Preliminary Outcomes from a National Wetland Restoration Workshop

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Wetland Restoration Workshop

- When - 11-12 April 2018
- Where - Southland
- Who – c. 25 people
- Locals and others
- Restoration & wetland practitioners.
- DOC, Councils, scientists, iwi and community

Workshop Goal

To develop effective methods for large-scale restoration of forest and other ecosystems associated with wetlands

Group session discussion:

What are the objectives for restoration of Southland forests and other ecosystems associated with wetlands?

Scope

- Existing methods – review & refine
- Novel approaches
- Large-scale (10-100 ha)
- Adaptive management / trials
- Different states
    - cleared (pasture)
    - degraded (gorse, manuka)
    - ‘intact’ (forest; tussock, etc)

Planned outputs

- Clear understanding of goals for wetland forest restoration
- Recommendations on best methods to implement at Awarua to achieve large-scale forest restoration
- Sharing knowledge between practitioners, ecologists and stakeholders

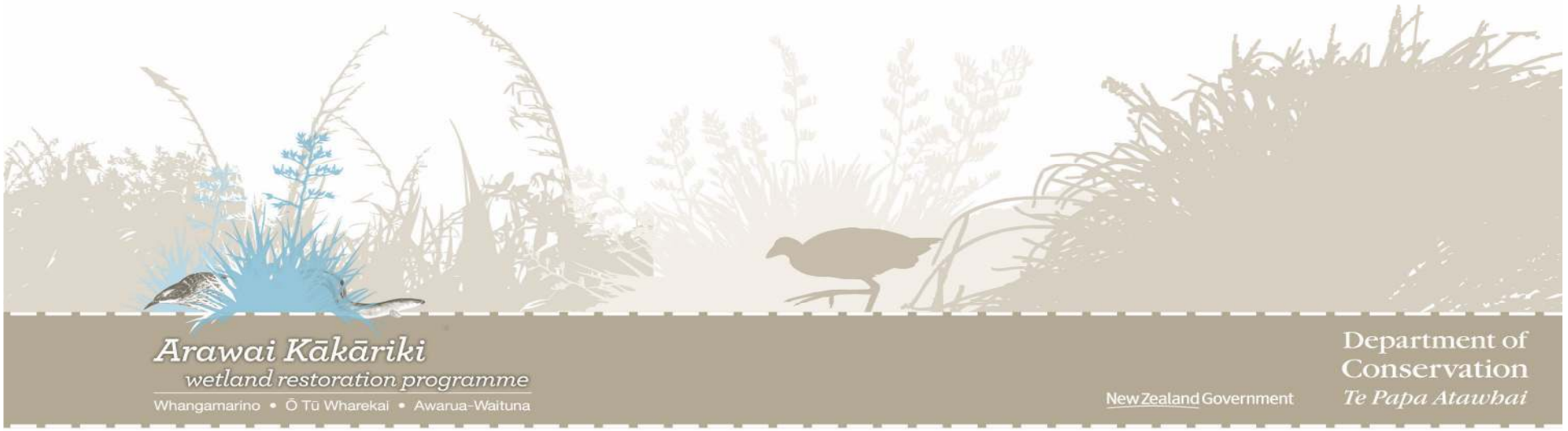
Local focus but national application

Arawai Kākāriki
wetland restoration programme
Whangamarino • Ō Tū Wharekai • Awarua-Waituna

New Zealand Government

Department of Conservation
Te Papa Atawhai

Why Awarua-Waituna focus?



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Awarua RAMSAR Site

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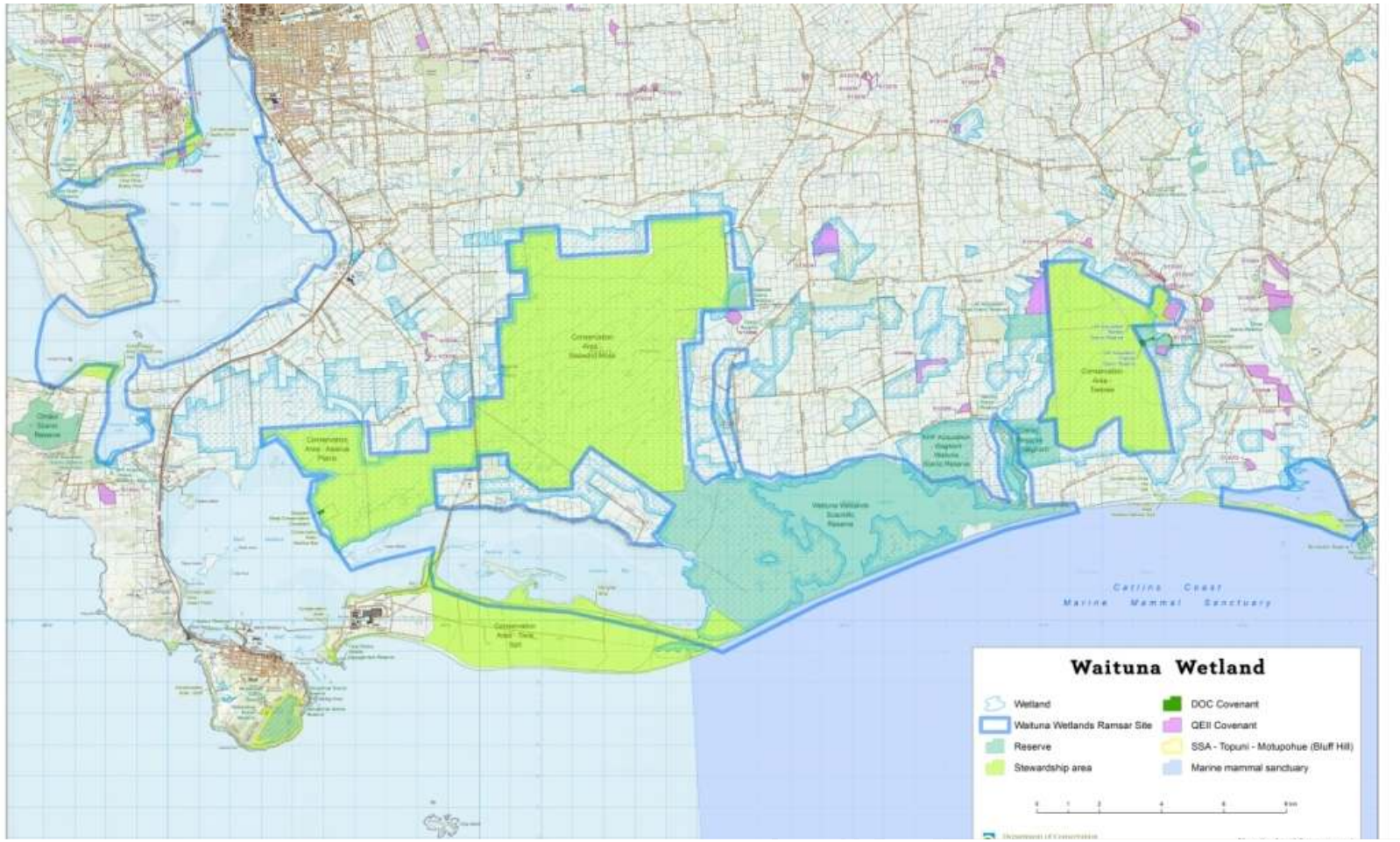


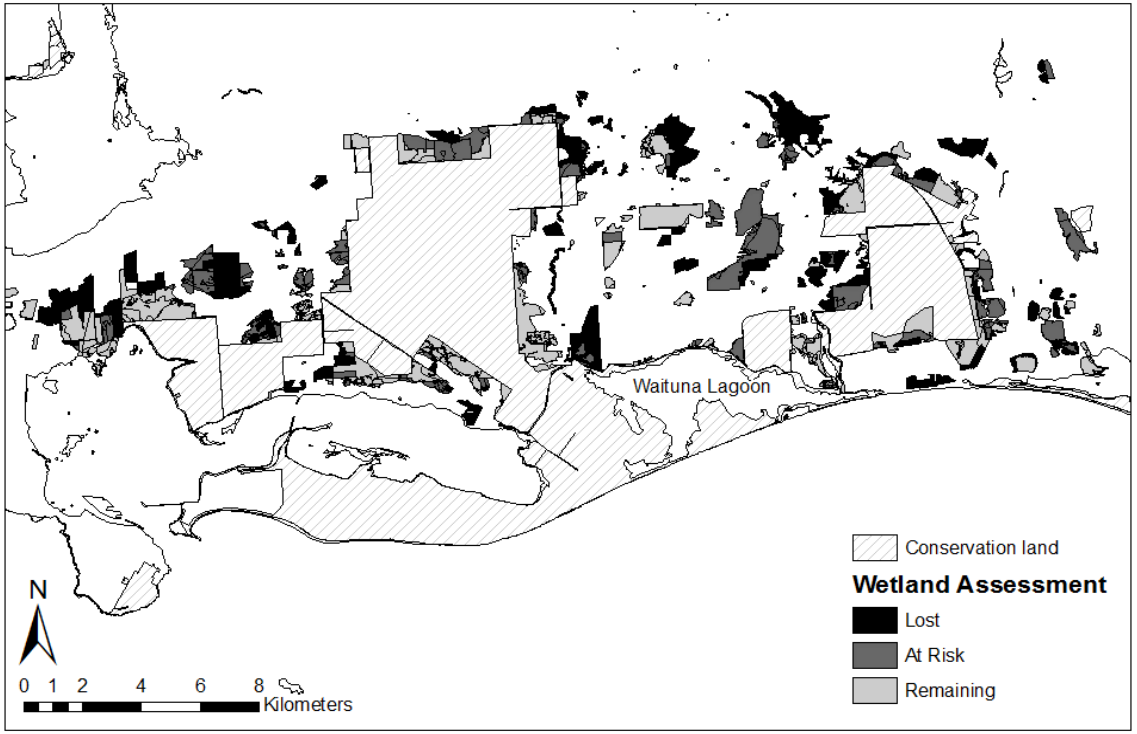
Awarua - Waituna Wetlands vegetation

Why a forest focus?

Ecosystem analysis – Waituna ED
(adapted from Southland Protection Strategy)

Ecosystem type	Original extent (% of ED)	Proportion of original extent remaining (%) (in indigenous vegetation)	Proportion of original extent/ remaining area protected (%)	
			Original	Remain.
Estuarine rushland and saltmarsh	2	2?	?	?
Coastal pingao sandfield	1	< 10	< 10	< 10
Coastal torea-pingao-Pimelea gravelfield	1	90	85	95
Coastal Notoreas herbfield-grassland-shrubland	1	90	85	95
Coastal tui-totara-podocarp forest	3	< 5	< 5	> 95
Lowland rushland-tussockland shrubland	55	40	38	> 95
Lowland kereru-podocarp-hardwood forest	35	< 5	< 2	30
Lowland korimako-silver beech forest	2	< 5	< 4	90

Wetland loss 1990-2013



Priority ecosystems for restoration

- Pasture
- Gorse shrubland
- Manuka shrubland
- Native forest
- Riparian

Pasture – approaches

- Do nothing – graze/retire
- Conventional restoration planting
- Direct drilling/planting machine/forest mounding
- Spraying – laying manuka slash
- Mechanical stripping of sward +/- manuka slash or seeding
- Exotic tree crop

Pasture – issues

Suppression of grass sward

Weeds

Trials – good but take time

Site conditions – exposure, hydrology, soils etc.

Plant selection

Community input

Pasture – conclusions

??? – Write up to be completed

A range of methods,

Select dependent upon site factors,

Trials useful – test and compare methods

Gorse – approaches

Do nothing – passive regeneration

Screen plantings

Establish islands/interplant

Seed addition

Gorse – issues

Control or not/biocontrol

Successional pathways/prevent disturbance

Timeframes – young v old gorse

Seed source/seed bank

Biosecurity rules/confine infestation

Community views

Accessibility

Gorse – conclusions

???

Limited methods,

Select dependent upon site/age of gorse

Potential for ecological benefits

Manuka – approaches

Do nothing

Establish islands as seed source

Broad scale underplanting/seed sowing

Pest control/weed control

Thinning & planting

Manuka – issues

Fire

Long term succession/endpoint

Seed source/Seed bank

Pest control

Accessibility

Myrtle rust

Manuka – conclusions

Reduce fire risk

It will happen by itself

High visibility trial

Public awareness/education

Forest – approach

Protect what you have!

Improve health/reduce edge effects

Control weeds

Pest control

Forest – issues

There is a limited amount.

Easier to protect than re-establish.

Prevent loss - fires/clearance

What was the original distribution?

Forest – conclusions

Treasure what we have!

Increase management efforts

Public awareness/education

Riparian planting – approach

Planting

Clump planting/islands

Direct drilling

Hydro-seeding

Physical work to increase habitat diversity

Riparian planting – issues

Secure fencing essential

Wider strips = greater benefits

Maximise landscape connection

Appropriate species

Site constraints – flooding, erosion

Stream management access

Community involvement

Riparian planting – conclusions

Multiple benefits

Maximise diversity

Links to other catchment initiatives

Ecological rather than mechanical

Where to from here?

- Write-up a Proceedings
  - Scene setting talks
  - Objectives for wetland forest restoration
  - Habitat types
  - Approaches/limitations/considerations
- Select best options for each site
- Develop a restoration plan for Awarua (ecosystems, sites, methods)
- Apply the knowledge more widely

Questions?