

Waverley Sawmills Limited
Monitoring Programme
Annual Report
2012-2013

Technical Report 2013-41

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Executive summary

Waverley Sawmills Limited operates a wood waste disposal site located on Monk Road at Waverley, in the Whenuakura catchment, and a wood waste disposal site located on Village Settlement Road at Waverley, in the Moumahaki catchment. The Monk Road site is consented to receive untreated wood waste only, and the Village Settlement Road site is consented to receive treated and untreated wood waste. All the wood waste discharged at both sites originates from the Company's sawmill in Waverley. This report for the period July 2012-June 2013 describes the monitoring programme implemented by the Taranaki Regional Council to assess the Company's environmental performance during the period under review, the results of Council's monitoring activities, and the environmental effects of the Company's activities. This is the sixth compliance monitoring report on Waverley Sawmills Ltd's activities at the Monk Rd and Village Settlement Rd sites.

The Company holds a total of four resource consents, which include a total of 50 conditions setting out the requirements that the Company must satisfy. The Company holds one land use consent for the purpose of installation and maintenance of a culvert, two consents to discharge wood waste onto and into land, and one consent to discharge leachate and stormwater to land and water.

The Council's monitoring programme for the period under review included three inspections, nine water samples, and three soil samples collected for physicochemical analysis.

At the Village Settlement Road discharge site stormwater improvements have reduced the amount of stormwater infiltration and leachate generation. Consent 6528-1 expired on 1 June 2012 and was not renewed until 31 July 2013. During this period the site was unconsented to accept waste was not used until the consent was renewed.

The Monk Road site was well run and there were no major issues in regards to the discharge of woodwaste. Leachate at the Monk Rd site still has potential to cause effects, however its quality seems to be improving slowly over time. The culvert running under the filled area was repaired during the period under review.

During the monitoring period Waverley Sawmills demonstrated a good level of environmental performance and compliance with consent conditions. The culvert at Monk was repaired as requested and the improved stormwater system at the Village Settlement Rd site has reduced contaminated run-off. No complaints were received, or incidents recorded, by Council during the monitoring period.

For reference, in the 2012-2013 year, 35% of consent holders in Taranaki monitored through tailored compliance monitoring programmes achieved a high level of environmental performance and compliance with their consents, while another 59% demonstrated a good level of environmental performance and compliance with their consents.

This report includes recommendations for the 2013-2014 period.

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1. Introduction

1.1 Compliance monitoring programme reports and the Resource Management Act 1991

1.1.1 Introduction

This report is the Annual Report for the period July 2012-June 2013 by the Taranaki Regional Council on the monitoring programme associated with resource consents held by Waverley Sawmills Limited. The Company operates two landfill (monofill – wood waste) sites situated on Monk Road at Waverley, in the Whenuakura catchment (consents 6413-2, 6412-1 and 7342-2), and on Village Settlement Road in the Moumahaki catchment (consent 6528-2).

This report covers the results and findings of the monitoring programme implemented by the Council in respect of the consents held by Waverley Sawmills Limited that relate to discharge of wood waste onto and into land within the Whenuakura catchment and the Moumahaki catchment.

One of the intents of the Resource Management Act (1991) is that environmental management should be integrated across all media, so that a consent holder's use of water, air, and land should be considered from a single comprehensive environmental perspective. Accordingly, the Taranaki Regional Council generally implements integrated environmental monitoring programmes and reports the results of the programmes jointly. This report discusses the environmental effects of the Company's use of water, land, and air, and is the seventh combined monitoring report by the Taranaki Regional Council for the Company.

1.1.2 Structure of this report

Section 1 of this report is a background section. It sets out general information about compliance monitoring under the Resource Management Act and the Council's obligations and general approach to monitoring sites through annual programmes, the resource consents held by Waverley Sawmills Limited in the Whenuakura catchment and the Moumahaki catchment, the nature of the monitoring programme in place for the period under review, and a description of the activities and operations conducted at each of the two wood waste disposal sites.

Section 2 presents the results of monitoring during the period under review undertaken at both sites.

Section 3 discusses and interprets the results in terms of environmental effects.

Section 4 presents a summary of recommendations to be implemented in the 2013-2014 monitoring year.

A glossary of common abbreviations and scientific terms, and a bibliography, are presented at the end of the report.

1.1.3 The Resource Management Act (1991) and monitoring

The Resource Management Act primarily addresses environmental 'effects' which are defined as positive or adverse, temporary or permanent, past, present or future, or cumulative. Effects may arise in relation to:

- (a) the neighbourhood or the wider community around a discharger, and may include cultural and socio-economic effects;
- (b) physical effects on the locality, including landscape, amenity and visual effects;
- (c) ecosystems, including effects on plants, animals, or habitats, whether aquatic or terrestrial;
- (d) natural and physical resources having special significance (eg, recreational, cultural, or aesthetic);
- (e) risks to the neighbourhood or environment.

In drafting and reviewing conditions on discharge permits, and in implementing monitoring programmes, the Taranaki Regional Council is recognising the comprehensive meaning of 'effects' inasmuch as is appropriate for each discharge source. Monitoring programmes are not only based on existing permit conditions, but also on the obligations of the Resource Management Act to assess the effects of the exercise of consents. In accordance with section 35 of the Resource Management Act 1991, the Council undertakes compliance monitoring for consents and rules in regional plans; and maintains an overview of performance of resource users against regional plans and consents.

Compliance monitoring, including impact monitoring, also enables the Council to continuously assess its own performance in resource management as well as that of resource users particularly consent holders. It further enables the Council to continually re-evaluate its approach and that of consent holders to resource management, and, ultimately, through the refinement of methods, to move closer to achieving sustainable development of the region's resources.

1.1.4 Evaluation of environmental performance

Besides discussing the various details of the performance and extent of compliance by the consent holder(s) during the period under review, this report also assigns an overall rating. The categories used by the Council, and their interpretation, are as follows:

- a **high** level of environmental performance and compliance indicates that essentially there were no adverse environmental effects to be concerned about, and no, or inconsequential (such as data supplied after a deadline) non-compliance with conditions.
- a **good** level of environmental performance and compliance indicates that adverse environmental effects of activities during the monitoring period were negligible or minor at most, or, the Council did not record any verified unauthorised incidents involving significant environmental impacts and was not obliged to issue any abatement notices or infringement notices, or, there were perhaps some items noted on inspection notices for attention but these items were not urgent nor critical, and follow-up inspections showed they have been dealt with, and any inconsequential non compliances with conditions were resolved positively, co-operatively, and quickly.

- **improvement desirable (environmental) or improvement desirable (compliance)** (as appropriate) indicates that the Council may have been obliged to record a verified unauthorised incident involving measurable environmental impacts, and/or, there were measurable environmental effects arising from activities and intervention by Council staff was required and there were matters that required urgent intervention, took some time to resolve, or remained unresolved at end of the period under review, and/or, there were on-going issues around meeting resource consent conditions even in the absence of environmental effects. Abatement notices may have been issued.
- **poor performance (environmental) or poor performance (compliance)** indicates generally that the Council was obliged to record a verified unauthorised incident involving significant environmental impacts, or there were material failings to comply with resource consent conditions that required significant intervention by the Council even in the absence of environmental effects. Typically there were grounds for either a prosecution or an infringement notice.

For reference, in the 2012-2013 year, 35% of consent holders in Taranaki monitored through tailored compliance monitoring programmes achieved a high level of environmental performance and compliance with their consents, while another 59% demonstrated a good level of environmental performance and compliance with their consents.

1.2 Process description

In 2005 Waverley Sawmills Limited was in the process of carrying out due diligence with regard to potential purchase of the sawmill. During this process the new owners noted that the sites to which their mill wood waste was being discharged did not have resource consents to cover this activity. While the Company viewed the issue of consenting the disposal site strictly a matter for the disposal contractor they considered it good environmental governance to make it their business, and become involved.

As a result the Company applied for and were granted consent to install a culvert at the Monk Road site and also a consent to discharge untreated wood waste to the site. They were later granted a consent to discharge treated wood waste to a site on Village Settlement Road.

As a result of ongoing leachate generation at the Monk Rd site, Waverley Sawmills Ltd applied for, and were granted a consent to discharge stormwater and leachate to land and water in August 2008 and this consent was renewed in 2010.

Wood waste is generated at the sawmill throughout the timber making process, from de-barking through to gauging. In the course of applying for resource consent to discharge treated wood waste the Company identified ways to reduce the quantity of treated wood waste produced. One of these measures included planing timber products before they are treated with preservative whenever possible. Such alterations to the production process have significantly reduced the quantity of treated wood waste for disposal.

The site at Monk Road is a gully in the upper reaches of a catchment predominated by

dairy farm land. Immediately above the discharge area is a small farm dam. Waverley Sawmills Limited installed a culvert at the site which conducted the discharge from this dam around and downstream of the discharge area, effectively bypassing the discharge area. The aim of this work was to reduce the quantity of water entering the discharge area and coming into contact with the wood waste discharged therein. After this development was done it was discovered that there was a spring under the area filled prior to the purchase of the sawmill and it was promoting leachate generation which was discharging into the unnamed tributary of the Kohi Stream. A consent to permit this leachate discharge was obtained in August 2008 and renewed in October 2010.

The discharge site on Village Settlement Road was chosen because it is elevated and thus dry. The site is small in size compared to the Monk Road site and while it is situated close to an unnamed tributary at the north west end of the site, the surface gradient and contours dictate that surface water from the site flows in a south easterly direction, some distance from any water body.



Figure 1 Waverley Sawmills discharge sites



Figure 2 Waverley Sawmills discharge site at Village Settlement Rd, Waverley



Figure 3 Waverley Sawmills discharge site at Monk Rd, Waverley

1.3 Resource consents

Waverley Sawmills holds four resource consents the details of which are set out in the table below and in sections 1.3.1 to 1.3.3.

Table 1 Resource consents held by Waverley Sawmills Ltd

Consent Number	Purpose	Granted	Review	Expire
6412-1	To install an maintain culvert (Monk Rd)	Mar 2005	June 2016	June 2022
6413-2	To discharge untreated woodwaste (Monk Rd)	May 2012	June 2016 June 2022	June 2028
7342-2	To discharge leachate (Monk Rd)	Oct 2010	June 2014 June 2016	June 2022
6528-2	To discharge treated wood waste	31 July 2012	June 2014 June 2018	June 2022

1.3.1 Discharge to water

Section 15(1)(a) of the Resource Management Act stipulates that no person may discharge any contaminant into water, unless the activity is expressly allowed for by a resource consent or a rule in a regional plan, or by national regulations.

Consent 7342-2

Waverley Sawmills Limited holds discharge permit **7342-2** to cover the discharge of leachate and stormwater from a sawmill-waste disposal site to water and into land where it may enter in an unnamed tributary of the Kohi Stream. This permit was issued by the Taranaki Regional Council on 7 October 2010 under Section 87(e) of the Resource Management Act. It is due to expire on 1 September 2022.

The permit has six special conditions.

Special condition 1 requires that the consent holder adopt best practicable option.

Special conditions 2 and 3 specify certain parameters and effects that shall be not exceeded in the unnamed tributary of the Kohi Stream.

Special conditions 4 and 5 require the consent holder to regularly take samples of the unnamed tributary of the Kohi Stream and undertake chemical analysis.

Special condition 6 is a review condition.

1.3.2 Discharges of wastes to land

Sections 15(1)(b) and (d) of the Resource Management Act stipulate that no person may discharge any contaminant onto land if it may then enter water, or from any industrial or trade premises onto land under any circumstances, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations.

Consent 6413-2

Waverley Sawmills Limited holds discharge permit **6413-2** to cover the discharge of wood waste from sawmilling operations onto and into land. This permit was issued by the Taranaki Regional Council on 31 May 2012 under Section 87(e) of the Resource Management Act. It is due to expire on 1 June 2022.

Special condition 1 relates to the provision of a management plan for the site.

Special condition 2 specifies that only untreated wood waste can be discharged to the site.

Special condition 3 requires that the discharges only be made to a certain area.

Special condition 4 requires that the consent holder shall be the sole source of materials discharged.

Special condition 5 requires that discharged material do not enter water.

Special condition 6 requires the consent holder to adopt the best practicable option when exercising the consent.

Special condition 7 specifies the requirements for capping and reinstatement.

Special condition 8 relates to review of the consent.

The permit is attached to this report in Appendix I.

Consent 6528-2

Waverley Sawmills Limited held discharge permit **6528-2** to cover the discharge of wood waste from sawmilling operations onto and into land. This permit was issued by the Taranaki Regional Council on 31 July 2012 under Section 87(e) of the Resource Management Act. This consent expired on 1 June 2022.

Special condition 1 requires the consent holder to adopt the best practicable option when exercising the consent.

Special condition 2 relates to the provision of a management plan for the site.

Special condition 3 specifies that only treated and untreated wood waste can be discharged to the site.

Special condition 4 specifies the area in which the discharges may occur.

Special condition 5 states that consent holder be the sole supplier of waste to the site and special condition 6 deals with the control of storm water on the site.

Special condition 7, 10 and 11 relate to capping requirements.

Special conditions 8 and 9 set out maximum contamination limits allowed in soil at certain areas of the site.

Special conditions 12 and 13 deal with requirements to notify Council of certain events.

Special condition 14 and 15 set out post closure monitoring requirements, and special condition 16 is a review condition.

1.3.3 Land use permit

Section 13(1)(a) of the Resource Management Act stipulates that no person may in relation to the bed of any lake or river use, erect, reconstruct, place, alter, extend, remove, or demolish any structure or part of any structure in, on, under, or over the bed, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations.

Consent 6412-1

Waverley Sawmills Limited holds land use permit **6412-1** to culvert an unnamed tributary of the Kohi Stream for land improvement purposes associated with cleanfill activity. The Taranaki Regional Council issued this consent on 4 March 2005 as a resource consent under Section 87(e) of the Resource Management Act. It is due to expire on 1 June 2022.

Special condition 1 requires the consent holder to adopt the best practicable option to prevent or minimise the discharge of silt or other contaminants into or onto the streambed and to avoid or minimise the disturbance of the streambed and any adverse effects on water quality.

Special condition 2 states that the exercise of the consent should be undertaken in accordance with documents submitted with the application.

Special condition 3 requires the consent holder to notify the Council 48 hours before and after works occur on site.

Special condition 4 requires that the exercise of the consent shall not cause ponding on upstream properties.

Special condition 5 relates to the lapse of the consent after 5 years if not exercised.

Special condition 6 deals with review of the consent.

A copy of the consent is included in Appendix I of this report.

1.4 Monitoring programme

1.4.1 Introduction

Section 35 of the Resource Management Act sets out an obligation for the Taranaki Regional Council to gather information, monitor, and conduct research on the exercise of resource consents, and the effects arising, within the Taranaki region.

The Taranaki Regional Council may therefore make and record measurements of physical and chemical parameters, take samples for analysis, carry out surveys and inspections, conduct investigations, and seek information from consent holders.

The monitoring programme for the Monk Road and Village Settlement Road sites consisted of three primary components.

1.4.2 Programme liaison and management

There is generally a significant investment of time and resources by the Taranaki Regional Council in ongoing liaison with resource consent holders over consent conditions and their interpretation and application, in discussion over monitoring requirements, preparation for any reviews, renewals, or new consents, advice on the Council's environmental management strategies and the content of regional plans, and consultation on associated matters.

1.4.3 Site inspections

The Monk Road site and the Village Settlement Road were visited three times during the monitoring period. With regard to consent for the disposal of wood waste onto and into land at both sites, the main points of interest were site processes with potential or actual discharges to receiving watercourses, including contaminated stormwater. Air inspections focused on plant processes with associated actual and potential emission sources and characteristics, including potential odour, dust, noxious or offensive emissions. Sources of data being collected by the consent holder were identified and accessed, so that performance in respect of operation, internal monitoring, and supervision could be reviewed by the Council.

1.4.4 Chemical sampling

The Taranaki Regional Council undertook sampling at both discharge sites. These included leachate samples, water quality samples and soil samples.

2. Results

2.1 Inspections

The Monk Rd and Village Settlement Rd sites were inspected on three occasions during the monitoring year. A summary of the notes made during these inspections is given below.

2.1.1 9 August 2012

A site visit was made to conduct a compliance monitoring inspection. It was raining at the time of the inspection with 14 mm falling over the past 72 hours.

A meeting was held at the site office with the director of the Company to discuss the new consents. The requirement to provide management plans was also discussed.

Monk Rd Site:

The discharged wood waste appeared to be clean and mostly free of unacceptable wastes. A large section of the filled area was at the final level and was being prepped for capping. There was a pile of wire on the northern face of the tip and this would have to be removed. A new drain had been dug down the centre of the unfilled area and this was channeling a mixture of clean stormwater and contaminated spring water.

The culvert under Monk Rd was discharging a mixture of contaminated spring water and flow from the upper pond. There was a slight odour to the discharge. Samples were taken from the pond, 20 metres downstream of Monk Rd and at the culvert near the dairy shed.

Village Rd Site:

Stormwater from the capped areas was being intercepted by a small bund running along the cap edge and being diverted around the open cell. The system was working well and containing the runoff from the tipface to within the landfill footprint.

2.1.2 23 January 2013

A site visit was made to conduct a compliance monitoring inspection and take soil samples. It was fine at the time of the inspection with 1.5 mm of rain over the previous 3 days.

Monk Rd Site:

There were several piles of timber off-cuts at the site that appeared to contain treated timber and these will have to be removed to the Village Settlement Rd site. There was also plastic and other material in the piles and this would have to be removed and disposed of properly. A discussion was held with the site operator and it was outlined that directional drilling contractors would be on site in February-March to install a new culvert.

Village Rd Site: Stormwater from the capped areas was being intercepted by a small bund running along the cap edge and being diverted around the open cell. The system was working well and containing the runoff from the tipface to within the landfill footprint.

The site operator said that very little treated wood waste was being produced.

The importance of not leaving the current cell open too long through the wetter months was discussed. Soil samples were taken from the usual sites.

The following action was to be taken

- Remove treated timber and other wastes from the Monk Rd site.
- Provide photos of area after removal.

Photographs of the required works were received on 12 February 2013

2.1.3 24 April 2013

A site visit was made to conduct a compliance monitoring inspection. It was showery at the time of the inspection with 7 mm falling over the past 48 hours.

Monk Rd Site:

The discharged wood waste appeared to be clean and mostly free of unacceptable wastes. A large section of the filled area was at the final level and was being prepared for capping. The new pond pipe had been installed as well as a new inlet structure. Due to the drought, the pond level was well below the inlet structure and no water was flowing. It was discussed onsite how to manage the spring water with the contractor and a ten inch perforated pipe would be used to drain the spring water away. The pond water was to be kept in its own pipe down to Monk Rd.

The culvert under Monk Rd was discharging only contaminated spring water as there was no flow from the pond. There was a slight odour to the discharge. Samples were taken of the pond, 20 m downstream of Monk Rd and at the culvert near the dairy shed.

Village Rd Site:

Stormwater from the capped areas was being intercepted by a small bund running along the cap edge and being diverted around the open cell. The system was working well and containing the runoff from the tipface to within the landfill footprint.

2.2 Results monitoring – Monk Rd

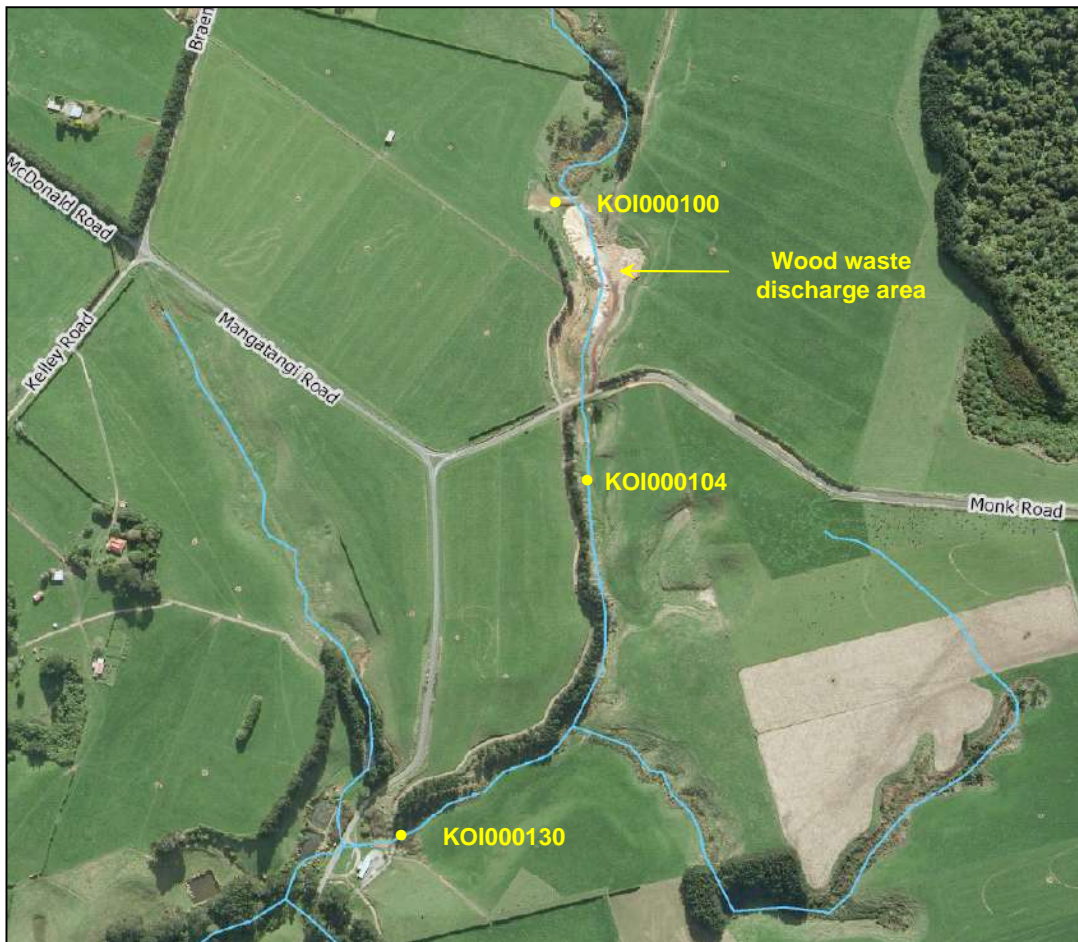


Figure 4 Monk Road sampling sites, Waverley

Council took nine water quality samples across three sites during the period under review. The sites used for sampling are shown in Figure 4 above. Waverley Sawmills also took two water samples as per consent conditions at site KOI000130. The results of the sample analysis are given in the tables below.

Table 2 Water quality analysis of fresh water taken from monitoring sites at Waverley Sawmills Limited's wood waste discharge site at Monk Road 9 August 2012

Parameter	Unit	KOI000100	KOI000104	KOI000130
Alkalinity	g/m ³ CaCO ₃	32	165	88
Dissolved arsenic	g/m ³	<0.001	0.33	0.017 (0.1)
BOD	g/m ³	0.7	>12	1.0 (3.0)
Conductivity	mS/m	16.9	38.2	25.2
Dissolved chromium	g/m ³	0.05	0.16	0.07 (0.1)
Dissolved copper	g/m ³	<0.01	<0.01	<0.01 (0.01)
Unionised ammonia		0.00002	0.00027	0.00035
Ammonium-N	g/m ³ - N	0.007	0.216	0.038
pH	pH	7.1	6.5	7.6
Temperature	Deg C	10.4	17.5	10.3

(bold) = consented limit

Table 3 Water quality analysis of fresh water taken from monitoring sites at Waverley Sawmills Limited's wood waste discharge site at Monk Road 23 January 2013

Parameter	Unit	KOI000100	KOI000104	KOI000130
Alkalinity	g/m ³ CaCO ₃	41	166	97
Dissolved arsenic	g/m ³	<0.001	0.18	0.036 (0.1)
BOD	g/m ³	0.7	1.1	<0.5 (3.0)
Conductivity	mS/m	18.0	38.6	25.4
Dissolved chromium	g/m ³	<0.03	0.03	<0.03 (0.1)
Dissolved copper	g/m ³	<0.001	0.001	<0.001 (0.01)
Unionised ammonia	g/m ³	0.00005	0.00038	0.00092
Ammonium-N	g/m ³ - N	0.003	0.119	0.062
pH	pH	7.5	6.8	7.5
Temperature	Deg C	22.6	20.8	19.9

(bold) = consented limit

Table 4 Water quality analysis of fresh water taken from monitoring sites at Waverley Sawmills Limited's wood waste discharge site at Monk Road 24 April 2013

Parameter	Unit	KOI000100	IND001055	KOI000130
Alkalinity	g/m ³ CaCO ₃	50	182	81
Dissolved arsenic	g/m ³	<0.001	0.010	0.042 (0.1)
BODCF	g/m ³	<0.5	<0.5	<0.5 (3.0)
Conductivity	mS/m	19.5	41.7	23.2
Dissolved chromium	g/m ³	<0.03	<0.03	<0.03 (0.1)
Dissolved copper	g/m ³	<0.001	<0.001	<0.001 (0.01)
Unionised ammonia	g/m ³	0.00003	0.00031	0.00098
Ammonium-N	g/m ³ - N	0.015	0.085	0.113
pH	pH	6.8	7.0	7.4
Temperature	Deg C	15.8	16.2	15.7

(bold) = consented limit

Table 5 Water quality analysis of water taken at site KOI00130 by Waverley Sawmills Ltd

Parameter	Unit	12 Oct 2012	22 Mar 2013	Consent limits
Dissolved arsenic	g/m ³	0.0114	0.0195	0.1
BODCF	g/m ³	<2	<2	3.0
Dissolved chromium	g/m ³	0.0059	0.0032	0.1
Dissolved copper	g/m ³	0.0006	0.0013	0.01

All samples taken during the period under review were compliant with consent conditions. The consent holder was also required to take samples at this site and the results from these samples also indicated that the site is compliant.

2.3 Results of receiving environment monitoring – Village Settlement Rd

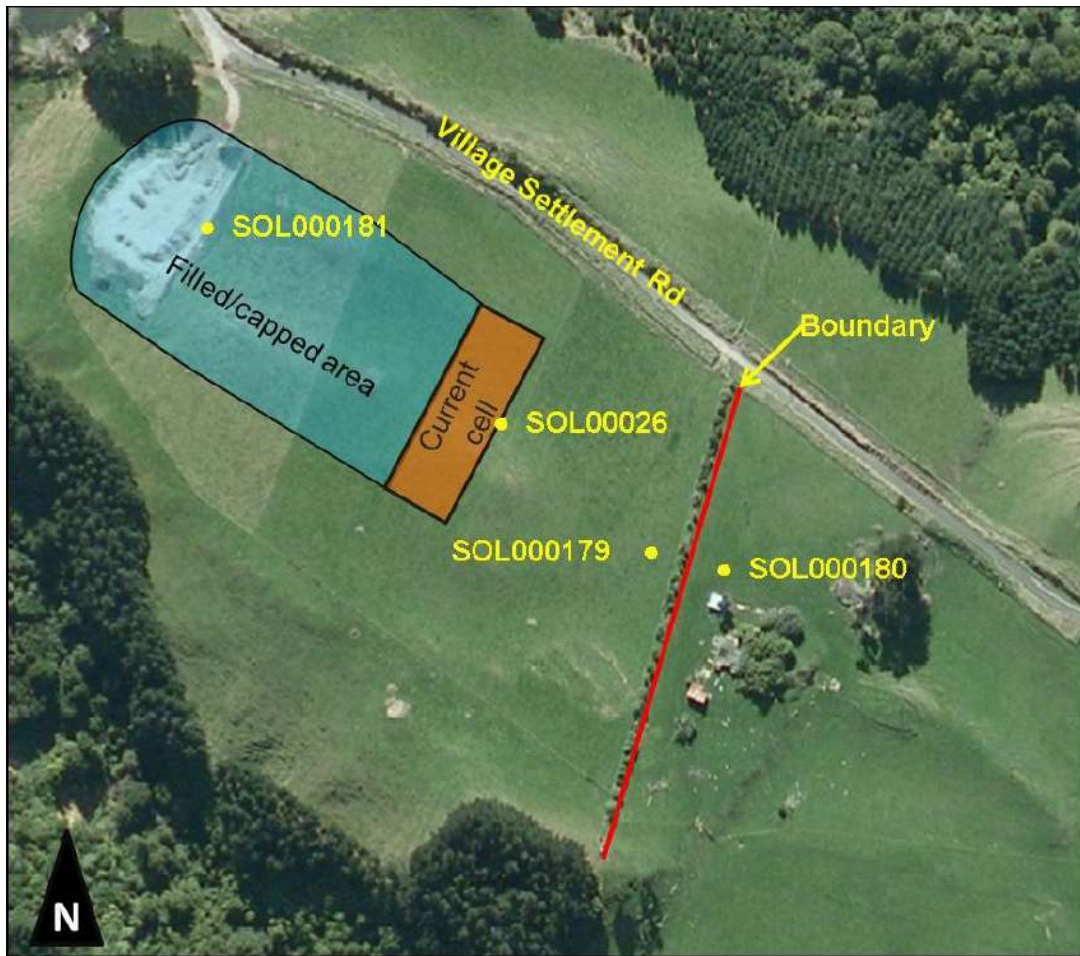


Figure 5 Aerial view of the discharge site and sampling sites at Waverley Sawmills Ltd's Village Settlement Rd site

Soil samples were taken from three sampling sites in the 2012-2013 monitoring period. These were taken to monitor the effect of the treated wood waste discharge cell situated uphill of the sampling sites. The results are given in Tables 6 and 7, and an aerial plan of the Village Rd site (with sampling sites) is shown in Figure 5.

2.3.1 Soil sampling

Soil samples were taken from the capped areas, on virgin ground downhill of the landfill foot print and from the neighbouring property. The sampling sites are shown in Figure 5 and the results of soil analysis are given in the tables below.

2.1.3.1 Capped area –site SOL000181

Twenty cores were taken along a 40 m NW diagonal transect passing through the center of the capped area. These cores were made into a composite sample and analysed for CCA contaminants. The results, given in the table below, showed that the capped areas were compliant with consent conditions in regards to CCA concentrations.

Table 6 Composite soil sample test results taken on the capped areas at the Village Settlement Road, Waverley – 25 January 2013

Parameter	Unit	SOL0000181	6528-2 Consent limit
Arsenic	mg/kg dry weight	14	30
Boron		<20	380
Chromium		40	76
Copper		29	40

2.1.3.2 Outside landfill footprint – site SOL000179

Five cores were taken across a 15 m transect running parallel to the southern boundary fence. These cores were made into a composite sample and analysed for CCA contaminants. It should also be noted that the consent 6528-2 contains conditions that require this area is to be remediated should CCAB levels exceed certain limits once filling operations have been completed. The results, given in the table below, showed that this area has levels of arsenic and chromium exceeding the limits set out in this consent condition and therefore remedial works will have to be undertaken prior to the site being capped.

It should be noted that the levels of contaminants are increasing due to periods of poor stormwater and leachate control that have occurred at the site. During the period under review the consent holder installed new stormwater control measures which should reduce the accumulation of contaminants.

Table 7 Results of soil sampling at site SOL000179 – 23 January 2013

Parameter	Units	SOL000179 3 m above south boundary	
		Recorded value	6528-2 Consent limit*
Arsenic	mg/kg dry weight	135	38
Boron		21	160
Chromium		119	76
Copper		63	130

* Consent limit is for post closure targets after remediation

2.1.3.3 Neighbouring property-site SOL000180

Five cores were taken across a 15 m transect running parallel to the southern boundary fence. These cores were made into a composite sample and analysed for CCAB contaminants. The results, given in the table below, showed that this area was compliant with consent conditions in regards to CCAB limits set out by the consent for the operational life of the site. The consent also sets out more stringent limits that must be attained at this site just prior to the site being capped.

Based on the current results it is likely that some remediation will be required as copper levels are already equal to the post closure consent limits.

Table 8 Results of soil sampling at site SOL000180 – 23 January 2013

Parameter	Units	SOL000180 1 m below south boundary		
		Recorded value	6528-2 Consent limit (operational)	6528-2 Consent limit (post closure)
Arsenic	mg/kg dry weight	4	30	30
Boron		15	380	76
Chromium		36	76	42
Copper		20	130	20

2.4 Investigations, interventions, and incidents

The monitoring programme for the year was based on what was considered to be an appropriate level of monitoring, review of data, and liaison with the consent holder. During the year matters may arise which require additional activity by the Council eg provision of advice and information, or investigation of potential or actual courses of non-compliance or failure to maintain good practices. A pro-active approach that in the first instance avoids issues occurring is favoured.

The Taranaki Regional Council operates and maintains a register of all complaints or reported and discovered excursions from acceptable limits and practices, including non-compliance with consents, which may damage the environment. The Unauthorised Incident Register (UIR) includes events where the company concerned has itself notified the Council. The register contains details of any investigation and corrective action taken.

Complaints may be alleged to be associated with a particular site. If there is potentially an issue of legal liability, the Council must be able to prove by investigation that the identified company is indeed the source of the incident (or that the allegation cannot be proven).

In the 2012-2013 period, it was not necessary for the Council to undertake significant additional investigations and interventions, or record incidents, in association with Waverley Sawmill's conditions in resource consents or provisions in Regional Plans in relation to the Company's activities during the monitoring period.

3. Discussion

3.1 Discussion of site performance

3.1.1 Monk Rd site

In regards to the discharge of wood waste the site was well managed and there was no evidence of illegal dumping or any significant amounts of unacceptable materials in the wood waste loads. There were no odour or dust issues noted during any of the inspections and no complaints were received about the site. The pipe installed under consent 6412 has been repaired and is now functional.

3.1.2 Village Rd site

The site was unconsented from 1 June 2012 to 31 July 2013 due to the application process being mishandled by the consent holder. During the period when no consent was in place, the Company did make any discharges at the site.

Since consent 6528-2 was granted, filling has continued and the upgraded stormwater system is minimising the infiltration of stormwater in the fill areas and reducing run-off.

No complaints were received in regards to this site during the monitoring period.

3.2 Environmental effects of exercise of consents

3.2.1 Monk Rd site

The discharge of leachate from the site is still having a minor effect on the environment immediately downstream of the discharge, however the water quality at the property boundary and compliance point is satisfactory.

No significant effects were noted from the current discharge of untreated wood waste at the site.

3.2.2 Village Settlement Rd site

The soil sampling done at the lower reaches of the site indicates that the contaminants are migrating downhill but are currently at acceptable levels and within consent conditions. The improved stormwater control should prevent the levels of contaminants from rising further. Current consent conditions (in consent 6528-2) require that affected areas outside the landfill foot print must be remediated prior to the consent being surrendered.

Provided consent conditions are followed and good control over stormwater and leachate is maintained, any adverse effects arising from the exercise of the consent will be minimised.

3.3 Evaluation of performance

A tabular summary of the Company's compliance record for the period under review is set out in Tables 9--13.

Table 9 Summary of performance for consent 6412-1 to install culvert - Waverley Sawmills Limited

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. The consent holder shall adopt the best practicable option when exercising the consent	Site specific monitoring programme – programme management	Yes (after repairs in February)
2. The consent shall be exercised generally in accordance with the information provided in the application	Site specific monitoring programme – programme management	Yes (after repairs in February)
3. The consent holder shall inform the Council of the culvert installation and completion of works within 48 hrs	Site specific monitoring programme – programme management	Yes
4. The exercise of the consent shall not cause flooding of upstream property	Site specific monitoring programme – programme management	Yes (after repairs in February)
5. The consent shall lapse after 5 years if not exercised	Site specific monitoring programme – programme management	Yes
6. Optional review provision	No review due this period	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		Good

N/A = not applicable

Table 10 Summary of performance for consent 6413-1 to discharge wood waste into and onto land – Waverley Sawmills Limited

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. The consent holder shall supply a management plan for the activity	Site specific monitoring programme – programme management	Yes
2. The consent holder shall supply a contingency plan for the activity	Site specific monitoring programme – site inspections	Yes
3. Only untreated wood waste shall be discharged to the site	Site specific monitoring programme – site inspections	Yes
4. No treated wood waste shall be discharged to the site	Site specific monitoring programme – programme management	Yes
5. No wood treatment chemicals or sludges shall be discharged to the site	Site specific monitoring programme – water quality sampling & inspection	Yes
6. The exercise of the consent shall be carried out in accordance with information supplied with the application	Site specific monitoring programme – programme management	Yes
7. Final waste levels shall not be above ground level	Site specific monitoring programme – programme management	N/A

Condition requirement	Means of monitoring during period under review	Compliance achieved?
8. No contaminants shall enter surface water as a result of carrying out the activity	Site specific monitoring programme – water quality sampling	N/A- now covered by consent 7342
9. The consent holder shall install silt control measures as required	Site specific monitoring programme – site inspection	Yes
10. The consent holder shall minimise storm water movement across the site	Site specific monitoring programme – site inspection	Yes
11. No fires shall be lit at the site	Site specific monitoring programme – site inspection	Yes
12. The consent holder shall install a perimeter fence	Site specific monitoring programme – site inspection	Yes
13. The consent holder shall be the sole discharger to the site	Site specific monitoring programme – site inspection	Yes
14. The consent holder shall adopt the best practicable option when exercising the consent	Site specific monitoring programme – site inspection	Yes
15. This condition set specific parameter limits to be adhered to in soil beyond the site boundary upon completion.	Site specific monitoring programme – soil sampling	N/A
16. This condition set specific parameter limits to be adhered to in soil on the site surrounding the discharge area upon completion.	Site specific monitoring programme – soil sampling upon closure	N/A
17. The consent holder shall contour the site when the site has reached capacity.	Site specific monitoring programme – site inspection upon closure	N/A
18. This condition sets limits on specific parameters in the upper layers of the final cap on the discharge area upon completion.	Site specific monitoring programme – soil sampling upon closure	N/A
19. Optional review provision	No review due this period	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

N/A = not applicable

Table 11 Summary of performance for consent 6413-2 to discharge wood waste into and onto land – Waverley Sawmills Limited

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. The consent holder shall supply a management plan for the activity	Site specific monitoring programme – programme management	Yes
2. Only untreated wood waste shall be discharged to the site	Site specific monitoring programme – site inspections	Yes
3. Materials to discharge in certain area	Site specific monitoring programme – site inspections	Yes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
4. The consent holder shall be the sole source of material discharged	Site specific monitoring programme – site inspection	Yes
5. Discharged material not to enter water	Site specific monitoring programme – site inspection	Yes
6. The consent holder shall adopt the best practicable option when exercising the consent	Site specific monitoring programme – site inspection	Yes
7. Specifications for capping and reinstatement	Site specific monitoring programme – inspection	No capping done yet
8. Optional review provision	A review is not required	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

Table 12 Summary of performance for consent 6528-2 to discharge wood waste into and into land – Waverley Sawmills Limited

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adopt best practical option	Site specific monitoring programme – site inspections	Yes
2. The consent holder shall supply a management plan for the activity	Site specific monitoring programme – programme management	Yes
3. Only wood waste shall be discharged to the site	Site specific monitoring programme – site inspections	Yes
4. No wood treatment chemicals or sludges shall be discharged to the site	Site specific monitoring programme – site inspections	Yes
5. The consent holder shall be the sole discharger to the site	Site specific monitoring programme – site inspection	Yes
6. The consent holder shall minimise storm water movement across the site	Site specific monitoring programme – site inspection	Yes
7. Fill capped top certain specifications	Site specific monitoring programme – site inspection	N/A
8. Capped areas not to exceed certain contaminant limits	Site specific monitoring programme –soil sampling	Yes
9. Non capped areas not to exceed certain contaminant limits prior to closure	Site specific monitoring programme –soil sampling	N/A – site still operating
10. Final toe of cap to meet certain specifications	Site specific monitoring programme – site inspection	N/A – site still operating
11. Maintenance of capped areas	Site specific monitoring programme – site inspection	Yes
12. The consent holder shall notify Council 20 days prior to final capping	Site specific monitoring programme – programme management	N/A – site still operating
13. The consent holder shall notify Council 7 days after final capping is complete	Site specific monitoring programme – programme management	N/A – site still operating

Condition requirement	Means of monitoring during period under review	Compliance achieved?
14. The consent holder to retain consent for monitoring purposes for a minimum of five years after closure	Site specific monitoring programme – programme management	N/A – site still operating
15. Entire filled are must be capped and reinstated by June 2017	Site specific monitoring programme – programme management	N/A – site still operating
16. Optional review provision	Review not due this period	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

N/A = not applicable

Table 13 Summary of performance for consent 7342-1 to discharge leachate and stormwater to land and water-Waverley Sawmills Limited

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. The consent holder shall adopt the best practicable option when exercising the consent	Site specific monitoring programme – programme management	Yes
2. Certain effects not to be present 50 m downstream of the discharge	Site specific monitoring programme – programme management and inspection	Yes
3. Certain parameters no tot be exceeded at site KOI000130	Site specific monitoring programme – sampling	Yes
4. The consent holder is to take water samples at site KOI000130	Site specific monitoring programme – programme management	Yes
5. Records to be supplied	Site specific monitoring programme – programme management	N/A
6. A review condition	A review is not required	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High

N/A = not applicable

During the monitoring period Waverley Sawmills demonstrated a good level of environmental performance and compliance with consent conditions. The culvert at Monk Rd was repaired as requested and the improved stormwater system at the Village Settlement Rd site has reduced contaminated run-off. No complaints were received by Council about either site during the monitoring period.

3.4 Recommendation from the 2011-2012 Annual Report

The 2011-2012 Annual Report recommended:

THAT monitoring of discharges from Waverley Sawmills Limited's site on Monk Rd and Village Settlement Rd sites, in the 2012-2013 year continue at the same level as in 2011-2012.

This recommendation was implemented in the period under review.

3.5 Alterations to monitoring programmes for 2013-2014

In designing and implementing the monitoring programmes for air/water discharges in the region, the Taranaki Regional Council has taken into account the extent of information made available by previous authorities, its relevance under the Resource Management Act, the obligations of the Act in terms of monitoring emissions/discharges and effects, and subsequently reporting to the regional community, the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of industrial processes within Taranaki emitting to the atmosphere/discharging to the environment.

It is proposed that for the 2013-2014 period, the monitoring programme remain unchanged from that of the 2012-2013 period.

A recommendation to this effect is attached to this report.

3.6 Exercise of optional review of consent

Resource consents 6528-2 and 7342-2 provide for an optional review in June 2014. Conditions in these consents allow the Council to review the consents for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Based on the results of monitoring in the year under review, and in previous years as set out in earlier annual compliance monitoring reports, it is considered that there are no grounds that require a review to be pursued or grounds to exercise the review option.

A recommendation to this effect is presented in Section 4 of this report.

4. Recommendations

1. THAT monitoring of discharges from Waverley Sawmills Limited's site on Monk Rd and Village Settlement Rd sites, in the 2013-2014 year continue at the same level as in 2012-2013.
2. THAT the option for a review of resource consent(s) 7342-1 and 6528-2 in June 2014 not be exercised, on the grounds that current consent conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent.

Glossary of common terms and abbreviations

The following abbreviations and terms are used within this report:

Al*	aluminium
As*	arsenic
Biomonitoring	assessing the health of the environment using aquatic organisms
BOD	biochemical oxygen demand. A measure of the presence of degradable organic matter, taking into account the biological conversion of ammonia to nitrate
BODF	biochemical oxygen demand of a filtered sample
bund	a wall around a tank to contain its contents in the case of a leak
CBOD	carbonaceous biochemical oxygen demand. A measure of the presence of degradable organic matter, excluding the biological conversion of ammonia to nitrate
CCA	Copper, chromium and arsenic; metals used in timber treatment
cfu	colony forming units. A measure of the concentration of bacteria
COD	chemical oxygen demand. A measure of the oxygen required to oxidise all matter in a sample by chemical reaction.
Condy	Conductivity, an indication of the level of dissolved salts in a sample, usually measured at 20°C and expressed in mS/m
Cu*	copper
DO	dissolved oxygen
DRP	dissolved reactive phosphorus
<i>E.coli</i>	<i>Escherichia coli</i> , an indicator of the possible presence of faecal material and pathological micro-organisms. Usually expressed as the number of colonies per 100 ml
Ent	Enterococci, an indicator of the possible presence of faecal material and pathological micro-organisms. Usually expressed as the number of colonies per 100 ml
F	Fluoride
FC	Faecal coliforms, an indicator of the possible presence of faecal material and pathological micro-organisms. Usually expressed as the number of colonies per 100 ml
fresh	elevated flow in a stream, such as after heavy rainfall
g/m ³	grammes per cubic metre, and equivalent to milligrammes per litre (mg/L). In water, this is also equivalent to parts per million (ppm), but the same does not apply to gaseous mixtures
Incident	an event that is alleged or is found to have occurred that may have actual or potential environmental consequences or may involve non-compliance with a consent or rule in a regional plan. Registration of an incident by the Council does not automatically mean such an outcome had actually occurred
Intervention	action/s taken by Council to instruct or direct actions be taken to avoid or reduce the likelihood of an incident occurring
Investigation	action taken by Council to establish what were the circumstances/events surrounding an incident including any allegations of an incident
l/s	litres per second
MCI	macroinvertebrate community index; a numerical indication of the state

	of biological life in a stream that takes into account the sensitivity of the taxa present to organic pollution in stony habitats
mS/m	millisiemens per metre
mixing zone	the zone below a discharge point where the discharge is not fully mixed with the receiving environment. For a stream, conventionally taken as a length equivalent to 7 times the width of the stream at the discharge point.
NH ₄	ammoniacal nitrogen, normally expressed in terms of the mass of nitrogen (N)
NH ₃	unionised ammonia nitrogen, normally expressed in terms of the mass of nitrogen (N)
NO ₃	nitrate, normally expressed in terms of the mass of nitrogen (N)
NTU	Nephelometric Turbidity Unit, a measure of the turbidity of water
O&G	oil and grease, defined as anything that will dissolve into a particular organic solvent (e.g. hexane). May include both animal material (fats) and mineral matter (hydrocarbons)
Pb*	lead
pH	a numerical system for measuring acidity in solutions, with 7 as neutral. Numbers lower than 7 are increasingly acidic and higher than 7 are increasingly alkaline. The scale is logarithmic i.e. a change of 1 represents a ten-fold change in strength. For example, a pH of 4 is ten times more acidic than a pH of 5.
Physicochemical	measurement of both physical properties(e.g. temperature, clarity, density) and chemical determinants (e.g. metals and nutrients) to characterise the state of an environment
PM ₁₀	relatively fine airborne particles (less than 10 micrometre diameter)
resource consent	refer Section 87 of the RMA. Resource consents include land use consents (refer Sections 9 and 13 of the RMA), coastal permits (Sections 12, 14 and 15), water permits (Section 14) and discharge permits (Section 15)
RMA	Resource Management Act 1991 and subsequent amendments
SS	suspended solids,
Temp	temperature, measured in °C
Turb	turbidity, expressed in NTU
UI	Unauthorised Incident
UIR	Unauthorised Incident Register – contains a list of events recorded by the Council on the basis that they may have the potential or actual environmental consequences that may represent a breach of a consent or provision in a Regional Plan that may represent a breach of a consent or provision in a Regional Plan
Zn*	zinc

*an abbreviation for a metal or other analyte may be followed by the letter 'As', to denote the amount of metal recoverable in acidic conditions. This is taken as indicating the total amount of metal that might be solubilised under extreme environmental conditions. The abbreviation may alternatively be followed by the letter 'D', denoting the amount of the metal present in dissolved form rather than in particulate or solid form. For further information on analytical methods, contact the Council's laboratory

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Appendix I

Resource consents held by Waverley Sawmills Limited



Land Use Consent
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

CHIEF EXECUTIVE
PRIVATE BAG 713
47 CLOTON ROAD
STRATFORD
NEW ZEALAND
PHONE 06-765 7127
FAX 06-765 5097

Please quote our file number
on all correspondence

Name of
Consent Holder: Waverley Sawmills Limited
 P O Box 44
 WAVERLEY

Consent Granted 4 March 2005
Date:

Conditions of Consent

Consent Granted: To erect, place and maintain a culvert in an unnamed
 tributary of the Kohi Stream in the Whenuakura catchment
 at or about GR: R21:515-629

Expiry Date: 1 June 2022

Review Date(s): June 2010, June 2016

Site Location: Monk Road, Waverley

Legal Description: Sec 71 Blk II Wairoa SD

Catchment: Whenuakura

Tributary: Kohi

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document
www.trc.govt.nz*

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

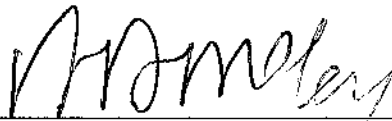
Special conditions

- 1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
- 2. The exercise of this consent shall be undertaken generally in accordance with the documentation submitted in support of application 3154. In the case of any contradiction between the documentation submitted in support of application 3154 and the conditions of this consent, the conditions of this consent shall prevail.
- 3. The consent holder shall notify the Chief Executive, Taranaki Regional Council, in writing at least 48 hours prior to the commencement and upon completion of the initial installation and again at least 48 hours prior to and upon completion of any subsequent maintenance works which would involve disturbance of or deposition to the riverbed or discharges to water.
- 4. The exercise of this consent shall not result in the significant ponding of water on the upstream neighbouring property.
- 5. This consent shall lapse on the expiry of five years after the date of issue of this consent, unless the consent is given effect to before the end of that period or the Taranaki Regional Council fixes a longer period pursuant to section 125(1)(b) of the Resource Management Act 1991.

6. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2010 and/or June 2016, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 4 March 2005

For and on behalf of
Taranaki Regional Council

A handwritten signature in black ink, appearing to read 'A. D. M. C.', is written over a horizontal line.

Director—Resource Management

Discharge Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of
Consent Holder: Waverley Sawmills Limited
 P O Box 44
 WAVERLEY 4544

Decision Date: 29 May 2012

Commencement
Date: 29 May 2012

Conditions of Consent

Consent Granted: To discharge untreated wood waste from sawmill
 operations onto and into land at or about (NZTM)
 1741513E-5601129N

Expiry Date: 1 June 2028

Review Date(s): June 2016, June 2022

Site Location: Monk Road, Waverley

Legal Description: Secs 71 & 72 Blk II Wairoa SD (Discharge site)

Catchment: Whenuakura

Tributary: Kohi

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

General condition

- a. The consent holder shall pay to the Taranaki Regional Council all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act 1991.

Special conditions

1. Within three months of the granting of this consent, the consent holder shall prepare and maintain a stormwater management plan that documents how the site is to be managed to minimise the infiltration of stormwater and spring water into the filled areas. This plan shall be followed at all times, shall be certified by the Chief Executive, Taranaki Regional Council, and shall include but not necessarily be limited to:
 - a) the manner in which any stormwater water will be isolated diverted from the fill area;
 - b) the manner in which any spring water will be isolated and diverted from the fill;
 - c) a timetable for capping works for any completed areas; and
 - d) details of final contouring and stormwater diversion of completed capped areas.
2. This consent only authorises the discharge of untreated wood shavings, sawdust and bark at the site. The discharge of any other material or waste at this site shall not occur.
3. The discharge of materials shall only occur in the shaded area shown in Figure 1 (attached).
4. The Waverly Sawmills Limited sawmill site at Oturi Road, Waverley shall be the sole source of material discharged at the site.
5. The exercise of this consent shall not result in any discharged material entering surface water.
6. The consent holder shall at all times adopt the best practicable option or options (as defined in section 2 of the Resource Management Act 1991) to prevent or minimise any actual or potential effect on the environment arising from any discharge at the site.
7. Any area used for the discharge of material under this consent shall be capped and re-vegetated. The cap shall be contoured to ensure no ponding occurs over the discharge area and shall consist of a minimum of 300 mm of clean clay and 100 mm of top soil.
8. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2016 and/or June 2022 for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 29 May 2012

For and on behalf of
Taranaki Regional Council

Director-Resource Management



Figure 1 Discharge area at Waverley Sawmill's Monk Road site

Discharge Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of
Consent Holder: Waverley Sawmills Limited
 P O Box 44
 WAVERLEY 4544

Decision Date: 31 July 2012

Commencement
Date: 31 July 2012

Conditions of Consent

Consent Granted: To discharge treated and untreated wood waste and
 associated leachate onto and into land at or about (NZTM)
 1744652E-5597502N

Expiry Date: 1 June 2022

Review Date(s): June 2014, June 2018

Site Location: Village Settlement Road, Waverley

Legal Description: Lot 6 DP 5250 Blk VIII Wairoa SD (Discharge site)

Catchment: Waitotara

Tributary: Moumahaki

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

General condition

- a. The consent holder shall pay to the Taranaki Regional Council [the Council] all the administration, monitoring and supervision costs of this consent, fixed in accordance with section 36 of the Resource Management Act.

Special conditions

1. The consent holder shall at all times adopt the best practicable option (as defined in section 2 of the Resource Management Act 1991) to prevent or minimise any actual or potential effect on the environment arising from any discharge at the site. This includes, but is not necessary limited to:
 - a) controlling stormwater to minimise infiltration into the filled areas;
 - b) leachate control to minimise to migration of contaminants from the tipface
 - c) minimising the area of discharged wood waste that is uncapped; and
 - d) minimising the duration for which discharged wood waste remains uncapped.
2. Within three months of this consent being granted the consent holder shall prepare and maintain a site management plan that documents how the requirements set out in this consent will be met. This plan shall be followed at all times and after having been certified by the Chief Executive, Taranaki Regional Council.
3. This consent only authorises the discharge of treated and untreated wood shavings, sawdust and bark at the site. The discharge of any other material at this site shall not occur.
4. The discharge shall only occur in the area depicted by the orange shading shown in Figure 1 (attached) and in particular but without limitation no discharges shall occur within 25 metres of the property's boundary.
5. The Waverly Sawmills Limited sawmill site at Oturi Road, Waverley shall be the sole source of material discharged at the site.
6. The consent holder shall establish and maintain all necessary stormwater structures and retention bunding to ensure that any tipface runoff is minimised and contained within the landfill footprint. This includes the establishment of new drains as required when new discharge cells are constructed.
7. When each discharge cell is full it shall be capped as soon as is practicable. The cap shall consist of a minimum of 600 mm of clean compacted clay and 200 mm of clean topsoil and shall contoured to ensure that stormwater is diverted away from the open tipface and drains freely from the capped area.

8. During the operational life of the landfill, the exercise of this consent shall not result in any of the maximum concentrations of contaminants shown in the table below being exceeded in the top 150 mm of soil beyond the site boundary.

Contaminant	Maximum concentration
Arsenic	30 mg kg ⁻¹
Boron	380 mg kg ⁻¹
Total chromium	76 mg kg ⁻¹
Copper	130 mg kg ⁻¹

9. Immediately prior to the final capping of the last discharge cell, the consent holder shall undertake any soil remediation action required to ensure that the levels of contaminants in the top 150 mm of soil in the areas identified in the table below do not exceed the respective maximum concentrations as also set out in the table below.

Soil Contaminant	Maximum concentrations		
	Capped Areas	Beyond site boundary	Area between toe and south boundary*
Arsenic	30 mg kg ⁻¹	30 mg kg ⁻¹	38 mg kg ⁻¹
Total chromium	76 mg kg ⁻¹	76 mg kg ⁻¹	76 mg kg ⁻¹
Copper	40 mg kg ⁻¹	42 mg kg ⁻¹	130 mg kg ⁻¹
Boron	380 mg kg ⁻¹	20 mg kg ⁻¹	160 mg kg ⁻¹

*Area depicted by purple shading in Figure 1

10. After completing the final cell, the toe of the filled area shall be capped in a manner that ensures that the fill material is completely encapsulated with 600 mm of compacted clay prior to applying topsoil.
11. For the duration this consent is in effect, the consent holder shall maintain the capped areas at the site to following standards:
- all areas capped prior to the granting of this consent shall be maintained to their current standard;
 - all areas capped during the exercise of this consent shall be maintained to the standard set out in special condition 7;
 - with the exception of access tracks, a vegetative cover shall be maintained on all capped areas of the site; and
 - an appropriate contour shall be maintained on all capped areas to ensure adequate drainage.
12. The consent holder shall notify the Taranaki Regional Council 20 days prior to commencing final capping of the final discharge cell. Notification shall include the consent number and a brief description of the activity consented and shall be emailed to worknotification@trc.govt.nz.

Consent 6528-2

13. The consent holder shall notify the Taranaki Regional Council within 7 days of the completion of the final capping of the final discharge cell. Notification shall include the consent number and a brief description of the activity consented and shall be emailed to worknotification@trc.govt.nz. Once the Taranaki Regional Council receives and acknowledges this notification, no further discharges may occur at the site.
14. This consent cannot be surrendered for at least five years after reinstatement of the site, during which soil quality monitoring will be undertaken to ensure that the contaminants in the fill have been effectively contained. During this period the level of soil contaminant must not exceed the limits set out in special condition 9.
15. To ensure that a five year post closure monitoring window is available, the site must be closed to discharges, reinstated and remediated by no later than June 2017.
16. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2014 and/or June 2018 for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 31 July 2012

For and on behalf of
Taranaki Regional Council

Director-Resource Management

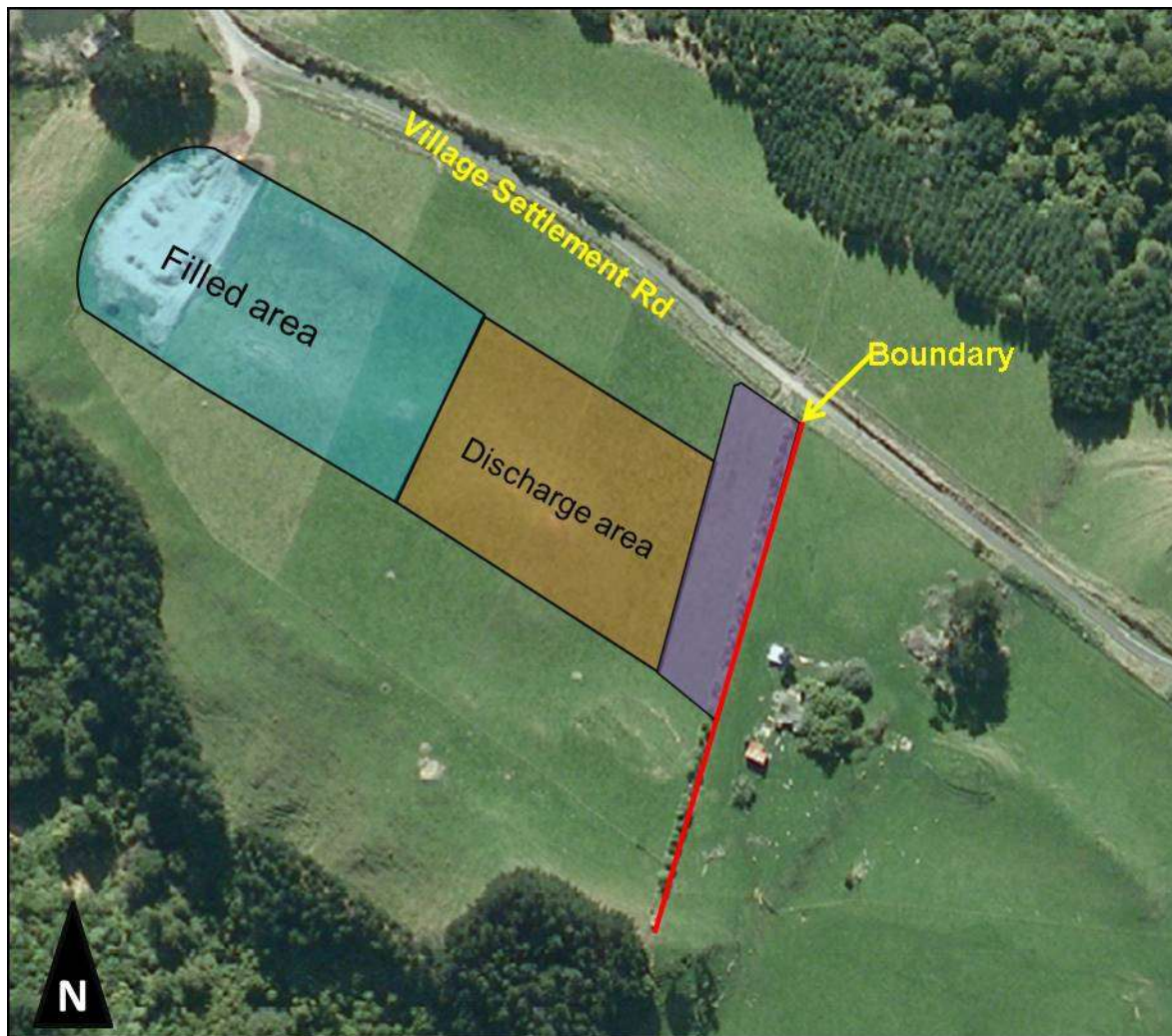


Figure 1 Discharge area at Waverley Sawmills Village Settlement Rd site



**TARANAKI
REGIONAL
COUNCIL**

CHIEF EXECUTIVE
PRIVATE BAG 713
47 CLOVEN ROAD
STRATFORD
NEW ZEALAND
PHONE: 06-765 7127
FAX: 06-765 5097
www.trc.govt.nz

Please quote our file number
on all correspondence

Discharge Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of
Consent Holder: Waverley Sawmills Limited
 P O Box 44
 WAVERLEY 4544

Decision Date: 7 October 2010

Commencement
Date: 7 October 2010

Conditions of Consent

Consent Granted: To discharge leachate and stormwater from a
 sawmill-waste disposal site into an unnamed tributary of
 the Kohi Stream at or about (NZTM) 1741531E-5601034N

Expiry Date: 1 June 2028

Review Date(s): June 2012, June 2014, June 2016, June 2022

Site Location: Monk Road, Waverley

Legal Description: Sec 71 Blk II Wairoa SD [Discharge site]
 Pt Lot 2 DP 4352 [Discharge source]

Catchment: Whenuakura

Tributary: Kohi

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

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General condition

- a. The consent holder shall pay to the Taranaki Regional Council [the Council] all the administration, monitoring and supervision costs of this consent, fixed in accordance to section 36 of the Resource Management Act.

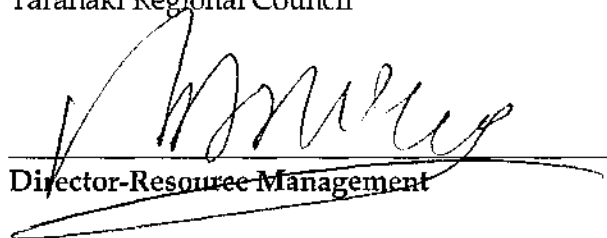
Special conditions

1. Notwithstanding any other condition of this consent, the consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The exercise of this consent shall not give rise to any or all of the following effects in the unnamed tributary of the Kohi Stream at a point 50 metres downstream of the discharge;
 - a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - b) any conspicuous change in the colour or visual clarity;
 - c) any emission of objectionable odour;
 - d) the rendering of fresh water unsuitable for consumption by farm animals;
 - e) any significant adverse effects on aquatic life.
3. The exercise of this consent shall not cause the receiving water at site KOI000130 [1741323E-5600500N] to breach the following standards;
 - a) concentration of filtered carbonaceous biochemical oxygen demand no greater than 3.0 g/m³
 - b) concentration of dissolved copper demand no greater than 0.01 g/m³
 - c) concentration of dissolved chromium demand no greater than 0.1 g/m³
 - d) concentration of dissolved arsenic demand no greater than 0.1 g/m³.
4. The consent holder shall undertake water sampling of the receiving water at site KOI000130 [1741323E-5600500N] at intervals not exceeding 60 days, and have the sample sent to an IANZ accredited laboratory within 24 hours of the sample being taken where it is to be analysed for;
 - a) filtered carbonaceous biochemical oxygen demand
 - b) dissolved copper [detection level of no greater than 0.005 g/m³]
 - c) dissolved chromium [detection level of no greater than 0.01 g/m³]
 - d) dissolved arsenic [detection level of no greater than 0.01 g/m³].
5. The consent holder shall provide the Chief Executive of Taranaki Regional Council with the results of the analyses as required in condition four, within 20 working days of the sample being taken.

6. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2012, 2014, 2016 and/or June 2022 for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 7 October 2010

For and on behalf of
Taranaki Regional Council



Director-Resource Management

