

**635 Whatawhata Road, Singleton Property
Survey of Recently Planted Trees. March 2018**

Individual trees marked with a dot and number on the aerial. Groups of trees bounded in blue ink on aerial, numbered.					
(Group) Tree No	Name (Vernacular)	Size (m)	Useful life expectancy (in years or self-sustaining group)	Health (Good Fair Poor)	Special features, notes
1	Himalayan Birch	To 2.5	30	Fair	A bit exposed. Several dead or dying
2	Evergreen magnolia/grandiflora	2.5	30	Good	Should grow well.
3	Evergreen magnolia/grandiflora	2.5	30	Good	Should grow well.
4	3x Evergreen magnolia/grandiflora	2.5	30	Good	Should grow well.
5	13x London plane	3	50	Good	Only 6m from the overhead lines. Will need heavy pruning in ten years or so. Consider shifting back
6	30x coastal redwood	500mm	30	Some dying	Urgent weeding needed
7	Plane (London x oriental?)	2	30	Fair only	If the redwoods are to grow satisfactorily, the planes will need to be removed in about ten years.
8	30 x coastal redwoods	500mm	30	Fair only	Weeding required
9	London plane	2.5	50	Good	Will grow well
10	London plane	2.5	50	Good	
11	London plane	2.5	50	Fair	
12	London plane	2.5	50	Good	
13	Dawn Redwood	1.8	50	Fair	
14	Dawn Redwood	1.8	50	Fair	
15	Dawn Redwood	1.8	50	Fair	
16	Manuka and wetland trees, shrubs and grasses	1 – 1.8	Not quite self sustaining, 20	Fair to good	Major privet problem. Other weeds are overpowering several smaller spp.
17	Manuka and wetland trees, shrubs and grasses	1 – 1.8	Not quite self sustaining, 20	Fair to good	
18	Manuka and wetland trees, shrubs and grasses	1 – 1.8	Not quite self sustaining, 20	Fair to good	The poplar trees will be a headache to remove with without major damage. Start removal process soon
19	Swamp cypress	10	30	Fair	Getting suppressed by the poplars
20	Manuka and wetland trees, shrubs and grasses	1 – 1.8	Not quite self sustaining, 20	Fair to good	Major privet problem. Other weeds are overpowering several smaller spp.
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23	Manuka and wetland trees, shrubs and grasses – larger area	1 – 2.5	Self sustaining, 20	Fair to good	Remove the exotics within 5 years

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24	Manuka and wetland trees, shrubs and grasses – larger area	1 – 2.5	self sustaining, 20	Fair to good	Major privet problem. Other weeds are overpowering several smaller spp.
25	Manuka and wetland trees, shrubs and grasses – larger area	1 – 1.8	self sustaining, 20	Fair to good	Major privet problem. Other weeds are overpowering several smaller spp.
26	Liquidamber/sweetgum	2	30	Fair	Will need careful formative pruning in the next few years
27	5 of Pin oak	2.5	40+	Fair	A bit unstable at present. Maybe cut back and allow new growth. Ideal trees for damp ground
28	29 of silver birch (<i>B. jacquemontii</i>)	2.5	20	Fair	A couple or so are dying. Check the stakes. Check regularly to ensure they develop properly white bark
29	Liquidamber	3	30+	Good	
30	Liquidamber	3	30+	Good	Grafted specimens? Typically, they will require careful form pruning
31	Golden elm	2.5	30+	Good	Reduce the stake height
32	Claret ash	1.8	20	Good	Keep on form pruning – they are inclined to be unstable
33	Ribbonwood, cabbage tree, sedges and others	800mm	20	Good	Excellent selection of infill spp. Weeding for two or three more years
34	Manuka, ribbonwood and other native spp.	1.8	Could be self sustaining group	Good	Doing well. Keep well weeded
35	Golden totara	5	60+	Good	Needs crown lifting and thinning to look like a tree and not a yellow blob. (there seem to be a lot of these trees, all about the same age)
36	Golden totara	5	60+	Good	Needs crown lifting and thinning to look like a tree and not a yellow blob.
37	Dawn redwood	25+ m	30	Good	A really good specimen. There are several others in the property most of which are in good condition and thriving.
38	Native spp. kahikatea, and others	800mm	20+	Good	Lining a drainage ditch. The planting is not wide enough to be self sufficient
39	Native spp. inc kowhai	1.8mm	20+	Good	Lining a drainage ditch. The planting is not wide enough to be self sufficient
40	Group of 4 london planes	2.0	50+	1 good, 3 not	One plane tree will be adequate here
41	Manuka, cabbage tree, kauri and others	2.0	50+	Good 2 kauri dying	Why are the kauri dying?
42	Szyzygium ‘Burgundy Glow’	1.0	10 – 15?	Good	Why are these trees even here? They interrupt the natural view lines, they get in the way of mowing. Nasty suburban things
43	10 of kowhai and manuka	1.0	20+	Fair	Stability of the kowhai will be an on going issue
44	Flax, kowhai cabbage tree, many other native spp.	2.0	Self sustaining	Good	Lovely spot in the property.
45	Flax and cabbage trees	600mm	10 – 20	Good	A maintenance nightmare. Could do with some redesign. (The planting is a continuation of group 38)
46	Small group of native by the bamboo	2.0	20	Good	Close to the duckpond. The area will probably be inundated by the bamboo - best to take precautions now.
47	4 of liquidamber	2.0	20	Fair	One dying. Why were liquidamber planted here?
48	Native boundary planting	1.0	50+	Good	2 – 3m wide strip along the boundary. NEEDS WEEDING

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49	London plane	2.5	50+	Fair	
50	3 of dawn redwood and some native spp	2	50+	Fair	
51	Native spp. Mahoe lining a drain/road	1	20	Fair	
52	Native strip along bdry.	1.5	20 – 30	Fair	
53	2 of <i>Glyptostrobus lineatus</i>	25m	40+	Good	These are very rare trees and it is important that they are properly documented in the NZ register of heritage trees and also as protected trees in the Waikato District Plan
54	Golden totara	4	40+	Fair	Prune if this is to be kept
55	London plane	3	50+	Poor	
56	6 of dawn redwood and manuka	2	30+	Fair	
57	Native planting on boundary	1.5	25 - 50	Fair	
58	Native planting on boundary	1.5	25 – 50	Fair.	Many of the rewarewa seem to be dead.
59	12 liquidamber	2.0	20+	Fair	Not sure why these trees were planted here. It is potentially a good location, but the nearby trees are still viable
60	37 London plane	3	50+	Good	Excellent choice of tree for an avenue. Some might want removing after about 20 years.
61	4 magnolia, 1 tulip tree and 5 tupelo	2	20 - 80	Fair	Lovely choice of trees – will need considerable as time goes on
62	5 pin oak	2.5	50	Good	Will be spectacular
63	3 dawn redwood, coastal redwood	2.0 and 500mm	50+	Good	Remove the larger trees – the Gleditsia and silk trees.
64	Golden totara	5	60+	Good	Needs crown lifting and thinning to look like a tree and not a yellow blob.
65	2 of evergreen magnolia	10	20+	Fair	Mature trees. Examples of the eventual shape of these overused trees.
66	Golden totara	5	60+	Good	Needs crown lifting and thinning to look like a tree and not a yellow blob.
67	Selection of NZ wetland spp. Inc kahikatea	1	30+	Fair	Weeding
68	Group of several pittos and titoki	1.5	Almost self sustaining	Fair	Weeding
69	Pittosporum, Schefflera and other spp.	1.5	Self sustaining	Fair	Weeding
70	Pond cypress	20	30	Good	Prune, form, tidy
71	Pond cypress and golden totara	20 and 5	30	Good	Form prune.
72	Wetland spp. Native and exotic	To 8	20 – 50+	Good	Attractive spot and charming trees
73	6 of red maple	3	30	Good	

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74	Group of 20+birch, kauri and native spp.	2.5	Self sustaining	Good	Lovely arrangement of trees
75	Group of Silver birch	2	20	Good	Good location on either side of the driveway – will they do well?
76	Orchard trees	To 2.5	10+	good	
77	London plane	3	50+	Good	
78	Native spp. Akeake, lacebark, and others	To 3	20	Good	Altogether the overhead pine trees present a challenge to the livelihood of these trees.

The new planting.

The new plantings around the boundaries of the property are currently in good health, but are in danger of imminent inundation by weeds. It is vitally important to make sure that these young trees are all weeded and cleared around in order for them to become well established in root and stem strength.

Generally, the choice of species has been well suited to the conditions, and the effect should start to show within the next 4 years.

Some of the larger specimens of the new trees are in need of formative pruning and should be revisited every couple of years for say the first six years after planting.

Stakes should be removed after three years, preferably after 18 months. If the trees are not standing firmly after that, they should be closely examined to establish the cause and given some form of remedial treatment (e.g. hard pruning, removal and replacement).

There are two London plane trees in the avenue (Group 60) that have been damaged by tree felling. Proper pruning, re-staking and tying will enable the trees to catch up with their peers within three growing seasons.

A major concern is the difficulty/cost of removing larger unwanted trees growing above newly planted trees – in particular Group 18 with the large poplars and Group 78 with the large pine trees.

There are a few small, slow growing trees such as the golden totara trees located at odd points in the site; these could be pruned into well shaped specimens and retained as minor focal points. Golden foliage is an uncompromising feature and is usually out of place in a large landscape.

The tree felling programme.

I did not enquire into the planned removal of many of the trees; however, it is clear that most of the trees felled so far have been poor quality specimens that would detract from the visual appeal of the new and younger trees.

I am not certain how many more large trees will be felled.

None of the trees is on any tree register or heritage list and the owner may remove as many as he wishes without the need for any local authority consent.

The mature and large trees on site

It became evident that the trees in the peat soils are generally unthrifty and unstable, whereas the trees further into the site, on slightly elevated soils are inclined to be healthier and larger. That is not to say that they are all worthy of long term retention. Many of them are short lived species such as sheoke and silky oak.

Trees that are of major significance to the site or to the local heritage are:

⑩ the redwoods close to the driveway leading to the house at the rear of the site – if each of the newly planted redwoods grow with such vigour the park will soon fully treed.

⑩ The dawn redwood trees – there are about 15 or more and they all appear to be growing with great vigour and good form.

⑩ The 2 *Glyptostrobus lineatus* trees halfway down the western boundary. The species is rare in its native country and these two would be the two biggest examples in New Zealand. They represent a very important seed and propagation source.

I had planned on surveying all the larger trees on the site, but following a conversation with Graham Singleton, we decided that from a long term perspective, the new plantings are of more importance than most of the older trees. This was decided partly as a matter of cost control – my initial estimate of ten days would have been far too low.

Other surveys can be carried out on established trees at a later date when housing sites are being formulated.

This survey sheet is to be read in conjunction with the marked up aerial photo.

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<p>John Wakeling Consulting Arborist</p> <p>March 19 2018</p>					