



**Eastland
Wood Council**

Te Kaunihera Pororākau o Te Tairāwhiti



Eastland Wood Council

- EWC members represent more than 130,000 hectares of production forestry (not to be confused with permanent carbon forestry).
- EWC members reflect the supply-chain and include; forestry companies, forestry managers, contractors, trucking organisations, Eastland Port, ISO (stevedoring), timber mills and export.
- EWC members represent approximately 80% of production forestry in Te Tairāwhiti. The other 20% of production forestry is made up of a range of different forestry blocks owned and managed independently (some are farmers)
- Planted forestry makes up just 20% of total area in Te Tairāwhiti. EWC does not employ forestry workers, nor do we own or manage forestry blocks.
- Forestry industry harvest volumes (wood availability forecast) are predicted to exceed four million tonnes in the next 2 - 5 years and our members have been planning the significant labour growth required to meet this increased harvest.





Glasgow Station (Pakarae) below.



Above is Bill Pethybridge of Teesdale Station.



Mangahauini Gorge

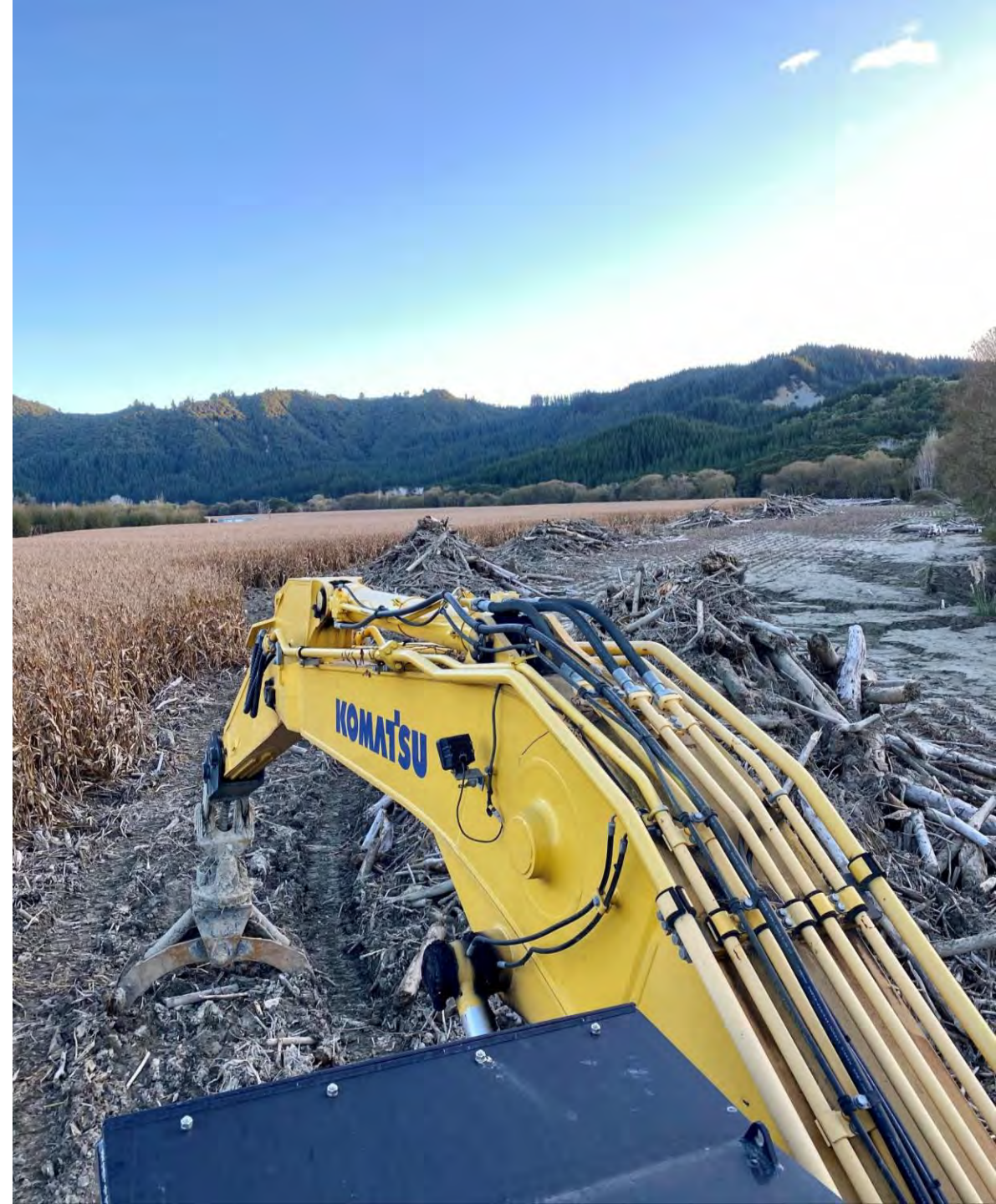


Inland from Ruatoria



Rob McKenzie standing in front of debris and what remains of his bridge on Hikuwai Road

Katikati cropping block, Pourau Incorporation following Cyclone Gabrielle and with the clean up in progress (Hikawai).





Ministerial Inquiry into Land Use



- EWC welcomed this inquiry, and were one of the first to call for it.
- The severity of this year's storms mean we do need to look at how we use our land, and what we need to change.
- We are awaiting the report to be released, and as an industry, have already started making changes to how we operate.

We are now focused on future solutions – and wood waste has a role to play.

- MPI commissioned the publicly available report... **“NZ Wood Fibre Futures Project Stage Two”**
- Wood waste technologies investigated includes:
 - Solid wood fuel (pellet, chips)
 - Liquid biofuels (gasification FT)
 - Biocrude oil (fast pyrolysis)
- In terms of investment returns for the technologies investigated, wood pellets looked the most attractive across all scales.

Table 3-1: Business cases overview

Priority product	Scale	Product output (thousand m ³ or tonnes/a)	Primary markets	Investment (NZD million)	Payback (years)	IRR (standalone) %
Sawmill	Small	126 (m ³ /a)	New Zealand and overseas	142	25	0.7
	Medium	253 (m ³ /a)		211	13	6.5
	Large	421 (m ³ /a)		285	8	10.6
Chip mill ¹	Small	115 (t/a)	New Zealand	18	>25	negative return
	Medium	230 (t/a)		20	>25	negative return
	Large	455 (t/a)		22	25	negative return
Pellet mill ²	Small	70 (t/a)	New Zealand and overseas	44	10	10.5
	Medium	140 (t/a)		63	9	12.3
	Large	280 (t/a)		100	9	11.7
Fast pyrolysis ³	Small	19 (t/a)	New Zealand	36	23	2.1
	Medium	38 (t/a)		57	14	8.0
	Large	76 (t/a)		92	11	12.5
Gasification FT ⁴	Small	31 (t/a)	New Zealand	323	>25	negative return
	Medium	57 (t/a)		742	>25	negative return
	Large	103 (t/a)		1 165	>25	negative return

Source: Indufor. Note 1): Output in tonnes/a @ MC 45% w/w. 2) Output in tonnes/a @ MC 10% w/w. 3) Output in tonnes biocrude. 4) Output in tonnes liquid biofuel.

Types of solid wood fuels

Pellets Factsheet

	Wood chips	White pellets	Torrefied pellets	SE pellets	Charcoal	Coal
Moisture content (wt%)	30-55	7-10	1-5	4-6	1-5	10-15
Calorific value (LHV, MJ/kg)	7-12	15-17	18-22	19-20	30-32	23-28
Volatile matter (wt%, db)	75-84	75-84	55-80	70-80	10-12	15-30
Fixed carbon (wt%, db)	16-25	16-25	22-35	23-30	85-87	50-55
Bulk density (kg/l)	0.20-0.30	0.55-0.65	0.65-0.80	0.75-0.80	0.18-0.24	0.80-0.85
Vol. energy density (GJ/m ³)	1.4-3.6	8-11	12-19	12-15	5.4-7.7	18.24
Hygroscopic properties	Hydrophilic	Hydrophilic	Moderately Hydrophobic	Hydrophobic	Hydrophobic	Hydrophobic
Biological degradation	Fast	Moderate	Slow	None	None	None
Product consistency	Limited	High	High	High	High	High
Transport cost	High	Medium	Low	Low	Medium	Low

Table 1: Key characteristics of fuels for power generation

Source: NSW DPI, Biomass for Bioenergy Project 2018-2022, www.dpi.nsw.gov.au/ccrs

Wood pellet opportunities

- A wood pellet processing facility is an option which may form part of the solution to utilising slash and woody debris.
- Genesis Energy and Fonterra have signed a Biomass Collaboration Agreement to work together on exploring the viability of biomass as a substitute for coal.
- However there are some limitations including the amount of material that may be required, issues with transportation to market, and the cost to set this up, so there would need to be collaboration across the sector.
- We are committed to thinking outside the box and finding solutions to the woody debris issues across the industry. We support local solutions to this local problem, and we are stepping up as a sector to make sure we are part of the solution.
- But, we can't do this alone and we need the people in this room to come on board and help us.





**Money doesn't grow
on trees but it does
grow in forestry.**

Trees are a renewable
resource and a
tangible investment
that benefits our
regional economy.



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