Value Timber Limited Monitoring Programme Annual Report 2015-2016

Technical Report 2016-75

ISSN: 1178-1467 (Online) Document: 1702323 (Word) Document: 1702773 (Pdf) Taranaki Regional Council Private Bag 713 STRATFORD

July 2016

Executive summary

Value Timber Limited (the Company) operates an untreated wood waste landfill located on Bristol Road at Inglewood, in the Waitara catchment. The sole source of the wood waste is from the Company's sawmilling operation in Inglewood. The Company sells most of its woodchip and sawdust as calf litter. The remaining material consisting of bark, soil and soiled woodchip/sawdust is sent to the Bristol Road site for disposal.

This report for the period July 2015 to June 2016 describes the monitoring programme implemented by the Taranaki Regional Council (the Council) to assess the Company's environmental performance during the period under review. The report also details the results of the monitoring undertaken and assesses the environmental effects of the Company's activities.

The Company holds one resource consent to discharge wood waste to land, which includes a total of 14 conditions setting out the requirements that the Company must satisfy.

During the monitoring period, the Company demonstrated an overall high level of environmental performance.

The Council's monitoring programme for the year under review included three inspections, two water samples collected for physicochemical analysis, and one wood waste sample collected for CCAB (copper, chromium, arsenic, and boron) analysis.

The monitoring showed that the site discharges were complaint with consent conditions, that the control of silt from the associated earthworks was much improved over the previous two monitoring periods, with re-establishment of grass cover in the pre-fill gully and improved management of the sit controls. There were no discharges of unauthorised wood waste or other materials found at inspection. There were no unauthorised incidents (UI's) recording non-compliance in respect of this consent holder during the period under review.

During the year, the Company demonstrated a high level of environmental and administrative performance with the resource consents.

For reference, in the 2015-2016 year, 71% 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 24% demonstrated a good level of environmental performance and compliance with their consents.

In terms of overall environmental and compliance performance by the consent holder over the last several years, this report shows that the consent holder's performance remains at a good or high level and has improved.

This report includes recommendations for the 2016-2017 year.

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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 for the period July 2015 to June 2016 by the Taranaki Regional Council (the Council) on the monitoring programme associated with the resource consent held by Value Timber Limited (the Company). The Company operates a wood waste disposal site situated on Bristol Road at Inglewood, in the Waitara catchment.

The report includes the results and findings of the monitoring programme implemented by the Council in respect of the consent held by the Company that relates to discharges to land in the Waitara catchment.

One of the intents of the *Resource Management Act 1991* (RMA) 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 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 eight combined annual report by the 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:

- consent compliance monitoring under the RMA and the Council's obligations;
- the Council's approach to monitoring sites though annual programmes;
- the resource consents held by the Company in the Waitara catchment;
- the nature of the monitoring programme in place for the period under review; and
- a description of the activities and operations conducted at the Company's site.

Section 2 presents the results of monitoring during the period under review, including scientific and technical data.

Section 3 discusses the results, their interpretations, and their significance for the environment.

Section 4 presents recommendations to be implemented in the 2016-2017 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 RMA 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 an activity, and may include cultural and social-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 (for example recreational, cultural, or aesthetic); and
- (e) risks to the neighbourhood or environment.

In drafting and reviewing conditions on discharge permits, and in implementing monitoring programmes, the Council is recognising the comprehensive meaning of 'effects' inasmuch as is appropriate for each activity. Monitoring programmes are not only based on existing permit conditions, but also on the obligations of the RMA to assess the effects of the exercise of consents. In accordance with Section 35 of the RMA, the Council undertakes compliance monitoring for consents and rules in regional plans, and maintains an overview of the performance of resource users and consent holders. Compliance monitoring, including both activity and impact monitoring, enables the Council to continually re-evaluate its approach and that of consent holders to resource management and, ultimately, through the refinement of methods and considered responsible resource utilisation, to move closer to achieving sustainable development of the region's resources.

1.1.4 Evaluation of environmental and administrative performance

Besides discussing the various details of the performance and extent of compliance by the Company, this report also assigns them a rating for their environmental and administrative performance during the period under review.

Environmental performance is concerned with <u>actual or likely effects</u> on the receiving environment from the activities during the monitoring year. Administrative performance is concerned with the Company's approach to demonstrating consent compliance <u>in site operations and management</u> including the timely provision of information to Council (such as contingency plans and water take data) in accordance with consent conditions.

Events that were beyond the control of the consent holder <u>and</u> unforeseeable (that is a defence under the provisions of the RMA can be established) may be excluded with regard to the performance rating applied. For example loss of data due to a flood destroying deployed field equipment.

The categories used by the Council for this monitoring period, and their interpretations, are as follows:

Environmental Performance

High: No or inconsequential (short-term duration, less than minor in severity)
breaches of consent or regional plan parameters resulting from the activity; no
adverse effects of significance noted or likely in the receiving environment. 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 in relation to such impacts.

• Good: Likely or actual adverse effects of activities on the receiving environment were negligible or minor at most. There were some such issues noted during monitoring, from self reports, or in response to unauthorised incident reports, but these items were not critical, and follow-up inspections showed they have been dealt with. These minor issues were resolved positively, co-operatively, and quickly. The Council was not obliged to issue any abatement notices or infringement notices in relation to the minor non-compliant effects; however abatement notices may have been issued to mitigate an identified potential for an environmental effect to occur.

For example:

- High suspended solid values recorded in discharge samples, however the discharge was to land or to receiving waters that were in high flow at the time:
- Strong odour beyond boundary but no residential properties or other recipient nearby.
- Improvement required: Likely or actual adverse effects of activities on the receiving environment were more than minor, but not substantial. There were some issues noted during monitoring, from self reports, or in response to unauthorised incident reports. Cumulative adverse effects of a persistent minor non-compliant activity could elevate a minor issue to this level. Abatement notices and infringement notices may have been issued in respect of effects.
- **Poor:** Likely or actual adverse effects of activities on the receiving environment were significant. There were some items noted during monitoring, from self reports, or in response to unauthorised incident reports. Cumulative adverse effects of a persistent moderate non-compliant activity could elevate an 'improvement required' issue to this level. Typically there were grounds for either a prosecution or an infringement notice in respect of effects.

Administrative performance

- High: The administrative requirements of the resource consents were met, or any failures to do this had trivial consequences and were addressed promptly and cooperatively.
- Good: Perhaps some administrative requirements of the resource consents were not met at a particular time, however this was addressed without repeated interventions from the Council staff. Alternatively adequate reason was provided for matters such as the no or late provision of information, interpretation of 'best practical option' for avoiding potential effects, etc.
- **Improvement required:** Repeated interventions to meet the administrative requirements of the resource consents were made by Council staff. These matters took some time to resolve, or remained unresolved at the end of the period under review. The Council may have issued an abatement notice to attain compliance.

 Poor: Material failings to meet the administrative requirements of the resource consents. Significant intervention by the Council was required. Typically there were grounds for an infringement notice.

For reference, in the 2015-2016 year, 71% 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 24% demonstrated a good level of environmental performance and compliance with their consents

1.2 Process description

The Company owns a sawmill located in Inglewood. The untreated sawdust produced from this mill is mostly sold as animal bedding. The remainder of the sawdust, and bark from log peeling, is discharged as fill to the Bristol Road site. The Company uses a small firewood truck to send three to four loads a week to the discharge site.

The site is located between two unnamed tributaries of the Kurapete Stream system. The site where the wood waste is discharged is a gully that directs stormwater and spring water from the surrounding pastureland to the headwater of the unnamed tributary of the Kurapete Stream. The previous owner of the property was in the process of filling the gully when the property was sold to the current owner. The current operation will continue to fill in the gully with untreated woodchip and sawdust to create more flat pasture land. Stormwater run-off from the land surrounding the fill area is intercepted and diverted by two lateral channels on each side of the fill area. Piping is being progressively laid ahead of the fill to allow ground water and spring water to drain away without being in contact with the wood waste. The final cap will consist of at least 300 mm of compacted clay and 100 mm of topsoil. The capping will be done progressively as the gully is filled.

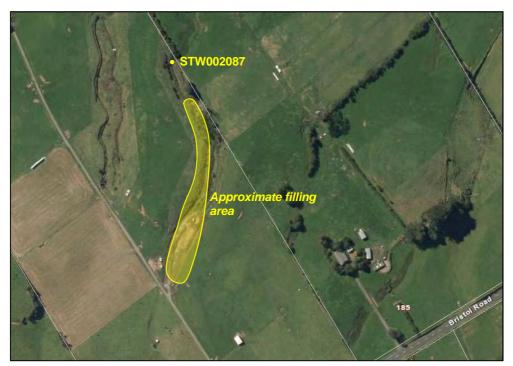


Figure 1 Aerial image of the Bristol Road site and sampling site

1.3 Resource consents

1.3.1 Discharges of wastes to land

Sections 15(1)(b) and (d) of the RMA 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.

The Company holds discharge permit **7338-1** to cover the discharge of up to 5 m³/day of untreated wood waste onto and into land. This permit was issued by the Council on 29 July 2008 under Section 87(e) of the RMA. It is due to expire on 1 June 2027.

The consent has 14 special conditions.

Conditions 1 to 4 specify the nature and the source of the wood waste discharged.

Conditions 5 to 8 deal with the mitigation of effects via site management.

Conditions 9 to 12 deal with the boundaries of the fill area, and site reinstatement requirements.

Condition 13 requires that the quality of the stormwater leaving the fill area shall not exceed certain parameters.

Condition 14 is a review condition.

A copy of this permit is attached to this report in Appendix I.

1.4 Monitoring programme

1.4.1 Introduction

Section 35 of the RMA sets obligations upon the Council to gather information, monitor and conduct research on the exercise of resource consents within the Taranaki region. The Council is also required to assess the effects arising from the exercising of these consents and report upon them.

The 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 Company's site consisted of three primary components.

1.4.2 Programme liaison and management

There is generally a significant investment of time and resources by the 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;
- new consents;
- advice on the Council's environmental management strategies and content of regional plans; and
- consultation on associated matters.

1.4.3 Site inspections

The Company's wood waste disposal site was visited three times during the monitoring period. Inspections focussed on the source and nature of discharged materials, site management and effects on water quality. Sources of data being collected by the Company were identified and accessed if required, so that performance in respect of operation, internal monitoring, and supervision could be reviewed by the Council. The neighbourhood was also surveyed for environmental effects.

1.4.4 Chemical sampling

The Council undertook sampling of stormwater at the site on two occasions. The samples were analysed for pH, biochemical oxygen demand, ammonia and suspended solids. A composite sample of the wood waste from the fill area was taken on one occasion and was analysed for copper, chromium, arsenic and boron (CCAB).

2. Results

2.1 Water

2.1.1 Inspections

8 October 2015

The site was inspected in fine weather and light southerly wind conditions. It was found that there were some minor amounts of stockpiled material. It was noted that these were to be spread at tip face once the ground had dried out. There was no ponding, slumping or cracking observed to be present on the tip site or tip face, and there was no unauthorised material present.

In the pre-fill gully it was found that the grass was still in the process of becoming established. It was noted that some areas with poorer drainage were still moist and boggy, but no surface ponding was observed. There was evidence of recent grazing and minor pugging around stormwater collection drains. This was having little, if any, effect on the quality of the treated stormwater discharge at the time of inspection.

At the stormwater collection system signs of recent flow were observed in the drains. All the drains were clear of vegetation and other obstructions. It was noted that all collection pits contained runoff, but that the lower pit was only discharging at approximately 0.1 L/s. It was reported that there was sufficient freeboard in all of the treatment ponds.

Sediment controls were in place at the tip face riser and in the tributary downstream of the discharge area. No environmental effects were observed in the tributary downstream and there was no fresh scouring found behind the silt cloth. A sample was collected at the time of inspection. It was noted that there was a slight oxide sheen

apparent in the tributary during sampling. The sample was clear with a slight yellow tinge. There was no odour or foaming.

The completed stage 1 fill area was found to be well vegetated and well drained. There was no ponding, slumping, cracking or stock damage present.

29 January 2016

The site was inspected in fine weather with light southerly wind conditions.

Two small piles of wood waste/sawdust were stockpiled at the top of the tip face to be spread at some point. There was no slumping, cracking or ponded water on the top of the fill. The batter was tidy with no slumping, cracks or erosion.

The pre-fill gully had regrassed well and there was no erosion, stock damage, or ponded water evident (Photo 1).



Photo 1 Regrassed pre-fill gully

The stormwater ponds were nearly empty with plenty of available freeboard. They were not discharging at the time of inspection, and there were no signs of recent flow.

The stormwater drain was very grassy and with very low flow. There were no signs of erosion or overflows. The silt cloth was partially overgrown at the edges (filling in the gaps) and slumped. The Company was advised that some maintenance was required to restore this.

The stock fencing around the gully and tributary was permanent and in place. There were no sign of recent stock access or damage.

No silt or sediment issues were noted downstream of the silt controls. There were no odour or dust issues at the time of inspection.

Sawdust samples were collected from the wood waste fill, and sent away for CCAB analysis. No unauthorised materials were noted on site.

15 June 2016

The site was inspected in fine, calm weather.

There were about six piles of stockpiled wood waste at the top of the tip face. No unauthorised material was evident. There were no signs of slumping or cracking on the fill area. The fill batters showed no sign of cracking or slumping, although there was a minor amount of erosion at one point that was likely to have been caused by the heavy rain in the previous week.

The stormwater ponds were all nearly full, with approximately 0.3-0.5 m of freeboard. The contents were a relatively clear brown colour, and the lowest pond had an iron oxide sheen present on the surface. The downstream stormwater drain had recently been cleared of vegetation and there were no obstructions to flow. Silt controls were in place, and appeared to be effective as the stormwater/tributary was noticeably clearer downstream. A sample was collected for analysis.

The stock fencing around the gully and tributary was permanent and in place. The area above the fill was being grazed at the time of inspection. There was no evidence of stock access or damage to the fill area or stormwater system.

No silt or sediment issues were observed downstream of the silt controls and there were no odour or dust issues found at the time of inspection.

2.2 Wood waste sample results

Wood waste sampling was undertaken on 29 January 2016. Sub-samples were taken from random places and depths in the recently discharged piles of wood waste and the sub-samples were then composited prior to analysis. The composite sample was analysed for CCAB. The results are given in Table 1.

Parameter	Unit	Result
Total recoverable arsenic	mg/kg dry weight	4
Total recoverable boron	mg/kg dry weight	< 40
Total recoverable chromium	mg/kg dry weight	13
Total recoverable copper	mg/kg dry weight	10

 Table 1
 Results of CCAB analysis of wood waste sample, 29 January 2016

The results showed that there was no CCAB treated wood waste in the fill.

2.3 Results of stormwater sampling

Discharges from the site were sampled on two occasions during the 2015-2016 period. The results are given in Table 2.

The samples were taken from site STW002087, which is in the receiving drain downstream of the fill area, just upstream of the boundary fence (Figure 1).

Table 2 Results of stormwater samples taken at Value Timber, Bristol Road site

Parameter	Units	8 October 2016	15 Jun 2016	Consent Limits
BOD	g/m³	0.9	1.0	5.0*
Unionised ammonia	g/m³	0.00032	0.00042	-
Ammoniacal nitrogen	g/m³	0.542	0.575	-
рН	рН	6.3	6.4	6-9*
Suspended solids	g/m³	6	5	100
Temperature	Deg C	13.5	13.2	-

Key:

BOD = biochemical oxygen demand

*consent limit at the boundary

The samples taken during the period under review were compliant with consent conditions.

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 Company. During the year matters may arise which require additional activity by the Council, for example 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 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 Incident Register (IR) 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 2015-2016 period, the Council was not required to undertake significant additional investigations and interventions, or record incidents, in association with the Company's conditions in resource consents or provisions in Regional Plans.

3. Discussion

3.1 Discussion of site performance

The site was found to be well managed during the period under review. The silt control was much improved over the previous monitoring period, with the re-establishment of grass cover in the pre-fill gully. During the dry summer months it was found that the silt fence in the stormwater drain/tributary had slumped, and this was addressed.

Sampling of the wood waste indicated that the recent wood wastes disposed of were free of CCAB, and no other unauthorised materials were observed at or near the tip face.

The completed fill area was well vegetated and remained stable with no cracking slumping or ponding noted.

3.2 Environmental effects of exercise of consents

From the information gathered via inspections and sampling, it is unlikely this activity is having a significant adverse effect on the environment. Sample results and observations at inspection found that the silt controls at the site were effective and the discharge was compliant with consent conditions.

3.3 Evaluation of performance

A tabular summary of the consent holder's compliance record for the year under review is set out in Table 3.

Table 3 Summary of performance for consent 7338-1

Pu	Purpose: To discharge up to 5 m³/day of untreated wood-waste onto and into land				
Condition requirement Means of mo		Means of monitoring during period under review	Compliance achieved?		
1.	Only wood waste be discharged at the site	Inspections	Yes		
2.	Volume of wood waste not to exceed 5 m³/day	Inspections and liaison with consent holder	Not assessed		
3.	No treated wood products to be discharged	Inspection and wood waste sampling	Yes		
4.	Value Timber to be only supplier of wood waste	Inspections and liaison with consent holder	Yes		
5.	No direct discharge of contaminants to waterway	Inspection and water sampling	Yes		
6.	Drainage pipes to be installed to certain specifications	Inspection	Yes		
7.	Maintenance of drains	Inspection	Yes		
8.	No fires to be lit at the site	Inspection	Yes		

Purpose: To discharge up to 5 m³/day of untreated wood-waste onto and into land				
Condition requirement Means of monitoring during period under review				
9. Adopt best practice	Inspection and liaison with consent holder	Yes		
Completed fill to be capped to certain specifications	Inspection-upon completion	Yes		
Reinstatement and revegetation of the fill area after completion	Inspection-upon completion	N/A		
12. Fill area not to exceed certain limits	Inspection, fill area within limits	N/A		
Stormwater leaving the fill area to comply with certain parameters	Inspection and sampling	Yes		
14. Option review provision	N/A			
Overall assessment of consent compliance and environmental performance in respect of this consent				
Overall assessment of administrative performance in respect of this consent				

N/A = not applicable

During the year, the Company demonstrated a high level of environmental performance and a high level of administrative performance consents as defined in Section 1.1.4.

3.4 Recommendations from the 2014-2015 Annual Report

In the 2014-2015 Annual Report, it was recommended:

- 1. THAT monitoring of discharges at Value Timber Limited's Bristol Road site in the 2015-2016 year continue at the same level as in 2014-2015.
- 2. THAT the option for a review of resource consent 7338-1 in June 2016, as set out in condition 14 of the consent, not be exercised, on the grounds that the current conditions are adequate to deal with any potential adverse effects.

These recommendations were implemented.

3.5 Alterations to monitoring programmes for 2016-2017

In designing and implementing the monitoring programmes for air and water discharges in the region, the Council has taken into account:

- the extent of information made available by previous authorities;
- its relevance under the RMA:
- its obligations to monitor emissions and discharges and their effects under the RMA; and
- to report to the regional community.

The Council also takes into account 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 and/or discharging to the environment.

It is proposed that for 2016-2017, the programme remains unchanged.

4. Recommendations

1. THAT monitoring of discharges at Value Timber Limited's Bristol Road site in the 2016-2017 year continues at the same level as in 2015-2016.

Glossary of common terms and abbreviations

The following abbreviations and terms may be used within this report:

As* Arsenic B* Boron

BOD Biochemical oxygen demand. A measure of the presence of degradable

organic matter, taking into account the biological conversion of ammonia

to nitrate

CCAB Copper chromium arsenate and boron (wood treatment chemicals)

Condy Conductivity, an indication of the level of dissolved salts in a sample,

usually measured at 20°C and expressed in mS/m.

Cr Chromium Cu* Copper

Fresh Elevated flow in a stream, such as after heavy rainfall.

g/m³ Grams per cubic metre, and equivalent to milligrams per litre (mg/L). In

water, this is also equivalent to parts per million (ppm), but the same does

not apply to gaseous mixtures

IR 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

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

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

NH₄ Ammonium, normally expressed in terms of the mass of nitrogen (N)

NH₃ Unionised ammonia, normally expressed in terms of the mass of nitrogen (N)

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

Resource consents 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 including all subsequent amendments

SS Suspended solids

Temp Temperature, measured in °C (degrees Celsius)

*an abbreviation for a metal or other analyte may be followed by the letters '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.

Bibliography and references

- Taranaki Regional Council (2016): *Value Timber Limited Monitoring Programme Annual Report* 2014-2015. Technical Report 15-73
- Taranaki Regional Council (2015): *Value Timber Limited Monitoring Programme Annual Report* 2013-2014. Technical Report 14-80
- Taranaki Regional Council (2013): *Value Timber Limited Monitoring Programme Annual Report* 2012-2013. Technical Report 13-38
- Taranaki Regional Council (2012): *Value Timber Limited Monitoring Programme Annual Report* 2011-2012. Technical Report 12-23
- Taranaki Regional Council (2011): *Value Timber Limited Monitoring Programme Annual Report* 2010-2011. Technical Report 11-78
- Taranaki Regional Council (2010): *Value Timber Limited Monitoring Programme Annual Report* 2009-2010. Technical Report 10-39
- Taranaki Regional Council (2009): *Value Timber Limited Monitoring Programme Annual Report* 2008-2009. Technical Report 09-82
- Taranaki Regional Council (2009): Officer Report 7338-1

Appendix I

Resource consents held by Value Timber Limited

(For a copy of the signed resource consent please contact the TRC consent department)

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

Name of Value Timber Supplies Limited

Consent Holder: P O Box 3246

NEW PLYMOUTH

Consent Granted

Date:

29 July 2008

Conditions of Consent

Consent Granted: To discharge up to 5 cubic metres per day of untreated

wood-waste onto and into land at or about (NZTM)

1707820E-5666476N

Expiry Date: 1 June 2027

Review Date(s): June 2010, June 2013, June 2016, June 2019

Site Location: Bristol Road, Inglewood

Legal Description: Sec 15 Moa Dist Blk I Huiroa SD

Catchment: Waitara

Tributary: Manganui

Kurapete

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 exercise of this consent shall be limited to the discharge of wood shavings, sawdust, bark and incidental soil from untreated timber only. The discharge of any other material/contaminants is prohibited.
- 2. The volume of waste discharged shall not exceed 5 cubic metres per day.
- 3. Treated wood waste or wood products shall not be discharged to the site.
- 4. The consent holder shall be the sole discharger of wood waste to the site and the Value Timber Supplies Limited sawmill plant of Inglewood shall be the sole source of the wood waste disposed at the site. No other waste streams or sources are permitted to discharge on the site.
- 5. The discharge to land shall not result in any contaminant directly entering surface water.
- 6. Any culverts or pipes installed by the consent holder that channel stormwater or spring water beneath the fill area, shall be completely enclosed in at least 200 mm of compacted clay to prevent leachate and to minimise the possibility of leachate entering the pipe or culvert. No culverts or pipes are permitted to be in direct contact with the wood waste fill material.
- 7. The consent holder shall maintain stormwater drains, culverts, sediment detention pond, and/or ground contours at the site, in order to minimise stormwater movement across, or ponding on the site to the reasonable satisfaction of the Chief Executive, Taranaki Regional Council.
- 8. The consent holder shall ensure that fires are not lit at the site, and if a fire does occur at the site that the Chief Executive, Taranaki Regional Council, is informed immediately.

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- 9. Notwithstanding any conditions within this consent, 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.
- 10. At the completion of each stage the consent holder shall cap the filled area with at least 300 mm of compacted clay and 100 mm of topsoil. Each stage shall be contoured in a manner that minimises ponding and allows stormwater to flow away from the capped area.
- 11. Upon the completion of all filling operations the entire site shall be reinstated to the reasonable satisfaction of the Chief Executive, Taranaki Regional Council. This includes, but is not limited to, appropriate final contouring and re-vegetation of the site, maintenance of stormwater drains and culverts, and the installation of systems to control and treat any leachate arising from the filled area.
- 12. That the filling operations shall not extend downstream of a point on or about 1707822E-5666653N (approximately 50 metres before the gully enters the neighbouring property).
- 13. Any stormwater discharging downstream of the fill area shall meet the following standards.
 - a) biochemical oxygen demand shall not exceed 5.0 g/m³;
 - b) suspended solids shall not exceed 100 g/m³; and
 - c) a pH range of 6.0 to 9.0.
- 14. 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 2013 and/or June 2016 and/or June 2019 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 July 2008

For and on behalf of
Taranaki Regional Council
Director-Resource Management