



Carbon Financed Indigenous Reforestation at Scale

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Our Purpose

Harnessing carbon markets for forest conservation



Challenge

100s of thousands of hectares need permanent reforestation

Problem

Not enough grant funding for this task and active planting is needed

Solution

Enough funds in the commercial sector through carbon trading

Barriers

Carbon economics of native reforestation are very challenging

Capital Expenditure (Build your carbon credit factory – establish your forest)
Operational Expenditure (operate & maintain your forest)
Opportunity Costs (benefits the landowner has to give up)

Capital Expenditure

Project Development

- NZETS eligibility & compliance
- Scoping & business case
- Detailed business plan & management plan

Investment ready Implementation ready

Capital Expenditure

Project Implementation

- ➢ Seedlings
- Land preparation (fencing, vegetation removal)
- Pre-planting pest control
- > Planting
- Survival monitoring
- ➢ Blanking
- ➢ Releasing
- Post-planting pest control
- Management

Capital Expenditure (Build your carbon credit factory – establish your forest)
Operational Expenditure (operate & maintain your forest)
Opportunity Costs (benefits the landowner has to give up)

Operational Expenditure

Conservation Management

Pest control, weed control, tracks, fencing, managing teams...

Measurement, Reporting, Verification

Capital Expenditure (Build your carbon credit factory – establish your forest)
Operational Expenditure (operate & maintain your forest)
Opportunity Costs (benefits the landowner has to give up)



Capital Expenditure

Operational Expenditure

Opportunity Costs

If you cannot cover these costs it will not happen at scale



Because you will not secure investment

What is Required for Private Investment?

- Generate a financial return
- Carbon trading can provide revenue
- Are native carbon returns sufficient to cover all costs?



Case Study: 100 ha Project

Assumptions

Seedlings Natives	\$2.30
Seedlings Exotics	\$1.40
Native species	Mixed
Exotic species	Redwood
Discount rate	6.00%
Inflation rate	1.00%
Fencing	\$0

Carbon price	\$50.00
CP1 price rise p.a.	\$1.50
CP2 price rise p.a.	\$4.75
CP3 price rise p.a.	\$8.00
Planning	\$50,000

Scenarios

NAF8000	Natives @ 8,000 sph	
NAF4000	Natives @ 4,000 sph	
NAF2000	Natives @ 2,000 sph	
NAF21000	Natives @ 1,000 sph	
NEAF1000 Natives (80%) Exotics (20%)		
ENAF1000	Natives (20%) Exotics (80%)	







Comparison Capex per ha



Comparison IRR Carbon Price Scenarios

■ CP1 ■ CP2 ■ CP3



Comparison NPV Carbon Price Scenarios



IRR = -6.2%

Medium Density Natives

IRR = -1%



IRR = 2%



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IRR = 5%

Exotic woodlot	Low Density Natives

IRR = 6%



Purpose of exotic woodlot:1. Fund the natives2. Fund the natives

Right tree, right place













- 1. Southland
- 2. Northland







- 1. Southland
- 2. Northland



2. Northland

- Natural regeneration: 10ha
- Native reforestation: 75 ha
- Co-financing grant: \$120k
- Private Investment: \$600k
- Interest rate: 2%
- Investment maturity: 25 years

2. Northland – Offsetting Project (impact investor)

- Natural regeneration: 10ha
- Co-financing grant: \$120k

Key success dependencies

• Interest rate: 2%

Take Home Message

- 1. To succeed at scale we need money at scale
- 2. To source money at scale we need to deliver a financial return
- 3. Delivering a financial return requires either:
 - a) Co-financing grant
 - b) Exotic woodlot element
 - c) Low interest rate on investment

Milnthorpe Reserve Golden Bay

Milnthorpe Reserve Golden Bay



