8. Management Units

8.1 Overview

The project area contains a number of reserves within the Pourewa Valley, including the Pourewa stream and its tributaries that require restoration work including pest plant control, pest animal control and planting. These reserves have been identified as management units (MU's) in Figure 26, with required weed and pest animal control and planting options outlined.

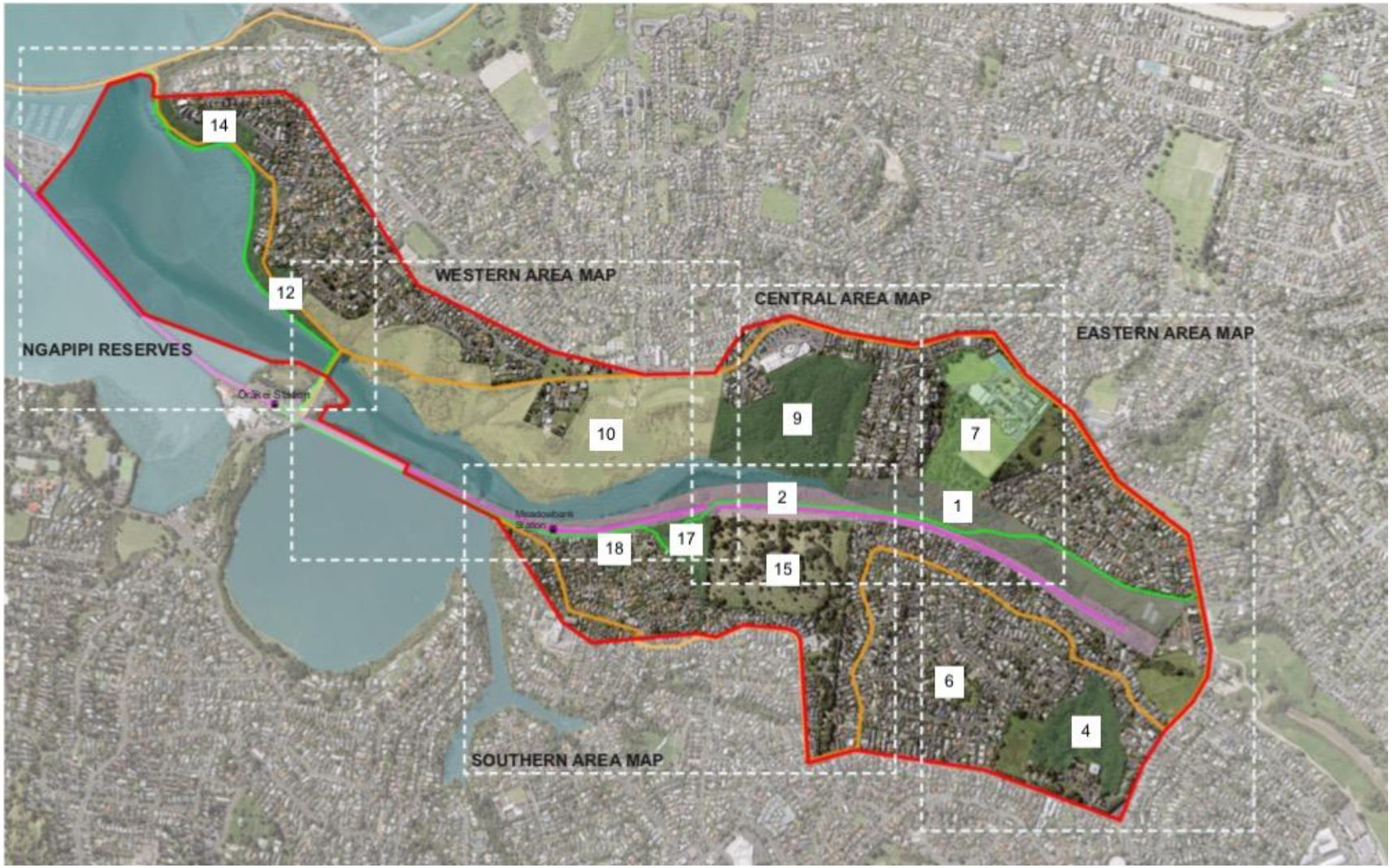

Figure 26: Management Units

8.6 Selwyn Bush and Park (Management Unit 7)

The land parcel is Ministry of Education land that provides access via the ASB Trust Stadium and Selwyn College into the Pourewa Valley, with a tributary to the Pourewa stream running through the gully to connect with the mid/lower parts of the Pourewa stream catchment and down to the coast. A track network follows the course of the tributary as well as along the ridge adjoining Selwyn College.

The forest area consists of exotic canopy trees; mainly macrocarpa, privet, willow and plane trees. A discrete number of emergent indigenous canopy trees include puriri. Exotic trees are generally dominant in the canopy with over 50% cover/biomass exotic. Extensive historic indigenous understory planting by volunteers is changing the exotic/indigenous composition. A robust understory exists beneath these canopy species; however pest plants are also climbing up trees and smothering them as well as forming a dense ground cover which is stopping the regeneration of indigenous plants. This comprises mainly climbing asparagus and wandering willie. The Selwyn Bush part of the land parcel is a Significant Ecological Area (SEA) – Exotic Scrub (ES) terrestrial ecosystem.

There are a number of pest plant incursions within the reserve as shown in figure 28; both in the streamside vegetation and the forest. In addition, there are infestations of pest plants on adjoining private land (Kempthorne Crescent). This includes a mix of climbing asparagus, cherry, privet, wandering willie, and ginger on the verge of properties on Kempthorne Crescent and adjoining stream margin, and more concentrated incursions of single species including climbing asparagus in the lower parts of the forest closer to where the tributary meets the Pourewa Stream.

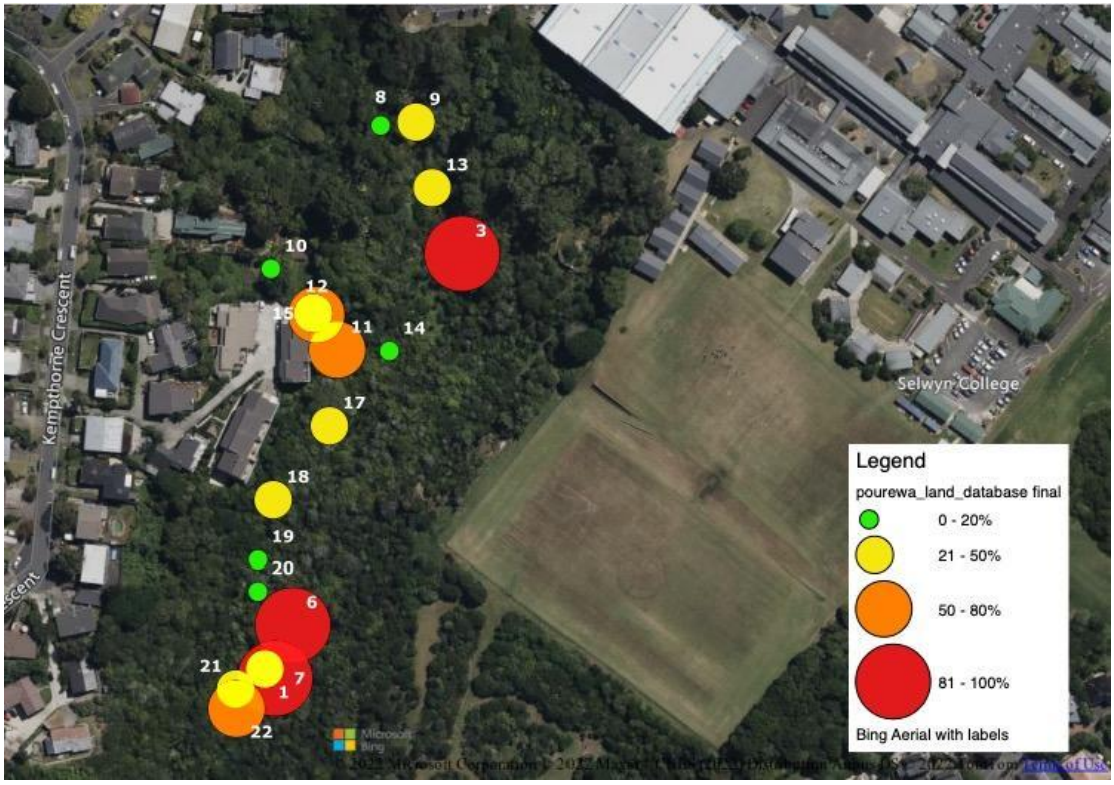

Figure 35: Pest plant abundance (density % of biomass)

8.6.1 Pest Plant Species & Control Method

Common name	Threat	ID	Method (chem; non-chem)	Who
Arum lily *(Zantedeschia aethiopica)*	Sustained Control	3	CP H	Eco- Contractor Volunteer
Bangalow Palm (*Archontophoenix cunninghamiana)*	Sustained Control		CP; FS; DF H (seedlings); C; CM	Eco-Contractor Volunteer
Bamboo *(Phyllostachys species)*			H	Volunteer
Cherry *(Prunus campanulata)*	Not listed	10,12,16,21,22	R; DF C; CM	Eco-Contractor Volunteer
Climbing asparagus* *(Asparagus scandens)*	Sustained Control	1**,6,7,**8,9**,**10,11**3,**14,15,17, **20**,21,22,	FS	Eco- Contractor
English Ivy *(Hedera helix)*	Sustained Control	3	FS; CP H	Eco- Contractor Volunteer
Ginger* (*Hedychium gardnerianum; H. flavescens)*	Sustained Control	1,10,11,12,13, 14,15,16,17,**1 8**21	CP H	Eco-Contractor Volunteer
Gorse *(Ulex*spp.)	Sustained Control	8,9	CP; FS CM	Eco-Contractor Eco-Contractor
Hawthorn *(Crataegus monogyna)*	Sustained Control	9,16,17	CP	Eco-Contractor
Jasmine *(Jasminum polyanthum)*	Sustained Control		CP;FS H	Eco-Contractor Volunteer
Japanese Honeysuckle *(Lonicera japonica)*	Sustained Control		CP; FS H	Eco-Contractor Volunteer

Madeira Vine *(Anredera cordifolia)*	Sustained Control		CP H	Eco-Contractor Volunteer
Moth Plant (*Araujia sericifera)*	Sustained Control		CP; FS H	Eco-Contractor Volunteer
Pampas (*Cortaderia jubata and C. selloana)*	Sustained Control		FS	Eco-Contractor
Privet – Chinese *(Ligustrum sinensis)*	Sustained Control	8,9,11,12	CP; R; DF H (seedlings); C; CM	Eco-Contractor(seedlings)/Eco-Contractor (Trees)
Privet – Tree *(Ligustrum lucidum)*	Sustained Control	1,9,11,12,13, 14,15,16,21	CP; R; DF H (seedlings); C; CM	Eco-Contractor Volunteer (seedlings) Eco-Contractor (Trees)
Wandering willie *(Tradescantia)*	Sustained Control	3,12	FS H	Eco-Contractor
Woolly Nightshade (*Solanum mauritianum)*	Sustained Control		CP; R H;C	Eco-Contractor Volunteer

Method code: Cut & Paste (CP) Cut – non chemical (C) Ringbark (R) Foliar spray (FS) Drill & Fill (DF) Hand (H) Chip & Mulch (CM)

***Species where areas of incursion are one species only (ID numbers in bold)**

8.6.2 Indicative planting schedule for riparian margins

Common name	Species	Plant Grade	Spacing (m)
Oioi	*Apodasmia similis*	PB3	0.5
Swamp maire	*Syzygium maire*	PB3	1

Mahoe	*Melicytus ramiflorus*	PB3	1
Puriri	*Vitex lucens*	PB3	1

8.6.3 Indicative planting schedule for forest understory

Common name	Species	Plant Grade	Spacing (m)
Rimu	*Dacrydium cupressinum*	PB3	1
Kahikatea	*Dacrycarpus dacrydioides*	PB3	1
Kawakawa	*Piper excelsum*	PB3	1
Large leaved Coprosma	*Coprosma grandifolia*	PB3	1
Mahoe	*Melicytus ramiflorus*	PB3	1
Puriri	*Vitex lucens*	PB3	1
Shining Coprosma	*Coprosma lucida*	PB3	1
Kohekohe	*Dysoxylum spectabile*	PB3	1

Figure 36: Pest animal control sites

8.6.4 Pest Animal Species & Control Method

Species	Method	Trap Type	Who
Rat	B; T	SnapE A24 Good Nature (private)	Volunteer
Possum	T	Timms	Volunteer
Mice	T	Mouse Trap	Volunteer
Hedgehog	T	SnapE	Volunteer
Wasp	S	Spray	Volunteer

Method code: Bait (B) Trap (T) types of trap Spray (S)

Figure 37: Water Quality Monitoring sites and In Stream values

8.6.5 Water Quality Results (Baseline)

Site	Temp	Clarity	Turbidity	PH	D.O	Nitrate	Nitrite	Phosphorous	Phosphate
Selwyn College Tributary	15.5	82	5.2	6	8	0	0	0.025	0.077

8.6.6 Volunteer Groups

- Pourewa Restoration Group
- Forest & Bird