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## ensis



**Ensis Environment** 

Integration of science, management and community: Rehabilitation of riparian vegetation in a weedy environment, Sherry River, Motueka catchment



E.R. (Lisa) Langer, Nick Ledgard, David Henley, and Barbara Stuart

## ensis Motueka Catchment









## Classified and assessed existing vegetation



- Visually examined 1:10,000 colour orthophotographs, enlarged to 1:4,000
- Classified riparian vegetation
- Calculated area, average width, length of riparian vegetation classes
- Ground truthed/fine tuned
- Assessed vegetation in 5 randomly selected transects/vegetation class.



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#### **Vegetation classes:**

Deciduous Hardwood
Indigenous Forest
Isolated Beech
Mixed Exotic Shrubland
Mixed Indigenous Shrubland
Plantation Forest
Pasture

# Vegetation class by area (m2)







# Dimensions of riparian vegetation classes

Vegetation Class	Ave Width (m)	Length (m)
Deciduous Hardwood	5.2	36,300
Indigenous Forest	6.1	19,350
Mixed Exotic		
Shrubland	4.8	18,640
Mixed Indigenous		
Shrubland	5.4	10,340
Pasture	4.1	11,800
Plantation Forest	6.1	7,150
Isolated Beech	4.1	1,970



# Community landcare group formed



- Local farmer based
- Assistance from NZ Landcare Trust
- Keen to learn how to manage riparian vegetation, especially how to control weeds.







## Native plant establishment trial

- Aim: to quantify effects of weed control on native plant survival and growth in weedy environment.
- Mature willows removed, June 2004
- Weed seed left to germinate
- Site sprayed, May 2005
- Manual weed clearing





Following willow removal & spraying \*, August 2005 \* Glyphosate/Tordon/Escort/Pulse mixture



## Synthetic weedmal Woollen carpet

Treatments:

• Repeated chemical

spraying • No weed control

10 replicates with chemical control strip separating each

> \* Glyphosate and clopralid + Pulse 4 sprayings in year 1

## **Pest control**

- Fencing stock elimination
- Egg repellent sprayed immediately following planting
- Hares controlled by spot-lighting.









## % survival by species, 1 yr after planting





## ensis % survival, 1 yr after planting



# ensis Height increase of surviving plants (cm)





## Height increase of surviving plants (cm)



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# Calculated costs, 1 yr after planting

Treatment	Material cost	Labour cost	Total cost/m²
No weed control	0	0	0
Chemical	\$0.40	\$0.75	\$1.15
Weedmat	\$0.98	\$1.19	\$2.17
Carpet	\$0.20	\$2.74	\$2.94



## **Preliminary conclusions**



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- Weed control primary consideration and cost.
- Survival slightly greater with chemical control.
- Economics depend on cost of labour.
- Future plantings dependent on farmer uptake/initiatives.



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