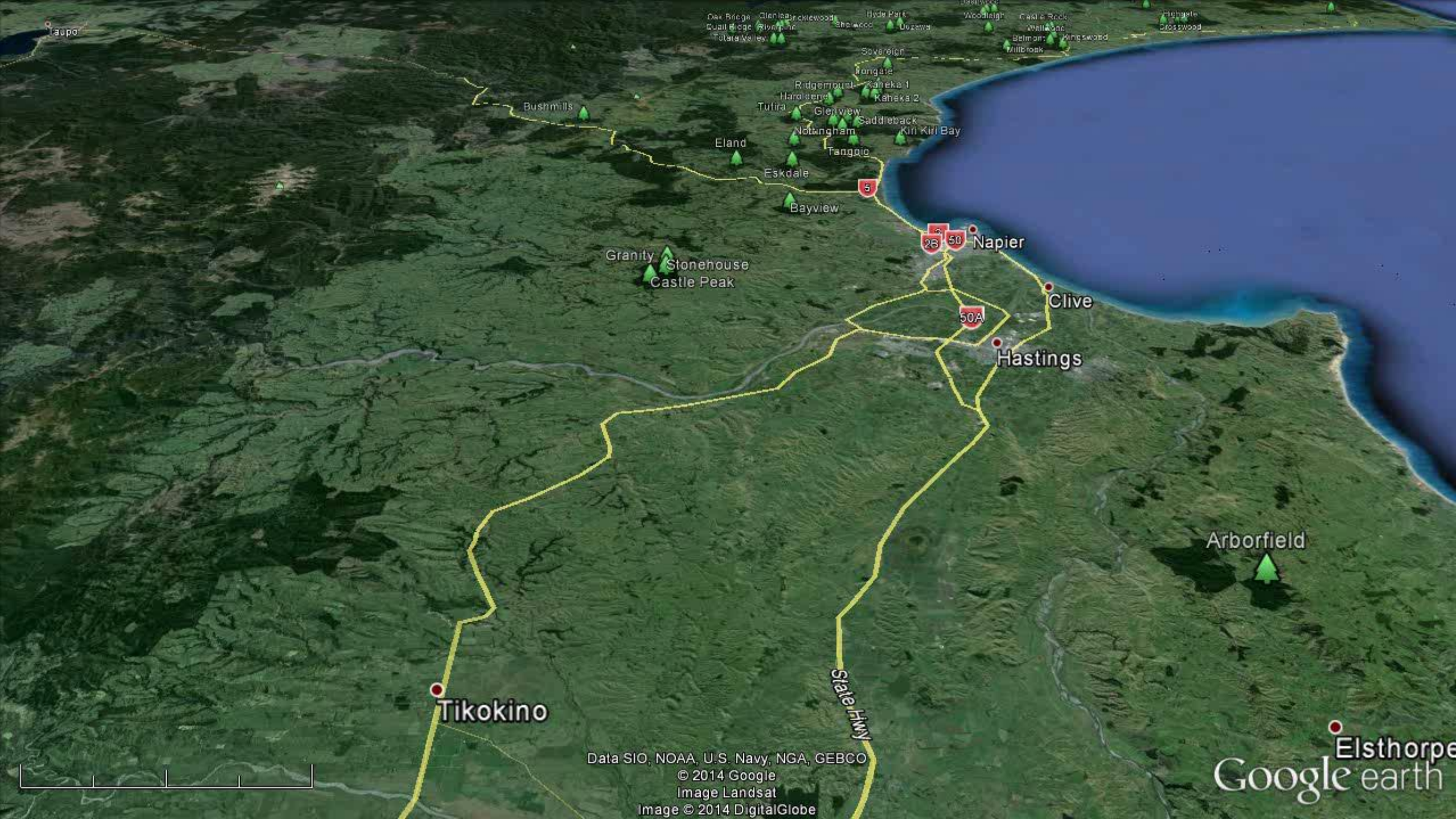


# Roger Dickie 2018 AGM's Harvest Planning

# Topics Covered

- Forest Development History
- Roger Dickie group scale
- Harvest Planning Timeline
- Planning overview and Harvest
- Summary & Questions



Laupo

Dak Bridge Glenlea Oakwood Hyde Park Ouzawa Woodleigh Castle Rock Millbrook Belmont Kingwood Highgate Crosswood

Sovereign

Longate

Ridgemoor Kahaka 1 Kahaka 2

Haroldene Tufira Glenview Saddleback Kiri Kiri Bay

Nottingham Tangaroa

Eland

Eskdale

Bayview

5

Granity Stonehouse Castle Peak

28 50

Napier

Clive

50A

Hastings

Arborfield

Tikokino

State Hwy

Elsthorpe

Google earth

Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
© 2014 Google  
Image Landsat  
Image © 2014 DigitalGlobe





# Forest Age and Net Stocked Area - HBRC District

- NSA Planted 1991 – 352.1 ha, NSA Planted 1992 – 1422 ha
- NSA Planted 1993 – 2609.4 ha, NSA Planted 1994 – 3552 ha
- 3704 ha planted in 1994
  
- Nottingham NSA 172.9 ha

# HARVEST TIMELINE

AGE 24

AGE 24/25

AGE 26

AGE 27

MAPPING  
LIDAR

P.H.I

HARVEST  
PLANNING

STRATEGIC  
PLANNING &  
CONTRACTOR  
MANAGEMENT

ROAD LINE  
ROAD  
CONSTRUCTION

CLEAR FELL

POST  
HARVEST



# LIDAR Acquisition

- Provides the most accurate terrain data with current technology at a realistic cost
- Used for Harvest Planning
- Road Planning and Design
- Slope maps



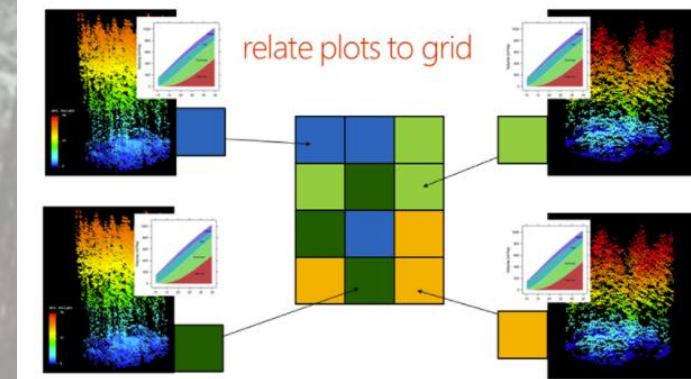
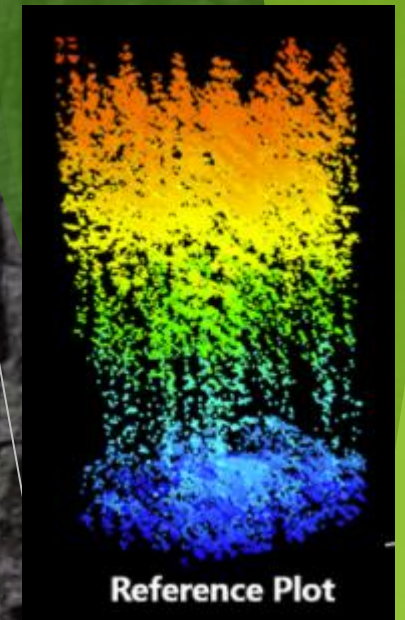
# LIDAR Acquisition 2017

- 500,000 ha captured 2017
- Largest program to date
- Provides good cost savings
- Delays in providing final data



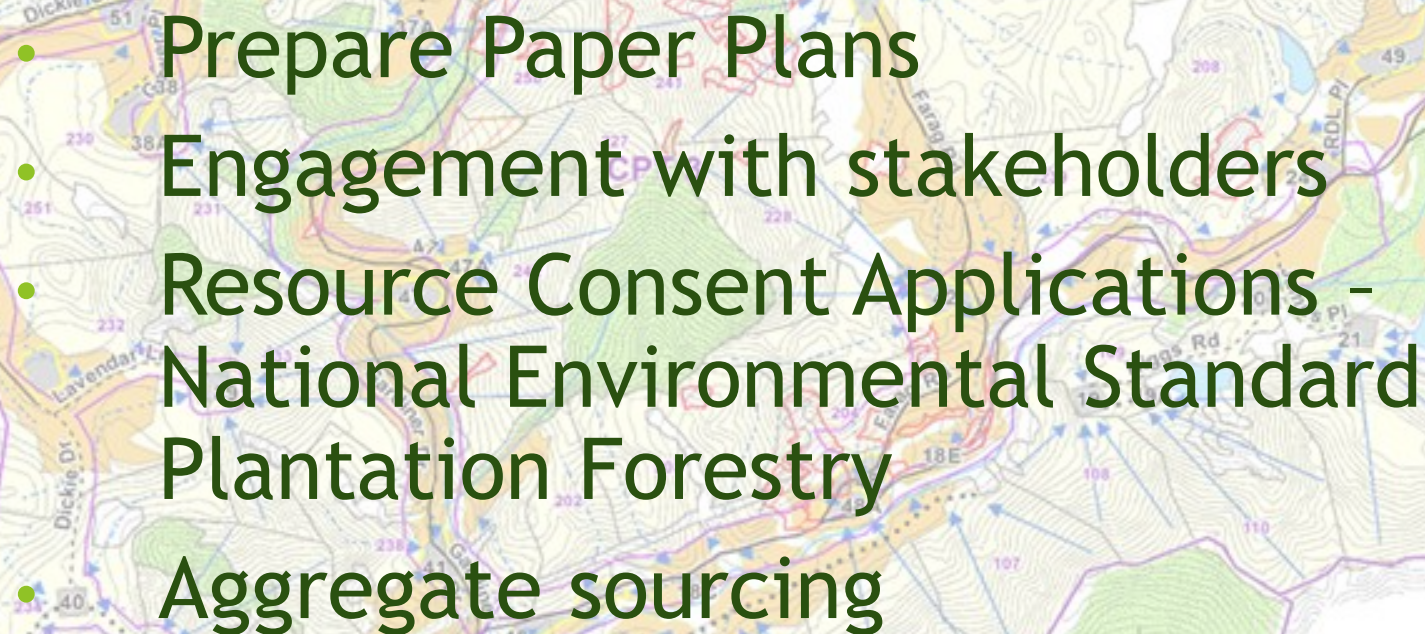
# Pre Harvest Inventory

- Plot Imputation Carried out – KNN
- Less Field plots established
- Relate physical field plots to grid
- Data used to generate yield table predicting recoverable volume and anticipated grade outturn
- Identify markets and potential grades to cut





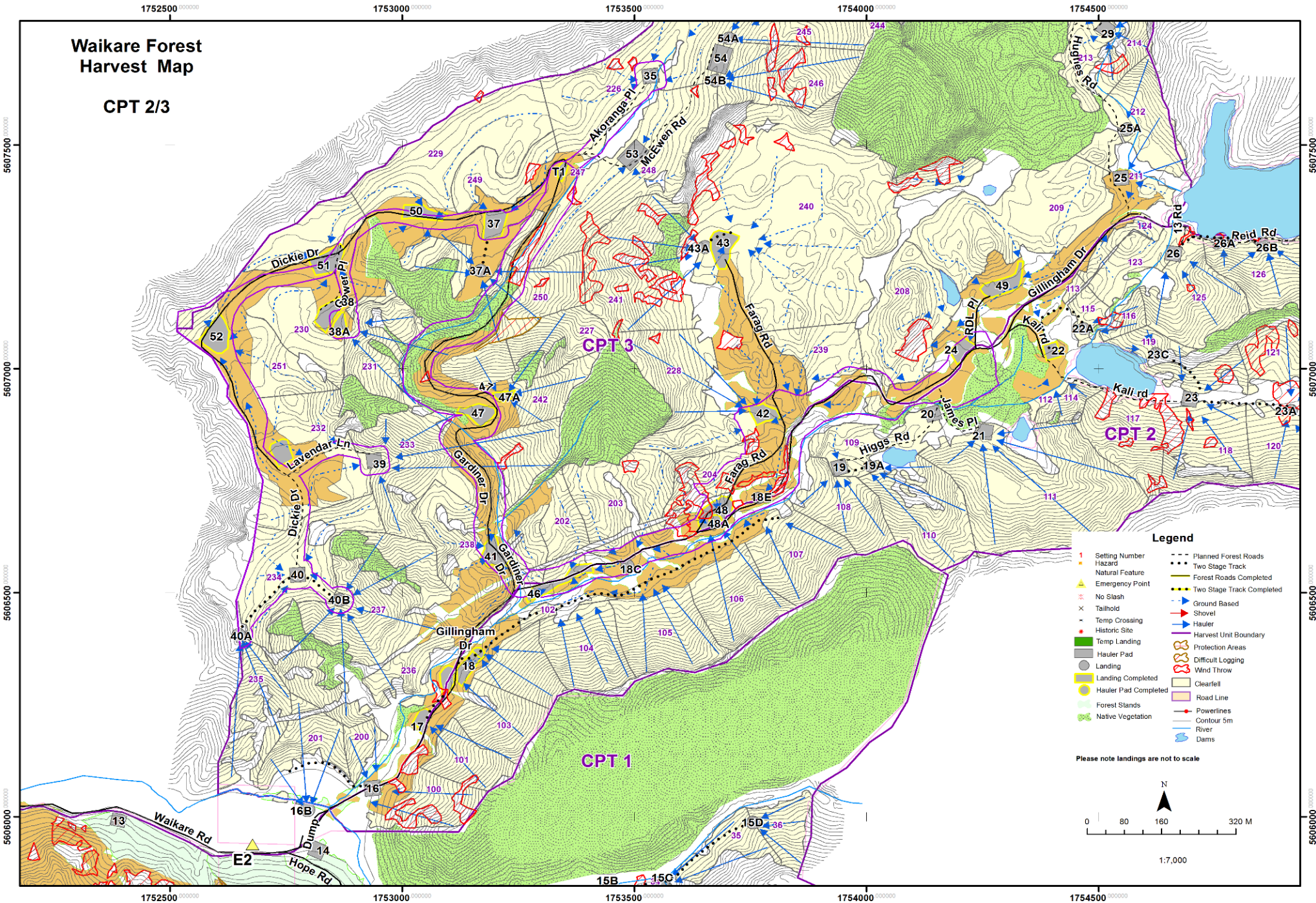
# Harvest Planning

- 
- Prepare Paper Plans
  - Engagement with stakeholders
  - Resource Consent Applications - National Environmental Standard Plantation Forestry
  - Aggregate sourcing



# Waikare Forest Harvest Map

CPT 2/3





# Contractor Management Strategic Planning

- Contractor procurement options
- Export and Domestic markets, wood flow and infrastructure, environmental issues, shared access, neighbours, and shareholder returns.



# Road Lining / Road Construction

- Carried out 18-24 months in advance of the clearfell operation to allow 12 mthswork
- Arterial roads will be metalled
- Average road density is 32 metres per hectare with engineering cost usually between \$5-9 per tonne.



# Harvest

- One good crew will harvest 60-70,000 tonne per annum
- Engage the right crew for the right site, continuity of work will command the best crews and best result
- In hard times control costs and reduce volumes.
- Bush dockets, log sales and reports



# Expected Expenses

## What needs to be funded??

### Funded by Shareholders

- Pre Harvest Inventory
- Harvest Planning
- Resource Consents

### Funded by log sales

- Infrastructure
- Road lining
- Logging
- Cartage
- Levies and Weighbridge Fees
- Management
- Re-Establishment



# Forest Re-establishment

- Re-planting will take place the following winter as harvesting proceeds.
- Re-planting can be a mandatory requirement
- Leaving land fallow is not an option and can lead to increased costs and reduce land value.



# In Summary

- We cannot control the markets only the expenses
- Harvesting should not be turned off and on as markets fluctuate.
- Smoothing of the volume is vital
- You will enjoy the benefit of the RDL scale
- The FMNZ team looks forward to the challenge ahead