

# WESTERN SPRINGS NATIVE BUSH REVEGETATION PROJECT

## PROGRESS REPORT

FEBRUARY 2022

### 1. WORK PROGRESS

#### 1.1 Initial Pest Plant control

Pest plant control was undertaken across the entire project area (Figure 1) on the completion of pine removal works (May/June 2021). The project area was systematically searched, and all pest plants encountered were controlled.

The pest plant infestations were dealt with *in situ*, removing the need for disposal. Several pest plant control methods were used, depending on the target species and infestation size. These included hand-pulling seedlings, cutting vines and tree pest plants and treating the stumps with herbicide, applying basal herbicide to crack willow (*Salix ×fragilis*), and foliar spraying ground-cover pest plants.

#### 1.2 Planting

Planting occurred between 14 July and 10 August 2021. A total of 7,428 revegetation grade plants were planted across the four planting areas (A - D; Figure 1). In addition, 20 specimen grade trees were planted, staked and mulched in Planting Area B. The number of each species planted within each of the four planting areas is provided in Table 1.

Wildlands facilitated a planting event with Pasadena Intermediate School on 7 July 2021, and a public planting event on 18 July 2021.

Table 1: Number of plants for each planting area.

Species	Common Name	Area A Cleared	Area A Forest	Area B	Area C	Area D	School and Public	Total 2021
<i>Alectryon excelsa</i>	Tītōki					25		25
<i>Carex lessoniana</i>	Rautahi				112	1075		1187
<i>Carex virgata</i>	Pūrei					1036		1036
<i>Carpodetus serratus</i>	Putaputawētā				32	72		104
<i>Coprosma robusta</i>	Karamū	30		104		73		207
<i>Coprosma robusta</i>	Karamū	268		75			180	523
<i>Cordyline australis</i>	Ti kōuka, cabbage tree	22				74		96
<i>Cordyline australis</i>	Ti kōuka, cabbage tree				25		180	205
<i>Cordyline australis</i>	Ti kōuka, cabbage tree	253						253
<i>Corynocarpus laevigatus</i>	Karaka	18	117				1	136

Species	Common Name	Area A Cleared	Area A Forest	Area B	Area C	Area D	School and Public	Total 2021
<i>Dacrycarpus dacrydioides</i>	Kahikatea	16	94			25	1	136
<i>Dysoxylum spectabile</i>	Kohekohe	4	92		10			106
<i>Hoheria populnea</i>	Houhere, lacebark	146		35	20	32	80	313
<i>Kunzea robusta</i>	Kānuka	40					460	500
<i>Kunzea robusta</i>	Kānuka	561						561
<i>Laurelia novae-zelandiae</i>	Pukatea					25		25
<i>Leptospermum scoparium</i>	Manuka	95				68		163
<i>Meliccytus ramiflorus</i>	Māhoe	293		50		55	190	588
<i>Meliccytus ramiflorus</i>	Māhoe		203		40			243
<i>Phormium tenax</i>	Harakeke			75		60		135
<i>Piper excelsum</i>	Kawakawa	5	90	91	20			206
<i>Pittosporum tenuifolium</i>	Kōhūhū	124					50	174
<i>Podocarpus totara</i>	Tōtara	10	189			22	1	222
<i>Sophora chatamica</i>	Kōwhai	16	105		20		1	142
<i>Vitex lucens</i>	Pūriri	13	129					142
		<b>1914</b>	<b>1019</b>	<b>430</b>	<b>279</b>	<b>2642</b>	<b>1144</b>	<b>7428</b>
<i>Beilschmiedia tarairi</i>	Tarairi (45L)			5				5
<i>Corynocarpus laevigatus</i>	Karaka (45L)			5				5
<i>Dysoxylum spectabile</i>	Kohekohe (45L)			10				10
				<b>20</b>				<b>20</b>

### 1.3 Maintenance Visit

A maintenance visit was undertaken 9-12 November 2021. Pest plants and other exotic plants were controlled to prevent indigenous plants from being smothered. The entire site was searched for re-establishing pest plants which were controlled as detected. Two large Phoenix palms (*Phoenix canariensis*), a large tree privet (*Ligustrum lucidum*) and several small to medium sized flame trees (*Erythrina ×sykesii*) were controlled and left standing.

### 1.4 Site Inspections

Wildlands have undertaken several post-planting site inspections. Plant establishment and pest plant presence were observed to identify whether any management actions were required (Section 2).

### 1.5 Work Programmed

The next maintenance visit is programmed for February 2022. A further maintenance visit is scheduled for May 2022.

Pest animal control (possums and rodents) will be undertaken in line with the Ecological Management Plan, with control pulses scheduled in March and May 2022.

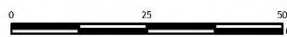
Infill planting to replace plants that failed to establish within the cleared areas will be undertaken in approximately July 2022.



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 Client: -  
 Ref: 06 1677  
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**Figure 1. Planting Areas within Western Springs native bush restoration project.**



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Scale: 1:1,197  
 Date: 28/06/2021  
 Cartographer: KM  
 Format: A4

## 2. OBSERVATIONS AND TECHNICAL ISSUES

The following observations have been made during site inspections.

- In the months following planting, rabbit browse was observed to be affecting plant establishment with continued severe browse on susceptible species. After reporting the observations to Council, rabbit control was undertaken (by other Council contractors) which was effective. Some recent rabbit sign has again been observed in February 2022 (Plates 1-2).
- Plants are generally establishing well across the entire site (Plates 3-6).
- The specimen trees are also establishing well (Plate 7), although possible vandalism of one karaka (*Corynocarpus laevigatus*) tree has occurred where the main stem has been snapped near ground level, however the tree was still alive with new growth.
- Within open planting areas of Area A, plant growth rates have been slower with occasional losses (Plate 8) compared to more sheltered areas further down slope. This is most likely attributed to dry soil conditions within the most exposed parts of the site following prolonged dry periods.
- An assessment of infill planting requirements for 2022 revealed that infill planting is only required within the cleared areas of Area A. Additional planting is not required within all other planting areas because of the original planting density and subsequent plant survival rates. Year 3 planting (winter 2023) as per the EMP will still occur with canopy species that require shelter provided by pioneering species planted in 2021.
- To infill the gaps within the cleared areas of Area A, an estimated 15% of the number originally planted within these areas should be allowed for, equating to approximately 450 plants. This is scheduled for July 2022.
- Control of pest plant infestations at the site has been successful, although several pest plant species are readily re-establishing including: woolly nightshade (*Solanum mauritianum*), brush wattle (*Paraserianthes lophantha*), mile-a-minute (*Dipogon lignosus*), Queen of the night (*Cestrum nocturnum*) and greater bindweed (*Calystegia silvatica*). Control of these species will be the focus of ongoing maintenance visits (Plates 9-10).
- Greater bindweed is beginning to smother plants within Planting Area D (Plate 11); and exotic grass, annual weeds and inkweed (*Phytolacca octandra*) have the potential to compete with establishing indigenous plants throughout open areas of the site. Control of these species will also be required during maintenance visits.
- Control of the two phoenix palms (Plate 12), a large tree privet and the flame tree appears to have been partially successful.

### 3. PHOTOGRAPHS



Plate 1: Rabbit browse on ti kōuka (*Cordyline australis*) within the Planting Area A.  
1 February 2022.



Plate 2: Evidence of rabbit presence. 1 February 2022.



Plate 3: Plant establishment within upper areas of Planting Area A, six months after planting. 1 February 2022.



Plate 4: Plant establishment within lower areas of Planting Area A. 1 February 2022.



Plate 5: Plant establishment within Planting Area D six months after planting.  
1 February 2022.



Plate 6: Pukatea (*Laurelia novae-zelandiae*) growing well in Planting Area D six months after planting. 1 February 2022.



Plate 7: A planted and staked tarairi (*Beilschmiedia tarairi*) specimen tree within Planting Area B. 1 February 2022.



Plate 8: Māhoe (*Melicytus ramiflorus*) that has failed to establish within Planting Area A. 1 February 2022.





Plate 9: Young mile-a-minute infestation establishing within Planting Area A will be controlled during the next maintenance visit. 1 February 2022.



Plate 10: Prolific woolly nightshade seedlings establishment near a planted kōwhai (*Sophora chatamica*) within Planting Area B. 1 February 2022.



Plate 11: Greater bindweed beginning to smother indigenous plants within Planting Area D. 1 February 2022.



Plate 12: Dying Phoenix palms following control. 1 February 2022.