

Under the Fast-track Approvals Act 2024 (FTAA)

And

In the matter of the Central and Southern Block Mining Project (FTAA-2512-1153)

JOINT WITNESS STATEMENT (JWS) IN RELATION TO:

Air Quality

21 September 2026

Conferencing Held on: 15 September 2026, 8:00 am to 9:30 am and 10:30 am to 11:30 am, adjourned for further discussions. JWS subsequently completed by way of correspondence between the parties on 18 September 2026.

Venue: Via AVL.

1. Agreed questions and scope of the JWS:

- 1.1 The Expert Panel directed the experts to confer and advise on questions concerning air quality. These questions are set out in Appendix A to Minute 24 of the Expert Panel dated 20 August 2026 as Request for Further Information (RFI) 9 and 10, and as follows:

RFI 9 [New]: Air Permit	The Panel considers that an air discharge permit is needed and requests the Applicant to draft air permit conditions utilising the air related conditions currently inserted to AUTH 01.01 (Conditions 8-16). Applicant also to consider the need for other air related conditions in the consent suite (e.g. AUTH 08.01 and Schedule 1) to be transferred to the air permit. As a general point, at the PFC the Panel expressed a preference for consent conditions to address the “what” (is required) with the “how” to be left to management plans to improve clarity, certainty and enforceability of consents. The air quality experts agreed to confer and advise on good practice consent conditions (as recommended by Mr Stacey for WRC) for dust management (with suggested updates for the dust management plan in chapter 6 of the Environmental Management Plan in Appendix T of the Substantive Application) (refer also next item).
RFI 10 [New]: Air Permit	The Panel requests the air quality experts confer and advise on: 1. Good practice conditions of consent for managing dust (as recommended by Mr Stacey refer previous point) in the new air permit. 2. The Panel further requests draft consent conditions requiring an action plan with specific actions to be undertaken to reduce overall site PM₁₀ emissions (e.g., xx ha of stabilisation/rehabilitation of

	existing exposed areas by <i>insert date</i>) if elevated <u>annual</u> PM ₁₀ concentrations are measured at Te Kura o Taharoa.
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2. **Attendance**

- 2.1 A list of participants, the party they represent, their expertise, and confirmation of the matters set out in paragraphs 3-5, is included in the table at the end of this JWS.
- 2.2 Aimee Harris (MERW) acted as a scribe and assisted the experts to draft the JWS.
- 2.3 Any declarations of conflicts of interest by any party:
 - (a) No experts declared a of conflict of interest.

3. **Basis of Attendance**

- 3.1 All participants agree to the following:
 - (a) The participants are participating on the basis of their expertise as outlined in the table below.
 - (b) In presenting a view as an expert, that attendee agrees to comply with the relevant provisions of the Environment Court Practice Note 2023, including the Code of Conduct for Expert Witnesses, and referred to in the Fast-track Approvals Act 2024: Panel Conveners' Practice and Procedure Guidance 22 July 2025.
 - (c) This JWS is to be filed with the Expert Panel by Tuesday 22 September 2026.

4. **Matters considered at Conferencing – Agenda and Outcomes**

- 4.1 The matters discussed in respect of each RFI are captured in **Appendix A**, which sets out the views of the participants including any matters of agreement or disagreement.

5. **Participants to the JWS**

- 5.1 The participants to this JWS, as listed below, confirm that:
 - (a) They agree that the outcome(s) of caucusing are as recorded in this statement; and
 - (b) The matters addressed in this statement are made on the basis of their expertise as outlined in the table below.

Confirmed: 21 September 2026

ATTENDEE'S NAME & EXPERTISE	PARTY REPRESENTED	EXPERTISE	ATTENDEE'S CONFIRMATION REFER PARAS 3-5
Grant Eccles (GE)	Taharoa Ironsands Limited (Applicant)	Technical Director – Planning, Tonkin + Taylor Grant has been a planner for over 30 years. This includes being a Technical Director - Planning at T+T since 2018, before which was a Technical Director for another planning firm for 13 years. In this time, he has specialised in consenting, designations, and policy development. Grant holds a Bachelor of Resource and Environmental Planning degree from Massey University and was admitted as a member of the New Zealand Planning Institute in 2001.	Confirmed
Andrew Curtis (AC)	Taharoa Ironsands Limited (Applicant)	Technical Director – Air Quality, Pattle Delamore Partners Qualifications and experience as set out in Attachment J to the Applicant's response to comments dated 22 June 2026.	Confirmed
Mark Chrisp (MC)	Waikato Regional Council (Relevant Local Authority)	Partner / Planner, Mitchell Daysh Ltd Qualifications and experience as set out in Section 1 of Waikato Regional Council's Section 53 Comments document, dated 20 May 2026.	Confirmed
Peter Stacey (PS)	Waikato Regional Council (Relevant Local Authority)	Managing Director, Air Quality Consulting NZ Qualifications and experience as set out in Section 2 of the Technical Review of Air Quality Assessment for the Taharoa Central and Southern Block Mining Project, memorandum dated 20 May 2026, prepared for Waikato Regional Council.	Confirmed

APPENDIX A

<u>RFI</u>	<u>Agenda item</u>	<u>Comments and outcomes</u>
RFI 9: [New] Air Permit	The Panel considers that an air discharge permit is needed.	All experts agree that: 1. Taking a literal interpretation, PM₁₀ is a hazardous substance as defined by the RMA and the Waikato Regional Plan (which adopts the RMA definition of Hazardous Substances). 2. Rule 6.1.16.1(e) requires an assessment at the boundary of the site and not at the point of emission. 3. An air discharge consent is not required solely on the basis that PM₁₀ is generated at the site. Rule 6.1.16.1 is a permitted activity rule. No mineral extraction activity would be able to comply with that rule if clause (e) was interpreted in an absolute manner, whereby there shall be no discharges of hazardous substances to the air whatsoever. The comma at the end of clause (e) indicates that the clause is an unfinished sentence, and this would suggest that the rule cannot be relied upon in that regard because it is incomplete and does not work in practice. GE is of the view that the Substantive Application provides scope for the Panel to grant an Air Discharge Consent if the Panel deems that one is required. GE and MC are of the view that if the Panel considers that an Air Discharge Consent is required and it imposes Condition 8, then by virtue of compliance with that condition, then the activity is a permitted activity. If the relevant Permitted Activity standards are then imposed as a condition of an Air Discharge consent (on the assumption that they will be complied with), it then negates the need for requiring an Air Discharge consent in the first place. In GE and MC's view this is a further reason not to require an Air Discharge consent and to rely on the proposed conditions (including Condition 8) that are currently proposed to apply to AUTH142035.01.01.

<u>RFI</u>	<u>Agenda item</u>	<u>Comments and outcomes</u>
	The Panel requests the Applicant to draft air permit conditions utilising the air related conditions currently inserted to AUTH 01.01 (Conditions 8-16).	All experts agree that irrespective of whether the Panel determines an Air Discharge Consent is required or not (the alternative being the air quality conditions are attached to the earthworks land use consent), the specific air quality conditions should be the same. Some elements of those conditions are contained in the general conditions and should remain in the general conditions.
	Applicant also to consider the need for other air related conditions in the consent suite (e.g. AUTH 08.01 and Schedule 1) to be transferred to the air permit. As a general point, at the PFC the Panel expressed a preference for consent conditions to address the “what” (is required) with the “how” to be left to management plans to improve clarity, certainty and enforceability of consents.	All experts agree as directly above. As already drafted the conditions deal with “what” needs to be achieved with the management plan dealing with the “how”.
	The air quality experts agreed to confer and advise on good practice consent conditions (as recommended by Mr Stacey for WRC) for dust management (with suggested updates for the dust management plan in chapter 6 of the Environmental Management Plan in Appendix T of the Substantive Application) (refer also next item).	As recorded in this JWS.
RFI 10: [New] Air Permit	Confer and advise on good practice conditions of consent for managing dust (as recommended by Mr Stacey) in the new air permit.	Refer to the comments provided by PS and AC in Appendix A to this JWS.
	Confer and advise on draft consent conditions requiring an action plan with specific actions to be	Refer to the comments provided by PS and AC in Appendix A to this JWS.

<u>RFI</u>	<u>Agenda item</u>	<u>Comments and outcomes</u>
	undertaken to reduce overall site PM ₁₀ emissions (e.g., xx ha of stabilisation/rehabilitation of existing exposed areas by <i>insert date</i>) if elevated annual PM ₁₀ concentrations are measured at Te Kura o Taharoa.	

SIGNATURES OF EXPERTS



Grant Eccles



Andrew Curtis



Mark Chrisp



Peter Stacey

Appendix A: Response to RFI 10: PS and AC Comments on Conditions

Condition	Source	Working condition wording	P Stacey (PS) Comment	A Curtis (AC) Comment
Standard Air Quality Conditions				
8	TIL recommended wording	The Consent Holder shall implement measures to manage dust to ensure that all activities in the Consent Area comply with the following: (a) There shall be no discharge of contaminants beyond the boundary of the Consent Area that has adverse effects on human health, or the health of flora and fauna. (b) There shall be no discharge of particulate matter that is objectionable to the extent that it causes an adverse effect at or beyond the boundary of the Consent Area. (c) The discharge shall not significantly impair visibility beyond the boundary of the Consent Area.	No comment.	No comment.
Site-Specific Dust Management and Stabilisation Requirements				
9	TIL recommended wording	The Consent Holder shall ensure that within the 100 m Priority Stabilisation Area shown in green in Figure 1 below:	See alternative condition below.	No comment.

Condition	Source	Working condition wording	P Stacey (PS) Comment	A Curtis (AC) Comment
		(a) extraction of sand is completed within 12 months of the date of commencement of this consent; and (b) stabilisation of any exposed surfaces shall be completed within 3 months of mining operations being completed. Stabilisation in this area involves compaction and surface stabilisation to minimise the potential for discharges of dust.		
9 - alternate	P Stacey recommendation	"The Consent Holder shall ensure that within the 200 m Priority Stabilisation Area shown in green in Figure 1 below: (a) The extraction of sand within the 200m Priority Stabilisation Area must cease 12 months following the commencement of this consent; and (b) Within 6 months of the commencement of this consent a Stabilisation and Rehabilitation Plan undertaken by a suitable experienced practitioner must be supplied to WRC for certification that details the methods and timeframes to ensure condition 8 above are met; and (c) the Priority Stabilisation Area is to be stabilised and rehabilitated in accordance with the plan as certified in (b) above within 36 months of the commencement of the consent and maintained thereafter as required to minimise dust effects on neighbouring properties."	PS considers that R4 is a highly exposed sensitive receptor and can be downwind of mining activities under a range of wind directions. Site observations and photographs indicate that dust can travel well beyond 100 m, while removal of part of the ridgeline has reduced the screening and wind shelter previously provided to R4. The history of complaints also indicates that existing separation and controls have not always provided adequate protection.	AC does not consider that these changes are necessary as he considers 100 m is appropriate. While he agrees that rehabilitation is appropriate, clause b replicates the requirements of proposed condition 18 and is not necessary as a specific air condition. In addition, as wet mining activities will continue to occur within the area beyond the time periods specified, neither the distance or the timeframe in c are practical. AC also understands that there are ongoing discussions between TIL and the owners of R4, which may mean that it is not the closest receptor. Given the distance to the next closest receptors, a change to the buffer distance as

Condition	Source	Working condition wording	P Stacey (PS) Comment	A Curtis (AC) Comment
			Increasing the Priority Stabilisation Area to 200 m would provide greater separation and is consistent with the distance I advised in the 2024 resource consent hearing decision. The 12-month mining limit, prohibition on further mining and 36-month rehabilitation requirement are intended to minimise the duration of exposure by requiring mining to progress through this sensitive area promptly and for exposed surfaces to be permanently stabilised as soon as practicable thereafter. PS notes that the requirement for a Stabilisation and Rehabilitation Plan may ultimately be addressed through other consent conditions. However, he considers progressive stabilisation and rehabilitation across the site to be a critical dust-management issue and has therefore included this requirement in the air discharge related conditions.	proposed by PS becomes irrelevant.

Condition	Source	Working condition wording	P Stacey (PS) Comment	A Curtis (AC) Comment
9A	P Stacey recommendation	The Consent Holder must: (a) stabilise areas where sand extraction has ceased and where rehabilitation is not proposed; and (b) rehabilitate areas where sand extraction has ceased to minimise, as far as practicable, the extent and duration of exposed and unstabilised surfaces capable of generating dust. (c) Provide a Stabilisation and Rehabilitation Plan undertaken by a suitable experienced practitioner to WRC for certification at 12 monthly intervals following the requirement in 9(b), that details the areas proposed for stabilisation and rehabilitation within the site and include the methods and timeframes to achieve the requirements of condition 8 above. The consent holder must undertake the stabilisation and rehabilitation in accordance with the certified Stabilisation and Rehabilitation Plan.	PS considers that progressive rehabilitation is required to minimise the extent and duration of exposed and unstabilised surfaces capable of generating windblown dust. He considers that this approach is consistent with the MfE GPG Dust¹ recommendation of controlling dust at source and specifying practical dust-control requirements in consent conditions. Similar to his comment above, PS considers rehabilitation to be a critical issue for managing dust discharges and therefore considers that specific requirements for progressive rehabilitation should be retained in the air quality conditions.	AC agrees that there is a need for rehabilitation and considers that Proposed Condition 18 deals with rehabilitation and there is no need to replicate that as a specific air quality condition. He also notes rehabilitation is a matter subject to RFI11, and is being dealt with separately.

¹ Ministry for the Environment. 2016. *Good Practice Guide for Assessing and Managing Dust*.

Condition	Source	Working condition wording	P Stacey (PS) Comment	A Curtis (AC) Comment
9C	P Stacey recommendation	A section of ridgeline along the northern boundary of the Central Block shall, where practicable, be retained or reinstated to provide screening and wind shelter between mining activities and receptor R4. Where this is not practicable, alternative measures such as a bund or vegetation shall be provided to achieve similar dust protection.	PS considers that retaining/reinstating the ridgeline will provide a physical wind sheltering and screening between mining activities and R4. This is a critical site-specific control measure required to reduce the potential for windblown dust reaching the receptor. PS is not aware of an updated version of the Rehabilitation Plan that includes this requirement.	AC notes that work in this area has almost been completed. Nevertheless, TIL intends to reinstate a ridge form along the northern boundary of the Central Block once current mining in the area is completed. This is a matter that should be covered in the Rehabilitation Plan and is not required as a specific air quality condition.
Environmental Management Plan				
18	TIL recommended wording	The Consent Holder must prepare a dust management chapter, the objective of which is to avoid offensive or objectionable dust discharges and dust related effects from the mining operations on the site in accordance with the requirements of conditions 8 to 10 inclusive of AUTH142035.01.01. The dust management chapter must include: (a) A general description of the activities and main potential sources of dust emission; (b) A description of the dust mitigation mechanisms which will be deployed on site,	See alternative Condition below.	See comments below

Condition	Source	Working condition wording	P Stacey (PS) Comment	A Curtis (AC) Comment
		including an inventory of relevant equipment, materials and relevant operating procedures, Total Suspended Particulate and PM₁₀ trigger levels for the implementation of dust suppression measures, an inventory of relevant equipment and materials, and contingency procedures; (c) A description of the staff training required, including areas relevant staff are to be trained in, mitigation methods to be used, frequency of training and where training records are to be kept; and (d) Monitoring procedures, records to be kept and a process for review and reporting where required.		
18	P Stacey recommendation	The Consent Holder shall prepare and maintain a Dust Management Chapter as part of the Environmental Management Plan. The objective of the Dust Management Chapter shall be to avoid or minimise adverse dust effects from mining activities and to achieve compliance with the air quality conditions of this consent. The Dust Management Chapter shall be prepared or reviewed by a suitably qualified and experienced air quality practitioner (SQEP) and shall, as a minimum, include: (a) identification of the principal dust-generating activities and sources;	PS considers that the proposed changes expand the TIL Dust Management Chapter requirements so that the EMP contains all the recommended matters outlined in MfE GPG Dust. The version of the condition also requires the Dust Management Chapter to be prepared by a SQEP, which PS considers is appropriate and typical practice for an activity of this scale.	AC considers that as drafted Condition 18 was able to cover these matters. However, the changes provide more specificity and are reflective of current practice. He does not agree with: d) as this is covered by the rehabilitation plan. l), m) and n) as these are general requirements for site activities not specific air quality ones and are covered elsewhere.

Condition	Source	Working condition wording	P Stacey (PS) Comment	A Curtis (AC) Comment
		(b) identification of sensitive receptors potentially affected by dust emissions and specific management procedures for activities undertaken within 200 m of those receptors; (c) the dust mitigation measures and operational controls to be implemented, including watering, vehicle speed controls, management of exposed surfaces, stockpiles and other dust-generating activities, and procedures for the inspection, maintenance and availability of dust-control equipment; (d) procedures for minimising the extent and duration of exposed and unstabilised surfaces, including progressive stabilisation and rehabilitation; (e) for mining activities undertaken in proximity to receptor R4, the proposed mining sequence and duration of works, together with the dust mitigation measures, monitoring procedures and contingency responses to be implemented, including measures to minimise the duration of mining and the extent of exposed surfaces in that area. (f) procedures for monitoring meteorological conditions and identifying periods of elevated dust risk; (g) procedures for the operation, maintenance, calibration, data capture and validation of the PM₁₀ monitoring network in accordance with the manufacturer's instructions and relevant Ministry for the Environment good-practice guidance, including the establishment and application of appropriate site-specific		AC has also suggested a change to clause b to reflect comments in his evidence

Condition	Source	Working condition wording	P Stacey (PS) Comment	A Curtis (AC) Comment
		correction factors for non-reference PM₁₀ monitors; (h) PM₁₀ and meteorological trigger levels for the implementation of additional dust mitigation measures; (i) contingency measures to be implemented where elevated PM₁₀ concentrations are recorded, adverse meteorological conditions occur, or normal dust control measures are ineffective; (j) short-term stop-work trigger levels for PM₁₀ concentrations and meteorological conditions at which relevant dust-generating activities, excluding dust suppression activities, must cease; (k) procedures for automated alerts, investigation of trigger exceedances and implementation of corrective actions; (l) procedures for investigating and responding to dust complaints; (m) staff responsibilities, training requirements and associated records; and (n) monitoring, record-keeping, reporting and review procedures.		
18B	P Stacey recommendation	The Dust Management Chapter shall be reviewed at least annually and, where necessary, updated. It shall also be reviewed following any material change in the location, staging or nature of mining activities, where	PS notes that the dust risk will change as mining moves around the site. Regular review is therefore important to ensure the Dust	On the basis that the EMP is only required to be reviewed every 5 years, AC agrees that it is appropriate to review the dust management chapter more

Condition	Source	Working condition wording	P Stacey (PS) Comment	A Curtis (AC) Comment
		monitoring indicates that existing dust management measures or trigger levels require amendment, or following a significant dust event or recurring complaints. Any material amendment shall be prepared or reviewed by a suitably qualified and experienced air quality practitioner and submitted to WRC for certification prior to implementation.	Management Chapter stays relevant and is updated if monitoring or complaints show changes are needed. The current condition (Condition 28) only requires the EMP, including the Dust Management Chapter, to be reviewed every five years , which he considers is too infrequent. PS considers that annual review is more consistent with typical good practice for an activity of this scale.	frequently. He notes that proposed condition 24 includes a requirement to update the dust section of the DMP if necessary if there is an exceedance of the particulate monitoring limits, and considers that this is appropriate. This essentially covers most of PS's recommended condition. Given this AC does not think there is anything to be added by this proposed condition. AC also notes that proposed condition 28 only sets the maximum time between revisions, which does not preclude TIL from making changes earlier if they are required.
<u>PM₁₀ Monitoring Requirements</u>				
10	TIL recommended wording	The Consent Holder must continuously monitor dust discharges using at least six (6) PM ₁₀ dust monitors, including one located on the western boundary and one located on the eastern boundary of the Consent Area, one located in proximity to Taharoa School/Kura, one located between the boundary of the Central Block and receptor R4, and one located in proximity to receptors R2 and R3.	PS is happy with the changes made by AC to this condition.	AC has proposed a change to the condition to make the intent clearer.
15	TIL recommended wording	With the exception of the monitor at Taharoa School/Kura, the dust monitors in the locations required by Condition 10 shall, for a maximum of 16 months from the commencement of this	PS does not consider there is a need to continue TSP monitoring for 16 months solely to establish PM ₁₀ trigger	The monitoring is to continue to allow for collecting co-current TSP and PM ₁₀ data to allow some form of "calibration" of the PM ₁₀ in the

Condition	Source	Working condition wording	P Stacey (PS) Comment	A Curtis (AC) Comment
		consent, monitor Total Suspended Particulate (TSP). The TSP data shall be used to inform PM ₁₀ trigger values and responses that shall be included in the dust management chapter of the Environmental Management Plan for the site required by Condition 18 of the General Conditions in Schedule One	values. In his view, there is sufficient guidance and existing information to adopt appropriate interim PM ₁₀ trigger values from the outset of the consent. These can then be reviewed and refined as site-specific PM ₁₀ monitoring data are collected. Any changes to triggers can be included in an updated version of the EMP.	existing TSP data set to provide trend information and develop appropriate trigger values. While the 16 months seems like a long time it is from commencement of the consent and allows for time to get reasonable correlations established to inform the trigger values as well as finalisation of the dust section of the EMP.
16	TIL recommended wording	With the exception of the monitor at Taharoa School/Kura, the PM ₁₀ dust monitors in the locations required by Condition 10 shall be installed and operational within 4 months of the date of certification by Waikato Regional Council of the Environmental Management Plan for the site.	No Comment.	No Comment.
11	TIL recommended wording	The PM ₁₀ monitor adjacent to Taharoa School/Kura shall use an Approved Method compliant with Schedule 2 of the National Environmental Standards for Air Quality (NESAQ), or an equivalent method as demonstrated through compliance with AS 3580.9.17:2018 or EN 12341:2014, or any updated or superseding standard that ensures equivalent data quality.	No comment.	No comment.
42 (g)	P Stacey recommendation	(g) Current and historical PM ₁₀ monitoring data.	PS considers that making the PM ₁₀ data publicly available provides transparency about PM ₁₀ concentrations.	This is already covered by condition 42 in the general schedule.

Condition	Source	Working condition wording	P Stacey (PS) Comment	A Curtis (AC) Comment
			PS notes that Condition 42 already requires dust monitoring data to be publicly available. However, it does not describe the specific monitoring data to be made available. He therefore recommends clarifying that this includes current and historical PM ₁₀ monitoring data.	
11C	P Stacey recommendation	All non-reference PM₁₀ monitors used in the monitoring network shall be of the same make, model and configuration. One non-reference PM₁₀ monitor of that make, model and configuration shall be permanently co-located with the reference PM₁₀ monitor at Taharoa School/Kura. Data from the co-located monitors shall be used to establish and periodically review an appropriate site-specific correction factor (k-factor) for application to the non-reference monitoring network. The methodology for determining, reviewing and applying the k-factor, including the frequency of review and any criteria for updating the correction factor, shall be specified in the Environmental Management Plan.	PS considers that using the same make and model across the network makes the correction process more consistent. Permanent co-location at the Kura provides an ongoing check against the reference monitor and co-located low cost monitor. This helps deal with some of the uncertainties around the use of low-cost PM ₁₀ monitors.	AC is comfortable with this suggested condition.
12	TIL recommended wording	The continuous PM ₁₀ monitors shall provide a minimum of 75% validated data.	No comment.	No comment.

Condition	Source	Working condition wording	P Stacey (PS) Comment	A Curtis (AC) Comment
13	TIL recommended wording	The PM ₁₀ monitor adjacent to Taharoa School/Kura shall be installed and operational within 6 months of the commencement of this consent.	No comment.	No comment.
Meteorological Monitoring Requirements				
Number to be confirmed	P Stacey recommendation	The Consent Holder shall obtain and use meteorological data from the Port Taharoa weather station for the purpose of dust management. The data shall include: wind speed, wind direction, temperature, relative humidity and rainfall. If the Port Taharoa weather station data is no longer available, the Consent Holder shall install an alternative on-site weather station in consultation with WRC.	PS considers that it is important to formalise the requirement to have suitable weather data to be used to trigger mitigation measures and investigate dust complaints.	AC considers that as the condition proposed formalises what is already happening it is appropriate. He also agrees that it is appropriate to require TIL to install and operate a weather station in the event that the current Port Taharoa weather station is removed
<u>PM₁₀ Performance Standards</u>				
14	TIL recommended wording	The concentrations of PM ₁₀ recorded at the monitor adjacent to Taharoa School/Kura shall not exceed 50 µg/m ³ as a 24-hour average.	See alternate condition below.	AC Considers that this is appropriate.
14 - alternate	P Stacey recommendation	The concentrations of PM ₁₀ recorded at the monitor adjacent to Taharoa School/Kura must not exceed 50 µg/m ³ as a 24-hour average or 20 µg/m ³ as an annual average.	PS recommends adding the 20 µg/m ³ annual average limit to the proposed 24-hour PM ₁₀ limit to address longer-term exposure and provides a clear	AC does not agree with this change, and considers that the condition drafted is appropriate, and consistent with the current New Zealand standards, noting

Condition	Source	Working condition wording	P Stacey (PS) Comment	A Curtis (AC) Comment
			trigger for the annual response requested by the Panel. He also notes that this limit is consistent with one of the consent limits for RS Sands. The 24-hour average limit of 50 µg/m³ is also broadly consistent with the rolling 12-hour average of 65 µg/m³, also a limit for RS Sands and recommended below for the other non-reference monitors. PS notes AC's concern that TIL is not responsible for all PM₁₀ measured at the monitor. However, he notes the following: 1) Historic TSP monitoring data from the site indicates that compliance with the annual average limit should be achievable. 2) If the annual limit is exceeded, an investigation	that this is not intended to be a reference site. AC also notes that it is unusual in New Zealand to have a condition which requires compliance with both a National Standard and an annual guideline in a consent condition. In addition, given the TSP monitoring that has been undertaken to date, it is clear that ambient particulate emissions occur from all directions. While PS considers that an exceedance of the proposed annual guideline where TIL was found to not be responsible for the majority of the PM₁₀, would not be a major issue, AC does not agree. He considers that there is potential for this to become a significant compliance issue in the future, depending on how WRC interprets and applies the condition. For the condition to be reasonable there needs to be the ability for TIL to influence the outcome, and consequently if there are significant PM₁₀ sources that are

Condition	Source	Working condition wording	P Stacey (PS) Comment	A Curtis (AC) Comment
			would be undertaken to determine the likely causes, including the contribution from natural and other non-mining sources. Where the investigation demonstrates that mining activities make only a limited contribution to annual average PM₁₀ concentrations, there may be limited scope for further practicable improvements by TIL, and this may be the appropriate outcome of the investigation. 3) The annual average guideline of 20 µg/m³ applies to the total ambient PM₁₀ concentration and does not distinguish between background concentrations and contributions from the site. Accordingly, where background concentrations are higher, a lower contribution from the site would be required to achieve the guideline. 4) AC's concern about background and other sources would also apply to the 24-hour limit, which he supports.	not under its control, there are mitigation it can implement. This is subtly different to the 24 hour guideline where specific conditions on a day can be identified and mitigation identified which can be implemented.

Condition	Source	Working condition wording	P Stacey (PS) Comment	A Curtis (AC) Comment
			In both cases, an exceedance would need to be investigated to determine TIL's contribution. PS therefore does not consider this a reason to treat the annual limit differently.	
14A	P Stacey recommendation	The concentrations of PM ₁₀ recorded at monitoring locations required under Condition 10, other than the Taharoa School/Kura monitoring station, where those locations are representative of public exposure, shall also not exceed 65 µg/m ³ as a rolling 12 hour average (updated every hour) or 20 µg/m ³ as an annual average.	PS notes that his recommended PM₁₀ limits are consistent with those in the recently granted RS Sands resource consent and are generally consistent with values used for the management of dust-generating activities in New Zealand. PS anticipates that any trigger levels developed for inclusion in the Dust Management Chapter of the EMP would be set below these limits, so that additional mitigation can be implemented before a limit is exceeded. The rolling 12-hour average provides the Consent Holder with an opportunity to respond to increasing PM₁₀ concentrations before the limit is exceeded. In comparison, a	AC does not agree with this condition, which sets operation trigger values. These trigger values are intended for operation purposes, and there needs to be flexibility to change these as required, and therefore they are better in management plans. If they are in a condition, then changing them is difficult. In any case He considers that there is not sufficient data available at this time to set PM₁₀ and does not consider that the RS Sands values are an appropriate model, given the significant difference in climactic and geographical features between the two locations. Trigger values will be developed as discussed above using the existing TSP and PM₁₀ during the initial 16 month period.

Condition	Source	Working condition wording	P Stacey (PS) Comment	A Curtis (AC) Comment
			1-hour average provides less time to identify increasing concentrations and implement additional mitigation.	
14B	P Stacey recommendation	Should either of the limits specified in Condition 14 and 14A be exceeded, an investigation shall be undertaken by a suitably qualified and experienced air quality practitioner approved by the WRC to determine the cause of the exceedance, including the extent to which activities authorised by this consent contributed to the exceedance. The investigation report shall be provided to WRC, and any recommendations arising from the investigation shall be incorporated into the Dust Management Chapter of the EMP.	PS prefers this wording as it specifically requires the investigation to assess the extent to which site activities contributed to the exceedance, requires the investigation to be undertaken by a SQEP approved by WRC, requires the report to be provided to WRC, and ensures that any recommendations are incorporated into the Dust Management Chapter of the EMP.	AC considers that alternate wording proposed by TIL in proposed condition 24 are preferred. These are consistent with those imposed in the recent RS Sands consent. Should the limits set out by Condition 20 be exceeded, an investigation report shall be completed by a suitably qualified and experienced person to determine the cause of the exceedance and identify actions or further mitigation measures to avoid further exceedances. Any recommendations arising from the investigation shall be incorporated into an amended EMP. Any EMP amendments arising from the exercise of this condition shall not trigger the requirements of condition 15 of the General Conditions in Schedule One.

Condition	Source	Working condition wording	P Stacey (PS) Comment	A Curtis (AC) Comment
14C	P Stacey recommendation	The investigation report required by Condition 14B, and any consequential revision to the Dust Management Chapter required by Condition 18, shall be provided to WRC for re-certification within 60 days of the exceedance being identified. Any additional mitigation or corrective measures identified through the investigation shall be implemented as soon as practicable and within the timeframes specified in the certified Dust Management Chapter.	PS considers that this provides a clear timeframe for completing the investigation and ensures that any additional mitigation or corrective measures identified are implemented.	AC considers that alternate wording proposed by TIL in proposed condition 25 are preferred. These are consistent with those imposed in the recent RS Sands consent. The investigation report required by Condition 24 and if required, a revision of the EMP shall be provided to the WRC for certification within 60 days of the exceedance being recorded.
14D	P Stacey recommendation	Where the annual average PM₁₀ concentration recorded at the Taharoa School/Kura monitoring station exceeds 20 µg/m³, the Consent Holder shall prepare a PM₁₀ Emission Reduction Action Plan for certification by WRC. The Action Plan shall identify specific measures to reduce overall PM₁₀ emissions from the site and shall, as a minimum: (a) identify the principal sources and activities contributing to PM₁₀ emissions from the site; (b) identify additional stabilisation and rehabilitation measures to reduce the extent of exposed surfaces capable of generating dust; (c) specify quantified stabilisation and rehabilitation targets, including the area of land, in hectares, to be stabilised or rehabilitated and the dates by which those works will be completed;	PS considers that this condition directly responds to the Panel's request. If annual PM ₁₀ at the Kura is elevated above consent limits, the condition requires a specific action plan with measurable actions, such as how much land will be stabilised or rehabilitated and when.	AC does not agree that this is appropriate and that the above condition is suitable.

Condition	Source	Working condition wording	P Stacey (PS) Comment	A Curtis (AC) Comment
		(d) identify any additional changes to mining staging, exposed-area management, haul roads, stockpiles, dust suppression or other operational practices required to reduce PM₁₀ emissions; (e) specify timeframes for implementation of each action; and (f) specify how the effectiveness of the actions will be monitored and reviewed. The Action Plan shall be prepared by a suitably qualified and experienced air quality practitioner and submitted to WRC for certification within 60 days of the annual average concentration being determined. The Consent Holder shall implement the certified Action Plan in accordance with the specified timeframes.		