

HON JAMES SHAW MINISTER FOR CLIMATE CHANGE BANKS PENINSULA VISIT

9 July 2021

#### **Native Forest Climate Change Group**

Share an interest in native biodiversity recovery

Penny Carnaby - Chair

Nick Butcher – Al consultant

Nick Head – Ecologist

Helen Greenep - Biodiversity officer

Richard Simpson – ETS Land owner

Mark Nixon – Landowner

Bruce Hansen – Trustee

Tina Troup – Trustee

Di Lucas - Landscape Architect

Larry Burrows - Forest Ecologist

Alice Shanks - Field Representative

Suky Thompson – Manager

Bob Webster – Trustee, ETS land owner

Clayton Wallwork – Forest & Biodiversity

**Banks Peninsula Conservation Trust** 

Carbon Crop NZ

Christchurch City Council

**Environment Canterbury** 

**Farmer** 

High Bare conservation group

Hinewai Reserve

Hinewai Reserve

**Lucas Associates** 

Manaaki Whenua

**QEII National Trust** 

**Rod Donald Trust** 

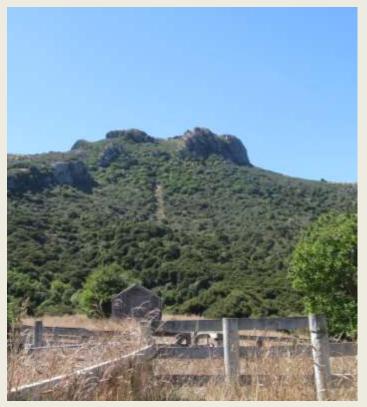
**Rod Donald Trust** 

Orion NZ

Banks Peninsula Native Forest Climate Change Group

#### **Overview**

- Huge potential for carbon sequestration through native forest regeneration on farmland
- Multiple benefits from natural regeneration
  - Help NZ meet its long term carbon targets
  - Biodiversity targets
  - Income for farmers
- 3 big problems with natural regeneration and the ETS
  - Eligibility assessment
  - Lookup tables
  - FMA



Perverse incentives leading to removal of native vegetation

# We support Climate Commission Recommendation 25



#### Ināia tonu nei:

a low emissions future for Aotearoa

**Recommendation 25** 

Manage forests to provide a long-term carbon sink

1. Establishing a long-term carbon sink through a comprehensive national programme to incentivise the reversion and planting of new native forests to maintain net zero long-lived greenhouse gas emissions beyond 2050.

# Programme to incentivise natural regeneration

#### Regeneration needs to be profitable land-use

- more financially attractive than alternatives
- such as grazing and pine forestry

#### How to make this happen

- remove barriers to registration from ETS
- end perverse incentives
- re-instate up-front conversion grants

### Natural regeneration- not planting

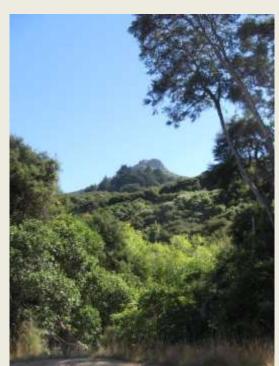
- Enables native forest on a landscape scale
  - To date planting is insignificant in scale in comparison
  - Regeneration much cheaper than planting
    - Approx \$500 per ha rather than \$11,000 per ha
    - No wait for nursery stock
  - Faster on a large scale
  - Less susceptible to pests
- Ecosystem services benefits
  - Results in native forest with ecological integrity
  - Right fungi for tree growth
  - No exotic wilding tree issues



### Regeneration suits marginal land

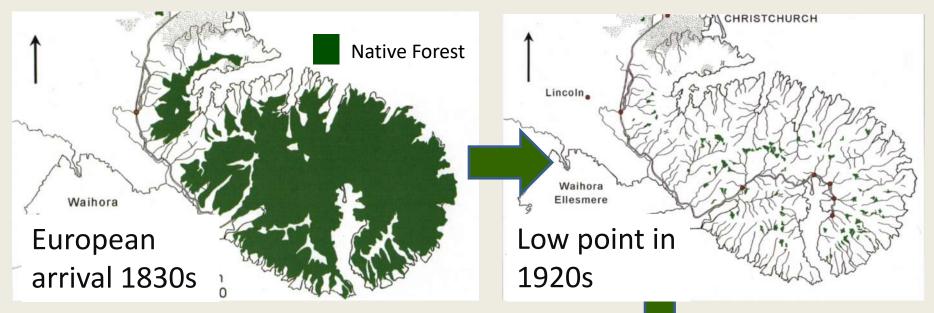
- Land unsuitable for harvested forestry
- Permanent native forest
  - Stabilises erosion prone areas
  - Improves water quality
- Banks Peninsula
  - Approx 35,000ha of marginal land
  - Natural tendency to revert
  - Landowners of all political stripes see the value



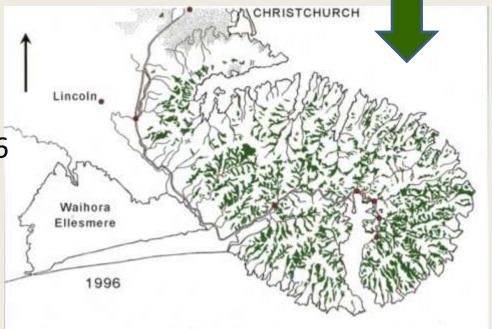


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#### **Banks Peninsula Native Forest story**



Forest cover 1996
- recovery
through natural
regeneration



Hinewai Exemplar

 Model for natural regeneration on a landscape scale

- 1,250ha with 30 year history

No planting – seed spread by birds and wind

Gorse used as a nurse crop for 'rapid' native forest

regeneration

 Grazing stock excluded

- Feral goats and sheep removed
- Possum control



### Relationship to ETS

- Demonstrates natural succession through gorse with appropriate management
- Sequestering 8 tonnes per ha/pa
  - Approx 350ha registered area
  - Earning in excess of \$100k p.a.
- Employs 3 FTEs
  - Plus contractors for pest control
- Hinewai registered for carbon prior to the ETS
  - Similar gorse covered properties now face issues with qualifying





#### **Proving ETS eligibility barrier**

- Philanthropic organisations failing to register similar regenerating land to Hinewai
- Farmers want to register regenerating land
  - \$45 Carbon price competitive with grazing
- No recent successful exemplars to follow



Carbon assessment Langer Reserve



Southern Bays farmers meet with MPI

Southern Bays land example

- 1700 ha regenerating land in Peraki and Horseshoe Bay
- Landowners struggling to maintain it as grazing land
- Barriers to ETS mean the continue farming
- Leading to ongoing clearance of regenerating native vegetative



#### 3 big issues with the ETS

- ETS eligibility criteria to determine the age of regenerating forest
  - Main barrier to registration
- Lookup tables
  - Indigenous carbon sequestration rates in a single table for all of NZ and all native species
  - More tables, and/or
  - Consider alternatives
- Field Measurement Assessment
  - Use for larger blocks
  - Review

#### Determining age of regenerating forest

- ETS plantation oriented
  - The date when a forest is planted is known
- Natural regeneration different
  - No definite start date regeneration occurs over time
  - ETS a poor fit for irregular, multi-age, multi species natural regeneration blocks
  - Appropriate methods not in place
- Reliance on grainy aerial historic imagery
- MPI eligibility assessments assumptions
  - All shaded areas contain potential forest and ruled out
  - Over-rule on-site professional detailed ageing work
  - Ecological understanding of native regeneration needed
    - (time, space, composition, successions)

#### MPI interpretation of entry to ETS

- MPI assessment of post 1989 status explained in email 20 March 2019
  - "If it is likely that forest species
    might be present as at 31 Dec
    1989, they [MPI Assessment team]
    are unable to deem it eligible post
    1989 land.
  - This is often the case for applications which have a land history dominated by Gorse.
  - Gorse is a known nursery species
     in the succession of native forest
     regeneration, therefore there is a
     high likelihood that forest species
     are present amongst the Gorse"

 Takes no account of landuse management



#### Gorse and broom control

As gorse and broom becomes active with the longer daylight hours and warming temperatures, it's a good time to be implementing your brushweed control programme. There are many control methods and herbicides available providing numerous control options:

 Helicopter – Application of herbicides using a helicopter can be very cost effective and selective with boom, half boom and spot spraying ability. It allows easy access to control pests in hard-to-reach areas and neighbours working together can reduce costs.







### Problem using historic aerials

MPI assume dark areas in historic images potential

forest



Red circle is pre 1990



mountain holly (non forest species) with post 1989 understorey of Halls totara (forest species).

### Difficult expensive field assessment

Seedlings counted under gorse or scrub in large plot

areas

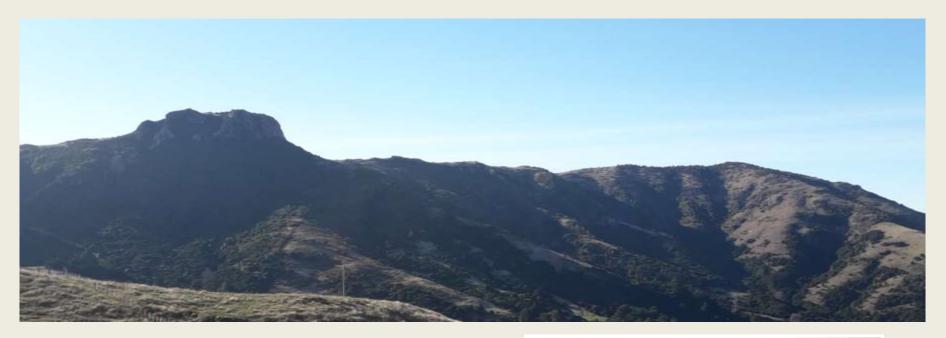
 Sample plots selected at random

- May be inaccessible
- Tracks must be chain sawed through gorse
- Destructive sampling of largest trees to determine age
- No guarantee that after this assessment MPI will agree with results and approve ETS registration





#### Example 1 – Langer Reserve



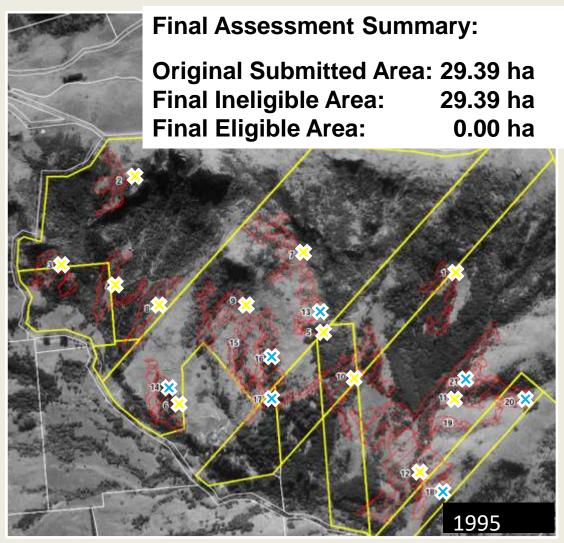
- 200ha regenerating forest in Le Bons Bay
- Owned by philanthropic trust
- Rapid regeneration 10 years



 2015 professional application to register 29ha fully rejected

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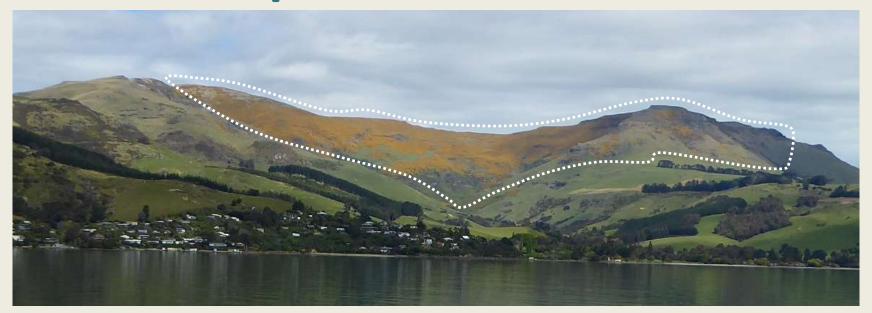
### Problem: Small disjointed areas



# MPI's assessment of this application by a professional consultancy:

- MPI not satisfied that the areas were non-forest land at 31 Dec 1989.
  - Areas less than 1
    ha and not
    directly adjoining
    other eligible
    areas.

#### **Example 2 Te Ahu Patiki**



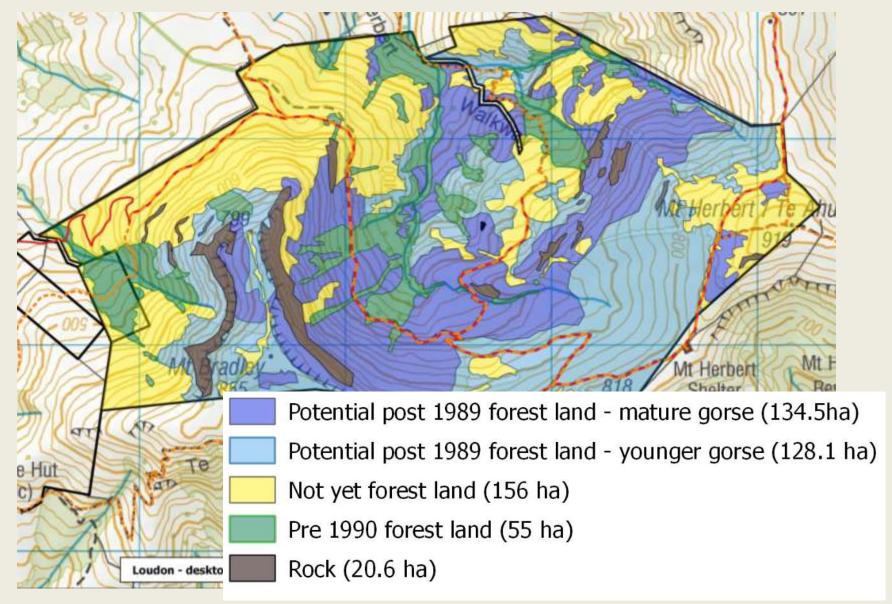
- 500ha steep land in Whakaraupō/ Lyttelton harbour recently purchased for conservation
- Large tracts of regeneration under gorse and in gullies
- Only 62.06ha considered eligible after extensive field work



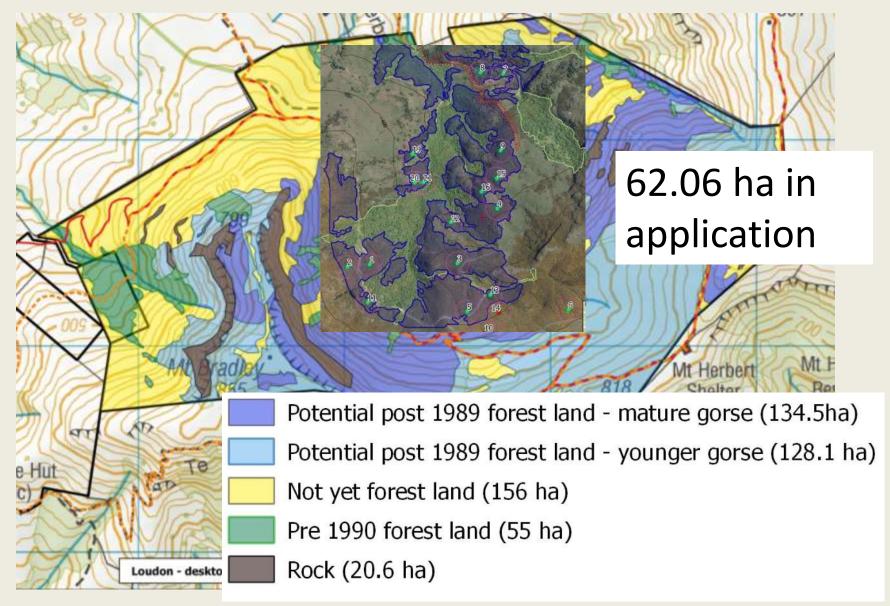
# Problem: Physically carrying out site sampling on 500ha gorse



#### Application for relatively small area



#### Application for relatively small area



### **Example 3 High Bare Peak Ltd**

- 540 ha at Little River
  - Marginal farm land
  - ~ 140 ha pre-1990 forest
- Company structure
  - Dozen "investors":farmers & "conservationists"
- Aim to showcase indigenous reforestation of marginal farmland is a viable activity
- Reliant on carbon income



#### High Bare Peak - Risks & Barriers

	Permanent Forest: Indigenous	Permanent Forest: Exotic
Predicting income	Complex and uncertain	Well defined and simple
Address crises	Both climate change and biodiversity loss	Climate change only, with significant downsides
Alignment with CCC Recommendation 25 (incentivising natives)	Yes	No
Additional costs	Significant: especially pest control of ungulates and possums	Minor
What if we can't get this project to work?	Buy out the farmers & and become a non profit	Buy out the greenies and plant pines!

#### Adverse results of perverse incentives

- More pine forests on unsuitable land
  - Easy to register rotational exotic forest in ETS
  - NES-PF favours rotational pines over native forest
    - Planting pines now a permitted activity except in ONL/ONC
    - Over-rides District Plans
    - Planting on unsuitable land
- Planting exotics for native regeneration underneath
  - Doubtful method
  - Fire risk and wilding issues
- More intensive grazing
  - Regenerating land clearance increasing on Peninsula



# Immediate solutions: MPI interpretation

- Change naturally regenerating land assessment
  - No need to change legislation around eligibility
  - Issue is MPI policy



- Base eligibility on demonstrable evidence of land use change
  - Covenant on title with a covenanting organisation
  - Registration in the ETS creates a liability if forest is cleared
- Add expertise in natural regeneration to MPI

## Immediate solutions: Financial incentives

Upfront costs with naturally regenerating areas occur

before income is received

- Costs fencing, pest control, weed control
- Years before significant ETS income
- 1BT natural regeneration
  - Grants discontinued
  - There was still approx \$20m
     in the fund
  - Can it be accessed?



30 April 2021
The One Billion Trees fund is now closed for new applications

#### 30 APRIL 2021

The One Billion Trees fund is now closed for new applications. All existing signed contracts will program according to the contract terms.

If you have any questions email OneBillionTreesProgramme@mpi.govt.nz

#### Summary

- Support Climate Commission Recommendation 25
- Natural regeneration enables landscape scale opportunity for native forest
  - Much cheaper and more feasible than planting
  - Supports biodiversity recovery
  - Long term carbon sink for NZ
  - Ideal for steep marginal land
- Landscape scale native forests need establishing now
  - To significantly sequester by 2050
- Urgent problem to resolve
  - Start with MPI policy around ETS eligibility
  - Reinstate natural regeneration grants
  - Then tackle ETS sequestration rates and measurement methodology
  - Rethink the NES-PF

## Thank you for visiting

