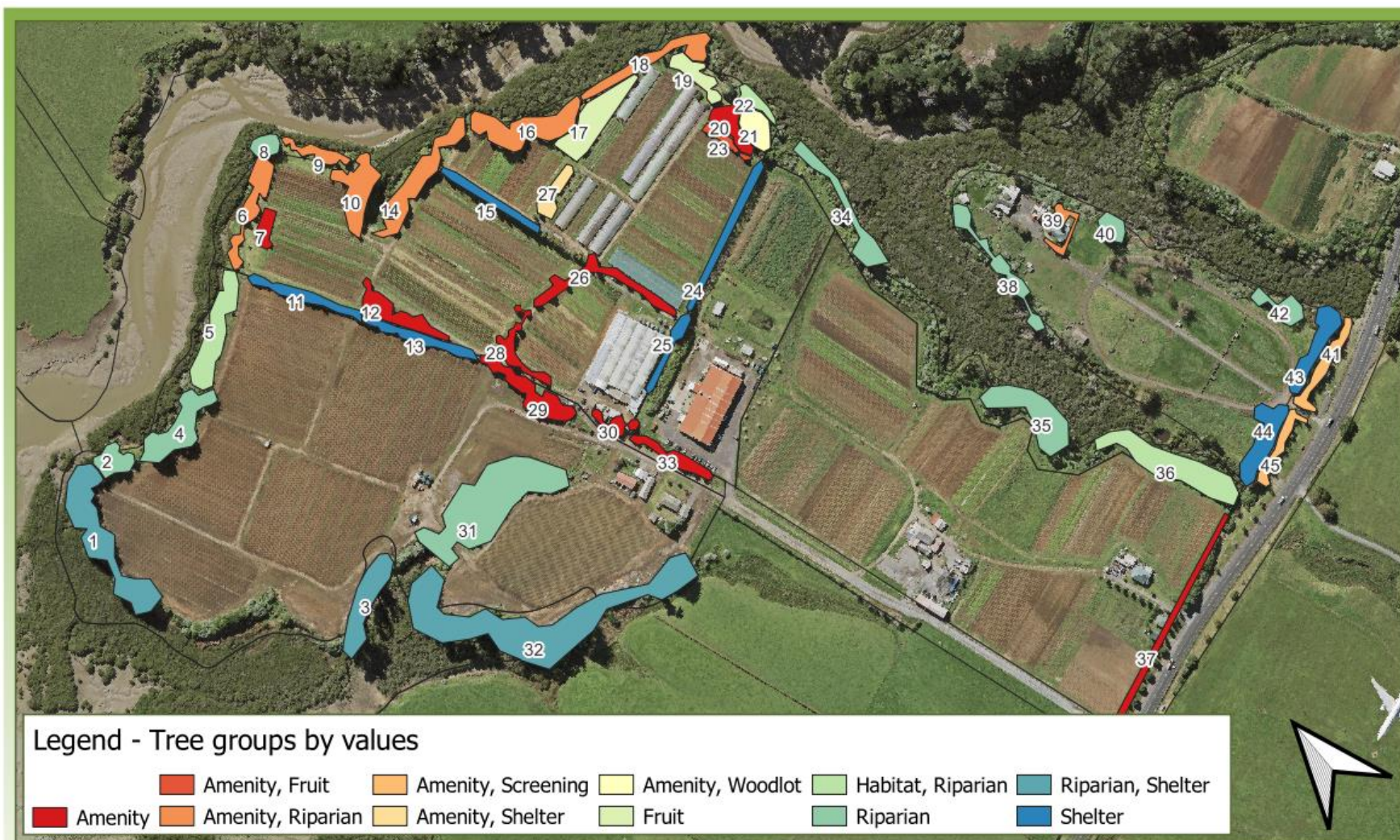
Group No.	Species		approx. number of trees	approx. area of group (m <sup>2</sup> )	Category	Sub-precinct	Values
	common names	botanical names					
39	bangalow palm, Italian cypress, pōhutukawa, peach, nikau, Mexican fan palm	<i>Archontophoenix cunninghamiana</i> , <i>Cupressus sempervirens</i> , <i>Metrosideros excelsa</i> , <i>Prunus persica</i> , <i>Rhopalostylis sapida</i> , <i>Washingtonia robusta</i>	10	365	O	C / C1	Amenity, Riparian
40	privet, Monterey pine, crack willow	<i>Ligustrum lucidum</i> , <i>Pinus radiata</i> , <i>Salix fragilis</i>	10	427	W	C1	Riparian
41	London plane, black poplar	<i>Platanus x acerifolia</i> , <i>Populus nigra</i>	10	725	O	C / C1	Amenity, Screening
42	Monterey cypress, privet, English oak	<i>Cupressus macrocarpa</i> , <i>Ligustrum lucidum</i> , <i>Quercus robur</i>	2	581	O	C1	Riparian
43	black poplar	<i>Populus nigra</i>	30	1025	SS	C / C1	Shelter
44	black poplar	<i>Populus nigra</i>	30	1202	SS	C / C1	Shelter
45	London plane	<i>Platanus x acerifolia</i>	10	544	O	C / C1	Amenity, Screening





 <p><b>CRAIG WEBB</b> Consultant Arborist</p>	<p><b>Project: Puhinui Precinct</b> <b>Title: Tree groups by type</b> <b>Client: Campana Landowners Consortium</b></p>	<p>Drawing No.: J2736-01 Version: 01 Date: 8 November 2024</p>
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**Project: Puhinui Precinct**  
**Title: Tree groups by values**  
**Client: Campana Landowners Consortium**

Drawing No.: J2736-02

Version: 01

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