



ARBOR
CONNECT

Memorandum

To: Natasha Flavell – Associated Development Manager – Fletcher Development Ltd
Hinsan Li – Development Manager – Fletcher Development Ltd

From: Stuart Barton - Arbor Connect Ltd

Subject: FDFH Silverdale West Industrial Area Private Plan Change – Notable Tree Assessment

Date: 3110/2023 – Final

Introduction

1. Resource consent for a plan change for approximately 107 ha of the land area to the southwest of the Silverdale interchange between State Highway 1 Northern Motorway and Dairy Flat Highway (the site), known as Silverdale West (refer to Figure 1). The proposal is to change the zoning from Future Urban to Business – Light Industrial.
2. In its request for further information letter dated 26 September 2023, Auckland Council has requested a notable tree evaluation to see if any trees within the site meet the criteria for inclusion in Schedule 10: Notable Tree Schedule of the Auckland Unitary Plan.
3. In undertaking this assessment, I have referred to the following documentation:
 - Ecological Values Assessment – Silverdale West Stage 1 Private Plan Change, Auckland by RMA Ecology dated August 2023
 - Heritage Assessment – Silverdale West 1732 and 1744 Dairy Flat Highway, Silverdale, Auckland by Archifact Ltd dated August 2023
 - Archaeological Assessment – Proposed Plan Change – Silverdale West, Auckland by Clough 7 Associates dated August 2023
 - Landscap[e Effects Assessment and Design Advice – Silverdale West Dairy Flat Industrial Area Plan Change by Boffa Miskell dated 20 August 2023
4. I visited the site on 26/10/2023 to assess the trees. The following report is based upon the findings of that visit and the conditions found.

5. The following appendices are attached to this memo:
- Appendix A – Potential Notable Tree Evaluation Table
 - Appendix B – Potential Notable Tree Location
 - Appendix C- - Auckland Council Guidelines for Nominating a Notable Tree for Evaluation – Scoring of Tree-Specific Factors
 - Appendix D – Potential Notable Tree Photographs

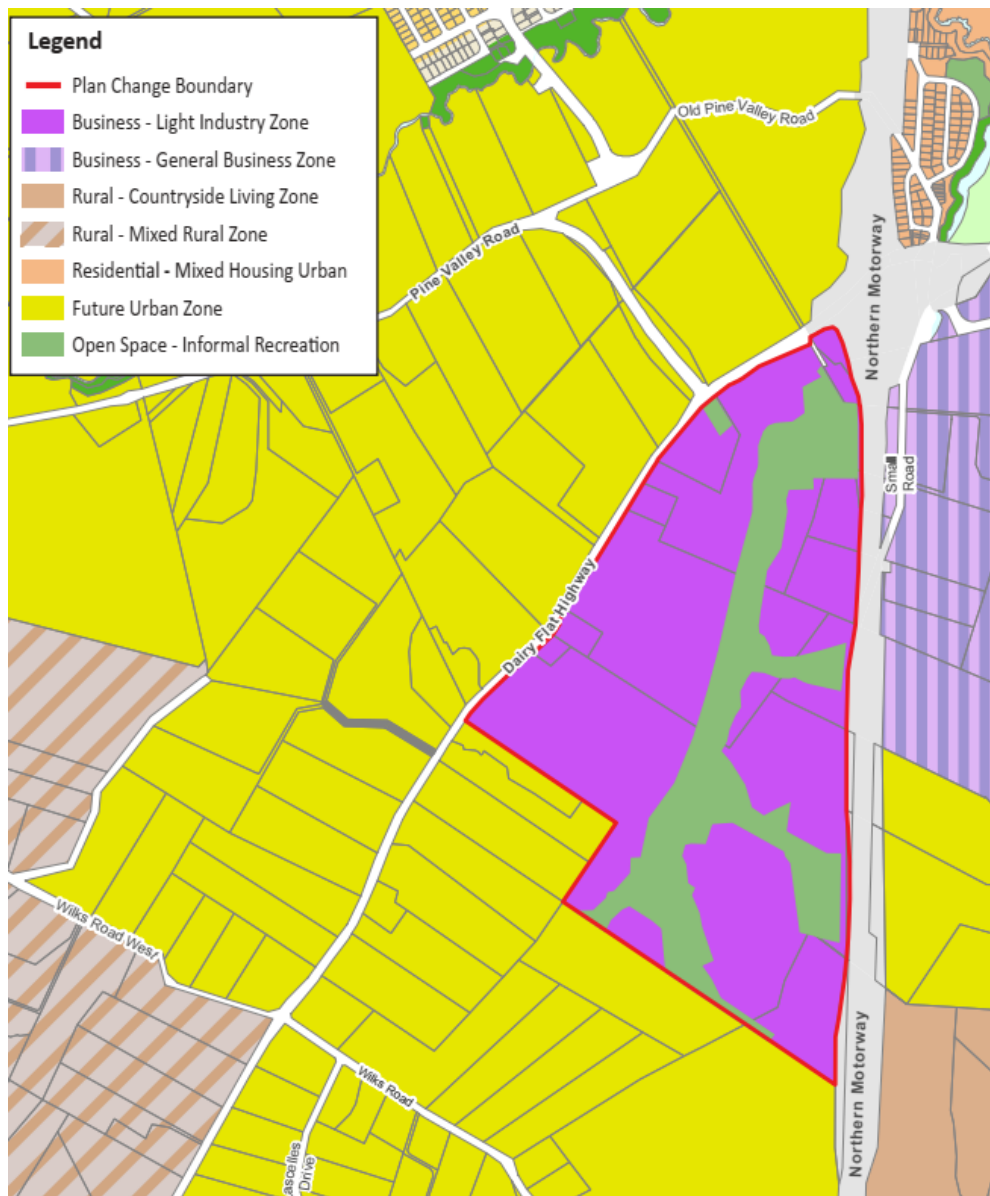


Figure 1: Silverdale West Plan Change area outlined in red. (Source - Fletcher Development Ltd)

6. The extent of the site is shown on the Tree location Plan attached as Appendix B. The majority of the trees within the site are exotics dominated by black poplar, radiata pine and willow. Historically, the site has been farmed, and most trees appear to have been planted as windbreaks. The northern end of the site is dominated by radiata pine.

Methodology

7. I walked the site and observed the site from Dairy Flat Highway and the vehicle accessway to 1748A Dairy Flat Highway. Although all of the trees were looked at, the investigation focused on those areas outside of the proposed Open Space – Informal Recreation Zone, as trees over 4.0 m high within that zone will have protection under the proposed plan change. The local roads were driven, and aerial photographs from 1958 to 2017 were viewed to understand the tree cover in the local area.
8. The trees were scored following Auckland Council's Guidelines for Nominating a Notable Tree for Evaluation (the guidelines). The tree-specific factors were scored on-site with follow-up research into the age of trees completed at the office. Only those trees that meet the evaluation criteria for becoming notable had their data recorded. The scoring for those trees is attached as Appendix A, and the plan showing the location of those trees is attached as Appendix B.
9. I had a conversation on-site with Robert Woolley from 1638 Dairy Flay Highway, who has lived in the area since the 1940s and was able to provide approximate dates for the planting of the trees around his property, which helped age many of the trees in the site. Aerial photographs downloaded from the Retrolens website also assisted in aging the trees.

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Notable Tree Assessment

10. The guidelines for assessing the potential for trees to be notable have two sets of factors to be considered. The first is tree-specific factors, and the second is special factors.
11. The tree-specific factors use a scoring system to assess age and health, character and form, size and visual contribution. The scoring of the tree-specific factors is attached as Appendix C. If a tree scores 20 or more (out of a possible 40), it is deemed to be considered suitable for scheduling as a notable tree. Negative effects on human health or property can be considered against the tree if it scores 20 or more.
12. Paragraphs 13 – 21 summarise the scoring for the majority of the trees.

Tree-specific factor - age and health

13. The majority of the trees within the site were considered to be between 41 and 60 years old, with some potentially up to 80 years old. The trees' health (vigour and vitality) was generally mid-range. Some deciduous trees were not in full leaf at the time of inspection, and past shoot growth was also considered in determining tree health.
14. Most trees scored between 4 and 6 for tree age and health.

Tree-specific factor – character or form

15. Most of the trees were typical of the rural trees found in the area, and many were growing as shelter belts, giving them uniformity. Few trees showed any exceptional character or form locally, and none had exceptional character or form for Auckland.
16. Most trees scored 0 under this category.

Size

17. The dominant species of black poplar, willow, and radiata pine on the site are common in the Silverdale West area. They are relatively uniform in size, and few were substantially greater than average.
18. Most trees scored 0 or 5 in this category.

Visual contribution

19. A lot of the site can be viewed from the Northern Motorway or Dairy Flat Highway, equating to more than 5,000 people viewing the trees daily. Other trees, buildings or the land contours hid a few trees.
20. Most trees scored 5 or 10 in this category.

Negative effects

21. No trees scored 20 or higher and then were disregarded by negative effects.
22. The special factors are five stand-alone criteria that a tree is assessed against. If a tree satisfies one or more of these criteria, it can be considered for inclusion in the notable tree schedule. The stand-alone criteria are Heritage, scientific, ecosystem service, cultural and intrinsic. Paragraphs 23 – 27 summarise the special factor assessments.

Heritage

23. A comprehensive archaeological assessment by Clough and Associates identified several sites relating to early European settlement, most notably the Maurice Kelly Homestead at 1636 Dairy Flat Highway. No trees could be identified as being associated with the early European settlement, and there is nothing to suggest that there are indigenous trees linked to māori history.

Scientific

24. No trees were identified as being rare or having outstanding scientific value.

Ecosystem service

25. The Ecological Values Assessment by RMA Ecology did not identify any individual trees providing critical habitat. There are few mature native trees within the site. The area identified as meeting the significant indigenous vegetation criteria in the RMA Ecology report has no large significant native trees.

Cultural

26. I am unaware of any trees within the site having any cultural significance.

Intrinsic

27. No trees within the site were judged as having intrinsic value.

Potential Trees for the Notable Tree Schedule

28. Four trees scored 20 or more points under the tree-specific evaluation. The details and scoring of these trees are attached as Appendix A. A summary of the evaluations can be found in Table 1.

Tree Number	Species	Address	Total Score
1	Silky oak	1638 Dairy Flat Highway, Dairy Flat	24
2	Pin oak	1686 Dairy Flat Highway, Dairy Flat	20
3	Cooks pine	1700 Dairy Flat Highway, Dairy Flat	30
4	English oak	1732 Dairy Flat Highway, Dairy Flat	25

Table 1: Notable tree evaluation summary.

Conclusion

29. An assessment of the site has identified four trees as potential candidates for inclusion into Schedule 10: Notable Tree Schedule of the Auckland Unitary Plan.

I trust this is of assistance. Please do not hesitate to contact me if you require further information.

For **Arbor Connect Ltd**



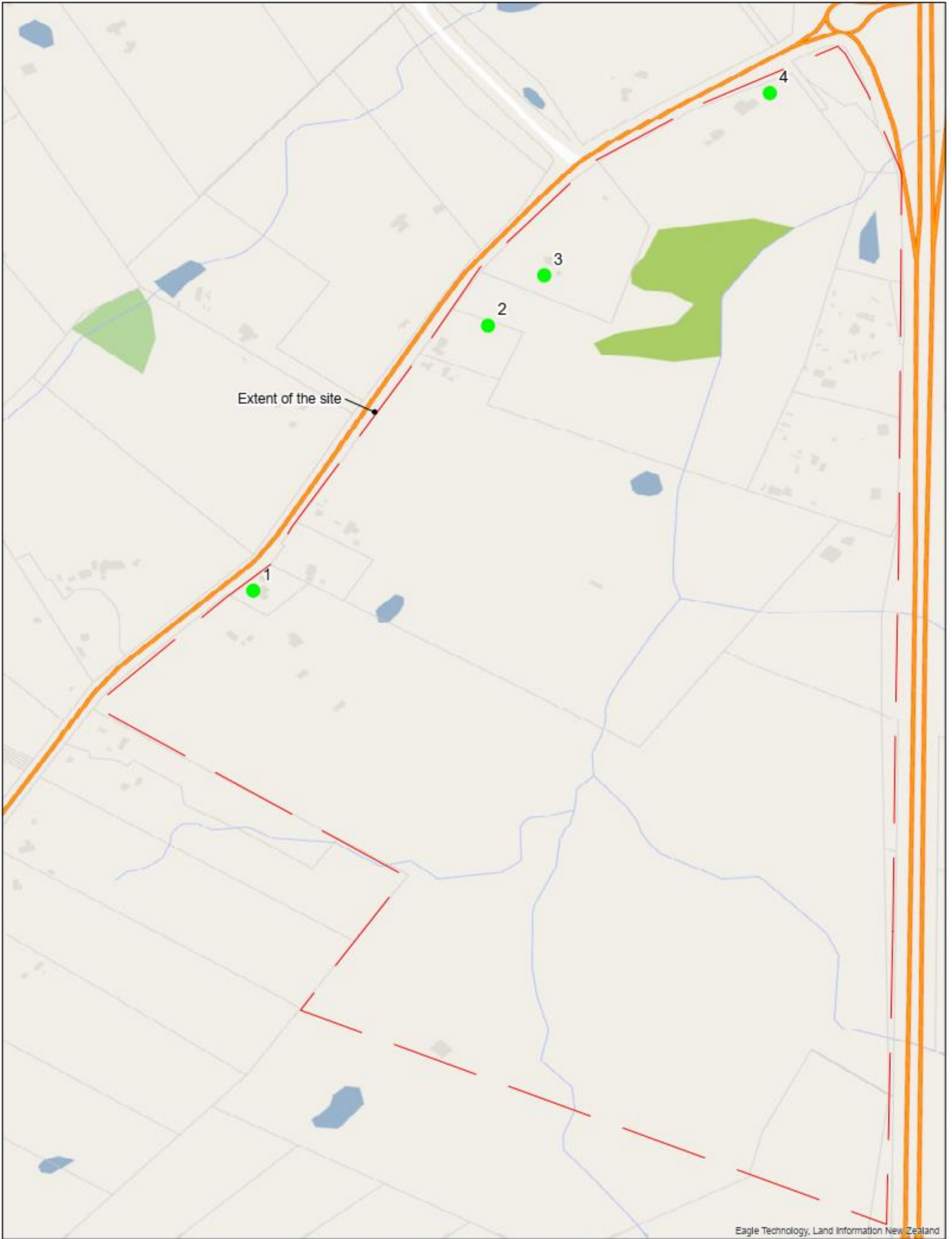
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APPENDIX A

POTENTIAL NOTABLE TREE EVALUATION TABLE

Tree Number	Address	Species	Height (m)	Canopy Spread (m)	Trunk Girth @ 1.4 (m)	Age	Vigour and Vitality	Age and Health Score	Character or Form	Character & Form Score	Size	Size score	Visual	Visual Contribution Score	Total Score	Negative effects
1	1638 Dairy Flat Highway, Dairy Flat	Silky oak <i>Grevillea robusta</i>	16.4	18.0	2.6	41-60 The owner said it was planted about 40 years ago. Not seen in 1970 aerial	Medium	4	Exceptional - local	5	Greater than average size (up to 25 %)	5	Main road /motorway highly visible	10	24	In a row so susceptible if others removed. Leaf drop compacted soils around the base
2	1686 Dairy Flat Highway, Dairy Flat	Pin oak <i>Quercus palustris</i>	20.1	14.0	2.4	41 – 60 Potentially in 1970 aerial	High	5	Exceptional - local	5	Greater than average size (up to 25 %)	5	Local park/community/minor road Difficult to see from Dairy Flat Rd	5	20	Other tall trees surround it, so it will be exposed if they are removed.
3	1700 Dairy Flat Highway, Dairy Flat	Cooks pine <i>Araucaria columnaris</i>	17.0 (Estimated)	8.0 (Estimated)	1.9 (Estimated)	41 – 60 Not seen in 1970 aerial	High	5	Exceptional - local	5	Substantially greater than average	10	Main road /motorway highly visible	10	30	Could not get a close look because it is surrounded by gorse
4	1732 Dairy Flat Highway, Dairy Flat	English oak <i>Quercus robur</i>	13.0	14.0	1.9 (Estimated)	41 – 60 Potentially in 1970 aerial	High	5	Exceptional - local	5	Greater than average size (up to 25 %)	5	Main road /motorway highly visible	10	25	

APPENDIX B
POTENTIAL NOTABLE TREE LOCATION



Eagle Technology, Land Information New Zealand



Potential Notable trees Silverdale West Plan Change

APPENDIX C

AUCKLAND COUNCIL GUIDELINES FOR NOMINATING A NOTABLE TREE FOR EVALUATION – SCORING OF TREE-SPECIFIC FACTORS

Scoring of tree specific factors

These scoring systems are to be used when evaluating a tree against the tree-specific factors in Section 6 (see page 10).

Age and health

Vigour and vitality	High	3	5	6	8	10
	↑	2	4	6	8	8
		2	4	6	6	7
		2	4	4	5	5
Low	2	2	2	3	3	
Age in Years	<40	41-60	61-80	81-100	>100	

This scoring system should be used when assessing the age and health of a tree. It allows for trees that are old and healthy to score much more highly than trees that are either unhealthy or young. The degree of vigour and vitality for any tree is assessed given the age of the tree. Therefore, a tree that is over 100 years old and showing high vigour and vitality, for a tree that age, will score a 10.

Character or form

Not exceptional	0
Exceptional example locally	5
Exceptional example in Auckland	10

This scoring system should be used when assessing the character or form of a tree. It allows for trees that are exceptional examples at two spatial scales (from local to Auckland-wide) to score more highly than trees that are regarded as normal.

Size

Average size for the species in this location	0
Greater than average size (up to 25% larger)	5
Substantially greater than average size (>25% larger)	10

This scoring system should be used when assessing the size of a tree (including height, girth and lateral spread). It allows for trees that are larger than would be expected (on average) for a particular location to be scored more highly than trees that are at, or close to (or below), their average height.

Visual contribution

In backyard or gully	2	e.g. fewer than 100 people see the tree daily
Local park/community/ beside minor road or feeder road/catchment	5	e.g. between 100 and 5000 people see the tree daily
Main Road/motorway or highly visible landform	10	e.g. more than 5000 people see the tree daily

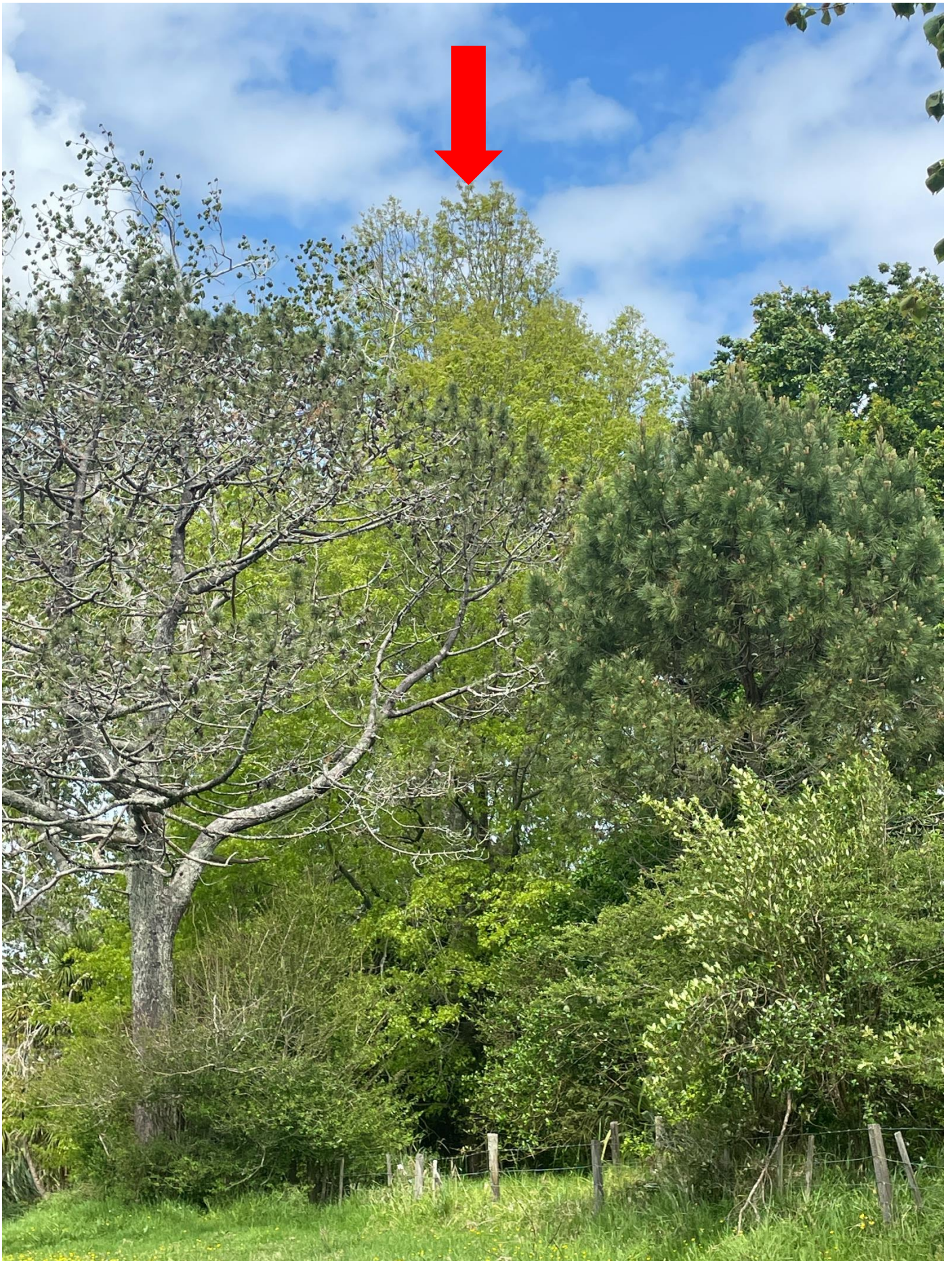
This scoring system should be used when assessing the visual contribution of a tree. It allows for trees that are seen by more people on a daily basis to score more highly than trees that are rarely seen.

APPENDIX D

POTENTIAL NOTABLE TREE PHOTOGRAPHS



Tree 1 – Silky oak: 1638 Dairy Flat Highway



Tree 2 – Pin oak (arrowed): 1686 Dairy Flat Highway



Tree 3 – Cooks pine: 1700 Dairy Flat Highway



Tree 4 - English oak: 1732 Dairy Flat Highway