Harvest Prescription

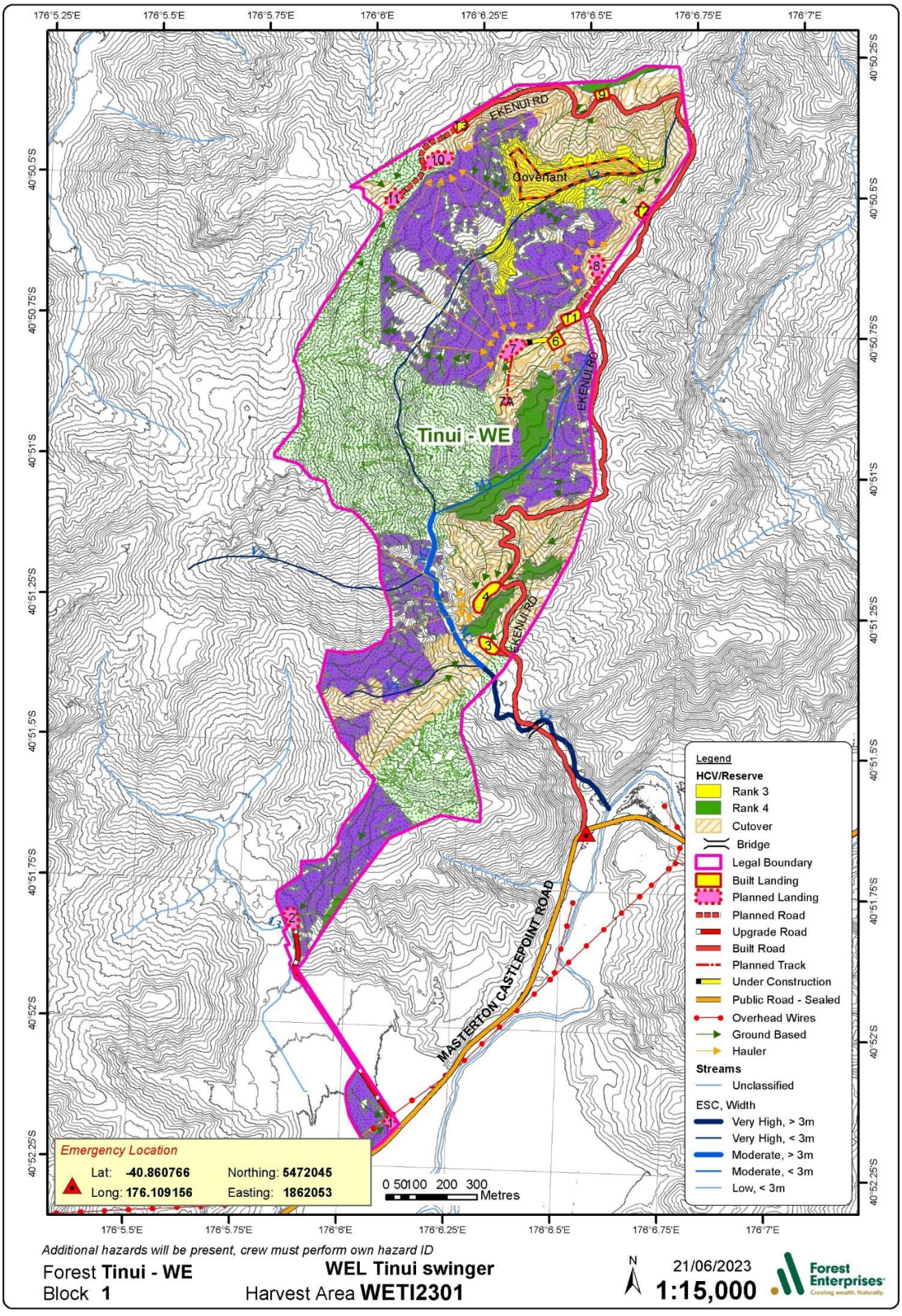
WETI 2301

Site Specific Safety plan

Forest	**Tinui - WE**	Type	**Clearfell**	Latitude	**-40.860766**
Block	**1**	Main Species	**P.RAD**	Longitude	**176.109156**
Harvest Area	**WETI2301**	Other Species		Location	**Ekenui Rd Forest Gate**
				Total Area	**56.4** Ha
Compartments	**5,6,2,7,9,1,8**	Harvest Date	**2024/02**	Initial NSA	**56.4** Ha
		D.Council	**Masterton**	Area Cut	**0.0** Ha
		Region	**Wellington**	Area Standing	**56.4** Ha
				MTH	**40** m
FE Growth.	_____	Contractor	_____		
Signature	_____	Signature	_____	**WORKSAFE**	**0800 040 030**

Details

Crop	P.Radiata				
Piece size	2.07 t				
System	Mechanised-Swing Yarder				
Machinery & Equipment to be used					
Time frame	Approximate length of time is **24 weeks** to completion the date being **29/01/2024**				
Crew Foreman	Justin Carswell	**Crew Safety Representative**	Justin Carswell		
Number of personnel					
Qualified First Aiders on site	**Name**	**Name**			
Hours of work	Work will occur between the hours of **6:30am** to **4:30pm**				
Sub-Contractors	Sub-Contractor Yes No	Do they have their own Health & Safety System? Yes No			
Frequency of Toolbox meetings	Daily	**Frequency of H&S Meetings**	Monthly		
Incident register	Incidents are reported for the safety meetings and discussed				
Notifiable Events reporting	**Who will investigate & report** Justin Carswell	**Notifiable events to be reported immediately**	**Notify Worksafe & FEG** Justin Carswell		
FEG Safety Reporting Agreed	**Near Miss** –Incident report form within 7 days	**First Aid, MTI**. - Reported verbally within 24 hours.	**LTI -** Reported verbally within 4 hours.		
Steep Slope Stability Plan	**Steep Safety plan required** Yes No	**Operator holds relevant unit standards** Yes No	**Plan completed on attached map and agreed.** Yes No		
Breaker-out plan	**Breaker out plan required** Yes No	**Head Breaker out holds Unit 1258** Yes No	**B/O plan Completed on attached map** Yes No		
Falling Plan	**Falling Plan Required** Yes No	**Tree Faller Qualified** Yes No	**Falling plan completed on attached map** Yes No		
Landing plan	**Slash disposal site agreed and marked on map** Yes No	**Truck turnaround and carpark agreed and marked on map** Yes No	**Safe Area agreed and marked on map** Yes No		



Additional hazards will be present, crew must perform own hazard ID

Forest **Tinui - WE** **WEL Tinui swinger**

Block **1** Harvest Area **WETI2301**

N 21/06/2023 **1:15,000** Forest Enterprises Creating wealth. Naturally.

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Stand Information

Forest	Cpt	Stand	Prune Height	SPH	MTH	Start Area	Area Cut	Area Remaining	Piece Size(t)	t/ha
WETI	**4**	**1**		331	?	7.1	0.0	7.1	2.00	663
WETI	**5**	**1**		283	?	5.8	0.0	5.8	2.24	634
WETI	**6**	**1**		331	?	4.3	0.0	4.3	2.00	663
WETI	**7**	**1**		308	?	8.3	0.0	8.3	2.41	741
WETI	**8**	**1**		364	?	11.0	0.0	11.0	1.97	718
WETI	**9**	**1**		364	?	15.4	0.0	15.4	1.97	718
WETI	**9**	**2**			?	0.0	0.0	0.0	?	831
WETI	**10**	**1**		364	?	2.5	0.0	2.5	1.97	718
WETI	**11**	**1**			?	2.0	0.0	2.0	?	534
Total						**56.4**	**0.0**	**56.4**		

Environment

Hazards	Method To Control
Power Lines	Power lines present in the stand require notification 20 days before commencement of operation. A dispensation to work around power lines will be required. **Contact PowerCo 0800 111 848** or in **Emergency 0800 27 27 27** **Are power lines present in this Harvest Area?** Yes **Powerlines are in setting 1**
Telecom lines	Telephone lines (overhead or buried); may be present in the Harvest Area. Location and identification of lines are required 10 days before operation commences. Contact **Spark 0800 800 123** **Are telecom lines (buried or overhead) present in this Harvest Area?** Along Castle Point Road
Fire dam and water points	**Fire dams / water points are not present within Harvest Area** (see map) - ensure all trees are directionally felled or back pulled from this area. Any trees entering dams or water points are required to be removed immediately.
Over boundary planting	No over boundary planting – however if tree ownership in doubt or boundary marking required, please notify FEG.
Fences	Real care must be taken when operating within 1.5 times tree height of fences. If there is any likelihood of damage to fences notify FEG before this occurs. As a rule, directionally fell or back pull all trees away from fences. If damage occurs to any fence notify FEG immediately.
RTE Species	If any Rare Threatened or Endangered species are seen in or near the Harvest area inform FEG by submitting a Survey123 form or completing and submitting a sighting form. If operations could disturb the RTE species stop immediately and inform FEG. **RTE Species have been sighted near the Harvest Area:** **Pakowhai (NZ Native Falcon)**
Slash Disposal	Slash volume it to be minimised by cutting and loading out all log grades on the cut card including pulp grades to minimise the volume of slash. Slash to be placed both to reduce the area lost for replanting and to reduce the risk and effects of "bird nest" failure. Any slash over the side of landing must sit on a bench or stable ground. Specific slash requirements will be marked on the skid site maps, agreed by FEG and contractor at the time of induction.
Forest neighbour	The forest neighbour **(Paul Schofield)** has shared access to the Ekinui Rd as this is through their property. **Ekinui Farm- Paul Schofield, 063726979, 0272225071** **Tinui Forest Park- Harriet Palmer, 02102532529**

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<table>
<tr><td>High Conservation Value and Reserve Areas</td><td>There are Rank 3 & 4 reserves identified on the prescription maps. No roads, tracks or landings will be constructed in reserves, unless there is a net environmental benefit from doing so.
Damage to reserves should be minimised however the table below lays out what is allowable.
<table>
<tr><td>Rank 1</td><td>• No major disturbance from operations
• Must not be pulled through for hauler operations
• No new roads or tracking by machinery
• Only minor edge damage accepted where trees cannot be safely felled away, or backline is adjacent</td></tr>
<tr><td>Rank 2</td><td>• May have minor disturbance from operations
• Can be pulled through by hauler operations but limited to minimum extraction lines
• Minor tracking allowed by machinery – minimal disturbance only</td></tr>
<tr><td>Rank 3</td><td>• May have disturbance from operations
• Can be pulled through for hauler operations but at a level where native vegetation
• can regenerate
• Can have minor tracking by machinery or roads constructed through where essential</td></tr>
<tr><td>Rank 4</td><td>• May be disturbed
• If does not meet forest accord and is unviable to practically protect can be destroyed
• May be cleared and planted as production forest</td></tr>
</table></td></tr>
<tr><td>Native Vegetation</td><td>When harvesting occurs within or across a riparian zone, all disturbed vegetation, soil, or debris must be deposited to avoid it entering into water, and to avoid
a. diversion or damming of any water body or coastal water
b. degradation of any aquatic habitat or riparian zone
c. damage to downstream infrastructure or property
Where the harvest plan requires pulling through native vegetation, as much as practical haul lines are to be minimised and log suspension is to be maximised to reduce damage.
If not part of an identified reserve area, Kanuka, Manuka and Tauhinu of any size may be disturbed, removed, damaged or destroyed provided the area is no greater than 1ha
If any unmarked areas of native vegetation that may justify protection are discovered during the operation – contact FEG.</td></tr>
<tr><td>Resource Consent</td><td>Resource consent WAR230127 has been granted for the Harvest Area and covers “Works associated with plantation forestry activities of 190ha of forest, including disturbance of land and discharge of sediment laden storm water to land or water from earthworks, stream works and harvesting “, all consent conditions must be strictly adhered to for this work. All other harvesting activity outside of the consent scope must be undertaken under the NES-PF permitted activity rules. If activity outside the resource consent conditions or NES-PF permitted activity rules is required notify FEG, further resource consent will be required prior to activity.
Confirm Copy of Consent onsite – Y
Confirm Copy of Harvest Management Plan Provided to Contractor - Y</td></tr>
<tr><td>Heritage New Zealand (Pouhere Taonga)
(04) 472-4341</td><td>No heritage issues are known in the Harvest Area – however if items of archaeological interest are discovered in the process of the harvesting operations or a suspected historical site identified or disturbed, then operations in the specific area must be suspended immediately and the area taped off. Notify FEG.</td></tr>
</table>

Streams

Stream Setbacks

Waterways are classified by two factors, Width and Erosion Susceptibility Classification (ESC). Classified streams are marked on the prescription maps and the following machinery setbacks from the waterway bank must be adhered to.

All trees must be directionally felled or back-pulling away from such areas is required unless unsafe to do so.

Stream Classification	Erosion Susceptibility	Width (m)	Machinery Exclusion Setback
V3	Very High	>10	10m
V2	Very High	>3	10m
V1	Very High	<3	5m
H3	High	>10	10m
H2	High	>3	10m
H1	High	<3	5m
M3	Moderate	>10	10m
M2	Moderate	>3	10m
M1	Moderate	<3	5m
L3	Low	>10	10m
L2	Low	>3	10m
L1	Low	<3	5m

If doubt arises regarding operational management in the vicinity of or impacting on watercourses – contact FEG.

Where agreed with FEG harvesting machinery may be operated in the setbacks only if

a. any disturbance to the water body from the machinery is minimised; and
b. the harvest machinery is being operated:
    i. at water body crossing points
    ii. where slash removal is necessary; or
    iii. where essential for directional felling in a chosen direction or extraction of trees

Slash in Streams

A slash management plan for the Harvest Area has been included. All slash must be removed from classified waterways not included in the plan. Slash must be removed from the area that would flood in a one in 20-year flood.

Extraction Across Streams

When extracting stems across a classified stream as much as practical haul lines are to be minimised and log suspension is to be maximised. At worst full butt suspension must be achieved.

The primary purpose of these restrictions and conditions are to minimise the risk of flooding, soil erosion, and sediment entering and impacting water. If you are uncertain of anything in this regard, contact FEG. This is IMPORTANT. Contact FEG to confirm prior to any work in streams.

Watercourse crossings

Where it is required by the harvest plan to extract stems across a classified watercourse and a crossing is required:

- Minimise the volume of soil entering the watercourse by using logs; and
- Excavation of the banks or bed of a river must not exceed 200 m2; and
- When logs are used a >300mm culvert must be place in the riverbed first; and
- Construct straight approaches so logs don't sweep off the crossing when turned
- Consider armouring the approaches to the crossing with corduroy or slash to prevent rutting

and the crossing must not:

- Alter the natural alignment or gradient of the river; or
- Dam or divert water; or
- Induce erosion of the bed, or erosion or instability of the banks of the water body.

Crossing should be removed within 1 week of the completion of use and if practical cut-outs must be installed within 10 m of the river crossing to diverted water away from the crossing point.

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<table>
<tr><td>Wetlands</td><td>Wetlands that are significant in terms of their biodiversity or species they contain, should be protected from any direct impact of the harvesting operation. All trees to be back pulled from wetlands unless unsafe to do so. The following machinery setbacks from the waterway bank must be adhered to. If any wetland areas are found that are not identified on the harvesting plan map, then contact FEG.

<table>
<tr><td>Wetland Classification</td><td>Machinery Exclusion Setback</td></tr>
<tr><td>Wetland larger than 0.25 ha</td><td>5m</td></tr>
<tr><td>Lake larger than 0.25ha</td><td>10m</td></tr>
<tr><td>Costal Marine Area</td><td>30m</td></tr>
</table></td></tr>
<tr><td>Erosion Susceptibility Classification (ESC) Zones</td><td>The harvest area has areas of Medium (yellow), and Very-High (red) erosion susceptibility classification zones. These zones have specific earthworks restrictions.
Specific Resource consent is required if the following thresholds are exceeded:
Earthworks in an orange zone with a land slope of 25 degrees or more and, in any 3-month period, comprise—
(i) side cutting to a height of 2 m to 3 m over a continuous length of 100 m; and
(ii) the deposition of 500 m3 of spoil or fill; or
Earthworks in a red zone and, in any 3-month period, comprise—
(i) side cutting to a heigh of 2 m deep over a continuous length of 50 m; and
(ii) the deposition of 100 m3 of spoil or fill.
Planned roads, landings, and ground-based areas in orange zones with land slope over 25 and red zones should have specific resource consent. Deviating from the plan over the thresholds will require consented e.g. tracking in a hauler setting</td></tr>
<tr><td>Tracking</td><td>Use existing tracks where possible. Minimise track density and disturbance as far as practical, tracks should be greater than 60m apart. Use slash to stabilise soft parts of tracks.
Tracking is subject to a complex set of rules and may not be permitted in areas not marked as ground-based on the harvest plan. Consult FEG before tracking in areas not marked as ground base on the harvest plan.
As part of all earthworks, construct water cut-outs to prevent run-off concentration and sediment flow on all tracks. Stabilise side-cut tracks with slash where possible.
Cut-outs must be installed on all tracks at the maximum spacings shown below as well as to discharge water away from sensitive areas such as crossing points and earthflows.
Maximum Cutout Spacing
<table>
<tr><td>Track Grade/Gradient</td><td>Erosion prone land (most of the Wairarapa and East Coast)</td><td>Non-erosion prone land (rocky stable country)</td></tr>
<tr><td>5% / 1:20</td><td>50m</td><td>75m</td></tr>
<tr><td>10% / 1:10</td><td>25m</td><td>35m</td></tr>
<tr><td>20% / 1:5</td><td>10m</td><td>15m</td></tr>
</table></td></tr>
<tr><td>Post-operational work</td><td>• Make sure cut-outs are installed and functional in all tracks. Exposed soil on tracks to be stabilised by covering in slash where practicable.
• Ensure all slash is in a stable location
• Remove all rubbish machinery and equipment (including drums, wire ropes, etc).
• Cleaned up all remaining fuel and oil spills
• Stacked Abandoned stock for future loadout
• Fill in holes from log stack stakes and other pits or trenches created
• Notify FEG of any remaining hazards</td></tr>
</table>

Safety

Hazards	Method To Control
RT Channel	While driving in **WEL-Tinui Forest**, use radio channel **FE 15** to call positioning.

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School bus route	Ensure extra care is taken by all drivers when using roads around the times of 7am – 9am and 3pm – 5pm
Public roads	Care taken when exiting onto public road **(Castle Point Rd)**. Trucks must cross directly over Castle Point Rd into the metal stockpile as the road camber is to severe to turn right straight onto the road, trucks could tip over.
Bluffs	There is a bluff in the native below skid 4, trees are planted up to the edge of the bluff.
Public Access	There is no public access to the forest, however the forest neighbour **(Paul Schofield)** has shared access to the Ekinui Rd as this is through their property.
DOC Covenant	There is a DOC covenant in the native between T3 and 9 (marked on the maps) this area cannot be disturbed in any way. **Do not fell trees into the area or allow debris to enter the area. Ropes cannot be strung across this area**
TTMP	Temporary traffic management plan will be required for any tree felling within two tree lengths of Castle Point Road (Setting 1). A TTMP will be developed by FEG. The road must be closed when falling within two tree lengths of it.
BO and felling policies	At all times follow **Horne Logging's** Breaker out and tree felling procedures. Procedures and policies always on site to be discussed daily.
Windthrow, old crop trees and hung-up branches	If identified on site, follow ACoP for Safety and Health in Forest Operations, as well as **Horne Logging's** Health and Safety and felling procedures.
WORKSAFE NOTIFICATION	It is the contractor's responsibility to Notify Worksafe of all Particular Hazardous Work (this includes logging). **Notify Online or on 0800 040 030**

Work Specifications

Operation	**Description**
	Note: All radiata trees and spars over 5m in height are to be felled Native vegetation under plantation canopy excluding "*riparian vegetation*" to be felled. Any other native vegetation, confirm with FE before felling.
DOC Covenant	There is a DOC Covenant over an area of native vegetation in the northern part of the forest. This cannot be disturbed by harvesting, see map for reference.
Engineering	N/A
Clearfell	Settings 1,4,6,7,10,11,12,13 are clearfell areas to be harvested
Maximum number of loads per landing	Landing capacity will be determined and agreed between **Horne Logging** and **FEG** as operations approach them and recorded by **Horne Logging**. If the maximum number of loads for any skid is reached, stop operation immediately, except for loading out.

Setting Information

Setting	Skid	Type	Method	Area (ha)	Area Cut	Area Standing	MTH (m)	SPH	Piece Size (t)	MHD (m)	AHD (m)	t/ha	Total (t) Standing
1	4	Clearfell		4.3	0.0	4.3		331	2.01	395	223	663.4	2,839
4	7A	Clearfell		1.4	0.0	1.4		308	2.41	246	140	742.3	1,032
6	7	Clearfell		19.1	0.0	19.1		?		547	281	727.2	13,889
7	8	Clearfell		6.6	0.0	6.6		364	1.97	306	153	718.6	4,714
10	10	Clearfell		10.2	0.0	10.2		364	1.97	456	210	718.0	7,316
11	3			5.8	0.0	5.8		283	2.24	577	351	634.2	3,697
12	2	Roadline		7.1	0.0	7.1		331	2.00	518	248	663.5	4,691
13	1	Roadline		2.0	0.0	2.0		?		203	100	534.0	1,041
Total				**56.4**	**0.0**	**56.4**							**39,220**

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Specific Slash Management Plan (Refer to Forest Practice Guides for Guidance)

Description	The forest mostly lies in a single catchement that drains through and unnamed tributary of the Tinui River. The unamed tributary runs through settings 4,7,8,10 and is ephemenral as well as the watercoarses that feed into it which all dry up during summer
Expected Volume of Slash	Approximately **5,883 tonnes** of slash is expected to be generated from the harvesting (15% TRV)
Water body risk assessment	Downstream of the forest is a container culver shared by the forest and neighbouring farm. A second container culvert exclusively owned by the farm is located further downstream. The stream then flows into the Tinu River and immediately downstream is the Ekenui Bridge. There are no fish spawning habitats in the area. The stream and Tinui river have unstable banks and naturally flow brown when it rains. They have relatively low ecological value The lower slopes of the catchment are very unstable and there are areas of active slumping into the watercourse. It is likely that slash will be deposited into the water course by land instability post-harvest.
Slash management	All trees are to be directional felled away from waterways unless unsafe to do so. Slash to be left in a stable position (natural bench or engineered slash bench) or pulled back onto the skid surface. Some areas of the tributary can be accessed by machinery and slash can be mechanical removed from the 5% AEP flood level after harvesting, any areas where there is no machine access must me cleaned as while the lines are over them. All merchantable material (>100mm SED and 3m length) must be removed to prevent blocking and damming in the waterway, smaller slash can be left in place as it poses little risk. Slash that is left for mechanical removal must be removed before any significant rain event
Risk mitigation strategies	With the above strategy the risk of slash leaving the forest has been reduced. However residual slash is likely to enters the watercourse post harvesting so a slash catchers will be installed where the river leaves the forest to prevent slash from leaving the forest

OPERATIONAL GUIDELINES

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The Contractor and their workers shall understand and meet the requirements of all relevant Acts, regulations and Guidelines relating to harvesting including:

- Health and Safety at Work Act 2015
- Approved Code of Practices for Safety and Health in Forest Operations
- NES PF
- Forest Enterprises Environmental Standards and Standard Operating Procedures
- Best Practice Guidelines for Plantation Forestry
- NZ Forest Road Engineering Manual
- Erosion and Sediment Control Guidelines for the Wellington Region
- Specific Resource Consents (attached)
- Roles and Responsibilities of Principals and Contractors (Worksafe)
- NZ FOA codes of practice and guidelines

The Contractor and their relevant crew member(s) shall understand the prescription and the map details.

Where a change to infrastructure location, construction method, or approach is expected to deviate significantly from the construction plan, the Contractor shall get approval from FEG prior to starting the changes. This is important as it may require council notification or a variation to Resource Consent.

All incidents shall be reported to FEG as soon as practicable.

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Skid 4

Skid 6

Skid 7
Skid 8

Harvest Prescription

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Skid 10

Draw a diagram of the skids in the box above. Mark the following features.

Slash Area

Identify an area on the landing where slash will be placed before commencement of operation. Any slash over the side of the landing must sit on a bench or stable area less than 25 degrees. The contractor is responsible for ensuring slash is contained on the landing or on a constructed bench.

During operations light slash should be used on the landing area to minimise the soil disturbance caused by loaders.

Avoid covering any slash with earth, as this may create combustion or collapse from decaying.

Truck turn around-T/A Safe Area-S/A Processing Area, Log stacks. Chain shot area.

The above maps are then to be transferred to a white board or similar information board for crew identification of site design.

Recorded Risks

Risk notes	none	