



Recommendation and decision on notification of resource consent application(s) under sections 95-95G of the Resource Management Act 1991 (RMA)

Summary

I recommend the application is processed on a publicly notified basis. This is because:

- I consider that the adverse effects on the environment will be more than minor, because:
 - The existing coal-fired boiler emissions, cumulatively with background concentrations, may exceed WHO guidelines that are designed to protect health for ground level concentrations of fine, inhalable particulate (PM_{2.5})
 - Odour effects beyond the boundary are assessed by the applicant's technical advisor and our reviewer as being more than minor

I acknowledge that the applicant is proposing improvements. However, as the air quality effect is in a township and has impacts at residential dwellings, and because the air quality impacts are both difficult for people to avoid and may affect their health, I consider that the adverse effects are more than minor. Therefore the application should be publicly notified in accordance with s95A of the Resource Management Act.

The application

Particulars

Applicant:	Alliance Group Limited
Application reference:	APP-20202357
Site address or location:	18-30 McQueen Avenue & 50 Selbourne Street, Maitava
New consent(s) for new activity(ies) (s88)	<input type="checkbox"/>
New consent(s) for existing activity(ies) (s88)	<input checked="" type="checkbox"/>
Change to conditions of existing consent(s) (s127)	<input type="checkbox"/>

The proposal

Alliance Group Limited has applied for a resource consent to discharge contaminants and odour to air from its meat processing plant at Maitava. The plant is a beef animal facility.

The plant has three operational coal or lignite-fired boilers (9.4MW main boiler, 0.923 MW hide plant boiler and 0.16 MW office boiler), and a back-up coal-fired 3.8MW boiler. The hide plant boiler stack is sited approximately 2 km northeast of the main plant boiler stack. Key combustion contaminant emissions are fine particulate (PM₁₀ and PM_{2.5}), sulphur dioxide (SO₂) and nitrogen dioxide (NO₂).

The applicant proposes to upgrade the main boiler within three years, either installing a bag-house filter or replacing the boiler with a new biomass-fired boiler.

The key sources of odour emissions from the plant are associated with the waste systems, such as decanting of wastewater treatment solids, storage and disturbance of compostable solids, and storage and load-out of renderable solids (rendering occurs at the Lorneville site). A series of modifications are proposed as mitigation.

The emission of contaminants to air from the meat processing plant is a **discretionary activity** under Rule 5.5.2 of the Regional Air Plan.

Public notification consideration

1. Is notification mandatory?

1.1	Has the applicant requested that the application be publicly notified? (s95(3)(a))	<input type="checkbox"/> Yes	Application must be publicly notified. Go to 10.2
		<input checked="" type="checkbox"/> No	Go to 1.2
1.2	Was further information, or commissioning of a report, requested under s92?	<input checked="" type="checkbox"/> Yes	Go to 1.3
		<input type="checkbox"/> No	Go to step 2.1
1.3	If yes, was the request refused, or did the applicant fail to respond or fail to provide the information by the deadline?	<input type="checkbox"/> Yes	Public notification is required by s95C. Go to 10.2
		<input checked="" type="checkbox"/> No	Go to step 2.1

2. Is notification precluded?

2.1	Is each activity subject to a rule or NES that precludes public notification?	<input type="checkbox"/> Yes	Rule(s): enter rule Go to 4.1
		<input checked="" type="checkbox"/> No	Go to step 2.2
2.2	Is each activity a controlled activity?	<input type="checkbox"/> Yes	Application must not be publically notified unless there are special circumstances. Go to 4.1
		<input checked="" type="checkbox"/> No	Go to 2.3
2.3	Is each activity a residential activity <u>and</u> a discretionary activity or a restricted discretionary activity?	<input type="checkbox"/> Yes	Application must not be publically notified unless there are special circumstances. Go to 4.1
		<input checked="" type="checkbox"/> No	Got to 3.1

3. Is notification required?

3.1	Are any of the activities subject to a rule or NES that requires notification?	<input type="checkbox"/> Yes	Application must be publicly notified. Go to 10.2
		<input checked="" type="checkbox"/> No	Go to 3.2
3.2	Will the activity have, or is it likely to have, adverse effects on the environment that are more than minor? (see Note)	<input checked="" type="checkbox"/> Yes	Application must be publicly notified. Complete 3.3 and go to 10.2
		<input type="checkbox"/> No	Complete 3.3 and go to 4.1.

Note: In forming this opinion (a) to (e) apply:

- (a) we must disregard any effects on persons who own or occupy the land on which the activity will occur or any land adjacent to that land (section 95D(a));

- (b) we may disregard an adverse effect of the activity if a rule or NES permits an activity with that effect (subject to Policy 36 of the pSWLP) (95D(b));
- (c) in the case of a restricted discretionary activity, we must disregard any adverse effects that do not relate to the matters over which the rule or NES restricts discretion (95D(c));
- (d) we must disregard trade competition and the effects of trade competition - 95D(d); and
- (e) we must disregard any effect on a person who has given written approval - 95D(e)

3.3 Reasons adverse effects on the environment are more than minor

The existing environment

The applicant’s plant is sited on the right (west bank) of the Mataura River at Mataura township. There is an industrial site (a former paper mill) on the opposite bank, but otherwise the surrounding land use is largely residential or commercial. State Highway 1 and the Main South railway line run along the western side of the applicant’s property.

The township contains 747 dwellings and has a population of 1,629 people. The nearest dwellings to the applicant’s plant are 110 m to the west, 200 m to the south and 300 m north east. Due to the proximity of residences, the surrounding area is sensitive to emissions to air from applicant’s plant.

The Mataura River is a statutory acknowledgement area under the Ngāi Tahu Claims Settlement Act, which means that there is an acknowledged traditional, historic, cultural and spiritual association with the river for Ngāi Tahu. The Mataura Falls, adjacent to the plant, had a local significance, particularly for mahinga kai and is part of a Mataitai Reserve¹

The topography of the area is flat to the west, with a higher terrace on the opposite side of the river to the east.

The following chart indicates wind strength and direction in Mataura:

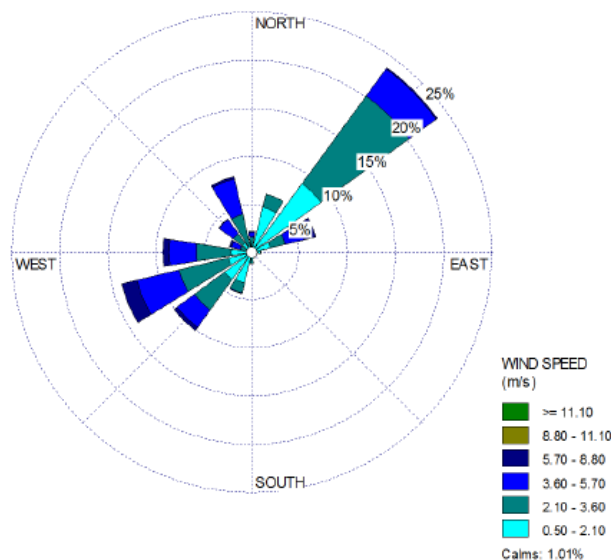
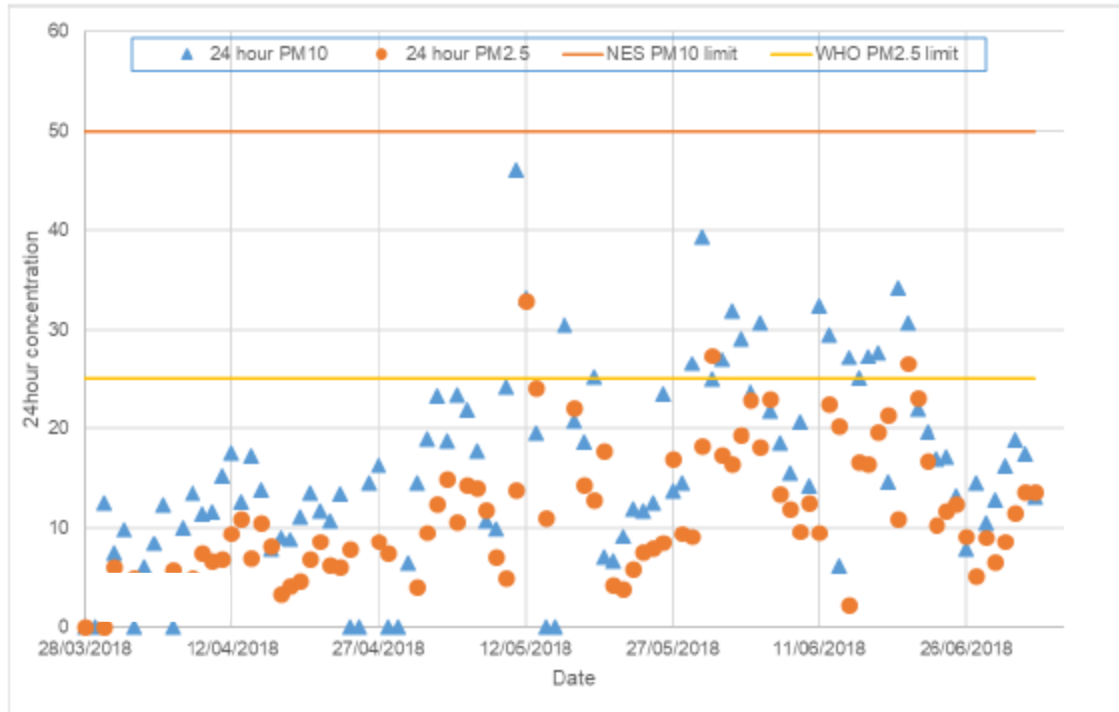


Figure 3: Mataura wind rose (April – July 2018).

¹ Mataitai reserves are areas where the tangata whenua manage all non-commercial fishing by making bylaws. The bylaws must apply equally to all individuals. mataitai reserves may only be applied for over traditional fishing grounds and must be areas of special significance to the tangata whenua. Generally there is no commercial fishing within mataitai reserves. Source: <https://www.gdc.govt.nz/assets/Files/Freshwater-Plan/R13-MFish-FAQ-mataitai-105.pdf>

There are elevated concentrations of inhalable fine particulate in air in the Mataura township. The ambient PM₁₀ concentrations comply with the National Environmental Standards, but the very fine particulate PM_{2.5} concentrations sometimes breach the World Health Organisation guidelines. Concentrations tend to be higher on cold, calm winter days, and this is likely to be associated with home heating emissions.



Southern Boundary Monitoring station 24-hour average PM₁₀ and PM_{2.5} concentrations.

Ambient concentrations of sulphur dioxide (SO₂) in the township are estimated to be as follows:

- 120 µg/m³, 1-hour average
- 30 µg/m³, 24-hour average
- 5 µg/m³, annual average

Background concentrations of nitrogen dioxide (NO₂) in the township are estimated as:

- 58 µg/m³, 1-hour average
- 38 µg/m³, 24-hour average
- 13 µg/m³, annual average

Adverse effects of the proposed activities on the environment

Combustion emissions

Existing coal-fired boilers

The applicant has modelled the effect of contaminant emissions from the plant. The following plots from the application show the PM₁₀ and PM_{2.5} 24-hour average ground level concentrations as a result of the coal-fired boiler emissions. Please note that these do not include background concentrations.

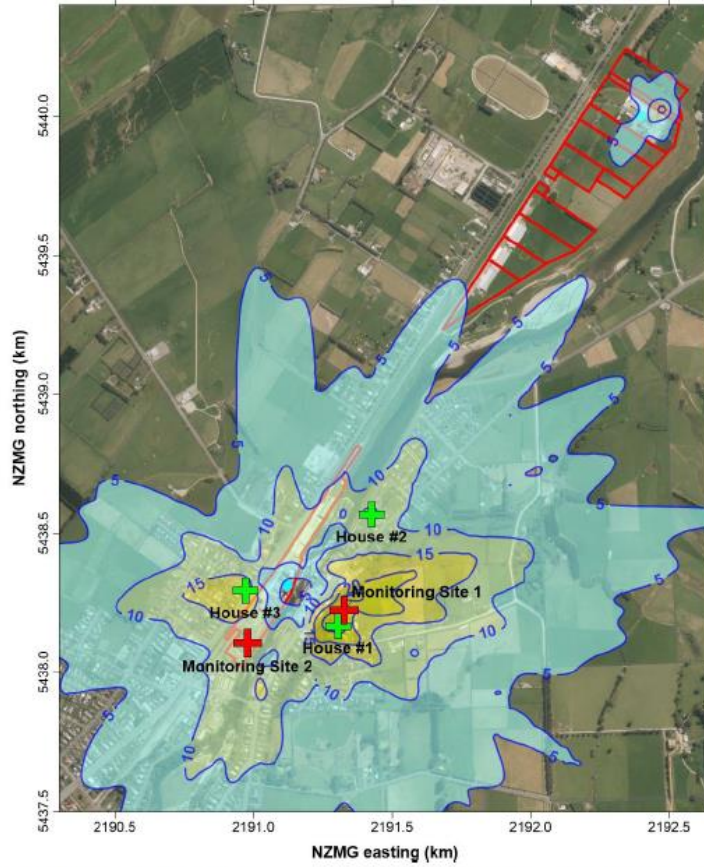


Figure 8: Predicted maximum 24-hour average PM₁₀ ground level concentrations (µg/m³), excluding background concentrations. CFB 2 at 64% MCR, CFB 3 at 40 % MCR.

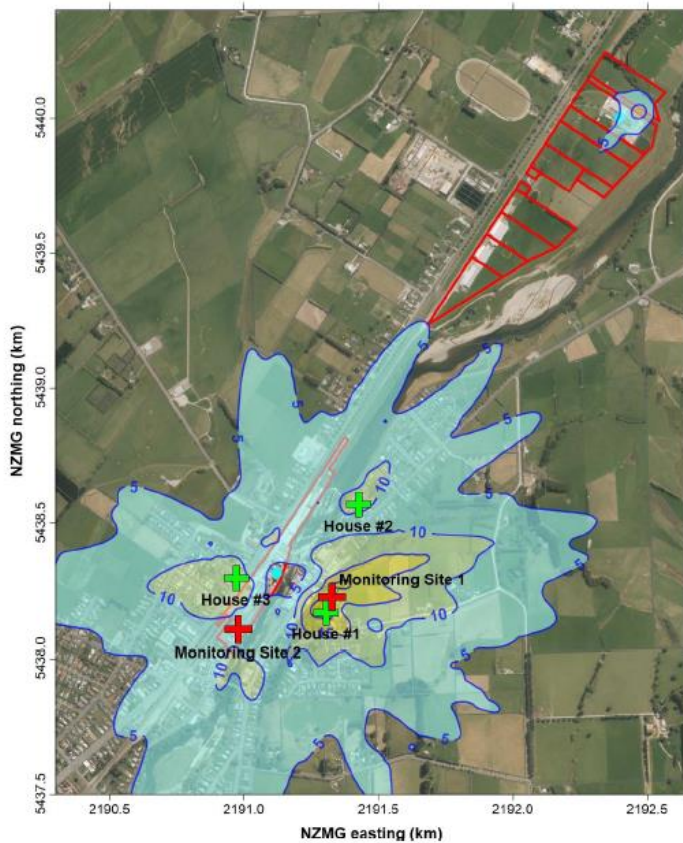


Figure 10: Predicted maximum 24-hour average PM_{2.5} ground level concentrations (µg/m³), excluding background concentrations. CFB 2 at 64% MCR, CFB 3 at 40 % MCR.

Based on modelling, the cumulative effect of the background air quality and the emissions from the applicant's existing coal-fired boilers will result in 24-hour and annual concentrations of inhalable particulate (PM₁₀ and PM_{2.5}) that approach or exceed health-based guidelines and standards. The maximum cumulative ambient concentrations offsite are expected to be at the southern boundary of the applicant's site:

44 µg/m³ 24-hour average PM₁₀ concentration (88% of the NES-Air Quality)
15 µg/m³ annual average PM₁₀ concentration (75% of the Ambient Air Quality Guidelines)
32 µg/m³ 24-hour average PM_{2.5} concentration (**128%** of the WHO guidelines)
9 µg/m³ annual average PM_{2.5} concentration (90% of the WHO guidelines)

The fine particulate concentrations at the most affected dwelling ('House 1') may be up to:

42 µg/m³ 24-hour average PM₁₀ concentration (84% of the NES-Air Quality)
31 µg/m³ 24-hour average PM_{2.5} concentration (**124%** of the WHO guidelines)

Predicted sulphur dioxide and nitrogen dioxide cumulative concentrations comply with the NES-Air Quality and Ambient Air Quality Guidelines. The effect of sulphur dioxide and nitrogen dioxide emissions on human health, animals and vegetation should therefore be no more than minor.

Coal-fired boiler with baghouse filtration

Appendix B of the application is a report by Golder Associates that models the effects of the two future options for the main boiler: coal-fired boiler with a baghouse filter and biomass-fired boiler.

Modelling indicates that the cumulative effect of the discharge from the coal-fired boiler with a baghouse filter and background concentrations at the southern boundary of the applicant's site may be up to:

15 µg/m³ 24-hour average PM₁₀ concentration (30% of the NES-Air Quality)
12 µg/m³ annual average PM₁₀ concentration (60% of the Ambient Air Quality Guidelines)
9 µg/m³ 24-hour average PM_{2.5} concentration (36% of the WHO guidelines)
7 µg/m³ annual average PM_{2.5} concentration (70% of the WHO guidelines)

The fine particulate concentrations at 'House 1' may be up to:

16 µg/m³ 24-hour average PM₁₀ concentration (32% of the NES-Air Quality)
10 µg/m³ 24-hour average PM_{2.5} concentration (40% of the WHO guidelines)

Biomass-fired boiler

Modelling indicates that the cumulative effect of the discharge from the biomass-fired boiler and background concentrations at the southern boundary of the applicant's site may be up to:

15 µg/m³ 24-hour average PM₁₀ concentration (30% of the NES-Air Quality)
12 µg/m³ annual average PM₁₀ concentration (60% of the Ambient Air Quality Guidelines)
9 µg/m³ 24-hour average PM_{2.5} concentration (36% of the WHO guidelines)
7 µg/m³ annual average PM_{2.5} concentration (70% of the WHO guidelines)

The fine particulate concentrations at 'House 1' may be up to:

17 µg/m³ 24-hour average PM₁₀ concentration (34% of the NES-Air Quality)
11 µg/m³ 24-hour average PM_{2.5} concentration (44% of the WHO guidelines)

Odour emissions

Appendix C of the application is a report by Golder Associates (NZ) Ltd to assess odour emissions from the site and their effects on the environment.

The report refers to a “sharp DAF solids” odour from the discharge of centrate from the decanter to the wastewater drain, and that the odour was recognisable at the southern boundary of the site. DAF is “dissolved air filtration”, which is part of the wastewater treatment process.

Screened solids from the wastewater system are stored for a week or more, then augered into a truck for transfer to an offsite composting facility. The report indicates that this may result in strong odour emissions.

The renderable by-products loadout bin also has the potential to cause “unpleasant” odours.

The Golder Associates report stated that adverse effects on the environment due to odour emissions beyond the site boundary “may still be more than minor”.

The report included recommendations for mitigations, such as reducing storage times for the compostable solids and concluded that, with suitable mitigations, offsite odour effects would be minor.

Technical review

We obtained a technical review of the applicant’s AEE from John Iseli of Specialist Environmental Services Ltd. Mr Iseli largely agrees with the air quality assessment that Golder Associates (NZ) Ltd provided for the applicant, but he was not as confident that the proposed odour mitigations would be less than minor, but thought that they may reduce odour to an acceptable level.

Mr Iseli considers that the existing boiler makes a significant contribution to ground level concentrations of PM₁₀ and PM_{2.5} in the township. The proposed future options (either coal-fired boiler with baghouse filter or biomass-fired boiler) will significantly reduce PM₁₀ and PM_{2.5} concentrations. Given the significance of the PM_{2.5} exceedance of the WHO guideline, Mr Iseli considers that a shorter timeframe for upgrading the boiler plant may be appropriate.

Adverse effects that have been disregarded

The effects of emissions on climate change have been disregarded in accordance with s104E of the Resource Management Act.

Planning provisions (policies and objectives) relevant to adverse effects

The following policies assist with determining the degree of adverse effects on the environment or to assist in the identification of affected persons. I have included policies from Regional Policy Statement because it is more recent than the Regional Air Plan provisions.

Regional Air Plan:

- Policy 5.3.1 Protect the environment from adverse effects from the discharge of contaminants into air from industrial or trade premises.
- Policy 5.3.2 Require the upgrading or change in process of existing industrial and trade processes where they are having significant adverse effects on ambient air quality.
- Policy 5.3.5 Recognise Maori cultural and traditional values with regard to the air environment and ensure that these are taken into account with regard to discharges to air from industrial or trade premises.

Regional Policy Statement:

- Policy AQ.1 Avoid, remedy or mitigate the adverse effects of discharges of contaminants to air on human health, cultural and amenity values and the environment.

Te Tangi a Taurira

- Policy 3.2.1.3 Encourage existing activities that emit contaminants to air to evaluate, and where practical implement new technologies to reduce adverse effects on air quality
- Policy 3.2.1.9 Discourage and prevent discharges to air that will have impacts on cultural well-being and community health
- Policy 3.2.1.10 Ensure that discharges of contaminants into the air such as dust, smoke and odour do not affect the amenity values of areas which are of cultural and historical significance to iwi.
- Policy 3.2.1.12 Engage Ngāi Tahu ki Murihiku early in the consenting and permitting process for activities whereby there is discharge to air, particularly..... activities causing offensive odours. Discharges must not cause objectionable or offensive odour to the extent that it causes adverse effects beyond the boundaries of the consent holder's property.
- Policy 3.2.1.13 Advocate for robust consent conditions with a maximum twenty-five years. Changes to consent conditions must be notified to affected parties and all consent conditions monitored routinely

Comment

Policy 5.3.1 of the Regional Air Plan is worded strongly, in that the environment must be "protected" from adverse effects from emissions from industrial and trade premises. The explanation to the policy states that the consent authority "*must ensure that conditions on consents for discharges of contaminants into air allow time for upgrades where necessary, but do not put the health of the public or environment at risk.*"

Policies 3.2.1.3, 3.2.1.9 and 3.2.1.12 of Te Tangi a Taurira provide direction to improve existing discharges, prevent impacts on community health and not cause offensive or objectionable odour. The existing situation is inconsistent with Policy 3.2.1.9 and the second sentence of Policy 3.2.1.12, although the proposed improvements comply with Policy 3.2.1.3.

The applicant is seeking a 35-year consent period, which is inconsistent with Policy 3.2.1.13. However I note that the applicant has carried out consultation with Hokonui Runanga, which is consistent with the first part of Policy 3.2.1.12

With regard to Policy 5.3.5 of the Regional Air Plan, Ngāi Tahu has an acknowledged historic, traditional, cultural and spiritual association with the Maitai River, and the mataitai reserve indicates that the area is of special significance to the tangata whenua. The modelling indicates that fine particulate concentrations in the Falls area will be elevated, although not as high as other locations.

I have not listed Policy 4.3.1 of the Regional Air Plan above because it refers to the 1994 ambient air quality guidelines which have been superseded.

Conclusion: significance of adverse effects on the environment

I consider that the ground level concentrations of PM_{2.5} beyond the site boundary due to emissions from the current boiler cumulatively with background concentrations, and the effect of odour emissions beyond the boundary, are more than minor effects on the environment.

The WHO guidelines for PM_{2.5} is designed to protect human health, and the application indicates that there will be exceedances at one dwelling at least. I acknowledge that the applicant is proposing to implement upgrades that will address these effects, but the boiler upgrades may take up to three years. Even considering the proposal as a whole, I consider that is a more than minor adverse effect, given that it would be difficult for the public to avoid exposure to the air quality effect.

I note that Golder Associates (NZ) Ltd assessed the existing odour effect as possibly more than minor, but recommended mitigations that should greatly reduce the effect beyond the site boundaries. So, like the combustion emissions, the adverse effect is more than minor in the short term, the effect is difficult for the residences that are impacted to avoid, but there is proposed improvement. The speed of that improvement is unclear, but the site visit showed that some mitigations are already underway. Due to the interim effects, I consider that the adverse effects are more than minor.

I also note that the emissions affect an area that includes an area of significance to the tangata whenua, as indicated by the statutory acknowledgement area and the mataitai reserve, and that the proposed 35-year term is inconsistent with both Policy 3.2.1.13 of Te Tangi a Taurira and the preference indicated by Hokonui Runanga during consultation.

4. Special circumstances and public notification

4.1 Do special circumstances exist in relation to the application that warrant the application being publicly notified?	<input type="checkbox"/> Yes	Application must be publicly notified. Explain reasons in 4.2 and go to 10.2
	<input checked="" type="checkbox"/> No	Explain reasons in 4.2. If each activity is a controlled activity go to 10.1. Otherwise go to 5.1

4.2 Reasons why special circumstances do or do not exist

I have not identified any special circumstances that warrant notification in this instance.

Affected Parties and Limited Notification

5. Protected Customary Rights Group or Customary Marine Title group

5.1 Is the activity in the coastal environment, within an area where it may adversely affect a protected customary rights group(s) or a customary marine title group(s) (see s95G)?	<input type="checkbox"/> Yes	Go to 5.2
	<input checked="" type="checkbox"/> No	Go to 6.1
5.2 May the activity have adverse effects on a protected customary right carried out in accordance with the requirements of Part 3 of the Marine and Coastal Area (Takutai Moana) Act 2011?	<input type="checkbox"/> Yes	The customary rights group(s) is an affected customary rights group(s). Application must be limited notified on them. Record in 5.3 and go to 6.1
	<input checked="" type="checkbox"/> No	Go to 6.1

5.3 Adversely affect a protected customary rights group(s) or a customary marine title group(s):

List the parties

6. Statutory Acknowledgement Areas

6.1 Is the activity on or adjacent to, or may it affect, a statutory acknowledgement area?	<input checked="" type="checkbox"/> Yes	Go to 6.2
	<input type="checkbox"/> No	Go to 7.1
6.2 Are the adverse effects on Te Rūnanga o Ngāi Tahu minor or more than minor?	<input checked="" type="checkbox"/> Yes	Include TRONT in 8.2 and go to 6.3
	<input type="checkbox"/> No	Go to 6.3

6.3 Reasons why adverse effects on Te Rūnanga o Ngāi Tahu are less than minor, minor or more than minor:

The emissions affect an area that includes an area of significance to the tangata whenua, as indicated by the statutory acknowledgement area and the mataitai reserve, and that the proposed 35-year term is inconsistent with both Policy 3.2.1.13 of Te Tangi a Taurira.

7. Is limited notification precluded?

7.1 Is each activity subject to a rule, NES or regulation that precludes limited notification?	<input type="checkbox"/> Yes	Go to 9.1
	<input checked="" type="checkbox"/> No	Go to 8.1

8. Are any people adversely affected?

- | | | |
|--|---|-----------|
| 8.1 Are the adverse effects on a person minor or more than minor (but not less than minor)? | <input checked="" type="checkbox"/> Yes | Go to 8.2 |
| | <input type="checkbox"/> No | Go to 8.3 |

8.2 Person(s) considered to be adversely affected (complete and go to 8.3)

Person	Effect on person
Hokonui Runanga Inc	Effects on cultural and spiritual values, and ability to exercise kaitiakitanga.
Te Rūnanga o Ngāi Tahu	Effects on cultural and spiritual values, and ability to exercise kaitiakitanga.
Public Health South	Effects on public health due to odour and particulate emissions
Gore District Council	Environmental health effects due to odour and particulate emissions.
Mataura Community Board	The discharges to air affect the Mataura township community.
The residents in the predicted peak ground level concentration and odour effect areas	The discharges affect air quality at and around their dwellings

Note: In forming this opinion (a) to (c) apply:

- We may disregard an adverse effect of the activity on the person if a rule or an NES permits an activity with that effect; and
- We must, if the activity is a controlled activity or a restricted discretionary activity, disregard an adverse effect of the activity on the person if the effect does not relate to a matter for which a rule or a national environmental standard reserves control or restricts discretion; and
- Must have regard to every relevant statutory acknowledgement made in accordance with an Act specified in Schedule 11.

9. Special Circumstances – Limited Notification

- | | | |
|--|--|---|
| 9.1 Are there special circumstances that warrant limited notification of any other persons? | <input type="checkbox"/> Yes | Application must be limited notified to those persons and any other affected persons. Go to 9.2 |
| | <input checked="" type="checkbox"/> No | Go to 10 |

9.2 Reasons special circumstances exist and persons to be notified

List and explain

Recommendation and decision

10. Officer's recommendation

- | | |
|---|-------------------------------------|
| 10.1 The application be processed non-notified | <input type="checkbox"/> |
| 10.2 Public notification is required/recommended | <input checked="" type="checkbox"/> |

10.3	The application be placed on hold while the applicant tries to obtain written approvals from the affected persons	<input type="checkbox"/>
10.4	Limited notification is required. Persons to be served notice are those listed in 8.2	<input type="checkbox"/>



Stephen West
Principal Consents Officer

Date: 26 November 2020

Decision under Delegated Authority

11.1	I agree with the recommendation	<input checked="" type="checkbox"/>
11.2	The application will be processed non-notified	<input type="checkbox"/>
11.3	The application will be publicly notified	<input checked="" type="checkbox"/>
11.4	The application shall be placed on hold while the applicant tries to obtain written approvals from the affected persons	<input type="checkbox"/>
11.5	The application will be limited notified. The parties to be served notice are those listed in section 8.2	<input type="checkbox"/>

This decision is made under delegated authority by:



Aurora Grant
Consents Manager

Date: 1 December 2020