

# Assessment of Environmental Effects – Replacement Air Discharge Permit

Higgins Contractors Limited



**BAY OF PLENTY  
REGIONAL COUNCIL  
TOI MOANA**

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## Application for a Resource Consent – Resource Management Act 1991 (s88)

### 4C Discharge Contaminants to Air

The purpose of this form is to provide applicants with guidance on the minimum information that is required under Schedule 4 of the Resource Management Act 1991 (RMA). Depending on the nature and scale of your proposed activity, more detailed information may be required.

If you need help filling out this form please or would like to organise a pre-application meeting, contact the Consents Team on 0800 884 880. They will be able to provide some assistance; up to 1 hour is provided as pre-application advice.

If you have dealt with a staff member regarding your consent application, please provide their name here:

.....

Please be aware your consent application is subject to the requirements in the:

- Regional Natural Resources Plan; and
- Plan Change 13 to the Regional Natural Resources Plan.

The information you provide in this application is regarded as official information. It is required under the provisions of the Resource Management Act 1991 to process this application, and to assist in the management of the region's natural and physical resources.

The information will be held by Bay of Plenty Regional Council, Quay Street, Whakatāne. This information is subject to the provisions of the Local Government Official Information and Meetings Act 1987, and the Privacy Act 1993. The information you provide in this application will generally be available to the public. If there is any information that you would like to remain confidential please contact a Consents Officer to discuss.

If you are applying for more than one activity and you have already completed the basic details in Part 1 on another form, go straight to Part 2 of this form.

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Under section 88 of the Resource Management Act 1991, the undersigned makes this application for resource consent(s).

## PART 1

### 1 Applicants Details

**Full name of applicant(s)** *(the name that will be on the consent)*

Surname: .....

First names: .....

**OR**

If the application is being made on behalf of a trust, the Trustees must be named.

Trust name: .....

Trustees' name: .....

**OR**

Company name: Higgins Group Holdings Limited .....

Contact person: Simon Pollard .....

**Telephone** *(please tick preferred contact number)*

☐ Residential (0 ) ..... ☐ Business (0 ) 07 574 4100 .....

☐ Cell (0 ) 027 411 1027 .....

**Email** S.Pollard@higgins.co.nz .....

**Postal address:** 92 Hewletts Road, PO Box 4473, Mount Maunganui 3149 .....

.....

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### 2 Details of consultant *(or other person authorised to make application on behalf of applicant)*

Company name: Pattle Delamore Partners Ltd (PDP) .....

Contact person: Simon Greening .....

Postal address: South British House, Level 2, 35 Grey Street, Tauranga, 3110 .....

.....

**Telephone** *(please tick preferred contact number)*

☐ Business (0 ) +64 7 985 6453 ..... ☒ Cell (0 ) +21 673 807 .....

**Email** Simon.Greening@pdp.co.nz .....

All correspondence, including invoices for charges, relating to this application(s) should be sent to:

☐ Applicant      ☒ Consultant

Preferred method of contact:

☒ Email      ☐ Post

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**3 Name and address of owner/occupier (of the site relating to application)**

**Owner:**      Frances Group Holdings Limited .....

Postal address: .....

☐ Residential (0 ) .....      ☐ Business (0 ) .....

☐ Cell      (0 ) .....

**Occupier:**      Higgins Contractors Limited .....

Postal address:      92 Hewletts Road, PO Box 4473, Mount Maunganui 3149 .....

☐ Residential (0 ) .....      ☒ Business (0 )      075744100 .....

☐ Cell      (0 )      027 411 1027 .....

**Please note:** If the applicant is not the owner of the land to which the activity relates, then it is good practice to submit the application with written approval from the landowner.

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**4 In which district is the activity located?**

<input type="checkbox"/> Whakatāne District	<input type="checkbox"/> Ōpōtiki District	<input type="checkbox"/> Taupō District
<input type="checkbox"/> Rotorua District	<input type="checkbox"/> Kawerau District	<input checked="" type="checkbox"/> Tauranga District
<input type="checkbox"/> Western Bay of Plenty District		

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**5 Application Details**

(a) Is this application to replace an existing or expired consent(s)?      ☒ Yes      ☐ No

If Yes, please state the consent number(s)      63317 .....

(b) Please specify the duration sought for your consent(s).

..... 10 years ..... 0 months



Start date 30 ...../09 ...../2020 .....

Completion date (if applicable) 30...../09 ...../2030 .....

(c) Do you also require resource consent(s) from a district council? ☐ Yes ☒ No

Type of consent required N/A .....

Has it been applied for? ☐ Yes ☐ No

Has it been granted? (If Yes, please attach) ☐ Yes ☐ No

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## 6 Location description of activity

Site address 90-92 Hewletts Road, Mount Manganui, 3149 .....

Legal description Lot 2 DPS 69066 (92 Hewletts Road) &

Lot 3 DPS 69066 (90 Hewletts Road) .....

Map reference NZTM, (if known) NZTM 1882209mE, 5826638mN (Plant Location) .....

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## PART 2

### 1 Air Discharge Information

- (a) The nature of the discharge refers to the composition of the discharge, the concentrations of the components and the emission rate.
  - (b) For a boiler, the fuel type, expected contaminants, concentrations, and emission rate must be listed (i.e. nitrogen oxides, sulphur oxides, particulate matter, heat output, and any others present).
  - (c) The makeup of the particulate matter should be known and provided. Particle size range is required to indicate whether particles are likely to settle, drift or be inhaled.
  - (d) The sensitivity of the receiving environment is related to the location of the operation and includes sensitive receptors (e.g. residential properties, schools, recreational facilities).
  - (e) Any physical controls or treatment provided to control or reduce the effects of the contaminants must be provided, including any possible hazards or emissions from these mitigation measures.
  - (f) For spray painting, please submit a Material Safety Datasheets with your application.
- 

### 2 Description of activity See attached AEE for details

(a) Combustion materials (boiler using coal, wood waste, diesel, etc.) .....

(b) Gases(s)/particulates/materials (contaminants) being discharged .....

.....

- (c) Concentration of contaminant(s) in air (*corrected to 0°C, 1 Atm and dry gas basis*). .....  
.....
- (d) Discharge/emission rate (from flue or vent) ..... m<sup>3</sup>/s
- (e) Discharge rate for particulates (*Ks/h*) .....
- (f) Flue velocity..... m/s
- (g) Particulate matter size range .....
- (h) Heat output (*gross*) of a boiler/heating plant .....
- (i) Fuel being used in a boiler/heating plant.....
- (j) Sulphur content of fuel used in a boiler/heating plant.....
- (k) Height of flue above ground level..... m
- (l) Height of building in vicinity of flue ..... m
- (m) Source of odours (*e.g. composting, wastewater treatment plant, industrial farming – piggery/poultry*) .....
- (n) Is the discharge:      ☐ Point source      ☐ Diffuse
- (o) Describe all possible sources of discharge:  
.....  
.....  
.....  
.....

### 3 Process details

- (a) Please supply a detailed **flow chart** and **description of the process** that either results in a discharge to the atmosphere, or could potentially result in a discharge to air. Show that raw materials and products are in your process. **See attached AEE**
- (b) How often does the operation run during the day and year? **See attached AEE**
- Hours per day: .....
- Days per year .....

### 4 Receiving environment **See attached AEE**

- (a) Site plan

On a separate piece of paper, please provide a site plan showing the location of the activity and receiving environment including distances to property boundaries.

You can also use the regional mapping system available on our website ([www.boprc.govt.nz](http://www.boprc.govt.nz) keywords 'regional mapping'). The mapping system includes property boundary and contour layers, and allows you to carry out a property search, and view and/or print topographic maps or aerial photography.

(b) Is the activity located in a gazetted airshed? ☒ Yes ☐ No

(c) What is the land main use in the surrounding area?

See attached AEE .....

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(Please continue on a separate sheet)

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## 5 Assessment of Environmental Effects (AEE)

The Resource Management Act 1991 requires resource consent applications to include an Assessment of Environmental Effects (AEE), identifying the actual and potential effects that an activity may have on the environment.

(a) Describe the actual potential effects that the proposed activity/operation could have on the environment, the neighbourhood, including cultural effects. Other areas that need effects assessed are historic sites and recreational areas, such as parks, scientific areas, and scenic features, etc.

See attached AEE .....

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*(Please continue on a separate sheet)*

- (b) Describe any visual effects (e.g. may be caused by wet plumes from a drying kiln, cooling tower, or wet scrubber) and/or landscape effects (e.g. deposition of matter onto land from an aerial discharge).

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See attached AEE .....

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*(Please continue on a separate sheet)*

- (c) Please describe any effects your operation will have on physical habitats of plants and animals and any potential health effects. *Some contaminants, such as nitrogen oxides, sulphur oxides, fluorides, and heavy metals have the potential to damage flora and fauna and pose a health risk to humans.*

See attached AEE .....

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(Please continue on a separate sheet)

- (d) Have there been any complaints associated with the proposed activity? Please describe.

See attached AEE .....

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(Please continue on a separate sheet)

- (e) Describe any effects of the proposal downwind, under prevailing wind conditions.

See attached AEE .....

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(Please continue on a separate sheet)

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## 6 Mitigation

The Resource Management Act 1991 requires the applicant to identify the ways in which those effects can be avoided, remedied or mitigated.

- (a) Describe what methods are going to be used to reduce the actual or potential effects (include physical controls, treatment systems and management procedures).
- (b) Include plans of the emission control system, if applicable.
- (c) Detail contingency plans in the event of a breakdown, such as a back-up system, stopping the process, alarms to warn of a problem, etc.
- (d) Show what your schedule of maintenance will be for the control equipment.
- (e) Provide an odour-management plan.

See attached AEE .....

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*(Please continue on a separate sheet)*

What alternative contaminant control methods or discharge locations have you considered and why?

See attached AEE .....

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*(Please continue on a separate sheet)*

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## **7 Hazards and waste generation**

- (a) Where your operations include the use of hazardous substances or installations, please provide an assessment of the risks to the air environment likely to arise from such use.

See attached AEE .....

.....

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*(Please continue on a separate sheet)*

- (b) Describe the type of waste generated by the proposed activity, and how you tend to manage that waste (e.g. capture, storage, disposal).

See attached AEE .....

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.....

*(Please continue on a separate sheet)*

- (c) If the activity produces hazardous waste products, indicated the volume produced and assess the risks of the waste on the environment (including health risks to humans).

See attached AEE .....

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.....

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*(Please continue on a separate sheet)*

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8     **Monitoring**

- (a)    How do you plan to monitor the discharges to air (include proposed frequency)?

See attached AEE .....

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.....

*(Please continue on a separate sheet)*

- (b)    If there are fugitive discharges, how do you plan to monitor the fugitive discharges to air (include proposed frequency)?

See attached AEE .....

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*(Please continue on a separate sheet)*

- (c)    What, if any, monitoring do you propose to carry out on the potential adverse environmental effects of the proposal on the receiving environment?

See attached AEE .....

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*(Please continue on a separate sheet)*

- (d)    Please describe any other monitoring of associated control measures proposed, if applicable.

See attached AEE .....

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*(Please continue on a separate sheet)*

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## 9 Statutory Assessment

This policy assessment is required as per s88 and schedule 4 of the RMA for the application to be considered completed. This policy assessment is required as per s88 and schedule 4 of the RMA for the application to be considered completed.

See attached AEE .....

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*(Please continue on a separate sheet)*

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## 10 Persons likely to be affected

*Affected persons may include neighbouring land owners and occupiers, and/or organisations such as the Department of Conservation, Land Information New Zealand (LINZ), Eastern Region Fish and Game Council, relevant iwi and hapū and community groups.*

*If you do not think there will be affected persons, you do not need to fill out this section; however, the Bay of Plenty Regional Council will make the final assessment of whether a person is affected by your proposal, and it is recommended as best practice to consult with those persons.*

*In order for your application to be considered for **non-notification** you **must** gain written approval from all persons who may be affected by the proposal. The Bay of Plenty Regional Council can help you identify people/organisations that are likely to be affected, and the form 'Affected Person's Written Approval', can be found at [www.boprc.govt.nz](http://www.boprc.govt.nz) keywords '**resource consent forms**'.*

Please provide details below of those you have identified as persons who may be affected. If you have discussed your proposal with any of these persons, please record any correspondence, and submit this with your application. See attached AEE and cultural effects section

Name .....

Address .....

.....

☐ Written approval supplied (*attached*)

Name .....

Address .....

.....

☐ Written approval supplied (*attached*)



(Please continue on a separate sheet)

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## 11 Extending timeframes

*The Resource Management Act 1991 specifies timeframes for processing resource consent applications (e.g. 20 working days for a non-notified application); however these timeframes can be extended, if necessary, with the Applicant's agreement.*

Do you agree to the Bay of Plenty Regional Council extending RMA consent processing timeframes?

- ☐ Yes, provided that I can continue to exercise my existing consent until processing of this application is completed (*renewal application only*).
  - ☒ Yes, provided that the extension is for the specific purpose of discussing and trying to agree on consent conditions.
  - ☐ Yes, provided that the application process is completed before ..... / ..... / .....
  - ☐ No.
- 

## 12 Deposit fee

A deposit fee of \$2,700.00, inclusive of GST, is payable with this application. This may be paid online, by cheque, or by eftpos at one the Regional Council's reception desks.

- Bay of Plenty Regional Council's bank account number is **06 0489 0094734 00**. Please use the Applicant's name as the reference. A GST invoice marked "PAID" will be issued on receipt of payment.
  - An application will not be accepted as a complete application until the deposit fee has been paid. **Please note:** while we are happy to hold the forms in the meantime, the processing time will not start until payment is received.
  - Additional charges are usually incurred, and will vary depending on the resource we use in the course of processing your application (e.g. *staff time*). Staff can give an estimate of expected costs. Please see the schedule of fees attached.
- 

## Checklist

The following information must be included in your application to ensure it is accepted.


- ☒ Complete all details in this application form.
- ☒ Include an Assessment of Environmental Effects, as set out in Schedule 4 of the RMA
- ☒ Supply written approval from all affected parties, if any, and/or summary of consultation carried out.
- ☒ Include a site plan.
- ☒ Sign and date the application form.
- ☒ Pay the required deposit.

- ☒ Include any other information you think relevant (e.g. *Certificate of Title, details from the Companies Register, etc.*)
- ☐ If your application is a large application, please submit an electric version on CD, and one hard copy.

Please be aware any unchecked boxes may result in your application being returned under s88.

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- 1 I confirm that I have authority to sign on behalf of the party/ies named as the applicants for this consent.**
- 2 I have read, and understand, all of the information contained on this application form, including the requirement to pay additional costs that will be itemised.**
- 3 I confirm that all the information provided is true and correct and understand that any inaccurate information provided could result in my resource consent later being cancelled.**

Signature .....  .....

Date 26/03/2020

# IMPORTANT

## NOTE TO THE APPLICANT

### PLEASE READ THIS BEFORE PROCEEDING WITH THE APPLICATION FORM

If you are unsure whether you require a resource consent for your proposed activity, or you have any other queries, please contact a consents officer at Bay of Plenty Regional Council on 0800 884 880.

#### IMPORTANT INFORMATION

- 1 **Processing of the application by Bay of Plenty Regional Council will not begin until the deposit fee is paid, unless prior arrangement has been made. If, at the end of the processing of the application, the actual cost exceeds the deposit, you will be invoiced for the balance.**
- 2 You may also be required to pay a resource management charge associated with holding a consent. The Water Administration Team will be able to provide you with more details. All charges are in accordance with Section 36 of the Resource Management Act 1991. All accounts are payable by the 20<sup>th</sup> of the month following date of invoice. Where costs are incurred that exceed \$2,000 above the deposit, or at the end of every quarter, you may be requested to pay an additional amount by way of interim payment against the final total costs.
- 3 The Coastal Marine Area is the area from the outer limit of the territorial sea (12 nautical miles) to the line of mean high-water springs. For activities at river mouths, please contact a consents officer at Bay of Plenty Regional Council for clarification.
- 4 Section 42 of the Resource Management Act 1991 allows the protection of sensitive information. Therefore, if your application includes trade secrets and/or commercially and culturally sensitive material, please advise Bay of Plenty Regional Council.
- 5 Schedule 4 of the Resource Management Act 1991 (*summarised at the back of this form*) sets out the information you must provide with your consent application, including an Assessment of Environmental Effects (AEE). An AEE must be prepared in accordance with Schedule 4 of the Resource Management Act 1991. To assist in the preparation of the assessment, a summary of the key requirements of Schedule 4 follows this information sheet. Failure to provide the correct information will result in delays in the processing of your application.
- 6 Bay of Plenty Regional Council may decide not to proceed with the application until applications for further resource consents are made (Section 91). It is, therefore, important to identify every consent required for the proposal at the outset.
- 7 Bay of Plenty Regional Council may request the Applicant, by written notice, to provide further information if required (section 92). If this occurs, the application will be put on hold, and the processing timeframes stopped. Processing will not recommence until the information is received.
- 8 An application does not need to be publicly notified if the environmental effects are minor, and if written approval has been obtained from everyone who is adversely affected by the granting of the consent (Sections 95D and 95B respectively). Bay of Plenty Regional Council has forms available to obtain approvals.
- 9 Under Section 128(1)(c) of the Resource Management Act 1991, Bay of Plenty Regional Council may undertake a review of any consent at any time if the application contains any inaccuracies that materially influence the decision made.

# Assessment of Environmental Effects – Replacement Air Discharge Permit

✦ Prepared for

Higgins Contractors Limited

✦ December 2020



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**solutions** for your environment

## Quality Control Sheet

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### DOCUMENT CONTRIBUTORS

Prepared by

SIGNATURE

---

Stephanie Williams

Reviewed by

Approved by

SIGNATURE

---

Simon Greening

Hamish Peacock

### Limitations:

This report has been prepared by Pattle Delamore Partners Limited (PDP) on the basis of information provided by Higgins Group Holdings Limited and others (not directly contracted by PDP for the work, including Harrison Grierson, Styles Group, Richard Hart Limited). PDP has not independently verified the provided information and has relied upon it being accurate and sufficient for use by PDP in preparing the report. PDP accepts no responsibility for errors or omissions in, or the currency or sufficiency of, the provided information.

This report has been prepared by PDP on the specific instructions of Higgins Group Holdings Limited for the limited purposes described in the report. PDP accepts no liability if the report is used for a different purpose or if it is used or relied on by any other person. Any such use or reliance will be solely at their own risk.

## Table of Contents

SECTION	PAGE
<b>1.0 Introduction</b>	<b>1</b>
1.1 Background	1
1.2 Applicant and Property Details	3
<b>2.0 Description of the Activity</b>	<b>3</b>
2.1 Overview	3
2.2 Existing Asphalt Plant Operation	3
<b>3.0 Statutory Considerations</b>	<b>5</b>
3.1 Key Features and Overlays	5
3.2 Reason for Resource Consents	5
3.3 Other Consents Required	6
3.4 Section 124 – Exercise of air discharge resource consent while applying for new air discharge consent	6
3.5 Value of Existing Infrastructure	6
3.6 Term of Consent	7
<b>4.0 Consideration of Alternatives</b>	<b>7</b>
4.1 Statutory Context for Alternatives Assessment	7
4.2 Options Considered	8
<b>5.0 Site Description / Existing Environment</b>	<b>9</b>
5.1 Cultural Setting	9
5.2 Amenity	9
5.3 Topography	9
5.4 Wind Patterns	10
5.5 Air Quality	10
5.6 Surface Water and Ecology	11
<b>6.0 Assessment of Environmental Effects</b>	<b>12</b>
6.1 Positive Effects	12
6.2 Cultural Effects	12
6.3 Air Quality Effects	14
6.4 Summary of Effects	16
<b>7.0 Draft Conditions of Consent</b>	<b>16</b>
<b>8.0 Consultation</b>	<b>18</b>
8.1 Statutory Context	18
8.2 Stakeholders	18
8.3 Consultation Outcomes	19
<b>9.0 Statutory Assessment</b>	<b>20</b>
9.1 Resource Management Act 1991	20
9.2 Notification Assessment	20
9.3 Information Requirements	25

<b>9.4</b>	<b>Section 104 Assessment</b>	<b>25</b>
<b>9.5</b>	<b>Section 105 – Matters Relevant to Discharge Applications</b>	<b>31</b>
<b>9.6</b>	<b>Section 104B – Determination of Applications for Discretionary or Non-complying Activities</b>	<b>32</b>
<b>9.7</b>	<b>Statutory Assessment Conclusion</b>	<b>32</b>
<b>10.0</b>	<b>Conclusion</b>	<b>33</b>
<b>11.0</b>	<b>References</b>	<b>34</b>

## Table of Figures

Figure 1: Location Map (92 Hewletts Road)	2
Figure 2: HCL Leased Site (in red) and Asphalt Plant (in green)	2
Figure 3: Tauranga Airport Windrose, 2007-2012	10

## Table of Tables

Table 1: Applicant Details	3
Table 2: Air Quality Parameters for the Asphalt Plant	4
Table 3: Zoning and Key Features	5
Table 4: Resource Consents Sought	6
Table 5: Highest Predicted MGLCs for Existing Asphalt Plant	15
Table 6: List of Stakeholders Consulted	18
Table 7: Public Notification Assessment	21
Table 8: Limited Notification Assessment	23
Table 9: Ambient Air Quality National Environmental Standards	29
Table 10: Section 105 Matters	32
Table 11: Bay of Plenty Regional Policy Statement	E-1
Table 12: Regional Air Plan and Plan Change 13	E-5

## Appendices

Appendix A: Certificate of Title
Appendix B: Air Quality Assessment
Appendix C: Draft Pollution Prevention Plan
Appendix D: Consultation Record and Written Approvals
Appendix E: Statutory Assessment

## 1.0 Introduction

### 1.1 Background

Higgins Contractors Limited (HCL) is a New Zealand owned civil construction business with 2000 staff in both New Zealand and Fiji. HCL provides fully integrated civil construction services and infrastructure products, including the manufacture and supply of aggregates, concrete and bitumen; pavement construction; spray sealing; asphalt paving; drainage; traffic management; road marking and road maintenance.

HCL occupies 90-92 Hewletts Road (the Site) in Mt Maunganui and has operated an asphalt plant on 92 Hewletts Road since 1991. The site area and existing asphalt plant is illustrated in Figure 1 and Figure 2. In Figure 2, the current leased area is outlined in Red and the existing asphalt plant is outlined in Green.

HCL currently holds an air discharge consent (Consent number 63317) for a diesel-fired asphalt manufacturing plant at the Site. The consent was granted on 6 December 2005 and expires on 30 September 2020 and authorises the:

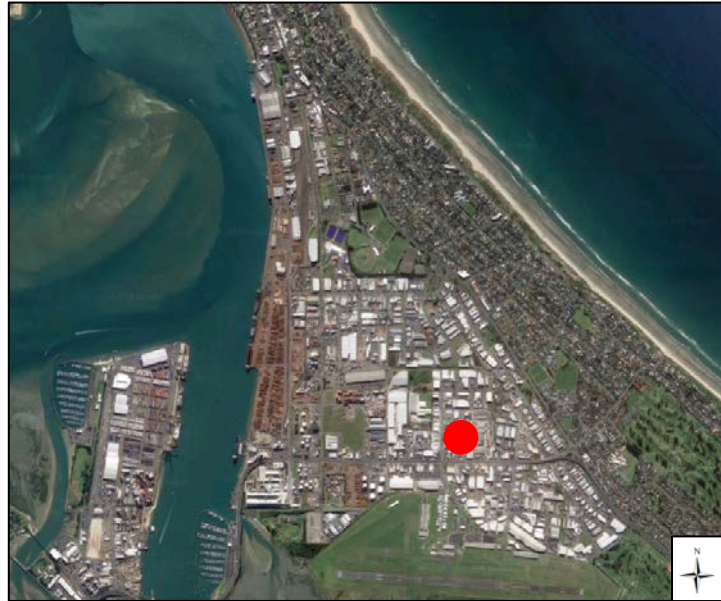
*'Discharge Combustion Gases, Bitumen, Sulphur Dioxide, Volatile Organic Compounds, Water Vapour and Particulate Matter from an Asphalt Plant to Air'.*

Condition 2 of the resource consent specifies that the discharge is:

*'from the asphalt plant (including asphalt and bitumen storage) and the site yard (including aggregate stockpiles)'.*

Accordingly, HCL is applying for consent from Bay of Plenty Regional Council (BOPRC) to replace their existing air discharge consent (63317) for the purposes authorised under the existing consent at the Site.





**Figure 1: Location Map (92 Hewletts Road)**



**Figure 2: HCL Leased Site (in red) and Asphalt Plant (in green)**

This Assessment of Environmental Effects (AEE) has been prepared by Pattle Delamore Partners Limited (PDP) to support the resource consent application to replace HCL's existing air discharge consent (63317) in accordance with the Resource Management Act 1991 (RMA) and the Regional Air Plan (RAP).

Section 2.0 provides a detailed description of the proposed activity.

## 1.2 Applicant and Property Details

HCL details and those details of the Site are contained in Table 1. A current Certificate of Title is provided in Appendix A. The site location and layout of the plant is presented in Figure 1 and Figure 2.

Table 1: Applicant Details	
<b>Applicant</b>	Higgins Contractors Limited
<b>Site Address</b>	90-92 Hewletts Road, Mt Maunganui
<b>Legal Description</b>	Lot 2 DPS 69066 (92 Hewletts Road) Lot 3 DPS 69066 (90 Hewletts Road)
<b>Landowner</b>	Frances Group Holdings Limited
<b>Grid Reference</b>	At about NZTM 1882209mE, 5826638mN (Plant Location)

## 2.0 Description of the Activity

### 2.1 Overview

HCL operates a stationary asphalt manufacturing plant at 90-92 Hewletts Road, Mount Maunganui, Tauranga (illustrated in red (Figure 2). The proposal includes replacing the existing air discharge consent for the existing plant.

### 2.2 Existing Asphalt Plant Operation

#### 2.2.1 Production

The asphalt plant is a parallel-flow drum mix plant, which has historically been the most common type of asphalt plant in New Zealand. This type of plant operates on a continuous basis with the drum used to both dry and heat aggregate and to mix liquid bitumen with hot aggregate to produce hot mix asphalt. Product is discharged from the drum at the opposite end to the burner onto a conveyor for transfer to thermally insulated hot storage bins and then load-out. The plant has a maximum production capacity of 60 tonne product per hour.

The particulate emission control system is a venturi water scrubber, and hot mix asphalt storage is in elevated bins. Combustion gases, dust, bitumen volatile matter and pyrolysis products are drawn by an induced draught fan through the water scrubber before gases are discharged into air through the stack (at a height of 13 m above ground level). Emissions testing of the existing plant is undertaken on a regular basis. A copy of the most recent test is attached as Appendix B of the PDP Air Quality Report (Appendix B: of this report), and shows

the emission rate for total particulate matter was measured at 1.0 kg/hr, which is 40% of the consented limit of 2.5 kg/hr.

Not all of the particulate discharged from the scrubber is PM<sub>10</sub>. USEPA emission factors for asphalt plants do not speciate particulate emitted from venturi scrubbers, although test data indicates that around 70% of total particulate emitted from a venturi scrubber consists of the PM<sub>10</sub> fraction.

### 2.2.2 Hours of Operation

On a day to day basis to meet expected average demand, the plant generally operates from 7am - 6.30 pm. However, there are times when the plant operates throughout night-time hours to align with projects that require asphalt product in the night-time when vehicle movements on public road networks are low, or for very large projects that need asphalt supply 24 hours per day. Based on the low-level effects, no specific consent conditions are required or expected to limit production beyond what is currently imposed, through the existing consent.

Table 2 presents the plant stack discharges relating to normal operations at maximum operating capacity for the asphalt plant.

Table 2: Air Quality Parameters for the Asphalt Plant	
Parameter	Values
Stack Height	13 m
Heat release	Up to 4.5 MW gross
Diesel consumption rate <sup>2</sup>	330 kg/hr
Efflux velocity	15 m/s
Carbon monoxide	3.9 kg/hour <sup>1</sup>
Oxides of nitrogen (as NO <sub>2</sub> )	1.7 kg/hour <sup>1</sup>
SO <sub>2</sub>	0.0033 kg/hr <sup>3</sup>
PM <sub>10</sub>	1.75 kg/hr <sup>1</sup>
<p>Notes:</p> <ol style="list-style-type: none"> <li>1. USEPA Emission factors, AP-42, April 2004. Assume 83% of TSP is PM<sub>10</sub>.</li> <li>2. Manufacturer specifications</li> </ol> <p><i>Note regarding SO<sub>2</sub>: The rate of generation of SO<sub>2</sub> when burning diesel oil fuels is calculated from the rate of fuel consumption. The USEPA notes in AP-42 Section 11.1 Hot Mix Asphalt Plants (April 2004) Table 11.1-7 that fifty percent of the fuel-bound sulphur, up to a maximum SO<sub>2</sub> of 0.1 lb/ton of product (0.05 kg/tonne) is expected to be retained in the product. The remainder will be emitted as SO<sub>2</sub> from the drying/blending drum. When burning 400 kg/hour of diesel fuel for the plant containing 0.001% sulphur by weight.</i></p>	

### 3.0 Statutory Considerations

The operative regional Air Plan (RAP) is the relevant regional plan for this proposal and associated activities.

It is noted that as well as the operative RAP, the BOPRC has notified Plan Change 13 (PC 13) that addresses 'air quality'. s86B (RMA), states the following:

1. *A rule in a proposed plan has legal effect only once a decision on submissions relating to the rule is made and publicly notified under clause 10(4) of Schedule 1, except if—*
  - (a) *subsection (3) applies*
3. *A rule in a proposed plan has immediate legal effect if the rule—*
  - (a) *protects or relates to water, air, or soil (for soil conservation);*  
*or*

Accordingly, PC 13 applies to this activity as well. The decision for PC 13 was notified on 12 March 2019 (PC 13-DV).

#### 3.1 Key Features and Overlays

Table 3 provides a description of statutory planning zones and any overlays that apply for the relevant planning documents within Tauranga City Council and Bay of Plenty Regional Council

Table 3: Zoning and Key Features	
City Plan	Tauranga City Plan
Zone	Industrial
Regional Plans	Bay of Plenty Regional Plan / Regional Air Plan
Overlays and/or key features	Statutory Acknowledgements Map - The site is not subject to any statutory acknowledgements.
	Bay of Plenty Regional Airshed Notice 2019: <div> <div></div> <div>Schedule 1 - Mount Maunganui Airshed - SO 537485</div> </div>

#### 3.2 Reason for Resource Consents

HCL requires consent from BOPRC for an air discharge permit associated with the operation and maintenance of the existing plant. Table 4 outlines the relevant regional rules under which consent is required.

Table 4: Resource Consents Sought			
Rule	Activity	Reason for Consent	Activity Status
<b>Regional Air Plan and PC 13-DV</b>			
<ul style="list-style-type: none"> <li>Rule 19(c) of RAP and;</li> <li>Rule AR R21(b) of PC 13-DV</li> </ul>	Discharge to air	An asphalt plant is an activity listed as requiring consent.	Discretionary

Overall, consent is required from BOPRC as a **Discretionary Activity**.

For the avoidance of doubt, HCL is seeking consent under the above rules and any other rules which may apply to the activity, even if not specifically noted.

### 3.3 Other Consents Required

No other consents are required.

### 3.4 Section 124 – Exercise of air discharge resource consent while applying for new air discharge consent

In circumstances where a resource consent is due to expire, section 124 of the RMA provides for the continuation of an activity while a determination is made on an application for a new consent.

This application includes a new consent for the same activity being the consent to discharge to air from the existing asphalt plant (section 124(1)(b)) and has been made within the 6-month timeframe specified in section 124(1)(d). Therefore, until the determination of this consent application HCL will continue to operate under its existing resource consents as provided by section 124(1) of the RMA.

### 3.5 Value of Existing Infrastructure

104(2A), the existing asphalt plant and its associated infrastructure is currently valued at around \$3.075 M.

The value of the infrastructure and associated assets consists of trucks/machinery/buildings/infrastructure associated with the current plant (HCL email dated 20/01/2020). This investment and ability to continue operations would be put in jeopardy if this application is not granted.

### 3.6 Term of Consent

As provided for by section 123 (RMA):

- ∴ a ten-year term of consent is sought for the continued operation of the asphalt plant (air discharge).

The proposed term of ten years would allow for the continued operation of the asphalt plant. HCL is intending to seek an alternative site to construct and operate a new asphalt plant with an increased capacity output to cater for any increase in demand. A ten-year term of consent would provide HCL with sufficient time to purchase/lease, undertake investigations, consent, construct and commission a new plant while meeting ongoing demand with their existing plant.

## 4.0 Consideration of Alternatives

### 4.1 Statutory Context for Alternatives Assessment

Schedule 4 of the RMA, Section 6(1)(a) states that:

*‘if it is likely that the activity will result in any significant adverse effect on the environment’, then the application must include “a description of any possible alternative locations or methods for undertaking the activity”.*

The continued operation of the asphalt plant and associated air discharge is not considered to have any significant effects on the environment.

Additionally, section 105(1)(c) states that if an application is for a discharge permit:

*‘the consent authority must, in addition to the matters in section 104(1), have regard to.... any possible alternative methods of discharge, including discharge into any other receiving environment’.*

Accordingly, HCL has considered alternative discharge options than that proposed. Each alternative method/location is identified, and reason provided for why it was not pursued in Section 4.2.

It is noted that Policy AQ P3 of PC 13-DV states that to achieve certain outcomes “activities that discharge contaminants to air must be managed, including by use of the best practicable option”. The BPO as defined by the RMA as follows:

**best practicable option**, in relation to a discharge of a contaminant or an emission of noise, means the best method for preventing or minimising the adverse effects on the environment having regard, among other things, to—

- (a) the nature of the discharge or emission and the sensitivity of the receiving environment to adverse effects; and*
- (b) the financial implications, and the effects on the environment, of that option when compared with other options; and*
- (c) the current state of technical knowledge and the likelihood that the option can be successfully applied.*

## 4.2 Options Considered

Accordingly, HCL has undertaken an assessment of alternative discharge options to pursue the BPO to meet the air discharge requirements of the RAP and PC 13, NAAQGs and NES-AQ for the next 10 years. These options include:

1. Retain the existing asphalt plant in its current location. This is considered the BPO to ensure the continued operation of the plant with minimal cost implications. The sensitivity of the area is minimised by the industrial zoning and nature of the surrounding business. Although the site is within a gazetted airshed, it meets Regulation 17 of the NESAQ and HCL will undertake site maintenance to reduce dust nuisance associated with PM<sub>10</sub> exceedances. This option minimises expenditure for the time being while providing for a known level of output from the air treatment that currently exists on the plant.
2. Retain the existing asphalt plant in its current location and implement new air treatment technology. As a result of the air discharge effects for option 1 proving that the effects on the environment and neighbours are less than minor, no further measures were considered necessary in terms of mitigation for the current plant.
3. Develop a new asphalt plant with modernised air treatment equipment at the current site (or nearby with same airshed). The joint response for options 3 and 4 (alternatives assessment) is provided below.
4. Develop a new asphalt plant with modernised air treatment equipment at the current site (or nearby with same airshed).

Joint response to option 3 and 4. HCL has invested considerable time and resources into investigating an alternative asphalt plant, that would have been located on Hewlett's Road. As circumstances have dictated, this is no longer feasible at this point in time, but is still considered as a viable option in the future. HCL is continuing to investigate their options for a new plant that would form the BPO into the future.

**Summary:** While investigations are ongoing for a site that could house a new asphalt plant, the BPO at this point in time is to continue the discharge from the current asphalt plant.



## 5.0 Site Description / Existing Environment

### 5.1 Cultural Setting

A review of the TCP and RNRP, Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA), Archsite and Tauranga Council's Cultural Heritage Index (CHI) has indicated that there are no cultural features located within or nearby the subject site (existing asphalt plant). The nearest archaeological site (reference number U14\_198), according to TCP online maps, is located roughly 1.3 km from the works site.

The works site falls within the following rohe of:

- ✧ Ngāi Te Rangi
  - (Ngāti Kuku)
  - Ngāi Tukairangi
- ✧ Ngāti Pūkenga
- ✧ Waitaha

### 5.2 Amenity

The site and locality are not located within any Natural Character or Outstanding Natural Features and Landscapes overlay, being within an industrial zone. Given the site has an industrial character and very low natural character, an industrial landscape predominates.

Residential dwellings are approximately 620 m to the east. Mt Maunganui College is within the residential zone and has the closest buildings in the zone, northeast of Maunganui Road (approximately 580 m to the east of the proposed new site boundary). There are many large intervening industrial buildings between residential housing, the school and the site.

### 5.3 Topography

The surrounding topography is generally of low relief. The average altitude of the area is approximately 2 m above the mean sea level. The major terrain feature of the surrounding area is Mount Maunganui, which is located approximately 4 km to the north west of the site, with an elevation of 231 m. The terrain gradually falls away to sea level to the east and west of the site, approximately 1.5 km distance. The locality and site are dominated by hard, flat surfaces, vehicle access and storage, buildings and structures areas as expected in an industrial zone.



## 5.4 Wind Patterns

The nearest full-time meteorological station is located at Tauranga Airport, less than 500 m to the south of the site. A windrose of the 2007-2012 period is provided as Figure 3. The most common wind direction is from between the west and southwest. The average wind speed for the meteorological data period was 3.8 m/s, with calm periods (wind speeds less than 0.5 m/s) making up 1% of the frequency.

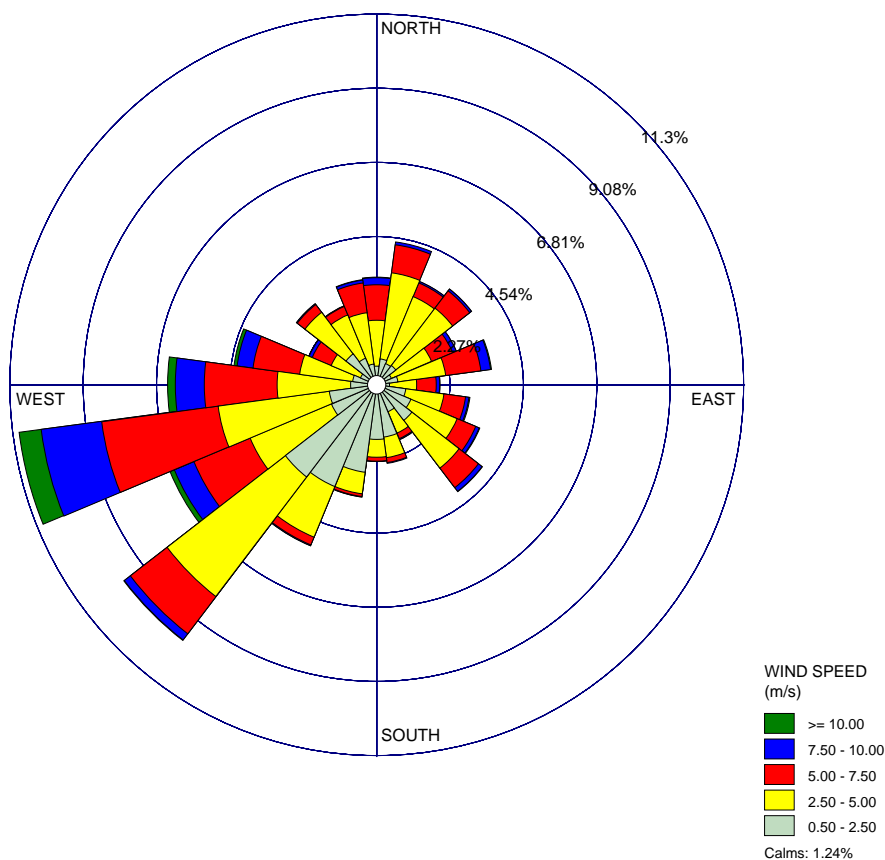


Figure 3: Tauranga Airport Windrose, 2007-2012

## 5.5 Air Quality

The existing asphalt plant has operated since 1994 and accordingly contributed to the local air quality for many years. In respect of the replacement consent for the existing asphalt plant, the operation should be considered as if it were a new operation, however legacy effects on neighbouring properties should be recognised. The PM<sub>10</sub> emissions from the asphalt plant are estimated at a rate of 1.75 kg/hr from a 13 m stack height (i.e. PM<sub>10</sub> forms 70% of the total particulate matter discharge of 2.5 kg/hr). This consented rate forms part of the existing environment.

Sensitive areas located near the existing and proposed asphalt site include:

1. Mount Maunganui College located approximately 580 m to the east of the proposed new site boundary;
2. Residential dwellings located approximately 620 m east the site boundary; and
3. Whareroa Marae located approximately 1.4 km to the west-southwest of the site boundary.

The area most affected by the existing and proposed activities consists of those receptors in the industrial zoned area surrounding the site. These activities are classified as being of 'moderate' sensitivity by the MfE Good Practice Guide (2016).

On 17 October 2019, Ministry for the Environment (MfE) gazetted the Mount Maunganui airshed which came into effect 28 days following the airshed notice. The BOPRC website<sup>1</sup> notes:

*The Port of Tauranga and the Mount Maunganui industrial area also have an issue with PM<sub>10</sub>, however, unlike Rotorua, it is primarily caused by industrial discharges. The Mount Maunganui airshed was introduced to enable tighter rules and resource consent decisions and a greater ability to manage industrial discharges.*

The NES Air Quality Regulations have a particular emphasis on managing PM<sub>10</sub>, with specific requirements for new discharges. Regulation 17(1) of the NES Air Quality Regulations applies to an application for resource consent to discharge PM<sub>10</sub> into a polluted airshed. If the discharge is likely to increase the concentration of PM<sub>10</sub> by more than 2.5 µg/m<sup>3</sup> in any part of a polluted airshed other than the site on which the consent would be exercised, then the consenting authority must decline the application for resource consent.

## 5.6 Surface Water and Ecology

There are no streams, aquatic or terrestrial ecology or vegetation located on the proposed site.

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<sup>1</sup> <https://www.boprc.govt.nz/environment/air/airshed/>

## 6.0 Assessment of Environmental Effects

The following assessment of environmental effects is applicable to the existing asphalt plant at Hewletts Road, Mt Maunganui.

### 6.1 Positive Effects

The existing operation as a result of asphalt production at Hewletts Road employs 143 amount of people. The asphalt operation itself continues to provide high grade asphalt to the BOP region as it grows to enable housing development, roading and other infrastructures that provides for social benefit. The asphalt plant also contributes to the overall resilience of the Bay of Plenty region. For example, in the case of a natural disaster occurring, increased outputs of asphalt would be required to rebuild any damaged infrastructure such as roads, pavements or buildings of which the existing plant could assist in providing.

Therefore, the operation of the asphalt plant positively contributes to the local economy.

### 6.2 Cultural Effects

Waitaha, Ngāti Pūkenga, Ngai Te Rangi, Ngai Tukairangi Hapū and Ngāti Kuku have been identified as potentially having an interest in the proposed development.

The Bay of Plenty Regional Policy Statement (RPS) provides strong direction for consideration of cultural effects. The RPS directs applicants to undertake consultation as necessary and review iwi/hapū resource management plans to best understand the cultural effects. As acknowledged in Policy IW 2B(b), 'only tāngata whenua can identify and evidentially substantiate their relationship and that of their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga'.

To understand potential cultural effects and concerns, HCL has undertaken (or attempted) consultation with the relevant iwi/hapū authorities and in addition reviewed any relevant iwi management plans. Although the consultation was associated with consenting the existing plant and building a new plant, feedback obtained from those processes is relevant to the ongoing operation of the existing plant. The consultation outcomes, and where possible, an assessment of the potential cultural effects on each iwi/hapū group are discussed below.

#### Waitaha

A response was received from Waitaha on 12 November 2019. Their response confirmed that *"given the location, Waitaha will support a response from Ngai Te Rangi"*.

**Ngai Te Rangi**

In meeting held with Ngai Te Rangi, the only matters raised concerned was the management of the air discharge and stormwater discharge (primarily as it related to a new plant). No specific cultural effects were raised by Ngai Te Rangi in regard to the existing plant. In response, the effects of the discharge from the existing plant have been assessed by PDP as less than minor. HCL noted that a copy of the AEE will be provided to Ngai Te Rangi following lodgement of the application.

The Tauranga Moana Iwi Management Plan 2016-2026 (TIMP) in regard to Ngai Te Rangi, which relate primarily to the management of effects on air, land and water, has been reviewed. The proposed development is considered consistent with the air objectives which aim to maintain and/or improve air quality.

**Ngāti Pūkenga**

A review of the Ngāti Pūkenga IMP has not been considered necessary based on their feedback. Ngāti Pūkenga was interested to know that air would be compliant with BOPRC requirements/standards and that independent monitoring will be put in place. No specific cultural effects were raised by Ngāti Pūkenga in regard to the existing plant. The ongoing air discharge would meet consent conditions imposed (standards) and as such the effects on Ngāti Pūkenga are considered less than minor.

**Ngai Tukairangi Hapū and Ngāti Kuku Hapū**

KT P15 (Policy 15) of the RNRP directs the consultation of all appropriate tāngata whenua holding mana whenua in circumstances where rohe (tribal boundaries), or areas of ancestral or historic interest overlap.

In consultation with Ngai Tukairangi and Ngāti Kuku Hapū, the same concern was raised regarding the management of air effects. KT P19 (Policy 19) of the RNRP encourages tāngata whenua to recommend appropriate measures to avoid, remedy or mitigate adverse environmental effects. To date, HCL has continued to consult with Ngai Tukairangi and Ngāti Kuku Hapū. The air quality report has been provided to these hapū for review on 18 March 2020 with a response expected soon. Although no specific cultural concerns have been raised by Ngai Tukairangi and Ngāti Kuku Hapū, consultation is ongoing. Effects are expected to be less than minor, however, HCL will inform BOPRC of any feedback received by Ngai Tukairangi and Ngāti Kuku Hapū.

With the information available to date, the cultural effects on Ngai Tukairangi and Ngāti Kuku Hapū are assessed to be less than minor.

## Summary

As reported to PDP by HCL, the overall responses and engagement with the iwi/hapū groups outlined above has shown a generally positive response and no opposition to the application was indicated. Although in relation to a wider strategy to upgrade the plant, no feedback was obtained that indicated the existing plant has been a concern, has created cultural effects, or is likely to create any cultural effects into the future.

Therefore, the effects on iwi/hapū are considered less than minor.

### 6.3 Air Quality Effects

The Air Discharge Assessment of Effects report compiled by PDP (December, 2019 - refer to Appendix B) used computer dispersion modelling to predict concentration of contaminants in air downwind of the source (i.e. the asphalt plant) and assess the effects of discharge on the environment for the asphalt plant. The assessment detailed that the asphalt plant is located in an appropriately zoned (i.e. industrial) receiving environment where surrounding activities are a combination of industrial, commercial, and residential uses, with a range of sources contributing to contaminants in air.

The nearest ambient air monitoring station to the HCL site is located at Totara Street, Tauranga, around 1 km to the west of the site. This station has continuously monitored total suspended particulate (TSP), PM<sub>10</sub> and PM<sub>2.5</sub> since August 2018. The PM<sub>10</sub> monitoring data results for the five monitoring sites have previously shown three exceedances at the Whareroa Marae monitoring site and two exceedances at the Rail Yard South monitoring site were measured. However, it is likely that these monitoring sites are impacted by dust and products of combustion from nearby activities at the Port, which would not necessarily impact air quality at the HCL site.

The discharges to air for the existing plant was assumed to be continuous over a 12-hour day (7am to 7pm) and 7 days per week. It is unlikely that the plant would operate at maximum continuous rating (MCR) for 12 hours continuously, and so the modelling is considered conservative, particularly for the 24-hour and annual average predictions.

The Air Discharge Assessment of Effects report (Appendix B: ) details the predicted maximum ground level concentrations (MGLCs) of 24-hour average PM<sub>10</sub> for the existing plant, with the highest concentrations occurring approximately 100 m south of the site boundary.

Based on the discharge parameters, the highest predicted maximum ground level concentrations (MGLCs) for the asphalt plant in isolation and cumulatively with background ambient air quality is shown in Table 5.

Table 5: Highest Predicted MGLCs for Existing Asphalt Plant				
Contaminant	Averaging Period	Peak Modelled MGLC – Effects in Isolation ( $\mu\text{g}/\text{m}^3$ )	Peak Modelled MGLC – Cumulative Effects ( $\mu\text{g}/\text{m}^3$ )	Evaluation Criteria ( $\mu\text{g}/\text{m}^3$ )
PM <sub>10</sub>	24-hour	13.70	46.50	50 (NES)
	Annual	1.80	11.80	20 (MfE)
NO <sub>2</sub> <sup>1</sup>	1-hour (99.9 <sup>th</sup> percentile)	6.90	71.90	200 (NES)
	24-hour	2.70	45.70	100 (MfE)
	Annual	0.30	16.30	30 (MfE)
CO	1-hour (99.9 <sup>th</sup> percentile)	79.00	5079.00	30,000 (MfE)
SO <sub>2</sub>	1-hour (99.9 <sup>th</sup> percentile)	<0.10	20.00	350 (MfE)
	24-hour	<0.03	8.00	120 (MfE)
Notes: 1. Assume 20% of NO <sub>x</sub> is NO <sub>2</sub> .				

The highest predicted concentrations of all contaminants are below the assessment criteria for all averaging periods. The predicted MGLCs at the surrounding sensitive receptors will in most cases be well below the highest predictions, and the effects of the discharges will be at a level that is less than minor.

The emission of PM<sub>10</sub> and other contaminants to air from the activities of the existing plant are considered to comply with the requirements of regulations 17(1) and 20 of the Resource Management (National Environmental Standards for Air Quality) Regulations 2004 (NESAQ) as there will be no increase in PM<sub>10</sub> emissions as a result of this discharge continuing.

HCL has successfully operated the existing asphalt plant at the site without any odour issues or complaints for over 20 years.

Overall, it is considered that there are less than minor adverse effects resulting from the air discharges from the existing asphalt plant, including those associated with particulates, odour or visible emissions.

## 6.4 Summary of Effects

Overall, it is considered that the actual and potential environmental effects from the proposal will result in effects being less than minor for all activities and can be adequately mitigated with appropriate conditions and management procedures.

## 7.0 Draft Conditions of Consent

HCL request that the existing conditions of Resource Consent 63317 be retained for the new air discharge consent for the existing asphalt plant, with additional conditions suggested:

1. The discharge of filterable particulate matter discharged from the asphalt plant stack shall be measured once every twelve (12) months. The following matters will be adhered to:
  - a. Measurements shall occur when the asphalt plant is operating at greater than 50% of maximum production capacity.
  - b. The method of sampling and analysis of filterable particulate matter shall be ISO 9096:2003, ASTM D3685-98, USEPA Methods 5 or 17, or equivalent methods.
  - c. The laboratory performing the testing and analysis shall be accredited under NZ/ISO/IEC 17025 to undertake the method used at the time of the test.
  - d. Total filterable particulate sampling results shall be reported as a concentration expressed as milligrams per cubic metre adjusted to 0 degrees Celsius, 101.3 kilopascals, and on a dry gas basis, and as a mass emission rate expressed as kilograms per hour. The results shall include a description of the method used, the approximate rate of asphalt production during testing and any assumptions made.
  - e. The consent holder shall provide test results to BOPRC within thirty (30) working days of sampling.
2. The consent holder shall take all practicable measures to minimise the discharge of dust emissions from the site. These measures shall include but not be limited to:
  - a. Minimising the heights of exposed stockpiles and drop heights;
  - b. Sealing of all surfaces adjacent to the asphalt plant and associated facilities that are subject to regular vehicle movements;
  - c. Sweeping, suction cleaning or use of other housekeeping measures to regularly remove accumulated bulk solid materials on yard or hardstand areas;

- d. Using water and/or dust suppressants on disturbed surfaces and stockpiles when required;
  - e. Limiting vehicle speeds within the site.
3. The discharge shall occur in accordance with a PPP that includes management of air quality. The PPP shall be submitted to BOPRC within six (6) months of the exercise of this consent. The PPP may incorporate a series of monitoring, management and operational procedures, methodologies and contingency plans, and together shall accurately record all data required to comply with the conditions of this consent. The PPP shall include, but is not limited to, the following:
- a. Identification of all fugitive and point sources for discharges of contaminants into air, including a map showing the location of each source;
  - b. Procedures to minimise discharges of contaminants into air, including details of the inspection, maintenance, monitoring and contingency procedures in place for all emissions control equipment at the site;
  - c. Details of management and monitoring practices in place to minimise discharges of contaminants into air, including dust and odour;
  - d. Details of methods and procedures for measuring operating parameters relating to discharges to air;
  - e. Where appropriate, the operating parameters and manufacturer's instructions for all emissions control equipment;
  - f. Procedures for the monitoring of dust and odour, including details of inspection procedures, recording requirements and contingency measures;
  - g. The identification of staff responsibilities;
  - h. The procedures for the receipt, recording and handling of air quality complaints received; and
  - i. Details of the frequency and scope of the regular checks to be performed on emissions control equipment.
4. The consent holder shall review and (if necessary) update the PPP at least once every three (3) years for the term of this consent, to ensure that any review takes account of the monitoring for the previous three (3) year period. Any proposed changes to the PPP relating to air quality management shall be submitted to BOPRC for review within one (1) month of the consent holder's review.



## 8.0 Consultation

### 8.1 Statutory Context

Schedule 4 RMA 6(1)(f) of the RMA states that an AEE submitted in support of a resource consent application should include “*identification of the persons affected by the activity, any consultation undertaken, and any response to the views of any person consulted*”.

Section 36A of the RMA clarifies that:

*(1) The following apply to an applicant for a resource consent and the local authority:*

- a) neither has a duty under this Act to consult any person about the application; and*
- b) each must comply with a duty under any other enactment to consult any person about the application; and*
- c) each may consult any person about the application.*

Accordingly, consultation is not mandatory by either an applicant or the local authority with respect to a resource consent application. However, best practice would normally incorporate consultation within project development and pre-application stages, particularly for large projects such as this one.

### 8.2 Stakeholders

The list of stakeholders HCL consulted with is shown in Table 6.

Table 6: List of Stakeholders Consulted	
Party	Primary Reason for Consultation
Waitaha	To understand any cultural effects.
Ngai Te Rangi	To understand any cultural effects.
Ngāti Pūkenga	To understand any cultural effects.
Ngai Tukairangi Hapū	To understand any cultural effects.
Ngāti Kuku Hapū Trust	To understand any cultural effects.
Neighbours (list provided if necessary)	To understand any air discharge effects.

Consultation outcomes as it relates to the consent application are assessed in section 8.3.

Although the scope of the consenting has changed since, a pre-application meeting was held with BOPRC on 12 December 2019 with HCL and representative consultants at 92 Hewletts Road. No substantive matters as they relate to the existing plant were discussed.

### 8.3 Consultation Outcomes

#### 8.3.1 Neighbours

Although consultation was primarily undertake for the proposed new asphalt plant, the existing asphalt plant formed part of this consultation. No express concerns were raised with the ongoing operation of the existing asphalt plant.

#### 8.3.2 Mana Whenua (Iwi)

Early project consultation has been undertaken or attempted with those parties listed in section 8.2. In general, the consultation and responses provided have been positive with the understanding that air quality will be managed appropriately. A summary of the consultation undertaken (or attempted) with the relevant iwi /hapū authorities is detailed below.

#### Waitaha

A meeting was held with Vivienne Robinson on 11 November 2019. On 12 November 2019 Waitaha iwi confirmed that *“given the location, Waitaha will support a response from Ngai Te Rangi”*. HCL updated Waitaha of change in plans to only re-consent the existing asphalt plant on 25/03/2020. No further concerns were raised by Waitaha.

#### Ngai Te Rangi

On 12 November 2019 HCL met with Ngai Te Rangi and provided detailed information of the proposed project. On 6 December 2019, a second meeting was held with HCL and Ngai Te Rangi to further discuss the proposed project (which at time involved a new plant). No cultural effects were identified by Ngai Te Rangi is regards to existing plant, although Ngai Te Rangi wanted to ensure air quality will be managed appropriately which can be interpreted as being applicable to existing asphalt plant and the plant that was being planned by HCL. HCL updated Ngai Te Rangi of change in plans to only re-consent the existing asphalt plant on 25 March 2020. No further concerns were raised by Ngai Te Rangi.

#### Ngāti Pūkenga

An email from Ngāti Pūkenga on 21 November 2019 confirmed that there are no identified cultural effects that relate to existing asphalt plant, provided it will be compliant with BOPRC requirements/standards and that independent monitoring will be put in place. This can be interpreted as being applicable to existing

asphalt plant and the plant that was being planned by HCL. HCL updated Ngāti Pūkenga of change in plans to only re-consent the existing asphalt plant on 25 March 2020. No further concerns were raised by Ngāti Pūkenga.

#### **Ngai Tukairangi Hapū and Ngāti Kuku Hapū Trust**

An email requesting a meeting with was sent to these hapū on 11 November 2019. No response was received. As a result, a second email was sent to an alternative contact of Ngai Tukairangi on 13 December 2019 to which no response was received. A follow up email was sent on 10 January 2020 to which Ngai Tukairangi replied requesting a meeting for 15 January 2020.

Ngāti Kuku later confirmed that they were represented by their then Chairman during the meeting held at 15 January 2020 with Ngai Tukairangi.

To date, HLC has continued to consult with Ngai Tukairangi and Ngāti Kuku Hapū. The air quality report has been provided to these hapū for review on 18 March 2020 with a response expected soon. Although no specific cultural concerns have been raised by Ngai Tukairangi and Ngāti Kuku Hapū, consultation is ongoing. Effects are expected to be less than minor, however, HCL will inform BOPRC of any feedback received by Ngai Tukairangi and Ngāti Kuku Hapū.

With the information available to date, the cultural effects on Ngai Tukairangi and Ngāti Kuku Hapū are assessed to be less than minor.

## **9.0 Statutory Assessment**

### **9.1 Resource Management Act 1991**

The RMA is the fundamental piece of legislation in New Zealand which sets restrictions on discharges (among other things) to ensure adverse effects of activities on the environment are appropriately managed.

This section of the AEE sets out the statutory framework against which this application is to be assessed under the RMA.

### **9.2 Notification Assessment**

#### **9.2.1 Sections 95A, 95C & 95D – Public Notification**

Under section 95A '*Public notification of consent applications*', the consent authority is to decide (in accordance with sections 95C and 95D) whether public notification of the activity is required. Under the provisions of the amended RMA there is now no presumption in favour of notification (Section 95A). The requirement for the Council to be "*satisfied*" that the effects "*will be minor*" before proceeding on a non-notified basis has been removed. Public notification is considered in accordance with the following steps in Table 7.

Table 7: Public Notification Assessment		
Section		Comments
	<b>Step 1</b> – Mandatory public notification in certain circumstances is required if:	
95A(3)(a)	<i>The applicant has requested that the application be publicly notified.</i>	HCL does not request public notification.
95A(3)(b)	<i>Required under section 95C being:</i>	HCL will attempt to provide any information requested under s92(1) on time or as otherwise agreed with BOPRC.
95C	<i>The consent authority has requested further information under section 92(1), but applicant:</i>	
95C(2)(a)	<i>does not provide the information before the deadline concerned; or</i>	
95C(2)(b)	<i>refuses to provide the information;</i>	
95C(4)	<i>This section applies despite any rule or national environmental standard that precludes public or limited notification of the application.</i>	
95A(3)(c)	<i>The application is made jointly with an application to exchange recreation reserve land under section 15AA of the Reserves Act 1977.</i>	N/A
<b>The activity does not require public notification under Step 1<sup>2</sup>.</b>		
	<b>Step 2</b> – if public notification isn't required in step 1, it may be precluded if:	
95A(5)(a)	<i>the application is for a resource consent for 1 or more activities, and each activity is subject to a rule or national environmental standard that precludes public notification</i>	The activity is not subject to a rule or NES that precludes limited notification. Therefore, public notification is not precluded.
95A(5)(b)(i)	<i>a controlled activity</i>	The consent is not sought as a controlled activity.
95A(5)(b)(ii)	<i>a restricted discretionary or discretionary activity, but only if the</i>	The activity is not a subdivision of land or a residential activity.

<sup>2</sup> Provided information requested under s92(1) is provided on time (or as otherwise agreed with BOPRC), or is not refused to.

Table 7: Public Notification Assessment		
Section		Comments
	<i>activity is a subdivision of land or a residential activity</i>	
95A(5)(b)(iii)	<i>a restricted discretionary, discretionary, or non-complying activity, but only if the activity is a boundary activity:</i>	The activity is not a boundary activity.
95A(5)(b)(iv)	<i>a prescribed activity (as per s360H(1)(a)(i))</i>	The activity is not an activity prescribed under s360H(1)(a)(ii) which prescribes particular activities or classes of activities, or the methods or criteria.
<b>The activity is not precluded from public notification.</b>		
	<b>Step 3</b> – If not precluded by step 2, public notification in certain circumstances is required if:	
95A(8)(a)	<i>the application is for a resource consent for 1 or more activities, and any of those activities is subject to a rule or national environmental standard that requires public notification:</i>	The activity is not subject to a rule or NES that requires public notification.
95A(8)(b)	<i>the consent authority decides, in accordance with s95D, that the activity will have or is likely to have adverse effects on the environment that are more than minor.</i>	The activity is not considered to have effects on the environment that are more than minor.
<b>The activity does not trigger public notification under Step 3.</b>		
	<b>Step 4</b> – If not required by Step 3, public notification, is required if:	
95A(9)(a)	<i>Special circumstances exist in relation to the application that warrant the application being publicly notified</i>	Special circumstances are not considered to exist.
95A(9)(b)	<i>If the answer is no, determine whether to give limited notification of the application under s95B.</i>	See Table 8 below.
<b>The activity does not trigger public notification under Step 4.</b>		

On the basis of the preceding assessment in Table 7, it is considered that the proposal does not require public notification under section 95B for the reasons given.

#### 9.2.2 Sections 95B & 95E – Limited Notification

Under section 95B ‘*Limited notification of the consent application*’, the consent authority is then to decide (in accordance with sections 95E to 95G) whether there are any affected persons in relation to the activity. The threshold for identifying affected persons is more rigorous, whereby the consent authority must decide that a person is affected if the activity’s adverse effects are minor or more than minor (but not less than minor) (95(E)(1)). Limited notification is considered in accordance with the following steps in Table 8:

Table 8: Limited Notification Assessment		
Section		Comments
	<b>Step 1</b> – Limited notification of certain affected groups and affected persons is required if:	
95B(2)(a)	<i>There are any affected protected customary rights groups.</i>	There are no affected protected customary rights groups.
95B(2)(b)	<i>There are any affected customary marine title groups (in the case of an application for a resource consent for an accommodated activity)</i>	There are no affected customary marine title groups relevant to this application.
95B(3)(a/b)	<i>any person has a statutory acknowledgement (made in accordance with an Act specified in Schedule 11) made on the land or adjacent land and is considered an affected person under section 95E.</i>	There are no statutory acknowledgements located on or near the subject site.
<b>The activity does not trigger limited notification under Step 1.</b>		
	<b>Step 2</b> – if limited notification isn’t required in step 1, it may be precluded in certain circumstances if:	
95B(6)(a)	<i>the application is for a resource consent for 1 or more activities, and each activity is subject to a rule or national environmental standard that precludes limited notification</i>	The activity is not subject to a rule or NES that precludes limited notification.

Table 8: Limited Notification Assessment		
	<i>the application is for a resource consent for either or both of the following, but no other, activities:</i>	
95B(6)(b)(i)	<i>a controlled activity that requires consent under a district plan (other than a subdivision of land);</i>	The consent sought is not for a controlled activity under the district plan.
95B(6)(b)(ii)	<i>a prescribed activity (as per s360H(1)(a)(ii))</i>	The activity is not an activity prescribed under s360H(1)(a)(ii) which limits who is considered affected.
<b>The activity is not precluded from limited notification.</b>		
	<b>Step 3</b> – If not precluded by step 2, limited notification of certain other affected persons is required if:	
95B(7)(a)	<i>In the case of a boundary activity, an owner of an allotment with an infringed boundary and is considered an affected person under section 95E.</i>	The activity is not a boundary activity.
95B(7)(b)	<i>In the case of any activity prescribed under section 360H(1)(b), a prescribed person in respect of the proposed activity and is considered an affected person under section 95E;</i>	The activity is not prescribed under section 360H(1)(b).
95B(8)	<i>In the case of any other activity, a person is considered an affected person in accordance with section 95E.</i>	The adverse effects on the environment are considered to be less than minor.
<b>The activity does not trigger limited notification under Step 3.</b>		
	<b>Step 4</b> – Further notification if:	
95B(10)	<i>Special circumstances exist in relation to the application that warrant notification of the application to any other persons not already determined to be eligible for limited notification under this section (excluding persons assessed under section 95E as not being affected persons).</i>	Special circumstances are not considered to exist in relation to the application that warrant notification of the application to any other persons not already determined to be eligible for limited notification.
<b>The activity does not trigger limited notification under Step 4.</b>		

On the basis of the preceding assessment in Table 8, it is considered that the proposal does not require limited notification under section 95B for the reasons given.

#### 9.2.3 Section 95 Summary

Having regard to the assessment undertaken within the AEE in support of this application, it is considered that there are no potentially adversely affected parties and the proposal can be processed on a non-notified basis.

### 9.3 Information Requirements

#### 9.3.1 Section 88 – Making an application

Section 88(2) states that a resource consent application must:

- a) be made in the prescribed form and manner; and*
- b) in the case of a fast-track application, include the prescribed information relating to the activity (if any); and*
- c) in the case of any other application or a fast-track application where there are no prescribed information requirements relating to the activity, include the information relating to the activity, including an assessment of the activity's effects on the environment, that is required by Schedule 4.*

This AEE is considered to fulfil the section 88(2) requirements above as it made in the prescribed form and manner and includes the information requirements of Schedule 4 and the RAP as detailed below.

#### 9.3.2 Schedule 4 – Information required in application for resource consent

Schedule 4 sets out the information to be included within a resource consent application. All the information specified has been provided within this AEE.

#### 9.3.3 Bay of Plenty Regional Plan

The RNRP (Appendix 3 of the RNRP) sets out the information to be included within a resource consent application. All the information specified has been provided within this AEE.

### 9.4 Section 104 Assessment

#### 9.4.1 Section 104 – Consideration of Applications

Section 104(1) of the RMA identifies the matters that a consent authority must have regard to (subject to Part 2) when considering an application for a resource consent. These matters have been addressed through this AEE.



#### 9.4.2 Bay of Plenty Regional Policy Statement

The RPS became operative on August 2014 and sets out a policy framework for the region to achieve sustainable and integrated management of major natural and physical resources in the region. The RPS specifically provides for significant infrastructure and recognises the importance of this physical infrastructure to the region, including to managing and providing for growth, and providing for the economic and social wellbeing of people and communities and their health and safety. The RPS additionally provides for air quality and appropriate use and development, with a focus on protecting and enhancing environmental values and avoiding adverse effects as far as practicable and otherwise remedying or mitigating effects.

Objective 1 of the RPS requires that adverse effects of odours, chemical emissions and particulates are avoided, remedied or mitigated to protect people and the environment. The AEE (section 6.3) addresses that the effects of the existing plant due to odours and chemical emissions are considered less than minor owing to the appropriate location (existing environment) of the activity and the setback distances to the nearest residential zones. With these measures, Policies AQ 1A (discouraging reverse sensitivity associated with odours, chemicals and particulates), 2A (managing adverse effects from the discharge of odours, chemicals, and particulates) and 3A (managing adverse effects of fine particulate contamination) are also achieved.

In Section 6.0 of this report (AEE), a precautionary approach has been taken (Objective 11 and policies IR 1B, 2B and 3B) to ensure all affected parties have been considered and that the operation of the plant will not result in adverse effects. Expertise has been sought from an Air Quality specialist to comprehensively assess effects, as well as thorough consultation with BOPRC and iwi groups (Policy IR 4B and IW 3B and IR 4B, Objective 14). The relevant Iwi Management Plans (IMPs) have been reviewed and are considered to be generally aligned to the desired outcomes of these plans (Objective 15, Policy IW 4B and 6B). No statutory acknowledgement areas or areas of significant indigenous habitats (Objective 20) have been identified near or on the proposed site. Overall, the cultural effects of the proposed project are considered less than minor (Objective 13 and 21).

Objectives 6, 7, 10, 11 and 12 consider the important role of significant regional energy and infrastructure. The asphalt plant assists in catering for the projected growth of the region with its current production outputs and as discussed in section 6.1, contributes to the region's overall resilience (Policy EI 3B and 4B).

Therefore, the proposed project is considered to be generally consistent with the relevant policies and objectives of the RPS.

Table 11 in Appendix E provides a more detailed assessment of the relevant RPS objectives and policies as they relate to the discharge of stormwater and contaminated land (water quality and land use) and air quality.

#### 9.4.3 Regional Air Plan and Plan Change 13

The new Regional Air Plan will be incorporated into RNRP as Plan Change 13 (Air Quality). However, the current Regional Air Plan (2003) remains in effect until Plan Change 13 becomes operative.

The RAP provides for the sustainable management of discharges of contaminants into air in the whole of the Bay of Plenty region. Table 12 in Appendix E provides a more detailed assessment of the relevant RAP objectives and policies as they relate to air discharge. In summary, the key objectives relevant to the proposed project aim to ensure that air quality standards within the region do not decrease and that adverse effects associated with air discharges are avoided by providing for activities that are considered predictable with minor effects on environmental, human health and cultural significance. The key policies aim to avoid, reduce and mitigate effects associated with air discharges by encouraging public awareness of air quality effects, encourage appropriate land use and compatible activities, and adoption of best practices.

As assessed earlier in this report, the effects of any odours or chemical emissions of the plant are considered less than minor owing to the appropriate location (existing environment) of the activity and the setback distances to the nearest residential zones (Policy 5).

Relevant parties (BOPRC and iwi) have been included in the consultation process to allow awareness of the proposed project and provide further input in identifying any adverse effects (Objective 3).

Taking the above into account, any potential adverse effects identified from air emissions have been avoided and/or mitigated as far as is practical (Policies 1(a)(b). Regular monitoring has also been proposed (Policy 2) to manage any unforeseen effects (Policy 7).

Therefore, the proposed project is generally consistent with these objectives and policies.

#### 9.4.4 Resource Management (National Environmental Standard for Air Quality) Regulations 2004

The Resource Management (National Environmental Standard for Air Quality) Regulations 2004 (NES-AQ) provides a regulatory framework to set a guaranteed minimum level of health protection for all New Zealanders.

NES-AQ sets out a number of restrictions on certain activities that discharge contaminants to air, including prohibitions, performance requirements and ambient air quality standards. None of the prohibitions in Regulations 6 to 12 apply to the activities undertaken by the applicant, and it is understood that no incinerators are currently in operation at the site.

NES-AQ Regulations 13 to 16 impose requirements on regional councils to set ambient air quality standards for five air pollutants: particulate matter (as PM<sub>10</sub>), CO, NO<sub>2</sub>, sulphur dioxide (SO<sub>2</sub>) and ozone (O<sub>3</sub>).

While NES-AQ Regulations 17 to 19 apply to activities involving the discharge to air of PM<sub>10</sub>, Regulations 17A to 19 were revoked in June 2011. NES-AQ Regulation 20 applies to discharges to air of CO, NO<sub>x</sub> and volatile organic compounds (VOCs), while Regulation 21 applies to discharges to air of SO<sub>2</sub>. Therefore, NES-AQ Regulations 17, 20 and 21 apply to the proposed activity to be undertaken by HCL, and are discussed in detail below.

Regulation 17(1) states that:

*“A consent authority must decline an application for a resource consent (the proposed consent) to discharge PM<sub>10</sub> if the discharge to be expressly allowed by the consent would be likely, at any time, to increase the concentration of PM<sub>10</sub> (calculated as a 24-hour mean under Schedule 1) by more than 2.5 micrograms per cubic metre in any part of a polluted airshed other than the site on which the consent would be exercised.”*

The operation of the asphalt plant (and its associated air discharge) is an existing process and there will be no increase in particulate matter discharged into the airshed from the plant's continued operation.

The NES-AQ also places constraints on resource consents depending on the pollutant, the existing air quality of an airshed relative to the NES and the date of the application. A 'significant' discharge of PM<sub>10</sub> is classified as a maximum 24-hour mean PM<sub>10</sub> concentration beyond the site boundary of greater than or equal to 5% of the NES for PM<sub>10</sub> (i.e. 2.5 µg/m<sup>3</sup>), in accordance with MfE (2011). The Air Quality Report (Appendix B) demonstrates the emission of PM<sub>10</sub> and other contaminants to air from the existing activities, comply with the requirements of regulations 17(1) of the NES-AQ. The asphalt plant has also operated for over 20 years at the site without complaints and in compliance with current consent conditions.

Therefore, overall, the emissions from the proposed asphalt plant are considered to comply with the NES-AQ regulations and standards.

#### 9.4.5 Other Matters

##### National Ambient Air Quality Guidelines

The National Ambient Air Quality Guidelines (NAAQGs) were published by the MfE in 2002 following a comprehensive review of international and national research and are widely accepted among New Zealand air quality practitioners. The NAAQG criteria provide the minimum requirements that ambient air quality should meet in order to protect human health and the environment.

Guideline levels for pollutants and averaging periods not covered by the NES criteria still apply. The NES criteria replace any previous guideline levels for that particular pollutant and averaging period. The NAAQG criteria set for the protection of human-health for PM<sub>10</sub>, CO, NO<sub>2</sub>, SO<sub>2</sub> and O<sub>3</sub> are presented in Table 9. The NAAQG for O<sub>3</sub> is the only criterion which does not apply to this assessment.

Table 9: Ambient Air Quality National Environmental Standards			
Contaminant	Threshold Concentration (µg/m <sup>3</sup> )	Averaging Period	Results of Peak Modelled MGLC (µg/m <sup>3</sup> )
PM <sub>10</sub>	50	24-hour	13.7
	20	Annual	1.8
CO	30,000	1-hour	79
NO <sub>2</sub>	200	1-hour	6.9
	100	24-hour	2.7
SO <sub>2</sub>	350	1-hour	<0.1
	120	24-hour	<0.03
O <sub>3</sub>	150	1-hour	N/A
	100	8-hour	

The outputs presented in Table 9 demonstrate that the emission from the asphalt plant are expected to be well below the thresholds of the NAAQG. Therefore, the proposed project is considered to comply with the NAAQG.

##### Tauranga Moana Iwi Management Plan (2016-2026)

The Tauranga Moana IMP is the joint management plan for Ngāti Ranginui, Ngāi Te Rangi and Ngāti Pūkenga.

The key issues identified in the IMP are:

- ✧ Role in resource management processes and decision making;

- ✧ Loss of cultural heritage;
- ✧ Rural & urban land use impacts;
- ✧ Air quality impacts;
- ✧ Coastal use and development impacts; and
- ✧ Water – quality, quantity and ecosystems.

For the proposed project, the relevant key issues identified relate to urban land use and air quality effects caused by the discharges.

Healthy Land policies aim to manage the effects of rural and urban air discharges through regular monitoring and compliance audits (Healthy Land Policies 23 and 24).

The TM-IMP expects that industrial air discharges close to marae, papakainga, kura kaupapa or kohanga reo involve iwi/hapū. The nearest of these facilities is located approximately 1.4 km to the west-southwest of the site boundary and therefore is not considered effected.

The proposed project does not contravene the above-mentioned policies of the IMP as it allows for appropriate use of land and air discharges within acceptable limits. HCL has engaged and consulted with local iwi and hapū early for this consent replacement. The emissions from the air discharge will be a continuation of an existing effect and will be compliant with existing consent conditions to mitigate and minimise air discharge effects.

#### **The Waitaha Iwi Management Plan (W-IMP)**

With regard to air quality, the W-IMP doesn't specifically cite commercial/industrial odour discharges as a problem (rather more broadly discharges as a result of intensive urban developments). Accordingly, their W-IMP focuses on pesticides and chemicals in terms of their response. The proposed discharge does not appear to conflict with the W-IMP desired outcomes.

#### **9.4.6 Part 2 - Purpose and Principles**

Whether the purpose of the RMA is being achieved involves *“an overall broad* Recent case law<sup>3</sup> has directed when decision making should employ *“an overall broad judgement”* in respect of resource consent applications. As found by the Court of Appeal, it would be *“appropriate and necessary”* to refer to Part 2 when considering consent applications, but only where there is doubt that a plan has been *“competently prepared”* under the RMA.

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<sup>3</sup> *RJ Davidson Family Trust v Marlborough District Council [2018] NZCA 316.*

As PC 13-DV is appealed in part, it is considered appropriate to assess the application against Part 2 of the RMA.

Sections 6(e), s7(a) and s8 of the RMA, require maintenance of the relationship of Maori and their culture and traditions with their ancestral water, waahi tapu, and other taonga, kaitiakitanga, while taking into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi). Iwi management plans have been reviewed and the activity is found to be generally consistent with those documents.

All other sections of section 6 (RMA) are not applicable. Of particular relevance to this application is section 7(c) and 7(f) which require '*the maintenance and enhancement of amenity values*' and '*maintenance and enhancement of the quality of the environment*' respectively. The continued discharge from the existing plant will not compromise the amenity values and quality of the environment in the surrounding area. HCL contributes to the economic wellbeing of the BOP area.

In accordance with the above assessment, the proposed activity is considered consistent with Part 2.

#### 9.4.7 Overall Summary

After considering all those matters relevant under section 104, granting the resource consents with appropriate conditions would promote the purpose of the RMA and would constitute sustainable management of natural and physical resources for the following reasons:

- 1) It allows the use of natural and physical resources in a way which enable people and the community to provide for their social, cultural and economic wellbeing;
- 2) It sustains the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations;
- 3) It safeguards the life-supporting capacity of air, water and soil, ensures that adverse effects are appropriately avoided, remedied or mitigated; and
- 4) It is demonstrably consistent with the relevant planning documents.

### 9.5 Section 105 – Matters Relevant to Discharge Applications

In addition to the section 104 matters which a consent authority must have regard to, s105(1) sets out additional matters, listed in Table 10, which the consent authority must also have regard to when considering discharge applications. In this case, the stormwater discharge and air discharge are affected by s105(1).

Table 10: Section 105 Matters	
Section 105 Matters	Comments
(a) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and	Refer to section 6.0 and 5.0.
(b) the applicant's reasons for the proposed choice; and	Refer to section 4.0.
(c) any possible alternative methods of discharge, including discharge into any other receiving environment	Refer to section 4.0.

In summary, in each case it is concluded the effects of the discharge would be less than minor and the proposed method of managing the effects of the discharge is the BPO.

## 9.6 Section 104B – Determination of Applications for Discretionary or Non-complying Activities

*After considering an application for a resource consent for a discretionary activity or non-complying activity, a consent authority—*

- (a) may grant or refuse the application; and*
- (b) if it grants the application, may impose conditions under section 108.*

In accordance with section 104B, HCL requests:

- ✧ the consent be granted; and
- ✧ conditions be imposed (in accordance with section 108) that are the same as those already imposed, plus new conditions as suggested in section 7.0.

## 9.7 Statutory Assessment Conclusion

The asphalt plant has significant and demonstrable positive effects in terms of sustaining the social and economic wellbeing of the community within the environmental limits proposed in section 7.0. Any adverse effects have been assessed as less than minor and acceptable and can be appropriately avoided, remedied or mitigated and managed through appropriate consent conditions as they have been to date.

After considering all those matters relevant under Part 2, s104 and s105, it is considered that granting the resource consents would promote the purpose of the RMA and would constitute sustainable management of natural and physical resources.

## 10.0 Conclusion

HCL is applying for a resource consent from BOPRC for a Discretionary Activity in relation to the re consenting of air discharge for the existing plant (replacement consent).

The resource consent sought aims to support the on-going operation of the existing asphalt plant (located at 90-92 Hewletts Road, Mount Maunganui).

The proposed activity has been assessed against the statutory requirements of the RMA including the RPS, RAP (PC 13) and NE-AQ. The documents have consistent provisions in relation to the sustainable management of natural and physical resources in the BOP area and the receiving environment of the proposed activities. These provisions are to enable infrastructure for the social and economic benefit of the community, in a manner that maintains and enhances the environment and its natural resources. The proposed project is considered to be aligned to these provisions.

It is considered that the proposal achieves an outcome which is consistent with statutory provisions and with the provisions set out in Part 2 of the RMA.



## 11.0 References

Ministry for the Environment, 2011. *Contaminated land management guidelines No. 1: Reporting on contaminated sites in New Zealand*. Ministry of the Environment.

Ministry for the Environment, 2011. *Contaminated Land Management Guidelines No. 5: Investigation and Analysis of Soils*. Ministry for the Environment.

Ministry for the Environment, 2013. *Hazardous Industries and Activities List (HAIL)*.

National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health. Regulations 2011.





**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD**



  
R.W. Muir  
Registrar-General  
of Land

**Identifier** **SA70C/744**  
**Land Registration District** **South Auckland**  
**Date Issued** 02 November 2000

**Prior References**  
SA55B/757 SA57D/595

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**Estate** Fee Simple  
**Area** 7135 square metres more or less  
**Legal Description** Lot 1 Deposited Plan South Auckland  
89127 and Lot 2 Deposited Plan South  
Auckland 69066

**Registered Owners**  
Frances Holdings Limited

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**Interests**

Subject to Section 241(2) Resource Management Act 1991

Subject to Section 59 Land Act 1948 (affects Lot 2 DPS 69066)

Appurtenant hereto are drainage rights created by Transfer 274989 - 22.6.1936 at 3:00 pm (affects Lot 1 DPS 89127)

B258383.4 Consent Notice pursuant to Section 221(1) Resource Management Act 1991 - Produced 24.2.1995 at 11.35 and entered 24.3.1995 at 9.00 am (affects Lot 2 DPS 69066)

Appurtenant hereto is a right of way, right to convey water, sewage, electricity, natural gas and telecommunications rights specified in Easement Certificate B258383.6 - Produced 24.2.1995 at 11.35 and entered 24.3.1995 at 9.00 am (affects Lot 2 DPS 69006)

Subject to a right to drain stormwater over part marked C on DPS 69006 specified in Easement Certificate B258383.6 - Produced 24.2.1995 at 11.35 and entered 24.3.1995 at 9.00 am

The easements specified in Easement Certificate B258383.6 are subject to Section 243 (a) Resource Management Act 1991

B357580.1 Certificate that a building consent has been issued in respect of a building on the land that is described in Section 36(2) Building Act 1991 - 26.7.1996 at 11.45 am (affects Lot 2 DPS 69006)

B357580.2 CERTIFICATE PURSUANT TO SECTION 37 BUILDING ACT 1991 (AFFECTS LOT 2 DPS 69066 AND CT SA55B/758) - 26.7.1996 AT 11.45 AM

Land Covenant in Transfer B401788.1 (affects Lot 1 DPS 89127)

B463134.1 Gazette Notice declaring the adjoining State Highway No 29 to be a limited access road - 2.2.1998 at 11.26 am (affects Lot 2 DPS 69066)

B502184.1 Notice pursuant to Section 91 Transit New Zealand Act 1989 - 15.9.1998 at 2.49 pm (affects Lot 2 DPS 69066)

Appurtenant hereto is a right to convey stormwater specified in Easement Certificate B632704.1 - 2.11.2000 at 9.02 am (affects Lot 1 DPS 89127)

Subject to a right of way and a right to convey stormwater over part marked A and B and a right to stormwater, electricity, telecommunications and water rights over part marked A all on DPS 89127 specified in Easement Certificate B632704.1 - 2.11.2000 at 9.02 am

Some of the easements specified in Easement Certificate B632704.1 are subject to Section 243 (a) Resource Management Act 1991 (See DPS 89127)

8471016.1 CERTIFICATE PURSUANT TO SECTION 77 BUILDING ACT 2004 THAT THIS COMPUTER REGISTER IS SUBJECT TO THE CONDITION IMPOSED UNDER SECTION 75(2) (ALSO AFFECTS SA55B/758) - 20.4.2010 at 9:24 am

8471016.1 Subject to Section 81(2) and 81(3) Building Act 2004 (affects SA70C/744 & SA55B/758) - 20.4.2010 at 9:24 am





**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD**



  
R.W. Muir  
Registrar-General  
of Land

**Identifier** **SA55B/758**  
**Land Registration District** **South Auckland**  
**Date Issued** 24 March 1995

**Prior References**  
SA56C/132

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**Estate** Fee Simple  
**Area** 7595 square metres more or less  
**Legal Description** Lot 3 Deposited Plan South Auckland  
69066

**Registered Owners**  
Frances Holdings Limited

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**Interests**

The within land has no frontage to a public road

Appurtenant hereto are drainage rights created by Transfer 274989

B258383.4 Consent Notice pursuant to Section 221 Resource Management Act 1991 - produced 24.2.1995 at 11.35 am and entered 24.3.1995 at 9.00 am

Appurtenant hereto is a right of way and right to convey water and to electricity, telecommunications, natural gas and sewage rights specified in Easement Certificate B258383.6 - produced 23.2.1995 at 11.35 am and entered 24.3.1995 at 9.00 am

The easements specified in Easement Certificate B258383.6 are subject to Section 243 (a) Resource Management Act 1991

B357580.1 Certificate that a building consent has been issued in respect of a building on the land that is described in Section 36(2) Building Act 1991 - 26.7.1996 at 11.45 am

B357580.2 CERTIFICATE PURSUANT TO SECTION 37 (2) BUILDING ACT 1991 BY THE TAURANGA DISTRICT COUNCIL - 26.7.1996 AT 11.45 AM

B463134.1 Gazette Notice declaring State Highway No 29 fronting the within land to be a limited access road - 2.2.1998 at 11.26 am

B502184.1 Notice pursuant to Section 91 Transit New Zealand Act 1989 - 15.9.1998 at 2.49 pm

8471016.1 CERTIFICATE PURSUANT TO SECTION 77 BUILDING ACT 2004 THAT THIS COMPUTER REGISTER IS SUBJECT TO THE CONDITION IMPOSED UNDER SECTION 75(2) (ALSO AFFECTS SA70C/744 ) - 20.4.2010 at 9:24 am

## Appendix B

Air Quality Assessment

PATTLE DELAMORE PARTNERS LTD

# Air Discharge Assessment of Effects - Tauranga Asphalt Plant

Higgins Contractors Limited

# Air Discharge Assessment of Effects – Tauranga Asphalt Plant

✦ Prepared for

Higgins Contractors Limited

✦ March 2020



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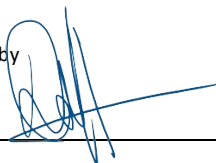
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## Table of Contents

SECTION	PAGE
<b>1.0 Introduction</b>	<b>4</b>
<b>2.0 Statutory Requirements</b>	<b>4</b>
2.1 Regional Air Plan 2003	4
2.2 Plan Change 13 to the Regional Natural Resource Plan	5
2.3 National Environmental Standards	5
2.4 Ambient Air Guidelines	8
<b>3.0 Location and Receiving Environment</b>	<b>8</b>
3.1 Location and Zoning of Site, and Adjacent Land Use	8
3.2 Topography and Meteorology	10
3.3 Background Ambient Air Quality	11
<b>4.0 Description and Operation of Plant &amp; Associated Processes</b>	<b>12</b>
4.1 Drum Mix Plant	12
4.2 Raw Materials	15
4.3 Operation of the Plant	16
<b>5.0 Properties of Contaminants Discharged into Air</b>	<b>18</b>
5.1 Contaminants Discharged to Air from Asphalt Manufacture	18
5.2 Nature and Composition of Discharges to Air – Normal Operation	20
5.3 Nature and Composition of Discharges to Air – Abnormal Operation	21
5.4 Process Monitoring	22
<b>6.0 Assessment of Effects of Discharges on the Environment</b>	<b>22</b>
6.1 Introduction	22
6.2 Atmospheric Dispersion Modelling of Chimney Discharge	23
6.3 Dispersion Modelling Results	27
6.4 Contour Plots	29
6.5 Other Discharges	33
<b>7.0 Best Practicable Option</b>	<b>35</b>
<b>8.0 Proposed Consent Conditions</b>	<b>35</b>
<b>9.0 Conclusion</b>	<b>36</b>
<b>10.0 References</b>	<b>37</b>

## Table of Figures

Figure 1: Mount Maunganui Airshed (BOPRC, April 2019)	7
Figure 2: Location of HCL Asphalt Plant	9
Figure 3: Tauranga Airport Windrose, 2007-2012	10
Figure 4: PM <sub>10</sub> Monitoring Results for Mount Maunganui Industrial Area, October 2018 – March 2019 (BOPRC, 2019)	11
Figure 5: Diagram of Parallel Drum Mix Asphalt Plant	14
Figure 6: HCL Asphalt Plant	15
Figure 7: TAPM Generated Surface File (.sfc) Windrose 2010-2011	25
Figure 8: Predicted MGLCs PM <sub>10</sub> (24-hour average)	30
Figure 9: Predicted MGLCs PM <sub>10</sub> (annual average)	31
Figure 10: Predicted MGLCs NO <sub>2</sub> (1-hour average, 99.9th percentile)	32
Figure 11: Tauranga City Council Plan – Diagram 2, City Plan Section 5 – Specified Airport Slopes and Surfaces	34

## Table of Tables

Table 1: NES Air Quality: Ambient Air Quality Standards	5
Table 2: New Zealand Ambient Air Guidelines (NZAAQG), May 2002	8
Table 3: Assumed Background Contaminant Concentrations	12
Table 4: Other Air Discharge Activities	20
Table 5: Parameters for HCL Asphalt Plant	21
Table 6: Dispersion Modelling Parameters	26
Table 7: Highest Predicted MGLCs for Asphalt Plant	28
Table 8: Estimated Worst-Case (Calm) Thermal Plume Vertical Velocity	35

## Appendices

Appendix A: Existing Air Discharge Consent
Appendix B: Emissions Test Report

## 1.0 Introduction

Higgins Contractors Limited (HCL) is a New Zealand owned civil construction business with over 2000 staff in both New Zealand and Fiji. HCL provides fully integrated civil construction services and infrastructure products, including the manufacture and supply of aggregates, concrete and bitumen; pavement construction; spray sealing; asphalt paving; drainage; traffic management; road marking and road maintenance.

Higgins Contractors Ltd currently has an air discharge consent (Consent number 63317) for a diesel-fired asphalt manufacturing plant at 90-92 Hewletts Road, Mount Maunganui. The discharge consent was granted on 6 December 2005. The discharge consent expires on 30 September 2020. A copy of the existing discharge consent is provided as Appendix A.

Higgins is applying to replace the discharge consent to allow for continued operation of the plant.

This report provides a technical assessment of the application's effects on the environment (AEE). It:

- ✧ Describes the operation of the drum mix plant;
- ✧ Discusses the discharge of contaminants into air from the asphalt plant and their potential effects on the environment; and,
- ✧ Discusses how HCL will ensure that emissions from the asphalt manufacturing process, and dust from the storage, handling, and processing of aggregates will minimise adverse effects on the environment.

## 2.0 Statutory Requirements

### 2.1 Regional Air Plan 2003

The *Regional Air Plan* (RAP) for the Bay of Plenty region became operative on 15th December 2003. The RAP addresses the effects of the discharge of contaminants to air in the region and provides rules to determine the consent status and the level of control that an activity discharging contaminants to air must meet.

The manufacture of asphalt is a discretionary activity pursuant to Rule 19 (c) of the RAP, *i.e.* requires a consent.

## 2.2 Plan Change 13 to the Regional Natural Resource Plan

Plan Change 13 to the Regional Natural Resources Plan decisions version (PC 13-DV) for the Bay of Plenty region was notified on 27<sup>th</sup> February 2018 and a decision notified on 12<sup>th</sup> March 2019. The RAP addresses the effects of the discharge of contaminants to air in the region and provides rules to determine the consent status and the level of control that an activity discharging contaminants to air must meet.

The manufacture of asphalt is a discretionary activity pursuant to Rule AR R21(b) of PC 13-DV, *i.e.* requires a consent.

## 2.3 National Environmental Standards

In 2004, the New Zealand Government gazetted the Resource Management (National Environmental Standards for Air Quality) Regulations 2004 (NES Air Quality). The NES Air Quality are designed to protect public health and the environment by setting concentration limits that differ from the New Zealand Ambient Air Quality Guidelines (NZAAQGs) in that they set an allowable level of exceedance and cover only one time period for averaging per contaminant. The NES Air Quality includes concentration thresholds and permissible excursions relevant to emissions from HCL's activity. These are presented in Table 1.

Table 1: NES Air Quality: Ambient Air Quality Standards			
Contaminant	Threshold Concentration	Averaging Time	Permissible Exceedances
Carbon monoxide (CO)	10 mg/m <sup>3</sup>	8-hour	One in a 12-month period
Nitrogen dioxide (NO <sub>2</sub> )	200 µg/m <sup>3</sup>	1-hour	9 in a 12-month period
Ozone (O <sub>3</sub> )	150 µg/m <sup>3</sup>	1-hour	None
Particulate matter (PM <sub>10</sub> )	50 µg/m <sup>3</sup>	24-hour	One in a 12-month period
Sulphur dioxide (SO <sub>2</sub> )	350 µg/m <sup>3</sup>	1 hour	9 in a 12-month period
	570 µg/m <sup>3</sup>	1 hour	None

The NES Air Quality uses the term “airshed”, which defines where air quality must be monitored and for polluted airsheds determines the basis for certain decisions on resource consents. The Ministry for the Environment (MfE) has gazetted airsheds for managing air quality, which are generally in populated areas where the NES Air Quality for fine particulate matter (PM<sub>10</sub>) is being breached or is likely to be breached.

The NES Air Quality Regulations have a particular emphasis on managing PM<sub>10</sub>, with specific requirements for new discharges as follows:

- ∴ **Regulation 17(1)** - Applies to an application for resource consent to discharge PM<sub>10</sub> into a polluted airshed. If the discharge is likely to increase the concentration of PM<sub>10</sub> by more than 2.5 micrograms per cubic metre in any part of a polluted airshed other than the site on which the consent would be exercised, then the consenting authority must decline the application for resource consent.
- ∴ **Regulation 17(2)** – States that Regulation 17(1) does not apply if the proposed consent is for the same activity at the same site (*i.e.* is a renewal of an existing consent), or is a new activity replacing an existing consented activity, and the amount and rate of PM<sub>10</sub> discharge of the proposed consent is the same as or less than that permitted by the existing consent.
- ∴ **Regulation 17(3)** – States that the consenting authority may allow the consent if the applicant can reduce (offset) the PM<sub>10</sub> discharged from another source or sources into the polluted airshed by the same or greater amount than the amount likely to be discharged by the proposed consent.

Bay of Plenty Regional Council (BOPRC) has recently undertaken monitoring in the Mount Maunganui industrial area and has determined that the area is in breach of the NES Air Quality for PM<sub>10</sub>. As a result, BOPRC has recommended that the area be designated as a gazetted airshed for the purpose of managing air discharges. Figure 1 below shows a map of the airshed and Mount Maunganui industrial zone. The Mount Maunganui airshed, as a polluted airshed, will be legally constrained in its ability to grant air discharge permits for new sources of PM<sub>10</sub> without the applicant applying for offsets of existing sources.

The asphalt plant is an existing process, therefore there will be no increase in particulate matter discharged into the airshed from the plant's continued operation. PM<sub>10</sub> discharges from the plant will be no more than are currently discharged.

HIGGINS CONTRACTORS LIMITED - AIR DISCHARGE ASSESSMENT OF EFFECTS – TAURANGA ASPHALT PLANT



Figure 1: Mount Maunganui Airshed (BOPRC, April 2019)



## 2.4 Ambient Air Guidelines

The Ministry for the Environment published ambient air guideline values for New Zealand in 2002. The primary purpose of the guidelines is to promote sustainable management of the air resource in New Zealand. The guideline values published are the minimum requirements that outdoor air quality should meet in order to protect human health and the environment. The guidelines provide values for contaminants that are commonly discharged from industrial sources.

The relevant guideline values with their respective averaging times are presented in Table 2.

Table 2: New Zealand Ambient Air Guidelines (NZAAQG), May 2002		
Contaminant	Threshold Concentration	Averaging Time
Carbon monoxide	30 mg/m <sup>3</sup>	1-hour
	10 mg/m <sup>3</sup>	8-hour
Fine particles (PM <sub>10</sub> )	50 µg/m <sup>3</sup>	24-hour
	20 µg/m <sup>3</sup>	annual
Nitrogen dioxide	200 µg/m <sup>3</sup>	1-hour
	100 µg/m <sup>3</sup>	24-hour
Sulphur dioxide	350 µg/m <sup>3</sup>	1-hour
	120 µg/m <sup>3</sup>	24-hour

## 3.0 Location and Receiving Environment

### 3.1 Location and Zoning of Site, and Adjacent Land Use

The HCL site is located at within the Mount Maunganui Industrial Area and are zoned as 'Industry' pursuant to the Tauranga City Plan. The site is within the gazetted Mount Maunganui airshed. Hewletts Road is surround by light and heavy industry. The terrain within the local area is generally flat with the ocean approximately 2 km to the east and the Tauranga harbour approximately 1.6 km to the west. Tauranga airport is approximately 800 m to the south. General light and heavy industry and warehousing is located to the north.

Figure 2 below shows the location of the asphalt plant. The site is located at 90-92 Hewletts Road, with legal description Lot 2 and Lot 3 DPS 69066. Access to the site is provided from Hewletts Road and Macrae Avenue.





**Figure 2: Location of HCL Asphalt Plant**

The industrial zone area has other light and heavy industry which contribute to air emissions in the area, including:

- ✧ Another asphalt manufacturing plant (Allied Asphalt);
- ✧ A fertiliser plant (Ballance Agri-Nutrients);
- ✧ A concrete batching plant (Firth);
- ✧ A chemical manufacturing plant (Hexion NZ Ltd); and,
- ✧ Port activities including log transport and storage areas.

Sensitive areas include:

- ✧ Mount Maunganui College located approximately 770 m to the east of the site boundary;
- ✧ Residential housing located approximately 770 m east the site boundary; and,
- ✧ Whareroa Marae located approximately 1.4 km to the west-southwest of the site boundary.

The area most affected by the existing activities consists of those receptors in the industrial zoned area surrounding the site. These activities are classified as being of 'moderate' sensitivity by the *Good Practice Guide for Assessing Discharges to Air from Industry* (MfE, 2016).

### 3.2 Topography and Meteorology

The surrounding topography is generally of low relief. The average altitude of the area is approximately 2 m above the mean sea level. The major terrain feature of the surrounding area is Mount Maunganui, which is located approximately 4 km to the north west of the site, with an elevation of 231 m. The terrain gradually falls away to sea level to the east and west of the site, approximately 1.5 km distance.

The nearest full-time meteorological station is located at Tauranga Airport, less than 500 m to the south of the site. A windrose of the 2007-2012 period is provided as Figure 3. The most common wind direction is from between the west and southwest. The average wind speed for the meteorological data period was 3.8 m/s, with calm periods (wind speeds less than 0.5 m/s) making up 1% of the frequency.

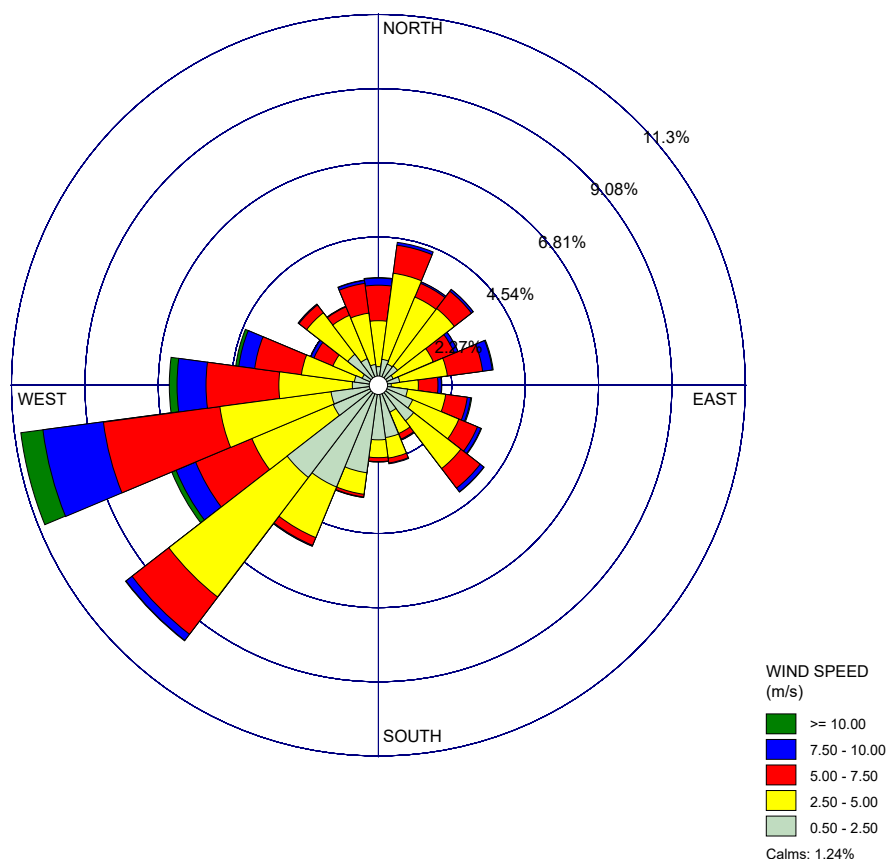


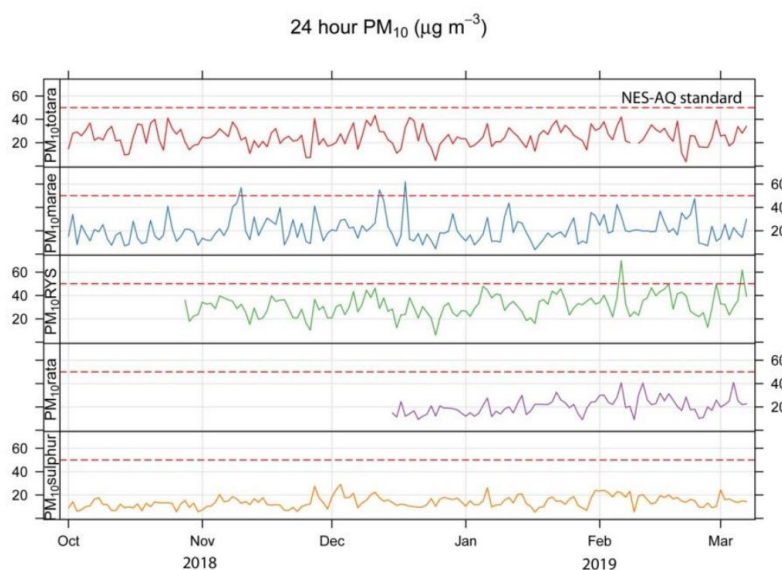
Figure 3: Tauranga Airport Windrose, 2007-2012

### 3.3 Background Ambient Air Quality

Background concentration of contaminants will vary depending on local activities and seasonal variations. Activities in the surrounding area are a combination of industrial, commercial, and residential uses, with a range of sources contributing to contaminants in air. Major sources of SO<sub>2</sub> and particulate emission are located approximately 1.5 km to the west of the site. Increased motor vehicle activity during the summer months also impacts on the ambient air quality, particularly for NO<sub>2</sub>.

BOPRC maintains a network of ambient air monitoring stations within the region, including a long term monitoring station at Otumoetai Road, Tauranga. BOPRC expanded the monitoring network in late 2018 to investigate the impacts of industrial activity in the Mount Maunganui area, with additional monitoring for PM<sub>10</sub> at five sites and one for SO<sub>2</sub>. Several exceedances of the NES Air Quality for PM<sub>10</sub> and one for SO<sub>2</sub> have since been measured.

The nearest ambient air monitoring station to the HCL site is located at Totara Street, Tauranga, around one km to the west of the site. This station has continuously monitored TSP, PM<sub>10</sub> and PM<sub>2.5</sub> since August 2018. Figure 4 is a graph showing the PM<sub>10</sub> monitoring data results for the five monitoring sites as 24-hour averages for October 2018 - March 2019. Three exceedances at the Whareroa Marae monitoring site and two exceedances at the Rail Yard South monitoring site were measured. It is likely that these monitoring sites are impacted by dust and products of combustion from nearby activities at the Port, which would not necessarily impact air quality at the HCL site.



**Figure 4: PM<sub>10</sub> Monitoring Results for Mount Maunganui Industrial Area, October 2018 – March 2019 (BOPRC, 2019)**

The MfE's *Good Practice Guide for Assessing Discharges to Air from Industry* (MfE, 2016) (Good Practice Guide) provides guidance on using default values for background air quality where there is no monitoring data. The Good Practice Guide recommends the use of default background air quality values provided by the New Zealand Transport Agency (NZTA). The default values are intended to provide a conservative estimate of likely background concentrations. The default values for PM<sub>10</sub> and NO<sub>2</sub> provided by NZTA for HCL sites are shown in Table 3 below. CO and SO<sub>2</sub> concentrations, which will not be discharged from the asphalt plant in significant quantities, have been adopted from the Good Practice Guide default values recommended for a main urban area.

Table 3: Assumed Background Contaminant Concentrations			
Contaminant	Averaging Period	Assumed Background Value	Source
PM <sub>10</sub>	24-hour average	32.8 µg/m <sup>3</sup>	NZTA <sup>1</sup>
	Annual average	10 µg/m <sup>3</sup>	BOPRC Tauranga monitoring <sup>2</sup>
NO <sub>2</sub>	1-hour average	65 µg/m <sup>3</sup>	NZTA <sup>1</sup>
	24-hour average	43 µg/m <sup>3</sup>	NZTA <sup>1</sup>
	Annual average	16 µg/m <sup>3</sup>	NZTA <sup>1</sup>
CO	1-hour average	5 mg/m <sup>3</sup>	MfE
	8-hour average	2 mg/m <sup>3</sup>	MfE
SO <sub>2</sub>	1-hour average	20 µg/m <sup>3</sup>	MfE
	24-hour average	8 µg/m <sup>3</sup>	MfE
Notes: 1. <a href="https://www.nzta.govt.nz/roads-and-rail/highways-information-portal/technical-disciplines/air-quality-climate/planning-and-assessment/background-air-quality/">https://www.nzta.govt.nz/roads-and-rail/highways-information-portal/technical-disciplines/air-quality-climate/planning-and-assessment/background-air-quality/</a> 2. <a href="https://www.lawa.org.nz/explore-data/bay-of-plenty-region/air-quality/">https://www.lawa.org.nz/explore-data/bay-of-plenty-region/air-quality/</a>			

## 4.0 Description and Operation of Plant & Associated Processes

### 4.1 Drum Mix Plant

The HCL asphalt plant is a parallel-flow drum mix plant, which has historically been the most common type of asphalt plant in New Zealand. This type of plant operates on a continuous basis with the drum used to both dry and heat aggregate and to mix liquid bitumen with hot aggregate to produce hot mix asphalt. A diagram of a typical parallel-flow drum mix plant is provided as Figure 5, and a photograph of the HCL plant in operation is shown as Figure 6.

The plant has a maximum production capacity of 60 tonne product per hour. The particulate emission control system is a venturi water scrubber, and hot mix asphalt storage is in elevated bins. The plant consists of the following sections:

- ✧ Aggregate storage facilities (up to around 1,000 m<sup>3</sup>);
- ✧ Four aggregate cold feed bins and associated conveyor to the drier drum;
- ✧ Two Recycled Asphalt Product cold feed hoppers;
- ✧ Two thermally insulated bitumen storage tanks, electrically heated, fitted with atmospheric breathers for pressure equalisation;
- ✧ Double-skinned diesel oil fuel storage tank with 30 m<sup>3</sup> capacity;
- ✧ Kerosene cut-back storage with 30 m<sup>3</sup> capacity;
- ✧ Drum mix asphalt plant (consisting of the rotary drying drum; fuel burner and integral combustion air fan; bitumen drum injection system; and an expansion box);
- ✧ A venturi water scrubbing section in the duct from the expansion box to the centrifugal water/dust separator; an exhaust fan; a cyclonic separator and a 13 m high discharge chimney;
- ✧ Hot mix storage bins supplied from an enclosed slat conveyor from the mixer;
- ✧ A primary, secondary, and tertiary scrubber water settling ponds, with water recycle; and,
- ✧ A control room.

A burner for a 60 tonne/hour parallel flow plant at maximum rate of heat release has a required thermal capacity of about 5.1 MW gross. This rate of heat release is calculated from a rate of about 8 L of diesel oil per tonne of product. At the rate of heat release of 5.1 MW gross, about 480 L (400 kg) of diesel oil will be burnt per hour (equivalent to about 470 Am<sup>3</sup> of natural gas/hour). For the likely average operation of 50 tph the fuel consumption will be proportionately lower (around 80% of the maximum rate).

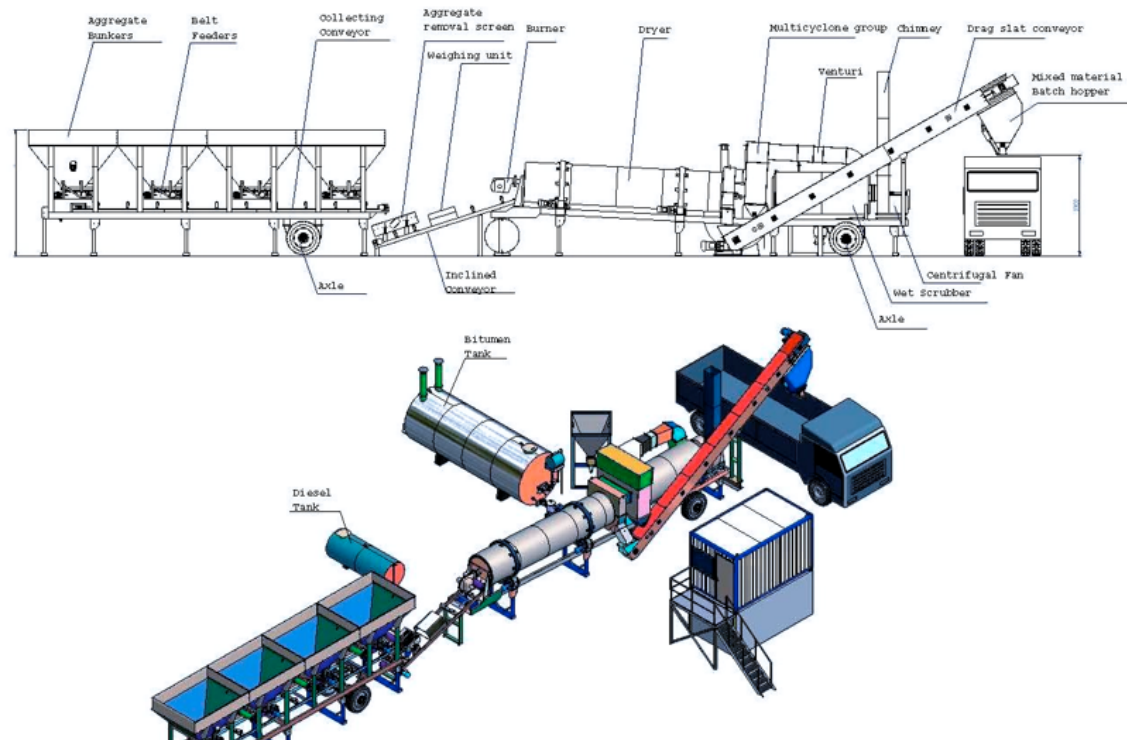


Figure 5: Diagram of Parallel Drum Mix Asphalt Plant





**Figure 6: HCL Asphalt Plant**

## **4.2 Raw Materials**

### **4.2.1 Aggregates**

Raw materials for both the asphalt plant consist of gravel chip, sand, and crusher dust (collectively aggregates). About 5-7% bitumen by weight is incorporated into the aggregate during processing. Diesel oil is the burner fuel for the plant.

Aggregates are obtained from greywacke, the rock almost exclusively used in most areas of New Zealand in asphalt, in concrete, and for most road and general construction purposes. The only mineral of potential concern in greywacke is crystalline silica (e.g. quartz) which is present in variable concentrations depending on the source. If quartz is in a respirable form and breathed in high concentration for sufficient time it may cause the occupational illness silicosis. It is highly unlikely that the emission of respirable quartz dust from any part of the process (even during upset conditions) will be of sufficiently high concentration and duration to have any occupational or (especially) public health significance.

Storage of coarse aggregate has low dust potential when dry and during strong winds but provided it is well washed. Crusher dust, which has a high fines content (and to a lesser degree sand), is received damp and kept damp while in storage to prevent dust generation while unloading, while being stored, and during transfer by front-end loader from the storage bin to the cold feed bins.

Aggregate storage is semi-enclosed, and crusher dust and sand will be covered as necessary during warm weather to minimise drying out without having to apply excessive water. Aggregate received by truck onto the premises will be damp to minimise dust generation during tipping and subsequent front-end loader operation.

#### 4.2.2 Bitumen

Bitumen is a solid to semi-solid residue resulting from the distillation of heavy crude oils. Bitumen consists of a complex mixture of high boiling point paraffinic, aromatic hydrocarbons, and heterocyclic compounds containing sulphur, nitrogen, and oxygen. Bitumen is stored hot (135°C to 165°C) using electric heating via thermal oil heat exchangers to keep contents sufficiently fluid to pump to the hot mix drum and inject into the aggregate mix. Bitumen tank temperature is controlled by thermostat set in fail-safe mode. The storage tanks are fitted with a short breather vent to permit pressure equalisation.

#### 4.2.3 Release Agent

Truck and trailer trays will be swabbed with a proprietary release agent solution to prevent asphalt sticking to the tray. This is normal practice in the industry.

#### 4.2.4 Fuel Storage

Diesel fuel used at the site will be standard automotive fuel grade, which currently has a maximum sulphur content of 0.001% by weight. The fuel storage tanks are double skinned and equipped with internal monitoring to ensure leaks do not occur. Facilities are also designed to ensure that if spills occur, they will be contained to prevent contamination of land and water.

### 4.3 Operation of the Plant

Parallel-flow drum mix plants operate on a continuous basis with the drum used to both dry and heat aggregate and to mix hot aggregate with bitumen. Aggregate is conveyed into the drum at the burner end and then travels down the slightly inclined rotating drum (which is fitted with flights) where products of combustion from the burner and excess air dries and heats the aggregate. The lifting motion of the flights achieves good contact between aggregate and drying gases. Hot liquid bitumen is injected into the drum about halfway down and the mixing action of the rotating drum ensures a good and even coating of bitumen on aggregate particles. A steam barrier generated by the drying aggregate, and burner design, prevents the burner flame impinging on the bitumen. Hot mix temperature ranges from about 135 to 170°C depending on the blend (about 150°C for the standard blends) and contains about 3-5% moisture. Product is discharged from the drum at the opposite end to the burner onto a conveyor for transfer to thermally insulated hot storage bins and then load-out.



Combustion gases, dust, bitumen volatile matter and pyrolysis products are drawn by an induced draught fan through the water scrubber before gases are discharged into air through the stack.

Spraying the bitumen into the aggregate and the steam generated by drying aggregate removes a substantial portion of the entrained dust (i.e. acts as a primary dust collector), which lowers the loading on the down-stream emission control equipment.

Parallel flow plants are energy efficient. Although the drying drum acts as the mixer, the potential for dryer drum fires with a modern plant, such as the HCL plant, is low. As well as the plant being equipped with normal process sensors and control systems to maximise product quality, the cold bin to drum conveyor is fitted with a fail-safe load sensor, which shuts down the burner if aggregate flow ceases for about 15 seconds or more.

Air and remaining entrained dust are then scrubbed in an adjustable-throat high efficiency venturi wet scrubber. Dust-containing water droplets entrained in the gas flow downstream of the venturi scrubber are centrifugally removed in the scrubber drum to discharge into the scrubber settling pond. This type of venturi scrubber, when appropriately set-up and operated, can consistently achieve dust emission concentrations of less than 250 mg/Nm<sup>3</sup> dry gas basis. The actual concentration of particulate depends on the rate of drying, the percentage of fines in the aggregate, the pressure drop across the venturi scrubber and its water flow, and the degree of settling achieved in the scrubber pond prior to recycle of water to the scrubber. Emissions testing of the plant is undertaken on an annual basis. A copy of the most recent test is attached as Appendix B of this report, and shows the emission rate for total particulate matter was measured at 1.0 kg/hr, which is 40% of the consented limit of 2.5 kg/hr.

Not all of the particulate discharged from the scrubber is PM<sub>10</sub>. USEPA emission factors for asphalt plants do not speciate particulate emitted from venturi scrubbers, although test data indicates that around 70% of total particulate emitted from a venturi scrubber consists of the PM<sub>10</sub> fraction<sup>1</sup>.

Given that water injection nozzles are maintained in good condition, increasing the venturi water flow increases particulate removal efficiency, but excessive water injection may overload downstream droplet removal causing excessive droplet carryover into the stack and problems with emission testing (and sometimes the ejection of droplets from the stack). Such droplets are often 'muddy' due to carryover of dirty scrubber water and washing of particulate from inside ducting and stack surfaces.

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<sup>1</sup> USEPA, AP-42 Appendix B.1 – Particle Size Distribution Data and Sized Emission Factors for Selected Sources, October 1986.

The height of the plant stack is 13 m with an exit diameter of 0.65 m. The temperature of stack gases is usually 60 - 70°C, with around 70°C being a typical value at the maximum rate of production. During normal operation, the discharge from the stack of an opaque white steam plume is apparent. Design volumetric flow of a 50 tph plant is about 3.5 Nm<sup>3</sup>/s of exhaust gas on a wet gas basis at around 20% moisture or about 2.8 Nm<sup>3</sup>/s on a dry gas basis. A flow rate at maximum production of 3.5 Nm<sup>3</sup>/s wet gas basis at 20% moisture equates to an actual rate of discharge of around 4.4 Am<sup>3</sup>/s of exhaust gas at 70°C. Actual volumetric flow (and its temperature) from the stack varies depending on how the dryer is set up, the rate of drying, and on scrubber operating factors.

## 5.0 Properties of Contaminants Discharged into Air

### 5.1 Contaminants Discharged to Air from Asphalt Manufacture

The properties of contaminants discharges into air are discussed below.

#### 5.1.1 Bitumen

The properties of bitumen are discussed in Section 4.2.2. The manufacture of asphalt paving mixes results in minimal exposure of employees to bitumen fumes. Likewise, exposure of the public to bitumen fumes during manufacturing operations is limited and does not pose a physical health risk.

#### 5.1.2 Carbon Monoxide

CO is colourless and odourless but has high mammalian toxicity in relatively high concentrations. It is slowly oxidised in the atmosphere to carbon dioxide. Its most significant environmental effect, in 'high' concentrations, is human health effects.

#### 5.1.3 Oxides of Nitrogen (NO<sub>x</sub>)

Nitric oxide (NO), which is relatively non-toxic, odourless, and colourless, is the primary compound produced during combustion (around 95% of the NO<sub>x</sub> emitted is NO). Some of the NO in the discharge will oxidise to NO<sub>2</sub> as the plume drifts down wind, with the rate of conversion being dependent on the presence of oxidising capacity of the receiving atmosphere.

NO<sub>2</sub> is an acidic gas with a characteristic odour. It is substantially more toxic and more reactive than NO and is of more concern as an air contaminant if concentrations are excessive. In sufficient concentration, NO<sub>2</sub> irritates the eyes and the respiratory tract and damages vegetation.

Other sources of NO<sub>x</sub> in the area will include motor vehicles, and other commercial and industrial fuel burning equipment.

#### 5.1.4 Particulate Matter

Deposited particulate is particulate matter having significant settling velocity in still air, and generally has a particle diameter greater than 10 - 20 microns. The primary impact of deposited particulate is nuisance (mainly soiling).

Dust particles less than about 10 to 20 microns in size are termed 'suspended particulate' as their settling velocities are low and they disperse similar to a gas. Fine particulate matter (PM<sub>10</sub>) in sufficient concentration can cause respiratory distress, soiling of surfaces, and will accelerate corrosion of surfaces by retaining moisture and acidic materials. Overseas health surveys have shown a correlation between the concentration of fine particulate in the atmosphere and increased frequency of respiratory and cardiovascular illness, and increased mortality, especially in those who are suffering from significant illness. These studies have also shown a correlation with increased prevalence of asthma symptoms. To date, the increase in adverse health effects with increasing concentration of fine particulate in the air has not been related to particle composition but only to particle size, concentration, and exposure time. Particles having a diameter of 10 microns or less (PM<sub>10</sub>), being respirable, are of principal concern. In response to these overseas health studies, New Zealand has lowered the air quality standard for fine particulate to 50 µg/m<sup>3</sup> as a 24-hour average<sup>2</sup>.

Other sources of suspended particulate matter in the area will include discharges from other industrial and commercial premises, dust from vehicle movements on roads, and within other industrial and commercial premises in the area; from motor vehicles on public roads; from areas of exposed soils during dry weather conditions; and from biogenic sources.

#### 5.1.5 Sulphur Dioxide

SO<sub>2</sub> is a colourless and pungent gas which, in sufficient concentration, irritates the eyes and respiratory tract, may damage vegetation, and promotes corrosion of some materials. Low concentrations of sulphur trioxide are also generated by oxidation of SO<sub>2</sub>. The discharge of sulphur oxides from burning automotive diesel oil is very low.

Other sources of sulphur oxides in the area will be diesel-fuelled vehicles and machinery, and any commercial and industrial fuel burning equipment burning oil fuels. Relatively high concentrations of SO<sub>2</sub> have been observed at the Rata Street ambient air monitoring station, with high concentrations being associated with the presence of cruise ships docked at the Port of Tauranga.

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<sup>2</sup> New Zealand Ministry for the Environment. *Ambient Air Quality Guidelines*. May 2002.

### 5.1.6 Total Organic Compounds (TOCs)

Combustion of diesel oil and hot bitumen emit unburnt hydrocarbons and products of incomplete combustion. Some of these compounds are odorous and, if of excessive concentration, can cause nuisance to neighbours. Such discharges are minimised by maintaining burners, and by ensuring that drum mix plants are set-up and operated to minimise over-heating of bitumen. The main effect of emitted VOCs is odour.

### 5.1.7 Other Activities

Other activities that result in discharges associated with the asphalt plant operations on site are described in Table 4 below.

Table 4: Other Air Discharge Activities	
Process Resulting in Discharge	Nature of Discharge and Degree of Effects
Stored fine aggregate (dust)	Low if protected and kept damp
Transfer aggregate to cold bins (dust)	Low if sand/crusher dust damp
Cold bins and conveyor (dust)	Low if aggregate damp
Bitumen storage (volatile compounds/odour)	Low – slight odour
Product conveyor/hot bin (odour)	Limited bitumen odour
Product-bin to truck (odour/smoke)	Moderate in immediate vicinity

### 5.1.8 Despatch of Product from the Premises

Despatch of asphalt product from the premises will be in covered trucks and trailers. Odour from product will be minimal. No other emissions to air are expected.

## 5.2 Nature and Composition of Discharges to Air – Normal Operation

Table 5 presents the plant stack discharges relating to normal operations at maximum operating capacity for the asphalt plant.

Table 5: Parameters for HCL Asphalt Plant	
Parameter	Values
Heat release	Up to 4.5 MW gross
Fuel consumption rate <sup>2</sup>	320 kg/hr diesel
Efflux velocity	15 m/s
Carbon monoxide	3.9 kg/hour <sup>1</sup>
Oxides of nitrogen (as NO <sub>2</sub> )	1.7 kg/hour <sup>1</sup>
SO <sub>2</sub>	0.0033 kg/hr <sup>2</sup>
PM <sub>10</sub>	1.75 kg/hr <sup>1</sup>
<p>Notes:</p> <ol style="list-style-type: none"> <li>1. USEPA Emission factors, AP-42, April 2004. Assume 83% of TSP is PM<sub>10</sub>.</li> <li>2. The rate of generation of SO<sub>2</sub> when burning diesel oil fuels is calculated from the rate of fuel consumption. The USEPA notes in AP-42 Section 11.1 Hot Mix Asphalt Plants (April 2004) Table 11.1-7 that fifty percent of the fuel-bound sulphur, up to a maximum SO<sub>2</sub> of 0.1 lb/ton of product (0.05 kg/tonne) is expected to be retained in the product. The remainder will be emitted as SO<sub>2</sub> from the drying/blending drum, as calculated assuming the burning 400 kg/hour of diesel fuel, containing 0.001% sulphur by weight</li> </ol>	

### 5.3 Nature and Composition of Discharges to Air – Abnormal Operation

Abnormal discharges into air can occur under the circumstances described below.

If the drum burner when fired on diesel fuel is poorly maintained or adjusted, the emission of black smoke may occur from the stack. Providing the burner is appropriately maintained and adjusted then the likelihood of significant smoke emissions is low.

Faulty adjustment of the burner, and/or failure of the induced draught fan to sufficiently extract products of combustion and drying from the drum may generate positive pressure in the drum with fugitive discharges to atmosphere ('puffing'). Proper burner adjustment and induced draught fan regulation to maintain slight negative pressure in the drum prevents this problem.

Operating the venturi scrubber at excessive pressure drop may restrict gas flow from the drying/mixing drum. Proper adjustment avoids this problem. Partial blockage of the scrubber drum and ducting downstream of the scrubber can also restrict gas flow causing positive pressure in the dryer. Appropriate maintenance avoids this problem. There have been no issues relating to abnormal emissions from the plant.

The plant has controls to notify the plant operators of potential faults. These include alarm functions for all important parameters including bitumen tank temperature, burner parameters, drying drum temperature, fan parameters, fabric filter temperature and pressure, and fuel consumption.

Nuisance dust effects may arise from poor control of transport and storage of aggregate; failing to keep working areas clean; failing to keep truck and machinery speeds low to minimise dust emissions during dry (and especially windy) weather, and/or failing to keep such surfaces damp. Proper management and maintenance of plant and facilities reduces the frequency of such events and reduces their impact to a minimum if they do occur. Dust management and mitigation measures will be included in the Environmental Management Plan for the sites.

#### 5.4 Process Monitoring

Operation of the asphalt plant is automatically controlled by a computerised control system. Automatic controls measure the input of aggregates and controls the addition of bitumen and the mix temperature. The control system is programmed by the operator to the desired blend and production rate and the system automatically provides consistent aggregate and bitumen feed. Key parameters for control include:

- ✧ Aggregate and bitumen feed rates;
- ✧ Hot mix production as total tonnes; and,
- ✧ Hot mix temperature.

Important parameters are also manually logged. Product quality is the definitive test of proper process operation (product is monitored by a registered technician).

Discharges of contaminants to air are not monitored directly on a continuous basis but they are visually assessed and minimised as documented in the sites' Environmental Management Plans.

### 6.0 Assessment of Effects of Discharges on the Environment

#### 6.1 Introduction

Under normal operation, discharges from the hot mix plant consist of:

- ✧ A noticeable white steam plume, which dissipates as the steam evaporates;
- ✧ Products of combustion, including carbon dioxide, CO, oxides of nitrogen and SO<sub>2</sub>;
- ✧ Particulate matter (as PM<sub>10</sub>);
- ✧ Limited dust from process fugitive emissions, truck and machinery movements during dry weather, and from receipt and handling of aggregate; and,
- ✧ Minimal dust from storage of aggregates.

## 6.2 Atmospheric Dispersion Modelling of Chimney Discharge

### 6.2.1 Introduction

Computer dispersion modelling is an internationally accepted method for predicting concentrations of contaminants in air downwind of a source for use in assessing the effects of discharges on the environment. Particular dispersion models may be approved by regulatory agencies for specific applications. Dispersion models take into account a number of factors including the emission rate of the contaminant(s), the height of the discharge, building downwash effects, local topography, and meteorology. The main meteorological aspects considered in modelling are wind speed and direction, ambient temperature, atmospheric mixing height and atmospheric stability.

The accuracy of model predictions depends on a number of factors, including:

- ✧ The quality of the input data and assumptions;
- ✧ The inherent limitations in the model for predicting plume rise at any point downwind;
- ✧ The ability to predict plume dispersion coefficients (plume spread);
- ✧ The assumption that meteorological conditions remain constant between the source and receptor; and,
- ✧ That varying terrain can be accounted for.

### 6.2.2 Modelling Approach

The Gaussian dispersion model AERMOD was used to predict the ground level concentrations likely to result from HCL's existing operations. AERMOD is widely accepted internationally as a dispersion model for regulatory purposes. Modelling has been undertaken for the plant.

### 6.2.3 Meteorological Data

Comprehensive meteorological data suitable for use with the AERMOD dispersion model was not available for this area. The meteorological data set was therefore developed using the prognostic model TAPM (Version 4.0.4), CSIRO, Australia (Hurley, 2008). This model predicts all meteorological parameters for the area based on large-scale synoptic information provided by the Australian Bureau of Meteorology.

In order to produce the meteorological data set to run AERMOD, TAPM was configured with:

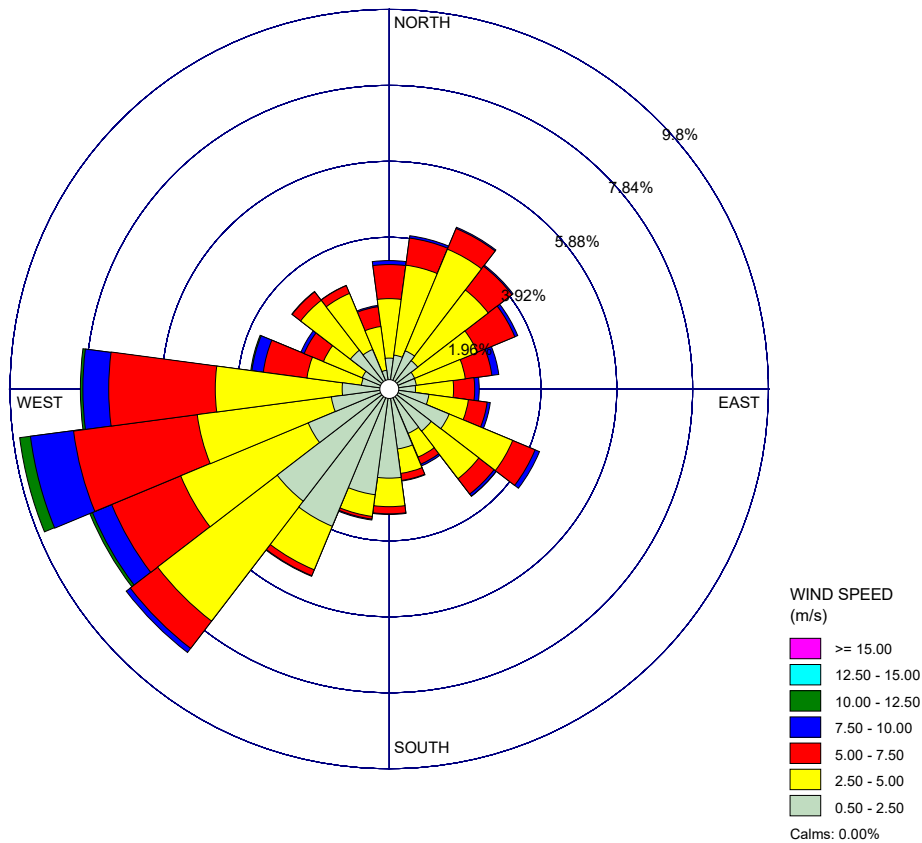
- ✧ Four nested meteorological grids with a grid spacing of 20, 5, 2, and 0.5 km;
- ✧ Default vegetation, topography and soil types as supplied in the TAPM databases for New Zealand;

- ✧ Grid centre at 37.66° S, 176.20° E, (429477 E, 5831137 S, UTM Zone 60S);
- ✧ Deep soil moisture used throughout the year was:
  - 0.15 (Jan, Feb, Dec);
  - 0.2 (Mar, Apr, May, Sep, Oct, Nov);
  - 0.25 (Jun, Jul, Aug);
- ✧ Grid dimensions (nx, ny, nz) = 25, 25, 25; and,
- ✧ Prognostic turbulence scheme and hydrostatic approximation.

Meteorological data collected at the Tauranga Airport Weather Station (AWS; operated by MetService, agent number 2283) for 2011 and 2012 was assimilated into the TAPM model to improve the correlation of the model predictions with actual surface wind measurements. Two meteorological datasets – one surface air data file (\*.sfc) and one upper air data file (\*.pfl) were extracted from a pseudo-met station of the modelling grid at the location of the HCL asphalt plant.

A windrose of the surface air data file showing wind direction and speed distribution is provided as Figure 7. The winds are predominantly from the south-westerly and westerly directions and show good agreement with winds observed at the airport meteorological station as shown in Figure 3.





**Figure 7: TAPM Generated Surface File (.sfc) Windrose 2010-2011**

#### 6.2.4 Model Setup and Plant Parameters

Table 6 sets out the parameters and settings used in the dispersion modelling. The discharges to air were assumed to be continuous during operating hours over the two-year modelling period.

On a day to day basis to meet expected average demand, the plant will generally operate from 7 am - 6.30 pm. However there will be times when the plant will operate throughout night time hours. This will be to align with projects that require asphaltting product in the night time when vehicle movements on public road networks are low, or for very large projects that need asphalt supply 24 hours per day. The very large jobs in and around the BOP are expected to be infrequent. The modelling scenario can, therefore, be considered as conservative.

Table 6: Dispersion Modelling Parameters	
Parameter	Value(s) for Dispersion Modelling
Chimney height (above grade)	13 m
Chimney exit diameter	0.65 m
Chimney efflux temperature	100°C
Chimney efflux velocity	15 m/s
Hours of Operation	7 am – 7 pm
Terrain effects	STRM3 Digital terrain file used
Modelling domain size	4 x 4 km (64 km <sup>2</sup> )
Receptor locations	Nested Grid: <ul style="list-style-type: none"> <li>⋮ 20 m × 20 m out to 100 m</li> <li>⋮ 40 m × 40 m out to 300 m</li> <li>⋮ 60 m × 60 m out to 800 m</li> </ul> Fenceline Grid: Set at site boundary 10 m × 10 m out to 50 m
Averaging times	1 hour, 24 hour, and annual

### 6.2.5 Rates of Contaminant Discharge

Dispersion modelling was undertaken assuming a nominal emission value of 1 g/s. As model concentrations are linearly related to emission rate (for a single source), the resulting maximum ground level concentrations (MGLCs) for each contaminants of interest have been adjusted on a pro-rata basis from the generic results. The highest predicted MGLC for each contaminant is calculated as follows:

$$\frac{\text{actual contaminant emission rate (n g/s)}}{\text{nominal emission rate (1 g/s)}} \times \text{modelled MGLC (}\mu\text{g/m}^3\text{)}$$

Emission rates used in the modelling are as provided in Table 5 in Section 5.0 of this report. Emission rates have been estimated using USEPA AP-42 emission factors and assumptions of sulphur content of fuel.

### 6.2.6 Other Model Inputs

Buildings were included in the model. Large items in the asphalt plant have been included as buildings. Other building heights have been scaled from photos.

### 6.3 Dispersion Modelling Results

Table 7 presents the highest predicted MGLCs of the modelled contaminants which are expected to occur at or beyond the site boundary for the operation of the asphalt plant, both inclusive and exclusive of the assumed background concentrations.

The highest predicted concentrations of all contaminants are substantially below the assessment criteria for all averaging periods. The predicted MGLCs at the surrounding sensitive receptors will in most cases be well below the highest predictions, and the effects of the discharges will be at a level that is less than minor.

Given that the modelling scenarios results in the highest predicted concentrations of all contaminants being well below the ambient air standards and guidelines, we consider the discharges have a less than minor effect on air quality for the plant.

**Table 7: Highest Predicted MGLCs for Asphalt Plant**

Contaminant	Averaging Period	Peak Modelled MGLC – ( $\mu\text{g}/\text{m}^3$ ) (excluding background)	Peak Modelled MGLC – ( $\mu\text{g}/\text{m}^3$ ) (including background)	Evaluation Criteria ( $\mu\text{g}/\text{m}^3$ )
PM <sub>10</sub>	24-hour	13.7	46.5	50 (NES)
	Annual	1.8	11.8	20 (MfE)
NO <sub>2</sub> <sup>1</sup>	1-hour (99.9 <sup>th</sup> percentile)	6.9	71.9	200 (NES)
	24-hour	2.7	45.7	100 (MfE)
	Annual	0.3	16.3	30 (MfE)
CO	1-hour (99.9 <sup>th</sup> percentile)	79	5079	30,000 (MfE)
SO <sub>2</sub>	1-hour (99.9 <sup>th</sup> percentile)	<0.1	20	350 (MfE)
	24-hour	<0.03	8.0	120 (MfE)
<b>Notes:</b> 1. Assume 20% of NO <sub>x</sub> is NO <sub>2</sub> .				

## 6.4 Contour Plots

Figure 8 shows the predicted MGLCs of 24-hour average  $PM_{10}$  for the plant, with the highest concentrations occurring approximately 100 m south of the site boundary. Concentrations are predicted to be significantly lower at further distances and are predicted to be below  $2.5 \mu\text{g}/\text{m}^3$  outside of the industrial area.

Figure 9 shows the predicted MGLCs of  $PM_{10}$  as annual averages, and indicates the highest predicted concentrations occur approximately 100 m to the east of the site boundary, with concentrations rapidly decreasing at further distances.

Figure 10 is a contour plot of the predicted MGLCs of  $NO_2$  as 1-hour averages (at the 99.9<sup>th</sup> percentile) and shows the highest concentrations of  $5\text{--}6 \mu\text{g}/\text{m}^3$  occurring along Hewletts Road to the south of the site. Concentrations are significantly lower beyond the industrial area surrounding the site.

The discharges to air were assumed to be continuous over a 12-hour day (7 am to 7 pm) and 7 days per week. It is unlikely that the plant would operate at MCR for 12 hours continuously, and so the modelling may be considered conservative, particularly for the 24-hour and annual average predictions.

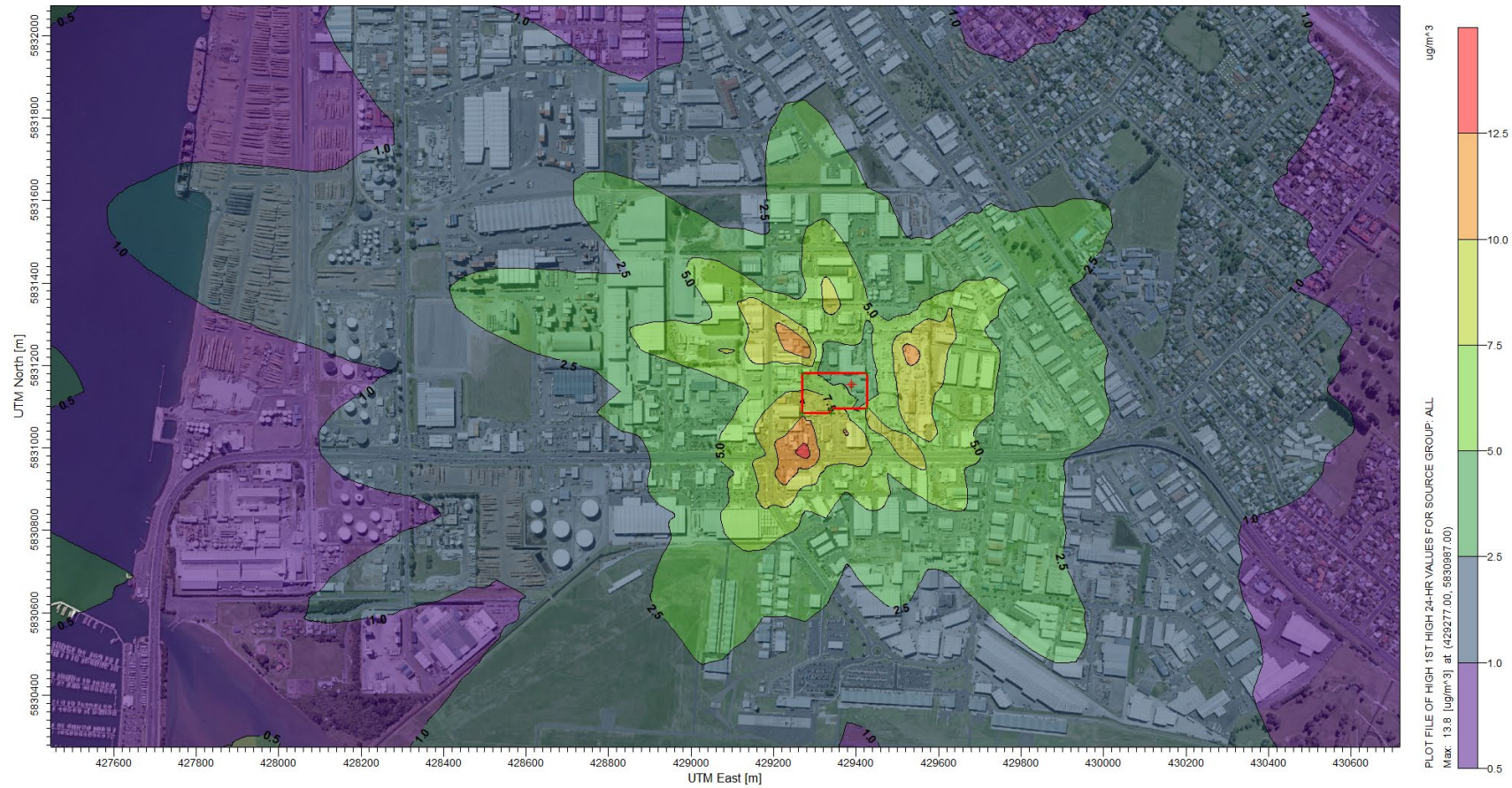


Figure 8: Predicted MGLCs PM<sub>10</sub> (24-hour Average)



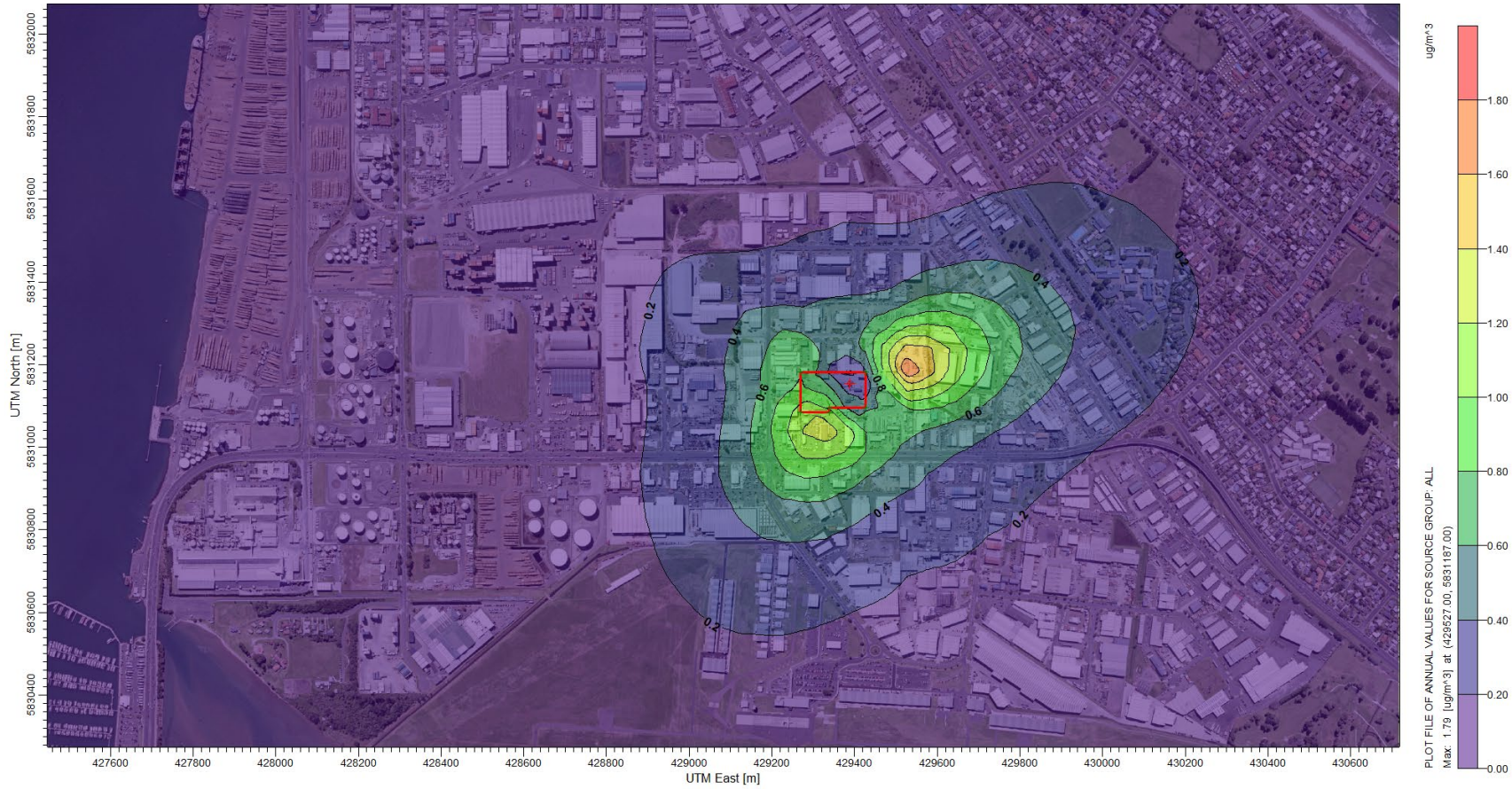


Figure 9: Predicted MGLCs PM<sub>10</sub> (annual average)



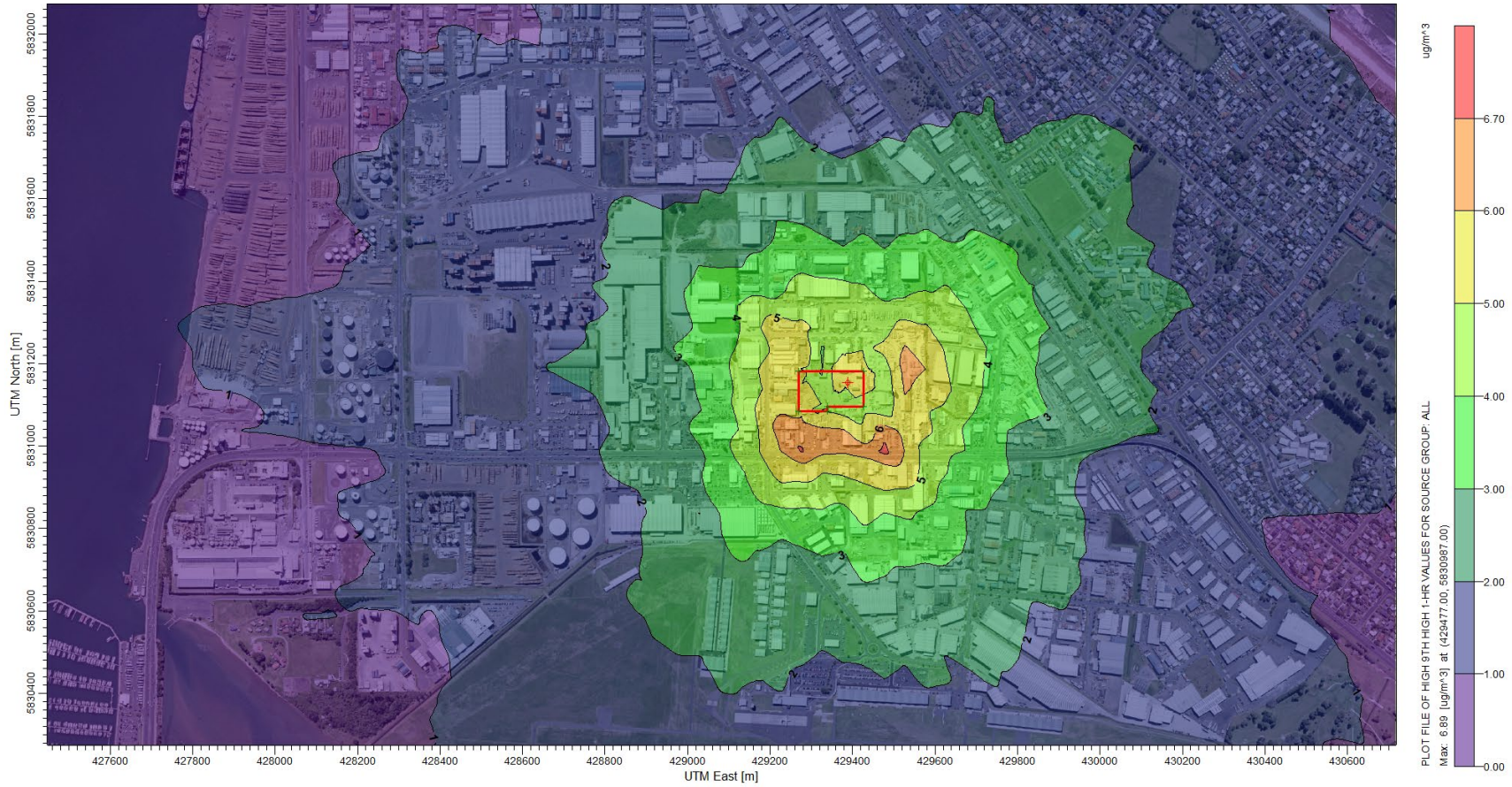


Figure 10: Predicted MGLCs NO<sub>2</sub> (1-hour average, 99.9th percentile)



## 6.5 Other Discharges

### 6.5.1 Odour Impacts

HCL has successfully operated the asphalt plant at the site without any odour issues or complaints for over 20 years. Therefore, it is considered there is minimal potential for adverse effects as a result of odour discharged from either plant.

### 6.5.2 Dust Impacts

Fugitive emissions of dust may be generated through wind erosion of material stockpiles, or entrainment of dust through physical agitation of materials (e.g. through handling).

To reduce the potential for dust generation the fine aggregate will be covered when the plant is not operating and will be kept wet (as described earlier) to reduce wind entrainment of finer material. Dust management procedures are included in the Pollution Prevention Plan (PPP) for the existing site.

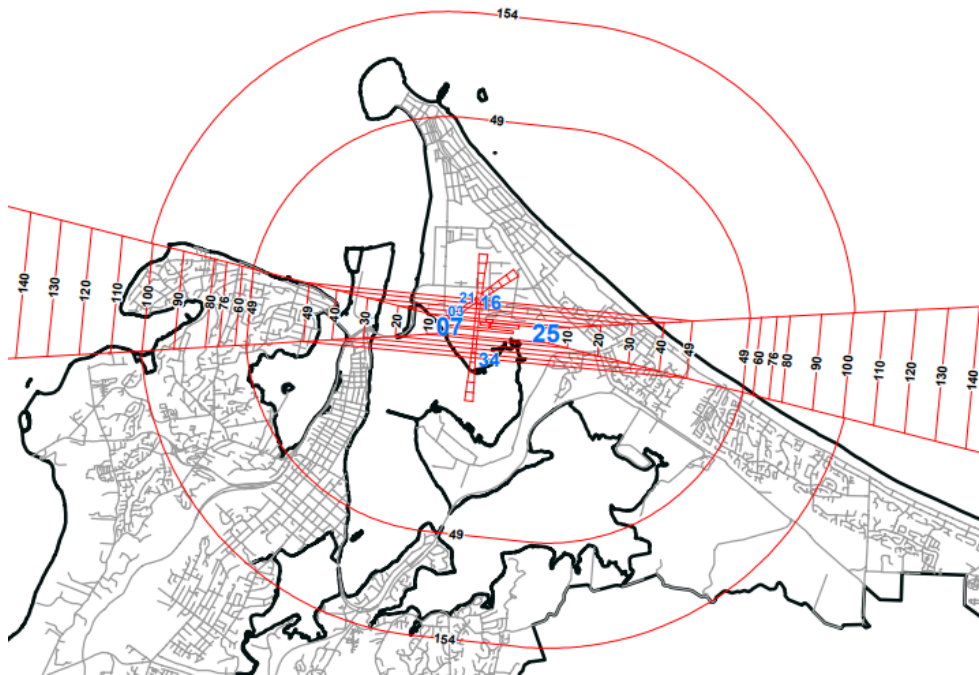
Provided these measures are undertaken, generation of dust from activities on the site is expected to be minimal and the potential adverse effects of these emissions on amenity are considered to be no more than minor.

### 6.5.3 Visibility Impacts

There will be a noticeable white steam plume for the asphalt plant, which dissipates as the steam evaporates, generally within 10 to 20 metres from the point of discharge.

### 6.5.4 Effects on Aircraft Flight Paths

The Tauranga City Plan protects aircraft approach and take-off paths and horizontal and conical surfaces to ICAO standards. No structures, building, object, or vegetation is permitted to protrude into the airspace protection envelope formed by connecting the air height contours shown on Diagram 2 of City Plan Section 5 which shows the specified airport slopes and surfaces. The air height contour over the area occupied by HCL is ~27 m above local ground level. Diagram 2 presented as Figure 11. All Higgins structures will be below this threshold height.



**Figure 11: Tauranga City Council Plan – Diagram 2, City Plan Section 5 – Specified Airport Slopes and Surfaces**

In addition, thermal plumes are a potential hazard to aircraft under or near aircraft flight path approaches to airports. The Airways Corporation of New Zealand has advised that the discharge of thermal efflux exceeding 4.3 m/second at 60 m or higher above ground level has the potential to adversely affect aircraft structural integrity, and a structure proposed to discharge efflux at a velocity greater than 4.3 m/second at 60 m or higher is required to inform the aerodrome operator.

The method used to estimate plume vertical velocity is that proposed by Hanna Briggs & Hosker (1982). This method is relatively simple but conservative. It determines plume rise velocity under the worst-case scenario of calm conditions. It does not account for different atmospheric stabilities. It calculates an average velocity across the plume that is at constant velocity. If this calculation indicates plume velocities at altitudes that are of potential concern to the Airways Corporation then a more sophisticated method may be required.

The results of these calculations are as follows in Table 8:

Table 8: Estimated Worst-Case (Calm) Thermal Plume Vertical Velocity		
Stack Parameters	Height above ground level to meet 4.3 m/s threshold	Maximum plume velocity at 60 m above ground level
Height at 13 m, diameter 0.65 m, velocity 15 m/s at 100°C	16 metres	1.0 m/s

The discharge of combustion gases from the plant is below the threshold value of 4.3 m/s at 60 metres and will not cause issues to aviation. There have not been any complaints from Tauranga Airport in 20 years of operation either.

#### 6.5.5 Summary

Overall it is considered that there will be no adverse effects resulting from the air discharge from the asphalt plant, including those associated with dust, odour or visible emissions.

## 7.0 Best Practicable Option

The processes and methods used to reduce discharges of contaminants to the environment to a minimum are the "best practical option" for a plant of its capacity and throughput at this point in time.

Discharges from the plant are through a venturi wet scrubber, which removes contaminants including particulate matter prior to discharge atmosphere.

The drying drum burner will be fired on automotive diesel oil, which is a high quality, low sulphur fuel.

The conveyor transferring product from the rotary mixer to the hot storage bin is enclosed which minimises wind blowing across the transferring product.

HCL has procedures to control dust from receipt, storage, and handling of aggregates and added filler, and from yards and roads, which are the most practicable method to minimise fugitive dust discharges for a plant of this capacity. These procedures follow good practice and are documented in the site PPP.

## 8.0 Proposed Consent Conditions

HCL requested that the existing conditions of consent be retained for the new air discharge consent. Further conditions are proposed in the Assessment of Environmental Effects report.

## 9.0 Conclusion

This technical report has evaluated the potential effects on air quality from the discharges of an asphalt plant operated by HCL at Hewletts Road. The key conclusions of the assessment are:

- ✧ The asphalt plant is located in an appropriately zoned (i.e. industrial) receiving environment;
- ✧ The emission of PM<sub>10</sub> and other contaminants to air from the activity will comply with the requirements of regulations 17(1) and 20 of the NES Air Quality; and
- ✧ The asphalt plant has operated for over 20 years at the site without complaints and in compliance with current consent conditions;
- ✧ The applicant employs good site management practices to ensure good operation and maintenance of the plant and to minimise fugitive dust and odour; and,
- ✧ The activities will not result in offensive or objectionable effects beyond the boundary of the consented premises.

## 10.0 References

BOPRC Letter report to Regional Direction and Delivery Committee, *Options Analysis for Gazetting the Mount Maunganui Airshed*, 10 April 2019.

BOPRC Letter report to Regional Direction and Delivery Committee, *Mount Maunganui Industrial Area Update*, 10 April 2019.

BOPRC, *Science Snapshot Report 2019, Air Quality Monitoring 2019*

Hanna, Briggs, and Hosker, *Handbook on Atmospheric Diffusion*, 1982.

Ministry for the Environment, *Ambient Air Quality Guidelines*, May 2002.

Ministry for the Environment, 2016. *MfE Good Practice Guide for Assessing Discharges to Air from Industry*. <https://www.mfe.govt.nz/publications/air/good-practice-guide-assessing-discharges-air-industry-0>

Peter Hurley. *TAPM V4. User Manual. CSIRO Marine and Atmospheric Research Internal Report No.5*. October 2008.

Resource Management (National Environmental Standards for Air Quality) Regulations 2004.  
<http://www.legislation.govt.nz/regulation/public/2004/0309/latest/DLM286835.html>

USEPA, *AP-42 Appendix B.1 – Particle Size Distribution Data and Sized Emission Factors for Selected Sources*, October 1986.

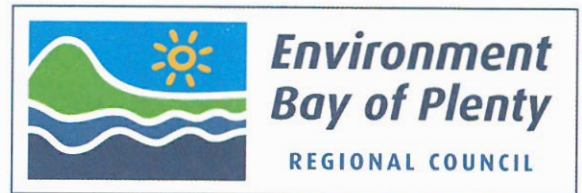
USEPA AP-42, *Volume I, Chapter 11.1 Hot Mix Asphalt Plants*, April 2004

World Health Organisation, *Air Quality Guidelines for Europe, Second Edition*, 2000.

**Appendix A**

Existing Air Discharge Consent

Copy to MH  
Your Ref:  
Our Ref: 1370 63317



22 December 2005

Attention Alex Reid

Higgins Contractors Limited  
trading as Higgins Contractors Bay of Plenty  
P O Box 4473  
MOUNT MAUNGANUI

Telephone: 0800 ENV BOP (368 267)

Facsimile: 0800 ENV FAX (368 329)

Email: [info@envbop.govt.nz](mailto:info@envbop.govt.nz)

Website: [www.envbop.govt.nz](http://www.envbop.govt.nz)

Pollution Hotline: 0800 73 83 93

International: +64 7 922 3390

Dear Sir

**Resource Consent Application Number 63317**

I enclose for your records, resource consent number 63317 granted on 17 October 2005 in accordance with a decision made under delegated authority of the Bay of Plenty Regional Council.

You should read the attached conditions thoroughly and make sure that any contractor or other person acting on your behalf is given a copy and are made aware of the conditions. Failure to comply with the attached consent conditions may result in enforcement action or prosecution.

If you have any questions please call me.

Yours faithfully

A handwritten signature in blue ink, appearing to read "Joy Leaming".

Joy Leaming  
Consents Administration Officer

for Group Manager Regulation & Resource Management

## Bay of Plenty Regional Council

### Resource Consent

Pursuant to section 105 of the Resource Management Act 1991, the **Bay of Plenty Regional Council**, by a decision dated 17 October 2005, **Hereby Grants** to:

HIGGINS CONTRACTORS LIMITED  
trading as HIGGINS CONTRACTORS BAY OF PLENTY

P O Box 4473  
MOUNT MAUNGANUI

A discharge permit pursuant to section 15(1)(c) of the Resource Management Act 1991 to undertake a discretionary activity being to **Discharge Combustion Gases, Bitumen, Sulphur Dioxide, Volatile Organic Compounds, Water Vapour and Particulate Matter from an Asphalt Plant to Air**

subject to the following conditions:

1 **Purpose**

To discharge particulate matter, volatile organic compounds, sulphur dioxide and steam to air associated with the permit holder's asphalt manufacturing plant at 92 Hewletts Road, Mount Maunganui.

2 **Points of Discharge**

To the air from the asphalt plant (including asphalt and bitumen storage) and the site yard (including aggregate stockpiles) as shown on BOPRC Plan Number RC 63317 submitted with the application.

3 **Map Reference**

At or about map reference NZMS 260 U14: 9243-8812 at the site of the stack.

4 **Legal Description**

Lots 2 & 3, DPS 69066, Block VII, Tauranga SD (Tauranga District).

5 **Emission Limits and Controls**

- 5.1 Discharge of particulate matter from the yard and aggregate stockpiles within the premises, and loading and unloading of aggregates, shall be controlled by the permit holder so that a dust nuisance does not occur beyond the boundary of the site.



- 5.2 The permit holder shall ensure that the asphalt plant stack is at least 13 metres above ground level to give adequate dispersion of flue gases and reduce the effects of down draft.
- 5.3 The asphalt plant shall be operated by the permit holder in a manner such that any smoke emission from the stack, after a 15 minute start up period when the operator shall aim to minimise smoke emissions, does not exceed 20 percent obscuration (assessed visually at the top of the stack) for any continuous period of two minutes or a total of four minutes in an hour.
- 5.4 The permit holder shall ensure that the total emissions of particulate matter from the asphalt plant stack do not exceed  $250 \text{ mg/m}^3$  corrected to  $0^\circ\text{C}$ , dry gas basis, and one atmospheric pressure.
- 5.5 The mass discharge of particulate matter from the asphalt plant shall not exceed 2.5 kg/hr.
- 5.6 The permit holder shall maintain a sampling port on the stack of the asphalt plant to specifications to be agreed upon in writing by the permit holder and the Chief Executive of the Regional Council or delegate.
- 5.7 The permit holder shall control the operations on site so there is not an odour nuisance beyond the boundary of the site.
- 5.8 The permit holder shall ensure that the sulphur content of fuel used to heat the asphalt plant does not exceed 2 % w/w.
- 5.9 The permit holder shall ensure that all vehicles carrying aggregates are adequately covered, and the loading or unloading of aggregates is controlled using the best practicable option approach, to minimise the release of particulate matter.
- 5.10 The permit holder shall take all practical measures to prevent bitumen fires from occurring, and shall extinguish any bitumen fires as soon as possible.
- 5.11 The permit holder shall provide access to Regional Council staff to carry out periodic inspections to ascertain compliance with this permit.

## 6 **Monitoring**

The permit holder shall undertake stack testing for particulate emissions from the asphalt plant in accordance with ASTM D 3685-90 (Method A) (or any other method approved by the Chief Executive of the Regional Council or delegate) when requested by the Chief Executive of the Regional Council or delegate.

## 7 **Maintenance**

The asphalt plant, including the heating burner, particulate control equipment and settling ponds for the scrubber water (including neutralising the scrubber water) shall be maintained and operated to control the level of discharge of contaminants to air so as to not cause adverse effects from that discharge.

8 **Term of Permit**

This permit shall expire on 30 September 2020.

9 **Resource Management Charges**

The permit holder shall pay the Bay of Plenty Regional Council such administrative charges as are fixed from time to time by the Regional Council in accordance with section 36 of the Resource Management Act 1991.

10 **The Permit** hereby authorised is granted under the Resource Management Act 1991 and does not constitute an authority under any other Act, Regulation or Bylaw.

**Advice Note:**

*The permit holder should make all persons involved in operating the asphalt plant, associated with the exercise of this permit, aware of the conditions of this permit.*

DATED at Whakatane this 6th day of December 2005

For and on behalf of  
The Bay of Plenty Regional Council



*for* J A Jones  
Chief Executive

**Appendix B**

Emissions Test Report

## PARTICULATE EMISSION REPORT:

### TOTAL SUSPENDED PARTICULATES (TSP)

#### Asphalt Plant

**Author(s):** D.Howie

**CRL Ref:** 18-32424

**Consent Number:** 63317

**Client Name:** Higgins and Sons

**Client Address:** Higgins Contactors  
92 Hewletts Road  
Mount Maunganui

**Date of Issue:** 18 July 2018

**Signature:**   
**Name & Designation:** Daniel Howie BSc  
Environmental Officer

**Approved:**   
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**Distribution:** Nil  
(other than client)

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Quality  
ISO 9001

## Contents:

Introduction	3
Methodology	3
Results	3
Test Results	4-5
Summary Table	6
Figures: Sampling Location & Sampling Plane	7

## Appendix

Field Sheets	1-2
Supplementary Information	3

# Particulate Emission Report Higgins and Sons



## Introduction

CRL Energy was engaged by Higgins and Sons to perform particulate testing on the Asphalt Plant. The purpose of the monitoring was to satisfy the conditions of Resource Consent 63317. Testing was carried out on the 19th December 2017.

## Methodology

The method employed for the test was USEPA Method 5 – Determination of Particulate Matter Emissions From Stationary Sources which included USEPA Methods 1 - 4. These methods are accredited by IANZ under CRL Hamilton's scope of accreditation.

In deviation from USEPA Method 1 only one sampling traverse was made and the sampling interval at each point increased due to safety being compromised in accessing the second sampling port from the cherry picker.

## Results

Higgin's Discharge Consent states under Emission Limits and Controls that; "5.4 The permit holder shall ensure that the total emissions of particulate matter from the asphalt plant stack do not exceed 250 mg/m<sup>3</sup> corrected to 0°C, dry gas basis, and one atmospheric pressure."

"5.5 The mass discharge of particle matter from the asphalt plant shall not exceed 2.5 kg/hr."

The results are within the air discharge limits set out by the resource consent. The average particulate concentration and emission rate from testing, as well as the resource consent limit are summarised below:

Actual concentration of particulate matter	113	mg/dsm <sup>3</sup>
Resource Consent concentration limit	250	mg/dsm <sup>3</sup>
Particulate matter emission rate	1.0	kg/hr
Resource Consent emission rate limit	2.5	kg/hr

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# Test 1 Summary



Site	Higgins and Sons	CRL Ref	18-32424	Date of Test	19 December 2017
------	------------------	---------	----------	--------------	------------------

Plant Description		Fuel Analysis (as received basis)	
Plant Description	Asphalt Plant	Moisture:	n/a %
Product	n/a	Ash:	n/a %
Emission Control	Wet Scrubber	Calorific Value:	n/a MJ/kg
Load	n/a	Type:	n/a
Stack Diameter:	0.720 m		

Method Details	
Measurement Standard:	USEPA Method 5: Determination of Particulate Matter Emissions From Stationary Sources which included USEPA Methods 1 - 4
Sampling Method:	Cumulative sampling
Suction Nozzle Type:	Sharp-edged stainless steel nozzle
Equipment Arrangement:	Water removal upstream of the gas meter
Particulate Drying:	Washing with Acetone, evaporating at clean ambient condition, drying in oven at 105°C
Particulate Separator:	Glass microfiber flat filter (90mm)
Leakage Tests Performed By:	BK TR

Sampling Start Time:	9:36 a.m.	Total Sample Time:	60 mins	Sample Time at Each Point:	10 mins
----------------------	-----------	--------------------	---------	----------------------------	---------

Stack Gas Conditions at Sample Point		Conditions of Sampling	
Stack Gas Pressure:	102.75 kPa	Nozzle Internal Diameter:	7.56 mm
Stack Gas Density:	1.051 kg/m <sup>3</sup>	Isokinetics:	99.5 %
Average Temperature:	54.8 °C	Gas Meter START Reading:	249.805 m <sup>3</sup>
Average Velocity:	8.0 m/s	Gas Meter STOP Reading:	250.793 m <sup>3</sup>
Dry Gas Volumetric Flow Rate:	8431 dsm <sup>3</sup> /hr	Gas Meter Static Pressure:	-0.15 kPa
		Gas Meter Inlet Temperature:	23.6 °C
For conditions at the sampling plane see figures 1 & 2		Dry Gas Volume Sampled:	0.926 dsm <sup>3</sup>
		Particulate Matter Collected:	116.70 mg

Gas Composition at Sample Point			
	% Dry (vol.)	% Wet (mass)	
Oxygen content <sup>#</sup> :	13.9	13.6	%
Carbon Dioxide content <sup>*</sup> :	6.4	8.6	%
Carbon Monoxide content (ppm dry) <sup>#</sup> :	71.0	0.01	%
Nitrogen content <sup>#</sup> :	79.7	68.3	%
Gas Moisture content:	14.7	9.5	%

Results		
Actual Concentration of Particulates:	126	mg/dsm <sup>3</sup>
Particulate Matter Emission Rate:	1.1	kg/hr

Notes
* CO <sub>2</sub> is calculated in accordance with M(1-O <sub>2</sub> /20.9) where M is the theoretical maximum CO <sub>2</sub> content for a given fuel when combusted with no excess air.
# These values are not measured and typical of non combustion processes
Allowable variation from isokinetic conditions is 90 to 110%
All gas volumes are expressed at 273 K and 101.325 kPa.
dsm <sup>3</sup> = dry standard cubic metre (273 K, 101.325 kPa)

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# Test 2 Summary



Site	Higgins and Sons	CRL Ref	18-32424	Date of Test	19 December 2017
------	------------------	---------	----------	--------------	------------------

Plant Description		Fuel Analysis (as received basis)	
Plant Description	Asphalt Plant	Moisture:	n/a %
Product	n/a	Ash:	n/a %
Emission Control	Wet Scrubber	Calorific Value:	n/a MJ/kg
Load	n/a	Type:	n/a
Stack Diameter:	0.720 m		

Method Details	
Measurement Standard:	USEPA Method 5: Determination of Particulate Matter Emissions From Stationary Sources which included USEPA Methods 1 - 4
Sampling Method:	Cumulative sampling
Suction Nozzle Type:	Sharp-edged stainless steel nozzle
Equipment Arrangement:	Water removal upstream of the gas meter
Particulate Drying:	Washing with Acetone, evaporating at clean ambient condition, drying in oven at 105°C
Particulate Separator:	Glass microfiber flat filter (90mm)
Leakage Tests Performed By:	BK TR

Sampling Start Time: 10:49 a.m. Total Sample Time: 60 mins Sample Time at Each Point: 10 mins

Stack Gas Conditions at Sample Point		Conditions of Sampling	
Stack Gas Pressure:	102.75 kPa	Nozzle Internal Diameter:	7.56 mm
Stack Gas Density:	1.034 kg/m <sup>3</sup>	Isokinetics:	99.7 %
Average Temperature:	58.7 °C	Gas Meter START Reading:	250.801 m <sup>3</sup>
Average Velocity:	9.4 m/s	Gas Meter STOP Reading:	251.950 m <sup>3</sup>
Dry Gas Volumetric Flow Rate:	9727 dsm <sup>3</sup> /hr	Gas Meter Static Pressure:	-0.15 kPa
		Gas Meter Inlet Temperature:	25.7 °C
For conditions at the sampling plane see figures 1 & 2		Dry Gas Volume Sampled:	1.070 dsm <sup>3</sup>
		Particulate Matter Collected:	106.60 mg

Gas Composition at Sample Point			
	% Dry (vol.)	% Wet (mass)	
Oxygen content <sup>#</sup> :	15.3	15.0	%
Carbon Dioxide content <sup>*</sup> :	5.1	6.9	%
Carbon Monoxide content (ppm dry) <sup>#</sup> :	58.0	0.00	%
Nitrogen content <sup>#</sup> :	79.6	68.5	%
Gas Moisture content:	14.8	9.6	%

Results		
Actual Concentration of Particulates:	100	mg/dsm <sup>3</sup>
Particulate Matter Emission Rate:	1.0	kg/hr

Notes	
<p>* CO<sub>2</sub> is calculated in accordance with M(1-O<sub>2</sub>/20.9) where M is the theoretical maximum CO<sub>2</sub> content for a given fuel when combusted with no excess air.</p> <p># These values are not measured and typical of non combustion processes</p> <p>Allowable variation from isokinetic conditions is 90 to 110%</p> <p>All gas volumes are expressed at 273 K and 101.325 kPa.</p> <p>dsm<sup>3</sup> = dry standard cubic metre (273 K, 101.325 kPa)</p>	

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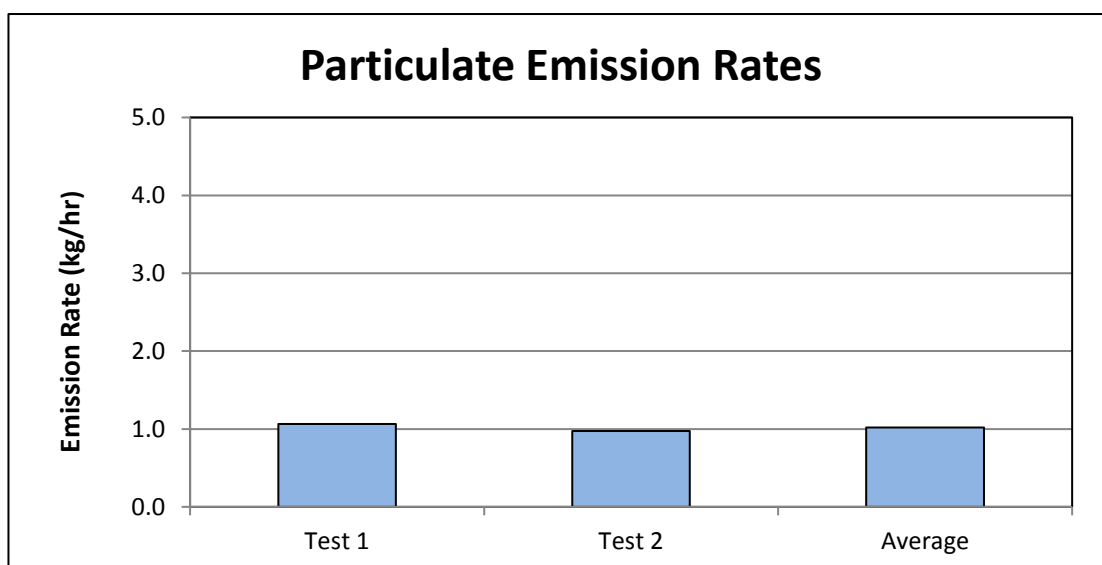
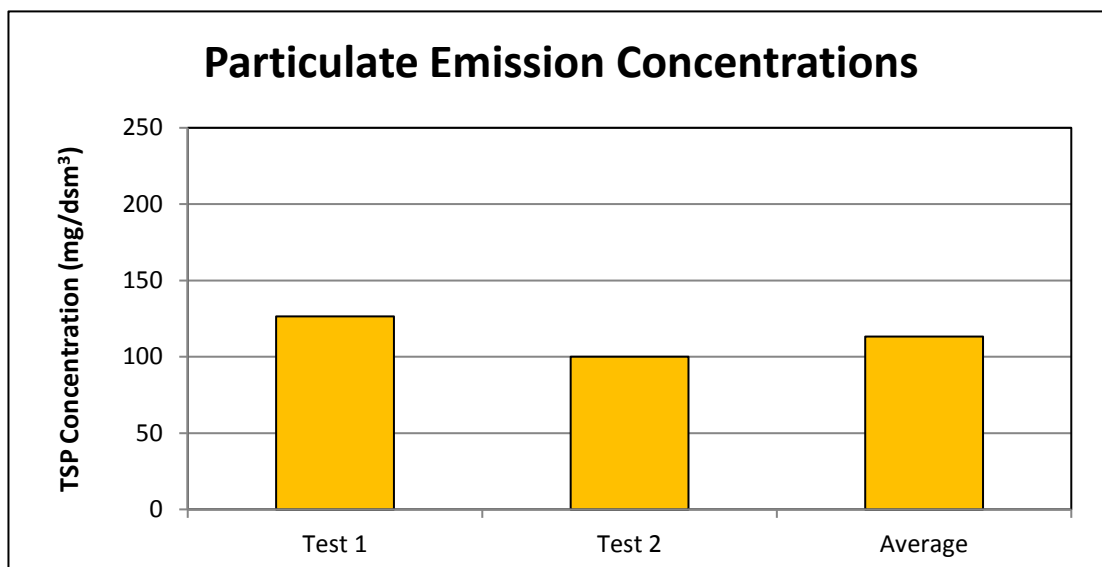


## Summary of Data

### Asphalt Plant



	Test 1	Test 2	Average	Units
Actual concentration of particulates:	126	100	113	mg/dsm <sup>3</sup>
Particulate matter emission rate:	1.1	1.0	1.0	kg/hr



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## Figures

Shape: Circular

Approximate diameters upstream from interferences (after sampling point): 8

Approximate diameters downstream from interferences (before sampling point): 6

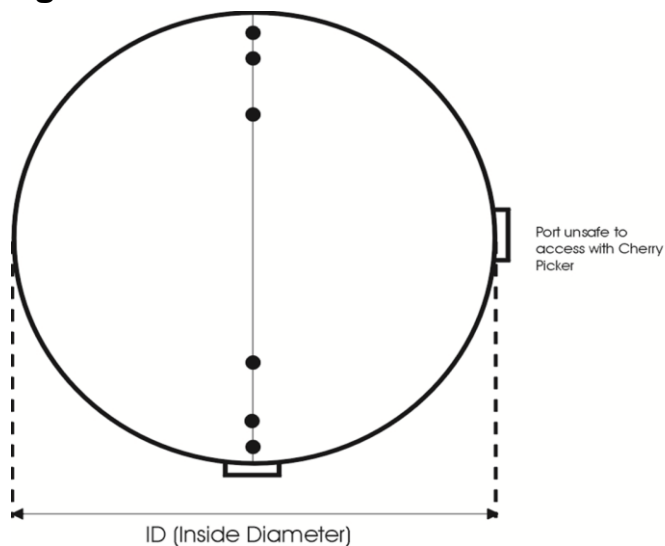
Inside Diameter (ID) of stack: 0.72m

Stack orientation is vertical

No of sampling traverses :1

Angle of gas flow <20°

### Figure 1



### Figure 2



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CRL Ref	18-32424		Site	Higgins and Sons					
Traverse Point	Time (min)	Sample Point (m)	Velocity Pressure ("WG)	Rota-meter Setting (l/min)	DGM Temp (°C)	Stack Temp (°C)	O <sub>2</sub> (%)	CO (ppm)	VAC (kPa)
1	10	0.032	0.23	18.2	25.0	58	15.4	56	-18
2	20	0.105	0.16	15.2	25.3	59	15.3	72	-22
3	30	0.213	0.12	13.2	25.7	59	15.3	55	-22
4	40	0.507	0.38	23.5	25.8	59	15.3	57	-26
5	50	0.615	0.37	23.2	25.9	59	15.2	55	-30
6	60	0.688	0.31	21.3	26.4	59	15.2	53	-30
					</				

## Appendix 2

## Supplementary Information

### Asphalt Plant

CRL Report No: 18-32424

<b>Leak Test Criteria:</b> A leak test is carried out before and after each test by blocking off the air at the inlet of the sampling train and creating a vacuum of -80-90 Kpa within the sampling train for one minute. Leakage rates in excess of 0.00057 m <sup>3</sup> /min, are unacceptable. Leak test data is found in the test sheets.			
<b>Particulate Matter Collected</b>	<b>Units</b>	<b>Test 1</b>	<b>Test 2</b>
Filter start weight	g	0.3250	0.3316
Beaker start weight	g	119.5315	112.2266
Filter & beaker stop weight (corrected to blank)	g	119.9394	112.6324
Filter gain	g	0.0829	0.0742
Nozzle and fittings wash (beaker)	g	104.4615	110.3058
Nozzle and fittings wash (beaker with residue)	g	104.4948	110.3377
Nozzle gain	g	0.0333	0.0319
Nozzle and fittings blank (beaker )	g	121.5867	121.5867
Nozzle and fittings blank (beaker with residue)	g	121.5862	121.5862
Blank gain/loss	g	-0.0005	-0.0005
<b>Gas Parameters</b>			
Stack gas density	kg/m <sup>3</sup>	1.051	1.034
Dry molecular weight	g/mol	29.576	29.428
Stack gas molecular weight	g/mol	27.879	27.742



Higgins Contractors Bay of Plenty

92 Hewletts Road

Environmental / Pollution Prevention Plan

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# ENVIRONMENTAL / POLLUTION PREVENTION PLAN





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**HIGGINS CONTRACTORS Limited**  
**Bay of Plenty**  
**92 Hewletts Road, Mt Maunganui**  
**New Zealand**  
**T: +64 7 574 4100**

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Pollution Prevention Plan Contents	
1.1	Management Responsibilities
1.2	Environmental Hazards
1.3	Aggregate and Material Stockpiles
1.4	Erosion and Sediment Control Methods
1.5	Chemicals Plant and Equipment
1.6	Environmental Contingency Plans
1.7	Reporting and corrective action
1.8	Monitoring environmental compliance
1.9	Site Specific Environmental Plan and Contact Personnel
1.10	Site Emergency Procedures Plan
1.11	Fire Fighting Procedures
1.12	Appendices
1.12.1	Environmental Policy
1.12.2	Plan of 92 Hewletts Road including SW and SS
1.12.3	Animal Farm Sediment and Erosion Control Plan

This document has been prepared by:		This document is approved by:	
 (Signed)		 (Signed)	
Name	Andrew Hollins	Name	Mike Haden
Position	Contract Manager	Position	Branch Manager
Date:	30/8/19	Date:	30-8-2019

### **Confidentiality**

Information and documentation relating to the Environmental / Pollution Prevention Plan and work practices/procedures is commercially sensitive and confidential between the Owners of 92 Hewletts Road, Mount Maunganui and the local governing authority. It is only to be used in relation to this site and is not to be divulged to third parties without the express written approval of Higgins Contractors.



## 1.1 Environmental Management Responsibilities and Scope

### Scope

This Environmental / Pollution Prevention Plan covers all aspects relating to the environment and its protection from activities carried out at 92 Hewletts Road Mount Maunganui and 9 Nature Place, Barks Corner, Tauranga (Animal Farm).

### Reference Documents

The following are relevant to the Environmental / Pollution Prevention Plan. The Branch Manager must be familiar with the contents and have access to these documents and any other relevant legislative or Worksafe guidelines that are applicable:

- ☐ Pollution Prevention Bylaw 2010
- ☐ Resource Management Act 1991
- ☐ Higgins Environmental Policy
- ☐ Higgins (BoP) Emergency Readiness Response Plan
- ☐ Higgins BOP Aspects and Impacts Register 2019
- ☐ Relevant resource consents for sites operated by Higgins BoP

## Environmental Management Responsibilities

### *Branch Manager – Mike Haden*

The Branch Manager is responsible for implementing and managing this plan and for ensuring all Higgins personnel are aware of any tasks that may represent an environmental hazard.

The Branch Manager may delegate environmental responsibility for a specific activity to other personnel at any time but will retain overall responsibility for the environmental performance of the area at 92 Hewletts Road, Mount Maunganui and Animal Farm and all personnel operating at the above addresses.

## 1.2 Environmental Hazards

- Dust
- Product storage
- Chemical spillages
- Sediment run off
- Asphalt production
- Erosion
- Mulch piles

### Types of Environmental Damage

- ☐ Sediment run off which enters waterways and smothers aquatic life, effects fish food stocks and destroys fish breeding grounds.
- ☐ Generate dust that contaminates the air and surrounding areas.
- ☐ Chemical spillages can poison waterways and soils, contaminate underground water sources and harm flora and fauna.

## 1.3 Aggregate and Materials Stockpiles

### *Purpose and Scope*

The purpose of this procedure is to provide information on set up and storage of material stockpiles so that they do not become an environmental hazard.

### *Responsibility*

The responsibility of ensuring that all Higgins activities are carried out in a manner that minimises environmental effect rests with the Branch Manager and their representatives.

### *Environmental Hazards*

- ☐ Dust from material stockpiles
- ☐ Dust generation from vehicles leaving a stockpile site
- ☐ Sediment run off from material stock piles

### *Aggregate Stockpiles*

In general, aggregate stockpiles do not pose an environmental risk because they contain only small amounts of particulate materials (ie sand and clay) that could cause dust or sediment contamination.

Aggregate stockpiles should be concentrated in the dedicated bins so as not to cause the material to be washed away. Sand and Pap materials are to be stored in a covered area as these are more susceptible to rain and washing away to the nearest drainage point.

### *Waste Material Bins*

Material not suitable for resale or structural filling is to be disposed of in the waste material bins provided in the yard. The material in these bins is also used to dewater the washed dust from the settling ponds. Bunds are formed with waste material before cleaning out the settlement ponds and placing in the bunded area to dewater.

Waste bins are to be maintained and cleared regularly.

## 1.4 Erosion and Sediment Control Methods

### **Control Methods**

The aim of the control methods is to prevent and/or minimise silt run off.

1. Limit the amount of unsealed yard at 92 Hewletts Road, Mount Maunganui. Currently approx. 90% of the yard is sealed.
2. Regular cleaning of sealed surfaces is carried out at both locations. Rotary brooming followed by use of a road sweeper is regularly carried out around the yard to keep sealed surfaces free of loose materials.
3. Bunding of waste materials is used to dewater washed dust from sediment ponds.
4. Unsealed surfaces are kept trimmed, compacted and maintained so as not to promote tracking of material onto sealed surfaces.
5. The Animal Farm has a Sediment Control Plan (Appendix Three).

### **Keeping Roads Clean**

It is important that material from the yard at 92 Hewletts Road, Mount Maunganui and the Animal Farm is not spread onto the road by vehicle tyres. To prevent this, the yard has two dedicated wash bays for use when required. This is not an identified risk at the Animal Farm.

The on-site yardman is responsible for ensuring that the wash bays are maintained and regularly cleaned.

## 1.5 Chemicals Plant and Equipment

### Purpose

The purpose of this section is to detail environmental hazards associated with chemicals and plant along with their storage at 92 Hewletts Road, Mount Maunganui. In addition, to provide contingency plans should an accident/incident occur. There are no chemicals or hazardous substances stored at the Animal Farm.

### Identified Hazards

#### Chemicals

The following chemical pose a threat to the environment if they are stored incorrectly or spillage occurs.

- ☐ **Bitumen**  
*Hazards* Spillage, Fire, Foam over, Site Run off.

Bitumen is stored on site in 2 x 20000 litre purpose-built tanks.

- ☐ **Emulsions**  
*Hazards* Spillage, Site Run Off

There is emulsion stored in 1000 litre tanks in the shed next to the main wash bay. These tanks are to sit in a bunded area so as to eliminate the risk of spillage should a tank be punctured.

- ☐ **Cement Powder**  
*Hazards* Caustic Dust

Any ready-mix concrete or cement bags should be kept undercover and on a pallet to limit the risk of damage and runoff.

- ☐ **Lime**  
*Hazards* Caustic Dust

Lime is stored at the asphalt plant in a purpose made silo that is water tight and computer controlled. There is no risk from this material becoming airborne or washed into drainage systems.

Delivery of this product is by specialized trucks with custom built closed transfer systems.

- ☐ **Diesel**  
*Hazards* Spillage, Fire

The diesel pump on site is operated by Z energy and has an in ground sealed tank. A spill kit is located adjacent to the pump should it be required. The area where the diesel pump is located drains to an interceptor designed specifically for treating hydrocarbons. This is being decommissioned in 2019.

- ☐ **Petrol and Hazardous Goods**  
*Hazards* Spillage, Fire

Petrol and Hazardous goods are stored outside the workshop in a purpose built 10-foot container designed for hazardous goods. A spill kit is in the workshop area should it be required.

- ☐ **Mulch piles at the Animal Farm**

Large mulch piles of green waste can spontaneously combust if not regularly checked. This can cause fire hazards and water runoff, of contaminants, into the stream.

Safety Data Sheets (SDS) for all products contained on site at 92 Hewletts Road, Mount Maunganui are available in electronic and hard copies with the respective workgroups. Each workgroup has their own Hazardous Inventory Register which they manage. These workgroups include; Workshop, Fuel/Yard, TCC Maintenance Shed, Chip Seal Shed and Asphalt Plant. All SDS documents are available for inspection.

#### Plant and Equipment

Heavy equipment and plant can cause environmental damage. The yard at 92 Hewletts Road, Mount Maunganui and the Animal Farm is used to park plant and equipment overnight and when not in use. Should any incident happen in either area, all staff are trained to be aware of where spill kits are located. Protection of stormwater drains is the priority after the safety of personnel is assured. This can be done using the spill kit or by using material in the yard to bund any spillage.

## 1.6 Environmental Contingency Plans

### Dust

Dust is a major environmental hazard. It can cause damage to trees and become a health hazard to affected residents. Dust blowing across live traffic lanes can also cause accidents.

Dust is controlled at 92 Hewletts Road with continued maintenance of sealed and unsealed surfaces as noted above in 1.4.

A watercart will be available to suppress any dust hazard as required from our Higgins Depot. Staff are available 24 hours per day 7 days per week.

Other Mitigation Measures:

1. Exposed stockpiles can be kept damp in windy conditions
2. Regular emptying of the waste bins will reduce the risk of airborne particles from this source.

### Spillage

The spillage of oils, bitumen, or diesel is to be considered a fire hazard and potential environmental hazard.

Cover all spills with dry crusher dust and do not allow flames within 2 metres.

Small spills should be shovelled up and disposed of according to local body requirements.

Large spills will be disposed of under the direction of the local body and or Regional Council. The Branch Manager will contact the relevant organisation and co-ordinate the disposal.

No substance may enter a stream or drainage system. A loader should be used to bund any spilled material that may enter a stream or drain. If a spilled material does enter the waterway the Branch Manager is to advise the Regional Council. All hazardous materials are bunded and stored away from waterways to limit this possibility.

In case of major hot bitumen spillage, the area is to be evacuated and emergency services notified. Responding emergency services will deal with the spill along with trained Higgins employees who have carried out a safe handling of bitumen course. Areas adjacent to drains should be bunded if possible and safe to do so to limit the potential of any spillage entering the drains.

## 1.7 Reporting, and Corrective Actions

### Purpose

The purpose of this section is to set out the requirements for reporting and correcting environmental incidents or events that have resulted in or had the potential to cause environmental damage.

### Responsibility

All Higgins employees are responsible for correcting and reporting environmental incidents.

Where it is apparent that the incident has caused or may cause major damage to the environment (for example a large diesel spill) the Branch Manager must be advised as soon as possible. The Branch Manager will be responsible for advising the Bay of Plenty Regional Council and Tauranga City Council.

### Procedures

The first priority in the event of an environmental incident is to ensure personnel and public safety, refer to section 1.5 which contains contingency plans for chemical spillages.

If it is safe to do so, actions should be taken to stop further spread of the contaminate.

All environmental incidents must be reported using the RADAR Incident Form. All Higgins employees have the required tools to report incidents which includes the use of the Roam SAI360 mobile phone application. Once reported, these incidents can be investigated by the responsible Project Manager.

Corrective actions are agreed with the Branch Manager and implemented where necessary. Feedback to all staff is provided during weekly Health and Safety Meetings/Toolboxes or at the monthly staff meeting.

## 1.8 Monitoring Environmental Compliance

The Branch Manager or their representative will complete monthly checks as a minimum for environmental compliance to BOPRC /TCC requirements.

Key areas to be checked will be bunding of material storage, maintenance of sealed and unsealed areas, stockpiling on site, maintenance of interceptor erosion prevention and checks of all site plant to eliminate any spills or leaks.

## 1.9 Site Specific Environmental Plan and Contact Personnel

Higgins Group Environmental Policy is attached below in Appendix One. The drainage site plan at 92 Hewletts Road, Mount Maunganui is attached in Appendix Two. This plan shows the location of key features on the site.

☐ Contact Details of key representatives on site are:

Joel Grason	Operations Manager	027 582 7556
Mike Haden	Branch Manager	027 664 1344
Andrew Hollins	Construction Manager	027 244 7368

## 1.10 Site Emergency Procedures Plan

### IN CASE OF EMERGENCY

**Call Emergency Services** Cell Phone **Dial 111**  
R/T Call base and get base coordinator to call emergency services

- ✓ For vehicle accidents involving injury ask for Police and Ambulance.
- ✓ If there is a threat, or there is a fire or bitumen/chemical spillage ask for Fire Brigade.
- ✓ Remember to clearly describe location of the site
- ✓ If bitumen spill or fire is involved; Quote UN No 1999 and Hazchem 2W

In all cases notify as soon as possible one of the following:

Mike Haden	Branch Manager	027 664 1344
Andrew Hollins	Construction Manager	027 244 7368
Cam Shaw	HSE Advisor	027 270 4215

### SITE FIRST AID

All Higgins employees are First Aid trained

First Aid Kits, Including Burns Cards and First Aid Manual are in all Higgins Trucks and Vans

### *EVACUATION and SITE SECURITY IN CASE OF AN EMERGENCY*

The following procedure is to be carried out in case of an accident event on site

1. Employees, Sub-contractors and public must be prevented from entering the area immediately affected by the incident.
2. Proceed to the predetermined area that is safe from the hazards.  
**The Assembly Point is located at the front and back gate to the Higgins Yard**

3. Make sure traffic control is in place and rearrange as required to prevent further incidents.
4. DO NOT move vehicles involved as movement could cause spillage or generate sparks.
5. Obey the Safety Warden
6. Do not enter the accident area, except to save lives.

## **1.11 Fire Fighting Procedures**

### **CHEMICAL FIRES                      Oil, Bitumen, Solvents**

For minor fires use extinguisher provided (trained personnel)

For major fires consider further evacuation.

Use foam, or water delivered as a fine mist, to control the fire and cool adjacent area

Do not use a water jet to fight the fire

Water must not enter containers of hot cutback bitumen.

Move people from the area. Keep upwind.

If fire gets out of control, evacuate the area and warn against entry.

#### **USE A DRY POWDER OR CO2 TYPE EXTINGUISHER ONLY**

Fire Extinguishers are located;

All Higgins Vehicles (Trucks and Vans)

Workshop

Main Office

### **ELECTRICAL FIRES**

USE A DRY POWDER OR CO2 TYPE EXTINGUISHER ONLY

DO NOT USE FIRE HOSE OR WATER

IN ALL CASES IF THE FIRE CAN NOT BE CONTAINED EVACUATE THE AREA

ALL FIRES MUST BE REPORTED TO THE BRANCH MANAGER AND INSPECTED BY THE FIRE SERVICE

### **SAFETY WARDENS DUTIES IN CASE OF AN EMERGENCY**

1. In case of an emergency, secure the site to prevent further injury. Where possible arrange first aid to the injured.
2. Notify the Emergency Services.
3. Shut down machinery and plant (only if it is safe to do so).
4. Check that the area has been cleared
5. Move staff to assembly points and check that everyone is accounted for.
6. If there are persons missing and it does not endanger life, organise a search.
7. Await the arrival of the emergency services and liaise with the officer upon their arrival.
8. When the area is safe to re-enter and give the all clear.

**Take care of Public at all times.**

## Appendix One

# HIGGINS®



## Our Environmental Policy

**Higgins is committed to minimising the impact of our operation on the environment, the sustainable use of resources and the conservation of energy.**

All Higgins team members and subcontractors are responsible for our environmental performance and working to meet our environmental objectives.

Our environmental goals are achieved by:

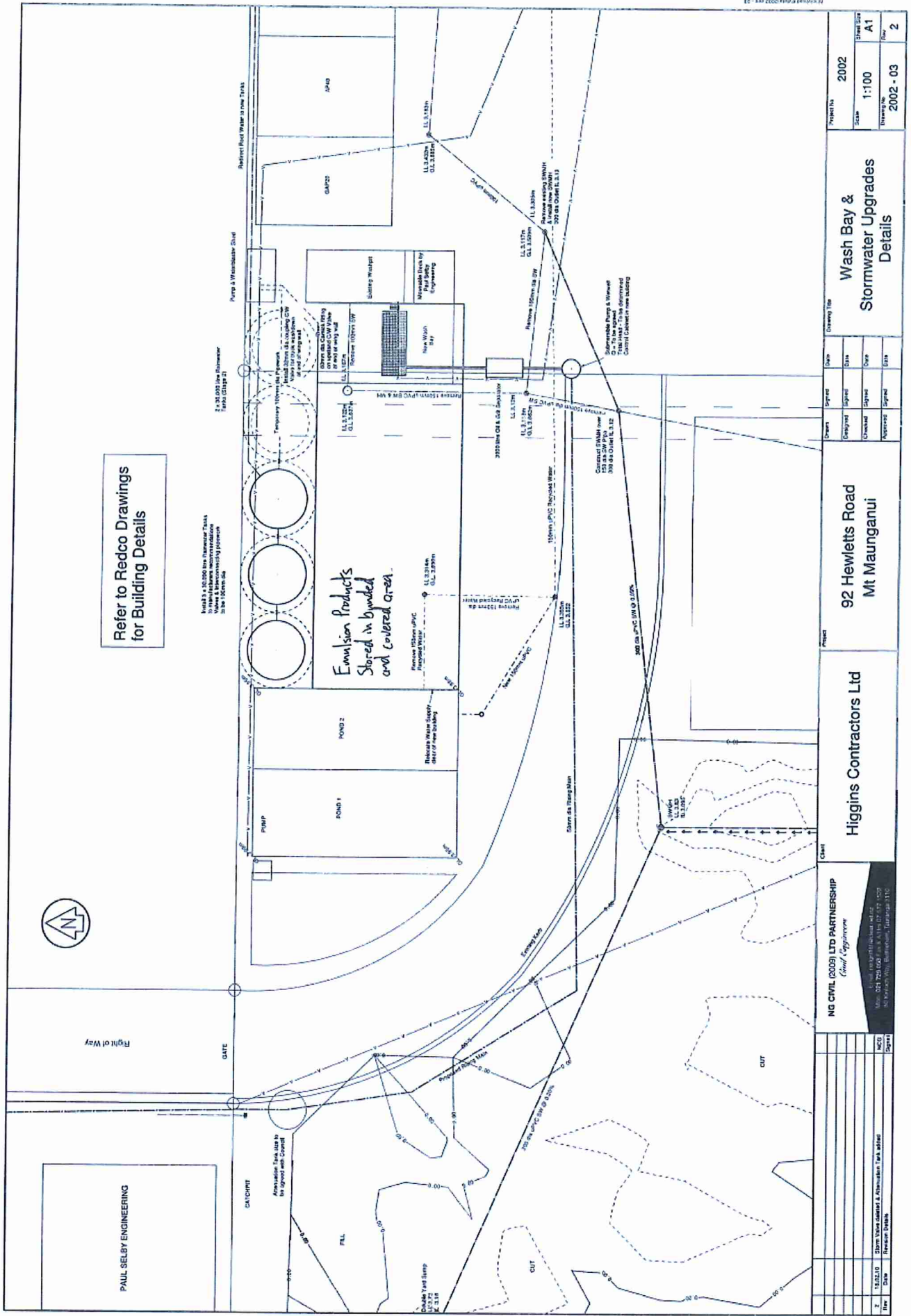
- Striving for continuous improvement in the environmental performance of our activities, products and services.
- Making a commitment to prevent pollution and minimise the impacts associated with our activities, products and services.
- Conserving energy consumption, reducing waste and using resources wisely.
- Minimising our impact on wildlife, flora and their natural habitats.
- The development and adherence to our environmental management system which covers services provided by the activities of our construction, manufacturing and permanent offices.
- Monitoring our environmental performance and auditing the effectiveness of our environmental management system.
- Complying with and exceeding, where practicable, environmental legislation and other applicable environmental requirements.
- Empowering all Higgins team members to find solutions and take action to improve the sustainability of their work.
- Providing the necessary resources, time and training to enable Higgins team members to continuously improve our environmental performance.

**Henare Clarke, General Manager**  
July, 2019











**LEGEND**

- Sloped drain (location indicative only)
- Cut off channel
- Extent of unstable fill

Marshall Avenue

Existing stream water cut off drain

Stormwater ponds location sourced from DSS

State Highway 29A

Extent of unstable filling approximately 100 ft. from center

Structural sediment retention pond contributing stormwater catchment area = 10.5 acres

Soilway Rater Data

Extent of excavation at RL 7.0m. Storage volume = 35000 m³

Existing track

Proposed maintenance track

form channel to pick up stormwater to provide outlet gate/valve and flip-rap for scour/erosion protection as required



## Appendix D

Consultation Record and Written  
Approvals





3<sup>rd</sup> February 2020

Re: Iwi/Hapu Consultation relating to the proposed construction of a new asphalt plant adjacent to 90 Hewletts Road.

To whom it may concern,

Please find below Iwi and Hapu consultation that has occurred in relation to the proposed development adjacent to 90 Hewletts Road. Specific details of each meeting have been omitted apart from key points relating to agreements or other arrangements.

**Group Name**

Waitaha Iwi

Contact name: Vivienne Robinson

Details: Sent an email requesting a meeting on the 11<sup>th</sup> of November 2019.

Response from Vivienne on the 12<sup>th</sup> of November 2019 was: "Given the location, Waitaha will support a response from Ngai Te Rangi."

**Group Name**

Ngai Te Rangi Iwi

Contact name: Pia Bennett

Details: Sent an email requesting a meeting on the 30<sup>th</sup> of October 2019.

12<sup>th</sup> of November 2019, Simon Pollard and Mike Haden met with Paora Stanley who is CEO of Ngai Te Rangi Iwi to introduce themselves and explain the new project.

Simon and Mike then met Pia Bennett of Ngai Te Rangi on the 6<sup>th</sup> of December at the Higgins Office on 92 Hewletts Road to go over the Project.

**Group Name**

Ngati Pukenga Iwi (Te Runanga o Ngati Pukenga Iwi)

Contact name: Buddy Mikaere

Details: Sent an email to Buddy requesting a meeting on the 11<sup>th</sup> of November 2019.

Met with Buddy on the 21<sup>st</sup> of November 2019 at 90 Hewletts Road and explain our proposal. Received the below response by email later that day.

“Kia ora – thanks for explaining your new plant proposal this afternoon. It was good to meet you.

As indicated earlier, the cultural concerns of Ngati Pukenga relate to discharges to air and site stormwater. It is understood that the new plant will be compliant with Regional Council requirements/standards and that independent monitoring will be put in place as is the current case. I also understand that all site stormwater will be captured and treated before discharge to the harbour.

That being the case Ngati Pukenga has no further issues with your proposal. We would appreciate a copy of the consent conditions when these become available.”

**Group Name**

Ngai Tukairangi Hapu

Contact name: Ngawa Hall

Details: Sent an email requesting a meeting on the 11<sup>th</sup> of November.

Response: No response from Ngawa Hall.

Further to our meeting with Pia Bennett of Ngai Te Rangi we asked about who we should contact at Ngai Tukairangi. Pia supplied us with Hayden Henry’s contact.

Initial contact was made with Hayden by email from Mike Haden on the 13<sup>th</sup> of December to which we received no reply.

A second follow up by Mike Haden on the 10<sup>th</sup> of January 2020 received a reply from Hayden on the same day to organise a meeting set for Wednesday the 15<sup>th</sup> of January 2020.

Wednesday 15<sup>th</sup> of January: Simon Pollard and Mike Haden met with Hayden Henry of Ngai Tukairangi and Chris Stokes of Ngati Kuku at Zone Café, Bayfair.

Hayden Henry requested that the Hapu would like to involve their own air quality consultant by the name of Julien Huteau of Ecocific. Higgins welcomed this involvement.

Julien contacted Higgins on the 16<sup>th</sup> of January and a meeting was set up for the 20<sup>th</sup> of January 2020. This meeting was held and Julian was briefed on the project.

**Group Name**

Ngati Kuku Hapu Trust

Contact name: Tio Faulkner

Details: Sent an email requesting a meeting on the 11<sup>th</sup> of November 2019.

Received no response from Tio.

Mike Haden had other landline contact names for Eddie Ngatai and Nathan James but could not contact either of these gentlemen.

Ngati Kuku Hapu was then represented by their Chairman Chris Stokes at the meeting that was held at Zone café with Ngai Tukairangi. See above under Ngai Tukairangi Hapu.

If you would like further information regarding Iwi and Hapu contact, please contact me.

Yours faithfully



Mike Haden  
Branch Manager  
Phone: 0276641344



## Regional Policy Statement

Table 11: Bay of Plenty Regional Policy Statement		
Objectives	Policies	Comments
<b>2.1 Air Quality</b>		
Objective 1: The adverse effects of odours, chemical emissions and particulates are avoided, remedied or mitigated so as to protect people and the environment.	Policy AQ 1A: Discouraging reverse sensitivity associated with odours, chemicals and particulates	The air discharges have shown to be compliant and/or below the thresholds of relevant plans, guidelines and standards. Such as the RAP, NES-AQ and NAAQGs.
	Policy AQ 2A: Managing adverse effects from the discharge of odours, chemicals, and particulates	Best practice measures will be utilised for dust suppression.
	Policy AQ 3A: Managing adverse effects of fine particulate contamination	The nearest residential zone is considered to have a sufficient set back distance (over 580 m) to mitigate any adverse effects. All effects will be managed in accordance with the consent conditions.
<b>2.3 Regionally Significant Energy and Infrastructure</b>		
Objective 6: Provide for the social, economic, cultural and environmental benefits of, and the use and development of nationally and regionally significant infrastructure and renewable energy	Policy EI 3B: Protecting nationally and regionally significant infrastructure	The asphalt plant caters for the region demand for asphalt and as discussed in section 6.1, will contribute to the region's overall resilience.



Table 11: Bay of Plenty Regional Policy Statement		
Objectives	Policies	Comments
<p>Objective 7 Provide for the appropriate management of:</p> <p>(a) any adverse environmental effects (including effects on existing lawfully established land uses) created by the development and use of infrastructure and associated resources;</p> <p>(b) any reverse sensitivity effects on established, consented or designated infrastructure.</p>	<p>Policy EI 7B: Managing the effects of infrastructure development and use</p>	<p>Section 6.0 has demonstrated that the effects of the air discharge are considered less than minor. The operation of the plant will be in accordance with the proposed consent conditions to further manage any effects (section 7.0).</p>
<b>2.5 Integrated Resource Management</b>		
<p>Objective 10: Cumulative effects of existing and new activities are appropriately managed</p>	<p>Policy IR 1B: Applying a precautionary approach to managing natural and physical resources</p>	<p>In the assessment of the effects (section 6.0) a precautionary approach has been taken to ensure all interested parties have been considered and that the operation of the plant will not result in adverse effects that are minor or greater.</p> <p>Expertise has been sought from a qualified air specialist to comprehensively assess effects, as well as consultation with BOPRC and iwi groups.</p> <p>The relevant IMPs have been reviewed and the proposed project is considered to be generally aligned to the desired outcomes of these</p>
	<p>Policy IR 5B: Assessing cumulative effects</p>	
<p>Objective 11: An integrated approach to resource management issues is adopted by resource users and decision makers</p>	<p>Policy IR 3B: Adopting an integrated approach</p>	

Table 11: Bay of Plenty Regional Policy Statement		
Objectives	Policies	Comments
Objective 12: The timely exchange, consideration of and response to relevant information by all parties with an interest in the resolution of a resource management issue.	Policy IR 4B: Using consultation in the identification and resolution of resource management issues	plans. No statutory acknowledgement areas or areas of significant indigenous habitats have been identified near or on the proposed site. Overall, the cultural effects of the replacement consent are considered less than minor.
<b>2.6 Iwi Resource Management</b>		
Objective 13: Kaitiakitanga is recognised and the principles of the Treaty of Waitangi (Te Tiriti o Waitangi) are systematically taken into account in the practice of resource management.	Policy IW 3B: Recognising the Treaty in the exercise of functions and powers under the Act	It is considered that the Treaty has been recognised through iwi consultation and consideration of effects on cultural values and IMPs.
	Policy IW 6B: Encouraging tangata whenua to identify measures to avoid, remedy or mitigate adverse cultural effects.	No recommended measures have been proposed by the iwi groups as part of the consultation that has occurred and are not considered necessary as a result of the cultural effects assessment.
	Policy IW 4B: Taking into account iwi and hapū resource management plans	The relevant iwi/hapū IMPs have been considered in section 9.4.5 and are found to be generally consistent with the proposal.
Objective 17: The mauri of water, land, air and geothermal resources is safeguarded and where it is degraded, where appropriate, it is enhanced over time.	Policy IW 5B: Adverse effects on matters of significance to Māori	Consultation was carried out with the relevant iwi groups. During consultation, no adverse effects were identified regarding the mauri of air.

Table 11: Bay of Plenty Regional Policy Statement		
Objectives	Policies	Comments
		<p>All effects associated with air (section 6.3) are considered to be less than minor.</p> <p>The relevant IMPs have been reviewed and the discharge is considered to be generally aligned to the desired outcomes of these plans. No statutory acknowledgement areas or areas of significant indigenous habitats have been identified near or on the proposed site. Overall, the cultural effects are considered less than minor.</p>
<b>2.8 Urban and Rural Growth Management</b>		
Objective 23: A compact, well designed and sustainable urban form that effectively and efficiently accommodates the region's urban growth.	Policy UG 9B: Co-ordinating new urban development with infrastructure	The asphalt plant caters for the region's asphalt demand and as discussed in section 6.1, will contribute to the region's overall resilience. Section 5.0 also details that the current air discharge location of the existing asphalt plant is the best practical option (section 4.0).
	Policy UG 10B: Rezoning and development of urban land – investment and infrastructure considerations	The asphalt plant operates within an environment that has a range of consolidated industrial environments where industrial and complementary activities are encouraged and operate in an environment with an amenity and character that results from the effects of these activities.
	Policy UG 11B: Managing the effects of subdivision, use and development on infrastructure	The plant is aligned to the industrial character of the area and has less than minor effects on the amenity of nearby residential areas.
	Policy WL 8B: Providing for regular reviews of regional council consent conditions	These are enabled through standard s128 consent conditions.

## Regional Air Plan and Plan Change 13

Table 12: Regional Air Plan and Plan Change 13		
Objectives	Policies	Comments
<b>Regional Air Plan</b>		
<b>Objective 1:</b> Maintain and protect high air quality in the Bay of Plenty region and in instances or areas where air quality is degraded, to enhance it by specifically addressing discharges into air of gases, particulates, chemicals, agrichemicals, combustion and odour.	<b>Policy 1(a):</b> Significant adverse effects of discharges of contaminants into air should be avoided.	<p>The effects from odours and chemical emissions are considered less than minor owing to: the appropriate location (existing environment) of the activity and the setback distances to the nearest residential zones.</p> <p>Taking the above into account, any potential adverse effects identified from air emissions have been avoided and/or mitigated as far as is practical. Regular monitoring in the draft consent conditions has also been proposed to ensure the plant is continuing to operate as expected.</p>
	<b>Policy 3:</b> Discharges into air of contaminants identified as hazardous air pollutants or carcinogens (Schedule 3 – Hazardous Air Pollutants) are to be avoided, or where avoidance is not possible, the quantity of discharge is to be reduced using best management practice to acceptable levels, which are relevant national or international standards or guidelines.	<p>Same as above.</p> <p>The air discharges have shown to be compliant with the thresholds of relevant plans, guidelines and standards. Such as the RAP, NES-AQ and NAAQGs.</p>
	<b>Policy 4:</b> Promotion of the use of the best practicable option approach including the efficient use of resources e.g. raw materials and energy, whenever it is the most efficient and effective means of preventing or minimising adverse effects on air quality.	<p>Section 4.0 demonstrates that the best current and practicable option has been pursued. Section 6.0 details that the adverse effects of the proposed air discharge are considered less than minor.</p>

Table 12: Regional Air Plan and Plan Change 13		
Objectives	Policies	Comments
<b>Objective 2:</b> Avoid, remedy or mitigate the adverse effects of all discharges of contaminants into air on the environment which includes the effects on: ecosystems, human health and safety, crops and livestock, amenity values, cultural values, the mauri of natural and physical resources and the global environment.	<b>Policy 1(a):</b> Significant adverse effects of discharges of contaminants into air should be avoided.	Same as above
	<b>Policy 4:</b> Promotion of the use of the best practicable option approach including the efficient use of resources e.g. raw materials and energy, whenever it is the most efficient and effective means of preventing or minimising adverse effects on air quality.	Same as above.
	<b>Policy 8:</b> Cumulative and/or synergistic effects of discharges into air are to be considered when assessing the environmental effects of activities.	The cumulative effects of the air discharge have been considered in section 6.3 and Table 5.
	<b>Policy 12:</b> Provide for the involvement of tangata whenua as kaitiaki (guardians) in the management of the mauri of air.	<p>Consultation was carried out with the relevant iwi groups. During consultation, no adverse effects were identified regarding the mauri of air.</p> <p>The relevant IMPs have been reviewed and the discharge is considered to be generally aligned to the desired outcomes of these plans. No statutory acknowledgement areas or areas of significant indigenous habitats have been identified near or on the proposed site. Overall, the cultural effects are considered less than minor.</p>

Table 12: Regional Air Plan and Plan Change 13		
Objectives	Policies	Comments
<b>Objective 3:</b> The community achieves a high level of awareness of the adverse effects on the environment of discharges of contaminants into air.	<b>Policy 8:</b> Cumulative and/or synergistic effects of discharges into air are to be considered when assessing the environmental effects of activities.	<p>Consultation was carried out with the relevant iwi groups to provide awareness of the project to relevant community stakeholders. During consultation, no adverse effects were identified regarding the mauri of air.</p> <p>All effects associated with air (section 6.3) are considered to be less than minor.</p> <p>The relevant IMPs have been reviewed and the discharge is considered to be generally aligned to the desired outcomes of these plans. No statutory acknowledgement areas or areas of significant indigenous habitats have been identified near or on the proposed site. Overall, the cultural effects are considered less than minor.</p>
	<b>Policy 12:</b> Provide for the involvement of tangata whenua as kaitiaki (guardians) in the management of the mauri of air.	

Table 12: Regional Air Plan and Plan Change 13		
Objectives	Policies	Comments
<b>Plan Change 13</b>		
<p><b>Objective AQ O1</b> Protect air from adverse effects — Te tiaki i te hau mai i ngā pānga kino</p> <p>Protection of the mauri of air and human health from adverse effects of anthropogenic contaminant discharges to air.</p> <p><b>Objective AQ O2</b> Ambient air quality — Te pai o te hau</p> <p>The region’s ambient air quality meets the National Environmental Standards for Air Quality (2004) (or its amendment or replacement).</p> <p><b>Objective AQ O2</b> Ambient air quality — Te pai o te hau</p> <p>The region’s ambient air quality meets the National Environmental Standards for Air Quality (2004) (or its amendment or replacement).</p>	<p><b>Policy AQ P1</b> Classification of activities — Te wehewehenga o ngā mahinga</p> <p>Manage the discharge of contaminants to air according to the following:</p> <ul style="list-style-type: none"> <li>(a) Provide for the discharge of contaminants to air by permitting discharges from activities where the discharge can be suitably managed with general conditions to avoid, remedy or mitigate any adverse effects of the discharge.</li> <li>(b) Classify all other discharges where (a) does not apply, as controlled, restricted discretionary, discretionary, or non-complying activities.</li> </ul> <p><b>Policy AQ P2</b> Hazardous substances — Ngā matū mōrearea</p> <p>Seek to avoid adverse effects from discharges of hazardous substances and hazardous air pollutants to air and where avoidance is not practicable, remedy or mitigate the adverse effects of the discharge using the best practicable option.</p>	<p>The effects from odours and chemical emissions are considered less than minor owing to: the appropriate location (existing environment) of the activity and the setback distances to the nearest residential zones.</p> <p>Taking the above into account, any potential adverse effects identified from air emissions have been avoided and/or mitigated as far as is practical. Regular monitoring in the draft consent conditions has also been proposed to ensure the plant is continuing to operate as expected.</p>

Table 12: Regional Air Plan and Plan Change 13		
Objectives	Policies	Comments
	<p><b>Policy AQ P3</b> Management of discharges — Te whakahaere i ngā tukunga</p> <p>Activities that discharge contaminants to air must be managed, including by use of the best practicable option, to:</p> <ul style="list-style-type: none"> <li>(a) safeguard the life supporting capacity of the air, protect human health, and avoid, remedy or mitigate adverse effects on cultural values, amenity values, and the environment</li> <li>(b) avoid the discharge of contaminants at a rate or volume that may cause an exceedance or breach of the ambient air quality standards of the National Environmental Standards for Air Quality (or its replacement or amendment).</li> <li>(c) avoid reduction in visibility where it may cause adverse effects on vehicle, aircraft, or ship safety</li> <li>(d) avoid, remedy or mitigate the discharge of contaminants that may cause adverse effects on regionally significant infrastructure/industry</li> </ul>	<p>The air discharges have shown to be compliant with the thresholds of relevant plans, guidelines and standards. Such as the RAP, NES-AQ and NAAQGs.</p> <p>The effects from odours and chemical emissions are considered less than minor owing to: the appropriate location (existing environment) of the activity and the setback distances to the nearest residential zones.</p> <p>Any effects associated with the air discharge will be managed in accordance with the consent conditions.</p>



Table 12: Regional Air Plan and Plan Change 13		
Objectives	Policies	Comments
	<p><b>Policy AQ P4</b> Matters to consider — Ngā take hei whiriwhiri</p> <p>Have particular regard to the following matters when considering the acceptability of any discharge of contaminants to air:</p> <ul style="list-style-type: none"> <li>(a) The proximity of sensitive areas to the discharge including the effect of new activities discharging contaminants into air near established sensitive areas.</li> <li>(b) Areas where the discharge may cause an exceedance or breach of the ambient air quality standards of the National Environmental Standards for Air Quality or exceed the Health-based Guideline Values in Table 1 of the Ambient Air Quality Guidelines (or their replacements or amendments).</li> <li>(c) Adverse effects on air quality values identified in the relevant iwi and hapū resource management plans during assessments of resource consent applications.</li> <li>(d) The effect of the prevailing weather conditions, including rainfall, wind speed and wind direction.</li> <li>(e) The effect of the discharge on human health, cultural values, amenity values, the environment, and regionally significant infrastructure.</li> <li>(f) Cumulative effects.</li> </ul>	<p>There are no nearby sensitive receiving environments.</p> <p>There are no areas identified by IMPs that could be affected.</p> <p>Weather conditions have been assessed as part of this assessment.</p> <p>There will be no net increase of particulates.</p> <p>The existing air treatment system has been sufficient to minimise effects over the course of the existing consent.</p>

Table 12: Regional Air Plan and Plan Change 13		
Objectives	Policies	Comments
	<ul style="list-style-type: none"> <li>(g) Whether a change to an activity expressly allowed by an existing resource consent will cause a net increase of particulates into an airshed in breach of the ambient air quality standard for particulates of the National Environmental Standards for Air Quality.</li> <li>(h) The operational requirements and locational constraints relevant to the discharge and/or activity.</li> <li>(i) Any other recognised air quality guidelines or standards (not listed) that are appropriate to the discharge.</li> <li>(j) The FIDOL factors (frequency, intensity, duration, offensiveness, location) when determining adverse effects in relation to odour and dust discharges.</li> <li>(k) The investment of existing infrastructure that mitigates adverse effects of discharges of contaminants to air.</li> </ul>	