Lower Waiwhakaiho
Air Discharges
Compliance Monitoring Programme
Annual Report
2019-2020

Technical Report 2020-39

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Executive summary

The Lower Waiwhakaiho area of New Plymouth accommodates several industries that include two abrasive blasting operations and an asphalt plant. The companies hold resource consents to allow them to discharge emissions into the air. This report for the period July 2019 to June 2020 describes the monitoring programme implemented by the Taranaki Regional Council (the Council) to assess the companies' environmental performance during the period under review, and the results and environmental effects of the companies' activities in relation to emissions to the air.

The companies monitored during the period under review were Downer EDI Works Ltd, Dialog Fitzroy Ltd, and Katere Surface Coatings Ltd.

The companies hold three resource consents, which include a total of 72 special conditions setting out the requirements that the companies must satisfy.

The Council's monitoring during the year under review included 10 inspections and two deposition gauge surveys.

Overall, the companies assessed in this Lower Waiwhakaiho Air Discharge Compliance Monitoring Programme demonstrated a high level of environmental performance.

The deposition gauge surveys found that, in relation to dust resulting in deposited particulates, ambient air quality in the area during the year under review was high.

During the year, Downer EDI Works Ltd demonstrated a high level of environmental and administrative performance with their resource consent. Overall, the site was found to be well maintained.

During the year, Dialog Fitzroy Ltd demonstrated a high level of environmental and high administrative performance. Overall, there was a measured improvement in site management.

During the year, Katere Surface Coatings Ltd demonstrated a high level of environmental performance and a high level of administrative compliance with their resource consent. Overall, there was an improvement in site management.

For reference, in the 2019-2020 year, consent holders were found to achieve a high level of environmental performance and compliance for 81% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 17% of the consents, a good level of environmental performance and compliance was achieved.

This report includes recommendations relating to monitoring in the 2020-2021 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 the Annual Report for the period July 2019 to June 2020 by the Taranaki Regional Council (the Council) describing the results of the monitoring programme associated with the air discharge permits held by three industries in the Lower Waiwhakaiho area. The monitoring covers emissions to air from the companies' activities in the Fitzroy area of New Plymouth.

Since 1 October 1991, with the enactment of the *Resource Management Act 1991* (RMA), the Council has been the agency with primary responsibility for air quality management in the Taranaki region. Early in 1992, the Council initiated air quality monitoring programmes for industries holding discharge permits, and has subsequently issued and monitored air discharge permits for a number of other industrial and trade premises.

The Council began monitoring some of the industries in the Lower Waiwhakaiho area in 1992. This report is the 27th Annual Report to be prepared by the Council to cover the companies' air discharges and their effects. It is the 19th Annual Report to deal with emissions in the area as a combined monitoring report.

A separate report covers the results and findings of the Council's monitoring programmes associated with the water discharge permits held by some of these companies[1].

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 companies in the Lower Waiwhakaiho area;
- the nature of the monitoring programme in place for the period under review; and
- a description of the activities and operations conducted in the companies' site/catchment.

Each company's activity is then discussed in a separate section (Sections 2 to 4).

In the subsections for each company (e.g. Section 2.1) there is a general description of the industrial activity and its discharges, an aerial photograph or map showing the location of the activity, and an outline of the matters covered by the company's air discharge permit.

Subsection 1 provides a process description for each company.

Subsection 2 presents the results of monitoring of the companies' activities during the period under review, including scientific and technical data.

Subsection 3 discusses the results, their interpretation, and their significance for the environment in the immediate vicinity of the site under discussion.

Subsection 4 presents recommendations to be implemented in the 2020-2021 monitoring year.

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[1] Lower Waiwhakaiho Catchment Monitoring Programme Annual Report, 2019-2020

Section 5 presents the results and findings in relation to any investigations, interventions, and incidents relevant to the Lower Waiwhakaiho area and discusses the deposition gauge results, their interpretation, and their significance for the environment in the Lower Waiwhakaiho area as a whole.

Section 6 presents a summary of recommendations made in relation to the monitoring of each company's activities.

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

Environmental performance is concerned with actual or likely effects on the receiving environment from the activities during the monitoring year. Administrative performance is concerned with the company's approach to demonstrating consent compliance in site operations and management 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 and 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 interpretation, 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 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 during investigations of incidents reported to the Council by a third party 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 during investigations of incidents reported to the Council by a third party. 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 during investigations of incidents reported to the Council by a third party. 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 failure to do this had trivial consequences and were addressed promptly and co-operatively.

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 2019-2020 year, consent holders were found to achieve a high level of environmental performance and compliance for 81% of the consents monitored through the Taranaki tailored monitoring programmes, while for another 17% of the consents, a good level of environmental performance and compliance was achieved.[2]

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[2] The Council has used these compliance grading criteria for 15 years. They align closely with the 4 compliance grades in the MfE Best Practice Guidelines for Compliance, Monitoring and Enforcement, 2018

1.2 Resource consents

Section 15(1)(c) of the RMA stipulates that no person may discharge any contaminant from any industrial or trade premises into air, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations.

A list of the companies holding air discharge permits monitored as part of the Lower Waiwhakaiho Air Discharges Compliance Monitoring Programme is given in Table 1, and their locations are shown in Figure 1. Copies of the full consents are included (in alphabetical order) in Appendix I.

Table 1 Air discharge permits in the Lower Waiwhakaiho

Consent Holder	Consent No	Description	Granted	Next Review Date	Expiry Date
Air discharge permits					
Downer NZ Ltd	4060-4	To discharge emissions into the air from the manufacture of hot mix asphalt paving mixes and associated activities	March 2005	-	June 2020
Dialog Fitzroy Ltd (formerly Fitzroy Engineering Group Ltd)	4025-3	To discharge emissions into the air from abrasive blasting operations and associated activities at the Dialog Fitzroy Ltd factory site and from yard blasting operations and from mobile abrasive blasting at various locations throughout the Taranaki region	November 2006	-	June 2020
Katere Surface Coatings Ltd	4475-2	To discharge emissions to air from abrasive blasting and surface coating activities at a permanent site located at Katere Road, New Plymouth and from mobile operations throughout the Taranaki region including within the Coastal Marine Area at Port Taranaki	February 2009	-	June 2020

1.3 Monitoring programme

1.3.1 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 air quality monitoring programme for the industries in the Lower Waiwhakaiho area consisted of up to three primary components.

1.3.2 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;

- discussion over monitoring requirements;
- preparation for any consent reviews, renewals or new consent applications;
- advice on the Council's environmental management strategies and content of regional plans; and
- consultation on associated matters.

1.3.3 Site inspections

Each site was visited up to four times during the monitoring period. 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. The neighbourhood was surveyed for environmental effects.

1.3.4 Particulate deposition monitoring

Atmospheric particulate matter can arise from a number of sources, both natural and from human activity, for example vegetation pollens, smoke and ash, sea spray, dust from soils and paved surfaces, and manufacturing processes. While extremely fine particles may remain floating in the atmosphere for weeks or months, coarser dusts may settle out within timeframes ranging from a few seconds to minutes.

The environmental effects of dusts include loss of visibility, loss of the amenity and aesthetic values of a 'clear sky', irritation to breathing, and soiling of surfaces. It has been found that background rates of dust deposition in rural areas of New Zealand are typically 0.1-1.5 g/m^2/30 days, while in urban areas rates are generally higher, in the range of 0.6-3.0 g/m^2/30 days. From experience, rates above 3-4 g/m^2/30 days tend to lead to complaints by neighbours over the objectionable or offensive nature of dust emissions from particular sources.

Many industries emit dust from various sources during operational periods. In order to assess the effects of the emitted dust, industries have been monitored using deposition gauges. From past results of deposition gauging it is likely that factors including seasonal weather variations, vehicle traffic about the site and the type of work being conducted can have some effect on the results.

Deposition gauges are basically buckets elevated on a stand to about 1.6 m. The buckets have a solution in them to ensure that any dust that settles out of the air is not re-suspended by wind. During processing, any insects and/or vegetative matter is removed by a 150 µm filter.

As a part of the Lower Waiwhakaiho Air Discharge Compliance Monitoring Programme, deposition gauges were placed in the vicinity of selected sites on two occasions during the year, and the collected samples were analysed for deposited particulate. The monitoring locations are shown in Figure 1. The gauges were left in place for approximately three weeks, on two separate occasions.

Figure 1 Location of industries holding air discharge permits, regional landfill and monitoring sites within the Lower Waiwhakaiho area

Photo 1 Examples of a deposition gauge set up and recovered filter pads

The rate of dustfall is calculated by dividing the weight of insoluble material (grams) collected by the cross-sectional area of the gauge m^2 and the number of days over which the sample was taken. The units of measurement are $g/m^2/day$.

Guideline values used by the Council for dust deposition are 4 g/m^2/30 days or 0.13 g/m^2/day deposited matter. Consideration is given to the location of the industry and the sensitivity of the surrounding community, when assessing results against these values. This guideline value has been incorporated as a limit in the companies' consents.

1.4 Incidents, investigations, and interventions

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 companies. 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 causes of non-compliance or failure to maintain good practices. A pro-active approach, that in the first instance avoids issues occurring, is favoured.

For all significant compliance issues, as well as complaints from the public, the Council maintains a database record. The record includes events where the individual/organisation concerned has itself notified the Council. Details of any investigation and corrective action taken are recorded for non-compliant events.

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 individual/organisation is indeed the source of the incident (or that the allegation cannot be proven).

Details of incidents, investigations and interventions are provided under each Company's section of this report.

2 Downer EDI Works Ltd

2.1 Introduction

2.1.1 Process description

The purpose of the Downer EDI Works Ltd (Downer) plant is to produce asphalt for use on roads and driveways etc. A permanent drum mix plant has replaced the batch plant and mobile plant that were formerly in use at the site.

The asphalt production is achieved by the following processes. The plant is a parallel-flow drum mix plant consisting of a rotary drum (which is used to both dry and heat the aggregate and to mix the hot aggregate with bitumen), a dual fuel burner and integral combustion air fan, a bitumen drum injection system and expansion box. Aggregate is transferred into the rotating drum at the burner end and then travels down the slightly inclined rotating drum where products of combustion and excess air dry and heat the aggregate. The drum is fitted with flights, which achieve a lifting motion ensuring good contact between the drying gases and the aggregate. Hot liquid bitumen is injected into the drum about half way down. A steam barrier from the drying aggregate, and burner design, prevents the burner from impinging on the hot bitumen. Hot mix temperatures range from 135 °C to 170°C depending on the blend, and mixes generally contain about 5% bitumen. The product is removed continuously by a conveyor at the end of the drum and is transferred to insulated storage bins prior to discharge into trucks.

The spraying of bitumen into the aggregate, and the steam generated by drying the aggregate removes a substantial proportion of the entrained dust. The combustion products, dust, bitumen volatiles, and pyrolysis products are drawn through an expansion box where large dust particles settle out and drop into the aggregate/bitumen mix. The emissions then pass through a venturi water scrubber, which injects water into the exhaust gas stream and centrifugally separates out the water/dust prior to discharge from the 17 m stack.

Road patching mix can be manufactured in a pugmill serviced via a by-pass conveyor.

The current drum mix plant was installed in 2006. It has a maximum production rate of 80 tonnes per hour, but is normally operated at around 50 tonnes per hour, with the typical annual operating time being around 200 to 400 hours per year.

The major components of this drum mix plant were either new or refurbished, with only items such as the aggregate storage facilities, control room and weighbridge being existing facilities. The scrubber settling ponds, although existing, were deepened to increase retention/settling time.

The drum burner for this plant operates primarily on natural gas but is equipped with dual fuel capability. The plant is able to operate on diesel oil, primarily to give some commercial advantage when negotiating fuel contracts. The burner has a rated capacity of 12 MW gross, but the plant requires only 7 MW gross on average at the plant's maximum production rate of 80 tonnes per hour.

Diesel and kerosene are not blended or stored at the site but at Port Taranaki. If diesel firing of the dual fuel drum burner was required, the consent holder advised that the existing self bunded (double skinned) 10,000 litre fuel tank would be used for fuel storage.

The plant is designed to be capable of processing recycled asphalt, and Downer indicated that they may want to introduce this at a later date. However, no information was provided to the Council at the time of their resource consent application regarding the potential effects from the processing of recycled asphalt paving and so it is not currently permitted by their consent.

The main potential issues associated with the discharges to air from the site are particulates, silica, organic compounds, carbon monoxide, nitrogen oxides and sulphur dioxide.

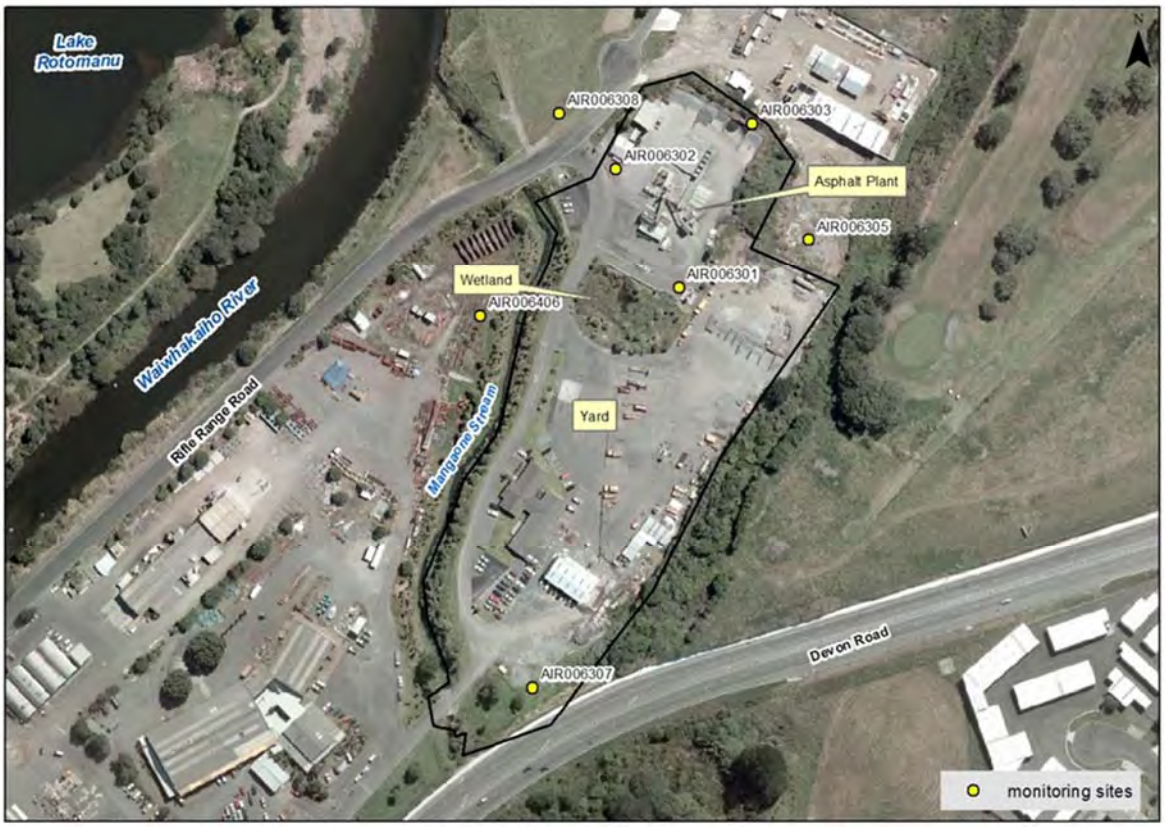


Figure 2 Location of Downer EDI Works Ltd and related deposition gauge sites

In addition to the emissions from the asphalt plant itself during normal operation, the main sources of additional particulates are:

- storage and movements of aggregate and crusher dust, the effects of which are mitigated by keeping the materials damp;
- washing out of the drum between substantially different batches of asphalt;
- run-out of aggregate loaded in excess of requirements;
- fugitive emissions, which are controlled by ensuring that adequate monitoring and maintenance is undertaken by operators at the site, and
- mobilisation of dust from the yard surface due to truck movements. The roads and yard areas have been progressively hard paved and these surfaces are kept damp when appropriate. The yard has been equipped with water sprays to assist in minimising dust during windy weather. Spillage of aggregate is scraped up and the area washed down as necessary. A speed limit of 10 km/h has been imposed to reduced dust generation from vehicle movements in dry weather.

Some of the total organic carbon (TOC) emissions can produce a noticeable odour, however it is expected that these odours would dissipate sufficiently so that they are not considered to be offensive beyond the boundary of the site. Bitumen odour can be apparent beyond the boundaries of the premises resulting from the dumping of hot mix or patching mix into waiting trucks. When the material is deposited in the truck, a moderate cloud of bitumen smoke may drift downwind. This event is of short duration.

Most of the sulphur dioxide and nitrogen oxides produced by the burning of fossil fuels in the plant are removed by the water scrubber in the cyclone.

Ground level concentrations of carbon monoxide and silica are estimated to be well below relevant guidelines.

2.2 Results

2.2.1 Inspections

Three inspections were carried out in the 2019-2020 period; these were conducted on the 20 November 2019, 25 February 2020 and 6 May 2020. Results from the inspections are below.

20 November 2019

An inspection was undertaken in fine weather with light westerly wind conditions. The site was clean and tidy and the scrubber had been used prior to the visit. All runoff from the site was being directed to the stormwater drains and then to separators to allow for treatment before being discharged. All truck wash-down was captured and discharged to trade waste. The treatment wetland at the southern end of the site was in good condition. The stormwater settling ponds were discharging a low, turbid flow at the time, and following discussions with staff onsite, the discharge valve was closed to allow for sediment to settle out prior to discharge. No visual impacts were noted in the receiving waters downstream. There were no odour or dust issues onsite.

The site was tidy and compliant with resource consent conditions at the time of inspection.

25 February 2020

An inspection of the yard and plant was carried out in fine weather with light SW wind conditions. The site was tidy and clean with no issues noted. No offensive or objectionable odour or dust was observed during the visit, and the plant was tidy and well maintained. Advice was given regarding the requirements of the annual stack emissions testing and reporting.

Overall, the site was compliant with resource consent conditions at the time of inspection.

6 May 2020

An inspection was undertaken in fine weather with light wind conditions. The plant was in operation at the time and hot mix was being loaded out. Intergroup were onsite cleaning the stormwater settling ponds, which weren't discharging to the Mangaone Stream. The yard was clean and tidy with no evidence of spills. Emissions stack testing was scheduled to be completed, but had been delayed by the COVID-19 restrictions. No odour or dust issues were noted onsite during the inspection.

Overall, the site was compliant with resource consent conditions at the time of inspection.

2.2.2 Results of receiving environment monitoring

2.2.2.1 Deposition gauging

Deposition gauges were deployed on two occasions during the monitoring period. The first deployment began in January 2020 and lasted 21 days. The second deployment began in February 2020 and lasted 22 days.

A site map marking the location of the gauges around the Downer site is shown in Figure 2, with the monitoring site locations also described in Table 2.

Material from the gauges was analysed for solid particulates with the results shown in Table 3. The prevailing wind directions during the surveys is included in Appendix II.

Table 2 Downer EDI Works Ltd air monitoring site locations

Site code	Location description	At or beyond site boundary
AIR006301	Approx. 80 m SE of asphalt plant	Inside boundary
AIR006302	NW of asphalt plant approx. 10 m from Rifle Range Road	Inside boundary
AIR006303	NE of asphalt plant approx. 50 m along screening bank	Inside boundary
AIR006305	East. Near golf course track	Outside boundary
AIR006307	Between southern site entrance and Devon Road	Inside boundary

For an industry such as this, relatively high deposition rates are expected due to handling and processing of aggregate material. As can be seen from Table 3, two of the ten samples collected and analysed during the year under review exceeded the Council's recommended guideline value of 0.13 g/m^2/day, or the consent limit of 4 g/m^2/30 days for deposited particulate at monitoring locations at the site boundary.

January 2020 survey

All sites sampled were within the guideline limit during the January survey, and the material collected ranged from brown to dark brown with vegetative matter present in some gauges.

The appearance of the particulate matter collected was consistent with re-suspended yard dust from the surrounding area and vegetation.

February 2020 survey

Two gauges (sites AIR006303 and AIR006305) showed elevated rates at or above the guideline limit during the February survey.

The material collected ranged from green brown to dark brown. The appearance of the particulate matter collected was consistent with a high input from vegetation as opposed to re-suspended yard dust.

Table 3 Deposition gauge results from around the Downer EDI Works Ltd site

Site ID	Dust deposition rate (g/m^2/day)	
	Run 1 from 07/01/2020 to 28/01/2020	Run 2 from 05/02/2020 to 27/02/2020
AIR006301	0.03	0.07
AIR006302	0.08	0.10
AIR006303	0.09	**0.25**
AIR006305	0.07	**0.22**
AIR006307	0.04	0.05
Guideline value:	0.13 g/m^2/day	

Key: Results in bold are at recommended guideline value

2.2.3 Investigations, interventions, and incidents

Table 4 below sets out details of any incidents recorded, additional investigations, or interventions required by the Council in relation to Downer's activities during the 2019-2020 period. This table presents details of all events that required further investigation or intervention regardless of whether these were found to be compliant or not.

Table 4 Incidents, investigations, and interventions summary table

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
February 2020	Exceedance in deposition rate	Y	None	Likely as a result of vegetative matter found in the gauge and re-suspended yard dust from the surrounding area.

2.3 Discussion

2.3.1 Discussion of site performance

Routine compliance monitoring inspections during the year under review found that activities at the site were well managed. There were no offsite effects found from either dust or odour due to Downer's activities at the time of inspection. The asphalt plant was in operation on one of the three compliance monitoring inspections undertaken.

In terms of potential dust issues, it is considered that activities at the site were generally well managed. There were two exceedances of the particulate deposition rate guideline value, or the consent limit, however these results were attributed to the presence of vegetative matter as opposed to dust from site activities.

There were no dust or odour complaints received by the Council.

2.3.2 Environmental effects of exercise of consents

Deposition gauging was conducted for the 60th and 61st time during the 2019-2020 monitoring year around the Downer site.

The results from the dust deposition gaugings show that of the ten samples collected during the 2019-2020 period, two were in excess of the particulate deposition rate guideline values adopted by the Council (Figure 3). However, the results could not be directly attributed to Downer's site; rather the high particulate deposition was more likely due to vegetation input and yard dust re-suspension from the wider area. Predominant winds during the first gauging period were split between south and south easterlies and westerlies. During the second period this was split between southerlies and westerlies (Appendix II). Particularly due to these variable winds, the neighbouring properties cannot be discounted as potential contributors to the high deposition rate.

It is noted that there were no complaints received by the Council in relation to dust issues from the Downer site during the 2019-2020 year.

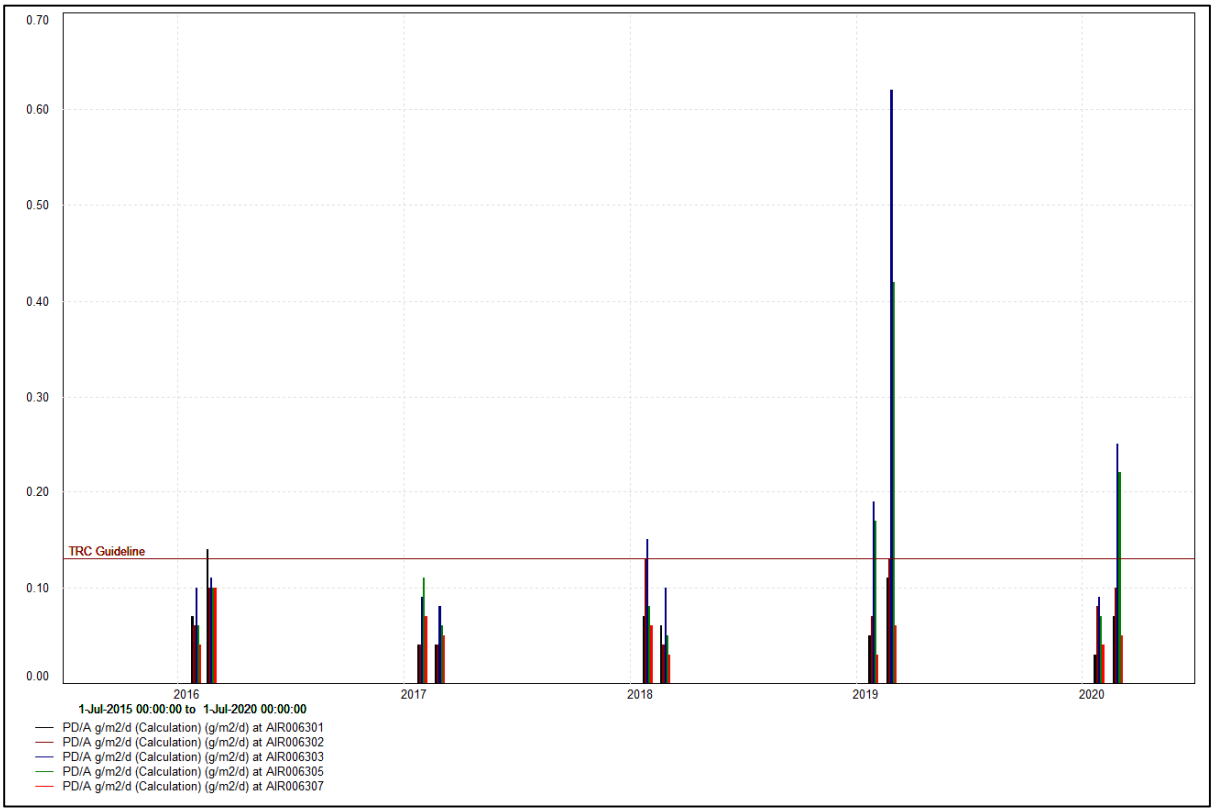


Figure 3 Deposition gauge results at Downer EDI Works monitoring sites (July 2016 – July 2020)

2.3.3 Evaluation of performance

A tabular summary of Downer's compliance record for the year under review is set out in Table 5.

Table 5 Summary of performance for Consent 4060-4, Downer EDI Works Ltd discharge of emissions to air

Purpose: ***To discharge emissions to air from the manufacture of hot mix asphalt paving mixes and associated activities***		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Exercised in accordance with the application	Inspection	Yes
2. Adoption of action likely to minimise adverse effects on the environment	Inspection, liaison with consent holder	Yes
3. Approval prior to alterations to plant or processes	Inspection and liaison with consent holder	N/A
4. Prohibition of recycled asphalt processing	Inspection and liaison with consent holder	Yes
5. Reduction of noxious emissions through six monthly burner maintenance	Discussed during inspection	Yes
6. Operation using waste oil not permitted	Inspection and liaison with consent holder	Yes

Purpose: *To discharge emissions to air from the manufacture of hot mix asphalt paving mixes and associated activities*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
7. Sulphur content of fuel	Discussed during inspection. Diesel not used in asphalt plant	Yes
8. Treatment prior to gas discharge	Inspection found emissions captured and treated satisfactorily. No complaints received. Emissions monitoring undertaken twice during the monitoring period	Yes
9. Stack emissions testing between 2016-2020	Review of documentation provided to the Council. Plant conditions required for monitoring clarified	N/A
10. Definition of methodology to be used for stack emissions testing	Review of documentation provided to the Council	N/A
11. Particulate deposition rate at site boundary	Deposition gauge monitoring	Two of ten gauges above limit, but attributed to vegetation input
12. Objectionable odour or level of dust not permitted at site boundary	Inspection and observation when inspecting officer is in the vicinity of the site on other business	Yes
13. Definition of factors constituting an objectionable odour	N/A	N/A
14. Limit on suspended particulate matter at or beyond boundary	No visible dust at boundary at inspection	Yes
15. No noxious or toxic levels of airborne contaminants at site boundary	Inspection and observation when inspecting officer is in the vicinity of the site on other business	Yes
16. Control of ground levels of nitrogen dioxide	Future monitoring as required	N/A
17. Control of ground levels of sulphur dioxide	Compliance previously demonstrated, and consent holder did not use diesel during year under review	N/A
18. Minimisation of dust emissions from aggregate and crusher dust through treatment and shielding	Inspection and observation when inspecting officer is in the vicinity of the site on other business. No dust complaints received	Yes
19. Cleaning of yard	Inspection and observation when inspecting officer is in the vicinity of the site on other business. No dust complaints received	Yes
20. Duration of smoke discharges	Inspection and observation when inspecting officer is in the vicinity of the site on other business. No complaints received regarding visible emission/smoke	Yes

Purpose: *To discharge emissions to air from the manufacture of hot mix asphalt paving mixes and associated activities*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
21. Maintenance of equipment important to controlling emissions	Information discussed at inspection and observation when inspecting officer is in the vicinity of the site on other business	Yes
22. Inspection of water scrubber and settling pond	Discussed at inspection	Yes
23. Maintenance of a log	Discussed at inspection	Yes
24. Availability of log to Chief Executive of the Council	Available on request	Yes
25. Maximum temperature in hotmix drum	Inspection and liaison with consent holder	Yes
Overall assessment of consent compliance and environmental performance in respect of this consent		**High**
Overall assessment of administrative performance in respect of this consent		**High**

During the year, the Downer EDI Works Ltd demonstrated a high level of environmental performance and administration performance and compliance with their resource consent, as defined in Section 1.1.5. No unauthorised incidents were recorded in relation to their activities on the site. The likely environmental effects of this discharge were considered to be low to negligible.

Although there were exceedances of the particulate deposition rate recorded, these were considered to be a result of vegetation input and yard dust re-suspension from the surrounding area, and no complaints were received in relation to their activities during the year.

2.3.4 Recommendations from the 2018-2019 Annual Report

In the 2018-2019 Annual Report, it was recommended:

1. THAT monitoring of consented activities at the Downer EDI Works Ltd site in the 2019-2020 year continues at the same level as in 2018-2019.
2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation 1 was implemented, while there was no requirement for additional work as allowed for in Recommendation 2.

2.3.5 Alterations to monitoring programmes for 2020-2021

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

- the extent of information already made available through monitoring or other means to date;
- its relevance under the RMA;
- the Council's obligations to monitor consented activities and their effects under the RMA;
- the record of administrative and environmental performances of the consent holder; and
- reporting 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 exercising resource consents.

It is proposed that for the 2020-2021 year the programme continues at the same level as in 2019-2020.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2020-2021.

2.4 Recommendation

1. THAT monitoring of consented activities at the Downer EDI Works Ltd site in the 2020-2021 year continues at the same level as in 2019-2020.
2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

3 Dialog Fitzroy Ltd

3.1 Introduction

3.1.1 Process description

Dialog Fitzroy Ltd (formerly known as Fitzroy Engineering Group Ltd) carries out abrasive blasting to clean and prepare surfaces for painting. The process involves blasting "garnet", an abrasive sand-like substance, onto the surface of the object in question. Material from the blasting process becomes airborne due to the release of high pressure air used to accelerate the abrasive media to the required cleaning velocities. Spray painting is also carried out on the site.

Emissions from abrasive blasting operations have the potential to cause nuisance and possible health risks, especially when conducted within populated areas. The Dialog Fitzroy permanent site is within an industrial area. The environmental effects of dusts can include loss of visibility, loss of the amenity and aesthetic values of a `clear sky', irritation to breathing, and soiling of surfaces. In the case of dust emissions from Dialog Fitzroy's blasting operation, there is also the potential for the dust to contain metals such as lead, zinc and chromium from the surface of the items blasted. The potential for lead to be contained in the dust has been significantly reduced as Dialog Fitzroy now undertakes lead testing as a matter of course. If a positive result is obtained, special procedures apply to contain and dispose of the debris in accordance with Department of Labour Guidelines. Dialog Fitzroy has also informed Council that the blasting of chromium items is not undertaken.

Dialog Fitzroy has carried out abrasive blasting in the permanent facilities and in the yard at their site on Rifle Range Road, New Plymouth since 1990, and also undertakes abrasive blasting work on fixed items at various locations throughout the Taranaki region (mobile blasting).

At the Dialog Fitzroy site there is a permanent facility called the "grit room". The grit room has a wet scrubber unit on its discharge outlet to minimise emissions to the atmosphere. The wet scrubber was commissioned in July 1995. The canvas curtains at the north-east end of the building were replaced by solid doors during the 1998-1999 monitoring period. These doors more effectively contained dust emissions from the operation. The grit room is now used very infrequently, and was not used at all during the year under review.

Dialog Fitzroy has another facility on its premises to provide for unusually sized and/or shaped objects. This facility is called the "garnet shed". A scrubber tower and spray system was installed to mitigate emissions from the garnet shed in June 2000, which was expected to provide a decrease in particulate levels on and off site. An upgrade was carried out in January 2003 when a stack extension, incorporating a third ring of water spray nozzles, was added. Further upgrades were undertaken during the 2005-2006 year when it was found that the discharge from the stack did not comply with condition 7, limiting the particulate emissions to less than 125 mg/m^3. The upgrade consisted of a reduction in nozzle size to achieve a more effective droplet size, and changing the spray configuration from a circumferential pattern to a centrally located arrangement. These upgrades were intended to generate a more effective water mist within the tower. Spent garnet and waste removed from the bottom of the scrubber towers was stored in bags in the yard, which were then disposed of by a contracted company on an as required basis.

In 2015, a new 'Blastquip' fabric filter air treatment system was installed at the garnet shed (Photo 2). This new system is considered to be the best practicable option for air treatment and a significant improvement from the wet scrubber system. Essentially, air is extracted from the roof at the northern end of the shed and directed through a filter system. The treated air is then returned to the shed at the southern end of the roof. The system is largely 'closed loop'; however, some of the treated air is discharged to the atmosphere with ambient air introduced into the shed, in order to control the shed temperature.

Photo 2 Blastquip fabric filter air treatment system at Dialog Fitzroy

The 'Blastquip' system has since been inspected by an external consultant from JCL Air and Environment Ltd in order to assess the feasibility and necessity of emission monitoring. Due to a number of factors, the consultant determined that emission monitoring was not feasible. Furthermore, the system's specifications provided by Blastquip indicated that the particulate concentration of treated air would be around 0.1 mg/m^3; well below the guideline level of 125 mg/m^3. Instead, the consultant's recommendation was to require compliance of the consent holder through the implementation of a management plan for the 'Blastquip' air treatment system. All these recommendations were set out as new conditions in a consent change in June 2016. They have subsequently been implemented.

Yard blasting is carried out when items cannot be blasted within the grit room or garnet shed. The yard areas on site are predominantly gravel, and therefore any sandblasting material spilt or deposited on site from aerial emissions is difficult to manage, and may be re-suspended by wind or vehicle movements. A substantial area of the yard near the offices at the Rifle Range Road end of the site was sealed during the 2002-2003 monitoring period.

The containment of emissions from yard and mobile blasting is limited to the use of screens, tarpaulins and other similar methods of airborne particulate suppression due to the temporary nature of the work being carried out.

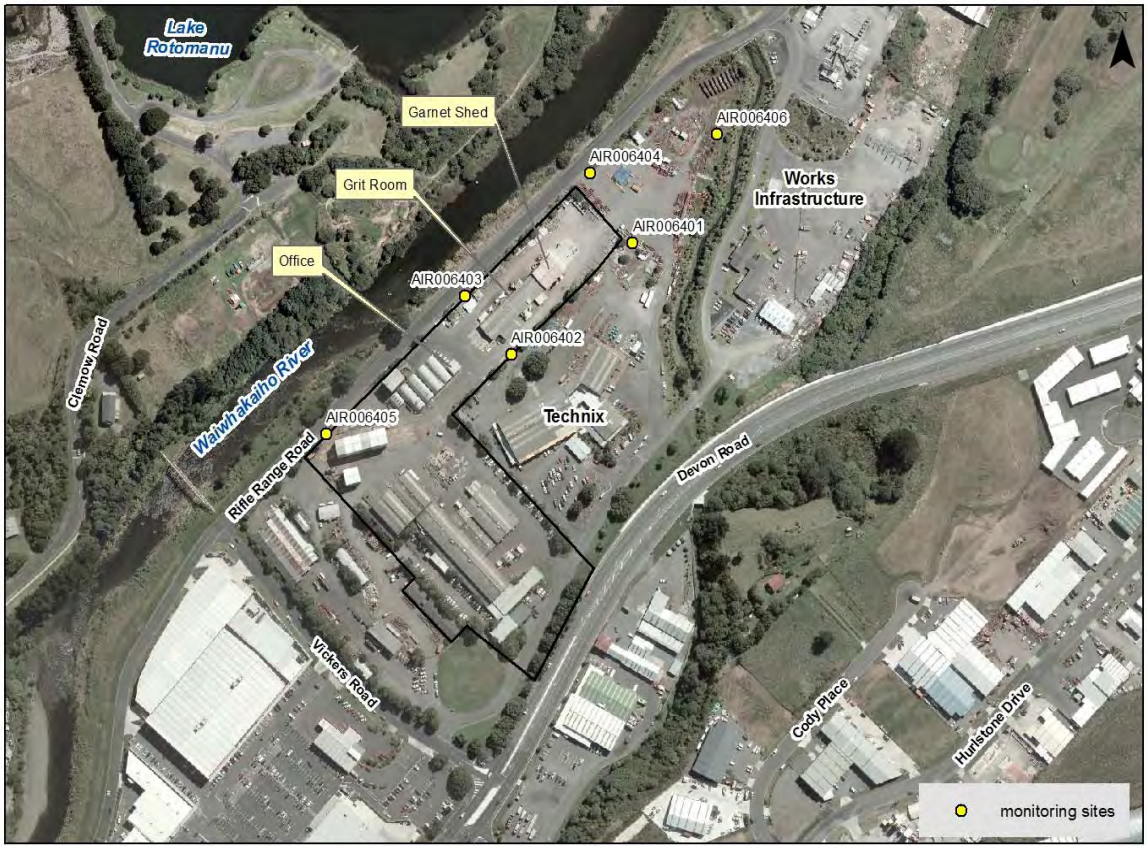


Figure 4 Dialog Fitzroy Ltd site and deposition gauge locations

3.2 Results

3.2.1 Inspections

Four routine compliance monitoring inspections were undertaken during the 2019-2020 year, on 2 July 2019, 12 September 2019, 15 January 2020 and 24 March 2020. Inspections were undertaken in relation to monitoring of the stormwater consent for the site, which was previously reported here but is now included in Dialog Fitzroy's section of the Lower Waiwhakaiho Catchment Monitoring Report.

There is also provision for a further inspection of mobile blasting operations to be undertaken by the Council if notification of mobile blasting is received. No mobile blasting notification was received, and as such no inspections were required.

2 July 2019

An inspection was undertaken in cool weather with light wind conditions. The site was generally tidy with all equipment stored appropriately. The stormwater catchment drains contained filter socks, and it was noted that these required maintenance. It was also advised that there was a noticeable amount of dust and blasting garnet built up on the yard and around the sandblasting/painting areas which required maintenance to ensure these contaminant were not being discharged to the stormwater system. Inspection of the site found that dust control sprinklers were missing or damaged, which had the potential to cause issues during drier months. A recommendation was made to ensure these remained in working order.

The site was compliant with resource consent conditions at the time of inspection.

12 September 2019

An inspection was carried out in fine weather. The yard was relatively clean and tidy, with some garnet residue noted around the sandblasting workshop, however staff onsite advised that housekeeping in this area was scheduled to be carried out. Filter socks were in place on all stormwater drains and were due for maintenance. There were no dust issues noted on or off the site during the visit.

The site was compliant with resource consent conditions at the time of inspection.

15 January 2020

An inspection was carried out in fine weather with light SW wind conditions. The site was tidy and clean and it was noted that there had been a significant improvement in general housekeeping from the previous visit. No blasting residue was noted around the buildings or yards. Filter socks were in place on all stormwater drains and showed signs of recent maintenance. The stormwater discharge points offsite were dry and not discharging, however it was noted that there was evidence of a small amount of garnet build-up in these areas. The fuel storage area was tidy with no sign of spills. A dust survey was undertaken at the time of the visit and no dust of odours were detected either on or off the site.

The site was compliant with resource consent conditions at the time of inspection.

24 March 2020

An inspection was carried out in fine weather with high cloud and light NW wind conditions. The site was clean and tidy with very little blasting residue noted around the buildings. Filter socks were in place on all stormwater drains and in satisfactory condition. The stormwater system was not discharging at the time. No offensive or objectionable odour or dust was noted during the visit.

The site was compliant with resource consent conditions at the time of inspection.

3.2.1.1 Mobile blast inspections

No notification was received by the Council regarding mobile blasting being undertaken by Dialog Fitzroy during the year under review and therefore, no inspections were carried out in relation to this activity.

3.2.2 Provision of company data

3.2.2.1 Operation, Management and Maintenance Plan

As per special conditions 12, 13 and 14 of the new consent, Dialog Fitzroy was required to update and maintain an Operation, Management and Maintenance Plan (OMMP) which detailed their procedures. This includes:

- Staff training
- General housekeeping and yard maintenance
- Blasting operations
- Monitoring and maintenance of the blasting buildings and air discharge treatment systems
- Records of training, monitoring and maintenance, and complaints.

The most up-to-date version of this OMMP was received from Dialog Fitzroy on 29 September 2020, and has been subsequently implemented into the monitoring programme. Adherence to this plan is assessed during compliance monitoring inspection visits.

3.2.3 Results of receiving environment monitoring

3.2.3.1 Deposition gauging

Deposition gauges were deployed on two occasions during the monitoring period. The first deployment began in January 2020 and lasted 21 days. The second deployment began in February 2020 and lasted 22 days.

A site map marking the location of the gauges around the Dialog Fitzroy site are shown in Figure 4. The results for the year under review are given in Table 6, with the prevailing wind directions during the surveys given in Appendix II.

Table 6 Deposition gauge results from around the Dialog Fitzroy site

Site ID	Dust deposition rate (g/m^2/day)	
	Run 1 from 07/01/2020 to 28/01/2020	Run 2 from 05/02/2020 to 27/02/2020
AIR006401	**0.13**	**0.17**
AIR006402	0.04	0.10
AIR006403	0.05	0.11
AIR006404	0.06	0.03
AIR006405	0.09	0.05
AIR006406	0.02	0.04
Guideline value:	0.13 g/m^2/day	

Key: Results in bold exceed recommended guideline value

The monitoring showed that the deposited particulate was at or in excess of Dialog Fitzroy's consent limit in two of the twelve gauges collected during the year under review.

January 2020 survey

The January survey found that no sites exceeded the particulate deposition rate guideline value, however one site, AIR006401 (SE of the blasting shed), was at this limit.

The material collected ranged in colour from green brown to dark brown, and three of the samples contained vegetative matter.

The appearance of the particulate matter collected was consistent with re-suspended yard dust and vegetation from the surrounding area rather than blasting media.

February 2020 survey

The February survey found that the particulate deposition rate limit was very slightly exceeded at one site, AIR006401 (SE of the blasting shed).

The material collected ranged in colour from green to brown, with an appearance consistent with re-suspended yard dust from the surrounding area and vegetation rather than blasting media.

No dust complaints were received regarding dust issues originating from the Dialog Fitzroy site.

The available evidence indicates that the elevated levels of dust deposition found in the gauges around Dialog Fitzroy were not as a result of the activities occurring on this site.

3.2.4 Investigations, interventions, and incidents

Table 7 below sets out details of any incidents recorded, additional investigations, or interventions required by the Council in relation to Dialog Fitzroy's activities during the 2019-2020 period. This table presents details of all events that required further investigation or intervention regardless of whether these were found to be compliant or not.

Table 7 Incidents, investigations, and interventions summary table

Date	Details	Compliant (Y/N)	Enforcement Action Taken?	Outcome
February 2020	Exceedance in deposition rate	Y	None	Likely as a result of vegetative matter found in the gauge.

3.3 Discussion

3.3.1 Discussion of site performance

During the year under review, no blasting activities were occurring onsite during inspections and there were no reported issues associated with the condition of the plant. The first two inspections noted that general housekeeping and maintenance was required, however this had improved significantly by the third and fourth visits. There were also no visible emissions noted, following an upgrade to the air discharge treatment system.

The Operation, Management and Maintenance Plan continued to be implemented and operational throughout the monitoring year, with no issues noted during compliance monitoring inspections. Site inspections continued to show an improvement in general management and housekeeping, with no unauthorised incidents occurring during the monitoring period.

During the year under review there were no complaints received by the Council relating to dust emissions or off site odours from the site.

3.3.2 Environmental effects of exercise of consent

Abrasive blasting operations have the potential to create adverse effects on health and the environment as well as creating nuisance. The impact that sandblasting has is determined by the type of abrasive material used (for example if it is sand that is dust free with low silica content), the effectiveness of the blasting enclosure and treatment system, the procedures followed by staff when blasting outside the blasting room (for example temporary screening), and the items blasted (e.g. with coatings such as lead-based paints or larger rusted areas resulting in generation of extra detritus).

Deposition gauging was conducted for the 48th and 49th time during the 2019-2020 monitoring year around the Dialog Fitzroy site.

The results from the gaugings found that one of the twelve samples collected during the 2019-2020 period was in excess of the consent limit (Table 5). However, the results could not be directly attributed to Dialog Fitzroy's site; rather the high particulate deposition was more likely due to vegetation input and yard dust re-suspension from the wider area. Predominant winds during the first gauging period were split between south and south easterlies and westerlies. During the second period this was split between southerlies and westerlies (Appendix II). Particularly due to these variable winds, the neighbouring properties cannot be discounted as potential contributors to the high deposition rate.

The site and immediate surrounding landscape has been significantly reshaped by human activity, and has no features of particular aesthetic, cultural, or other value. The main highway, golf course, and Mangaone Stream/Waiwhakaiho River are unlikely to be affected by activities on the site.

There is the potential for the staff and property of industries in the surrounding area to be affected by dust generated by Dialog Fitzroy and during recent years a significant amount of commercial development has occurred in the area. This increases the potential for complaints, as the number of people working in this area, and the number of public visiting the area has increased.

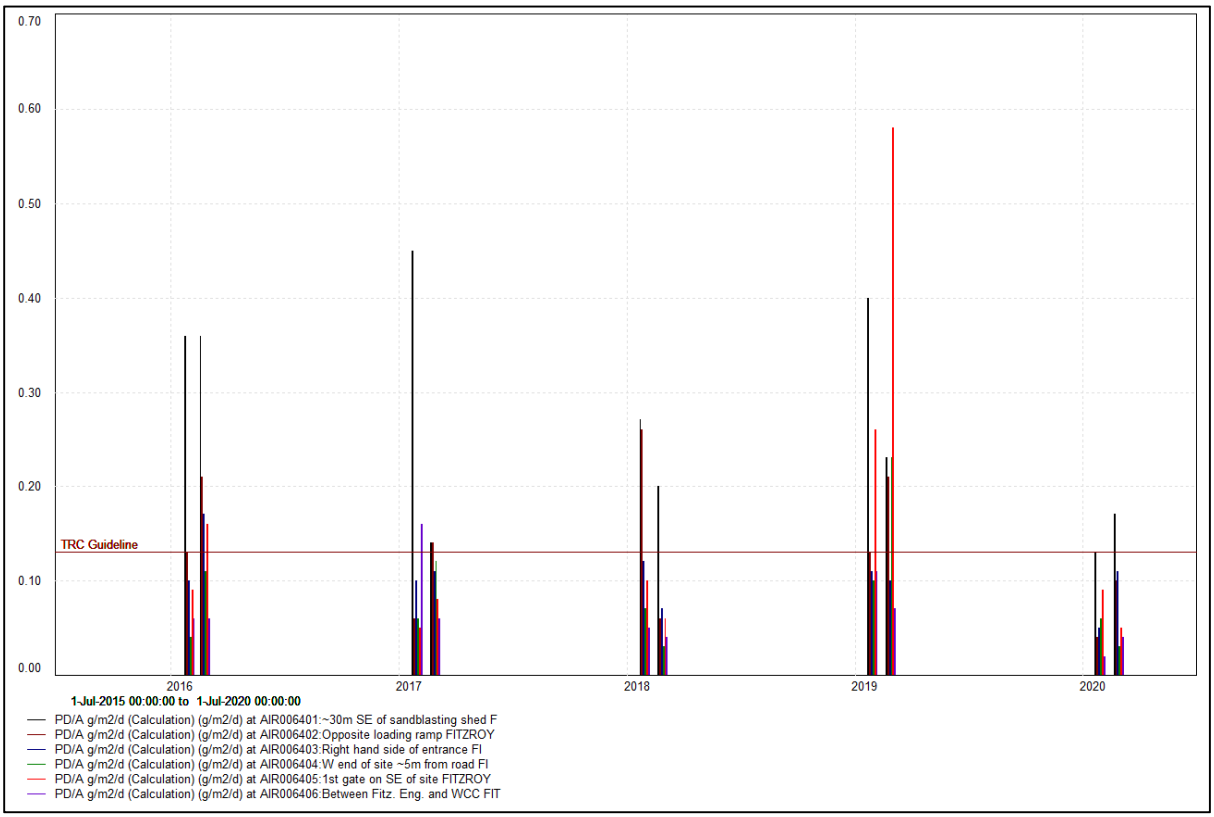


Figure 5 Deposition gauge results for the Dialog Fitzroy monitoring sites from July 2016 to July 2020

3.3.3 Evaluation of performance

A tabular summary of Dialog Fitzroy's compliance record for the year under review is set out in Table 8.

Table 8 Summary of performance for Consent 4025-3, Dialog Fitzroy Ltd discharge of emissions to air

Purpose: ***To discharge emissions to air from abrasive blasting operations and associated activities at the factory site and from yard blasting operations and mobile abrasive blasting at various locations throughout the Taranaki region***		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
All operations		
1. Adopt best practicable option to avoid, remedy, or mitigate effects	Inspection, liaison with consent holder and observation when inspecting officer is in the vicinity of the site on other business, along with deposition gauge monitoring	Yes – improvement noted throughout the year

Purpose: *To discharge emissions to air from abrasive blasting operations and associated activities at the factory site and from yard blasting operations and mobile abrasive blasting at various locations throughout the Taranaki region*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
2. Exercise consent in manner consistent with consent application	Inspection and liaison with consent holder	Yes
3. Sand-free silica limit of 5% and limit of 2% finer than 0.15 mm diameter	Inspection and liaison with consent holder. Dry sand not used	Yes
4. No offensive, objectionable or toxic odour or dust beyond boundary. Suspended particulate <3 mg/m^3	Inspection and observation when inspecting officer is in the vicinity of the site on other business	Yes
5. Take account of wind conditions to minimise off-site emissions	Inspection and observation when inspecting officer is in the vicinity of the site on other business	Yes
6. Clearance of blasting material	Inspection	Yes
7. Avoidance of dry sand blasting	Inspection and liaison with consent holder. Dry sand not used	Yes
8. Particulate deposition rate limit of 0.13 $g/m^2/day$	Deposition gauging	One of twelve gauges above limit, but attributed to vegetation input
9. Compliance of operators with conditions	Inspection	Yes
Operations within permanent facilities		
10. Enclosed blasting at permanent site	Inspection and observation when inspecting officer is in the vicinity of the site on other business	Yes
11. All emissions contained and treated as far as practicable	Inspection and observation when inspecting officer is in the vicinity of the site on other business	Yes
12. Provision and maintenance of Management Plan	Plan on file	Yes
13. Consent to be exercised in line with management plan	Inspection and liaison with consent holder	Yes
14. Availability of information collected for condition 12	Inspection and liaison with consent holder, and accessing information recorded by consent holder	Yes
15. If control of windblown dust not effective, condition 19 to apply	Inspection and observation when inspecting officer is in the vicinity of the site on other business, deposition gauge results	Yes
16. Yard and roadways to be sealed and maintained subject to condition 18	N/A	N/A

Purpose: *To discharge emissions to air from abrasive blasting operations and associated activities at the factory site and from yard blasting operations and mobile abrasive blasting at various locations throughout the Taranaki region*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
17. Notification prior to using more than three blasting nozzles	Check of the Council records, inspection and liaison with consent holder. No more than three nozzles used	N/A
18. Notification prior to using grit room	Receipt of notifications, inspection and liaison with consent holder. Grit room not used	N/A
19. Emissions limits for lead, chromium and zinc	Not measured. Discussions with consent holder about materials blasted	Yes
Yard operations		
20. Infrequent yard blasting	Inspection and observation when inspecting officer is in the vicinity of the site on other business	Yes
21. Screening at yard blasting to contain dust emissions	Inspection and observation when inspecting officer is in the vicinity of the site on other business	N/A
Mobile operations		
22. Screening at mobile blasting to contain emissions	Inspection and observation when inspecting officers travelling in region	Yes
23. Notification seven days to 48 hours before blasting near watercourses	Notification received	Yes
24. Prohibited effects in surface watercourses	Inspection	Yes
25. Notification if blasting close to dwelling or property boundary	No notifications received. No complaints received	N/A
26. Suspended particulate limit of 3 mg/m^3 and deposited particulate of 0.13 g/m^2/day beyond boundary	Not measured during year under review	N/A
Review		
Overall assessment of consent compliance and environmental performance in respect of this consent		**High**
Overall assessment of administrative performance in respect of this consent		**High**

During the year, Dialog Fitzroy Ltd demonstrated a high level of environmental and a high level of administrative performance as defined in Section 1.1.5. No unauthorised incidents were recorded in relation to their activities on the site. The likely environmental effects of this discharge were considered to be low to negligible.

Although there was one slight exceedance of the particulate deposition rate recorded, this was considered to be a result of vegetation input and yard dust re-suspension from the surrounding area, and no complaints were received in relation to their activities during the year.

3.3.4 Recommendations from the 2018-2019 Annual Report

In the 2018-2019 Annual Report, it was recommended:

1. THAT monitoring of consented activities at the Fitzroy Engineering Group Ltd site in the 2019-2020 year continues at the same level as in 2018-2019.
2. THAT the 2019-2020 report be updated to include changes to the consent holder name.
3. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendations 1 and 2 were subsequently implemented, while there was no requirement for additional work as allowed for in Recommendation 3.

3.3.5 Alterations to monitoring programmes for 2020-2021

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

- the extent of information already made available through monitoring or other means to date;
- its relevance under the RMA;
- the Council's obligations to monitor consented activities and their effects under the RMA;
- the record of administrative and environmental performances of the consent holder; and
- reporting 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 exercising resource consents.

It is proposed that for 2020-2021 the programme continues at the same level as in 2019-2020.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2020-2021.

3.4 Recommendation

1. THAT monitoring of consented activities at the Dialog Fitzroy Ltd site in the 2020-2021 year continues at the same level as in 2019-2020.
2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

4 Katere Surface Coatings Ltd

4.1 Introduction

4.1.1 Process description

Katere Surface Coatings Ltd (Katere Surface Coatings) operates an abrasive blasting and surface coating business from a mobile unit at a permanent site on Katere Road. A map showing the location of the site is provided in Figure 6.

The emissions from abrasive blasting operations may include sand, grit, dust, silicates, rust, detritus, and various metal compounds including zinc, iron, lead and arsenic. Emissions from surface coating processes may include objectionable odours and spray drift.

Blasting takes place within an enclosed building with emissions passed through a scrubber system before being discharged to the atmosphere. Some items are too large to process in the building and are, therefore, blasted outside. All outside work requires effective screening measures such as tarpaulins and similar covers to contain emissions within the site boundary. Screening also applies to operations carried out by the mobile unit. Weather conditions must be considered before any outside work is carried out.

The 2019-2020 monitoring year was the 29th year in which the Council has monitored air emissions from the Katere Surface Coatings site (formerly Vinsen G M Ltd) and their effects within the region.

Figure 6 Location of Katere Surface Coatings Ltd and their deposition gauge sites

4.2 Results

4.2.1 Inspections

Three routine compliance monitoring inspections were carried out during the monitoring period, on 9 October 2019, 15 January 2020 and 6 May 2020.

4.2.1.1 Site inspections

9 October 2019

An inspection was undertaken in cloudy conditions with a light westerly breeze. The yard area in front of the blasting shed was relatively clean and staff onside advised that this area is cleaned at the end of each working day as per special condition 5 of the resource consent. It was noted however, that due to the condition of the north-western end of the blasting shed, garnet blasting material was escaping and accumulating on the ground. Replacement of the shed was still planned to be carried out, but staff were advised that in the meantime, ongoing maintenance was still required to ensure all blasting material was fully contained. It was also noted that any items stacked on the outside of the building in this area would need to be moved to allow for ongoing access and maintenance. The filter sock was not in place in the stormwater drain at the rear of the yard, and a recommendation was given that this be replaced to ensure that any blasting residue and sediment from the unsealed yard was captured prior to discharge. No dust was being emitted at or beyond the boundary during the visit.

The site was compliant with resource consent conditions at the time of inspection.

15 January 2020

An inspection was carried out in warm weather with light southerly wind conditions. It was noted that there was still evidence of blasting material escaping from the rear of the shed, and this was observed entering onto the yard in the vicinity of the stormwater drain. Previous repairs to the shed in 2016 were no longer satisfactory, and a recommendation was made that further repairs should be undertaken as soon as possible. In the meantime, it was advised that housekeeping and maintenance in this area be prioritised to ensure no material was discharging offsite. Filter socks were in place on the rear stormwater drain and appeared to be operating relatively well, with signs of blasting residue being contained within the system. Blasting material was observed further down the system at the discharge point, and it was recommended that a second filter sock be installed at this point to ensure no garnet residue was discharging offsite.

The site was compliant with resource consent conditions at the time of inspection.

6 May 2020

An inspection was carried out in fine weather. The site was tidy and clean with no sign of spills. There had been a noticeable improvement in housekeeping and maintenance onsite, which was evident by the lack of blasting material at the rear of the shed. Further repairs to the shed were underway, as recommended by the previous inspection advice. Plastic and timber framing had been used to temporarily stop any escape of blasting garnet, while awaiting the arrival of the replacement shed iron. The filter sock in the rear stormwater drain had been recently replaced, and the sump at the discharge point was clear of any accumulated blasting residue. A filter sock was not in place at this point because due to the nature of the drainage point, this had the potential to caused flooding and overflow from the system. Instead, the area is swept and cleaned as needed to ensure no offsite discharge of blasting residue. No odour or dust issues were noted.

The site was compliant with resource consent conditions at the time of inspection.

4.2.1.2 Mobile blast inspections

No notifications were received by the Council regarding mobile blasting being undertaken by Katere Surface Coatings during the year under review.

4.2.2 Results of receiving environment monitoring

4.2.2.1 Deposition gauging

Deposition gauges were deployed on two occasions during the monitoring period. The first deployment began in January 2020 and lasted 21 days. The second deployment began in February 2020 and lasted 22 days.

A site map marking the location of the gauges around the Katere Surface Coatings site is shown in Figure 6 and the results of the 2019-2020 gauging surveys are presented in Table 9. The prevailing wind directions during the surveys are shown in Appendix II.

Table 9 Deposition gauge results from around the Katere Surface Coating Ltd site

Site ID	Dust deposition rate (g/m^2/day)	
	Run 1 from 07/01/2020 to 28/01/2020	Run 2 from 05/02/2020 to 27/02/2020
AIR009303	0.08	0.05
AIR009304	0.02	**0.13**
Guideline value:	0.13 g/m^2/day	

January 2020 survey

All sites were within the guideline limit for the January survey. The material collected was a dusty brown with bugs present in all gauges. The appearance of the particulate matter was consistent with organic matter and re-suspended yard dust rather than blasting media.

February 2020 survey

One gauge (site AIR009304) was measured at the guideline limit for the February survey, however there were no exceedances noted. The material collected was dusty brown with vegetative matter present. The appearance of the particulate matter was consistent with vegetation and re-suspended yard dust rather than blasting media.

4.2.3 Investigations, interventions, and incidents

In the 2019-2020 period, the Council was not required to undertake significant additional investigations and interventions, or record incidents, in association with Katere Surface Coating's conditions in resource consents or provisions in Regional Plans.

4.3 Discussion

4.3.1 Discussion of site performance

There were no complaints received during the 2019-2020 year in relation to Katere Surface Coating's activities.

Substantial improvements that were made at the site in the 2012-2013 year in relation to the treatment systems for both the blast booth and the paint shed have continued to produce significant reductions in emissions from the site.

General housekeeping at the site was in need of some improvement during the first inspections, however this improved markedly during the year. The Council was not required to issue any abatement notices in regards to accumulation of blast material on the ground around the vicinity of the blast booth.

There were no exceedances at any gauging sites during both the January 2020 and the February 2020 surveys. One site was measured at the guideline value limit during the February survey, however the high particulate deposition during this instance was more likely due to vegetation input from the wider area.

4.3.2 Environmental effects of exercise of consents

Abrasive blasting operations have the potential to create adverse effects on health and the environment as well as creating nuisance. The impact that sandblasting has is determined by the type of abrasive used (for example is it sand that is dust free with low silica content), the effectiveness of the blasting enclosure and treatment system, the procedures followed by staff when blasting outside the blasting room (for example temporary screening), and the items blasted (for example with coatings such as lead-based paints or larger rusted areas resulting in generation of extra detritus).

The particulate deposition rate was not exceeded during the year under review (Figure 7). There were no complaints received regarding dust impacting beyond the boundary of the property. Predominant winds during the first gauging period were split between south and south easterlies and westerlies. During the second period this was split between southerlies and westerlies (Appendix II). Due to these variable winds, neighbouring properties cannot be discounted as potential contributors to the deposition rate.

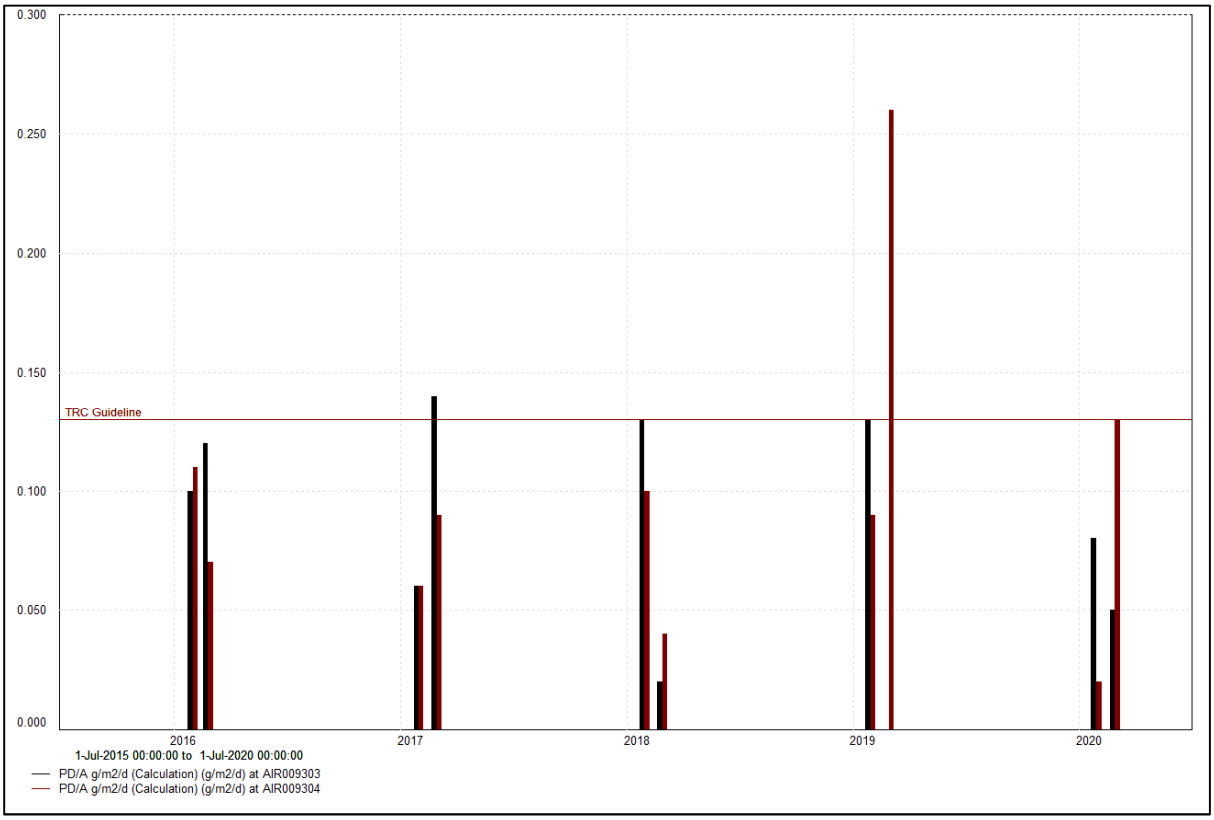


Figure 7 Deposition gauge results for the Katere Surface Coatings monitoring sites from July 2016 to July 2020

There were no offsite emissions or odours noted during any inspections, and there were no complaints related to paint odours and overspray. It appears that the treatment system installed on the paint shed during the 2012-2013 year has continued to be effective in preventing the odour and overspray issues that resulted in a number of complaints during previous monitoring years.

The results of the 2019-2020 monitoring indicate that there were no significant adverse environmental effects that occurred as a result of Katere Surface Coatings' activities.

4.3.3 Evaluation of performance

A tabular summary of Katere Surface Coating's compliance record for the year under review is set out in Table 10.

Table 10 Summary of performance for Consent 4475-2, Katere Surface Coatings Ltd discharge of emissions to air

Purpose: ***To discharge emissions to air from abrasive blasting and surface coating activities at a permanent site located at Katere Road, New Plymouth and from mobile operations throughout the Taranaki region including within the Coastal Marine Area at Port Taranaki***		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
1. Specifies which special conditions apply to which activities	N/A	N/A
All Activities		
2. Adoption of best practicable option to minimise effects on the environment	Inspection and discussion with consent holder	Yes – improvement noted throughout the year
3. No offensive, objectionable or toxic odour or dust beyond boundary	Inspection and observation when inspecting officer is in the vicinity of the site on other business	Yes
4. Consideration of wind conditions to minimise off-site emissions	Inspection	Yes
5. Clearance of blasting material	Inspection	Yes
6. Sand has low active silica content and limited fine particles	N/A – garnet used	N/A
7. Avoidance of dry sand blasting	Inspection and liaison with consent holder. Dry sand has not been used	Yes
8. Compliance of operators with conditions	Inspection	Yes
Within the permanent facility		
9. Except as provided for by S.C. 12 to 14 blasting must be in enclosed facility	Inspection and discussion with consent holder	Yes
10. Treatment of emissions prior to discharge. Limit on emissions from enclosure of 125 mg/m^3	Inspection and point source suspended particulate monitoring	Yes

Purpose: *To discharge emissions to air from abrasive blasting and surface coating activities at a permanent site located at Katere Road, New Plymouth and from mobile operations throughout the Taranaki region including within the Coastal Marine Area at Port Taranaki*		
Condition requirement	**Means of monitoring during period under review**	**Compliance achieved?**
11. Particulate deposition rate limit of 0.13 g/m^2/day	Deposition gauging	Yes
Yard blasting at Katere Road site		
12. States provisions for occasional yard blasting as per S.C. 12 to 14	Inspection	Yes
13. Email notification to the Council seven days to 48 hrs prior to yard operations	Inspection and observation when inspecting officer is in the vicinity of the site on other business	Yes
14. Screening of items to be blasted	Discussion with consent holder. Water blasting used rather than dry abrasive blasting	Yes
Any site other than Katere Road		
15. Screening to contain emissions	No mobile blasting undertaken	N/A
16. Notification to District Council prior to blasting in residential areas	Discussion with consent holder, and review of the Council records. No notifications received as no mobile blasting undertaken	N/A
17. Email notification to the Council seven days to 48 hrs prior to blasting in close proximity to watercourse	Discussion with consent holder, and review of the Council records. No notifications received as no mobile blasting undertaken	N/A
18. Notification to affected parties prior to blasting close to boundaries	No notification of mobile blasting received and no complaints	N/A
19. Suspended and deposited particulate limits 3 mg/m^3 and 0.13 g/m^2/day respectively	No mobile blasting notification received	N/A
All Activities		
20. Provision for consent to lapse if not exercised	Consent exercised	N/A
21. Optional review provision re environmental effects	No further opportunities for review	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		**High**
Overall assessment of administrative performance in respect of this consent		**High**

During the year, Katere Surface Coatings demonstrated an overall high level of environmental and administrative performance as defined in Section 1.1.5. No significant adverse environmental effects were noted due to the activities of Katere Surface Coatings during the period under review.

4.3.4 Recommendations from the 2018-2019 Annual Report

In the 2018-2019 Annual Report, it was recommended:

1. THAT monitoring of consented activities of Katere Surface Coatings Ltd in the 2019-2020 year continues at the same level as in 2018-2019.
2. THAT should there be issues with environmental or administrative performance in 2019-2020, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Recommendation 1 was implemented, while there was no requirement for additional work as set out in Recommendation 2.

4.3.5 Alterations to monitoring programmes for 2020-2021

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

- the extent of information already made available through monitoring or other means to date;
- its relevance under the RMA;
- the Council's obligations to monitor consented activities and their effects under the RMA;
- the record of administrative and environmental performances of the consent holder; and
- reporting 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 exercising resource consents.

It is proposed that for 2020-2021, the monitoring continues at the same level as in 2019-2020.

It should be noted that the proposed programme represents a reasonable and risk-based level of monitoring for the site in question. The Council reserves the right to subsequently adjust the programme from that initially prepared, should the need arise if potential or actual non-compliance is determined at any time during 2020-2021.

4.4 Recommendation

1. THAT monitoring of consented activities of Katere Surface Coatings Ltd in the 2020-2021 year continues at the same level as in 2019-2020.
2. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

5 Lower Waiwhakaiho area performance

5.1 Air related incidents

During the year under review there were no incidents recorded in relation to air discharges within the Lower Waiwhakaiho catchment. All consent holders in the area demonstrated a high level of environmental performance.

5.2 Deposition gauging

With the transient nature of effects upon air quality a combined monitoring approach in the industrial area in question is a good way of assessing consent holder performance. This approach was continued in this monitoring period as adopted following the recommendations in the 2000-2001 annual reports for dischargers in the area.

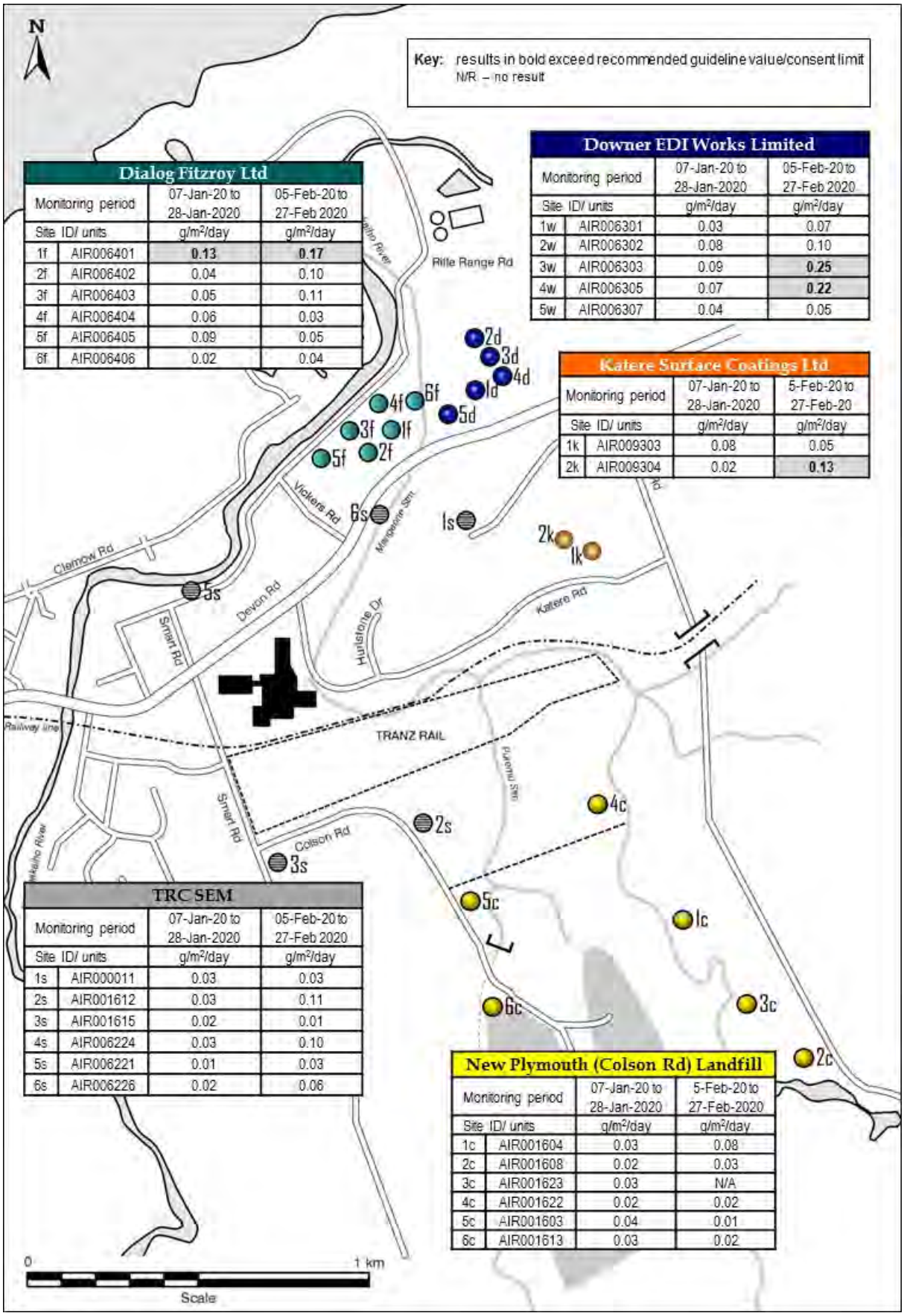
The deposition gauges were put in place and retrieved at all sites at the same time, including the Council's state of the environment monitoring (SEM) sites. The gauges for the near-by Colson Road landfill site were also deployed for the same period. The wind direction and speed for each of the sampling periods are shown in Appendix II. These were recorded at the Hillsborough Weather Station, which is in the same area.

5.2.1 Results of deposition gauging

There were five recorded instances where the Council's guideline limit was met or exceeded, out of 26 total gauge deployments assessing the three consent holders covered by this report. The results of the deposition gauging undertaken in the Lower Waiwhakaiho area for the year under review are summarised in Figure 8.

Deposition gauge results from the Colson Road landfill monitoring programme have also been included in Figure 8 to provide context of air quality in the wider Waiwhakaiho area. There were no exceedances of the 11 total gauge deployments for the Colson Road landfill programme in the year under review. Colson Road landfill deposition gauges AIR001612 and AIR001615 are also used as SEM gauges. Accordingly, results from these gauges have been included in the TRC SEM table in Figure 8.

Results from the SEM gauges deployed in the Lower Waiwhakaiho area have been included in Figure 8 to provide context of air quality in the wider Waiwhakaiho area. None of the 12 total SEM gauges exceeded the Council's guideline limit in the period under review.



Dialog Fitzroy Ltd

Monitoring period		07-Jan-20 to 28-Jan-2020	05-Feb-20 to 27-Feb 2020
Site ID/ units		g/m²/day	g/m²/day
1f	AIR006401	**0.13**	**0.17**
2f	AIR006402	0.04	0.10
3f	AIR006403	0.05	0.11
4f	AIR006404	0.06	0.03
5f	AIR006405	0.09	0.05
6f	AIR006406	0.02	0.04

Downer EDI Works Limited

Monitoring period		07-Jan-20 to 28-Jan-2020	05-Feb-20 to 27-Feb 2020
Site ID/ units		g/m²/day	g/m²/day
1w	AIR006301	0.03	0.07
2w	AIR006302	0.08	0.10
3w	AIR006303	0.09	**0.25**
4w	AIR006305	0.07	**0.22**
5w	AIR006307	0.04	0.05

Katere Surface Coatings Ltd

Monitoring period		07-Jan-20 to 28-Jan-2020	5-Feb-20 to 27-Feb-20
Site ID/ units		g/m²/day	g/m²/day
1k	AIR009303	0.08	0.05
2k	AIR009304	0.02	**0.13**

TRC SEM

Monitoring period		07-Jan-20 to 28-Jan-2020	05-Feb-20 to 27-Feb 2020
Site ID/ units		g/m²/day	g/m²/day
1s	AIR000011	0.03	0.03
2s	AIR001612	0.03	0.11
3s	AIR001615	0.02	0.01
4s	AIR006224	0.03	0.10
5s	AIR006221	0.01	0.03
6s	AIR006226	0.02	0.06

New Plymouth (Colson Rd) Landfill

Monitoring period		07-Jan-20 to 28-Jan-2020	5-Feb-20 to 27-Feb-2020
Site ID/ units		g/m²/day	g/m²/day
1c	AIR001604	0.03	0.08
2c	AIR001608	0.02	0.03
3c	AIR001623	0.03	N/A
4c	AIR001622	0.02	0.02
5c	AIR001603	0.04	0.01
6c	AIR001613	0.03	0.02

Figure 8 Dust deposition for the Lower Waiwhakaiho area in the 2019-2020 monitoring period

5.3 Discussion

5.3.1 Environmental effects of exercise of air discharge permits

Ambient air quality (at SEM sites) in the Lower Waiwhakaiho area during the year under review was good.

The overall air quality in the Lower Waiwhakaiho area, including deposition survey results for the five consent holders covered in this report, was generally high during both the January and February gauging periods.

January 2020 deposition gauge survey

In the case of the January survey, just one of 13 (8%) of the gauges analysed was measured at the guideline value. There were no exceedances over the guideline value in any of the gauges. As with previous years, the higher particulate deposition rates were again found to be at monitoring locations in close proximity to industrial sites.

Wind direction was variable during the gauging period, with winds predominantly from the west for 20% of the time, and from the south and south east for 18.6% and 16.4% of the time respectively. The strongest winds were from the west.

February 2020 deposition gauge survey

In the case of the February survey, four of 13 (31%) of the gauges returned results that were at or in excess of the guideline value. On this occasion the exceedances were again at monitoring sites located close to the industrial sites, in the vicinity of the Dialog Fitzroy and Downer EDI sites. The prevailing wind directions observed during this gauging period were from the south west (22% of the time) and the south (19% of the time), with the strongest winds from the south.

6 Summary of recommendations

1. THAT monitoring of consented activities at the Downer EDI Works Ltd site in the 2020-2021 year continues at the same level as in 2019-2020.
2. THAT monitoring of consented activities at the Dialog Fitzroy Ltd site in the 2020-2021 year continues at the same level as in 2019-2020.
3. THAT monitoring of consented activities of Katere Surface Coatings Ltd in the 2020-2021 year continues at the same level as in 2019-2020.
4. THAT should there be issues with environmental or administrative performance in 2020-2021, monitoring may be adjusted to reflect any additional investigation or intervention as found necessary.

Glossary of common terms and abbreviations

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

g/m^3	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.
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.
Investigation	Action taken by the Council to establish what were the circumstances/events surrounding an incident including any allegations of an incident.
L/s	Litres per second.
PM_{10}	Relatively fine airborne particles (less than 10 micrometre diameter).
QPR	Quality Pavement Repair - a high performance permanent repair material for repairing potholes, filling utility cuts and repairing damaged asphalt.
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 including all subsequent amendments.

For further information on analytical methods, contact a Science Services Manager.

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Appendix I

Resource consents for discharges to air held by industries in the Lower Waiwhakaiho area (alphabetical order)

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

Water abstraction permits

Section 14 of the RMA stipulates that no person may take, use, dam or divert any water, unless the activity is expressly allowed for by a resource consent or a rule in a regional plan, or it falls within some particular categories set out in Section 14. Permits authorising the abstraction of water are issued by the Council under Section 87(d) of the RMA.

Water discharge permits

Section 15(1)(a) of the RMA 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. Permits authorising discharges to water are issued by the Council under Section 87(e) of the RMA.

Air discharge permits

Section 15(1)(c) of the RMA stipulates that no person may discharge any contaminant from any industrial or trade premises into air, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations. Permits authorising discharges to air are issued by the Council under Section 87(e) of the RMA.

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. Permits authorising the discharge of wastes to land are issued by the Council under Section 87(e) of the RMA.

Land use permits

Section 13(1)(a) of the RMA 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. Land use permits are issued by the Council under Section 87(a) of the RMA.

Coastal permits

Section 12(1)(b) of the RMA stipulates that no person may erect, reconstruct, place, alter, extend, remove, or demolish any structure that is fixed in, on, under, or over any foreshore or seabed, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations. Coastal permits are issued by the Council under Section 87(c) of the RMA.

Discharge Permit

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

Name of Consent Holder:	Dialog Fitzroy Limited Private Bag 2053 New Plymouth 4342
Decision Date (Change):	23 June 2016
Commencement Date (Change):	23 June 2016 (Granted Date: 21 November 2006)

Conditions of Consent

Consent Granted:	To discharge emissions into the air from abrasive blasting operations and associated activities at the Fitzroy Engineering Group Limited factory site and from yard blasting operations and at mobile abrasive blasting at various locations throughout the Taranaki region
Expiry Date:	1 June 2020
Site Location:	Rifle Range Road, New Plymouth (Permanent site) & Various locations throughout the Taranaki region (Mobile)
Grid Reference (NZTM)	16966302E-5677760N (Permanent site) Various locations throughout the Taranaki region (Mobile)

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

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

All operations

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.

2. The exercise of this consent shall be undertaken in general accordance with the information provided in support of the original application for this consent and with any subsequent application to change consent conditions, particularly, the '*Feasibility of Emissions Testing*' assessment report prepared by *JCL Air and Environment Limited,* and dated *5 October 2015*.

   In the case of any contradiction between applications the later application shall prevail, and where there is conflict between an application and the conditions of this consent, the conditions of this consent shall prevail.

3. Sand used for dry blasting must contain less than 5% by dry weight free silica, and less than 2% by dry weight dust able to pass a 0.15 mm sieve.

4. Any discharge to air from the exercise of this consent shall not give rise to any offensive, objectionable or toxic levels of dust or odour at or beyond the boundary of the property on which the abrasive blasting or associated activity is occurring, and in the case of blasting undertaken at the Rifle Range Road site, suspended particulate matter shall not exceed 3 mg/m^3 (measured under ambient conditions) beyond the boundary of the site.

5. All abrasive blasting is to be conducted with taking into account wind direction and wind strength, such that off-site emissions are kept to a practicable minimum.

6. As far as is practicable, work areas and surrounding areas shall be cleared of accumulations of sand and any other blasting material at the end of each blasting session and by the end of each working day.

7. Dry sand blasting shall be used only when specified by a client. High pressure water blasting, wet sand blasting, garnet blasting, vacuum blasting or an equivalent alternative process must be used when practicable.

8. The discharge of particulate material from the site shall not raise the particulate deposition rate at or beyond the boundary of the leased site of the permanent facility at Rifle Range Road, New Plymouth, above a mean daily rate of 0.13 $g/m^2/day$ collected over a minimum of 21 days.

9. The consent holder shall ensure that all operators of abrasive blasting equipment understand and comply with the all the conditions of this consent prior to the commencement of any work for which this consent is required.

Operations conducted within permanent facilities

10. As far as is practicable, all abrasive blasting on the consent holder's permanent site at Rifle Range Road, New Plymouth, shall be carried out in an enclosed booth or shed.

11. All emissions from abrasive blasting, surface preparation or surface coating operations and all other associated emissions from abrasive blasting at the permanent site at Rifle Range Road, New Plymouth, shall be contained and treated, as far as is practicable, prior to discharge from any operations enclosure.

12. Within a month of the granting of this consent, the consent holder shall updated and thereafter maintain, to the satisfaction of the Chief Executive, Taranaki Regional Council, an Operation, Management and Maintenance Plan (OMMP) detailing the Company's procedures, including but not limited to staff training, general housekeeping and yard maintenance, blasting operations, monitoring and maintenance of the blasting buildings and air discharge treatment systems, the recording of training, monitoring and maintenance undertaken, the recording of complaints made directly to the Company, and the frequency of review of the plan. This reviewed OMMP shall include particular reference to the new garnet blasting plant fabric treatment system installed at the site.

13. The consent will be exercised in accordance with the procedures set out in the operation and management plan, and the consent holder shall subsequently adhere to and comply with the procedures, requirements, obligations and all other matters specified in the operation and management plan, except by specific agreement of the Chief Executive, Taranaki Regional Council. In the case of any contradiction between the operation and management plan and the conditions of this resource consent, the conditions of this resource consent shall prevail.

14. The monitoring, maintenance and complaints records required by special condition 12 shall be made available to the Chief Executive, Taranaki Regional Council upon request.

15. If the management practices for the control of windblown dust from the yard areas is not implemented within one month of the approval of the management plan, or is not effective at controlling windblown dust such that compliance with special conditions 4 and 8 is achieved, then special condition 16 shall apply.

16. Subject to special condition 15, the yard and any roadways in the yard shall be sealed, maintained and cleaned to minimise windblown dust to the satisfaction of the Chief Executive, Taranaki Regional Council.

17. The consent holder shall notify the Chief Executive, Taranaki Regional Council, not less than 24 hours and not more than 7 days prior to using more than three blasting nozzles simultaneously in the "garnet shed".

18. The consent holder shall notify the Chief Executive, Taranaki Regional Council in writing at least 24 hours and not more than 7 days prior to operation of the grit room.

19. The final discharge after any pre-treatment at the permanent site at Rifle Range Road, New Plymouth, shall not contain lead (Pb) or Pb components at a concentration greater than 0.7 milligrams per cubic metre as Pb, chromium (Cr) or Cr compounds at a concentration of 1.5 milligrams per cubic metre as Cr, or zinc (Zn) or Zn compounds at a concentration of 15 milligrams per cubic metre as Zn (discharge corrected to 0 degrees Celsius and dry gas), at any time.

Yard operations

20. From time to time the consent holder may receive for abrasive blasting or other surface treatment, an item that because of its bulk, weight, or other factor, cannot be treated inside the appropriate enclosed facility. Such yard operations shall not be permitted on a frequent or continual basis, other than with the written approval of the Chief Executive, Taranaki Regional Council.

21. All items which cannot be treated within properly enclosed facilities shall be screened by means of covers, tarpaulins, cladding or other means, as completely as practicable, to contain dust emissions and depositions and to restrict the spread of all blasting debris.

Mobile operations

22. All items or premises to be blasted from a mobile blasting unit shall be screened by means of covers, tarpaulins, cladding, or other means, as completely as practicable, to contain dust emissions and depositions and to restrict the spread of all blasting debris and materials to the satisfaction of the Chief Executive, Taranaki Regional Council.

23. Where abrasive blasting or surface coating from a mobile blasting unit is to take place within 100 metres of a watercourse, the consent holder shall notify the Chief Executive, Taranaki Regional Council, not more than 7 days and not less than 48 hours prior to any operation commencing. The Chief Executive, Taranaki Regional Council, may require additional measures to prevent, minimise or mitigate any potential for adverse environmental effects. The consent holder shall ascertain such measures prior to commencing an abrasive blasting operation, and comply with any and all such measures at all times.

24. The discharge shall not give rise to any of the following effects in any surface watercourse:

    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;
    f) an increase in suspended solids of more than 10 grams per cubic metre;
    g) turbidity above 4 nephelometric turbidity units (NTU), except that if the turbidity within the water body is above 3.2 NTU, no more than 25% increase in NTU;
    h) any increase in the concentration of zinc, lead, arsenic, chromium or thorium-based products.

25. Dry abrasive blasting from a mobile blasting unit shall not be conducted within 200 metres of any dwelling place or property boundary until either public notice or individual notice to the owners or occupiers of those dwellings or properties has been given.

26. The suspended particulate matter shall not exceed 3 mg/m^3 (measured under ambient conditions), and the deposition of dust shall not exceed a mean daily rate of 0.13 $g/m^2/day$ beyond the property boundary or beyond 50 metres of the discharge when sited on public amenity areas, whichever is less.

Transferred at Stratford on 30 August 2019

For and on behalf of
Taranaki Regional Council

_____

A D McLay
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:	Downer NZ Limited PO Box 272 New Plymouth 4340
Decision Date (Change):	22 June 2016
Commencement Date (Change):	22 June 2016 (Granted Date: 29 March 2005)

Conditions of Consent

Consent Granted:	To discharge emissions into the air from the manufacture of hot mix asphalt paving mixes and associated activities
Expiry Date:	1 June 2020
Site Location:	Rifle Range Road, Waiwhakaiho
Grid Reference (NZTM)	1696850E-5677930N

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

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. This consent shall be exercised generally in accordance with the information submitted in support of application 3225 and to ensure the conditions of this consent are maintained. Where there is any conflict between the information supplied in support of application 3225 and the conditions of this consent, the conditions of this consent shall prevail.

2. The consent holder shall adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any actual or likely adverse effects on the environment arising from the exercise of this consent.

3. Prior to undertaking any alterations to the plant, processes or operations, which in the opinion of the Chief Executive, Taranaki Regional Council, may significantly change the nature or quantity of contaminants emitted from the site, the consent holder shall gain the approval of the Chief Executive, Taranaki Regional Council, and shall obtain any necessary approvals under the Resource Management Act, 1991.

4. Recycled asphalt shall not be processed at the site. This does not prohibit the consent holder from seeking approval for this purpose at a later date as described in special condition 3.

5. The drum burner shall be maintained by a trained service person at least every six months to optimise combustion efficiency and to reduce noxious emissions to air.

6. The consent holder shall not operate the asphalt plant using waste oil. This does not prohibit the consent holder from seeking approval for this purpose at a later date as described in special condition 3.

7. The asphalt plant shall not be operated on any fuel containing more than 0.3% sulphur (weight/weight basis).

8. All gas streams ventilated or otherwise discharged from the asphalt plant shall be treated to reduce the concentration of total particulate matter to less than 125 milligrams per cubic metre, normal temperature and pressure, at any time.

9. The consent holder shall have an emission test conducted on discharges from the asphalt plant stack to demonstrate compliance with special condition 8. This test shall;

   a) be undertaken on one occasion between 1 June 2016 and 1 June 2020, and

   b) comprise not less than three separate samples taken during production conditions that give rise to maximum emissions from the asphalt plant stack, and

   be reported to the Chief Executive, Taranaki Regional Council, within 20 working days of the samples being taken. The report shall include the results of the tests, the relevant operating parameters including pressure drop over the scrubber and the production rate over the period of each test, all the raw data and all the calculations"

10. The emissions tests shall be carried out in accordance with Australian Standard 4323.2-1995, or any other equivalent method subject to the written approval of the Chief Executive, Taranaki Regional Council, and these tests shall be performed to the satisfaction of the Chief Executive, Taranaki Regional Council.

11. The discharge of particulate material from the site shall not raise the particulate deposition rate at or beyond the site boundary, above 4 grams per square metre per 30 days or 0.13 grams per square metre per day.

12. Any discharge to air from the exercise of this consent shall not give rise to any offensive or objectionable odour at or beyond the boundary of the property.

13. For the purposes of condition 12, without restriction, an odour shall be deemed to be offensive or objectionable if:

   a) it is held to be so in the opinion of an enforcement officer of the Taranaki Regional Council, having regard to the duration, frequency, intensity and nature of the odour; and/or

   b) an officer of the Taranaki Regional Council observes that an odour is noticeable, and either it lasts longer than three (3) hours continuously, or it occurs frequently during a single period of more than six (6) hours; and/or

   c) no less than three individuals from at least two different properties, each declare in writing that an objectionable or offensive odour was detected beyond the boundary of the site, provided the Council is satisfied that the declarations are not vexatious and that the objectionable or offensive odour was emitted from the site as specified in (b). Each declaration shall include the individuals' names and addresses, the date and time the objectionable or offensive odour was detected, the location of the individual when it was detected and the prevailing weather conditions during the event. The declarations shall be signed and dated.

14. The discharge of suspended particulate matter from the site shall not increase the ambient concentration of suspended particulate matter by more than 3 milligrams per cubic metre (measured under ambient conditions), determined by measurements at the upwind and downwind boundaries of the property.

15. The discharge must not result in noxious, toxic levels, or dangerous levels of airborne contaminants at or beyond the boundary of the property, including but not limited to any risk of fire or explosion.

16. The consent holder shall control all emissions to the atmosphere from the site, so as to ensure that the maximum ground level concentration of nitrogen dioxide measured under ambient conditions does not exceed 200 micrograms per cubic metre (one-hour average) with 99.9 percentile compliance across all monitoring data, up to a maximum limit of 300 micrograms per cubic metre (one-hour average), or 100 micrograms per cubic metre (twenty-four hour average), at or beyond the boundary of the site.

17. The consent holder shall control all emissions to the atmosphere from the site, so as to ensure that the maximum ground level concentration of sulphur dioxide measured under ambient conditions does not exceed 350 micrograms per cubic metre (one-hour average) with 99.9 percentile compliance across all monitoring data, up to a maximum limit of 570 micrograms per cubic metre (one-hour average), or 120 micrograms per cubic metre (twenty-four hour average), at or beyond the boundary of the site.

18. Stockpiles of aggregate and crusher dust liable to produce windblown dust shall be treated, or shielded to minimise dust emissions to the satisfaction of the Chief Executive, Taranaki Regional Council.

19. The yard and any roadways in the yard shall be sealed, maintained, and cleaned to minimise windblown dust to the satisfaction of the Chief Executive, Taranaki Regional Council.

20. Any smoke discharged from the site shall not occur for longer than a total of three minutes in any sixty minute period.

21. All equipment used to avoid, remedy, or mitigate any effect on the environment from the discharge of emissions into the air shall be maintained in optimum condition and shall be operated within optimum design parameters at all times the plant is in operation, to the satisfaction of the Chief Executive, Taranaki Regional Council.

22. The consent holder shall visually inspect the water scrubber and settling pond at least once per month, and maintain as necessary to avoid, remedy or mitigate discharges to air.

23. The consent holder shall maintain a log, recording:

    a) dates when the scrubber was inspected and any maintenance undertaken;
    b) dates when the settling pond was inspected and any maintenance undertaken;
    c) dates of burner maintenance; and
    d) complaints received including name and address of complainants, date received and any remedial action in response to the complaint.

24. The log required in terms of special condition 23 shall be made available to the Chief Executive, Taranaki Regional Council upon request.

25. Air temperatures in the hot mix drum shall not exceed 200 degrees Celsius. The drum shall have an audible temperature alarm which shall sound if at any time the drum temperature exceeds 200 degrees Celsius and corrective action shall be taken. All incidents of temperature exceedance must be recorded in the log required in terms of special condition 23.

Signed at Stratford on 22 June 2016

For and on behalf of
Taranaki Regional Council

_____

A D McLay
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:	Katere Surface Coatings Limited P O Box 3258 Fitzroy NEW PLYMOUTH
Consent Granted Date:	18 February 2009

Conditions of Consent

Consent Granted:	To discharge emissions to air from abrasive blasting and surface coating activities at a permanent site located at Katere Road, New Plymouth at or about (NZTM) 1697260E-5677411N and from mobile operations throughout the Taranaki region including within the Coastal Marine Area at Port Taranaki
Expiry Date:	1 June 2020
Review Date(s):	June 2014
Site Location:	Katere Road, New Plymouth & Various locations throughout the Taranaki region
Legal Description:	Lot 2 DP 16705 & Various locations throughout the Taranaki region

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

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 conditions of this consent shall apply to the various operations of the consent holder as follows;

- Special Conditions 2-8, 20, and 21 apply to all operations.
- Special Conditions 9-11 apply to operations conducted within the permanent facility at Katere Road, New Plymouth.
- Special Conditions 12-14 apply to yard operations conducted at the permanent facility at Katere Road, New Plymouth.
- Special Conditions 15-19 apply to operations conducted at any site other than the permanent facility at Katere Road, New Plymouth.

All operations

2. 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.

3. Any discharge to air from the exercise of this consent shall not give rise to any offensive, objectionable or toxic levels of dust or odour at or beyond the boundary of the property on which the abrasive blasting or associated activity is occurring.

4. All abrasive blasting is to be conducted taking into account wind direction and wind strength, such that off-site emissions are kept to a practicable minimum.

5. As far as is practicable, work areas and surrounding areas shall be cleared of accumulations of blasting material at the end of each blasting session and by the end of each working day.

6. Sand used for dry abrasive blasting shall contain:

   (i) less than 5% by dry weight free silica; and
   (ii) less than 2% by dry weight dust able to pass through a 0.15 micron sieve.

7. Dry sand blasting shall only be used only when it is the only method suitable for the job.

8. The consent holder shall ensure that all operators of abrasive blasting equipment understand and comply with the all the conditions of this consent prior to the commencement of any work for which this consent is required.

Operations conducted within the permanent facility located at Katere Road, New Plymouth

9. Except as provided for in conditions 12 to 14, all abrasive blasting on the consent holder's permanent site at Katere Road, New Plymouth shall be carried out in an enclosed booth or shed.

10. All emissions from abrasive blasting, surface preparation or surface coating operations and all other associated emissions from abrasive blasting within the permanent site at Katere Road, New Plymouth shall be contained and treated, as far as is practicable, prior to discharge from any operations enclosure. All gas streams ventilated or otherwise emitted from an enclosure shall be treated to a concentration of total particulate matter of less than 125 mg/m^3 [natural temperature & pressure] corrected to dry gas basis, at any time.

11. The dust deposition rate beyond the property boundary of the permanent site at Katere Road, New Plymouth arising from the discharge, shall be less than 4.0 $g/m^2/30$ days.

Yard operations conducted at the permanent facility located at Katere Road, New Plymouth

12. From time to time the consent holder may receive for abrasive blasting or other surface treatment, an item that because of its bulk, weight or other factor cannot be treated inside the appropriate enclosed facility. Subject to conditions 12 to 14 such items may be treated outside the enclosed facility (termed 'yard operations').

13. The consent holder shall specifically notify the Chief Executive, Taranaki Regional Council not more than 7 days and not less than 48 hours prior to commencing any yard operation as described in special condition 12. Notification shall include the consent number and a brief description of the activity consented and be emailed to worknotification@trc.govt.nz. Notification by fax or post is acceptable only if the consent holder does not have access to email.

14. All items which cannot be treated within properly enclosed facilities shall be screened by means of covers, tarpaulins, cladding or other means, as completely as practicable, to contain dust emissions and depositions and to restrict the spread of all blasting debris.

Operations conducted at any site other than the permanent facility at Katere Road, New Plymouth

15. All items to be blasted shall be screened by means of covers, tarpaulins, cladding, or other means to contain dust emissions and deposits to the satisfaction of the Chief Executive, Taranaki Regional Council.

16. Prior to undertaking abrasive blasting within residential areas, the consent holder shall notify the relevant District Council.

17. Where abrasive blasting or surface coating is to take place within 100 metres of a watercourse, the consent holder shall notify the Chief Executive, Taranaki Regional Council, not more than 7 days and not less than 48 hours prior to any operation commencing. Notification shall include the consent number and a brief description of the activity consented and be emailed to worknotification@trc.govt.nz. Notification by fax or post is acceptable only if the consent holder does not have access to email.

18. Dry abrasive blasting that is to be conducted within 200 metres of any dwelling place or property boundary may only take place after either public notice or individual notice to all affected owners or occupiers has been given.

19. The suspended particulate matter shall not exceed 3 mg/m^3 [measured under ambient conditions], and the deposition of dust shall not exceed 0.13 $g/m^2/day$ beyond the boundary of the property on which the activity is occurring or beyond 50 metres of the discharge when sited on public land, whichever is less.

Review

20. This consent shall lapse on 31 March 2014, 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.

21. 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, 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 18 February 2009

For and on behalf of
Taranaki Regional Council

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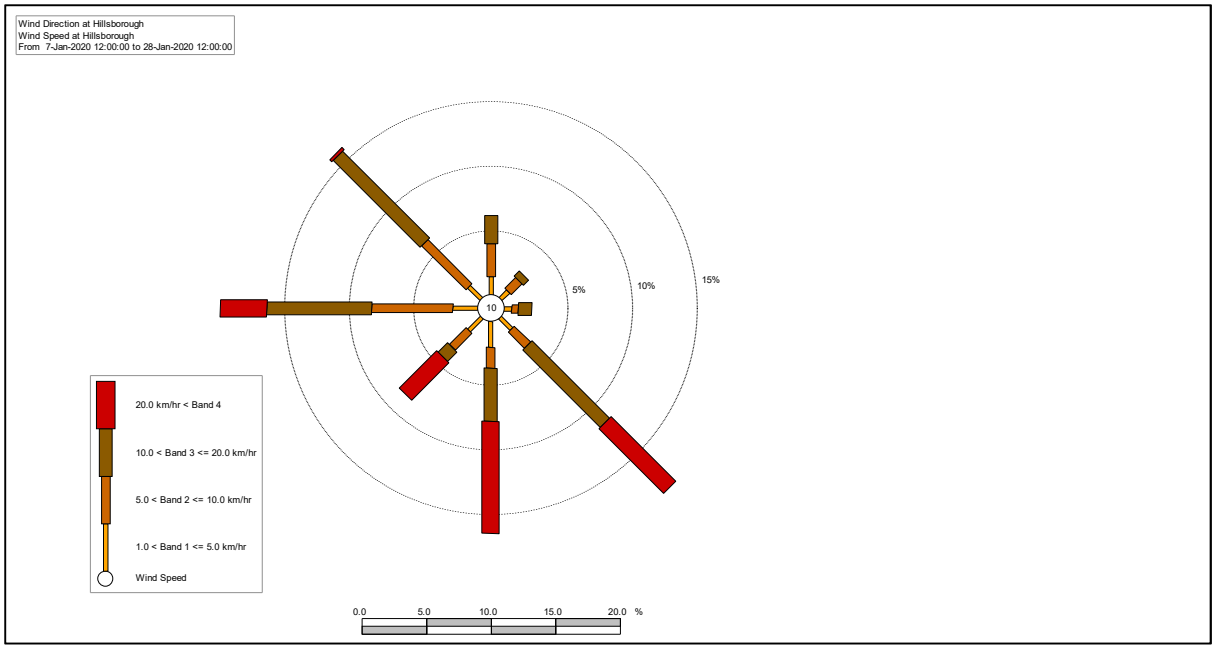
Chief Executive

Appendix II

Wind direction information for the New Plymouth area during the deposition gauge monitoring periods



~~~ Hilltop Hydro ~~~ Version 6.65.07 21-Sep-2020

~~~ PLWind ~~~

Source is R:\UNAUDITED-DATA\TELEMETRY\TELEMETRY.HTS

Wind Direction at Hillsborough and Wind Speed at Hillsborough

From 7-Jan-2020 12:00:00 to 28-Jan-2020 12:00:00

Number of data points read : 3024

Number of directions <0.0 or >360.0 deg. : 0

Limits for Wind Speed are 0.0 to 50.0 km/hr

Number of readings outside limits : 0

Number of data points used : 3024

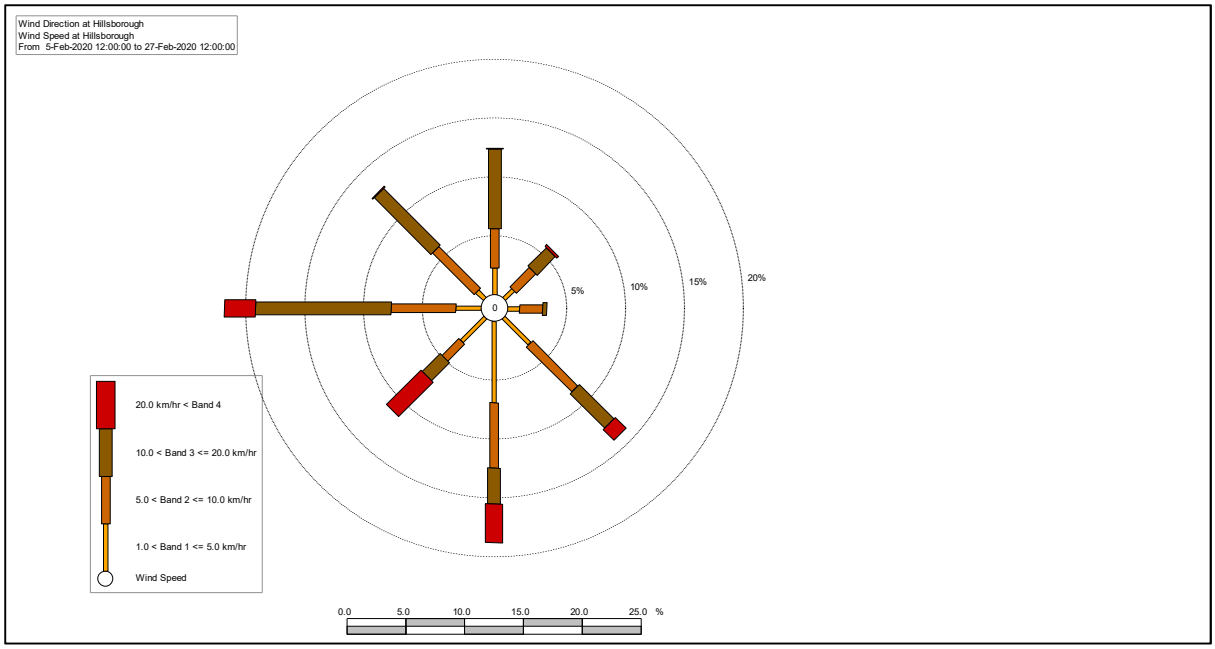
Percentange of time in each band

Direction	Band 1	Band 2	Band 3	Band 4	Total
337.5 - 22.4	1.4	2.6	2.1	0.0	6.2
22.5 - 67.4	0.9	1.2	0.6	0.0	2.6
67.5 - 112.4	0.6	0.5	1.1	0.0	2.1
112.5 - 157.4	1.2	1.8	8.5	7.1	18.6
157.5 - 202.4	2.0	1.6	4.1	8.7	16.4
202.5 - 247.4	1.4	1.8	1.0	4.1	8.3
247.5 - 292.4	2.0	6.3	8.1	3.6	20.0
292.5 - 337.4	1.4	4.9	9.5	0.3	16.0
Total	10.8	20.6	35.0	23.7	90.1
				Percentage <= 1.0	9.9

Wind Speed bands (km/hr)

1.0 < Band 1 <= 5.0 5.0 < Band 2 <= 10.0

10.0 < Band 3 <= 20.0 Band 4 > 20.0



~~~ Hilltop Hydro ~~~ Version 6.65.07 21-Sep-2020

~~~ PLWind ~~~

Source is R:\UNAUDITED-DATA\TELEMETRY\TELEMETRY.HTS

Wind Direction at Hillsborough and Wind Speed at Hillsborough

From 5-Feb-2020 12:00:00 to 27-Feb-2020 12:00:00

Number of data points read : 3168

Number of directions <0.0 or >360.0 deg. : 0

Limits for Wind Speed are 0.0 to 50.0 km/hr

Number of readings outside limits : 0

Number of data points used : 3168

Percentange of time in each band

Direction	Band 1	Band 2	Band 3	Band 4	Total
337.5 - 22.4	2.3	3.4	6.8	0.1	12.5
22.5 - 67.4	1.1	2.3	2.2	0.2	5.8
67.5 - 112.4	1.0	1.9	0.4	0.0	3.3
112.5 - 157.4	3.1	5.4	4.1	1.3	14.0
157.5 - 202.4	6.9	5.5	3.0	3.3	18.7
202.5 - 247.4	2.8	2.1	2.1	4.2	11.1
247.5 - 292.4	2.1	5.5	11.5	2.6	21.8
292.5 - 337.4	1.0	5.0	6.8	0.1	12.8
Total	20.3	31.1	36.9	11.7	100.0
			Percentage <= 1.0		0.0

Wind Speed bands (km/hr)

1.0 < Band 1 <= 5.0 5.0 < Band 2 <= 10.0

10.0 < Band 3 <= 20.0 Band 4 > 20.0