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WAY OUT WEST

Dune Restoration of NZ Annual Conference 2014

11 – 13th March 2014

Fitzroy Surf and Lifesaving Club, New Plymouth

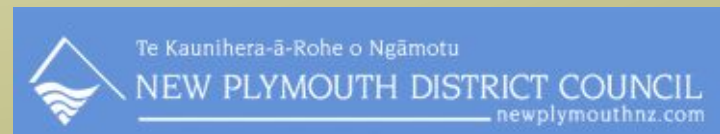


Presentation: Patea Planting Trust

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Conference sponsors



The logo for Patea Planting Trust is centered on a white rectangular background. It features the word "Patea" in a black, thin-lined sans-serif font. To the right of "Patea" is a stylized green leaf icon with two smaller leaves branching off to the right. Below "Patea" is the word "Planting" in a green, thin-lined sans-serif font. Below "Planting" is the word "Trust" in a black, thin-lined sans-serif font.

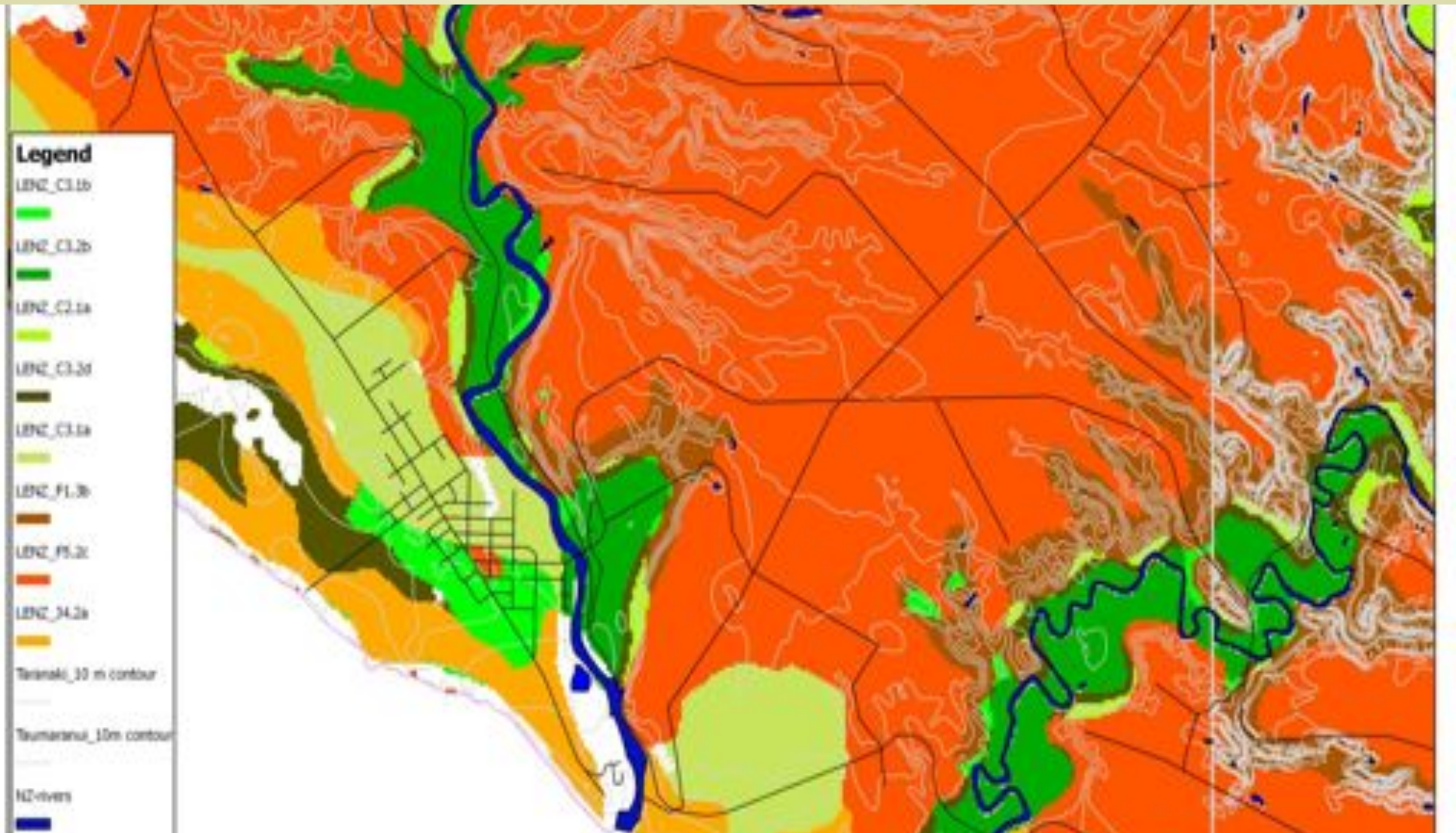
Patea
Planting
Trust

Patea River Historic Walkway Regeneration Project

Fataa River Walkway in the context of the lower North Island



LENZ categories



LENZ classes found at Fotea River mouth overlaid with indigenous forest from Land Cover Database 3: Excluding F1.3b

Legend
LENZ class with indigenous forest:

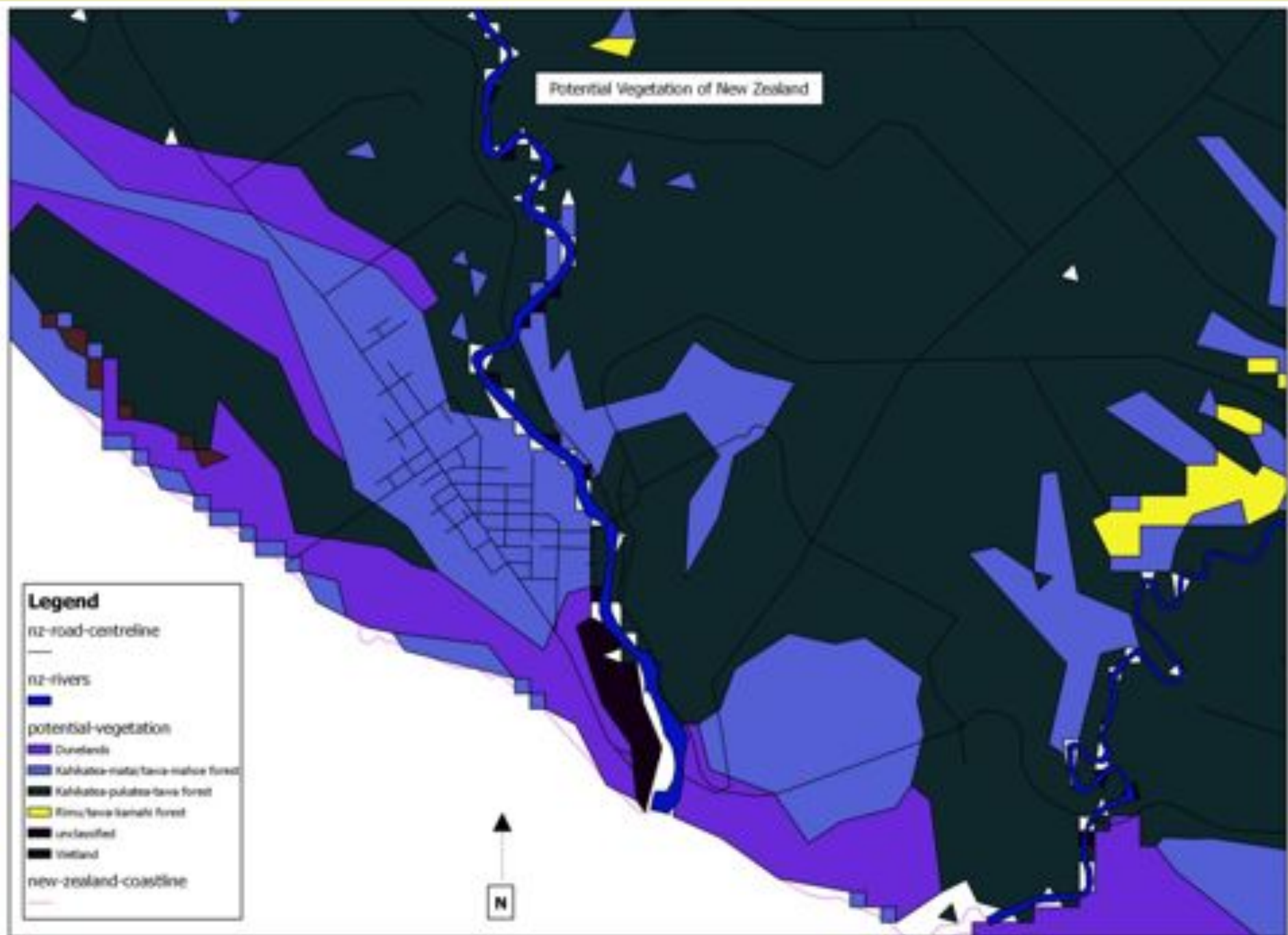
- C2.1a_indFor_intersect
- C3.1a_indFor_intersect
- C3.1b_indFor_intersect
- C3.2b_indFor_intersect
- C3.2d_indFor_intersect
- F1.3b_indFor_intersect2
- F5.2c_indFor_intersect
- J4.2a_indFor_intersect
- n2-rivers
- n2-road-centreline
- n2-coastline



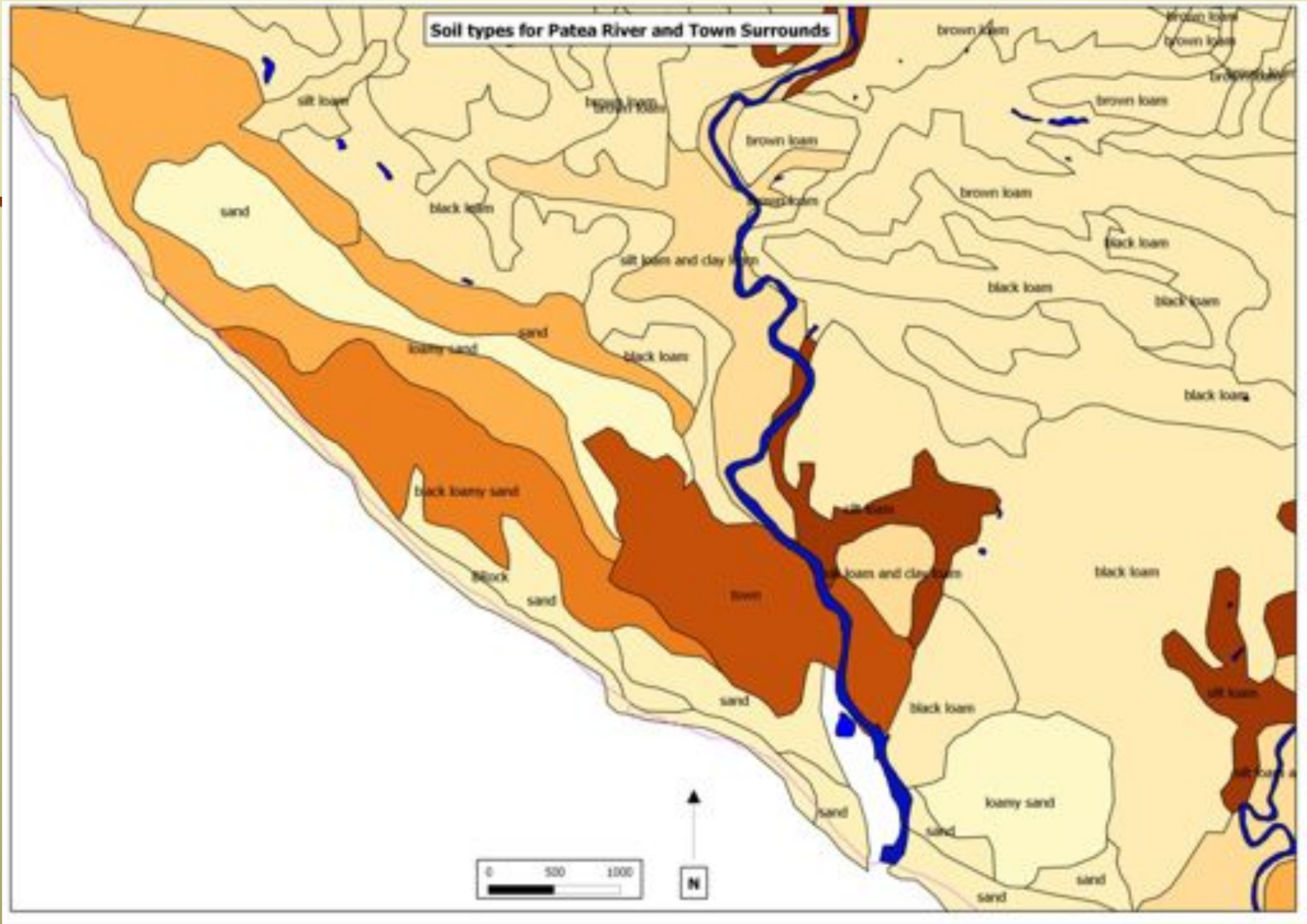
N

Potential Vegetation of New Zealand

- Legend**
- rz-road-centreline
 - rz-rivers
 - potential-vegetation
 - Clunefens
 - Kahikatea-matai/tawa-matai forest
 - Kahikatea-pukatea-tawa forest
 - Rimu/tawa-karaka forest
 - unclassified
 - wetland
 - new-zealand-coastline



Soil types for Patea River and Town Surrounds



View south to dune knoll (initial planting site).



View north from dune knoll





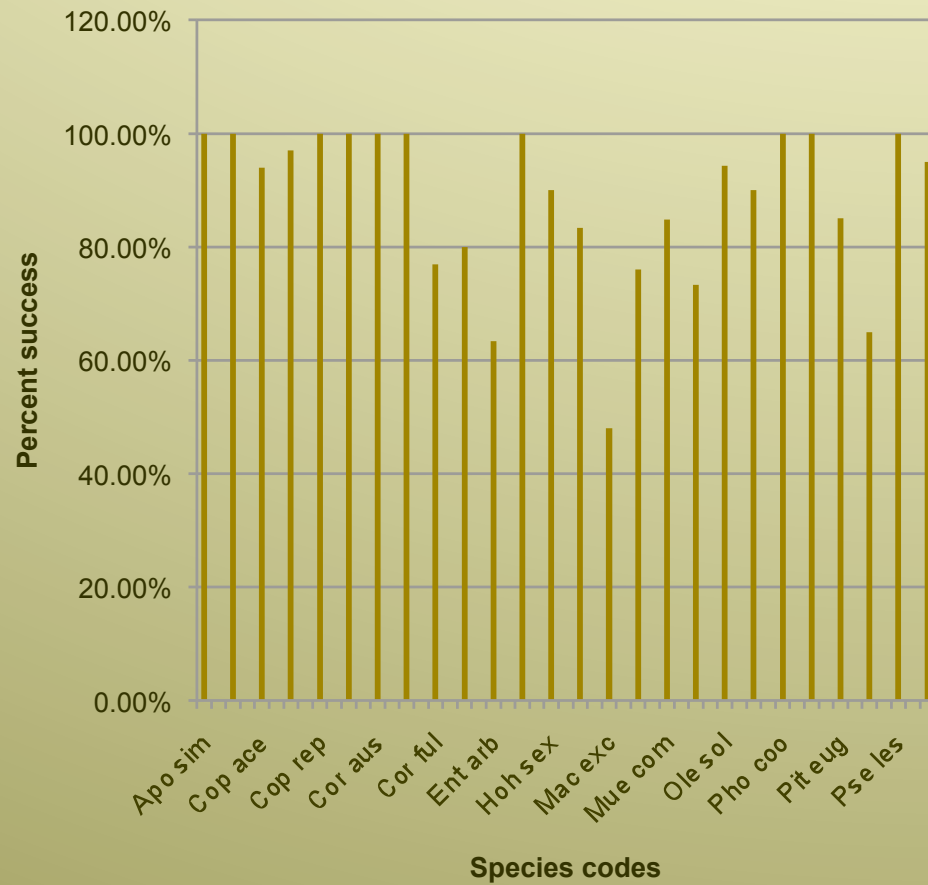
Species Nominal species list for the project (not late succession species)

Common name	Seral Stage 1	Northern Entrance	Comments	Bluff	Comments	Northern Dune Hummock	Ponds Terrace	Southern Terrace Dune	Southern Dunes	River Terrace & Back Dunes	Comment	Beach Entrance Corridor	School Bluff Top
Brachyglottis repanda	rangiora	C	✓		✓	drier parts	✓	✓	✓	✓		✓	✓
Carex Secta	pukio	C	✓	Seeps	✓	near running water							
Coprosma propinqua	mingimingi	C, M-S	✓		✓		✓	✓	✓	✓		✓	✓
Coprosma repens	taupata	C	✓		✓		✓	✓	✓	✓		✓	✓
Coprosma robusta	karamu	C, M-S	✓		✓		✓	✓	✓	✓		✓	✓
Cordyline australis	cabbage tree/ ti kouka	C	✓		✓		✓	✓	✓	✓		✓	✓
Corokia cotoneaster	korokio	C	✓			✓		✓	✓	✓		✓	✓
Cortaderia fulvida	toetoe	P, C	✓		✓								
Dodonaea viscosa	akeake	P, C, M-S	✓	Dry areas	✓			✓	✓	✓		✓	✓
Dysoxylum spectabile	kohekohe	L-S	✓	Shelter from salt	✓								
Fuschia excorticata	kotukutuku	C, M-S, L-S	✓	Sheltered position, seeps	✓								
Griselinia littoralis	broadleaf	M-S, L-S	✓		✓								
Hebe stricta	koromiko	P/C, C	✓		✓								
Kunzea ericoides	kanuka	P, C, C/M-S	✓		✓								
Leptospermum scoparium	manuka	P/C, C	✓		✓			✓	✓	✓			✓
Macropiper excelsum	kawakawa	C, C/M-S	✓		✓	Not in v dry places		✓	✓	✓			✓
Melicope ternata	wharangi	M-S, L-S	✓		?	Try a few		✓	✓	✓	Hollows of dunes preferentially		
Melicytus ramiflorus	mahoe	M-S, L-S	✓		✓			✓	✓	✓	Possibly for the southern dunes		✓

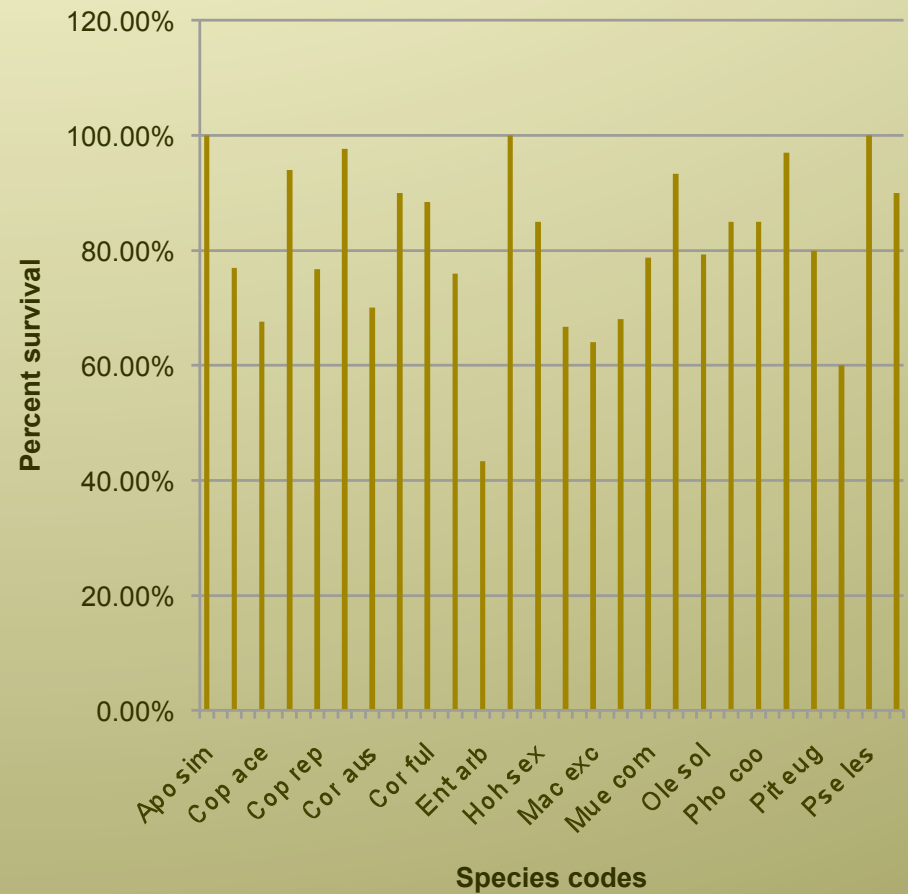


Species survival

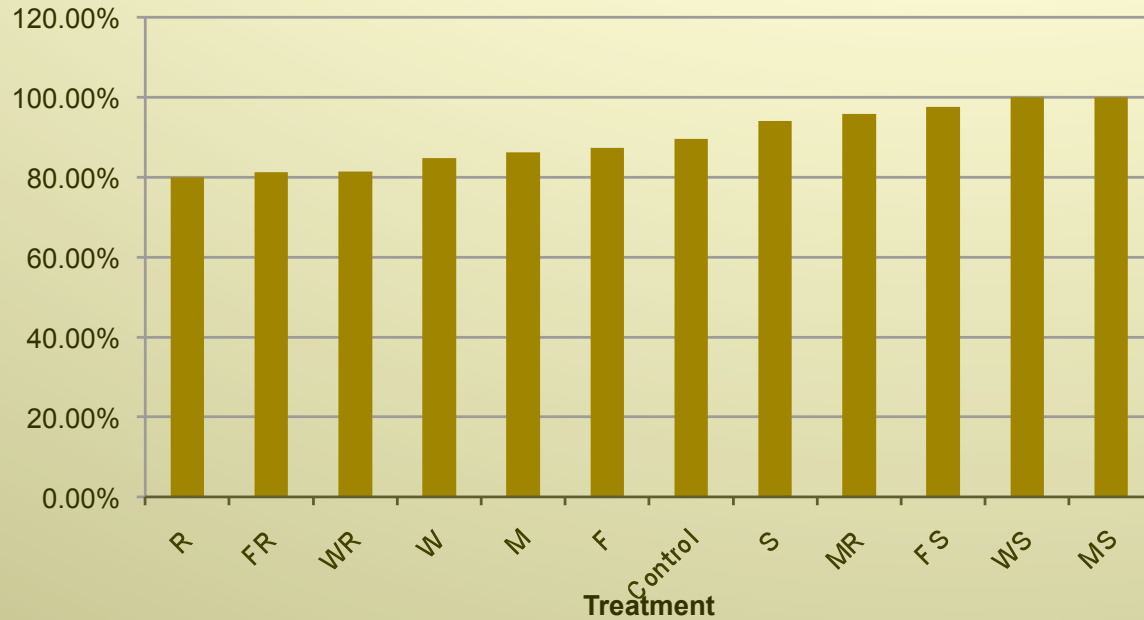
Species survival rates: 15/9/13



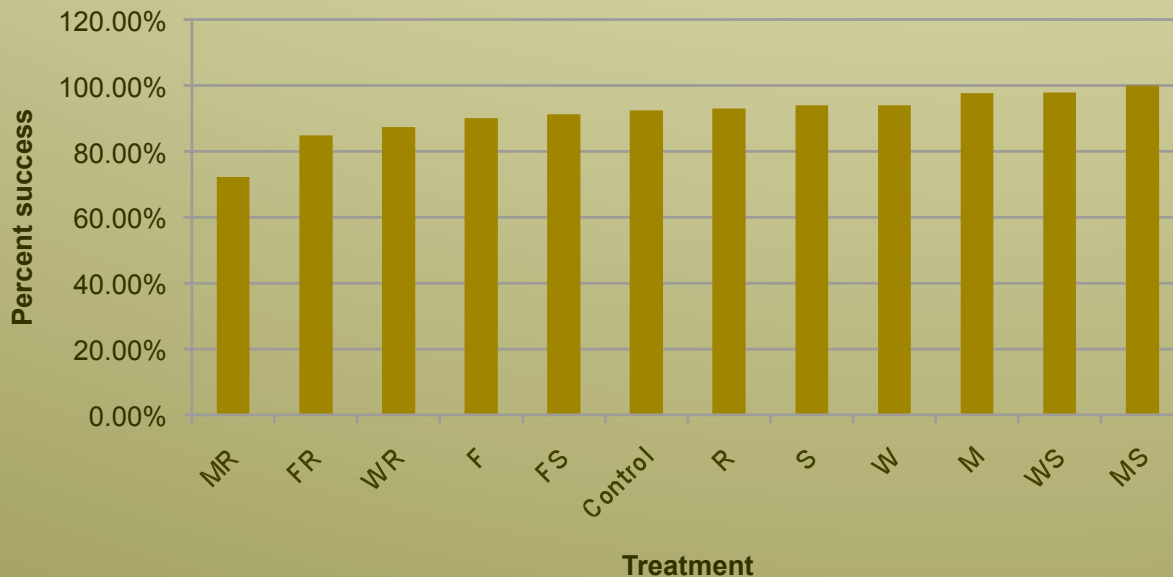
Species Survival: 8 December 2013



**Survival rate by specific treatment method (ordered graph):
Monitored 15 September 2013**



**Success rate by specific treatment:
Monitored 8 December 2013**



C: Control (no treatment)

F: Slow release fertiliser

FR: Slow release fertiliser and pest repellent.

FS: Slow release fertiliser and plant protection sleeve.

M: Mulch mat.

MR: Mulch mat and pest repellent.

MS: Mulch mat and plant protection sleeve.

S: Plant protection sleeve

R: Pest repellent

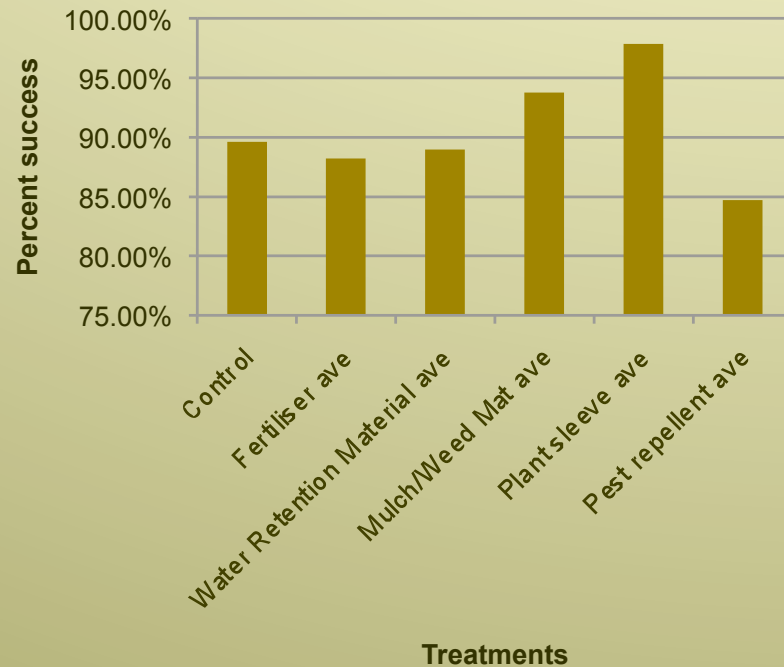
W: Water retention fibre.

WR: Water retention fibre and pest repellent.

WS: Water retention fibre and plant protection sleeve.

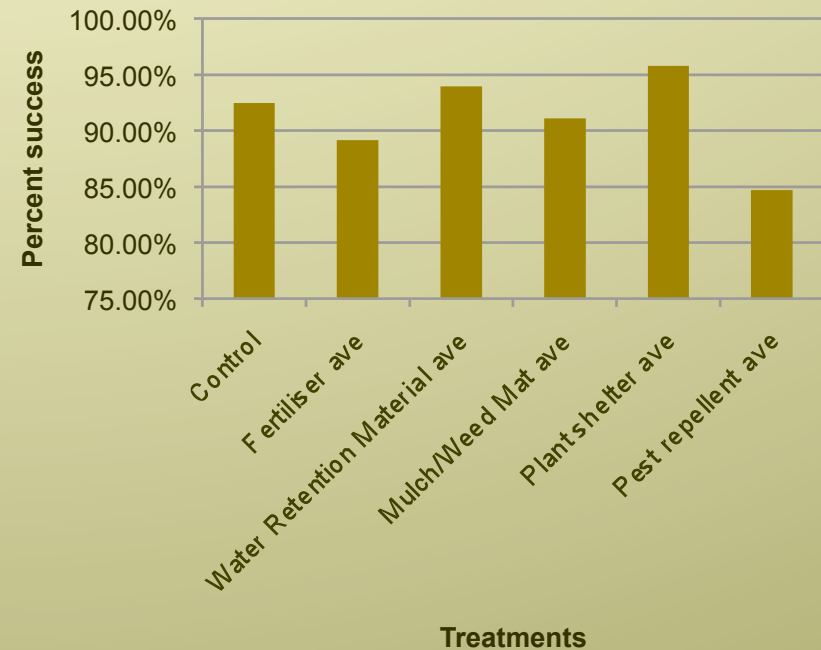
Blocked results

Percent success by the average of treatment
block: 15 September 2013



The results show that $\chi^2 = 0.897$ and the df (degrees of freedom) = 5 giving the critical value 11.070 at the 0.05 level of significance.

Percent success by the average of treatment
block: 8 December 2013



The results show that $\chi^2 = 0.197$ and the df (degrees of freedom) = 5 giving the critical value 11.070 at the 0.05 level of significance.



Thanks to:

South Taranaki District Council, Taranaki Trees Trust, Taranaki Regional Council, Kaitahi Landcare and Nursery, Hooper Engineering, Northcott Auto Services, Department of Conservation.