

Internal Correspondence

Doccm - 2717710

From: Tim Shaw Date: March 2016

Windblown Timber Act. Subject:

Weed monitoring.

Summary

1. Qualitative assessment

2.

Context

- Act Act 3. Cyclone Ita occurred on 17 April 2014. Timber fellectly that storm has been harvested from PCL (under the West Coast Windblown Timber [Conservation Lands] Act 2014) since late October 2014.
- 4. There was an expectation in the passing of the Act that research would be funded to determine the effect of harvest on long term regeneration of conservation forests. It was quickly determined that this question as potentially huge and within the context of the project prohibitively expensive to anxiet in its entirety
- 5. It was decided to concentrate of key elements that could be realistically and meaningfully measured to contribute to understanding the effect of harvest.
- 6. One of the possible and significant effects of timber removal approved through the Windblown Timber Advantage to alter weed ecology. It was important for managers to know any effects timber removal activities have had on the types and quantity of weeds colonising disturbed sites.
- 7. Harvested and non-harvested sites were compared. This document records weed ecology and forest respectation observations undertaken at a selection of harvest sites. These sites include the where the greatest amount of both wind and harvest disturbance occurred.

Weed and forest regeneration observations at Windblown timber harvest sites

Date	16 Feb 2016						
Specified Site	Carew Falls	Carew Falls					
Approved operator	DSJ Contracting	DSJ Contracting					
Date of harvest	From Oct 2014	From Oct 2014					
Observers	Alan Tinnelly / Tim Shaw						
Photo location	S:\Tim S\Timber\OPERATORS	WORKPLANS\DSJ	Carew				
	Falls\Feb 2016						

Summary Six in forest milling sites revisited approximately 12 months following harvest.

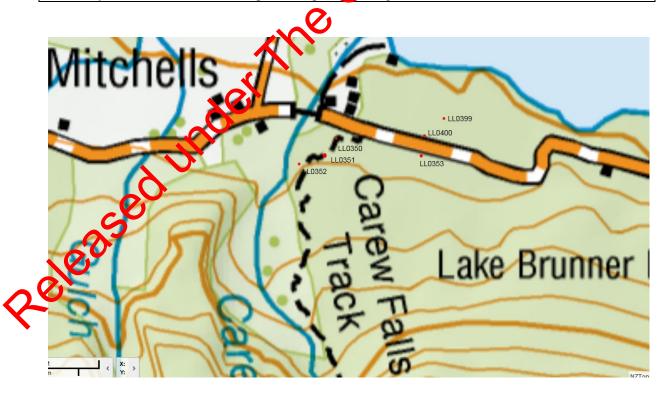
No woody weeds or shade tolerant herbaceous weeds encountered within harvest sites, a sites alongside Carew Falls track had common herbaceous annual weeds, especially nightshade. None of these expected to be a long term problem. All weeds encountered were also present in light wells alongside the track. One woody weed - cotoneaster was found on the track-ide away from harvest sites.

Natural regeneration occurring as an even mix of regrowth from damaged rumps (esp. mahoe, punga and crown fern), epicormic growth on partially snapped / leaning vegetation (pigeon wood, cop aus) and seedlings (fuchsia, pate).

Sawdust drifts may in places be inhibiting seedling colonisation, however the greatest distance between individual plants across sawdust affected sites is the and on average less than 500mm. In these areas seedlings are getting a foot wherever sawdust is thin or on the edge of debris / soil.

Regrowth of fuchsia and pate (up to 2m) prolific especially from edges; Wineberry seedlings prolific and likely to be an important component of regeneration in medium term – at this stage some up to 20cm but most in early 1 to 10cm range.

Immediately surrounding damaged vegetation that was not cleared to allow milling, has relatively much denser and more prolific epic rmic regrowth.



Location	First Matai milled at RHS of Carew Falls track							
Tree tag #		LLog	LLo350					
Waypoint		E 146	58828		N 5278077	N 5278077		
Weeds								
Overall % cove	r	20%						
Species	Abundan	ce	Stage	Species	Abundance	Stage		
Nightshade	Abundan	it	Adult	Willow weed	Rare	Adult		
Thistle	Common	l	Adult	Black berry	One	Seedling		
Dandylion	Common	l	Adult	Scenecio	Common	Adult		
Yorkshire fog	Rare		Adult			^		
Natural regen	eration							
Overall % cove	r	20%						
Species	Abundan	ice	Stage	Species	Abundance	Štagė		
Fuchsia	isia Abundant		Seedling?	Cop rob	Common	Seedling		
Pate	Abundant		Epi Seedling	Cop aus	Common	Seedling		
Wineberry	Common	1	Seedling	Supplejack	Commol	Epicormic		
Mahoe	Common	1	Epicormic		ČO.			

Overall description

In forest milling site. Significant sawdust drifts and in places these may be inhibiting seedling colonisation. Regrowth of fuchsia (up to 1m) prolific especially from edges; maybe from seed but more likely from broken branches. Pate (up to 2m) and significant, again seedling or regrowth of stumps, suckers? Wineberry seedlings in early 1 to 10cm range...but prolific and likely to be important component in medium term. Man length of regrowth = 700mm

likely to be important component in medium term. Mear length of regrowth = 700mm

No woody weeds but surprising amount of herbaceous annual weeds, especially nightshade.

None of these expected to be a long term problem.

Immediately surrounding damaged vegetation that was not cleared to allow milling, has relatively much denser and more prolific proprinc regrowth.

Total coverage of site by vegetation (weedy and non weedy) in region of 40 to 50%, whereas surrounding veg is 100% covered by combination of debris and epicormic regrowth.

No Browse.

Location			ld tree milled a	t RHS of Carev	w Falls track	
Tree tag #		Llog				
Waypoint		E 146	88798		N 5278037	
Weeds						
Overall % cove	\	<5%				
Species 🕜	Abundanc	e	Stage	Species	Abundance	Stage
Nightshade	Common		Adult	Scenecio	Common	Adult
Dandeli n	Dandelin Common					
Natural regen	eration					
Overall % cove	r	20%				
Species	Abundanc	e	Stage	Species	Abundance	Stage
Fuchsia Abundant			Seedling?	Mul aus	Rare	Seedling
Pate Abundant			Epi Seedling	Cop aus	Common	Seedling
Wineberry Common			Seedling	Supplejack	Common	Epicormic
Mahoe	Common		Epicormic			
. 11 1	. •					

Overall description

In forest milling site. Sawdust drifts less than 0350 but in places these may be inhibiting seedling colonisation. Regrowth of fuchsia and pate (up to 1m) prolific especially from edges; Wineberry seedlings in early 1 to 10cm range...but prolific and likely to be important

component in medium term. No woody weeds and few herbaceous annual weeds, especially nightshade. None of these expected to be a long-term problem. Immediately surrounding damaged vegetation that was not cleared to allow milling, has relatively much denser and more prolific epicormic regrowth. Total coverage of site by vegetation (weedy and non weedy) in region of 50%, whereas surrounding veg is 100% covered by combination of debris and epicormic regrowth. No Browse.

Location		Thir	Third tree milled at RHS of Carew Falls track					
Tree tag #		LLog	0352					
Waypoint		E 146	68734		N 5278012			
Weeds								
Overall % cove	er	5% to	10%					
Species	Abundar	ice	Stage	Species	Abundance	Singe		
Nightshade	Abundar	ıt	Adult	Juncus		()		
Thistle	Common	1	Adult	Foxglove				
Dandelion	Common	1	Adult	Poa ann				
Black berry	One		Seedling		١٠٥٠			
Natural regen	eration							
Overall % cove	er	20%			11,			
Species	Abundar	ice	Stage	Species	Abundance	Stage		
Fuchsia	Abundar	ıt	Seedling?	Mul aus	Rare	Seedling		
Wineberry	Common		Seedling	Dic sca	Common	Regrowth		
Mahoe	Common	1	Epicormic	Water forn	Common	Seedling		
Cop aus	Common	1	Seedling	Supplejack	Common	Epicormic		
_ 11 1				— —				

Overall description

In forest milling site. Sawdust drifts in places may be inhibiting seedling colonisation. Wineberry getting a foot wherever saw has thin. Regrowth of fuchsia and pate (up to 1m) prolific especially from edges; Some Whieberry seedlings up to 20cm but most in early 1 to 10cm range... prolific and likely to be important component in medium term. No woody weeds and few herbaceous annual weeds, especially nightshade. None of these expected to be a long-term problem. Immediately surrounding damaged vegetation that was not cleared to allow milling, has relatively much deriver and more prolific epicormic regrowth.

Total coverage of site by vegetation (weedy and non weedy) in region of 40%, whereas surrounding veg is 100% covered by combination of debris and epicormic regrowth.

No Browse.

Location		Tree milled on north side of road immediately across from road sign.						
Tree tag #		LLog	LLo353					
Waypoint		E 146	69042		N 5278033	V 5278033		
Weeds								
Overall % cover	r	20%						
Thistle	Common		Adult					
Scenecio	Common		Adult					
Foxglove	Rare		Adult					
Ragwort	One		Seedling					
York Fog Common			Adult					
Natural regene	eration							
Overall % cover	r	20%						
Species	Abundan	.ce	Stage	Species	Abundance	Ŝtage		
Fuchsia	Abundan	t	Seedling?	Dic squ	Common	Begrowth		
Pate	Abundant		Seedling?	Mahoe	Rare	Epicormic		
Wineberry Common			Seedling	Rice grass	Commol	Regrowth		
Cop aus	Common		Seedling	Pigeon wood	Common	Regrowth		
Marble leaf	Rare		Seedling	Supplejack	Common	Epicormic		

Overall description

In forest milling site. Sawdust drifts in places may be inhibiting seedling colonisation. Wineberry getting a foot wherever sawdust thin. Regrowth of fuchsia and pate (up to 1m) prolific especially from edges; Wineberry seedlings profile, some up to 20cm but most in early 1 to 10cm range.

No woody weeds. A few herbaceous annual weeds, especially nightshade. None of these expected to be a long term problem.

Immediately surrounding damaged vegetation that was not cleared to allow milling, has relatively much denser and more prolific propring regrowth.

Total coverage of site by vegetation (weedy and non weedy) in region of 50%, whereas surrounding veg is 90% covered by combination of debris and epicormic regrowth.

Small amount of browse.

Location	cation First tree milled on south side of road down small beside road sign.						
Tree tag #	. 0	LL0400					
Waypoint	λ	E 146	39051		N 5278084		
Weeds							
Overall % cover	r	<1%	<1%				
Thistle	2		Adult	Ragwort	1	Seedling	
Dandelon	2		Adult				
70							
Natural regen	eration						
Overall % cover							
Species	Abundan	ice	Stage	Species	Abundance	Stage	
Dic squ	Abundant		Regrowth	Kamahi	Common	Epicormic	

Overall description

Common

Mahoe

In forest milling site. Sawdust drifts. Regrowth of punga occupying over 40% of site. No woody weeds and very few herbaceous annual weeds. Total coverage of site by vegetation (weedy and non-weedy) in region of 50%, very little surrounding veg was damaged. No browse.

Epicormic

Wineberry

Common

Seedling

Location			ond tree mille ediately beside		ide of road do	own small track	
Tree tag #		LLog	•				
Waypoint		E 146	69101		N 5278127		
Weeds		•					
Overall % cov	er	<1%					
Thistle	Rare		Adult				
Dandelion	Rare		Adult				
Foxglove	Rare		Adult				
Natural rege	neration					^ \	
Overall % cov	er	20%					
Species	Abundar	ice	Stage	Species	Abundance	Stage	
Wineberry	Common	1	Seedling	Rice grass	Common	Regrowth	
Crown fern	Abundar	nt	Regrowth	Supplejack	Common	E picormic	
Asp bul	Common	1	Regrowth	Mul aus	Rare	Seedling	
Cop aus	Common	1	Seedling				
Mahoe	Common	1	Epicormic		(())		

Overall description

In forest milling site. Sawdust drifts. Regrowth of crown fern occupying over 40% of site.

No woody weeds and very few herbaceous annual weeds.

Total coverage of site by vegetation (weedy and non week) in region of 50%. Surrounding damaged veg has relatively higher growth and mostly picormic.

Alot of small freshly germinated gris lit etc seedlings of sawdust. . Released under the

Small amount of browse.

Weed and forest regeneration observations at Windblown timber harvest sites

Date	16 Feb 2016			
Specified Site	Bell Hill			X
Approved operator	NZSFP			C
Date of harvest	From Oct 2014	4		
Observers	Alan Tinnelly	/ Tim Shaw	^ \	
Photo location	S:\Tim S\T	Cimber\OPERATORS	WORKPLANS\DSJ Carew	
	Falls\Feb 2016	3		
Summary				

WBT Weed Obs	servations
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Harvest Site	
Date of Observations	
Observer	
Links	

	0
Site Description: Forest type, weeds present, distance from edge etc	
	XO .

Survey	Point				Weeds present				
Tag WPT					vest	()	Species	Abundance	Age / height
	Name	Е	N	Yes	No	Description			
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Survey Point							Weeds present	Weeds present		
Tag	WPT		Harvest			Species	Abundance	Age / height		
	Name	Е	N	Yes	No	Description		Y		
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